

She does seem to come across as pretty arrogant but so do a lot of other "chefs" so I just dismiss that. I did like the first show on dumplings, I'm planning to make some cherry soup this summer with dumplings so it was of more than a passing interest to me. The second show on pickles and sauerkraut was also interesting as I was raised on a German farm, need I say more? ;D

And I might add that I developed a special fondness for Korean Kimchi during my many trips to Korea, I like to refer to it as Korean sauerkraut. I still remember when flying into Kimpo International Airport and making the final approach and looking out the window and seeing all those kimchi pots on the roof tops, GOOD STUFF! :drool:

Off-Topic Foods / Re: Somewhere South.....

The type or amount of yeast used has nothing to do with the dough yield. The amount of yeast used can be varied as a means of regulating the amount of fermentation the dough receives during a period of time under specific temperature conditions. For example an emergency dough that will be ready to make pizzas from in a matter of a couple to a few hours will contain significantly more yeast than a dough which will be fermented at room temperature for an extended period of time at room temperature. If the dough that is to be fermented for a long period of time at room temperature were made with the same yeast level as the emergency dough it would be extremely over fermented (excessively weak and have poor oven spring properties to name but a few of the over fermented characteristics). The three main types of yeast that are used are Compressed yeast (CY) aka fresh yeast/block yeast/wet yeast; Active dry yeast (ADY) aka dry yeast; and Instant dry yeast (IDY) aka instant yeast/bread machine yeast/quick rise yeast. Each of these yeast types are handled differently. CY can be crumbled and added directly into the flour or it can be suspended in the dough water with no special handling precautions, that's the good news, the bad news is that it must be kept under refrigeration and it is perishable with a shelf life that can range from a week or so to a few weeks depending upon the age of the yeast and the storage conditions. ADY is essentially the same yeast as CY but it has been dried to a lower moisture content for storage stability, because of this there is more leavening power pound for pound in ADY than there is in CY, thus to achieve fermentation similar to that of CY the ADY must be used at a lower level (lesser amount). The substitution for using ADY to replace CY is to use 50% of the CY as ADY (use 1/2 as much ADY as CY). IDY is again essentially the same as CY but it has been made using a different drying process and it has been dried to a moisture content even lower than that of ADY making it the most concentrated of the three on a pound for pound basis. When replacing CY with IDY the substitution is to use only 38% as much IDY as CY to get equivalent fermentation.

Is there a difference in performance of finished crust flavor between the three different yeast types? No, they have been engineered to have essentially identical performance characteristics.

Why one over the other? Convenience and shelf life stability. CY can be added to the dough very easily without any special handling or addition methods BUT it is quite perishable and must be kept refrigerated for the duration of its somewhat limited shelf life. ADY has a rather long shelf life (6-months unopened) but may be shorter after opening, on the down side it must be pre-hydrated and activated in 100F water prior to addition to the dough. IDY has a very long shelf life (1 to 2-years unopened and 30-days or more after opening), it is also easy to use as it does not require pre-hydration and activation prior to addition to the dough, instead it is just added (dry) right on top of the flour. The one exception to this is

when the dough will be mixed by hand, the IDY then needs to be pre-hydrated in 95 to 100F water BUT it does NOT require activation as the ADY does. The one cautionary note regarding IDY is that it should never be put directly into the cold dough water, to do so will damage the yeast and result in a soft dough condition with diminished or inconsistent fermentation properties.

A quick search through the archives here will turn up quite a bit of excellent discussion on these different types of yeast.

That's it in a nutshell.

Dough Clinic / Re: Yeast question and ratios

I've been watching it since it first came on here (first episode here was last week/PBS).

Off-Topic Foods / Re: Somewhere South.....

Let's do the math..

Your dough formula calls for 10% total fat in the form of butter or margarine, both of these will consist of 80% fat and 20% water. So, in 10% butter/margarine there is 8% fat. 80% of ten is 8, so if you want to replace 10% butter or margarine with shortening you would only need to use 8% shortening, the other 2% can be added to the dough formula as additional water.

One of the problems with adding an emulsifier to a yeast raised donut dough formula is that it can result in a very gummy eating characteristic if the donut is consumed when still VERY fresh (that's when yeast raised donuts are at their best). It can also result in a higher than desired level of fat absorption.

Dough Clinic / Re: on fat : oil, margarine, vegetable shortening, butter

I make all of my thick crust and pan style pizzas (including Detroit style) in my home oven as 450F using a middle rack position.

When baking in a deck oven if I encounter problems with the bottom of the pizza getting too dark I just place a pizza screen under the pan to address the problem, it's amazing what a small air gap will do :)

Detroit Style / Re: Lloyd Pans - Bottom Burning

I've seen a towel used quite successfully, a dry towel I might add. The dough did not dry out at all. This was when I was in the Philippines. There is sufficient humidity in the air there (85+% R.H.) that the dough couldn't dry out if it wanted to, the towel was placed over the dough to keep the flies off of it, they are absolutely attracted to the fermentation aroma. There are places in the U.S. where you might get away with it in the summer but not in the winter too, for this reason I've always recommended that if you are going to cover your fermentation container with a towel, make it a damp towel, the moisture from the towel will help to humidify the air between the top of the dough and the towel which will go a long ways in preventing drying of the dough while its fermenting plus it will also keep the flies off of the dough. Back in the 50's it was common at pizzerias to mix a dough and leave it in the mixing bowl to ferment, the bowl was almost always covered with a wet/damp towel to keep drafts off of the dough and to prevent it from drying out. You have to remember that most pizzerias back then didn't have air conditioning so in the summer those kitchens were awfully humid and you could get away with it back then but today with air conditioning in that same shop it ain't gonna work the same way, not to mention the chatter that you're going to get from your food safety inspector.

Neapolitan Style / Re: Completely cover dough when proofing?

No, you didn't miss it, you're tight though, that subject is pretty far from my area of expertise. Outside of smoking some beef, venison pork and salmon and sugar curing half of a hog from time to time I don't have a clue about how commercially cured meats are made.

Dough Clinic / Re: Pepperoni

In bread production there is no difference in functionality between shortening and oil. There is no difference in finished moisture content of the bread either, between shortening and oil.

Fat is a tenderizer and as such it helps to provide the finished bread with a more tender eating crumb structure. Without any added fat, be it oil or shortening, the crumb will have a tough, more chewy characteristic (think of French bread) and as the amount of fat in the dough formula is increased the crumb structure will become progressively more tender eating, this is usually referred to as improved mastication properties when speaking about white pan breads where a tender eating crumb structure is a desirable characteristic. While at one time shortening used to be the most commonly used fat in white pan bread production, today oil in dome form is almost universally used due to its ability to be pumped and metered into the dough mixer(s) without the need to heat the fat or have heated delivery lines to the mixer. Just as in pizza dough production it is also common for the oil to be added to the dough after the dough has been mixed to some extent to reduce the possibility of the oil soaking into a portion of the flour thus rendering that portion of the flour incapable of producing gluten during the mixing process. What role does any fat (oil or shortening) play in white bread production? It helps to seal the cell structure for improved gas retention resulting in improved loaf volume characteristics, it also lubricates the dough which also contributes to improved loaf volume. It provides a method to regulate the mastication properties of the finished bread. The ability of a fat to retain flavors helps to provide depth and dimension to the flavor of the finished bread while at the same time imparting a type of mouthfeel to the bread which is perceived by the consumer as "richness". Since fat also inhibits moisture migration and moisture absorption the bread is not perceived as being as dry when fat is included in the dough formulation (moisture is not drawn from the mouth as readily). This is why breads made without fat are commonly perceived as being "dry". Under certain circumstances the type and amount of fat can impact perceived crumb firmness, for example, oil is always a liquid, so if stored in a cool environment it will have essentially no impact upon the firmness of the finished loaf, on the other hand butter will recrystallize to nearly its pre-baked firmness as the loaf cools so if the loaf is stored at low temperatures (below 60F) it can result in a perceived firmer bread. This can be a critical quality aspect as many breads are frozen for distribution and then thawed at the point of sale, if the bread is not fully up to ambient store temperature when the consumer picks up the loaf they can perceive that the loaf is firmer and reject it for a softer loaf which is perceived as being fresher. The use of fat in the dough formulation can also impact the appearance of the finished loaf in that the baked crust will have a more attractive, lustrous hue to it (the color itself doesn't change but the way the crust reflects light does). Lastly the oil provides a source of enhanced lubrication for the slicer blades during the slicing and packaging operation.

Note: Butter is a standardized product so the properties of the butter can influence some of the above cited effects, for example many U.S. butters have a very narrow slip point so they go from rock hard to sloppy soft within a narrow temperature range while real Danish butter does not exhibit these characteristics, it is still soft and pliable at refrigerated temperatures while not turning soft and sloppy at elevated temperatures (this is where Danish pastry got its name from). Margarine,

on the other hand, is a man made product which can be formulated for just about any application with any slip point desired which explains why it has a broad application in the U.S. baking industry. It can be formulated to mimic Danish butter, U.S. butter or it can be so soft as to allow it to be spread on fresh bread right out of the fridge while not melting into an oil at room temperature (you might know this as a "soft spread" margarine). A somewhat unique product to the bread making industry is what is referred to as a "liquid shortening", this is really nothing more than a plastic shortening to which oil has been incorporated and it usually also includes an anti-staling agent such as a blend of mono-diglycerides which work to help reduce the staling rate of the bread. Since these are usually added along with the fat it is a convenience factor to the baker to have these materials included into the liquid bread shortening.

One last thing, butter naturally has 18 to 20% water and table grade margarine, being formulated to replicate butter also has the same water content. In some applications this water has to be taken into account when calculating the total dough absorption, for the most part it isn't but at high fat levels (above 8%) many bakers will account for the water in the butter/margarine.

I probably missed a few points here but this should give you a pretty good idea of how these different fats function in a white bread system.

Dough Clinic / Re: on fat : oil, margarine, vegetable shortening, butter

If you were using a commercially made frozen dough it most likely contained L-cysteine (almost universally used in commercial frozen dough) which always results in a soft and very extensible dough after thawing which would explain the need for a bowl. Even non-commercially made frozen dough will suffer much of this same fate as the static freezing (freezing at temperatures above -20F) will damage the yeast cells allowing for leakage of glutathione (very similar to L-cysteine) from the cells upon thawing of the dough.

Dough Clinic / Re: How can I keep my pizza round and 16"?

Now I understand what you are doing, I think that by twisting the open end of the bag into a pony tail and tucking it under the dough ball as you place it in the fridge will result in a more round dough ball after the 36-hour cold fermentation process, when we do it in a pizzeria or when I do it at home getting a round shape has never been an issue as the pressure exerted by the bag forces the dough into a pretty round shape. After the CF period we just set the bagged dough balls on the side to temper AT room temperature (3-hours is a long time, with plastic bags about half of that time is more typical). The bag is then rolled down around the dough ball and the bag is inverted allowing the dough ball to fall onto a floured surface, then flour the entire dough ball and begin opening it into a skin by your preferred method.

Dough Clinic / Re: How can I keep my pizza round and 16"?

OK, so now my old age is creeping up on me again and I'm confused. You said you were following the referenced dough formula and procedure so I opened it and that's where I got my information from, that's what you said you were following? Putting that aside, I presume you are bagging the dough BUT you are not pulling the bag slightly snug to the dough ball and twisting the open end into a pony tail and tucking it under the dough ball as you place it in the fridge, this, to a great extent, negates one of the great advantages of bagging the dough, that is the process which I'm reading into your reply leaves a significant dead airspace within the bag, thus insulating a good deal of the dough ball and not allowing for consistent cooling of the dough ball, not to mention that it provides a space for

condensation to form (not a good thing). I would suggest incorporating the above procedure into your bagging process to see if it helps, it'll provide better dough ball cooling so at least it won't hurt. You should not be putting the bagged dough balls into any kind of container, a flat sheet pan is often used by pizzerias to place the bagged dough on in their coolers but dough boxes and lidded containers are counter productive in this case. A very popular reason for bagging the dough balls is the fact that they require no further attention once they are put into the fridge/cooler, there is no cross-stacking or down-stacking associated with bagged dough balls, for me this is a great convenience factor when making dough at home. Remember, experimenting is half of the fun, the other half is divided between learning from your experiments, eating your experiments, coming to the realization that you are rapidly making a whole new group of friends who just happen to love eating pizza as much as you do. :chef:

Dough Clinic / Re: How can I keep my pizza round and 16"?

If you take a single mozzarella cheese and shred it to different particle sizes, from small cubes to a long shred you will see a progressively darker cheese color and the particle size diminishes (gets smaller), you will also see a significant change in the appearance of the top of the pizza as the cheese becomes more nondescript with the smaller particle size. For me, my preference is for a long, coarse shred as it gives better coverage and in my opinion, a better looking finished pizza.

Pizza Cheese / Re: How grate size affects melting

There are seven recognized proteins in wheat flour but only two of them are responsible for forming what we call "gluten", these two proteins are glutenin and gliadin.

L-Cysteine hydrochloride aka L-cysteine is indeed a dough reducing agent in that it breaks the gluten bonds making for a softer, more extensible dough. Essentially all L-cysteine made today is synthesized as are many of the vitamins which are used in food production. If you cannot use L-cysteine check into using glutathione aka "dead yeast" it is 100% interchangeable with L-cysteine but is sourced directly from yeast by heating just enough to collapse the cell wall but not enough to denature the amino acid (glutathione). If yeast is acceptable glutathione will also be acceptable.

What application are you wanting to use the reducing agent in? For what purpose?

Dough Ingredients / Re: What exactly is the 1/2protein; 1/2 content in flour?

A 100-ml graduated cylinder would work I guess and you do know that there is a substitute for the balloon :-D but using one would probably require using a 250-ml graduated cylinder and a larger dough piece.

Or you could also fashion a simple gas trap.

Dough Clinic / Re: IDY vs ADY vs bread machine yeast

I've looked at the dough formula and procedure that you have referenced and I'd like to make a couple of comments. The dough formula calls for 63% dough absorption, do you know if this is the optimum dough absorption for the flour that you are using? Flour absorption changes and it is not uncommon for the absorption to change. My guess is that the absorption might be a little on the low side so you should consider incrementally increasing the dough absorption to see if that helps. Increasing the absorption makes for a softer, more pliable dough that will typically exhibit a reduced tendency to snap back aka "dough memory".

I also see that you are using metal fermentation containers and that you are NOT cross-stacking (leaving then uncovered until the internal dough ball temperature

reaches 50F). This is a CRITICAL aspect to effective dough management as it allows for uniform cooling of the dough and also prevents or minimizes dough sweating which in nearly every case leads to a sticky/tacky dough at the time of opening. So, in my humble opinion these should be the first things to address, then if we need to we can dig deeper to resolve the problem. There are also some deviations in the dough formula which differ from what I normally use or recommend but we can address those later if we need to.

Dough Clinic / Re: How can I keep my pizza round and 16"?

Question #1: Yes you do. When substituting ADY for IDY you will need to use about 32% more ADY than IDY.

Question #2: IF, and that's a BIG "if" it is still as viable as it was when fresh/unopened, you would use the same amount.

An easy test to see if the yeast is still viable is to make a small dough in a cereal bowl (1/2 cup flour, pinch of yeast and a pinch of sugar) Put four tablespoons of warm water (100F) in the bowl, add the IDY and stir to suspend the IDY in the water, add the sugar immediately followed by the flour and stir, add more water as needed to make a dough, using your finger, oil the inside of a shot glass, then remove a piece of the dough large enough to fill half of the glass, cover with a damp piece of paper towel and check it for growth in 30-minutes. This will tell you if the yeast is still viable or not.

Another easy test is to make a slurry of 50 ml 100F water, 1-tablespoon flour and a pinch of sugar, stir this all together and pour into a test tube (I bet you have a case of then just waiting to be used for this), and then fit a balloon over the end of the test tube, place the tube into a glass or cup about 1/2 filled with 100F water. Check the back in about an hour to see if the balloon is beginning to inflate.

Dough Clinic / Re: IDY vs ADY vs bread machine yeast

If you go to my web site <www.doughdoctor.com> and look under "Media" you will have access to my videos. In the last of the dough making videos we show the dough balls being opened both by using a dough sheeter to pre-open the dough and also opening it entirely by hand (similar to the first video you've referenced as wanting to learn from).

Neapolitan Style / Re: Bench flour

Perfect! :)

Starters/Sponges / Re: Polish amount

Rohfan;

Unless it has been upgraded to a reverse spiral dough arm (not sure if it can be) it will most likely have a very basic dough hook which you will eventually come to hate as the dough keeps riding up on the hook and doesn't get properly mixed. This tends to be more problematic with dough sizes anything less than full bowl capacity.

You will want to experiment with your mixer to see if you can mix smaller size doughs using the flat beater for a portion of the dough mixing time and then changing over to the hook and mixing at a higher speed to keep the dough from climbing up the hook. If you plan to make some of the higher absorption doughs this may not pose as great of a problem as the dough is easier to mix at a higher speed allowing centrifugal force to pull the dough off of the hook for improved mixing action. I know a number of members here have a similar problem with their K5-A so maybe they will be able to share with you what they have found to work at resolving this irksome trait of the old "J"/"C" hook design.

Newbie Topics / Re: Newbie--Caputo's Tipo 00 dough recipe

Most of the time the set temperature for a poolish is between 75 and 80F, it is suggested that you that the water temperature used in making the poolish be about 2F less than the targeted set temperature. I never recommend "room temperature" as there is no definition as to what it might be. For some it might mean 70F while for other it might mean 60F or as I once found out in Hermosillo, Mexico it meant over 100F/37.7C! :o

Starters/Sponges / Re: Poolish amount

Your best bet will be to allow the dough balls to rest, undisturbed at room temperature until they have softened sufficiently to be opened into skins without tearing. If you want to make pan pizzas using the dough just grease a dark colored, deep-dish pan with Crisco (Butter Flavored Crisco is my favorite), but margarine or lard works well too. Flatten the dough ball into a puck shape and place into the pan, drape with a piece of plastic and allow to rest for 30-minutes, then using your hands, press and stretch the dough to fit the pan, don't worry if it fights you or pulls back, just cover it back up and allow to ferment for another 30 to 45-minutes, finish shaping the dough to the pan, it should stay put this time. Cover the panned dough with the plastic again and allow to final proof for 30-minutes, you're then ready to dress and bake.

Newbie Topics / Re: Dough tears when balling? Can you over ball?

While that dough management procedure isn't designed for use with a poolish, it can be done. Use 1/3 of the flour, 1/2 of the water and all of the yeast in the poolish. Set temperature for the poolish should be 75 to 78F/23.9 to 25.5C, allow the poolish to ferment for 6-hours before incorporating it into the remainder of the dough ingredients.

Starters/Sponges / Re: Poolish amount

First off, the "window pane" test for gluten development is used for determining the proper mix for a bread dough not a pizza dough. Pizza doughs are correctly mixed when the dough JUST takes on a smooth appearance. You do not want to mix the dough more than this. Allowing the dough to ferment for an hour before balling is just asking for the dough to tear during balling, especially with a strong flour like All Trumps. My suggestion would be to just scale and ball immediately after mixing, and then manage the dough as you wish from there.

Newbie Topics / Re: Dough tears when balling? Can you over ball?

I would really need to know more about the dough to answer your question. How long after the flour was removed from the freezer did you mix the dough? What kind of flour are we talking about?

Protein content?

Dough absorption?

How big of a dough are we talking about?

How was it mixed, by hand or machine? If by machine for how long?

How was the dough managed?

I've got an idea but I want to narrow the field before casting my vote.

Dough Clinic / Re: sticky dough?

Yes.

Dough Clinic / Re: Help please

Do not use more than 24-hours CF for a T&B pizza. Adjust the dough formula by increasing the yeast level by 20% and reducing the dough absorption by at least 2% maybe more, depending upon what your present dough absorption is. Generally something in the 58 to not more than 60% range seems to work well, but again it will depend upon the flour you're using. Immediately after opening the skin place it on a silicone baking sheet and then onto a cardboard circle. Refrigerate for at least 1-hour, then dress and back into the fridge for another hour, then stretch wrap and refrigerate until ready to use. Bake directly from the fridge at 425F.

Dough Clinic / Re: Take and bake dough suggestions?

Yep, your problem is that you are not fermenting a sufficient amount of the flour. Kyrol flour tends to require quite a bit of fermentation to properly condition the gluten. After making the dough, scale and ball it and cold ferment the dough balls for 48-hours. After the cold fermentation period remove the dough from the fridge and allow it to temper AT room temperature until the internal dough ball temperature reaches 60F, then begin opening the dough balls into skins. Let us know if this makes things a bit easier.

Dough Clinic / Re: Help please

For the home pizza maker the term "cross-stacked" as indicated in my previous response, means left open/uncovered/unlidded. After the appropriate cross-stack period the dough box is lidded or covered in some manner so as to prevent drying of the dough during the fermentation period.

Prep Equipment / Re: question about Doughmate artisan box size

Let's look at an order of progression, first adjust the dough absorption to a level that works with your mixing method and dough management procedure, then based on that dough absorption begin a series of tests with progressively higher or lower absorptions to achieve the desired finished crust characteristics. All flours are not created equal, some will carry more water than others. You cannot arbitrarily plug in a high absorption, like 75% and expect that all flours will produce a dough with acceptable dough handling properties or the finished crust characteristics one is looking for. You have to find out what is correct for YOUR specific flour. When dealing with an unknown flour you always want to first get a working dough formula and procedure, then once you have that you can begin adjusting the formula and/or procedure to move it closer to giving you the characteristics you're looking for.

Dough Clinic / Re: Dealing with poor flour

Sure! Just reduce the dough absorption to 60%. This is a pretty good place to bench mark just about any pizza dough formula from. Unless you have a really "off the wall" flour it will almost always give you a usable dough, you can then decide if you want to stay with 60% or adjust the amount up or down for better overall dough performance and/or finished product quality.

Dough Clinic / Re: Dealing with poor flour

You'll have to excuse me but I'm a bit confused.

What ingredients were in the poolish? How much of the total flour was in the poolish? What was the temperature of the poolish?

I don't think enough of the flour is being fermented but answers to the above will tell.

Dough Clinic / Re: Help please

Also remember that the Doughmate boxes will need to be cross-stacked (left open) until the internal dough ball temperature reaches 50F after which it can be covered/lidded. All of the other methods mentioned do NOT require this additional step in your dough management procedure which is something to consider if you will be making your dough after the sun goes down. I use the plastic bread bag method almost exclusively anymore, just bag it, put it in the fridge and forget it! :)

Prep Equipment / Re: question about Doughmate artisan box size

Welcome!

There are many of us here who can help you with your endeavors. To help get you up to speed on all things pizza, there is also another web site that you will want to explore too <www.pmq.com> . There are also magazines dedicated specifically to pizza which are available through on-line subscriptions: Pizza Marketing Quarterly Magazine/www.pmq.com; and Pizza Today Magazine/www.pizzatoday.com There are also quite a few good books on pizza production that are available from most on-line sources.

In the mean time, what is your concept for a store/pizzeria?

New Forum Members / Re: An engineer, wanting to start a pizza business.

HansB;

You did that just as a very competent well trained baker would do it, well versed in what we refer to as "bakers math". You think like I do. Do you have a background in the baking industry?

Sicilian Style / Re: Help Scaling Tony G Sicilian Dough

There is bread and there is "bread", can you be more specific as to the type of bread that you are making?

Dough Clinic / Re: Substituting Caputo 00 for KABF

It looks like you are definitely getting a more open crumb structure. You might make another increase in the yeast level and you might also consider putting some moisture into the oven, maybe placing a pan of water in the oven before the pizza will increase the moisture content of the air within the oven to give you better oven spring. Electric ovens bake with a very dry heat as there are no products of combustion in the baking chamber as there are with wood fired ovens (water/moisture is one of those products of combustion).

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

People need bread so they're thinking of making their own, what kind of flour do you buy to make bread? Bread flour! If there were a shortage of bagels they'd all be buying "bagel" flour..whatever that is? During times of shortage I've always accepted the challenge to use whatever type of flour I could get my hands on, when traveling internationally back in the 80's we couldn't always find "pizza" flour or even "bread" flour but there was always some type of wheat flour available. Sometimes it was even a composite flour consisting of 70% wheat flour and 30% fine ground domestic grains and legumes. In all cases we were able to make pizza from the flour, maybe not a New York style or a Neapolitan style, but it was a decent pizza and people liked it. The truth to the matter is that bread, pizza, bagels, pretzels, soft rolls and hard rolls can all be made from the same flour without any difficulty at all. The same goes for pizza in that it can be made from just about any kind of flour, yes you will need to make some adjustments in the way you make it but that's what learning about pizza is all about. What do you think the old pizza makers of 200-years ago in Italy did for flour? They used what they got

and they learned, by trial and error, how to use it, and from the looks of the present day pizza industry they did a mighty fine job of overcoming their flour issues and got to the business of making pizzas. The same is true today, snag a bag of the "different" flour and experiment with it to broaden your learning curve, but what about the mistakes? Trust me, there will always be someone waiting just outside of the kitchen all too eager to help you make those mistake pizzas go away never to be seen again.

I relinquish the soap box. :-D

Dough Clinic / Re: yeast and flour supply chain?

I did that too, I worked at AIB during the day (6:30 a.m. to 6:00 p.m. including travel time) dinner with the family and off to the store at 7:00 p.m. Worked at the store until 12:00 a.m. and back home to repeat on the following day. I did this for nearly 2-years until I got my staff and got them all trained. It's a tough grind to be sure! More importantly, I was A LOT younger then too.

Shop Talk / Re: Delay opening?

Also, remember that we go to all the trouble of preheating the oven and the stone/steel and then we open the oven to peel the pizza in, depending upon how proficient one is at peeling a pizza into the oven can have a huge impact upon how much heat is lost from the oven during the process. This is especially so with today's "200" Energy Star rated ovens.

Newbie Topics / Re: Consistent white brim

Wotavidone has answered the question for me, spot-on! Thank you! ^^^

While approximately 10% protein content is a bit on the low side it is entirely doable, especially when mixing the dough by hand.

While there are many different ways to mix a dough by hand here is the way that I do it.

Put water in mixing bowl (70F) 60% of the flour weight.

Add the salt and sugar to the water (no need to stir).

Put the yeast in 5% of the flour weight of 100F water, stir to suspend the yeast. IF CY or IDY you can now add the yeast suspension directly to the water in the bowl, if it is ADY allow the yeast to activate for 10-minutes before adding it to the water. Immediately add the flour and begin to stir the dough with a wooden spoon, after a minute, or so, add the oil and continue mixing until the dough becomes too stiff to mix with the spoon, now begin mixing by hand until you have a homogeneous dough.

Turn the dough out of the bowl using a plastic bowl scraper to get it all out, lightly oil the bowl and the dough, knead the dough for a few minutes (3-minutes), form the dough into a ball and place back into the oiled bowl, cover (drape) with a piece of plastic and allow to ferment for about 2-hours.

Turn the dough out of the bowl again and knead it until it just takes on a smooth appearance, oil the bowl, form the dough into a ball again and place back into the bowl.

Cover the bowl with a piece of stretch wrap but do not seal it tightly, place in the fridge to cold ferment for about 24-hours (48-hours max.).

After the CF period bring the dough out of the fridge and allow it to warm to 60F internal ball temperature (about 90-minutes), turn the dough out of the bowl onto a floured surface, flour both sides of the dough ball and open into a skin by your preferred method.

Newbie Topics / Re: Newbie--Caputo's Tipo 00 dough recipe

There should also be a nutritional panel too, what does it say?

Newbie Topics / Re: Newbie--Caputo's Tipo 00 dough recipe

About a week or two out from opening begin making pizzas and send them out to local charities, police station, fire station, etc. This will give your crew a chance to practice and serve to advertise your presence. When opening, I would advise you not to do a grand opening, instead do a soft/quiet opening, if you have done your pre-opening work you will have customers coming in to check you out. This will allow you to work out any serving issues that might crop up (they always do) while allowing your staff to ramp up their skills gradually. In these trying times I don't think you'll get "hammered" as is usual for a new opening restaurant but you never know. Once your staff is comfortable and you feel ready for it, then is the time to consider a grand opening. Many of the restaurants that I've worked with never had to do a grand opening, once the word got out that they were open they were too busy for a grand opening! :).

Best of luck!

Please keep us posted.

Shop Talk / Re: Delay opening?

We have discussed cold fermenting dough balls in bags a number of times here so I'll just summarize. When cold fermenting the dough balls in bags DO NOT use ZipLock bags, instead use bread type bags. Lightly oil the dough ball(s) and drop into individual bags, twist the open end of the bag into a pony tail and tuck the pony tail under the dough ball as you place it in the fridge (DO NOT SECURE THE OPEN END IN ANY OTHER WAY), after the CF period remove from fridge and allow to temper AT (NOT TO, AT) room temperature until the internal dough ball temperature reaches 55 to 60F, then roll the bag down around the dough ball and invert it over a floured surface or bowl of flour, the dough ball will invert the bag as it falls free. Flour both sides of the dough ball and open into a skin by your preferred method. Save the bags and store in a small covered bowl in the fridge for the next time you make pizzas.

Note: When placing the dough ball into the bag try to pull the bag snug, but NOT tight to the dough ball. If you search back through some of the threads on the topic I think you will find some good pics of bagged dough balls.

Dough Clinic / Re: Thank you Tom the dough doctor

Yes to both of your questions. What can you tell us about the AP flour you have on hand? Can you send a picture of the ingredient panel? The reason I ask is because all AP flours are not created equal, some are more like a bread flour while others are more like a pastry flour.

Newbie Topics / Re: Newbie--Caputo's Tipo 00 dough recipe

I'll be brief. Delay the opening and DON'T quit the day job!!! ^^

Shop Talk / Re: Delay opening?

Before you make the next bake try adding 2% sugar to the dough formula (flour weight X 2 (press the "%" key) and read the sugar weight in the display window. Note: Ingredient weight will be in the same weight units (pounds, ounces, grams, etc.) that the flour weight was shown in.

Rather than baking the pizzas in a lower rack position you might also try raising the rack to a higher position (closer to the heat) as this should also help in getting better crust color.

Now, with all of that said, I might suggest one other thing, rather than starting with

a "00" flour, set it aside for now and see if you can get a bag of regular bread type flour, use this flour to perfect your skills, dough formulation and dough management procedure, once you're enjoying some good pizzas that's the time to introduce the "00" flour and begin perfecting the dough formula and procedure with that flour.

Newbie Topics / Re: Newbie--Caputo's Tipo 00 dough recipe

What shelf position are you baking on? If you are not baking on the highest shelf position try moving your pizzas to a higher position in the oven.

Newbie Topics / Re: Consistent white brim

Yes one can. Find out how much protein your existing flour has and subtract this from the percent protein you want the flour to have, divide this number by 0.6 and that is the percent VWG you will need to add to bring your existing flour up to the desired protein level. Remember that you will need to increase dough absorption by 1.8% for each 1% VWG you add. Make sure to blend the VWG into the flour to prevent pilling of the VWG.

Dough Clinic / Re: Modifying recipe to use Bread Flour Instead of KASL-Flour shortage due to Covid

I can imagine a scale that would require you to enter the temperature of the water and then a microprocessor would calculate the density and show the water as a volumetric measure in ml based on the weight of the water.

I think I'll just stay with my multi mode scale as I work mostly in metrics anyhow.

Prep Equipment / Re: All in one scale? (Precise and large capacity)

I'm staying with my yeast guess.

Dough Clinic / Re: Hilarious Result, But Delicious

Your best bet by far will be to fully bake the pizzas but to bake them to your minimum standard of being "done", to allow to cool, slice into desired size pieces, individually wrap each piece in cling wrap and freeze. I do not recommend trying to recon (reheat) the pizza directly from the freezer, instead either place it in the fridge to thaw or thaw at room temperature (you will need to work out the time needed to thaw as it will vary with the pizza). Place into a 350F oven to reheat. The time again, will need to be determined.

Dough Clinic / Re: Pizza Hut Pan Pizza

ML. on a scale? That's a first! :-D

Prep Equipment / Re: All in one scale? (Precise and large capacity)

Dan;

You certainly came to the right place! Take a look at the posts on New York style pizzas and you'll find yourself chin deep in "high gluten" flour. :-D

New Forum Members / Re: Pizza dough

Try my New York dough formula but reduce the dough absorption to 56%, CF for 48-hours, allow the dough balls to temper to 50F internal temperature, open dough balls using a rolling pin or pastry pin to about 3/16-inch thickness, dock the dough well using a dough docker, fit the skin into a lightly oiled, bright colored (not seasoned) cutter pan, dress and bake at 500F. Bench mark from there and let's see how close that gets you.

Dough Clinic / Re: Looking for a specific pizza dough recipe

As you didn't mention anything about the dough feeling different we'll "assume" that it felt pretty normal to you, so I'm guessing you might have made an error in scaling the yeast or possibly scaled it right but maybe used IDY instead of ADY which when used at the same levels would create a slight increase in overall yeast level. Just not enough information to make a better SWAG. In any case it's good to hear that you enjoyed the pizza regardless of what it looked like, like I always say "even our mistakes can taste pretty good".

Dough Clinic / Re: Hilarious Result, But Delicious

Dasnyde4;

The only time you might really want to use a "high gluten" flour (14+% protein content) is when making a more authentic New York style pizza. The dough formula and procedure performs very well using just about any decent bread type flour, with the only real difference being that the finished crust will not be as chewy as it would be if made using a flour like All Trumps. It will still be chewy, just not as chewy. This might even prove to be a good thing for you as some prefer a pizza that isn't quite as chewy as a traditional New York style pizza.

Welcome to the forum and let us know if you have any questions or problems along the way.

Dough Clinic / Re: Modifying recipe to use Bread Flour Instead of KASL-Flour shortage due to Covid

I occasionally run into the same problem, when I do I just place the pan on a pizza screen and bake it that way.

Detroit Style / Re: Steel Pans

And the baking temperature was?

Newbie Topics / Re: First Delivery for our NY Style Slice shop concept

A number of years ago we did a study on similarity of flour by type from different manufacturers, we found that there was a very high level of similarity between bread, and H&R type flours. The so called "high gluten" flours were somewhat variable with some having a protein content as low as 12% while others were in the 13 to 14+% range. With AP type flours we found even greater variances as some AP flours were made from soft wheat varieties and others were made from hard wheat varieties with protein content all over the board from a low of 9% to a high of nearly 12%, and remember that there is a significant difference in the gluten characteristics between flours made using hard and soft wheat. Based on this study we developed the recommendation to be very cautious when changing brands of AP flour.

Starters/Sponges / Re: Starter suddenly stiffened

I love my KD-8000! We use it for when making jerky and preserves and anything else where we need to weigh something in the kitchen. Two scales are the way to go but if you don't have the accuracy range you want from a KD-8000 just weigh, put into water and stir, then divide. For example, if you want 1-gram of yeast, weigh two grams into two small glasses of 100F water, stir to suspend the yeast and portion out one of the glasses. What you will have in the glass will be close enough to 1-gram for making pizza dough. Be sure to include the water in the suspension as part of the dough water and you're good to go.

Prep Equipment / Re: All in one scale? (Precise and large capacity)

In countries where noodle production is one of the major products made from imported wheat or flour and bread or pastry production is secondary I've seen a number of cases where the lower protein HRW (HRW #!) is blended with the higher protein durum wheat/flour to provide a higher protein flour option. Many international millers don't have any baking background so they have little or no concept of the ramifications this can have for the end user. Like I said, it just an educated guess based on the information provided. The relatively high ash content shown on the flour specification also shows that the flour is what we refer to as a high extraction rate flour (typical U.S. white flour runs at about 0.6% ash while whole wheat flour comes in at 1.0 to about 1.25%).

Dough Clinic / Re: mixing and handling unmalted flour

Are you sure you want to leave the dough balls come all the way up to room temperature after the CF period? The dough can be problematic at room temperature in some cases, this is why pizzerias use 50F (internal ball temperature) and many home pizza makers use 60 to 65F (internal ball temperature) for the target temperature before opening the dough balls into skins. Poplar is probably one of the most common woods used for dough boxes and bagel boards because of its dense grain which doesn't tend to splinter like some of the hardwoods do. In the cracker industry, we used to use wood dough troughs for fermenting the cracker doughs (18 to 24-hours) and when the wood troughs were no longer permitted we found that there was a change in the flavor of the finished crackers. It was found that the wood would become inoculated with a strain of lacto bacillus which in turn migrated into the dough during the fermentation period resulting is a specif flavor development which could not be achieved in the mandated steel fermentation troughs. The specific strain of LB was identified and added as a supplement to the dough at the time of mixing thus restoring the original flavor to the crackers. Keep in mind though that this is all based on using well used wood dough troughs (boxes in your case) and the dough was in the box for 18 to 24-hours. Cracker doughs are around 40% absorption so there was never much of a problem with the dough becoming one with the wood. Note that these wood dough troughs were never washed, they were just scraped clean for the next use. Cold fermenting the dough for 24 to 48-hours, or more in a plastic box and then transferring it to a wood box to temper prior to opening would serve no useful purpose.

Prep Equipment / Re: Is there a benefit to using wood boxes for proofing?

It should work just fine, I've used the G.M. Sperry organic flour many times with my dough formula and dough management procedure with the added (optional) 2% sugar.

Dough Clinic / Re: Giusto's Ultimate Performer for NY Style

It would if you took a break between suspending the yeast in the salt water and adding the flour, otherwise it would not cause any problem, on the other hand if the yeast amount was the same and you went from 2% to 3% salt (a 50% difference) that might explain the difference. What I suggest you do is to make the dough again but use only 2% salt, if you get better fermentation you'll have your answer, let me know what you find.

Dough Clinic / Re: Forkish Saturday dough, too much salt?

Phil;

Welcome to the site! Hopefully we can help you make your dream a reality. Your ideas are sound, and buying "local" can be a significant benefit, try to

incorporate that theme into your advertising. One word of caution though, while N.Y. pizzas are great, they may not be perceived that way by once you get away from the east coast. A case in point, I worked with a young man here in Manhattan, Kansas about 12-years ago in opening a N.Y. pizzeria. Got the pizza nailed down tight, sauce and toppings too, even the store decor...pizza was judged just ho-hum. The problem was that people in this area want and really like a crispy crust regardless of the type of pizza it is. We made changes to the pizza so we now have a VERY CRISPY crust but retained all of the physical appearance characteristics of the N.Y. pizza. Truth is, we now have a New Haven style pizza, but the customers love it, so much so that the owner, Adam Peyton, now has three stores and has been named "best pizza" numerous times, in our local market area AJ's Pizzeria is without doubt the preferred pizzeria. (AJ's New York Pizzeria, Manhattan, Kansas). Point is, know your market and give your customers what they want and you'll have a leg up over the saddle on your way to success.

New Forum Members / Re: Introduction - Pizza Truck Pipe Dream

Now I'm unconfused. ;D but I still have some questions as to exactly what you are wanting to do.

So we want to room temperature ferment our dough in dough boxes measuring approximately 18 X 24-inches, right? I saw your reference to a heat lamp but the refrigerator part leads me to believe this assumption might be wrong. Maybe you just want to use the refrigerator as an insulated box? I guess the questions I'm asking now is "what temperature do you want to ferment your dough at, and how many dough boxes are we talking about?

Prep Equipment / Re: Wide enough fridge

Why do you want to proof the dough in your dough boxes? After CF just place at room temperature and allow the dough balls to warm to 50 to 60F internal temperature before opening into skins.

Pan pizzas are proofed after the dough is fitted into the pan before dressing and baking.

Is there a possibility that you mean "fermentation" rather than proofing?
Please unconfuse me.

Prep Equipment / Re: Wide enough fridge

The thing about SD starters is that it's a crap-shoot as to what you get. You really don't know what you're culturing/growing until you go to use it. Once you find something that you like treat it like you would important computer data, back it up! Start a second one using the first one to inoculate the back-up thus ensuring you'll have the same micro-flora. Then if you lose one you will still have another to work with and to propagate another/more from without losing the flavor or performance of the master S.D. starter.

Dough Clinic / Re: Help - looks like dough is being eaten from the inside out

Use less potato.

Dough Clinic / Re: mixing and handling unmalted flour

From a practical point in home use application the rate of deterioration between ADY and IDY is about the same.

Dough Ingredients / Re: Yeast storage and longevity

No, just the flour and the water for the autolyze. Add the potato into the dough not

the autolyze.

Dough Clinic / Re: mixing and handling unmalted flour

Easiest question to answer for the day: No.

Based on that I would move insufficient dough absorption to the bottom of my list of things to look at. I have never had any problem making bread or pizza doughs with just 20% added rye flour, it's not until you get up into amounts over 35% that things begin to get interesting with the dough unless additional VWG is added to help carry the rye flour. I think your approach is a good one to look at just the flour alone and then look at the starter and the added grains.

Dough Clinic / Re: Help - looks like dough is being eaten from the inside out

RI;

I might add that with this type of dough it's important to suspend the yeast in the water and then add the salt and sugar, give it a quick stir and add the flour, then add the butter. The best way to add the butter is to cut it into pieces or shave it onto a piece of paper and then allow it to warm to room temperature, it is then added right on top of the flour just before you begin mixing.

Dough Clinic / Re: Cracker style dough

No, just make the autolyze and add it to the bowl then the remainder of the ingredients (no more flour or water) and mix, then proceed as suggested or as you wish to.

Dough Clinic / Re: mixing and handling unmalted flour

In a word, yes.

Dough Clinic / Re: organic vs. non-organic flour?

From your description I am wondering if the flour might not be made from a specially milled hard red spring wheat which has a larger particle size (slower to hydrate resulting in a sticky dough). This would not be a durum semolina but more like a spring wheat semolina flour. We do the same thing here in the U.S. using hard red winter wheat varieties where the flour is designed specifically for making pasta.

Here is something to try, make an autolyze of the flour and 70% of the flour weight as water. Allow this to set for 1-hour, then add the remaining ingredients and see if you get a better dough. The absorption might not be correct but it should be better than what you have been getting and not as sticky either. If the flour is made from all spring wheat the dough should open pretty well after 24 to 48-hours cold fermentation but if the flour is made from a blend of both spring wheat and durum wheat you may find the dough to be too elastic for making donuts.

For your process, mix, (targeted finished dough temperature is 80 to 85F/26.6 to 29.4C), then bulk ferment for 1-hour, divide into 2 or 3Kg. pieces and form into loaves, cover the loaves and allow to ferment for 1.25-hours, then begin rolling the dough out to about 8mm in thickness, cut the donuts from the sheeted dough. Place cut donuts on a frying screen or flour dusted cloth on a sheet pan or proofing board and allow to proof for about 45-minutes, fry approximately 1-minute on each side at 365F/185C.

Don't worry about the flour not being malted as your donut formula already has plenty of sugar in it.

Dough Clinic / Re: mixing and handling unmalted flour

There is a commercial method of scaling and balling that I show in one of my videos on my web site at <www.doughdoctor.com> very fast with one person balling approximately 85-pounds of dough in under 20-minutes (12-ounce scaling weight).

General Pizza Making / Re: Balling

We do begin to see some changes in the "brew" (which is what you are describing) after about 36-hours in the fridge but these changes are hard to see in pizza crust production (bread making is a TOTALLY different story) so you should be good doing as proposed, but since we are not propagating yeast we are only diluting the existing population of cells, with time you will find that you will need to add ever increasing amounts of the brew to maintain equivalent gassing/fermentation power.

Dough Clinic / Re: Yeast

Flour: 100% 500-grams

Salt: 1.75% 8.75-g.

Sugar: 2% (optional) 10-g.

Yeast: CY 1% 5-g.

Butter: 6% 30-g.

Water: 45% 225-g.

Total: 778.75-g

Bowl and fermentation loss: 75-g.

Yield: 703.75-g.

Use the trim dough to make a few bread sticks for appetizers. or just cut into strips about 1/2-inch wide and desired length to make a dipping bread stick.

Dough Clinic / Re: Cracker style dough

I use equal parts of regular white flour, FINE corn meal, and semolina flour. If you ask 50 different people what works best for them you'll probably get close to 50 different answers.

Neapolitan Style / Re: Bench flour

That's an impossible question to answer as I don't know how much damage the CY has sustained as a result of being frozen (CY does not tolerate freezing all that well). The best advice I can offer is to use it at 2.5 times your IDY level and see how it performs. If it appears slow you can increase the amount of CY but be aware that the freezing process will damage the yeast cells resulting in the release of glutathione into the dough making softer and more extensible than normal. To some extent this can be addressed by reducing the total dough absorption a couple percent. If you see any of this I wouldn't advise trying for any long fermentation times (limit CF to not more than 24-hours) as the softening will continue during the CF time.

By the way, unopened IDY can be frozen for up to 2-years with just a 25% loss of activity.

Dough Clinic / Re: Yeast

Are you including the rye flour in the total flour? The total flour should include only the gluten forming flours. Other flours mentioned such as spelt have a very low amount of gluten forming proteins and they create a poor quality gluten, ditto for rye flour, it appears that you are milling the steel cut wheat into a flour so that being the case it can be included in the total flour, if not milled into a flour it should

be shown separately as an added ingredient. To determine the dough absorption figure 62% for the white flour portion and 75% for the dark rye flour portion, this should get you pretty close to the correct dough absorption. For the other flours use the same procedure as you would for finding the absorption of a multi-grain mix. If you search back through the archives you should find several threads of discussion on how this is done.

I hope this helps,

Dough Clinic / Re: Help - looks like dough is being eaten from the inside out

Most cracker type doughs are made with a dough absorption of 40 to 45% and about 5% fat in the form of shortening as opposed to oil. They are mixed for a VERY SHORT TIME, usually about 2-minutes or less. The "dough" after mixing looks a lot like a biscuit or pie dough in that it is extremely "shaggy" and not cohesive at all, but instead it is dry, floury, and crumbly. The dough is scaled to desired weight and packed together on the bench top using your hands to form something that looks a bit like a puck (hockey puck), this is then wrapped in stretch wrap or placed onto a sheet pan with a 2-inch spacing between pucks and the entire sheet pan bagged or wrapped. The dough is allowed to cold ferment for a minimum of 24-hours but may go as long as 48-hours, it is then removed from the cooler and allowed to temper AT room temperature until the internal puck temperature reaches 55F, the pucks are then formed into skins using a dough sheeter or a rolling pin/pastry pin. Formed skins are trimmed to diameter and dressed for baking, usually at 500 to 550F.

Dough Clinic / Re: Cracker style dough

What was the total dough absorption for each of the doughs?

Dough Clinic / Re: Help - looks like dough is being eaten from the inside out

Can you share your complete dough formulas? What I see in the photos of the dough balls is a case of insufficient dough absorption, this is especially evident with the two rye dough balls. The stickiness you noted with the rye dough is totally normal for rye, and depending upon the strength of the white flour that you're using VWG will most likely need to be included in the dough formulation

NOTE: Depending upon the type of rye flour (light, medium or dark) the absorption of the rye flour will be something between 68 and 75%. Plus, if it's a pumpernickel rye flour it will require a soaker.

Dough Clinic / Re: Help - looks like dough is being eaten from the inside out

You didn't mention anything about the size of the dough skin or the weight of the dough ball, this can have an impact on it too. If the problem is just due to opening technique you might want to try this to get things started:

Use a rolling pin to open the dough ball to within 2-inches of the desired diameter, then finish opening the dough by hand.

I've got a video of this procedure being used commercially. It works well and we get individuals who have never opened a dough ball by hand doing it in no time at all. Once you begin to get the hang of it you won't need to use the rolling pin anymore. P.M. me with your email address or send me an email at <thedoughdoctor@hotmail.com> and ask for the dough opening video.

Neapolitan Style / Re: center of pizza too thin....

That's more like it! ^^^

Now you can adjust the amount of dough in the rim portion when you open the skins and also adjust how far out you spread the sauce to achieve the rim you want.

Dough Clinic / Re: Dense cornicione in a Neapolitan style pizza

One other thing I might add, have you confirmed the actual temperature of your oven using a calibrated thermometer or an IR thermometer? In many cases where one is baking directly on a stone or steel the oven door is left open for some time which DRAMATICALLY reduces the actual oven temperature at the time the pizza is placed in the oven. You can use an IR thermometer to measure the temperature both before and after placing the pizza into the oven. If you don't own one of these handy devices they are readily available from most home stores as well as Harbor Freight and online sources too. I recently picked up yet another one, this time for use in the garage, from H.F. for just \$17.00.

Dough Clinic / Re: Crust doesn't brown

Those "industry created shortcuts" are made by fermenting flour and water to create the lactic acid and then spray drying or roller drying with sufficient temperature and time to inactivate the material. The problem is that there is primarily only one acid present, lactic, while in a naturally fermented dough or even a sourdough there are other acids present as well which changes the entire flavor profile. This is one reason why my suggestion for using these products is to incorporate some regular fermentation into the dough and use the inactive sourdough material at only 1/2 of the LOWEST recommended level and work up from there if necessary.

Dough Ingredients / Re: Article on Lactic Acid

For your next try turning the broiler on 15-minutes before putting the pizza into the oven (this is after a 1-hour pre-heat time) and increase the sugar level in your dough to 3%, or three time what you are presently using. Don't make any other changes but do record everything that you do. Let us know if this provides further improvement in crust color.

The dryness you noted in the crust is due to the par-baking of the crust. Par-baked crusts are always significantly lower in finished moisture content than single baked crusts.

After you get a baking steel you should be able to open the skin, dress it and bake it without par-baking.

Dough Clinic / Re: Crust doesn't brown

I'm guessing 48-hours and 0.4% IDY.

Dough Clinic / Re: Domino's Pan Pizza Dough Fermentation days

For pan pizza most go by just the risen height of the dough in the pan. Pizza Hut used to have a mark/line stamped into their deep-dish pans as an indicator of how high to allow the dough to rise.

General Pizza Making / Re: How do I tell when dough is over-proofed?

At one time we used to see a lot of pizzerias blanching the green pepper slices for use in a slice operation. The reason for this is because the blanched slices do not weep (give up water) as fresh pepper slices do. They might have been using some form of canned green pepper slices but that would also be pretty close to blanched too.

Saute them as suggested will accomplish much of the same thing, something to

experiment with.

Pizza Toppings / Re: cooked green peppers

Here is a simple trick that I've used any number of time where refrigeration was non-existent, follow your present procedure BUT withhold 1/2 of the flour and 1/3 of the water. After the dough has fermented for the desired time, on the morning that you want to make pizza add the remainder of flour and water to the fermented dough mass, mix in well, then immediately scale and ball, place dough into lightly oiled containers, lightly cover (NOT AIR TIGHT), and allow to ferment until you are ready to make your pizzas (at least 6-hours), turn dough out of the container onto a flour dusted bench, dust the dough ball on both sides and open into a skin by your preferred method, dress and bake.

Dough Clinic / Re: Dough balls "spreads out" to much in the box

CC;

Your picture graphically shows what a totally over fermented and collapsed dough looks like.

If you are to continue making pizza under those conditions you will need to reduce the amount of yeast dramatically, how much I cannot say as I don't know anything about the temperature at which the dough was fermented at but for starters I would suggest something around 0.05% (0.4-grams) CY/fresh yeast.

Now, I see that you have a question mark by the "fresh" when referencing the yeast, does this mean that the yeast is of questionable quality/freshness/age? Old yeast or improperly stored CY (stored at temperature above 40F/4.4C) can release glutathione into the dough resulting in an overly soft/extensible/weak/sticky dough. If your yeast was stored in the fridge with the broken thermostat this might be a contributing factor.

Also, I might add that if you are machine mixing, your mixing process can be made a little more direct by just putting the water into the mixing bowl, adding the yeast and then adding all of the flour and salt, then begin mixing. Your first three steps as shown serve no practical purpose with CY when machine mixing.

Dough Clinic / Re: Dough balls "spreads out" to much in the box

Your family is in our prayers.

Chitchat / Re: I don't ask for much.....but I ask now for your prayers.....

Bob;

Egg Shade is the coloring material used by many pizzerias in Chicago, since it's available on line and relatively inexpensive you might want to order some. Many pizzerias use 6-ounces for a 50# flour dough so you can use that to calculate the amount you will need in your dough. The darker colored dough will absorb more heat which will help with the browning of the dough.

If you can only bake at 450F can you move the oven shelf to a position closer to the heat if you have bottom heating?

Assuming you are allowing at least an hour for the oven and steel to heat before baking.

If all else fails try removing the pizza from the pan and placing it right on the steel for a minute or so to achieve a stronger bottom bake.

Dough Clinic / Re: Chicago deep dish browning question

Your dough looks kinda dead to me so I'm guessing it's your yeast.

Dough Clinic / Re: Dense cornicione in a Neapolitan style pizza

What you are looking at there is essentially a no-time dough or at the very best a short-time dough, neither of which will win any contests for the best tasting pizza crust. It's OK for a "feed me" pizza but that's about where that road ends. Why not just go for an over night fermentation at room temperature? If you are using IDY reduce it to 0.1% (be sure to suspend it in a SMALL amount of 95F water then add it to the dough water, no need to activate as ADY. If using ADY use 0.125% and hydrate/activate according to directions, if using CY use 0.25% and put directly into dough water and whisk to suspend then add to the mixer. Adjust the dough water temperature to 50F and allow to mix just long enough to achieve a smooth dough consistency. Divide into desired weight pieces and ball, place into lightly oiled containers and cover with a piece of foil (DO NOT SEAL TIGHTLY), place in a cool spot to ferment for 18 to 24-hours, then turn out of the container(s) onto a flour or fine corn meal dusted surface, coat the dough ball well and open into a skin by your preferred method, dress and bake.

Dough Clinic / Re: Pizza dough in bread machine?

First things first:

- 1) Are you using a dark colored deep-dish pan?
- 2) Are you baking at an honest 525F?
- 3) Are you using margarine or Butter Flavored Crisco in the pan?
- 4) What are you baking on (stone, steel, grid)?
- 5) Do you use Egg Shade coloring in the dough?

Dough Clinic / Re: Chicago deep dish browning question

Please explain/describe what you have including the dough formulation.

Off-Topic Foods / Re: need some bread consulting, dough made, broken fridge

By all means add sugar to your dough, 2% is a good starting point but you can go higher if you want. You seemed disappointed that the 2% sugar didn't give the crust a sweet taste, pizza crust is not typically sweet tasting but if you want to have a sweeter tasting crust you have to go to at least 5% sugar for starters. If you are baking with the broiled element on that's why your cheese is getting browned too fast. You might try moving the pizza to a lower rack position. Additionally, how long are you preheating the oven/stone? You want to preheat for at least 1-hour. A baking steel will probably help a lot.

Hand kneaded dough will always be more sticky than a machine mixed dough that is properly mixed, that's not a problem though as the condition will improve as the dough is allowed to ferment.

Your bread flour should be just fine in it is malted (check the bag).

In the mean time some things you might need to do:

- 1) Place the cheese in the freezer for 30-minutes prior to use.
- 2) Tent the top of the pizza with a piece of foil for about the first 5-minutes of the bake time (you will need to experiment).
- 3) If you are getting bubbling during baking the dough might be too cold (did not allow to warm to 55F internal dough ball temperature), par-bake with 1/2 of the sauce applied to the skin usually fixes the problem, or you may need to also dock the skin prior to dressing.

This is all based on the assumption that you are correctly following my dough formula and dough management procedure.

Dough Clinic / Re: Crust doesn't brown

If its just a leaven we're talking about I'd set it outside, it should be just fine.

Off-Topic Foods / Re: need some bread consulting, dough made, broken fridge

If you are running a short fermentation schedule you may need to add a little more fermentation time but if you are fermenting your dough as most of us do, 24-hours or more, you probably won't ever see the difference.

Off-Topic Foods / Re: Substitute power flour for bread flour

It is common knowledge that salt impacts yeast activity at levels above 1.5% in most dough formulations. This is addressed quite easily by an increase in the yeast level. Essentially all dough formulations which you find are already have the yeast level adjusted for the salt level to achieve a decent fermentation rate. If you want to see this for yourself just make a double size dough without any added salt, then mix until the dough comes together and forms a mass, remove from the mixing bowl, weigh the dough, divide it into two equal weight pieces, put one piece back into the mixer and add 1% salt based on the weight of flour in the dough piece, mix the dough for another 5-minutes, remove from the mixing bowl and cut off 75-grams, form into a ball and place into a lightly oiled tall drinking glass. Do the same thing with the other dough piece but add 3% salt to it, lightly tent each glass with a small piece of foil and set side by side to observe how the dough rises in each glass over the next several hours.

To see the affect of salt on gluten strength make two doughs, one without any added salt and the other with 2% added salt, pay close attention to how the gluten develops as well as how the dough feels at all stages of development.

Salt has a tremendous impact upon the taste of the baked product, when insufficient salt is used the finished product has a "starchy" taste and when excessive salt is used it has a salty taste. Some people like the salty taste while other do not, plus there are a lot of people who recognize the potential health concerns associated with excessive sodium in their diet so they try to limit sodium consumption. Salt by itself is not a flavoring but instead it should be used only to accentuate flavors already present.

Dough Clinic / Re: Water Loss

All of which contribute to oven spring, which without you would have nothing much more than a large poker chip.

Dough Clinic / Re: how to get cornicione

Grease Wheel: You left the door open on this one! :-D
With GUSTO!

Artimas: Can you please describe the differences you are seeing?

There is a quantum leap between the average pizzeria and the average home kitchen when it comes to making pizza dough, but the biggest difference that I've seen is in how the dough is refrigerated. Most home refrigerators are really not all that good for dough storage as in many cases they lack the necessary refrigeration capacity but more importantly it is small in comparison to a walk-in cooler or even a commercial reach-in cooler so every time the door is opened the temperature fluctuation is significant, it may not seem so, but it is. This temperature fluctuation will have a significant impact upon the dough over the course of 24 and more hours. In many cases we can address this by targeting a lower finished dough temperature or by modifying our dough management procedure to better

accommodate our unique conditions under which we make our pizzas. When teaching pizza making at homes I always tell everyone that the first thing we need to do is to have a dough formula and dough management procedure that allows us to make a decent pizza, then we need to fine tune it to allow us to make a great pizza on a consistent basis (this is a real confidence builder), after that I encourage them to experiment making different types of pizzas/pizza doughs/crusts, such as wheat, whole-wheat, multi-grain, Tex-Mex, Asian, based on thin crust or deep-dish formats (whatever their family preference is). Pizza making should be a family fun adventure in pizza cuisine, and now that we're hopefully all at home with our families this is a great time to get everyone involved in the pizza making process. My wife and I have made a pizza together for dinner for the last two days, the first one was a vegetarian topped N.Y. style and last night's pizza was a shrimp topped pizza with Alfredo sauce instead of a red sauce seasoned with dried dill from our garden last year, then we added left over vegetables from the previous night's pizza preparation. No complaints from my better looking half! Like the old adage goes, "Happy wife, happy life" ;D

Newbie Topics / Re: Newbie looking for a basic beginner recipe for home oven

I have to plead innocent as I know nothing about it. I've not been contacted nor informed of anything. I am sure there is a lot of confusion and work going on over this whole thing of needing to cancel Pizza Expo so when/if something falls through the cracks it is totally understandable. I give them full credit for their attempts to provide a level of training the industry desperately needs right now.

Pizza News / Re: Pizza Expo/Tom Lehmann

In one word: Absolutely! IDY is no different than ADY or CY when it comes to application and performance. 24 to 48-hours is not really considered to be a long fermentation time in the realm of pizza dough. If you have a balanced dough formula and have an effective dough management procedure the amount of IDY to use for 24 to 48-hours CF will probably be in the range of 0.3 to 0.4%.

Dough Clinic / Re: Instant dry yeast

You are confusing bakers percent and "true" percent which is based on the total dough or meat weight. To convert a dough formula into true percent just divide the individual ingredient weights by the total dough weight and multiply by 100. The problem with using true percent with dough formulations is that if you change any one ingredient you have to go back and recalculate the percent for each of the other ingredients.

By the way, there isn't that much difference in finished moisture content between a high absorption and low absorption dough until you drop down into the 40% and lower absorption range.

Dough Clinic / Re: Water Loss

Why would you want to do that when the salt percentage is based on the flour weight?

Dough Clinic / Re: Water Loss

Huh? ??? ??? ??? ??? ??? ??? ???

Pizza News / Re: Pizza Expo/Tom Lehman

A fully baked pizza crust will typically come in at between 22 and 28% moisture

content as compared to white pan bread at 38 to 40% and pretzels which come in at 2 to 4% moisture content.

Dough Clinic / Re: Water Loss

Your dough formula contains a SLUG of IDY as well as a SLUG of salt! I would suggest bringing the IDY down to about 0.15% and the salt down to 2% or 2.5% if you're addicted to salt. In addition to dough formulation the temperature of the room where the panned dough is being proofed as well as the temperature of the dough at the time of panning are also critical factors that enter into determining the correct yeast amount, without this information my suggestion for yeast amount should be considered as an educated SWAG.

Dough Clinic / Re: Over night proof

Really nothing to washing it, just use a hard plastic scraper to scrape the bowl out when you remove the dough then straight to the sink where it's filled with hot water, agitator then goes into the bowl and I get back to my pizza making chores. After the dough is put up I go back to the sink and finish washing the bowl and agitator and wipe down the mixer with a damp towel. Since we are not blessed with acres of counter space I find it more troublesome to drag the mixer out from its hiding space than to wash it.

Newbie Topics / Re: Do you mix by hand or use a mixer?

How deep are your trays?

Prep Equipment / Re: Proofing tray storage

I use both methods. When at home I will use the KA about 3/4 of the time but when away from the house I use hand mixing almost exclusively. For small batches I can't say that I have a preference but for larger batches or multiple doughs machine mixing wins out every time.

Newbie Topics / Re: Do you mix by hand or use a mixer?

I think two things might be responsible, too much fermentation and frying the bread at too low of a temperature. I'd suggest reducing the fermentation time to 3-hours and adjusting the temperature of the frying fat to 370F/188C. Also, I'm guessing that you are using fresh oil for frying, this is not the best to use, though you probably have little choice. Believe it or not, a blend of about 25% old frying fat and 75% new frying fat is superior to 1% all new frying fat. One other thing, be sure to fry the items submerged.

You might incorporate these changes and let us know if you see any improvement.

Dough Clinic / Re: Bubbles in fried dough

Peter;

Wow! You really did dig deep to find that one from 2003!

The SAF/Lesaffre Yeast Corporation water temperature calculation that is mentioned in the article is still available but here it is just in case someone wants it right away.

This is designed for doughs which will have a targeted desired finished dough temperature in the 82 to 88F range.

Here is the calculation:

145 minus flour temperature = desired water temperature.

While this is designed for commercial planetary mixers with a friction factor of about 30 it can be easily modified to any other type of mixer. It will take a little trial

and error, but once you have it it's a handy tool to have.

1) Use the above equation to make a dough, measure the finished dough temperature.

2) If the temperature is more than 5F too high or too low recalculate the water temperature using 145 plus 10 (if the temperature is too low or 140 minus 10 if the temperature is too high).

3) Make a dough using the new calculated water temperature and measure the finished dough temperature. If the finished dough temperature is within 5F of your targeted finished dough temperature you're good to go, if not make another adjustment to the 145 number and repeat.

Once you have the number needed for your mixer to give you YOUR desired finished dough temperature the only variable will be the flour temperature so from that point on all you will need to do is to measure the temperature of the flour and subtract it from "your number" to get the desired water temperature.

New York Style / Re: Processor for NY Style?

There is an old quip that goes something like this "I'd like to help you out but I don't know how you got in", in this case I'd like to help you out but I don't have any information on what you are doing. It would be of great help if you could please provide the dough formulation and complete dough management procedure including frying conditions. I've got an idea but I really do need more information.

Dough Clinic / Re: Bubbles in fried dough

With 0.3% IDY and a finished dough temperature in the 75 to 80F range I've found that 48-hours CF is needed to really develop a decent flavor, and if you can wait that long, 72-hours might be even better. In the end though the fermentation tolerance of your flour and, how well you manage your dough and YOUR specific tastes will dictate the CF time.

General Pizza Making / Re: How to get less rise but more flavor

We're looking forward to seeing your progress.

Dough Clinic / Re: Dough seems too airy after proofing

It's also good to keep in mind when mixing the dough that all you are looking for is a dough with a smooth appearance, once the dough takes on a smooth appearance it has been sufficiently mixed. With time and developed expertise you will be able to better fine tune the dough mixing specific to your dough management procedure and desired finished crust characteristics, but for now I suggest just mixing for the smooth appearance. One other thing, with a food processor it is better to error on the under mixed side than on the over mixed side.

New York Style / Re: Processor for NY Style?

Micko;

Please post the dough formula, mixing and dough management procedure you used to make your pizza. Also, be sure to provide the finished dough temperature. I agree that 45 to 50% absorption seems awfully low, this is more like the absorption that is used to make a thin crispy type of pizza. If the ingredient amounts provided to you were in "pinches, drabs and dribbles, I think we may just need to start over fresh with a dough formula that you can manipulate to give you the desired finished crust characteristics that you are looking for.

Dough Clinic / Re: How to get this dough? Thin crust, crispy (but not dry), puffy and soft inside

My ALL TIME FAVORITE substitute for sauce is to use thin sliced fresh, ripe tomatoes (operative word being "ripe"). Slice about 3/16-inch thick, place on towel to remove excess juice. Brush dough skin lightly with oil, apply fresh garlic and fresh basil leaves and then apply the fresh tomato slices (don't peel) as that's where all the flavor is at. Add cheese and toppings and bake.

Let us know what you think.

Sauce Ingredients / Re: Saucing with uncooked fresh tomatoes

"Cooked sauce, so no worries" about what?

Sauce Ingredients / Re: Recanning Stanislaus Tomato Sauce

A good Neapolitan pizza will need to be baked at a much higher temperature (750 + F). How about a slightly modified New York style pizza formula?

Dough Clinic / Re: Neapolitan pizza in home oven

I can comment on a number of things that I see here.

- 1) The salt level is low at only 1.5% I suggest increasing it to 2 or 2.5% to better control the fermentation rate. This will also improve crust flavor too.
- 2) You might want to reduce the IDY down to 0.3% (a 25% reduction in amount).
- 3) 6-hours out of the fridge before opening the dough is indeed too much, use a thermometer to measure the internal dough ball temperature and when it reaches 55 to 60F then proceed with opening it into a skin. My guess the time will be closer to 2-hours than 6-hours.
- 4) If you really want to have a thin crust you really need to use a rolling pin to fully open the dough ball into a skin and you may need to dock the skin after opening.

General Pizza Making / Re: How to get less rise but more flavor

Your dough looks fine in each photograph, I wouldn't suggest making any major changes except to "make it your own". As long as you have some type of sugar in your dough you can use "00" type flours at the lower baking temperatures, but to be honest with you, I'd be highly tempted to experiment with a more typical bread type of flour rather than the "00". You might like what you get from it, but then again, you might not, try it to find out.

What is the baking time for your pizzas?

The crumb structure looks OK for what you are doing but then again, experimentation might allow you to improve it somewhat. To go this route I'd suggest incrementally increasing the dough absorption (2% increments) to see if that helps.

I'd also experiment with ways to bake the pizza longer, perhaps try laying a piece of aluminum foil over the top of the pizza at the end of the bake and leave it in the oven for an additional minute, or so. See, now that you have a decent pizza to experiment with the real fun begins, that's what I mean by making it your own. Don't be afraid to experiment, just change only one thing at a time and record everything you do, remember, you're making PIZZA, not nitroglycerin so have fun, and remember that your mistakes can taste as good as your successes! :chef:

Dough Clinic / Re: Need Help with Fermentation Process

Your dough really isn't a whole-wheat dough as it is only 36% whole-wheat flour, so it is more correctly referred to as a "wheat" dough. I see that your total dough absorption is 60% which might be a bit low for this type of dough as wheat and whole-wheat doughs tend to perform better at a higher absorption. My suggestion would be to make the dough again but increase the dough absorption to 65% and

fine tune it from there if things look better. Keep in mind that wheat and whole-wheat doughs should be slightly tacky to the touch as opposed to dry.

You may also find that an autolyze will also help. To make the autolyze put all of the whole-wheat flour into a container with an equal amount of water, stir to suspend the flour in the water and let set undisturbed for an hour, then add it to the mixing bowl along with the the remainder of the dough ingredients and mix the dough in the normal manner. You may find that this will allow you to increase the dough absorption even more for an even more open crumb structure.

General Pizza Making / Re: 8h@RT Whole Wheat Pizza Dough

Areed, that's some fine lookin' pizza! :drool:

Next time try something a little different by using some Crisco or some other form of plastic fat (margarine, butter, lard, etc.) on the sides of the pan and use some oil in the bottom, then bring the cheese all the way out to the edge of the pan, that'll put a Detroit twist on your pizzas.

Thick Style / Re: Standard Thick Crust Recipe - Basic Pizza

Be sure to cover the deep dish pans with foil or they will dry out for sure at 110F! I can only say that IF your dough is between 80 and 85F when it is panned and set on the oven it will most likely take between 30 and 45-minutes using the dough formula I provided. We used it for over 30-years so I know how it performs, and other dough formula?

Thick Style / Re: Standard Thick Crust Recipe - Basic Pizza

Andrew;

Whole wheat flour certainly qualifies as a high extraction flour, by definition it is 100% extraction. There are differences between different whole-wheat flours, for example there are whole-white wheat flours (milled from hard white wheat varieties). There are also whole-wheat flours milled from soft white wheat varieties which are referred to most commonly as graham flour. Now you know where graham crackers get their name. For this discussion we will limit ourselves to just the whole-wheat flour made from hard red wheat varieties as they are the most commonly used. There are differences in the particle size of the whole-wheat flour with "stone ground" being the coarsest, and then there is what is referred to as "steel cut" which looks like chopped/granular pieces of the wheat berry (hard to call it a flour), and then there is just a common whole-wheat flour which is what most of us relate to when thinking of whole-wheat flour. Since you are looking at replacing a regular whole-wheat flour with a stone ground type (it isn't actually ground on a stone anymore except maybe by some small independent retail millers), Be aware that the bran pieces will be larger and exert a more pronounced cutting effect upon the gluten film, and the larger pieces of bran will take longer to hydrate so I would highly encourage you to think about using the whole-wheat flour in an autolyze. Use sufficient water in the autolyze to make a thick pasty consistency and let it hydrate for about an hour. To figure the total dough absorption use 60% for the white flour and 75% for the whole-wheat portion of the flour blend and you should be pretty close. Mix the dough just until it begins to develop a smooth skin, DO NOT OVER MIX. Target finished dough temperature will be 75 to 80F. Don't get fancy with fermentation, mix, scale, ball, cold ferment NOT MORE THAN 24-HOURS. Don't skip the cross-stacking and tempering periods after the cold fermentation and you should be fine.

I've never heard of wheat or whole-wheat items described as having a "buttery" aroma, it is almost universally described as being "nutty", however, with that said, in all of my whole-wheat dough formulas I always use butter, seldom ever oil which

does indeed impart a nice buttery aroma and taste to the finished produce, especially when you have the butter (Butter Flavored Crisco works well too) up at 5% or more. Also, you may find that a wheat or especially a whole-wheat dough benefits from a slightly higher yeast level.

You should have no issues at all substituting 25 to 30% whole-wheat flour for an equal amount of white flour in your pizza dough while retaining pretty normal dough handling properties.

Dough Clinic / Re: blending whole wheat?

Between 3/8 and 1/2-inch thick depending upon how thick you want the final crust to be. I suggest starting at something around 1/4-inch thick and then make another one a little bit thicker until you find what you like.

Thick Style / Re: Standard Thick Crust Recipe - Basic Pizza

As the name indicates what you are looking at is ADY (active dry yeast). It is different in a number of ways from IDY but the main thing to remember is that when using ADY it must be hydrated and activated prior to use. Do this by putting the ADY into about 5 times its weight of 100F/38C water. Be sure to put the yeast into the water, not the other way around. The water that the yeast is hydrated/activated in should be considered as part of the total dough water. Stir the yeast to suspend it in the water. Allow the suspended yeast to set for about 10-minutes to activate, then stir and pour into the dough water in the mixing bowl, you are now ready to add the remainder of ingredients and begin the mixing sequence.

Dough Clinic / Re: SAF IDY

While it can be done, I think as a novice, working with high absorption and long fermentation doughs you would be much better served using individual dough containers that have been lightly oiled.

Newbie Topics / Re: Transferring High Hydration Dough from Dough Tray

Just a guess here but I'm guessing that the flour was mis-scaled, maybe only 1000-grams or the tare of the container wasn't accounted for. Try to get a weight on what you have, it might give a clue.

Thick Style / Re: Standard Thick Crust Recipe - Basic Pizza

I don't have any "recipes" but here is a good formula for one;

Strong bread type flour (12 ro 12.8% protein content) 100%

Salt: 1.75%

Sugar: 2%

Shortening (Butter flavored Crisco, butter, margarine, non-deodorized lard, etc.) 4%

IDY: 0.4%

Water: (65F) 64%

Target finished dough temperature: 75 to 80F.

Mix to a smooth dough consistency, take directly to the bench for scaling and balling, wipe dough balls with salad oil, place in individual plastic bread type bags, twist open end into a pony tail and tuck it under the dough ball as you place it in the fridge. Cold ferment for 24 to 48-hours, remove from fridge and allow to warm to 60F INTERNAL ball temperature, roll bag down around the dough ball and invert over a floured surface, flour both sides of the dough ball and using a rolling pin or pastry pin open to a diameter slightly larger than your pan. Prepare the pan

by applying oil to the inside of the pan, you want to have a well oiled pan. Place the opened dough into the pan and set aside for about 20-minutes, then using your hands/fingers finish stretching the dough to completely fill the pan, drape with a plastic sheet and allow to final proof for about 45-minutes (time will be variable depending upon the thickness you want in the finished crust). Dress the skin to within 1/2-inch of the edge and bake or using your fingers, pull the dough up on the edge of the pan just before dressing. Bake at 450 to 500F on a grid type oven shelf. You may need to rotate and change shelf position after about 12-minutes of baking. Remove from pan immediately after baking.

Note: A dark colored pan or a well seasoned pan is by far the best pan to use, a 1.5 to 2-inch edge height is desirable.

Thick Style / Re: Standard Thick Crust Recipe - Basic Pizza

No, why not just pyramid stack them or lay a piece of wood (or how about a table knife) across the top of the bottom containers and then stack on top of that? Where there's a will, there's a way.

Dough Clinic / Re: Need Help with Fermentation Process

I can see a few things that might be creating a problem for you.

1) 25% (400-grams) of your total flour is a durum semolina flour which creates a very tough, elastic gluten. I would suggest replacing the durum semolina flour with your organic bread flour or the "00" flour.

2) You are adding 22% sourdough starter which I think is excessive, try using it at 1/2 of the present level.

3) You mention using the "window pane" test to check for gluten development, this is ONLY FOR BREAD, it is not used for pizza dough as pizza dough is not mixed the same as a bread dough. Instead, just mix the dough until it has a smooth appearance, more mixing than that is not needed nor desirable.

4) Since you have a spiral mixer I'd like to propose a different, more direct mixing method. Put water in the mixing bowl (20 to 21C), then add the starter followed by the flour (all of it), add the salt and mix until all of the flour has been hydrated then add the oil and continue mixing until the dough takes on a smooth, satiny appearance. Measure the dough temperature, it should be in the 23 to 27C range. Take the dough directly to the bench for scaling and balling, lightly oil each dough ball and place into fermentation container(s) , DO NOT APPLY LIDS, leave the containers open in the fridge until the internal dough ball temperature reaches 10C then cover/lid the containers and allow to cold ferment for 24-hours (the dough will probably be at its best after 48-hours). You might want to make some pizzas from the dough after both 24 and 48-hours to see what works best for you. When you're ready to use the dough balls remove from the cooler and place at room temperature ONLY until the internal temperature of the dough ball reaches 10 to 15C, then turn the dough ball out onto a floured surface and open into a skin by your preferred method, dress to the order and bake.

Let us know how this works for you, provide some pictures if you can.

Dough Clinic / Re: Need Help with Fermentation Process

I wouldn't say that your time was limited in any way unless we are talking about a commercial pizzeria setting, but as the dough temperature increased after the cold refrigeration period the dough will not get any easier to work with and in fact, it might even begin to get gassy to the point where bubbles in the dough become an issue.

General Pizza Making / Re: Cold Bulk Fermentation questions

You tossed them out? Remember what we always say; Even our mistakes can taste pretty good too! If nothing else it would have been a good learning experience for you in opening a soft/slack/extensible dough which you might not otherwise get. :(

Dough Clinic / Re: Pizza Dough over rising and deflating?? Help

I've visited a lot of different type of forums over the years and one thing that I can attest to is that pizzamaking.com is one of the most sharing (by all participants), respectful and civil of all the forums. This is in great part due to the tremendous efforts of Peter, which in my world don't go unnoticed. Pizzamaking.com, if not already, is well on its way to becoming the most recognized collective authority for knowledge for the home/hobby pizza maker in the world which is quite an achievement for all at Pizzamaking.com!

Dough Clinic / Re: longer RT sourdough fermentation

Manually flatten the dough on the bench as you would for shaping bread dough to make a loaf of bread (plenty of good videos on the Internet), then fold the ends in a few inches and loosely roll (about 1.5 curls) like a jelly roll, place onto a lightly floured sheet pan, lightly dust the top of the dough and cover with a sheet of plastic and allow to relax for 20-minutes, or just until the dough can be easily rolled to a thickness of 1/2-inch/12.5-mm. for immediate cutting.

Dough Clinic / Re: adding salt too early??

Make the dough again but next time use only 1/2 of the amount of starter. If that improves things you can begin incrementally increasing the amount of starter until you see or experience something you don't like, then back the amount down a little and that'll be the maximum amount you can use of that SPECIFIC starter.

Dough Clinic / Re: Dough is ripping while stretching, help!

After removing the dough from the fridge a good rule is to allow it to warm AT (NOT TO) room temperature until the INTERNAL dough ball temperature is in the 50 to 60F range. The dough will be a little firmer and easier for some to handle at the lower end of the temperature range while at the upper end the dough will be softer and more extensible and easier to open only if you possess the necessary skills to open a soft and extensible dough and peel it into the oven without creating a disaster.

General Pizza Making / Re: Cold Bulk Fermentation questions

A couple of things that I see;

1) I'm assuming the 80 to 85F water is for activating the ADY, but that temperature is not correct, it should be 100 to 105F.

2) You are using ice water, but what is the finished dough temperature. The finished dough temperature is what sets the stage for the fermentation that is to come. If the dough temperature is too cold the dough ferments too slowly and if too warm it will ferment faster than anticipated.

3) I see you are using a poolish, how much of the total flour is in the poolish? How much yeast? Temperature of the poolish? How long do you ferment the poolish for?

4) Hand or machine mixing?

Dough Clinic / Re: Neapolitan crust isn't puffing up

One of the problems you can have by putting the salt into the dough after the fat has been added (high fat doughs only) is that it can be difficult to dissolve and disperse the salt in the dough unless the salt is a very fine granulation salt. The presence of salt in the dough prior to the addition of the fat will not have any

impact upon how the fat disperses in the dough.

Are you making pizza or donuts from this dough? The picture that you attached looks more like a pizza skin. Normally when we open the dough for making donuts we open it to a thickness of about 1/2-inch/12.5-mm. using a rolling pin or a pastry pin to achieve a smooth, flat surface to the top of the dough sheet prior to cutting with a donut cutter for "hand snapped" donuts.

Dough Clinic / Re: adding salt too early??

I'm betting that if you read the label on the bag of flour that it will not mention anything about the addition of malted barley flour or enzymes. This would be an indication that you do not have a malted flour. The two options then would be to add more sugar or to buy some diastatic malt and add that to the dough. With the malt products that you have available to you locally you will need to add between 1 and 2%.

On a different note, I'd suggest investing in a low cost scale as well as a dial/stem type thermometer, this will allow you to begin scaling your ingredients as opposed to using "estimated" volumetric portions for your "recipe". With all of your ingredients in weight measures it will be easy to convert the formula into bakers percent which will then allow you to begin making effective changes to the formula to achieve your specific desired characteristics. By weighing your ingredients you will also significantly improve the consistency of your pizzas from one bake to another.

Newbie Topics / Re: Pale base, sad face.

Bringing the dough balls up to room temperature after CF is probably not the best thing for you to do. Instead, allow the dough balls to warm AT (NOT TO) room temperature until the INTERNAL dough ball temperature reaches something in the 50 to 60F range, keeping in mind that the lower the temperature the easier the dough will be to handle and the higher the temperature (60F) the easier it will stretch, not a bad thing if you have the ability to work with a softer dough condition.

Dough Clinic / Re: Pizza Dough over rising and deflating?? Help

I neglected to mention that in these cases the dough is mixed to just short of the desired gluten development before the fat is added, failure to do so might result in being unable to achieve the desired level of gluten development in the dough.

Dough Clinic / Re: adding salt too early??

When dealing with high fat content doughs it's preferable to add the salt right up front in the mixing process and hold the fat out (like with the delayed oil addition mixing method) only this applies to all types of fat, both liquid and plastic. The reason for this is because at high levels, in addition to interfering with flour hydration it also plays havoc on gluten development often resulting in atypically long mixing times.

Dough Clinic / Re: adding salt too early??

When we say 100% fermentation we are saying that the dough has been fully fermented (ideally fermented) for the product being made under a specific set of conditions. For most white pan bread doughs using the straight dough procedure and a finished dough temperature of 80F. 2.5-hours of fermentation time is typically considered to be 80% fermentation. However, this can change dramatically if you have a different finished dough temperature, more or less yeast, more or less salt, or a very strong flour. This is why we seldom use this expression

of fermentation anymore. The one thing that we do concern ourselves more about is the fermentation tolerance of a flour, some flours are very tolerant to fermentation while others are not. We can see this with some of the Caputo flours where not more than 12-hours of total fermentation time is recommended. When I first started doing my research on pizza back in the mid-1960's it was thought that both bread and pizza production shared the same technology, but as we got into understanding more about pizza it was clear that pizza production had a technology of its own and it took us many years to unravel that technology.

Dough Clinic / Re: very sticky dough

It's important to note that in addition to daily filtering of the frying fat and cleaning of the fryer they are adding fresh oil every day too, this is important to note since by doing so you are continually diluting the old frying fat. In commercial operations it is not unusual at all to end up replacing 50 to 100% of the fat weight on a daily basis.

Off-Topic Foods / Re: How many times do you reuse your frying oil?

Probably not as you want a pizza dough to be more relaxed than it would be for making bread. If the dough is not relaxed (through fermentation) you will only be fighting it as you're trying to open the dough into a skin, and then if you are successful, it will most likely just shrink back in size during baking.

Dough Clinic / Re: very sticky dough

QJ;

If you don't mind the garlic a bechamel sauce works well or if you want something a bit more subtle a basic Alfredo sauce can be used equally as well.

Dough Clinic / Re: turkey pizza with leftovers?

I should also add that if you are mixing the dough by hand the preferred method for adding IDY is to put it into about 5 times its weight of 95F water (the temperature is critical with IDY) and all you need to do is to stir it to form a suspension, you can then add it directly into the remainder of the dough water in the mixing bowl. If you have the salt in the water in the bowl it's important that the flour be ready to be added immediately following the addition of the IDY suspension. Also, unless you're doing it for the exercise, there is no benefit to stirring the salt into the water, just dump the salt and proceed to the next step. When it comes to making yeast leavened doughs temperature reigns supreme. Since temperature is the #1 driver of fermentation you will want to control it very closely and record it as part of your dough record keeping. For most of us, a finished dough temperature in the 75 to 80F range works well and if you're cold fermenting the dough we have some good practices for effective dough management posted here that might help you.

Neapolitan Style / Re: yeast - fresh, IDY, ADY revisited

Amen! With practice comes proficiency, with proficiency comes new and even more exciting things to explore along the pizza making journey.

Dough Clinic / Re: very sticky dough

Walter;

Remember the the battle cry of us AARPers! Work smarter! Not harder! :-D

Shop Talk / Re: Rounder and divders

Rancidity will even occur in the refrigerator or even the freezer. If it's going to be

that infrequently it's a moot issue, fry, drain and discard.
If this is for a commercial application write it off as a bad idea.

Off-Topic Foods / Re: How many times do you reuse your frying oil?

The ascorbic acid is added only to counter the softening effect of the glutathione (yes, some is released during the drying and rehydration process).

The specific strain of S.C. used in the SAF GOLD has a high tolerance for sugar, but remember, SAF/Lesaffre is a French company so it was developed specifically for the French baking industry where low salt levels are employed when high sugar levels are used, this is why we see such limited use of it here in the U.S. as we typically use both high sugar and salt levels at the same time.

By the way, there is also a GREEN LABEL SAF which was developed specifically for use in frozen dough systems. We looked at this one too and didn't find there to be sufficient difference in performance over RED LABEL to justify its increased cost. Again, this is why we don't see it used more than we do. You might say that it's hard to improve upon something as good as SAF RED LABEL.

Dough Clinic / Re: SAF IDY

The big question though is, what are those individuals going to do once this is over?

Dough Clinic / Re: yeast and flour supply chain?

Freezing, the great equalizer.

Chitchat / Re: Even during a pandemic, we'll never be this hungry

When things normalize the hoarders will be sitting on a life time supply of unopened bags of flour. I'm betting that very few even know how to make bread and even fewer will ever try their hand at it after they can just pick it off of the supermarket shelf. Has anybody heard if there has been a run on MREs (meals ready to eat/modern day military rations)? I used to see people buying that stuff by the pallet! I think as much, if not more went to the civilian market as went to the military.

Dough Clinic / Re: yeast and flour supply chain?

It sounds like you're using too much oil, just brush the top of the rim with oil, as the rim expands it will roll the sides down allowing the top to expand and become the outer edge of the rim. The thing about oil is that a little does the same job as a lot when you're putting it on the rim before baking.

Dough Clinic / Re: Oil in rim sticks to peel

Not all that well. It has a high tolerance to sugar but a VERY POOR tolerance to salt, so unless you are using 1% salt or less, I don't recommend it.

Dough Clinic / Re: SAF IDY

Back in the 80's during the great pizza price wars which also brought us "extended cheese product" (they had to do something to keep the price down) and since no one thought much of the quality of a frozen pizza it really didn't matter because as mentioned, even back then people were buying the cheapest on the shelf and "doctoring" with their own toppings. I worked with a frozen pizza company (Fellini's Pizza) out of Topeka, KS at introducing the first really value packed frozen pizza (preceded Tony's Red Baron). While essentially all frozen supermarket pizzas were selling for \$1.00 each or a little less we developed and introduced an 11-inch frozen pizza that was REALLY LOADED with toppings (you could visibly perceive

the value in that pizza). We sold it for \$3.00 for a single topping and \$4.00 for two toppings (in addition to cheese). For the cheese pizza we used a cheese blend along with 1/3 more cheese on the pizza (8-ounces total). The pizza was a huge success and it continually sold out at all of the Dillon's Stores here in Kansas. The television ad that was developed for it was as follows: A gurney is wheeled by a team of doctors and nurses towards the double doors of the operating room (this was shot at Stormont Vail Hospital in Topeka but when by a different name back then I believe) as the gurney approached the doors a nurse pulls back the sheet and proclaims " Wait! This is a Fellini's Pizza, it doesn't need to be doctored". Pretty corny I know, but it worked, it got the message across.

Chitchat / Re: Even during a pandemic, we'll never be this hungry

A short time ago we discussed bulk and ball fermentation here. With such a small size dough you will not achieve any benefit to bulk fermentation. Because of this I'd suggest just balling the dough and then giving it the room temperature fermentation, then turn it out of the container onto a floured surface, flour the dough ball and open it into a skin ready for dressing and baking. You don't even have a pastry pin?

Neapolitan Style / Re: What factors influence the amount of air in the cornicone?

My first introduction to pizza was the Chef Boyardee home pizza kit about 60-years ago, as a kid I liked it but today it makes anything sold on a cardboard circle from a frozen case look pretty darn good but as noted, over time our tastes do change. That doesn't make them anything less of a pizza, they're just not at the top of my list anymore. But it is nice to know that when things get tough, it's not burgers and dogs, or even Mac & Cheese that people turn to in desperation, it's PIZZA! Doesn't make any difference the "ilk" of it, it's still PIZZA! :pizza: :pizza: :pizza:

Chitchat / Re: Even during a pandemic, we'll never be this hungry

As a rule, the colder/cooler the dough is going into the oven the longer it will take to achieve the same bake as a warmer dough at the same oven temperature but this difference is all but impossible to see in anything but an air impingement oven as the difference is measured in seconds, not minutes. You can also impact the baking of the top of the pizza by using colder toppings. We were able to see differences in top bake with cold v/s warm sauce and cheese in our deck ovens at 500F more so than in our air impingement ovens at 475F. You mention that you feel that your dough could use more water, why don't you increase the dough absorption in 2% increments to see what that does for you? A couple percent increase in dough absorption will not mandate a change in oven temperature. I normally think of pizza doughs as having a typical dough absorption in the 62 to 68% range for a N.Y. style pizza, cracker style doughs are a lot lower in absorption, typically in the 40 to 50% range with thin crispy doughs coming in at 52 to 56%. There are a good many Neo. style doughs as well as "traditional" style doughs which utilize what I refer to as high absorption (above 70%), these doughs can have an absorption of anywhere from 70 to as high as 82% with most probably falling in the 75 to 78% range.

Dough Clinic / Re: Correlation between hydration and cook temp and time

From what you are describing as well as your comments on "pushing" the dough lead me to believe that you might have a problem in the way you are opening the dough. Here is something to try, open the dough using a rolling pin or pastry pin but DO NOT open it to full diameter, instead just open it to within 36 to 50mm of

the full diameter, then finish opening the skin to full diameter by hand. Be sure to provide us with the dough ball weight and diameter pizza you are making.

Neapolitan Style / Re: What factors influence the amount of air in the cornicone?

My feelings exactly! ^^^ ^^^ ^^^

Let's put this in context here, someone buys a frozen pizza from you, just how long do you suppose they are going to sit on it before consuming it? An educated SWAG says less than a week. You can freeze just about any pizza or raw dough for that matter for up to 15-days without any disastrous change in quality, so if you put a manufactured/made-on date as well as a use-by date on the package quality should not be an issue, ingredient labeling, well that's a different issue. You just want to make sure you don't sell the pizza to someone who has an allergy specific to an ingredient or topping that you are using.

Shop Talk / Re: frozen/vacuum sealer pizza for delivery and pickup.

I'm not sure I fully understand your question but as far as shortages in flour and yeast are concerned it is my understanding that neither is in short supply, but there are some regional supply/distribution issues especially at the store/supermarket level. From what I've seen and heard yeast is still widely available from on-line sources, many have said the same for flour but shipping costs can dramatically increase the cost. You might check out any local restaurant supply facilities as they should have a good inventory of flour, maybe not exactly what you want but then this is a good time to learn to improvise. How long will this last? That's impossible to say but I think what we are seeing is spot shortages, none on the shelves today but they were full yesterday.

As to how often you should be baking bread and pizza, wow! That's a tough one to answer. I've got something over 200-pounds of flour on hand with plenty of yeast and baking powder so I'm pretty well set-up for the near future. Right now I bake every other day or so, bread, pizza, calzones, pies, cakes and kuchen. Yes, we have two chest freezers in the basement full of venison and pork as well as frozen and dehydrated vegetables, fruit and berries all from last years harvest so we're not in the same boat as our city brethren, the point is make what you can as often as you can with the amount of supplies you have on hand and as you're out and about on a "necessities" run keep an eye out for something you can use to justify firing up the oven. I was out this morning and I could have snagged two bags of KA Whole-Wheat Flour on the shelf or a couple cans of baking powder but I didn't.

Dough Clinic / Re: yeast and flour supply chain?

Not all foods are prone to clostridium contamination, clostridium is primarily soil borne, so think about things like garlic, carrots, onion, vegetables, etc as being more prone to it. Meats and fruits seem to be pretty safe but after that you're on your own. Just because something can be vacuum packaged doesn't mean that it will be safe to eat, the same can be said about canning foods too. If one wants to do something for their own family, that's fine, let's pray that nothing goes terribly wrong, but when we begin to market the product to other people, outside of our immediate family one has an obligation to ensure that food item is safe and sanitary, in my world playing Russian Roulette is not considered to be a safe activity so I'd rather see it frozen than vacuum packaged unless you have the microbiologist on staff to certify its safety.

Shop Talk / Re: frozen/vacuum sealer pizza for delivery and pickup.

Chlostridium aka botulinum is not destroyed by heat as its the aflataxin that's so

deadly. It can still be present after baking. Since its an anerobe it doesn't grow in the presence of air only in an anaerobic environment (like a vacuum sealed package). There have been two documented cases of clostridium in vacuum packaged tortillas and one in bread from back in the 50's. The last case of clostridium poisoning that I read about was back in the 90s? where a young housewife in Indiana canned some low acid tomatoes using a high acid tomato recipe, the entire family died. Garlic is also a good or better candidate for clostridium when added to oil.

Shop Talk / Re: frozen/vacuum sealer pizza for delivery and pickup.

Restaurants, bars, pizzerias, buffets all ordered to shut down to any dine-in, only DELCO is now allowed. The places not impacted are those that do delivery only like Domino's, the various sandwich shops, and Sonic. Most are hoping to just retain staff during these trying times, profits are on the back burner for now.

Shop Talk / Re: how is the Corona virus affecting business?

Again.

Only open what you need, the rest is already canned. If canning something twice would improve the product I'm sure Stanislaus would be doing it. Freeze only the remainder of the opened product, if you absolutely must, can only that portion of the opened cans. If you're worried about being able to get future product, deviate from your "norm" and use just a single product on your pizzas (desperate times call for desperate measures). I personally prefer to use just the 7/11 ground whole tomatoes (with peel) as my "go to" sauce. Another favorite is 74/40 Tomato Filets (I use the drained juice for my pasta sauce base) and the Saporito is used for what I call my "chunky" sauce.

I've been making more pizzas lately using just the frozen tomatoes from last years harvest, I drain off the juice and use the tomato for my sauce. The juice is used as a base for our next meal based on pasta. Last night I marinated a couple of chicken breasts in the drained juice then cooked the chicken in the marinade, cut it into pieces, added some vegetables (from the freezer) and cooked them in the marinade too, I then seasoned the marinade and added the cooked pasta and diced chicken, with some grated Parmesan cheese on top we had a great meal. Like I said, desperate times.....

In the end though it's your call.

Sauce Ingredients / Re: Recanning Stanislaus Tomato Sauce

Jack;

10-grams divided by 600 X 100 = 1.66% yeast. If it is ADY (active dry yeast) the level should be 0.5% or about 1/3 of what you are using. If it is IDY (instant dry yeast) the level should be about 0.375% or 22% (1/5th) of what you are using. Remember that with hand mixing the dry yeast, regardless of which type you're using should be suspended in about 5 times its weight of warm (100F) water prior to addition to the dough. If you are using ADY you will want to wait about 10-minutes for the yeast to begin to activate before adding it to the dough water but if you're using IDY all you need to do is to suspend the yeast in the water by stirring in well and then adding it to the dough water.

Check your finished dough temperature too, you will be looking for a temperature in the 75 to 85F range for hand mixed dough. This is adjusted by the temperature of the dough water.

After you take the dough out of the fridge only allow it to set out at room temperature until the internal dough ball temperature reaches 60F, more time than that is not necessary and will probably put your dough opening skills to a greater

test.

Dough Clinic / Re: Dough seems too airy after proofing

DO NOT vacuum package the pizza as there is a potential for clostridium. All of the commercial operations use MAP (modified atmosphere packaging) but not vacuum. If you search back through the archives you will find earlier discussion on this topic.

Shop Talk / Re: frozen/vacuum sealer pizza for delivery and pickup.

I'm confused, why are you wanting to can 80-pounds of product when it is already canned? Why not just open a single can, use what you need and then break the remainder of the can down into smaller containers (about the amount you usually use in each container) and freeze? The other, unopened cans can be put away on a shelf for later use as you need it. It keeps very well.

Sauce Ingredients / Re: Recanning Stanislaus Tomato Sauce

Why not just make a higher absorption biga? Put the water in the bowl first along with the yeast and then whisk the flour into the water as well as you can. This should give you a finished biga that will incorporate much more readily.

Starters/Sponges / Re: Need help with biga dough

I'm betting that the issue you're experiencing is mostly due to the agitator (dough hook) on your mixer. It is not really a reverse spiral design and it is very thin (small diameter) so it tends to drive through the dough without imparting as much stretching/kneading action that a thicker or cast agitator would impart. This means that your mixing time will need to be longer or at a higher speed if that is possible with your specific machine. In any case, try mixing your dough until the dough just takes on a smooth appearance and has an extensible skin.

Keep us posted on your progress.

Dough Clinic / Re: Pizza dough is instable and breaks/tears apart.

Most pans manufactured for baking, like bread, cake and sheet pans are anodized, with any other pans you will need to check the label or pan specifications.

QuertyJuan brings up a good point, if you put a drop of concentrated detergent on the pan and leave it there for 15-minutes and the aluminum turns dark or black it isn't anodized but if no change in color is observed it's most likely anodized.

The problem with raw (non-anodized) aluminum and dough is that the dough becomes progressively more acidic as it ferments and anything that is acidic or caustic (like soap) will at the very least etch the aluminum removing any oxidation in the process and leaving a very clean surface on the aluminum. The downside is that the food can easily pick-up a metallic aftertaste due to the aluminum oxide.

Dough Clinic / Re: Aluminum pans

QJ;

Excellent point but the Caputo Red should be sufficiently strong. Let's see what the "dough hook" looks like, it appears to be quite thin and if in the old "C" configuration it may not be developing the gluten very well.

Dough Clinic / Re: Pizza dough is instable and breaks/tears apart.

I'm guessing that your pans are not anodized to prevent oxidation. Aluminum oxidizes quite fast and what you are seeing is most likely the oxidation transferring to the dough. Next time make sure the pans are anodized to prevent this from happening. You can still salvage the pans though by wiping the INSIDE of the

pan(s) with salad oil and baking in a 400F oven for about 30-minutes. Do this twice and then treat them as you would a seasoned baking pan.

Dough Clinic / Re: Aluminum pans

The dough does not appear to be very well developed even after 10-minutes of mixing, I can't tell from the pictures what the dough agitator/hook looks like, could you please send a picture of it laying flat on your work surface? Typically, a properly developed dough is mixed just until it takes on a smooth appearance which I do not see in any of the pictures. Just trying to figure out why.

Dough Clinic / Re: Pizza dough is instable and breaks/tears apart.

No salt? Crust must taste awful.

Would need more information on mixing time, dough temperature and dough management procedure used.

Did the dough feel the same after 2-days than it did on the first day? I'm guessing it's related to the dough being initially under mixed but that as it fermented biochemical gluten development occurred which would toughen the dough significantly. Without more information that the best guess I can offer.

New York Style / Re: Dough with its own mind and mutated like a virus

Two main reasons;

- 1) The dough will open a lot easier at 60F than at 40F.
- 2) The dough will exhibit a pronounced tendency to bubble at the lower temperatures to the point where you are almost guaranteed a bubbling problem with a 40F dough going into the oven.

Dough Clinic / Re: Cold Dough

Since you have two dough balls, unless you need both at the same time, use one now and let the other one go for an additional 24 hours to see which one you like the best.

Dough Clinic / Re: 48 hrs bulk ferment - 12 hours ball ferment?

When comparing the nutritionals of whole-wheat flour against an enriched white flour the only difference is in the fiber/bran content of the whole-wheat flour. This is due to the fact that enriched flour is enriched to the same level of vitamins/minerals as whole-wheat flour. Comparing whole-wheat flour to a non-enriched white flour the cards are stacked in favor of the whole-wheat flour as the most nutritious part of the wheat berry is associated with the bran fraction, just like apples and potatoes, when you remove the outer skin you also remove the most nutritious part.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Beautiful cutter! Is it available with a 4 or 5-inch wheel? Over the years we found that the larger diameter wheels cut better in that they disrupted the top of the pizza less than the smaller diameter wheels.

It's hard, if not impossible to find a really good cutter with the larger diameter wheel.

Stones/tiles/steel, Pans & Accessories / Re: KA Cutter

Your math is indeed correct. ^^^

Just remember to scald and then cool the liquid milk before using it and you're good to go.

Dough Clinic / Re: Yeast donuts recipe?

Easy to do;

We have 56% absorption for the dough which represents all of the water added to the dough, so if we calculate 12% of 56% (56 X 12 press the "%" key and read the answer in the display) we find that if all of the liquid added to the dough was liquid milk the total milk solids contribution would be 6.72% (only 1% more than called for but still within the normal range for milk solids) so in this case we can substitute the water with 100% liquid milk and add the difference (6.72%) in water. If you want be be specific and add the specified amount of dry milk powder called for in the dough formula you will need to replace 48% of the water with liquid milk then add 8% water plus 5.75% water for a total of 13.75% water in addition to the 48% liquid milk.

As far as the type of milk, it really doesn't make any difference as long as it is liquid milk ready for drinking (as opposed to being concentrated).

Dough Clinic / Re: Yeast donuts recipe?

By us, here in Manhattan, Kansas Tony's brand and DiGiorno brand pizzas are the premium brands on our supermarket shelves and with each trip to the store I always check to see what is moving and what isn't, it's been a very consistent observation that many of the low cost pizzas are sold out or are in limited supply as compared to the higher priced/premium brands. My Econ. 101 class explained that by stating that the more expensive something is the fewer will be sold, which explains why we see more Fords on the road than Rolls Royce. :-D

Chitchat / Re: Even during a pandemic, we'll never be this hungry

I've seen the same thing but what I'm seeing is that only the higher priced pizzas are left on the shelves, all of the Roma's, Tombstone, and other "bottom feeders" are gone. Wonder what pizzas were on either side of the Tony's? They're gone, just stating an observation.

Chitchat / Re: Even during a pandemic, we'll never be this hungry

High heat treatment is the only one to use for yeast leavened products, any of the others can be used for chemically leavened products. Due to its cost, today many bakeries don't use dry milk powder in their yeast leavened products, instead they will often use milk replacers/substitutes designed specifically for that application. The function of the milk powder in the yeast raised donuts is to help retain moisture, contribute to crust color development, and impart flavor. The calcium content also functions to help buffer the acid formation during fermentation which is part of the flavor improvement achieved with the use of milk.

Am I missing something? I fail to see an issue here, if high heat treatment aka bakery grade dry milk powder is not available all one has to do is to use liquid milk and heat it just until it begins to boil (scald it) then allow it to cool and use it as part of the total liquids content, just remember that liquid milk is approximately 12% solids, the rest being water. This is what bakeries and home bakers did before high heat treatment milk powder became available.

Dough Clinic / Re: Yeast donuts recipe?

Alex;

I'd say that is a pretty fair summary as I see it.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Absolutely! It only needs to be opened once after you put the dough balls in to introduce enough warm air to form a skin. In some cases a skin might form but it

will only be a dry (not crusty) skin which isn't too much of an issue but if you want to address it you can always drape a damp towel over the containers for the cross-stack period, that should fix the problem regardless if the door is opened or not.

Dough Clinic / Re: Coating dough balls in oil for high temp bakes

They are one and the same, just of a finer consistency.

Dough Clinic / Re: Yeast donuts recipe?

Alex;

I think you hit the nail right on the head! The protein level indicated for a whole-wheat flour can be misleading, because there is about 1% protein bound to the bran portion of the flour the total protein content of a whole-wheat flour is about 1% higher than its white flour counterpart BUT that !% extra protein is not typically comprised of gluten forming proteins so it doesn't do anything for the strength of the flour. If you cannot find a higher protein content whole-wheat flour you can always add VWG to the existing whole-wheat flour, the amount to add should raise the total protein content of your flour by 3%, since 1% VWG increases the protein content by 0.6% you will need to add about 5% VWG plus the necessary extra water $1.7 \times 5\% = 8.5\%$ extra water.

By the way, just because the spelt flour has 14% protein content doesn't mean that it's all gluten forming protein, I seriously doubt that it will work for you without the addition of VWG.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Looks like a winner to me! :drool:

Newbie Topics / Re: First Attempt at Lehmann Dough - The Results w/ Photos

Thin dough skins and extra heavy on the toppings is not a good mix for a number of reasons. If it were me, I'd be making the dough a little thicker (same diameter but greater dough weight), also you can try placing those cherry tomatoes sliced side down on a clean towel to remove some of the extra moisture from the cut surface. I do this all the time when I use nothing but sliced fresh/ripe tomato for my "sauce". You might also consider applying a very light application of oil over the center of the skin before adding the sauce, this will help to create a moisture barrier keeping the moisture on top of the skin rather than allowing it to soak into it or worse yet, through it.

Neapolitan Style / Re: Thinning Dough

A good temperature to final proof the dough balls at would be between 70 and 75F/21.1 to 23.9C. so your 24C location should work fine.

When re-rounding the dough don't try to make them into cannon balls that Napoleon would be proud of, instead lose round them (just get them into a round shape) and I think you will be OK.

Dough Clinic / Re: Pizza dough is instable and breaks/tears apart.

Good point! I was assuming he was using KA Whole-Wheat flour (14% protein content) as he alluded to, but then.....maybe someone needs to pin a tail on me. :-D :-D :-D

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Like with everything, there is always a possibility. I can say that in many cases too much oil is being added to the dough ball which is why I always emphasize wiping

a light coat of oil onto the dough balls. If you can see a shine on the surface of the dough there is sufficient oil to do the job at hand. The next time you make dough apply the oil as sparingly as possible to see if that has any impact. In some cases we've found that oil is only needed on the top of the dough ball, it is not needed in the container. For whatever reason with some containers the dough does not seem to adhere very well and it will fall free from the container with minimal distortion. Here's another trick you might try to see if it works for you, as you round the dough place the balls on the bench and lightly dust the top of the dough balls with flour (I like to use semolina flour but try your regular flour too), then place the dough balls into the un-oiled with the floured (top) side down, very lightly oil the top of the dough balls and CF as usual. Now, here is something else to ponder, according to the laws of physics (hard to argue with them) cold air holds less moisture than warm air so contrary to popular belief, things DO NOT dry out due to being placed in the fridge.....UNLESS YOU KEEP OPENING THE DOOR which allows warm air to enter which is the culprit when it comes to drying out the dough balls. If you have a dedicated fridge for the dough balls or if you can resist the temptation to open the door UNTIL YOU ARE READY TO DOWN-STACK/COVER THE CONTAINERS you might find that you don't even need to use any oil. Where the oil application is essential is in commercial practice where the dough boxes are placed into a common walk-in or reach-in cooler and the door is constantly being opened and closed plus there is significant airflow to provide a consistent temperature throughout the cooler (this is not present in a home fridge, at least none that we have ever owned), so there are some things for you to explore. Please let us know if any of these work for you.

Dough Clinic / Re: Coating dough balls in oil for high temp bakes

When it comes time to open the dough balls don't be afraid to use dusting flour, after getting the ball pretty well opened place it on a wood prep peel with some fine corn meal as peel dust, finish opening and dress to the order, bake immediately. Let us know how it turns out.

General Pizza Making / Re: Is this dough going to work...?

Alex;

If you are following the dough formula and procedure as shown in the video I would suggest that you look at incrementally increasing the % of yeast used in the dough formula to achieve a more open crumb structure.

What do you mean by: "That towel technique" to open the dough balls into skins? You also say that your crust burns quickly in your oven, have you confirmed the ACTUAL temperature of your oven using something like an infrared thermometer? You mention that the dough is elastic when you go to open it, is it REALLY elastic or do you mean extensible. Elastic is like a rubber band, where you stretch it out and it pulls back or fights you as you try to open it. Extensible is when the dough is easy to open and stays put/retains its shape when you place the skin on a peel. This is an important distinction as a whole-wheat dough that is too elastic might actually be under absorbed. Most whole-wheat doughs will require about 75% total dough absorption, your total dough absorption is less than this so it might be something to consider.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Because you get better gluten development at the higher "kneading" temperature. Isn't that why we are kneading the dough? ??? The lower temperature at the time of opening the dough ball(s) into skins serves two purposes, one is that it makes the dough easier to handle and form into a skin and two, it allows for a broader

window of time to use the dough in. This is especially important in a commercial (pizzeria) setting. Most pizzerias target their opening temperature for 50F but for home application where we are only opening a couple of dough balls within a fairly short period of time we can use a higher temperature which is typically around 60F BUT keep in mind that a warmer dough can be more problematic to open if one is not skilled in opening the dough balls into skins so for home applications I will frequently suggest beginning to open the dough balls into skins at 50F and as your level of ability increases begin increasing the temperature at which you open the dough. A really skilled bench person can open doughs as warm as 85 to 90F without too much of a problem, but as we all know, many home pizza makers are not yet at that skill level. As the old adage goes: "Different strokes for different folks."

Dough Clinic / Re: Questions about temperature?

Alex;

After mixing the dough what does it feel like? Select one: Dry, Tacky, Sticky, Smooth.

What is the temperature of the dough after mixing?

I see that you are using "dry yeast" what kind of dry yeast is it? Select one: Active dry yeast, Instant dry yeast.

How are you adding the yeast to the dough?

Have you tried making your dough without the honey? Honey will contribute to a darker crust color and possible burning at high baking temperatures.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Sure, 100% bread flour will work just fine. If you notice, I have the "Crisco" shown in brackets to give an example of what is meant by All Purpose Shortening, any non-emulsified all purpose shortening will work just fine in this application.

Dough Clinic / Re: Yeast donuts recipe?

To answer your questions;

1) What you are describing is a type of autolyse (I use an almost identical method when hand mixing the dough all the time) which is well recognized as being beneficial when hand mixing and kneading the dough as it allows for better dough hydration.

2) You will ALWAYS get a more consistent dough if you go directly from mixing/kneading to scaling, balling and into the fridge/cooler.

3) While there is a difference in crust flavor between R.T. and C.F. we have never been able to distinguish a hybrid flavor resulting from the use of both. Take your pick, which do you like and go for it. I do realize that both methods are frequently employed and in cases I've recommended it myself but it has always been for a dough management reason not to develop a specific flavor profile in the finished crust.

4) We have investigated that and found just too many variables to draw any significant conclusions. Included in the variables are flour protein content, fermentation tolerance of the protein, dough absorption, dough formulation, dough temperature and ambient temperature. Conclusions COULD be drawn from a specific dough formula produced under controlled conditions with a specific lot of flour but in reality the data wouldn't be all that useful as the results would change with a different lot of flour (flour is NOT consistent) as well as with any change in the finished dough temperature and if your dough formula wasn't the same as that used to develop the data again it wouldn't be relevant.

Dough Clinic / Re: Proofing dough before/after cold ferments?

I'm not sure exactly what you are trying to accomplish, but if it's to look at the baking properties of different doughs you have to put something on top of the skin during the baking process as the baking dynamics are totally different for a plain skin (we'd call it a par-baked skin). The easiest thing to do is to just sauce the skin and then bake it by your preferred method, the results which you see should translate pretty well to a fully dressed pizza baked under the same conditions.

Newbie Topics / Re: Newbie Pizza Dough Cooking Test

They are essentially the same, but the milk powder must still be heat treated for bakery application. If the product is intended to be reconstituted for drinking or cheese manufacture it is not a heat treated dry milk product. You will need to contact the manufacturer to find out if the milk powder has been heat treated for bakery applications. You might also check around at some local retail bakeries to see what kind of milk powder they're using in their yeast leavened products. When I had my shop we used to make the dough and cut the donuts on one day and then place the cut donuts on parchment lined sheet pans which were placed in the cooler, on the following morning they were removed from the cooler and placed onto proofing screens and then placed into the donut proofer for final proofing before frying. This allowed us to have yeast raised donuts ready for sale about 1.5-hours sooner than if we had to make the dough that morning. The dough will only be good for 1-day.

A 10-L mixer should work well to get you started.

Dough Clinic / Re: Yeast donuts recipe?

I don't know anything about the dough formula he is using but you might want to try adding VWG (vital wheat gluten) to the dough formula. I would suggest starting with a 5% addition and then working up in 3% increments from there. Remember to blend the VWG into the flour to prevent pilling and also remember to increase the dough absorption by 1.7% for each 1% VWG added. The other option to look at is the use of Ultra Grain whole-wheat flour which while still whole-wheat flour has significantly different handling properties than the more conventional whole-wheat flours.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

To answer your questions in the order presented;

1) The type of mixing greatly factors into the heating of the dough during the mixing process, as a very general rule, the slower the mixing action the less heat build up there will be due to friction between the bowl and the dough BUT in some cases this can be off set by a significantly longer mixing time which can result in significant heat generation.

2) Wheat proteins disassociate (come apart) at warm temperatures which is why a dough will be extremely soft and sticky at temperatures approaching 100F this softer and more extensible dough will not exhibit the same amount of bowl friction as a cold dough which is much firmer/stiffer. Cold doughs do not hydrate or develop gluten as well as warmer doughs do so you might say that a compromise temperature (the Goldilocks Temperature Range) of 70 to 85F provides doughs which will exhibit rapid flour hydration combined with good gluten development and decent handling properties.

3) 1F per hour on average.

4) Yes and no, a higher protein flour will typically be a stronger flour which will require more fermentation to give a finished dough that has the desired dough handling properties. Since temperature is the driver of fermentation one of the

things that we can go is to increase the finished dough temperature to achieve a faster fermentation rate, hence more fermentation within any given period of time. With that said, we can also simply allow the dough to ferment for a longer period of time or even increase the yeast level. Each of these has pros and cons which will influence which is the most appropriate action to take based on the dough management procedure we're using.

5) I'm not sure what you mean by "enabling the yeast" but sugar hydrolyzed into nutrient for the yeast to feed upon during the fermentation process (any residual sugar is utilized in the browning reaction to provide crust color and in some cases flavor). It is well known that small amounts of sugar (about 2%) have little impact upon the fermentation rate but at higher levels the osmotic pressure exerted by the sugar upon the yeast will actually have a suppressing affect upon the fermentation rate, however at the same time it can also provide sufficient nutrient to allow for longer fermentation periods if necessary. Salt has a suppressing effect upon yeast activity. At levels above 2.25% we begin to see this, and at 3% and above the impact can be significant. Increasing the temperature will have no impact upon the yeast in this case so the usual action taken is to increase the yeast level.

6) No.

7) 34 to 40F (most will target for 36 to 40F)

8) 50F for a pizzeria and anything in the 50 to 60F range for home pizza making.

Dough Clinic / Re: Questions about temperature?

What disappointing characteristics have you been finding? Remember that different mozzarella cheeses will perform differently under different baking conditions.

Pizza Cheese / Re: Spotting LM Mozz from the nutrition label?

We developed that procedure for use with commercial frozen dough which is made without any kind of fermentation at all (fermentation before the freezing process is detrimental to long frozen shelf life properties of the dough) so it's awful in the taste and aroma department when it comes to the finished/baked crust. That procedure actually provides a pretty decent flavor to the finished crust, at least when compared to the alternative.

General Pizza Making / Re: Specific Dough Freezing Question

When you are mixing your dough with a mechanical mixer it is not necessary to allow the dough to rest at any time during the mixing process. Your math is correct. ^^^

Dough Clinic / Re: Pizza dough is instable and breaks/tears apart.

The problem stems from the use of 100% whole-wheat flour, you will not get an extremely open crumb structure as you do when using white flour. By nature whole-wheat items are more dense than those made with white flour. This is due to the roughly 20% bran content of the whole-wheat flour, it absorbs a lot of water and it has a cutting and disrupting effect upon the gluten structure neither of which is conducive to a very light, open crumb structure. Whole-wheat flour is best when used to make relatively thin crust pizzas if any kind of crispiness is desired. It can be used to make thicker crust pizzas as well as pan style pizzas but crispiness is generally not going to be a strong point.

I've had my best whole-wheat pizzas when baking at 260C both top and bottom. At this temperature I can bake the pizzas sufficiently long to get the crust thoroughly baked without burning the top of the pizza.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Gus;

You might try leaving the door cracked open a bit during the last part of the baking process to allow for ventilation of some of that steam out of the oven, this should give you a crispier finished pizza if that is your quest. Otherwise, steam will give you a soft and soggy pizza.

Dough Clinic / Re: Steam oven

Nope, scale and ball the dough immediately after mixing. The dough will feel soft and tacky but don't let that discourage you as it will improve during the fermentation period. No need for stretch and fold as biochemical gluten development will take the place of that for you.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

When you go to use the frozen dough place it in the fridge overnight to slack-out/thaw, then bring it out to room temperature and allow it to warm to about 55F internal ball temperature before opening it into a skin for use.

Another good way to manage your frozen dough is to make the dough with little to no fermentation time prior to freezing it, then in preparation for use, slack it out in the fridge overnight, then bring it out to room temperature until the internal dough ball temperature reaches 55 to 60F, reball it, lightly oil the dough ball and place into individual plastic (bread type) bags, twist the open end to close and tuck the pony tail under the dough ball as you place it back into the fridge to cold ferment for 24-hours. Remove from fridge and allow to warm to 55F (internal ball temperature), then roll the bag down around the dough ball and invert it over a flour dusted bench/counter top, or bowl of flour, flour the dough ball and open into a skin by your preferred method, the skin will be ready for immediate use.

General Pizza Making / Re: Specific Dough Freezing Question

I don't know what you mean by "will the outer skins be OK" If you are suggesting placing the dough balls onto sheet pans for freezing no problem, I do suggest that you flatten them to about 2-inches or so as this will greatly reduce the time needed to freeze the dough ball to the core. In large scale production we usually lightly oil the dough balls (pucks as they are referred to as) prior to freezing as this is another step in making sure the dough balls don't stick together when bulk packaged. The dough does not dry out in the freezer IF the freezer is kept closed. Keep in mind that unless you are either mechanically freezing at -25F (ideally lower) or cryogenically freezing at -40 to -55F your shelf life of the frozen dough will be limited to about 2-weeks.

General Pizza Making / Re: Specific Dough Freezing Question

I always like to investigate the easy things first so what I'd suggest is as follows:

- 1) Add the cold water to the mixing bowl then add the sourdough (if used) to the water followed by the flour, yeast (if used) and salt.
- 2) Mix the dough longer than what you are presently mixing for, you want to mix until the dough has a smooth appearance.
- 3) Scale and ball the dough immediately after mixing, place it into lightly oiled containers but DO NOT COVER/LID as tightly as you are presently doing. The dough will release carbon dioxide gas which will blanket the dough preventing it from drying out. Cut a couple small holes in the plastic wrap to prevent any pressure build up in the containers.
- 4) After the room temperature fermentation period reball the dough placing the dough balls back into their containers and cover lightly.

5) Allow the reballed dough to rest at room temperature for about 5-hours or until it can be easily opened into a skin.

Try this and let us know what the results are.

Dough Clinic / Re: Pizza dough is instable and breaks/tears apart.

Can you please share your dough formula and dough management procedure with us? Also be sure to include all dough temperatures.

Dough Clinic / Re: Help with Tough Dough/Crust

Since you asked, here is what I would do;

After the initial counter top bulk fermentation, divide the dough into desired weight pieces and form into balls, wipe the balls with oil and place in the cooler without a lid on the container(s) and allow it to cool to 50F internal ball temperature, then lid/cover the container(s) and allow to CF for the additional time. Remove from cooler, allow to temper AT room temperature until the internal dough ball temperature reaches 55F then begin opening the balls into skins by your preferred method. Dress and bake.

General Pizza Making / Re: Is this dough going to work...?

Gus;

I need a little more information on the oven, it sounds like it is a steam injected oven using low pressure steam and gas or electric to heat the oven. A rotating rack oven with steam injection would be a good example of this type of oven. For baking a pizza on a raw dough skin this would probably not be a good choice but for reheating a pizza or a slice it might work OK if the steam can be controlled and evacuated from the baking chamber to allow for crisping of the pizza after it has been reheated.

Dough Clinic / Re: Steam oven

We're talking about two different things here right? Gummy bread and pizza crust and the development of a gum line in a pizza crust. Flour has three main parts, starch, protein and moisture. There is typically less than 1% ash and minerals. The starch has very little capacity to carry water as it is in the flour so the burden of carrying the water is left up to the protein, the more protein present the higher the dough absorption. As the dough is baked/heated the protein gives up the water to the starch which is beginning to gelatinize and now has a high affinity for water, the starch gelatinizes/sets and creates the structure for the finished product we're making. A higher protein content doesn't hold on to the water any differently than a lower protein content.

Dough Clinic / Re: Gum line

All of the above.

Eggs (whole eggs) add richness to the finished crust and contribute to crust color development.

Mashed potatoes contribute softness and some crust color to the finished crust. Semolina flour will help to produce a crispy thin type crust BUT at levels above 25% it will contribute to a very tough and chewy eating characteristic in the finished crust, especially after a few minutes out of the oven.

Dough Ingredients / Re: Has any one used eggs, mashed potato's or fine semolina flour to your dough?

The surface is pretty normal for a no knead dough. Actually, no knead doughs do get kneaded but not very much. After you knead the dough for a minute or so you

will see the surface become a lot smoother as the dough again expands.

General Pizza Making / Re: Is this dough going to work...?

What you've described sounds about right to me for that procedure. I use a different procedure where I grasp the skin with my palms facing down and I pull the edge of the skin between my thumb and index finger stretching the dough as I pull it through, this helps to increase the circumference of the skin.

General Pizza Making / Re: Stretching/ opening a dough ball problem

Peter;

The flour needs to be frozen (not just in the freezer) for a minimum of 30-days so I'm assuming a week to allow the flour (regardless of the amount) to get down to freezing temperature. Flour is really hard to cool due to its low moisture content as well as its density.

Dough Ingredients / Re: All Trumps- unbromated, unbleached

There are two reasons for freezing the flour, it dramatically slows the oxidation rate and if you freeze the flour for a minimum of 30-days you will effectively kill any insects, larvae and eggs that might be in the flour. This means that a 5-pound bag of flour will need to be in the freezer for at least 6-weeks. Once frozen you can transfer it to an insect proof metal or plastic container for long term storage. It will oxidize but at least it won't be infested. Oxidized flour behaves very much like bromated flour just in case you're wondering.

Dough Ingredients / Re: All Trumps- unbromated, unbleached

What is the internal temperature of the dough ball at the time you begin to open it into a skin? Most pizzerias target for 50F but many home pizza makers target something in the 55 to 60F range. I'm thinking that an hour out of the fridge might not be long enough to give you this dough temperature. Also, how long are you cold fermenting the dough?

General Pizza Making / Re: Stretching/ opening a dough ball problem

And let's not forget that a few years ago free form pizzas were popular too, Pizza Hut's Big Foot pizza was a good example of a commercial attempt at this.

Dough Clinic / Re: How to make pizza perfectly round?

Having your A.T. flour unbromated really doesn't hurt a thing unless you are planning to ferment your dough for the better part of a week, and even then it would be questionable. As for it being malted, at the temperature you're baking at it shouldn't pose a problem in the 700 to 750F range. You can always repackage what you don't use into 2 to 5-pound bags and freeze it. Frozen it will keep forever and a day.

Dough Ingredients / Re: All Trumps- unbromated, unbleached

The most common things that might be responsible are:

Baking too hot or not long enough.

Pre-saucing.

Over thinning of the sauce.

Using too much sauce.

Too much/many toppings.

It would really help to be able to see the issue and know more about how the pizza is made and baked as this can help in determining the cause.

Dough Clinic / Re: Gum line

A number of years ago there was a pizzeria just outside of Pittsburgh, PA (School Hill?) that I had visited where the owner mixed all of his doughs totally by hand. Interesting observation: The owner didn't have a hair on either of his arms or hands, if I remember correctly, he was bald too, but I don't think that had anything to do with mixing the dough :-D

Dough Clinic / Re: Differences between human vs. machine made pizza?

OMG! We have covered this a number of times before and I've written a comprehensive article on the topic (maybe Peter can direct you to it?). The first thing to do though is to make sure you REALLY have a gum line and not a false gum line. Turn the slice upside down so the bottom crust is facing up, use a VERY SHARP serrated knife or a single edge razor blade and using multiple strokes cut the slice from the point to the outer crust, now fold the slice so toppings are facing each other, look immediately under the sauce, if you see a gray area more than about 1/8 inch in thickness, congratulations, you have the dreaded gum line (read about how to solve) if not, don't worry as you don't have a gum line. Note: If you cut the slice from the top down, through the sauce and toppings you will ALWAYS get a false gum line as you are pulling the sauce down into the crust as you cut it. You CANNOT use a pizza wheel or rocker knife to cut the slice when looking for the presence of a gum line as these tools will compress the crumb structure making it impossible to identify the presence of a true gum line.

Dough Clinic / Re: Gum line

It will be in the 8 to 10-minute range using 2nd. speed.

Dough Clinic / Re: Hobart A120 Mixer Input

We studied hand v/s machine dough mixing many years ago, mixing a dough by hand is so gentle that it is all but impossible to over mix a dough without the aid of a reducing agent such as L-cysteine or glutathione aka dead yeast, machine mixing on the other hand, if it can be set to mix the dough at relatively high speed/r.p.m. can/will easily over mix just about any kind of yeast leavened dough. Because of the force applied to the dough through the mixing action the dough will heat up considerably more with machine mixing than with hand mixing as a result of bowl friction. Gluten development is considerably faster with machine mixing and there is also much better incorporation of ingredients into the dough with machine mixing. It is also a lot easier to incorporate higher levels of water into a dough with machine mixing as opposed to hand mixing/kneading. With all of this said, there are also dough mixers that are designed to emulate the hand mixing process, the one which immediately comes to mind is the Artoflex twin arm dough mixer. These mixers were designed specifically for mixing very soft/slack Danish doughs but they also work well with the higher absorption pizza doughs too. The main function of the Artoflex mixer is to allow for the development of a dough without excessive gluten development. There is a very slight "chemical" if you want to call it that, difference between mixing with a planetary mixer and mixing by hand, in a planetary mixing bowl if it is possible to have a limited amount of oxygen in contact with the dough so as gluten bonds are broken they are not readily reformed through oxidation at the S-H bonding points. This is one reason why it is possible to almost liquefy a dough through excessive machine mixing and it is also a contributing factor to the shorter mixing time in this type of mixer. Note that this is only observed in doughs which have been exposed to fermentation such as a remixed straight dough process or more commonly a sponge and dough process, in

both of these cases the dough or sponge beings carbon dioxide into the mixing bowl and being heavier than air, it is not displaced very well by the mixing action but it does displace the air/oxygen from the bottom of the bowl where the dough is resulting in the dough being mixed in an oxygen depleted environment. We didn't see any evidence of this when we just added the ingredients to the bowl and began the dough mixing process as many of us do when making our doughs by the conventional straight dough process.

The British Tweedy Bread Mixer utilizes this principal by pulling a vacuum in the mixing chamber for significantly reduced dough mixing times. In our research we were able to achieve only a limited reduction in dough mixing time by flooding the mixing bowl with carbon dioxide during the mixing process which we attributed to the significant amount of air contained within the flour and other dry ingredients in the mixing bowl and the fact that the dough reached the desired amount of gluten development before a significant reduction in mixing time could be seen.

Dough Clinic / Re: Differences between human vs. machine made pizza?

Most antacids as well as different forms of baking powder will contain aluminum.

General Pizza Making / Re: Aluminum pans for Chicago deep dish

I agree with the dough absorption increase. See if it will carry 65% if its a N.Y. style that you are after.

Dough Clinic / Re: Switched ovens, pizza is very dry and crispy now.

What kind of surface were you baking on in the home oven? Why the sudden increase in baking temperature?

Dough Clinic / Re: Switched ovens, pizza is very dry and crispy now.

This was a very smart move on their part especially when considering the C-19 situation in Italy and Europe, not to mention Asia as well as progression along the entire West cost of the U.S. Always better to be safe than sorry.

Hopefully this thing will be behind us by the end of June!

Events Calendar / Re: Pizza Expo 2020 *POSTPONED*****

I've used the Ankarsrum mixer (a friend of mine had one) for making bread doughs but never for making pizza doughs and I've never physically or mentally done a comparison of the two mixers (the other being a planetary type mixer) so I'm probably not the best person to ask about a comparison of the two. The best I could offer is that the Ankarsrum mixer is really a home type mixer while the Hobart A-120 mixer is designed for commercial applications. With that said, there was a period of time (mid 1970's to sometime in the 1990's when Hobart didn't make the motors for their A-120 or A-200 mixers) which left these two mixer models grossly under powered for their size. Now, if we are looking at either an A-120 or A-200 mixer made prior to that it's a whole different story as those were true work horses and didn't have to "stop for a rest" half way through mixing a large size dough.

Dough Clinic / Re: Hobart A120 Mixer Input

You're not missing anything, you can get up at about 10-pounds of dough into the 12-quart bowl but but you can't achieve a consistent mix throughout the dough using that much dough with the relatively short mixing time employed for pizza dough as compared to a bread dough which is significantly longer. If you don't mind having a dough that is inconsistently mixed you can use a lot more dough than I suggested. If you don't see the dough being turned over during the mixing process you're not getting a consistent mix throughout the dough. Bread doughs

are a different matter as they are mixed much longer and to a higher level of gluten development which helps to turn a larger dough over in the bowl during the mixing process. If you mix large size pizza doughs your best bet will be to stop the mixer periodically and manually turn the dough over in the bowl a couple of times during the mixing process. To your point, I should have mentioned this.

Dough Clinic / Re: Hobart A120 Mixer Input

By the way, that's a very good price on the A-120 mixer, especially with all of the extras. Be sure to set the bowl to agitator clearance before using it though. The bowl lift is adjustable, place a nickle between the bowl and the reverse spiral dough arm as a gauge with the bowl in the fully up position, adjust the gap so the agitator JUST clears the nickle. If your bowls are tin plate DO NOT mix sauce in them unless you are fond of a funky metallic taste. Not a problem with stainless steel bowls. NOTE: Match bowl with agitator and mark them so they can stay together as a pair. If you heat the familiar Hobart "tink, tink, tink" as the mixer is running with or without a dough in it the clearance between bowl and agitator is not correct OR there is a dent in the bowl which has to be removed. We have discussed all of this previously here so you might want to take a stroll through the archives if appropriate. P.S. BE SURE TO BOLT YOUR MIXER DOWN as they have a tendency to want to walk off of bench tops while running.

Congrats on a great find!

Dough Clinic / Re: Hobart A120 Mixer Input

I'm not personally familiar with the speed control for the conveyor but the conveyor drive motor usually isn't anything special so it might just be a rheostat type of control which should be a pretty easy fix if it is. You might search the Internet to see if you can find an electrical schematic for the oven as that will tell you for sure what you're up against.

Pizza Ovens / Re: Anvil Conveyor Oven - Belt Speed

Just remember to allow time for the dough ball to warm AT (repeat AT) room temperature until the internal ball temperature is in the 50 to 60F/10 to 15.5C range before opening into skins.

Dough Clinic / Re: Fermentation time counting question

No, I'm saying that if you do the math as indicated and divide the total dough weight in grams by your unit weight that would be the approximate number of units that could be had from a single dough made in the A-120 bowl. I say "approximate" as there will be some bowl loss resulting in the actual dough weight being a bit less than the calculated dough weight. You are on the right track though.

Dough Clinic / Re: Hobart A120 Mixer Input

You would find then to be about the same with the one having the potatoes being possibly more sticky.

Dough Clinic / Re: pour all of the water vs little by little

Powdered sugar is only necessary when you don't want to have the potential grittiness of the granulated sugar (that's why it is also known as "icing sugar" since this is a mute issue in the dough you can just use granulated sugar, a fine granulated sugar such as "fruit granulation" is most commonly used in bakery applications.

Dough Clinic / Re: pour all of the water vs little by little

With a 65% absorption dough the A-120 (12-quart capacity) mixer will handle up to a maximum of 1,000-grams of total flour weight. I used them all the time when I ran the bake lab at AIB. Add up the total of all the bakers % (find the sum) then divide by 100 and multiply the 1000-gram flour weight by this to find the total dough weight. It will probably be close to 170 divided by 100 = 1.7 so $1.7 \times 1,000 = 1700$ -grams total dough weight.

Dough Clinic / Re: Hobart A120 Mixer Input

In most large wholesale bakeries where sweet dough is made the sugar is held back in the dough mixing process along with a good portion of the fat until the gluten has been pretty well developed to the desired point, the sugar and fat are then gradually added and mixed in just to get a thorough incorporation.

Dough Clinic / Re: pour all of the water vs little by little

In all probability not, just reball the dough and place it back into the fridge, then about 3-hours before you plan on using the dough remove it from the fridge to temper AT room temperature. The dough balls will be ready to use when the internal temperature of the dough balls reaches a temperature between 50 and 60F.

General Pizza Making / Re: Yeast doing too much work.

Here is some direction;

- 1) Use a strong bread type flour and mix the dough to just short of full gluten development.
- 2) Dough absorption will be about 56%
- 3) Dough formulation will include the reducing agent RS-190 aka dead yeast to reduce mixing time and provide extensibility to the dough.
- 4) Target a finished dough temperature in the range of 80 to 85F.
- 5) Very little fermentation time is employed in making this crust.
- 6) To form the skin use a dough sheeter/rolling pin or pastry pin.
- 7) After forming, dock the skin and allow it to proof for 15-minutes before baking.
- 8) Bake at 425F
- 9) Here's a starting dough formula if you don't already have one;

Flour: 100%

Salt: 2%

Sugar: 2%

Oil: 2%

RS-190: 1.5%

Ticaloid Lite Gum or Guar Gum: 0.25%

Yeast: 2.5% (compressed yeast)

Water: 56%

The function of the Guar Gum in this application is to help retain moisture in the par-baked crust which results in a finished crust with more of the characteristics of a crust baked from a raw dough skin. I did all of the initial applications work many years ago.

American Style / Re: Recreating Drive-In Pizza

Craig;

Even though the water is bound by the starch it is still free water and as such it is included in with the dough absorption in the same manner as the water in the eggs would be.

Dough Clinic / Re: pour all of the water vs little by little

It should be about the same (80%).

Dough Clinic / Re: pour all of the water vs little by little

You can make your own by scalding the liquid milk then add it as part of the dough water remembering that only 88% of the weight of liquid milk is water.

Dough Clinic / Re: Yeast donuts recipe?

Alex;

What you are describing is pretty common for a whole-wheat dough. I think your problem might be related to low dough absorption. Your present dough absorption calculates to 68.75% which is low for a whole-wheat pizza dough. Increase the dough absorption to 74% (592-ml) and mix the dough just until it all comes together as a homogeneous dough (it is VERY EASY to over mix a whole-wheat dough). Put the water (18.3C) in the bowl first, then add the honey and all of the dry ingredients including the yeast if it is IDY but be sure to put the IDY on top of the flour (if it is ADY pre-activate it in 50-ml. of warm (37.8C) water for 10-minutes before adding it to the water in the mixing bowl. Mix at low speed until the dough just begins to form then add the oil and mix for 1-minute, then mix the dough at the highest speed possible just until a dough is formed. Take the temperature of the dough, ideally it should be in the 75 to 80F/23.8 to 26.6C) range. Immediately scale and ball the dough and place into lightly oiled fermentation containers, lightly oil the top of each dough ball, leave the lids off of the containers until the internal dough ball temperature reaches 10C then apply the lids BUT make sure you have some form of a vent hole in the lids to bleed of any gas and prevent pressure build-up that might pop the lids off. Cold ferment for NOT more than 24-hours, remove from the fridge and allow to warm AT room temperature until the internal dough ball temperature reaches 10C then turn the dough out of the container(s) onto a flour dusted surface and begin opening the dough into skins by your preferred method. As soon as the pizza comes out of the oven brush the edge with olive oil or as I like to do, use melted butter.

Let me know how this works for you and be sure to post some pictures.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

The total dough absorption figures out to about 64% (30% as added water, 16% from the boiled potato and 18% from the whole egg) which is high for a yeast raised donut. I would suggest reducing the water incrementally to about 55% or maybe a little less to see how that works for you. As your dough formula is quite rich I might also suggest using 100% of the high protein flour rather than the blend that you are presently using.

Dough Clinic / Re: pour all of the water vs little by little

Your observations are correct in that a short fermentation time makes your observation more pronounced. A longer fermentation time will allow you to mix the dough better and then achieve the desired extensibility through longer fermentation which will, at the same time, provide a better flavored crust that also has better eating properties.

Dough Clinic / Re: pour all of the water vs little by little

For the 65% dough absorption here is how you do it:

460 (flour weight) X 65 (press the "%" key) and read the amount of water in the display window. 299-grams is the answer.

We have discussed the leaching of glutathione from ADY or IDY when put into cold water a number of times here, it never hurts to read it again though.

Dough Clinic / Re: Pizza Dough - Fails to Retain Shape during Ferment

I'm in agreement with Yael, plus it is actually a lot easier on the mixer. In actuality, you achieve a much more uniformly mixed dough by method #1 while method #2 results in a much more inconsistent dough which is why you were seeing it as being more extensible due to the inconsistent gluten development.

Dough Clinic / Re: pour all of the water vs little by little

Are we talking about machine mixing or hand mixing/kneading?

Dough Clinic / Re: pour all of the water vs little by little

I can see several issues with what you are doing that might be contributing in part or whole to the issue.

- 1) 67% absorption is a bit on the high side, I'd recommend going lower, possibly start at 65% and go down in 2% increments from there.
- 2) You are putting IDY into the dough water. For hand mixing you should be hydrating the IDY in about 5X its weight of warm (100F) water before adding it to the colder dough water. What you are presently doing can leach glutathione out of the yeast which will have a softening effect upon the dough.
- 3) Do not place the lid on the container until the internal dough temperature reaches 50F, this is especially important when using a long CF period.
- 4) Are you mixing/kneading the dough until it has a smooth appearance? This is important as the smooth appearance is an indicator of gluten development and it is the gluten that helps to hold the dough ball together.

Dough Clinic / Re: Pizza Dough - Fails to Retain Shape during Ferment

Peter;

Absolutely! I'm just saying that when people reference a "yeasty" flavor one has to be sure we are all on the same page flavor wise before attempting to answer the question, I wish I had a dime for each time I've gone off on a tangent discussing a true yeasty flavor only to find out later that what the person was looking for was more of the flavor developed by the yeast aka fermentation flavor. It's like the time I got a question on how to develop a true rye flavor in rye bread. I suggested a pumpernickel rye formula (the equivalent of a whole-wheat but with all rye flour) as you can't get more of a rye flavor than that, as it turned out that didn't work either as it still didn't taste like "rye bread" to the individual. So, what was he looking for in flavor? As it turned out he was looking for the missing "mystery" ingredient, caraway seed! He was relating the flavor of rye bread to that of caraway seed. He never saw the caraway seed in his rye bread because the brand he was buying used either fine ground caraway seed or caraway seed oil for the flavor and because he was buying his bread from a small local bakery they didn't need to provide an ingredient listing on each loaf which might have given him a clue to its use in the bread. I see the same thing when people are looking for a corn like flavor and keep adding corn flour or corn meal but to no avail, in actuality, all they need to add is masa flour aka maseca (the magic ingredient in corn chips that gives them their unique flavor).

New York Style / Re: Yeast Amount

Yeast Raised Donut Formula:

Flour: 100% (strong bread type flour with 12 to 12.8% protein content)

Sugar: 6%

Shortening: 10%
Dextrose/glucose: 1%
Bakery grade non-fat dry milk: 5.75%
Salt: 1.75%
Yeast (compressed): 6.5%
Water: 56% (variable)

Mix to a smooth, well developed consistency with a targeted finished dough temperature of 80F.

Ferment for 1-hour at room temperature.

Cut into smaller manageable size pieces and form into loaf shape, cover with a sheet of plastic and allow to rest for 15 to 20-minutes.

Sheet the dough to about 1/2-inch in thickness and cut with desired shape donut cutter.

Place cut donuts on oiled screens for proofing at 100F/75 to 80% Relative Humidity. Proof times will be about 45-minutes.

Fry donuts at 375 to 385F.

Frying time will be about 45 to 60-seconds per side. For Bismarks submerge the donuts after frying the first side to complete the frying process.

Dough Clinic / Re: Yeast donuts recipe?

Be careful what you wish for as large bubbles being formed during baking can/will rearrange the toppings and create inconsistencies in the top bake of your pizzas. If you just want to create a more open crumb structure you might look at increasing the dough absorption in 2% increments (the more fluid dough consistency will allow for easier expansion of the dough both prior to and during baking resulting in larger bubbles and a more open crumb structure. An increase in the yeast level might also help too as this will promote greater oven spring characteristics resulting in a more open crumb structure in the finished crust.

Dough Clinic / Re: Larger Bubbles Before Cooking

Recommendations for home ovens is one area where I seldom tread as there are others here on this web site who are much better versed on the subject than I am, now when it comes to commercial ovens, that's "a horse of a different color".

Dough Clinic / Re: Recommendations for Outdoor wood fired/gas fired brick oven

When answering this question one must always ask: What do you mean by yeasty flavor? All too often when further exploring this question I've found that what they are actually referring to is the flavor of "FERMENTATION" not the flavor/taste of yeast. The taste of yeast is probably best described as that of old, wet newspapers. The other yeasty flavor commonly referenced is that of bread made from commercially frozen dough (very little fermentation and double the normal yeast level), this is a flavor that some might associate with the bread that their Grandma used to make back when Grandmas made bread from scratch. Not knowing specifically which flavor is being referenced as "yeasty" is an exercise in pure futility.

New York Style / Re: Yeast Amount

A Boston Cream Donut is nothing more than what is normally referred to as a custard filled Bismark with chocolate dipped icing on top, much like a Boston Cream Pie except in a donut format.

I'll need to look for the yeast raised donut formula you mentioned.

Dough Clinic / Re: Yeast donuts recipe?

Pictures of the dough, dough ball prior to opening as well as the finished crust would all be helpful in this case. It sounds like you might be allowing the dough balls to rest at room temperature too long before opening them into skins. The next time you make dough try opening dough balls at 2, 4, and 6-hours and compare the resulting crumb structure to see if opening them any sooner helps to create a more open, porous crumb structure.

Dough Clinic / Re: Larger Bubbles Before Cooking

While a plastic fat can be added right along with the flour in most pizza applications in this case where we have the GDL + soda mixed into the fat it should still be added later in the dough mixing process to help prevent any of the fat from being scrubbed off of the chemical leavening contained in the plastic fat. With the bake to rise concept you really want to limit the amount of fermentation that the dough receives. A little fermentation is OK but a lot of fermentation only leads to a sub quality finished pizza. The steps you have outlined for freezing a bake to rise pizza are valid and should work well as far as the dough is concerned but freezing vegetable toppings is never a good idea if you want to have a decent finished pizza that isn't wet and soggy. This can be done commercially using either moisture controlled vegetable toppings or employing either mechanical or cryogenic blast freezing techniques. The Nestle DiGiorno/Delicio/Giordano's brand frozen bake to rise pizzas employ both moisture controlled vegetable toppings as well as blast freezing and highly specialized packaging to achieve the level of quality they have. Bake to rise pizza is not a new invention, it has been around for a VERY LONG TIME, over 70-years! When I was a small child my first introduction to pizza was the Chef Boyardee pizza kit. We have discussed this previously here if you wish to read more about it. Papa Murphy's take and bake pizza chain is a well known user of this concept (their stores don't even have an oven). It was mentioned that you could make these pizzas on a par-baked crust, this is not correct as a par-baked crust will not rise during the baking process, instead it will be just another form of a pretty standard frozen pizza that one might pick up at the local supermarket. The bake to rise concept pizzas must be made using a raw dough to allow it to rise during baking. I totally agree that it would be a lot easier to make the school's pizzas using a par-baked crust, then all they would need to do is to bake the pizzas long enough to fully cook the toppings and warm the crust, you will get a crispier finished pizza and for the most part, a better tasting finished pizza too as you can use a more standard dough formula utilizing more fermentation to build in flavor and you won't need to contend with any off flavors resulting from the CL (chemical leavening) system used in the bake to rise dough formulation.

Dough Clinic / Re: Rising crust pizza - SALP alternative?

Fermentation time v/s yeast quantity, that is the question.

Adding more yeast to a dough is not a substitute for fermentation time because just adding more yeast will provide more leavening power but it will not provide the necessary time needed for the byproducts of fermentation (acids, alcohol, carbon dioxide) to begin breaking down the flour proteins. Additionally, there are enzymes present (amylase and protease) which hydrolyze starch and proteins during the fermentation process which further conditions the dough making it easier to work with. All of this degrading of starch and protein also help to contribute to the flavor profile of the finished (baked) crust as well as adding to the overall digestibility of the crust. The key is "time", these reactions all require time to take place they do happen to a lesser extent with short fermentation times and higher yeast levels but

not to the same extent as is achieved with a lower yeast amount and a longer fermentation time.

Dough Clinic / Re: More yeast vs more fermentation time?

There are a couple of problems associated with targeting a finished dough temperature as low as something in the 50 to 55F range;

- 1) Cold flour does not absorb water as readily as warm flour so a longer mixing time will be required, a longer mixing time = more bowl friction = more heat generation = increase in finished dough temperature, it's kind of a Catch 22.
- 2) The dough itself is very stiff at low temperatures, as the dough temperature drops below 65F the dough quickly becomes progressively stiffer/firmer/harder, whatever you want to call it. This by itself results in greater warming of the dough through increased bowl friction.
- 3) From a commercial standpoint about the lowest temperature that can be realistically achieved is 60 to 65F (60F is really pushing the envelope), and to accomplish that both refrigerated water and direct expansion refrigeration of the mixing bowl are required which means that a horizontal bar type mixer will be needed to mix the dough so we are talking about commissary type operations here as opposed to home or pizzeria.
- 4) Keep in mind that you would need to have the dough at 50 to 55F not just coming off of the mixer, but still at that temperature after scaling, balling (rounding) and boxing. The lowest finished dough temperature that I've encountered in the production of pizza dough was 65 to 67F and that was in a large box store commissary, even at that, with a mixing room temperature of 55F the actual dough temperature going into the cooler was closer to 75F than 67F. Aside from these obstacles, it would be nice if we could bring the dough off of the mixer at a temperature where we could get it into the cooler within the 50 to 55F range as that would eliminate the need to cross-stack and down-stack BUT at the same time it would impact our dough management procedure as the amount of fermentation that the dough receives during the cross-stack period plays an integral part in our dough management procedure by allowing for the development of acids and allowing enzymes to do their job as well as changing dough density which further impacts the way the dough continues to ferment in the cooler especially when considering the impact of heat of metabolism during the residence time in the cooler.

As a side note, frozen dough is typically made using a dough with a targeted finished dough temperature of 65 to 70F (highly specialized horizontal bar type mixers are required for this task), the dough is then immediately scaled and rounded, slightly flattened, and it then immediately proceeds to the blast freezer where it is blast frozen to a core temperature of 15F +/- 2F, it is then packaged and held in a holding freezer for 24-hours at -10F prior to shipment/distribution. The idea here is to render the dough "stable" by getting it frozen before any significant fermentation begins. This is the reason why bread made from frozen dough has little or no fermentation flavor.

Dough Clinic / Re: Final Dough Temperature

Your pizzas look GREAT! :drool:

Newbie Topics / Re: Trying for consistency lower TF

The proportions of GDL to soda are 2.2-parts GDL to 1 part soda. The amount to use of the GDL + soda blend is 3% of the total flour weight. Do NOT use any oil in the dough formula, instead use a plastic fat/shortening (DO NOT use butter or margarine as they contain water). Put the fat into a small bowl and add the GDL

+soda blend and using a fork or spatula mix the two together until the GDL +soda is THOROUGHLY incorporated into the fat, then you can add the fat to the dough formula and begin mixing the dough.

Adjust the amount of yeast to 0.25% compressed yeast or its equivalent of ADY or IDY. Target a finished dough temperature of 65F. Immediately after mixing scale and ball the dough, set aside to ferment at room temperature just long enough for the dough to be able to be easily opened (about 2-hours?), open the dough into a skin, place in an ovenable pan or on a piece of oven parchment paper and place on a pizza circle and store in the cooler for at least 1-hour, remove from the cooler and lightly oil the top of the skin, dress to the order, wrap in stretch wrap and place back in the fridge for at least 3-hours prior to sale/use.

If these will be baked in a home oven you will want to include 7% bakery grade sweet dairy whey powder or 5% sugar in the dough formula.

I've got formulas and procedures posted in the RECIPE BANK at <www.pmq.com>

Dough Clinic / Re: Rising crust pizza - SALP alternative?

The only other real option which you have is GDL (glucano delta lactone).

Dough Clinic / Re: Rising crust pizza - SALP alternative?

Yes you do, but remember that the scheduling of those fermentation periods is just as important as the total fermentation time, for example, if we are going to give our dough 24-hours total fermentation time there will be a huge difference in how the dough handles if we were to ball the dough immediately after mixing and then give it 24-hours of undisturbed fermentation as opposed to fermenting the dough for 23-hours and then balling it and trying to open it into a skin only an hour later. This is one reason why I personally like to scale and ball the dough immediately or soon after mixing and then allow it to ferment in ball form for the bulk of the fermentation time (whatever that might be), when managing the dough in this manner you are almost assured of a dough ball that will be very relaxed and open easily.

Dough Clinic / Re: Fermentation time counting question

If you cannot find SALP (sodium aluminum phosphate) try looking for CAPP (calcium acid pyrophosphate) it has a neutralizing value (N.V.) of 67 so the CAPP will equal 67% of the amount of baking soda used. If you are not using as commercially encapsulated product such as Wise use a plastic fat instead of oil in the dough formula and blend the CAPP and the soda into the plastic fat.

Dough Clinic / Re: Rising crust pizza - SALP alternative?

You should lightly oil the dough ball and leave it uncovered for at least 2-hours, then cover it for the duration of the cold fermentation time.

Newbie Topics / Re: Trying for consistency lower TF

A dough loading of 0.088 ounces per square inch is about average for a N.Y. style pizza so your 0.09 target is pretty close but your IDY level of 1% is much higher than what is normally used, in fact it's about 3X higher than normal which might be giving you a thicker than normal finished crust. My suggestion would be to drop the IDY down to 0.375% and see if the finished crust thickness is more to your liking.

Newbie Topics / Re: Trying for consistency lower TF

Jamie;

Have you considered the possibility that the problem might be with the oven? Not

knowing anything about your oven I can't say, but if the oven has a very high crown that could account for the problem. Most operators with that problem address it by baking the pizza until the bottom is done (the way a pizza should be baked) and then lifting the pizza up into the crown of the oven to finish off the top. I've done this many times myself and it works well.

Dough Clinic / Re: Pizza base burns underneath later in the day at restaurant

Pete;

Pretty much all of it is correct. Getting a thorough bake is critical for achieving a more tender eating crust on the rolls. More yeast will help with oven spring for a better bake as will more fermentation of the dough, this is why I was a bit concerned over the rolls going straight from the fridge into the oven as a refrigerated roll of any kind is more difficult to bake than a roll at room temperature. Depending upon the dough formulation a little fat in the dough formula can also be beneficial as it promotes oven spring, heat transfer and produces a more tender eating characteristic.

Dough Clinic / Re: Dough to hard to chew

You can use any type that is readily available to you. The type of pizza being made does not dictate the type of yeast used but many like to use IDY due to its uniformity, ease of use, and long shelf life.

Dough Clinic / Re: Yeast types and uses

Jsaras;

Attend seminars directed at new operators and when on the show floor get as much information from vendors as possible (even "stuff" you don't think you will ever need) then when you get back home organize it in several 3-ring folders for use as a quick reference guide in the future, you'll be glad you did! Also visit with ALL of the different oven companies as well as the dough mixer and pan suppliers their information will be invaluable if you decide to "drop the hammer".

Events Calendar / Re: Pizza Expo 2020

Please show us your dough formula and complete dough management procedure to include times and temperatures as well as information on the flour you are using as this will help us to better identify what's causing the problem.

Dough Clinic / Re: Bulk Fermenting vs. Individual Balls

Everybody know you're not supposed to eat dough! :-D :-D :-D

Getting to you point, a couple of things come to mind;

- 1) Five hours fermentation probably wasn't enough fermentation time for your dough made by your specific dough formula, overnight would have been better.
- 2) It looks like you took the dough straight from the fridge to the oven which further compounded the issue as this would reduce the oven spring characteristics of the dough resulting in poorer bake out which in turn results in a tougher, chewier finished crust or roll in your case. You would most likely have been better off by just leaving the made up rolls rest at room temperature for that hour rather than putting them in the fridge.

Dough Clinic / Re: Dough to hard to chew

Whey powder isn't the issue, it's the heat treatment of the whey that's the issue. They are using what is referred to as high heat treatment aka bakery grade whey powder that has already been heat treated to denature the specific whey proteins

responsible for creating the softening of the dough. Think of it like you would fresh eggs, all fresh eggs are considered to be dangerous to consume without proper heat treatment (cooking), but after heat treatment they are fine to eat. ;D

General Pizza Making / Re: Replacing water and powdered milk with whole milk?

I would consider 25C water to be cool, not warm (32C+ would be considered "warm") but with that said, 25C is a good water temperature to use when making your dough, however, I would encourage you to put the ADY into 4 to 5-times its weight of warm (37C) water to hydrate and activate it, then just add it right to the dough water in the mixing bowl. After adding the yeast suspension go ahead and add all of the remaining ingredients and incorporate by hand until a dough begins to form (about 5-minutes), turn the dough out of the bowl and scrape the bowl clean, lightly oil the bowl, knead the dough for just a couple of minutes and form it into a ball and place back into the mixing bowl or other suitably sized container (be sure it's lightly oiled), allow to ferment for about 2-hours (this will allow for some biochemical gluten development to take place), turn the dough out of the bowl and knead until the dough begins to take on a smooth appearance (about 5-minutes?), place dough back into the lightly oiled container and allow to ferment for 30-minutes, turn the dough out of the container and scale/divide into desired weight pieces, form each piece into a ball, lightly oil each dough ball and place into individual plastic bread type bags, twist the open end into a pony tail to close and tuck it under the dough ball as you place it into the fridge to cold ferment for 48-hours. To use the dough, remove from the fridge about 2-hours prior to use time, roll the bag down around the dough ball and invert over a floured surface allowing the dough ball to fall from the bag, flour both sides of the dough ball and open into a skin by your preferred manner, the skin is now ready for immediate use.

Dough Clinic / Re: Problems with NP dough in 70% hydration

I've not seen corn starch added to the dough formulation but it is commonly used in icings and glazes and it is an integral part of powdered sugar.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Cultured quartz, offers both beauty and durability with little to no maintenance and it's widely available even at home centers.

Prep Equipment / Re: Remodeling kitchen...Best surface?

RedSauce;

My feelings exactly.

Dough Clinic / Re: SAF High Power IDY

I would tend to agree with that. That is not the same as putting the ADY directly into a pizza dough with a more typical absorption of 62 to 66%.

Dough Clinic / Re: Problems with NP dough in 70% hydration

When ADY is not correctly hydrated glutathione can/will be leached out of it resulting in some inconsistencies in your dough both due to the reducing effect of the glutathione and also due to the fact that yeast cells from which glutathione has been removed from will not ferment.

You might not readily see this but it is happening.

Dough Clinic / Re: Problems with NP dough in 70% hydration

Gus;

Putting oil in the dough will help to allow the dough to rise better and it will certainly tenderize the crumb so the pizza is Less, not more chewy. Because oil repels water it also helps to prevent the development of a gum line in the crust during baking (putting oil on the skin prior to applying the sauce will serve the same purpose). Your procedure really isn't all that complex so I really wouldn't worry about it. The one thing to do next time you make pizza is to use colder water as this will help to lower the finished dough temperature.

Dough Clinic / Re: Oil in dough

In addition to what Yael said, I'd also suggest hydrating/activating the ADY in a small amount of warm (38C) water for about 10-minutes prior to adding it to the dough water in the mixing bowl.

Dough Clinic / Re: Problems with NP dough in 70% hydration

It all depends upon how much fermentation you want to achieve during the CF period. Remember that the fermentation rate will dramatically slow at temperatures below 45F and almost stop at temperatures of 40F and lower, so at 42F there won't be very much fermentation taking place. At 50 to 55F internal dough temperature there will be a measured amount of fermentation taking place which is suitable for dough that will be subjected to up to 72-hours CF but yet it will still be "usable" at the 24-hour mark if necessary. Dough which is allowed to cool to a lower temperature will require more time to fully ferment so if you are planning to hold the dough for 5 to 7-days or more cooling it to a lower temperature is the right thing to do but keep in mind that the dough will be under fermented at the other end of the spectrum (24 to 48-hours). There are some "00" flours which have a very short fermentation tolerance and allowing these doughs to cool to a lower temperature would be an effective way to better manage dough made with these types of flours. As for working with reach in coolers we have found that it is desirable to reduce the finished dough temperature by at least 5F when using a reach in cooler as opposed to a walk in cooler due to the lower efficiency of the reach in when loading it with dough.

I hope this has answered your question.

Dough Clinic / Re: Cooling the dough balls down to an internal temperature of 50 to 55F

Have you "poked" around at other independently operated stores to see if you can find out where they source their materials from? I would have guessed that there would be some type of distributor in Anchorage that you could order from or special order from, if not maybe a distributor on Washington or Oregon might be able to get things to you a bit cheaper?

Resources / Re: Supplies in Alaska

No, it's because when a large wholesale account receives their flour it comes in a tank car (road or rail) and it was milled immediately before shipment (usually just hours or a day at most after milling) so it is easy to have a Farinogram report specific to that particular lot of flour. With bagged flour the routing is different as the flour goes from the mill in bags to a mill storage area, then it's shipped to a distributor and then sometimes another distributor like an ingredient vendor this makes it difficult to match the bagged flour to a Farinogram report, and add to that, unless you specify from your vendor not to mix lot numbers on an order, you may find that your flour shipment consists of two or more different mill lots. Due to laws regarding trace ability it probably wouldn't be too difficult for the mills to have a computerized system where you would enter your lot number (shown on

each bag) and it would give you a page showing the Farinogram report. Then there is the issue of explaining just what it is and how to use it as well as how to develop a Farinogram factor for each of your doughs. That sounds like a lot of work to me for any company that is highly competitive and trying desperately to keep their costs down. A possible solution would be to charge an annual fee to access such information, I don't know how many operators would avail themselves of such a program though, but it's a thought.

Shop Talk / Re: All Trumps Unbromated/Unbleached - Inconsistencies?

In our pizza classes I used to ask my students if they could tell me what the difference between flour and hockey pucks was.

Answer: Hockey pucks are consistent and always the same. Flour isn't.

This is why large commercial bakeries have a FARINOGRAM REPORT ON EACH AND EVERY LOT OF FLOUR THEY RECEIVE. The Farinograph report gives vital information on flour absorption, mixing time and overall strength of the flour allowing them to make the necessary adjustments right up front without any surprises. Most of the time we see the most significant changes in flour during the period which is referred to as new crop change-over, this is when the new crop is just coming into the mills, for spring wheat based flours this is usually mid-August to early September. For winter wheat based flours this is usually mid July to early August.

Shop Talk / Re: All Trumps Unbromated/Unbleached - Inconsistencies?

You might find some advantage to adding a very small amount of malt to the biga if you are fermenting the biga for several hours. If you are baking your pizzas at or above 750 to 800F I'd suggest a non-diastatic malt but if you are baking at a lower temperature I'd use a diastatic malt.

Dough Clinic / Re: Why and when is it recommended to use malt in the dough?

My own personal peels are all wood peels, they're hard to beat for any kind of dough and they dramatically reduce the incidence of the dough sticking to the peel. I use aluminum peels as my oven peels only.

Stones/tiles/steel, Pans & Accessories / Re: Pizza peel choices

Spot-on!

My suggestion would be to ball it immediately after mixing (when you scale it) and then lightly oil the containers, drop the dough ball into the container, lightly oil the top of the dough ball, leave the top of the container off when you place it into the fridge until the internal dough ball temperature reaches 55F/12.8C, then apply the lid for the duration of the CF period. When ready to use the dough, remove from fridge and allow to temper to 50F/10C, then begin opening the dough ball(s) into skins. You will want to experiment with the final temperature (50F/10C) as some find it easier to open into skins at a slightly higher temperature. You probably won't want to go more than 65F/18.3C though.

Newbie Topics / Re: Having issues stretching dough? Seems to stretch unevenly.

Getting back to a very basic question: Is your flour malted in any way?

Dough Clinic / Re: Why and when is it recommended to use malt in the dough?

If you're not scaling and balling before the CF period, when are you scaling and

balling? Also, how much fermentation is the dough getting in ball form between balling and opening? Am I missing something in your procedure?

Newbie Topics / Re: Having issues stretching dough? Seems to stretch unevenly.

Yeast, a living organism needs to feed and it feeds off of sugar that is both added to the dough as an ingredient (the exception being lactose which is not metabolized by the type of yeast we use) and also the enzymatic conversion of starch into sugar by the enzyme amylase which is both present with the yeast and also added to the flour by the miller as sprouted barley flour (malted flour). As yeast feeds it produces carbon dioxide, acids (acetic, lactic, and propionic) and alcohol. What John is referencing as "Zing" is a slight acidity formed when the carbon dioxide gas is dissolved in the water from the sauce creating a mild acid (carbonic acid). He is correct in the formation of this acid but I would question if it is a significant factor in the flavor of a pizza since the other three acids formed are significantly stronger and are recognized for their contribution to the flavor profile of a pizza. The slight tartness, regardless of how it is formed or what acid is responsible, is an important aspect of our sensory response to a food in that it makes us salivate and we unconsciously associate salivation with something that tastes good to us.

Dough Clinic / Re: papa johns pizza ZING

There is a very good reason why large, commercial bread ovens (not artisan, that a whole different story) have an air circulating device that's called a "colorator" installed in them, they are installed in the oven at a point late in the baking stage where they serve to provide precise control of crust color after the loaves have been baked. Like I said, rotating rack ovens are much like a home convection oven but without the airflow they are plagued by one major issue, that is heat stratification so the products at the top of the rack bake at a different rate than that at the bottom of the rack until the airflow is turned back on again. To get around this many ovens now pulse the airflow fans for a set period of time at the beginning of the bake cycle. About the best I can say for it is that "it works".

Dough Clinic / Re: convection and undercooked dough - lou's semolina

True, but they lack the capacity needed by many pizzerias.

Dough Clinic / Re: convection and undercooked dough - lou's semolina

I agree with the comments from Bob's Red Mill. But remember that while the baking trays rotate through the oven cavity in a reel oven they are not considered to be convection ovens by any sense. Convection ovens are characterized by a much greater and focused airflow over and around the product. This should not be confused with air impingement baking which is totally different in that it employs VERY high speed airflow which is VERY highly focused on the product during baking (the technology of baking is very different from convection baking). Reel ovens are the mainstay of the retail baking industry where they serve to bake everything from pies, cookies, pastries, as well as all types of breads and rolls. Rotating rack ovens are a form of convection oven which is utilized in the baking industry and much like many home ovens, they have a feature which allows for shutting off the convection fans for a portion of the baking cycle in order to prevent peaking of layer cakes and poor crust development on loaf breads.

By the way, Chicago pizzas are given a long bake time to ensure the raw sausage (what is Chicago style pizza without the use of raw sausage?) is fully cooked. My favorite Chicago pizza places are Nancy's, Uno, Due, Gino's and Beggars.

Dough Clinic / Re: convection and undercooked dough - lou's semolina

Pete;

There is a huge difference in the way a deck oven bakes and the way a reel oven bakes. Thin crust Chicago pizzas are typically baked in a reel oven at 500 to 550F for just shy of 30-minutes while the deep dish pizzas take a bit longer at nearly 45-minutes. This is why the reel oven are so popular in Chicago, they have a huge capacity when long baking times are the order of the day. Deck ovens have their burner located immediately below the deck in order to maintain deck temperature and recover temperature quickly while reel ovens have a single ribbon burner across the bottom of the oven and the shelves (decks) just rotate through the heated air. There is also a big difference in crown height of the two ovens also, deck ovens have a relatively low crown height measured in just a few inches while a reel oven really doesn't have a crown. Middleby-Marshall reel oven are the most common reel ovens encountered in Chicago. Cobblestone Oven company is a major supplier of these ovens in Chicago, they don't make them and they are not a distributor, they refurbish existing ovens and resell them. When maintained they will last just about forever.

Places making an authentic Chicago style pizza will often use a reel type oven, occasionally they will use a Middleby-Marshall but more commonly I see the smaller reel ovens made by Fish and Reed Oven Company being used unless they are a high volume shop.

Dough Clinic / Re: convection and undercooked dough - lou's semolina

Remember, NEVER, EVER soak any seasoned pan in water! The seasoning will begin peeling off like a bad sunburn then you'll need to strip all of the remaining seasoning off of the pan(s) and start all over again.

We have previously had some discussion on how to clean seasoned pans if you want to look back through the archives.

General Pizza Making / Re: Aluminum pans for Chicago deep dish

A spiral mixer operating at 80% of capacity is a "walk in the park" for that design of mixer. They are not nearly as load sensitive as planetary mixers are, and one thing that's a sure bet is that a spiral mixer will outlast a planetary mixer any day of the week and with a lot fewer repairs during its life span.

Shop Talk / Re: Spiral Mixer (commercial) recommendations and general feedback

Pete;

What temperature are you baking it in your reel oven? What shelf material do you have (steel, transite, or open grid?)

Dough Clinic / Re: convection and undercooked dough - lou's semolina

Also check out your state SBA (Small Business Assn.) to see what kind of assistance they can provide. We used to have a program called KVAC (Kansas Value Added Center), it was a state funded association operated through Kansas State University comprised of volunteer and retired business people whose sole purpose was to assist new start up businesses in the state of Kansas. All at no charge to the client. We were paid a token stipend for our time through the KVAC program. I don't know if New York state has anything like this but from all the hype I hear from N.Y. about a "business friendly" environment I would think that they would have something similar in place.

Shop Talk / Re: Business planning for new shop

I'm betting that the best research team at M.I.T. could not come up with a poorer shape for freezing than a round ball shape (think dough ball). Just remove the dough balls from the box and flatten to about 1-inch, or so in thickness, then place in the freezer. They will freeze much more thoroughly and faster than they would if left in ball shape and you will have markedly improved your chance at success in making pizzas using the frozen dough at the same time.

General Pizza Making / Re: Calling all Dough Savers

Just to confirm, you want to make a New York style pizza that has a crispy crust as opposed to a more typical fold able crust common to N.Y. pizzas. It sounds like you want to make a New Haven style pizza which I've often described as a New York style pizza but with a crispy crust.

Here is a good dough formula to start with;

Flour: 100%(strong bread flour)

Salt: 1.75%

Sugar: 2%

Oil: 2%

IDY: 0.375%

Water: 64% (variable)

Mix dough using delayed oil addition mixing method, and mix just to a smooth dough consistency.

Targeted finished dough temperature: 75 to 80F

Basic Procedure:

Mix

Scale and ball

Box and oil top of dough balls.

Cross-stack in cooler until internal dough ball temperature reaches 55F.

Down-stack

Allow to ferment for a minimum of 24-hours, best at 48 to 72-hours.

Open dough balls into skins by hand.

Dress and bake at 500F.

Dough Clinic / Re: ny style dough that cracks when folding

While Kansas USED to be known as "The Wheat State" about 6-years ago corn surpassed wheat as the main agricultural crop in Kansas.

To keep on top of what is actually happening to wheat prices you have to look at the world picture and take into what the wheat crop in Brazil, Argentina, Canada, Australia, China and Russia are doing. Generally it's not a big issue if one of those countries falls behind as the other countries will export wheat to make up the difference but if several or all of them face issues with their wheat crop (like we saw about 12-years ago where ALL of them faced severe issues) it will go to a whole new playing field where wheat might not even be available and when it is it will be expensive and flour prices will spike through the roof as they did back then. If we ever find ourselves in that spot again (we probably will) watch the world wheat carryover, there are the world wheat reserves, when things were really bleak we were down to less than 3-days! Think of it like this, you are out of a job and can't find employment and you are now tapping into your 401K (the wheat reserves), when it's gone you are up that proverbial creek without a paddle.

Dough Ingredients / Re: U.S.D.A. forecasts the smallest all-wheat area on record

Dough absorption is the amount of water added to the dough, it is expressed in percent of the total flour weight used to make the dough. For example, if we made a dough with 700-grams of flour and it required 400-grams of water to give the desired handling and finished crust characteristics the dough absorption in this case would be 400 divided by 700 X 100 or 57.14% (we would round that off to 57%). All of the other dough ingredients are also expressed in this very same manner.

If you have a dough formula (dough formulas are based on weight measures (grams, kilograms, ounces, pounds, etc.) while recipes are based on volumetric portions (teaspoons, tablespoons, cups, buckets, etc.) that is given in percentages and you want to find the weight for those percentages it's very easy to do:

- 1) Decide how much flour you want to use by weight measure.
- 2) Using your calculator, enter the flour weight then press "X" followed by the ingredient percent that you want the weight for and read the ingredient weight in the display. The ingredient weight will always be in the same weight measures that the flour is shown in.
- 3) Flour is always shown as 100%.

I used to tell my students that it is just like calculating the amount of a tip where the flour weight is the cost of the meal and the ingredient percent is the percent of the tip that you want to leave.

Dough Clinic / Re: Neapolitan Pizza - Puffy Airy Crust (Canotto Style)

BBE;

65% RH (relative humidity?) You most likely mean dough absorption (65% water based on the total flour weight). A finished dough temperature in the 70 to 75F range is recommended when the dough will be mixed entirely by hand as the colder dough temperature makes for easier dough kneading. When machine mixing is used we typically recommend a finished dough temperature between 75 and 80F unless there is poor refrigeration and in that case it's back to the 70 to 75F recommendation. Targeting a higher finished dough temperature just makes the dough more sensitive to slight differences in finished dough temperature as well as room temperature. For example, at 72F the dough will show little effect of missing the targeted temperature range by 2 or 3F (like 77 or 78F) but that same dough at 80F and getting a finished dough temperature of 82 or 83F the dough will show greater effect in the form of faster fermentation as well as being more difficult to cool after being placed into the fridge. The reason for waiting for the dough to drop in temperature to 55F before covering it in the fridge is to reduce the propensity of a warm dough to sweat in the lidded container but more importantly to ensure that it has cooled to a point where it can be further cooled even though the container is lidded at a constant and predictable rate. Remember, just putting the dough into the fridge doesn't stop fermentation, the dough MUST be cooled to a temperature below 40F to retard fermentation, if not the dough will over ferment or blow, and to add insult to injury, the dough is always in the process of warming up due to the heat of metabolism resulting from the fermentation process. This is why I've always said that you cannot have effective dough management without temperature control.

Dough Clinic / Re: Finished dough temperature range

Peter;

It doesn't make sense to me either. In many cases where high salt levels are used it is the step taken to control the fermentation rate that has resulted from improper dough management (failure to cross-stack or lidding fermentation containers too

soon) or just lack of dough temperature control. Once these are properly addressed the high salt levels are no longer necessary and in my opinion, desirable as there is plenty of salt coming from everything that is put on top of the dough.

Marolla1;

The way to measure dough temperature is by use of a dial aka stem type thermometer.

Dough Clinic / Re: Why is it happening

You really can't, but I'll give you an example, years ago we R.E. the Papa Murphy's crust and found that the sweetness perceived in the finished crust (not the dough) was due to 5% sugar. So if you back it down to 2% to see if that gets the color back on track you can then begin incrementally increasing the sugar to get some sweetness in the finished crust, and if it's sweetness that you are after I suggest limiting your total fermentation time to not more than 24-hours CF, this is because fermentation = acid formation and acid = tartness, tart is just the opposite of sweetness. From an ingredient standpoint you might consider replacing any fat in the dough formula with ghee as this will contribute to a perception of sweetness in the finished crust.

Dough Clinic / Re: Too much char?

Fyre;

Do you realize that you are using 7.5% sugar in your dough formula? A more typical level would be 1.5 to 2%. At this sugar level you should get a more even, uniform browning by baking on either a screen or directly on the oven deck. Make this one change and let us know how it works for you. Include pictures if possible.

Dough Clinic / Re: Too much char?

Brian;

Just be sure to season your new tin-plate pans well prior to their first use or they won't bake any differently than your aluminum pans, and once you have them well seasoned NEVER soak them in water for any reason. If you do, the seasoning will begin to peel off like a bad sunburn and you will need to strip all of the seasoning off of the pan and start all over again. Instead, to clean the pans just wipe out with a clean towel or if you feel absolutely compelled to wash the pans grasp pan in one hand, dip in soapy water, LIGHTLY scrub with a soft plastic bristle brush, rinse in clear water, wipe dry (NOTE: At no time did I say to release your hold on the pan), now place the pan into a warm oven to force dry for about 15-minutes, now you can put the pan away. If you don't follow these basic rules for a seasoned pan these infamous words will haunt you: "I told you so". :-D

Welcome to the site!

I'm an ex south sider (Tinley Park).

New Forum Members / Re: Hello From Chicago!

I would advise not using more than 25% combined spelt and semolina flour to start with, then you can begin to incrementally increase the spelt-semolina flour blend to whatever your specific flour will accept. You will also want to determine the correct absorption value the the spelt-semolina blend that you use. If you search back through the archives we have had a lot of discussion on whole-wheat and multi-grain blends, in this discussion I explained in detail how to find the absorption of these "composit" flour blends. I would also highly recommend that you put the composit flour blend in an autolyze for a minimum of 1-hour to allow for complete hydration prior to actually mixing the dough.

Dough Clinic / Re: Flours for Roman-style pizza dough

When using IDY and hand mixing the dough it is always a good idea to suspend the IDY in a small portion of warm (95F/35C) water before adding it to the dough. You should be targeting a finished dough temperature in the 70 to 75F range, and you should not be lidding the containers right away, instead, very lightly oil the top of the dough after it's in the container, then allow the dough to cool in the fridge until the internal dough ball temperature is 55F/12.7C, then apply the lid for the duration of the cold fermentation period.

Unless you're really big into physical fitness and want arms like the village blacksmith all of that kneading really isn't necessary. Let biochemical gluten development do the work for you. Just knead the dough until it begins to take on a smooth appearance, then scale, ball and place into the fermentation containers.

Dough Clinic / Re: Why is it happening

I'm confused, you use flour or semolina flour on the peel to help with peeling the skins but yet you say you are baking for at least one minute on screens?

If you can share your dough formula as well as dough management procedure it would be a big help.

Dough Clinic / Re: Too much char?

I agree, I also think the dough is too thin, When making rolled items I always like to use a rolling pin or pastry pin to open the dough as this gives me a more uniform dough thickness than opening by hand. A uniform dough thickness is important as it helps to eliminate blow-outs. I also like to make several French cuts across the top of each roll to allow steam to escape and to allow for controlled expansion during baking. In some cases it also helps to spray the rolls with water immediately before placing in the oven, this allows the dough to expand a little during oven spring which reduces the chance for a blow-out.

Dough Clinic / Re: roni roll bursting open

Another option for the home (what I use) is a wood (maple) top. They're very reasonable priced and available from most home centers like Menard's. For a commercial application cultured quarts is also a good option as it doesn't stain or discolor and is nearly bullet proof in all other ways and you can get it in just about any color you want.

Newbie Topics / Re: Prep table

Here is a quick summary of my suggestions;

- 1) Two speeds are better than a single speed.
- 2) Reverse rotation is a nice feature to have.
- 3) A removable bowl can make life a lot easier in some shops.
- 4) A drain plug in the bowl makes cleaning a LOT EASIER.
- 5) Spiral mixers will effectively mix a dough as small as 25% of stated bowl capacity or as large as 115% of stated bowl capacity so size your mixer so your dough size is close to being in the middle of this bracket.

Note: To clean a spiral mixer, put a couple gallons of HOT water in the mixer, cover bowl with a plastic sheet, allow to steam for 20 to 30-minutes, scrub with a long handle plastic pot brush, pull the drain plug and drain while rinsing with clear water, sanitize, reinstall drain plug. Without that drain plug you will need to bail the water out of the bowl (now you understand why the drain plug is important).

Shop Talk / Re: Spiral Mixer (commercial) recommendations and general feedback

Unless the flour is malted or you have added diastatic malt to the dough/biga formula the use of a biga will actually result in a lighter crust color. This is due to the fact that a biga is fermented and one of the byproducts of fermentation is acid (acetic, lactic and propionic), these acids lower the pH of the dough which inhibits its ability to develop color during the baking process. This is why sourdough breads are always lighter in color. If diastatic malt or amylase enzyme is present the starch portion of the flour can be hydrolized into sugars (malt or dextrose) which provide a nutrient for the yeast as well as helping to develop crust color during baking.

Dough Clinic / Re: Why and when is it recommended to use malt in the dough?

Also, what was the finished (mixed) temperature of the dough? How did you put the dough balls into the fridge (type of container, was it lidded or not?)

Dough Clinic / Re: Why is it happening

Have you looked at the not too far distant archives for the discussion we have had on spiral mixers?

Shop Talk / Re: Spiral Mixer (commercial) recommendations and general feedback

A couple of things to comment on;

1) Your dough absorption is 65% which would normally be pretty typical but as you are using VWG at 5.5% (VWG has an absorption of approximately 175% so 5.5% VWG would be responsible for 9.6% of that 65% absorption) so the overall absorption of 65% may seem OK but in reality it might be too low? I suggest increasing the dough absorption in 2% increments to see if the dough becomes any easier to open.

2) Your dough ball count in the box is too high, reduce the dough ball count per box by 50%.

Dough Clinic / Re: Dough Management Problem

To better answer your question I really need to see a picture of the burst toll.

Dough Clinic / Re: roni roll bursting open

I'm of the same opinion as TXCraig1, the "C" hook aka dough hook doesn't work in any size mixer unless the bowl is at near maximum dough capacity which probably explains why we used to see sooooo many used Hobarts totally worn out. The reverse spiral dough arm was first made available back in the late 60's (AIB did prototype dough testing with it at the time), thankfully, the reverse spiral dough arm is now standard equipment with all new Hobart mixers (at least the large ones that I deal with). When Hobart made their own motors it was a very different "ball game", but around 1975 they were forced to contract all of their motors, what they got were gutless wonders. When AIB moved from Chicago, IL to Manhattan, KS in 1977 I had several of the old Hobart A-120 (12-quart) mixers as well as an A-200 (20-quart) mixer. Hobart agreed to exchange all of our old mixers for new models but I kept my old mixers as they were in excellent condition. After setting up shop in Manhattan we discovered the shortfalls of those new mixers. Remember, I kept my old ones so it didn't impact me or my lab at all but others were in for a huge surprise, the new mixers would stall with the same dough size that the old ones were mixing on a daily basis, and the speed would vary as the dough developed (not good for research) while my old ones just kept plugging along just fine. It really wasn't until they came out with the Legacy line that they seemed to get

things under control.

Prep Equipment / Re: Spiral Dough Hook for KitchenAid Artisan?

Ya gotta season those bright colored aluminum pans unless you like light colored crusts. We have discussed this a number of times here as well as how to maintain those seasoned pans.

General Pizza Making / Re: Aluminum pans for Chicago deep dish

Let's go by the old adage of "first things first" and if absorption doesn't help then we can dig into dough management.

Dough Clinic / Re: Neapolitan Pizza - Puffy Airy Crust (Canotto Style)

Start increasing the dough absorption, first by 5% then after that in 2% increments, that should help to open the crumb structure. With the crumb structure more open you may find that the crust is developing too much color, address that by eliminating the sugar from your dough formula.

Dough Clinic / Re: Neapolitan Pizza - Puffy Airy Crust (Canotto Style)

Alex;

Try it, see if it works.

Something to ponder; Maybe the cheese you are using isn't well suited to high baking temperatures? Maybe try a different cheese too.

Commercial Ovens / Re: Correct Pizza Oven Temperature

Pictures of your pizza would have helped immensely, but since we don't have that to go on I'm going to take a "SWAG" and say that you will need to increase the dough absorption to at least 65% or more, and bake at a higher temperature, not knowing anything about how your pizzas are being baked I'll say to bake the pizzas on a baking steel 3/8-inch thick or a stone at least 1/2-inch thick as hot as you can get your oven (allow at least 90-minutes for everything to come up to temperature before baking your first pizza).

Let us know if this mover your finished pizza characteristics closer to where you would like it to be.

Dough Clinic / Re: Neapolitan Pizza - Puffy Airy Crust (Canotto Style)

When I was teaching in the AIB Baking Science and Technology class we used to make it when the students were in the large production shop, I don't think I have a copy of the formula anymore but if memory serves me correctly we used a spring wheat flour with 13.8 to 14.2% protein content, 1% oil, 6% compressed yeast, 1.75% salt, sugar 2%, vinegar (100-grain strength) 0.75%, water 72% (variable).

Mixing:

Use delayed salt addition mixing method.

Mix slightly past full development.

Targeted finished dough temperature is 63 to 65F (this is CRITICAL).

Fermentation time is 15 to 20-minutes.

Final Proof is hot and dry at 105F/50 to 55% R.H.

Bake at 400F

De-pan loaves for cooling immediately after baking.

Note:

We determined dough absorption experimentally by increasing it to the point where the proofed loaves would collapse during baking then back it down to a point where we no longer experienced collapse, with some lots of flour we were able to use as much as 78% absorption.

The mixing time can be slightly reduced by withholding 10% absorption and mixing to full development, then adding the withheld water along with the salt and mixing it in during the last few minutes of mixing.

Handle the fully proofed dough GENTLY.

Hopefully I didn't forget too much!

Dough Clinic / Re: English Muffin Bread.....?

Additionally, your IDY amount calculates out at 0.883% based on 453-grams of flour weight which is nearly 3 times the suggested amount of 0.3%. The IDY amount shown for the dough based on 1-Kg. of flour weight is correct at 0.3%. As Yael indicated the finished dough temperature is critical, especially when making dough in warmer climates, in your case you should be targeting a finished dough temperature of about 70F/21C, I would also recommend that you lightly oil each dough ball and place into individual plastic (bread type) bags, then twist the open end into a pony tail and tuck the pony tail under the dough ball as you place it into the fridge to cold ferment. I think this will work better for you than what you are presently doing. To use the bagged dough balls, remove from the fridge about 1-hour prior to use, roll the bag down around the dough ball and invert the dough ball over a floured surface allowing the dough ball to fall free from the bag onto the bench top, flour both sides of the dough and begin opening into a skin by your preferred method.

Dough Clinic / Re: Help!!! Can't keep my dough balls as balls.

I'd recommend starting with 250 to 275C for the deck temperature and use the same temperature on the top, then adjust the top temperature to give you the desired top pizza color characteristics once the bottom is baked, remember, not all cheese colors the same so your specific mozzarella cheese or cheese blend may color up entirely differently than that which someone else is using. The dough management as well as the dough formulation will also impact the way the crust bakes. The rule for baking pizzas is to get the bottom crust properly baked, then worry about the top of the pizza.

Commercial Ovens / Re: Correct Pizza Oven Temperature

Nope, it's not the radiant heat coming off of the aluminum wok, the oil will easily absorb that heat.

There is NOTHING that will give you a 72-hour shelf life on a yeast raised donut. If you want to have a 72-hour shelf life from a donut you have to make cake donuts, not yeast raised donuts.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

One thing I should point out is that what I fry donuts in is different from what you are frying them in, I'm talking about using a commercial donut fryer using a bit more than a cube of shortening (50#) so I have a huge amount of latent heat stored in all that hot oil while you are frying in what appears to be maybe just a couple pounds of oil so the temperature is not as consistent as mine is, with that said you may need to fry your donuts a little longer, you will sacrifice something in quality but that's the nature of the beast. The good news is that yeast raised donuts have a shelf life measured in hours so more than likely they'll all be gone in no time at all.
:chef:

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Hard fats like beaded mono-glycerides are not appropriate as they have a melting point that is too high (typically around 136F) you need something with a melting

point close to body temperature or it will impart a waxy mouthfeel to the finished product. Do you have a specific reason for wanting to use a more expensive spray dried product than just a blended plastic fat? The more processing steps that go into making a product the more expensive it usually becomes. The products you are looking at are typically used in specific applications like dry mixes.

Dough Clinic / Re: Adding high ratio of shortening/oil in pan pizza dough

If you're going to use yeast your shelf life will need to be limited to not more than 15-days unless you use blast freezing. Without blast freezing, if you want/need more than 15-days shelf life you will need to use a par-baked crust to build your pizza on. As for the sauce, you will need to use as little water as possible while still being able to achieve spreading/application consistency. Some frozen pizza manufacturers will incorporate gums into the sauce (Ticaloid Lite from TIC Gums) to help control syneresis as the sauce melts during the early stages of baking, still it is a good idea to limit the amount of sauce used.

Regarding chemical leavening, a coated/encapsulated chemical leavening system such as Wrise is used only if you are making a bake to rise type of crust but since this type of crust also contains yeast you're back to blast freezing again.

So, what about the pizzerias that make a pizza, partially bake it, wrap it and sell it from a frozen case in their store? I think everyone will agree that they are not true restaurant/pizzeria quality pizzas but most will also agree that they are better than make delivered pizzas. This is OK at the store level where the food item is not exposed to the masses as it is at a supermarket, but once you take it to the supermarket you MUST ensure that the pizza is heated to an internal temperature of at least 160F and then get the product frozen as quickly as possible which may require that you have an effective HACCP (hazard analysis critical control point) plan in place that is being followed.

Dough Clinic / Re: Frozen dough recipes and stabilizers

Before answering your question I would like to know what substrate the fat is sprayed on.

Dough Clinic / Re: Adding high ratio of shortening/oil in pan pizza dough

Dustin;

Have you REALLY looked into this? I mean from a legal point of view?

Because your pizzas will be sold from a venue other than where they are made (pizzeria) you will have to have at minimum the following:

Ingredient declaration

Nutrition facts panel

Where the pizza is made (hard address)

Approved name (yes, there are laws regulating what you can call your pizza)

If there is any meat on the pizza it will need to be made in a USDA inspected facility.

You will most likely need to have special packaging (plain stretch wrap doesn't cut it).

The dough formula isn't anything special but you might want to consider moisture controlled vegetable toppings if you will not be blast freezing the pizzas. Blast Freezing= -30 to -45F, this can be done mechanically using an ammonia freezer or cryogenically using an industrial cryogen such as liquid carbon dioxide or liquid nitrogen.

Due to the UV light in the store you will need to have a full panel over the top of the pizza or you will need to have a packaging film with a formulated UV barrier to

prevent the toppings from fading in color which can happen quite rapidly.

Dough Clinic / Re: Frozen dough recipes and stabilizers

Nothing special but just a good cheese flavor which I personally think is an improvement over just plain mozzarella is a blend consisting of 80% Grande WM mozzarella + 15% Parmesan and 5% Romano. After that, "the world is your oyster", begin experimenting with different cheeses to find what YOU like best for YOUR pizzas.

Pizza Cheese / Re: cheese blends

Can you break it down into smaller (5-pound) bags and store it in the freezer? If you can store it in the freezer for 6-weeks you can then transfer it to a container that can be tightly sealed and store it at room temperature for up to a year.

Resources / Re: High-gluten flour in Nashville area

No, not unless your frying fat temperature is above 365F/185C, if you drop the fat temperature too far the donut will become dry or the inside will not be cooked properly. Optimum frying time for a yeast raised donut with a scaling weight of around 1.5-ounces will be about 1-minute and 45-seconds.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

All trumps is the "preferred" flour to use in New York as it gives the desired finished crust characteristics and the All Trumps flour used there also happens to be bleached and bromated. Does this mean that it HAS to be bleached and bromated? No, you can use just about any flour having 12 to 14.4% protein content to make a decent N.Y. style pizza. Stop worrying about the bromate, the residual "bromate" in the crust is measured in PPB (parts per billion). If you live in a metropolitan area you probably have more to fear from the air you're breathing. To answer your last question, little to none unless you are adamant about fermenting your dough for 5-days or more. Be sure to go back and read the discussion threads we just recently had on bromate in flour.

Dough Clinic / Re: Bromated flour

Try keeping your hands wet during the rounding/balling process.

General Pizza Making / Re: Thoughts on balling wet doughs

As a general rule, you only need to have a tightly balled dough if you are targeting much more than about 48-hours fermentation time in ball form. Rather than concentrating on balling tight or loose, it's better to concentrate on being consistent.

Dough Clinic / Re: Shortest quality neapolitan dough

I agree, mix, (target finished dough temperature 75 to 80F), scale, ball, box and allow to ferment. The exact fermentation time as well as the yeast level will need to be adjusted to fit into your operating scheme in your mobile pizza operation.

Dough Clinic / Re: Shortest quality neapolitan dough

Do NOT melt the shortening prior to addition to the dough.

Dough Clinic / Re: Adding high ratio of shortening/oil in pan pizza dough

A lot of the answer to that question lies in what is being fried. Take donuts for example, new frying fat makes for crappy donuts so we ALWAYS seed the new frying fat with a portion of the old fat. If you're frying things that put a lot of sugar,

flour and seasonings into the fat you will need to filter the fat on a daily basis, but if you're frying things like French fries you can go several days between filtering the fat and because potatoes by themselves remove flavors from the fat you might be able to get away changing out the fat only once a week depending upon how much material you're putting through the fryer. In my opinion the worst thing to fry is tempura coated anything. Pieces of the coating are blown off in the fryer, and the coating is high in water content which can lead to hydrolytic rancidity, both of these combined means that you'll probably be cleaning out the fryer and filtering the fat daily while changing the fat on a much more regular basis that you would for any other product. It should go without saying that if you are frying fish and then want to fry donuts a change of the frying oil is in your near future.

As mentioned by others, oxidative rancidity is always an issue with frying fats, this is why commercial frying fats contain anti oxidants and anti foaming agents.

Off-Topic Foods / Re: How many times do you reuse your frying oil?

Calzonemaker;

Different products exhibit differences in fermentation, when making pizzas there are a vast number of different flours of varying strength used to make the pizzas. If the pizza will be lightly loaded you can get away with a lot of over fermentation but if the pizza is to be loaded with a lot of toppings it may well collapse under the weight of those toppings if the dough is over fermented or fermented too much for the strength of the flour. Bread is all but intolerant of over fermentation because the dough is proofed to such a low density prior to baking and then it has to be handled when placing the bread into the oven, these conditions make the dough a prime candidate for collapse unless the flour is sufficiently strong or exhibits good tolerance to fermentation (a common characteristic of U.S. and Canadian wheats/flours but not always true for imported flours made from soft wheat varieties.

Dough Clinic / Re: very sticky dough

beeuu;

The question that begs to be asked is how did you add the ADY and IDY. you told us how you added the CY but not the ADY and IDY.

Neapolitan Style / Re: yeast - fresh, IDY, ADY revisited

I'd go with upping the yeast a little to maybe 0.125%

Sicilian Style / Re: Need help proofing my Sicilians

I use left over turkey all the time, even tried it a time or two with stuffing. Use both just like any other added topping ingredient. For a cheese topping I am partial to using a blend of mozzarella and ricotta applied in dollops. I've even added the mashed potatoes too, just place them on the pizza in dollops like the ricotta. For this type of pizza my preference leans towards using a white sauce rather than a red sauce since it ties the pizza together better than a red sauce which just seems out of place.

Dough Clinic / Re: turkey pizza with leftovers?

Your starter might be too strong or your flour might not be strong enough to handle the starter strength under those conditions.

Hard to tell with limited data.

Dough Clinic / Re: Dough is ripping while stretching, help!

Flour: 100%

Salt: 2.5%

IDY: 0.375% (variable depending upon dough management procedure)

Water: 60%

Add water to mixing bowl, then add the salt, flour and IDY.

Mix at low speed for 2-minutes, then mix at medium speed just to form a smooth dough.

Target finished dough temperature 75 to 80F.

Immediately scale and ball.

Lightly oil dough balls and place into individual fermentation containers.

Place in fridge UNCOVERED until INTERNAL dough ball temperature reaches 50F. then loosely cover/lid the containers.

NOTE: THIS PART MAY CHANGE DEPENDING UPON WHICH "00" FLOUR YOU HAVE.

Allow dough balls to CF for 24 to 48-hours.

Remove from cooler and allow dough balls to warm to 50 to 60F INTERNAL dough ball temperature.

Open into skins for immediate use.

Note: There are MANY different ways to work with "00" flours, this is just one of them.

Dough Clinic / Re: Caputo 00 thin crust dough recipe

Use a stem aka dial type thermometer to measure the INTERNAL dough ball temperature after the CF period. When the internal dough ball temperature is in the 50 to 60F/10 to 15.5C range it is ready to open into a skin for immediate use. From what you have said I'm guessing that you are allowing the dough to get too warm before opening it into a skin.

Dough Clinic / Re: Too stretchy dough

Peter is absolutely correct. Learn the basic and easy to make pizzas first using common, off the shelf ingredients. You will be able to hone your pizza making skills while building your confidence, then, using your new gained skills you will be able to venture out into other types of pizzas or upping the game by experimenting with different ingredients above all else, remember to change only one thing at a time when it's time to begin experimenting, go slow and easy and smell the pizzas along the way, the rewards are delicious! :drool:

Newbie Topics / Re: Most Important Things for Beginner's to Focus On

Walter;

What would we ever do without duct tape? :-D :-D

Shop Talk / Re: Rounder and divders

I think I found our why your pizza slice was wet and soggy!!! :-D :-D :-D :-D :-D

Dough Clinic / Re: How does dough ball size affect kneading?

With American style pizzas using approximately 0.375% IDY (instant dry yeast), with effective dough management and a room temperature in the 70 to 75F range we will typically allow the dough balls to set AT room temperature until they reach 50F/10C before we begin opening them into skins, once we begin opening the dough balls into skins they will be good for the next 2.5 to 3-hours. Any unused dough balls are not put back into the fridge as this creates an inconsistency for those dough balls on the following day (consistency is the name of the game), instead, we convert those dough balls into things like bread sticks and garlic knots which can be par-baked and used on the following day without any issues.

Additionally, you can also use left over dough balls in your new dough but the amount that you add should not exceed 15% of the new dough weight.

Dough Clinic / Re: Pizza Dough Storage & Handling Questions

In the Philadelphia area there was a pizzeria where the owner mixed all of his dough by hand. His doughs were based on a 50# bag of flour, however he did not knead the dough in the truest sense of the word, instead he just combined the ingredients by hand and let biochemical gluten development do all the work for him. If when you say "knead" you mean it in the literal sense a dough sized on 20-pounds of flour weight will probably all you will want to wrestle with and even then you will be on the fast track to achieving your secondary goal of developing arms like the village blacksmith. Anything smaller just gets easier.

Dough Clinic / Re: How does dough ball size affect kneading?

Yael;

I used to say that knowledge is like a fine wine, if it's not shared it's just wasted.

Dough Clinic / Re: longer RT sourdough fermentation

We really need to know more about your dough formula and how you're managing the dough.

Dough Clinic / Re: Neapolitan crust isn't puffing up

Before we go off on a tangent, you're talking about total dough size/weight....right?

Dough Clinic / Re: How does dough ball size affect kneading?

Without knowing the strength of your sourdough starter it's impossible to answer your question. The best advice I can offer you is to make three doughs at 4%, 8% and 12% starter and see which one performs the best for you under YOUR specific conditions.

Dough Clinic / Re: longer RT sourdough fermentation

Yael;

I've never been so fussy that I didn't sneak a piece of the overturned pizza after evaluating it, like we used to say in the lab, it's all in the name of research! :-D :-D :-D

Stones/tiles/steel, Pans & Accessories / Re: Question about cutting the pizza

Par-baked crusts are always going to give you a finished pizza with a lower moisture content in the crust. If you want to avoid that you will need to par-bake the crusts with some steam in the oven or add a gum to help retain moisture in the baked crust. We recently had some discussion on this very topic which you might want to check out.

Dough Clinic / Re: dried out crust after parbaking

Par-baked crust, or anything else for that matter, is actually fully baked, it has to be in order to avoid collapse during cooling. If you are getting too much color during the par-baking phase you will need to REDUCE the baking temperature and possibly extend the baking time. The idea in par-baking is to achieve an internal dough temperature of 190F. Once you reach that IT the dough is fully baked and should have minimal crust color development.

Dough Clinic / Re: dried out crust after parbaking

With pan style pizzas using shortening is preferred over oil, the best way to add it is to have it at a temperature between 70 and 80F and just add it right on top of the flour when you begin the dough mixing process. If the amount of shortening is 10% or more it is advisable to withhold the shortening until after the dough has come together in the mixing bowl, then add the shortening and mix just enough to thoroughly incorporate it.

Dough Clinic / Re: Adding high ratio of shortening/oil in pan pizza dough

Dough enhancer is a very broad term, I guess we might call anything added to the dough that enhances it in some way a "dough enhancer" these might include:

dead yeast (glutathione): Dough Relaxer

diastatic or non-diastatic malt: Crust color/flavor/food for the yeast

vital wheat gluten: Dtrength

calcium sulfate: Reduces stickiness

from a commercial stand point enzymatic oxidizers are also used: Strength

some might even include ascorbic acid: Strength

vinegar might be referred to as a dough enhancer too: Accelerates fermentation

It all depends upon that you want the dough enhancer to do, then you select the best product for that function.

New Forum Members / Re: Dogh Enhancer

The traditional way of making bagels is to mix, form, cold proof on bagel boards overnight, pull from the cooler and allow to rest at roon temperature for 20 to 30-minutes, transfer to the boiling kettle and stir, until the bagels all float, then transfer to a rinse station where the bagels are flushed with cold water and immediately topped if desired and placed onto wet baking boards (redwood) and baked for a couple of minutes until a firm skin is formed on the bagel, they are then turned off of the boards (inverted) onto the oven deck to continue baking.

Off-Topic Foods / Re: Baking soda and Pretzel

Bagels are either steamed or kettled (boiled) but not actually boiled as the water temperature is only 200F, and just plain water is used. After kettling they are allowed to dry for a minute or so and then baked with a turn about mid way through the baking process, pretzels are just run through the alkali solution (2% lye) and then salted and baked. For the crispy pretzels they then go through a kiln drying process which is a pass under the oven to allow for a more controlled drying process (about 20-minutes), they are then taken directly to packaging.

Steamed bagels are made using a rotating rack oven, steam is introduced into the oven for the first 15 to 20-seconds, the door is then opened to evacuate the steam and the bagels are baked for about 18 to 20-minutes at 450F. The difference is that kettled or traditional bagels as they are known are tough and chewy while steamed bagels are much more tender eating, for this reason the steamed bagels are much more popular for use when making bagel sandwiches.

Off-Topic Foods / Re: Baking soda and Pretzel

Travis;

Just something to watch for. Pineapples contain a very powerful reducing enzyme (Bromelain) which is very similar to papain. These enzymes are effective at hydrolizing protein and very low levels. I don't know if the pH of the starter will inactivate the bromelain or not but it is something to be aware of. If you use the starter and find that the dough becomes unusually soft and extensible this might be the cause. let us know how it works for you.

Dough Clinic / Re: Hidden dangers of old starters?

Tim;

I wrote about this in one of my articles some time ago. Here are the things to do to improve the quality of a DELCO pizza;

- 1) Lightly oil the skin prior to application of the sauce.
- 2) Use sauce sparingly.
- 3) Use vegetable toppings sparingly.
- 4) Bake pizzas as LONG as possible to both dry out the pizza and develop the thickest crust as possible.
- 5) Immediately after baking place on rack to steam-off for a minute before boxing.
- 6) Use some type of sheet in the box to hold pizza off of the bottom of the box.
- 7) Make sure box has steam vents and that the vents are opened.
- 8) Encourage customers to reheat/re-crisp the pizza when they get it home.
- 9) When it comes to oven selection, air impingement ovens are by far the best choice if DELCO pizzas are in your future. The focused airflow of these ovens is a decided benefit to achieving the best bake and driest pizza possible for this application.

Dough Clinic / Re: My pizza gets soggy not crunchy after cools down

Also check out any scrap yard that take metal in your area, we have one near us and I've found some great buys there. For a few extra bucks they'll even cut it.

Newbie Topics / Re: If I wanted to just buy a 1/2" pizza steel, where would I do that for the least

Five to eight percent shortening will be about the limit. As for why the dough appears to ferment faster with fat the answer is, it doesn't but the fat both lubricates the dough for easier expansion and it also coats the cell wall for improved gas retention so the dough retains more gas, making it appear larger.

Dough Clinic / Re: Chicago tavern style needs improvement

What you have described is pretty common for delivery/take away pizza. Delivery pizzas are best baked as long as possible and with a ripple sheet or Pizza Savor mat in the box to hold the pizza up off of the bottom of the box, we've discussed this here a number of time in the past if you care to search the archives. Your best bet might be to educate your customers to reheat the pizza once they get it home, this will refreshen as well as re-crisp the pizza for maximum enjoyment.

Dough Clinic / Re: My pizza gets soggy not crunchy after cools down

Do you mean autolyse and hydration? Hydrolysis is a totally different thing not related to pizza making.

If so, you can mix water and flour together to allow the flour to better or more fully hydrate prior to the actual dough mixing process. This is beneficial when making dough with whole-wheat flour or making a multi-grain dough. In this case the flour and water are typically allowed to set for about an hour. An autolyse, on the other hand, is similar but it is allowed to set for anything from one to several hours (more typically several hours) which allows the flour to fully hydrate and it also allows for enzymes in the flour and yeast to begin working making for an easier to handle dough and some will say a better flavored finished product. The autolyse method is especially beneficial when making dough with a high (70%+) absorption.

Dough Clinic / Re: What is the difference between Autolysis and hydrolysis?

Your ADY is a bit on the high side for what you are wanting to do, I'd suggest

dropping it back to 0.3%. Additionally, you don't say what the finished dough temperature is but from what you are describing it sounds like it is possibly too high (hot), try adjusting the water temperature to give you a finished dough temperature of 70F/21.1C.

Newbie Topics / Re: Blistering when balling

Pictures? It sounds like the dough might have quite a bit of fermentation on it at the time of scaling and balling, a picture would help.

Newbie Topics / Re: Blistering when balling

One more thing, the strength of your flour will also play an important part in determining if YOUR dough will still be good several days down the road.

Newbie Topics / Re: Storing dough in fridge.. How long?

A lot of the answer to your question pivots around the finished dough temperature, the amount of yeast used in the dough formula, and overall how well the dough is being managed. Every dough is different in this respect, the best advice I can give you is to save one or two of your dough balls for testing with a few more days of CF time. That's the only way you will know for sure.

Newbie Topics / Re: Storing dough in fridge.. How long?

The next time you make them open them up a bit more to get a better shape, then try dipping the tops in sesame seeds right after the caustic solution, makes for a great flavor!

Off-Topic Foods / Re: Baking soda and Pretzel

We typically use 10-ounces of dough to make a 12-inch N.Y. style pizza, this calculates to a dough loading of 2.4778-grams per square inch. A 20-inch pizza has 314-square inches so $314 \times 2.4778 = 778$ -grams. So based on this a good dough weight for your 20-inch N.Y. style pizza would be 778-grams.

Dough Clinic / Re: 20" (50cm Pies) im up to 24oz (700g) dough balls to get up to size

Vacuum sealing it the key to getting long term storage from an opened package of IDY. New packages are either gas flushed or vacuum sealed.

Dough Ingredients / Re: Yeast storage and longevity

Norma;

I've heard of it but never used it.

Off-Topic Foods / Re: Baking soda and Pretzel

Let me see, August 11, 2018 to August 11, 2019 = 1-year and August 11, 2019 to August 11, 2020 = 2-years, yep, just as I guessed, it's still good. Your observation is correct in that as the IDY ages it loses its potency and you need to continue adding more and more of it. From a commercial application point of view this is totally unacceptable but for home use it isn't necessarily a game changer. Once you open the package all bets are off the table when it comes to shelf life as there are just sooooo many contingencies that might impact the shelf life.

When I was running the bake lab at AIB we made it a habit to NEVER hold an opened package of IDY for more than 5-days, the reason for this is because we saw a difference in performance already at the 7-day mark. I believe most manufacturers will suggest holding an opened package no more than 14-days, but this again is for commercial application, not for home application. There are huge

differences in performance expectations between experimental/research, commercial and home applications.

Dough Ingredients / Re: Yeast storage and longevity

A number of years ago one of the major pretzel manufacturers got the lye solution too concentrated which resulted in residual lye on the surface of the pretzels and caused a recall of the product as consumers were complaining of a burning sensation on their lips after eating the pretzels. Every once in a while you will experience this same burning sensation when eating perfectly "normal" pretzels, this is due to the water in the lye solution evaporating to cause a slightly too concentrated solution having the same results but to a much lesser degree. The most concentrated lye solution purchased by bakeries is 20%, in the dry form it is much too dangerous due to its propensity to dust into the air while being transferred/scaled.

Off-Topic Foods / Re: Baking soda and Pretzel

It only takes 0.25% of a 20L malt powder to replicate the level of malting flour receives at the flour mill, anything over that will be converting a significant amount of starch to maltose sugar which is why you found it necessary to use less malt powder than sugar, the downside to it thought is the inherent stickiness of the dough due to the formation of excess maltose.

Dough Clinic / Re: Diastatic malt vs sugar

Please define "higher absorption" in bakers percent.

Dough Clinic / Re: Chicago tavern style needs improvement

Brent;

That's exactly the same as for honey. ^^^

Dough Clinic / Re: Diastatic malt vs sugar

The manufacturers used to have a 2-year shelf-life on it at 70F storage temperature but a number of years ago they rolled it back to 1-year, I think the reason being that it was too difficult for merchants and users to keep track of the age over such a long storage period. Unopened, you should be good for 2-years at 70F.

Dough Ingredients / Re: Yeast storage and longevity

We have addressed this question before, when storing either ADY or IDY in the refrigerator or in the freezer it is HIGHLY recommended that the yeast be removed from the fridge or freezer and allowed to come to room temperature BEFORE opening the container. Moisture will lead to early loss of the yeast so opening the container ONLY after it has reached room temperature will reduce the condensation issue thus reducing the moisture accumulation on the yeast and result in better long term storage of the yeast. By the way, it is NOT recommended to remove the yeast from the original packaging if using only a portion of the yeast, instead, fold the packaging down tightly to the yeast, secure with tape or rubber band and refrigerate or freeze. Air will also cause the yeast to deteriorate and this eliminates much of the air in the package.

Dough Ingredients / Re: Yeast storage and longevity

Rather than using "melted" butter, just use "softened" butter, putting melted butter in the fridge is counter productive. As for achieving the targeted finished dough temperature just use colder water, some use water that has been stored in the

fridge overnight while others find that they need to use a little crushed ice in the water too. I don't know how else to explain the appearance of the dough when it has been properly mixed except to say that it is just mixed until the dough has a smooth appearance which is a very good visual indicator that the dough has been sufficiently mixed when you are going to use 18 to 24-hours of cold fermentation. It is impossible for me to speculate what speed to mix the dough at using your specific mixer except to say that you should use the highest speed possible without fear of over working your mixer.

Dough Clinic / Re: Cinnamon rolls

Try using shortening rather than oil but be aware that the dough will still cling to the shortening, most pizzerias use the plastic dough boxes which don't pose this problem.

General Pizza Making / Re: Dough sticking to dough pans

I'm assuming your malt powder was non-diastatic?

When using honey remember that the darker the color the more robust the flavor will be. In the baking industry we use honey that is as dark as black coffee.

Dough Clinic / Re: Diastatic malt vs sugar

Yael;

When making pretzels you don't need to use an egg wash for color. The alkaline wash will give you both color and shine, the stronger the alkaline wash the greater the color. We typically used a 2% sodium hydroxide solution (which is what is used commercially). One might say that the only real difference between a bagel and a pretzel is alkalinity of the water in which the bagel is "kettled" in. When pretzel crusts were all the rage we made them by brushing the edge of the skin with the 2% sodium hydroxide solution and then applying a light application of coarse pretzel salt just prior to baking. We made the pretzel buns by the exact same manner.

Off-Topic Foods / Re: Baking soda and Pretzel

Gotta admit, that's a good lookin' pizza! :drool: :drool: :drool:

Sicilian Style / Re: Serving up pan pizza - soggy crust woes.

Even with an electric oven it is highly recommended that you have some kind of ventilation in your garage or eventually you're going to find everything covered with a sticky layer of goo. You might be surprised to find out what goes up the stack in an electric oven.

Pizza Ovens / Re: Commercial oven for garage, gas vs electric?

Yep, it's the "nature of the beast" to get soft VERY soon after exiting the oven. If you are baking the pizzas at home and also happen to be the Chief Cook, Bottle Washer, CEO, CFO, and President of pizza making endeavors you can do whatever you want and deviate from the classical Neo type pizza to something that better fits YOUR likes (that's actually the best part of making pizzas at home), so by simply reducing the oven temperature and baking longer you can introduce a more crispy nature to the finished crust and the crust will retain the crisp for a longer period of time, this is the experimentation that we all find so interesting. The more you experiment the more you understand about pizza and the more experimenting you will want to do (it's an endless cycle) but you will find few here who are complaining about it.

Neapolitan Style / Re: Neapolitan pizza goes Tough and rubbery after 15

minutes?

Saying that you use Caputo "00" flour really doesn't help very much as there are different types of Caputo "00" flour, perhaps you are using one which isn't designed to tolerate more than 12-hours of fermentation? It would be good to know the actual finished (mixed) dough temperature as well as exact ingredient weights or amounts in bakers percent. What kind of mixer are you using? When you bulk ferment, what kind of dough weight are we talking about?

Dough Clinic / Re: Flat Pizza balls

It's my experience that this is a pretty common issue with aluminum fermentation pans. I used them when I was at AIB and we always had to scrape the dough off of the pan. Plastic, in my opinion, is a much better alternative.

General Pizza Making / Re: Dough sticking to dough pans

How about the time I set a series of experimental doughs and then went to lunch with aspirations of conducting the baking experiments that afternoon after lunch, upon my return I got everything ready and pulled the first dough only to find it looking much like it did in the morning, OMG! Are they all like this? Yep, everyone. Forgot to add the yeast.

Almost as bad as the time when I set sponges in the morning and went over to the lake (Michigan) as AIB was located only 200-yards from Ohio Street Beach, I was watching the kids playing on the shore and my eyes got heavy, very heavy, when I woke up it was quiet, the kids were gone and it was almost 4:00 p.m. Oops! Those sponges, well lets just say that they were very well fermented and yes, there was a mess to be cleaned up as they all over flowed their containers.

Dough Clinic / Re: Diastatic malt vs sugar

If the donuts were wet coming out of the proofer the relative humidity was too high in the proofer, remember that you only want a R.H. in the 75 to 80% range (favoring 75%) at this humidity the proofed donuts will have a dry but soft outer skin on them.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Traditionally, All Trumps flour is used but the truth is that just about any good bread type flour will work well. Here is a good starting dough formula:

Flour; 100%

Salt: 1.75%

Olive oil: 2%

IDY: 0.375%

Water: 63% (70F)

My Dough Management Procedure is presently posted here in an active thread, I suggest using the plastic bag procedure with a cold fermentation period of 48-hours.

New York Style / Re: pizza dough for ny style piza

QJ;

Sometimes it's also the BTU of the burner or the way the flame is adjusted that can result in this issue.

Dough Clinic / Re: Chicago tavern style needs improvement

djenks;

I'm not sure I fully understand your question, but I do suggest increasing the salt and shoot for the targeted finished dough temperature. Then go straight from the mixer to the bench for scaling and balling, then bag and into the cooler.

Here is another option for a truly outstanding Chicago style crust.

Put water in mixing bowl (70F).

Suspend the IDY in a small amount of 95F water then add to the water in the bowl, no need to activate, just hydrate.

Add salt and sugar IMMEDIATELY followed by the flour.

Mix at low speed for approximately 1.5-minutes (yes, you read that right). The "dough will look very shaggy" with lots of dry flour present.

The dough is properly mixed when you can grab a hand full and press it together to form a crumbly ball (it will NOT be cohesive).

Scale to desired weight, form into "puck" shape as you would if making a pie crust.

Place into individual plastic bags as you presently do.

Cold ferment for 24 to 48-hours.

Remove from cooler, allow to warm to 50F (internal ball/puck temperature).

Turn out of the bag (the dough will be much more cohesive now). Do not re-ball, just flatten and begin forming.

Form into a skin using a dough sheeter or rolling/pastry pin.

Dress to the order and bake.

NOTE: This dough has no added oil.

I discussed this procedure quite some time ago here if you want to research it.

Dough Clinic / Re: Chicago tavern style needs improvement

If you are looking for more of a "corn" flavor in the finished crust try replacing 50 to 100% of the corn meal with Masa Flour/Maseca.

General Pizza Making / Re: "San Francisco" style cornmeal attempt

One of the very first things I'd do to address the flavor issue is to increase the salt level to 2%, then at the same time change the dough mixing procedure by putting the water in the mixing bowl first, then the salt and sugar (no need to stir) followed by the flour and IDY. Mix at low speed just until you don't see any dry flour in the bottom of the bowl, then add the oil gradually, mix 1 additional minute after all of the oil has been added, then go to the next highest speed and mix for 8 to 10-minutes. You don't say anything about the finished dough temperature, this is a critical aspect of effective dough management. I'd suggest targeting 75 to 80F for 48-hours CF.

Dough Clinic / Re: Chicago tavern style needs improvement

If you didn't put any yeast in the dough you might be disappointed. :-D

Dough Clinic / Re: Diastatic malt vs sugar

The key here is to make sure it gets reheated to a temperature above 160F which isn't always the case on the top of the slice. This can be a pretty good case for a small air impingement or IR oven for reheating those slices especially if you are having a hard time dealing with a FSI.

Dough Clinic / Re: Best Practices for Pizza by the Slice: Food Safety & Taste

We did all of our research on a stone deck in a combination wood and gas fired commercial pizza oven that was a full 6-inches thick. I can see where different deck materials as well as different deck thickness would affect this. Good point.

Dough Clinic / Re: Diastatic malt vs sugar

Non diastatic malt is nothing more than "malt sugar" while diastatic malt is enzyme active alpha amylase primarily but other enzymes are also present which hydrolyze wheat starch into maltose which is then further hydrolyzed into glucose by the enzyme (maltase) in the yeast which is then metabolized by the yeast as a nutrient to support fermentation/yeast activity. Too much malt and a wood fired oven baking at very high temperatures is generally not considered a match made in heaven as the crusts have more than a slight tendency to burn. If baking at less than 650 to 700F this may not be as much of a problem.

A typical use level for 20L dry malt powder is 0.25% in an un-malted flour.

New Forum Members / Re: New member and malt powder question

I also like to do it out of the bowl using a scraper in one hand to help lift the dough and stretch it for folding.

General Pizza Making / Re: On stretching and folding wetter doughs

If baking on the deck, about 650F, even at that the crust might develop color too quickly for some pizzas.

Dough Clinic / Re: Diastatic malt vs sugar

Thickness Factor/Dough Loading = dough weight divided by pan surface area in square inches.

$15.5 \times 12 = 186$

22-ounces divided by 186 = 0.1182795

Dough Loading Factor: 0.1182795 or to put it another way, you have 0.1182795-ounces of dough per square inch of pan surface area.

Sicilian Style / Re: Serving up pan pizza - soggy crust woes.

And don't forget to put a wet towel in the oven too, otherwise just heating the air will drive the R.H. down allowing a crust to form on the dough (something you don't want).

It is very easy to make your own donut proofer too, all you need is a box, a light bulb and a wet towel, use a pair of stem type thermometers for measuring R.H. with a couple of ventilation holes cut into the box to control temperature and humidity you're good to go.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Sure, here's how it's done.

A good dough weight for a 12-inch pizza is 10-ounces. The surface area of a 12-inch circle is $\pi \times R^2$ (you might remember that from high school math), so $3.14 \times 36 = 113.04$ -square inches. By dividing dough ball weight by surface area we get the dough loading per square inch (10-ounces divided by 113.04 = 0.08846-ounces per square inch).

A 6-inch pizza has ($3.14 \times 9 = 28.26$ -square inches) Now all we need to do is to multiply the surface area of the 6-inch pizza by the dough loading (0.08846) to find the weight of the dough ball needed to make our 6-inch pizza ($28.26 \times 0.08846 = 2.4998$ -ounces) We can round that off to 2.5-ounces.

Each dough ball should weigh 2.5-ounces to make a typical 6-inch thin crust pizza skin.

Can the dough ball have a different weight? Sure it can, it's YOUR pizza so you can make it whatever you want but I think 2.5-ounces is a reasonable starting point that will make a finished crust about the thickness of a Domino's thin crust.

Dough Clinic / Re: Six Inch Individual Pizzas

That would be my recommendation. Yeast raised donuts are final proofed at 85 (29.4C) to not more than 90F (32.2C) at between 70 and 75% relative humidity for 40 to 60-minutes. Total frying time will be just under 2-minutes total for both sides.
Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Most will fully bake the pizzas, hold in a temperature/humidity controlled cabinet and reheat for the customer. I like to add a little additional cheese for flavor and appearance, but that's just me. In the end you will want to develop a plan and then pass it by your food safety inspector the his/her blessings, after all, in the end they will have the final say in the matter.

Dough Clinic / Re: Best Practices for Pizza by the Slice: Food Safety & Taste

When dealing with un-malted flours you will typically see a slightly greater tendency towards developing more crust color with a higher protein flour than a lower protein flour due to the fact that protein participates in the browning reaction.

Dough Clinic / Re: Diastatic malt vs sugar

That is a VERY LOW temperature (130C/266F) for frying donuts at. The lowest I've ever seen used was 340F/171C.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

In a scenario like that the dough will continue to ferment but because it's warmer and continuing warm (due to heat of metabolism) the fermentation rate will also continue to increase. The result will soon be a dough that is difficult to shape as it becomes overly extensible and in a severe case it will become very weak making opening it into a skin without having it tear or develop holes all but impossible. In most cases dough balls that have been allowed to ferment too long can be salvaged by re-balling them BUT remember that it may take several hours for the dough to relax sufficient for it to be opened again. A much better option (one that is commercially practiced) is to go ahead and open the dough balls into skins before they reach this point, place the opened skins onto pizza screens and store in the cooler/fridge (covered to prevent drying) until 20 to 30-minutes prior to time of use. To use, remove from the cooler (keeping covered) and allow to warm AT room temperature for 20 to 30-minutes, remove from the screen and touch-up the dough skin, then dress and bake to the order. A lot of pizzerias do this to enable them to keep up with the rush periods when they tend to fall behind on opening skins.

General Pizza Making / Re: How long can proofed dough sit at room temperature.

Using flour with too low of a protein content can result in an overly tender finished donut, deleting the whole egg will reduce the richness of the finished donut. 0.8% IDY should work OK.

Remember that powdered sugar is made from dextrose, not sucrose which is why powdered sugar exhibits a cooling effect in the mouth and the flavor isn't overly sweet.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

You might try this for your mixing procedure, put water in mixing bowl first (65F), then add the flour and all of the dry ingredients and mix at low speed just until you don't see any dry flour in the bowl, add the oil and mix at low speed for 1-minute, change to the highest speed your mixer will handle the dough at and mix 8 to 10-minutes, or until the dough just begins to look smooth. then scale/ball and cold

ferment for 24 to 48-hours, after CF allow the dough to warm to 55F at room temperature (this is the INTERNAL dough ball temperature), it will take about 90 to 120-minutes. Then proceed with your usual process. Keep us posted.

Sicilian Style / Re: Serving up pan pizza - soggy crust woes.

Be sure to remove the pizza from the pan IMMEDIATELY after you remove the pizza from the oven and place it onto a wire cooling rack for a minute or so to allow the toppings to set-up, then transfer to a cutting surface and cut into desired slices, serve immediately.

Additionally, can you share your dough formula as well as the dough management procedure and baking procedure with us? Perhaps there is something there that we can help you with to achieve a crispier crust.

Sicilian Style / Re: Serving up pan pizza - soggy crust woes.

The Thunderbolt was a "plain Jane" Ford Fairlane with a 4-speed and just a single bucket seat, no passenger seat or back seat, battery was located in trunk over right rear wheel (Ford still didn't have a decent locking rear end). I took off all of the 427 badges and replaced them with 289 badges. I ended up putting in a second bucket seat and replaced the driver's harness with a lap belt and then add a rear seat. Spent a lot of time under the hood adjusting valve lash. Spark plugs were a bear to replace so I added a Delta Electronics C.D. ignition system, aside from that it was "stock". Can't tell you how many 289 Mustangs and 289 H.P. Fairlanes got "dusted" by it, even did the number on some "goats" (Pontiac 389 GTO's), even did in a 396 Nova SS and my buddy's 383 Plymouth. The most expensive part of that car was the cost of tires! Ran Blue Streaks on the rear for traction in the summer and usually went through at least two sets every summer. Tire rotation on the rear was done every two weeks.

The beast made the Shelby Cobra look very refined!

Chitchat / Re: My First Car was

Paulrevere73;

Here in Kansas we call that camouflage. :-D

Chitchat / Re: My First Car was

You're not going from 500 - 550F to room temperature, you are only going from the suggested platen and head temperatures of around 250 to 300F and pressing for +/- 5-seconds.

RS-190 aka dead yeast is available from Red Star Yeast/Lesaffre. Contact Sandi Cazalet at <s.cazalet@lesaffre.com> / <www.lesaffreyeast.com>.

Chicago Style / Re: Mimicing whole-sale cracker thin-crust dough

A 1954 flathead V-8, then a 1956 Ford Crown Victoria V-8, then a 1960 Ford Thunderbird, Then a 1964 Ford Sprint with the 289 V-8 crate engine option, after that it was a 1966 Ford Thunderbolt 427, then a 1969 Shelby Cobra, after that I grew in a different direction and it was a 1972 International Scout II, then a 1979 Jeep Renegade, then a 2001 Dodge 2500 Pickup (which I still have) and presently also have a 2014 Jeep Patriot. In addition, in 2005 I bought a Dodge Dakota as my daily driver (a real piece of CrXX) plagued by engine, electrical, body rust and mechanical issues its entire life, three years ago it gave up its life to save mine when I hit a patch of unseen black ice on the Interstate, it was replaced by the Patriot which has served me VERY WELL. I can also tell you about all of the cars my wife has had too including the 1967 VW Beetle that I retrofitted with a 20-gallon gas tank up front (it got an honest 40 m.p.g.) giving it tremendous range

during the gasoline shortage years.

Cars are just one of those things us guys don't ever forget.

Chitchat / Re: My First Car was

That's the key here, whatever is used to press form the skins needs to be able to maintain that temperature for the duration of the dwell time.

It might be as easy as two thick steel plates placed into the oven to pre-heat and then placing the partially opened skin onto one of the plats (don't forget to oil it first) and immediately placing the second (oiled) plate on the skin and pressing down on it for a count of 5 or more seconds, then removing the plate and peeling the formed skin off of the bottom plate. I've personally never ventured into this territory as I've always had access to a multitude of different hot and cold presses to work with. The first thing to do is to study the different hot presses available (AM-Manufacturing) and I think Dough-Pro also has one with both a heated head and platten, though I may be wrong?

In my mind this is what I see, two steel plates of desired diameter, bottom plate is 1/2-inch thick and top plate is 3/8-inch thick. Top plate has two sturdy handles welded onto it to allow it to be evenly pressed with full upper body weight down onto the bottom plate (with the dough trapped between then), after the dwell time the top plate is lifted off of the dough and the skin is manually lifted from the bottom plate. Will it work? Only one way to find out.

Chicago Style / Re: Mimicing whole-sale cracker thin-crust dough

When the crusts are commercially made on a wholesale basis the entire skin is subjected to the heat of the hot press (about 300F bottom and 250F top). The dough will need to be very soft and extensible, remember that it has to go from a ball to a fully formed skin in something between 1 and 2-seconds. Better than your cast iron pan approach might be to try a couple of Pyrex pie plates, using a rolling pin, open the dough ball to about the diameter of the bottom of the pie plate, then place the top plate on the dough and carefully press the dough between the two how pie plates, leave it set for a minute or so (commercially the dwell time is only about 5-seconds) but you're not holding it under 800 p.s.i. pressure under heat so you need to work outside of the box, when the dough has been pressed between the two plates (dwell time) long enough it will release from the plates without too much difficulty and have a slightly glossy appearance, then it goes directly to the oven for par-baking.

I think you might be plowing a virgin field so please keep us posted on your progress.

Chicago Style / Re: Mimicing whole-sale cracker thin-crust dough

TNT Crusts makes their own hot presses but they are copied after the AM Manufacturing commercial hot presses, if you want to see how the crusts are formed just Google (Am Manufacturing dough presses), there are a number of links to look at but one has a video that you might be interested in seeing. I won't go into much detail but these dough receive almost no fermentation and they do use a reducing agent (RS-190) aka dead yeast to facilitate pressing, after pressing the shins are par-baked to set the structure, it is then important to allow the crusts to age for at least 24-hours before using.

The chemical leavening (SALP and SODA) are in the form of a fat encapsulated chemical leavening system which we have previously discussed here and I've written an article or two on it also. The commercial name for this product is "Wrise", manufactured by Wright Enrichment Company.

Chicago Style / Re: Mimicing whole-sale cracker thin-crust dough

You want the frying fat at 365F and the donuts will look better after the frying fat has some age on it. New/fresh frying fat doesn't do much for the appearance of the donuts. This is why those in the business of making donuts always seed their new frying fat with 15% of the old fat.

Off-Topic Foods / Re: Problem of yeast donut - many bubbles

There are some good charts here that will allow you to predict the amount of yeast needed for specific room temperature fermentation, if you cannot control the room temperature your only other option, in this case, is to adjust the yeast level based on the room temperature. But be aware that there are short comings to this too in that a reduced yeast level can affect the oven spring, especially if your pizzas tend to be heavily loaded.

Dough Clinic / Re: Complications with dough management

Try par-baking with 1/2 of the sauce, then remove from oven and place on screens in a wire tree rack to cool. Does not need refrigeration. At the event all you need to do is to apply the remainder of the sauce and dress to the order, you can do that faster then the pizzas will bake and you will get the freshest pizza. Reheating a par-baked pizza is OK at best.

Neapolitan Style / Re: Large Pizza Party - prebaking pies?

Your salt level is low too at just 1.368%. A better salt level would be something in the 2 to 2.5% range. Since salt helps to control the fermentation rate as well as strengthen the dough this would be a step in the right direction too.

Starters/Sponges / Re: Starter with ADY trouble

In loaf bread bleached flour produces a brighter, whiter crumb color, but in pizza the crumb structure doesn't lend itself to seeing this since it is so thin and more open/porous as well as most of the time being smeared with sauce and/or toppings due to cutting. So for all practical purposes it can be said that bleaching has no impact on pizza dough or the finished crust.

Dough Clinic / Re: Diastatic malt vs sugar

That's the best part of making your own pizzas at home, you can make them the way YOU like them, and remember, if YOU don't like it you know who to blame. :-D

Newbie Topics / Re: Opinions regarding cornicione of the pizza

Here is a working example:

Flour weight: 800-grams

Ingredient percent: 0.375%

The math using your calculator: 800×0.375 (press the "%" key and read the ingredient weight in the display (3-grams) NOTE: Ingredient weight will ALWAYS be in the same weight units (pounds, grams, kilograms, etc.) that the flour is shown in.

To find the total dough weight:

Find the sum of all of the ingredient percentages, then divide by 100. Multiply the flour weight by this number.

Example: Flour: 100% (800-grams), Salt: 2%, IDY: 0.375%, Water 60%, Oil 2%

The sum is: 164.375% divided by 100 = 1.64375

Multiple flour weight by 1.64375. $800 \times 1.64375 = 1315\text{-grams}/1.315\text{-Kg}$.

If you want to put a dough formula based on weight measures into bakers percent. Flour is ALWAYS 100%.

Divide the weight of each ingredient by the weight of the flour and multiply by 100. Example: 800-grams flour weight and 450-grams ingredient weight. $450 \div 800 \times 100 = 56.25\%$ do this for each ingredient and you will have put your dough formula into bakers percent.

Ain't math great!

Newbie Topics / Re: Percentages

I'd suggest that you also post this on the PMQ web site (Think Tank).

[<www.pmq.com>](http://www.pmq.com).

Shop Talk / Re: Switching from Grande cheese

I agree with Craig, also the ADY should be activated in 100F water with just a small amount of sugar (actually, a pinch is sufficient), put the rest of it in the dough. What is the finished dough temperature? Ideally, it should be around 75F, if the dough is warmer than this it will further accelerate the rate of fermentation making matters even worse. Can you provide the weights for your salt, sugar and ADY as opposed to volumetric portions?

Starters/Sponges / Re: Starter with ADY trouble

Don't worry about clostridium, the environment is too acidic, about the only thing to worry about is a change in the micro-flora resulting in a different flavor profile, if smells OK go ahead and proceed to activate it and make some dough with it, if the dough is OK and there is nothing strange about the flavor of the finished crust you're good to go.

Dough Clinic / Re: Hidden dangers of old starters?

A malted flour will always provide more crust color development with a fermented dough and since protein is a participant in the browning reaction the higher the protein content of the flour the more it will contribute to crust color development. It can safely be said that the impact of flour protein content is significantly less than that of a malted v/s non-malted flour, or inclusion of sugar in the dough formulation.

Dough Clinic / Re: Diastatic malt vs sugar

I was referencing the 20-grams of yeast in the dough formula shown so 80% of 20-grams would make it 16-grams in 4-Kg of flour or 8-grams in 2-kg. flour.

Dough Clinic / Re: Dough Management Problem

It wasn't in this thread was it? I think in that particular instance the individual had both flours and the KABF was more readily available, otherwise 100% of either flour would be just fine.

Dough Clinic / Re: Diastatic malt vs sugar

The rule is to allow at least 1.5 X the oven depth as free/open space in front of the oven for the oven tended to work in. Failure to do this typically leads to wishing you had.

Shop Talk / Re: Putting a Deck Oven in a Food Truck?

The addition of sugar in this case is for crust color, so if you are satisfied with the

finished crust color continue using sugar as you are.

I also suggest that you get the balled dough into the cooler within 20-minutes from the time the dough is finished mixing.

Keep us posted on the results.

Dough Clinic / Re: Dough Management Problem

Once you remove the dough balls from the cooler you will need to allow them to warm to an internal temperature of 50F/10C (about 90-minutes) before opening them into skins, once the dough balls reach 50F/10C they will remain good to use for up to 3-hours at room temperature. Any dough balls not use in that period of time should be slightly flattened, placed on a lightly floured pan, covered to prevent drying (or you can place back into the dough box), then remove them from the cooler and allow to warm for only 30-minutes before you open them into skins.

Neapolitan Style / Re: Big amount of recipes

Using that kind of water temperature the dough was very warm and most likely over fermented becoming what is commonly referred to as "bucky". This is a condition where the dough is VERY elastic and difficult to impossible to open into a skin without the dough tearing.

Try making the dough again but use only 70F water. Use only a very small amount of water at 100F to hydrate the IDY in.

Neapolitan Style / Re: Rubber band dough

Fahrenheit (F).

Dough Clinic / Re: Diastatic malt vs sugar

If you are in a restaurant you will have access to a cooler? Why not just stagger the times that you remove dough balls from the cooler so as to have a continuous supply of dough balls to work with during the entire 12-hour day?

I'm not sure I can help you with a dough that is fermented for 16-hours at ambient and then still be able to provide a consistent quality pizza over an additional 12-hour period of time during which the pizzas will be made. A lot of changes can/will take place in a yeast leavened dough over that 12-hour period at ambient.

Neapolitan Style / Re: Big amount of recipes

The next time you make it try making one with sliced fresh (RIPE) tomato rather than sauce, it really makes the red pop and contrast with the white and green.

If you can't get fresh ripe tomatoes try Stanislaus 74/40 Tomato Filets (drained for 20-minutes), they're superb!

Neapolitan Style / Re: First Margherita

Too hot for sugar in the crust!

Dough Clinic / Re: Diastatic malt vs sugar

We did a study on herbs as it pertains to the flavor of pizza some years ago and what we found was very interesting. Oregano (dried) is the most over used herb on pizza, it also has the most dominant and identifying flavor, and is also responsible for the heart burn many older individuals complain about after eating pizza. In an effort to increase the flavor of their pizzas many operators just keep pouring on the dried oregano, then in short order they begin asking if anyone else has noticed the lack of flavor in the mozzarella cheese lately. Our tests showed that the dried oregano was overpowering the delicate flavor of the cheese (mozzarella cheese by definition has a VERY mild flavor). We also found that our sensory panelists

consistently associated the basil flavor with pizza. We then looked at the difference between fresh and dried basil. The fresh oregano (micro-leaf) was consistently preferred over the dried oregano by our panelists and when presented to individuals who limited their consumption of pizza due to the heart burn issue they reported back to us that they didn't suffer the usual heartburn. At the time we were doing two major pizza shows a year so we presented our finding at the shows for two years in a row, the results were always the same, there was a much greater preference for fresh oregano over dried oregano and as a side study we began reducing the amount of cheese used on the pizzas in conjunction with the use of fresh oregano. We asked our audience what they thought of the pizza they were given (we did not prompt them in any way), the most frequently asked question was "What brand of cheese did you use?" "This pizza has a great cheese flavor". The pizzas were made using 3.75-ounces of shredded Grande WM mozzarella on a 12-inch pizza. The oregano used was fresh micro-leaf oregano adjusted to give a very mild but yet readily identified oregano flavor. The audience had a hard time believing that we got that level of cheese flavor from just 3.75-ounces of just mozzarella cheese. This led us back to our sensory panel for another look at dried oregano, we presented them with samples of pizza made with dried oregano at levels which were typical to that being used by the industry and then asked them to identify the flavor used in other pizza samples, what we found was that the dried oregano appeared to "wipe out"/over power their taste buds to the point where they were not able to readily distinguish different flavors which led us to think about the cheese comments as well as a growing trend in the industry to use ever increasing amounts of cheese to get a decent cheese flavor in the pizzas, it's not a change in the cheese, in my opinion, it's the excessive use of dried oregano that's at fault here.

General Pizza Making / Re: Oregano before or after bake?

Yes, omit the sugar, what temperature are you baking at?

Dough Clinic / Re: Diastatic malt vs sugar

With short fermentation time the sucrose wins with longer fermentation time the diastatic malt powder wins.

Dough Clinic / Re: Diastatic malt vs sugar

For IDY I would go with 0.4%, because the dough is mixed by hand it has to be hydrated by suspending it in a small amount of warm (100F) water before addition to the dough water. As for finished dough temperature I would suggest targeting 75F, which will put the dough water temperature at about 70F.

When I was teaching pizza making to local families I found that I could take almost any pizza dough formula and plug it into this procedure and get decent results, not spectacular, but everyone reported that it was an easy procedure to follow, didn't take a lot of attention (farm families have other things to do too) and always allowed them to make pizza as well as bread that their family really enjoyed. This is why I always revert to this procedure for someone just learning to make their first pizza, when you can sit at the table with your family and enjoy the fruits of your labor the incentive is pretty great to go on and make more and even better pizzas.

:chef:

General Pizza Making / Re: Check my method please

Vertical wire tree racks are wire racks designed to hold pizza pans, screens and

disks stacked vertically, some racks are designed to be free standing, like on a counter top while others are designed to be suspended from a wall, still others are constructed on wheels so as to be able to be easily moved about you can see these if you Google "wire pan pizza support racks". If you go to American Metalcraft at <www.amnnow.com> and search "Pizza Racks" you can see pictures of the free standing racks that many stores use.

Neapolitan Style / Re: Big amount of recipes

May I suggest an improved procedure?

Put water in mixing bowl first, add the yeast suspension, then add the salt and sugar immediately followed by the flour. Using a wooden spoon, mix the dough until it can no longer be mixed without fear of breaking the spoon, remove the spoon, add the oil and mix by hand until the oil is incorporated into the dough, turn the dough out of the bowl onto a lightly oiled surface, scrape the bowl clean and lightly oil it, knead the dough a few times (1 or 2-minutes), form into a ball and place back into the oiled bowl, lightly oil the top of the dough ball and cover with a piece of plastic (DO NOT SEAL OR COVER TIGHTLY), allow the dough to ferment at room temperature for about 3-hours, then turn the dough out of the bowl onto a floured surface and knead the dough for about 5-minutes or until it begins to look somewhat smooth. Lightly oil the bowl again and place the dough ball back into the bowl for 30-minutes, turn the dough out of the bowl and scale to desired weight pieces, form each piece into a ball, lightly oil each dough ball and place into individual plastic bread type bags (DO NOT USE ZIP LOCK BAGS), twist the open end of the bag into a pony tail and tuck it under the dough ball as you place it into the fridge. Allow dough balls to cold ferment in the fridge for 24 to 48-hours. To use, remove dough balls from fridge and allow to warm AT (NOT TO) room temperature until the internal dough ball temperature is in the 50 to 60F range (about 60 to 90-minutes, then roll the bag down around the dough ball and invert the bag over a floured surface allowing the dough ball to fall free from the bag, flour both sides of the dough ball and open into a skin by your preferred method. We have recently had discussion on this vert topic.

General Pizza Making / Re: Check my method please

If you are referencing sucrose then the answer is sucrose.

Dough Clinic / Re: Diastatic malt vs sugar

Sure, on the morning of the event open all of the dough balls into skins, place on pizza screens and store in a vertical wire tree rack(s) in the fridge, they will keep all day this way, to use just remove from the cooler 20-minutes prior to dressing and baking, turn off of the screen and re-stretch a little then dress to the order and bake. This is a similar method as used by many of the fast casual pizza places. You're still going to need a cooler of some type, as holding dough between 27 and 34C for what essentially amounts to all day is going to result in more than just a little change from the first to the last of the pizzas.

Neapolitan Style / Re: Big amount of recipes

When you remove the dough balls from the cooler BE SURE to allow them to warm to 50F/9.9C internal dough ball temperature (not higher than this), this will give you a full 3-hour window of time to open all of the dough balls into skins without too much/excessive difference in quality between the finished pizzas. This is what essentially all of the big U.S. box chains and a good many pizzerias do.

Neapolitan Style / Re: Big amount of recipes

You did well! Great lookin' pizza! :drool:

New York Style / Re: Made a few pies with Tom Lehman dough recipe in my home oven

No, none at all. Whole egg = 35% solids + 65% water, of the 35% solids about 12% is yolk which is 33% fat so the total fat being contributed by the whole egg is (10% (35% o 10% = 3.5% and 12% of 3.5% = 0.42% and 33% of 0.42% = 0.1386% total fat contribution in bakers percent from the 10% added whole eggs.

Dough Clinic / Re: Delayed egg method

I forgot to add that the salt level is 1.9% not 0.019% as indicated (76 divided by 4,000 X 100 = 1.9%) In view of the potentially weak dough you have it might be beneficial to increase the salt level to 2.5% (4000 X 2.5 (press the "%" key) and read the new salt weight in the display window. (100-grams is the new salt weight).

Dough Clinic / Re: Dough Management Problem

From what you have described and from the appearance of the dough balls, especially the last picture, I'm guessing that the dough is over fermented. Is there any chance that you can use it after 24-hours rather than 48-hours? The other option is to try reducing the yeast level 20-grams in 4Kg. of flour is 20 divided 4,000 X 100 = 0.5% Note: All of your percentages shown are incorrect. You don't say what kind of yeast you are using so I can't add anything more about the yeast except that you might try reducing it by 20% to see if that helps. Additionally, you say you are adding an "improver" can you provide a list of the ingredients in that improver, many times these improvers are a cocktail of ingredients, all of which may not be compatible with long fermentation times as they were designed and intended for use in bread formulas incorporating much shorter fermentation times, usually only just a couple of hours as opposed to days for a pizza dough.

Dough Clinic / Re: Dough Management Problem

Don't worry, that's perfectly normal. The dough will become smoother and stronger as it's worked and given more fermentation.

General Pizza Making / Re: Torn dough surface question gt

When we did our pizza seminars at AIB we told our students that proper attire was required of ALL persons in the shop. No open toe shoes, aprons or lab coats had to be worn, ALL jewelry that was worn and visible above the waist had to be removed (the rest we didn't want to know about) ;D regarding rings, a plain band was OK but if it was more than just a plain band it either had to be removed or covered with a plastic glove, everyone was also required to wear a hair net too and while on the topic of hair, if hair was worn below the collar it had to be restrained under the hair net (above the collar). It totally gives me the shivers when I see someone with unrestrained long hair working close to a mixer or a dough sheeter.

Regarding those TV personalities, don't you just love to watch them constantly wiping their hands on the towel they wear at their waist? It's a petri dish of bacteria! The mystery to me is why a chef's coat has a breast pocket or arm pocket designed to hold a pen or thermometer? It violates EVERY food safety rule in existence!

Chitchat / Re: Jewelry and Food Preparation????

Been there, done that many times!

Scenario:

I have four dough balls that are all under scaled/too light in weight and they are

ready to be opened.

Corrective Action:

- 1) Determine how much additional weight has to be added to each dough ball.
- 2) Set aside one dough ball as a sacrificial dough ball which will be used to provide the additional dough needed to bring the other three dough ball up to desired weight.
- 3) Cut a piece of dough from the sacrificial dough ball slightly larger/heavier than needed, using your scale trim the weight of the dough piece back to the target weight.
- 4) With MINIMAL handling add the trimmed dough piece to the bottom of one of the under weight dough balls (cut side facing the bottom of the dough ball) thus bringing it up to the desired weight.
- 5) When adding the trimmed dough piece just place it on the bottom (under) the dough ball, it will meld into the dough ball within a few minutes and nobody will be any the wiser of your error.

Note: The dough remaining as the sacrificial dough ball can be used to make a smaller pizza or it can be further subdivided to make bread sticks. If you plan on making another pizza from it cut the dough pieces from it around the sides of the dough ball thus retaining a somewhat round shape to it. Oh yes, those cut pieces that you trimmed off of the piece cut from the dough ball, just gather them up and place under the sacrificial dough ball, then open that dough ball last as this will allow more time for all of those scrap pieces to meld into the dough ball.

This was one of the things we used to demonstrate to our students in our pizza seminars.

Tip: A scissors is a great specialized tool for trimming those cut dough pieces to exact weight. Place the cut dough piece on the scale pan and cut to weight on the scale pan using the scissors, works like a charm! :chef:

Newbie Topics / Re: How to combine/reportion dough balls after some cold ferment

Does your mixer have a reverse spiral dough arm? If not sure please include a picture of it. If it does have a reverse spiral dough arm you will need to reduce the total dough size/weight which will allow you to mix the dough at a higher speed for improved development/mixing action.

Starters/Sponges / Re: Need help with biga dough

It can/will both inhibit and prevent gluten development if added too soon. It prevents it by soaking into the flour before the flour hydrates, once the flour absorbs oil before water that portion of the flour which has become oil soaked cannot form gluten, we found that this is what led to everyone thinking that the weather influenced how much water the dough would absorb. This was when everyone was putting the water and oil in the bowl at the same time, the oil would float to the top of the water, then the flour was added and the oil soaked into a portion of the flour, this impacted how the dough felt (when more flour was oil soaked the dough felt soft (less gluten development) so flour was added to the dough, is less flour was oil soaked the dough felt firmer due to more gluten being developed sometimes leading to more water being added to the dough. This was blamed on the outside weather, now you know the truth, Mother Nature was found innocent. By using the delayed oil mixing method the flour is allowed to hydrate prior to the addition of the oil and dough consistency is restored.

Dough Clinic / Re: purpose of oil

Remember, change only one thing at a time!

Dough Clinic / Re: Complications with dough management

A higher dough absorption will make for a softer dough consistency which will expand even more in the bowl than your present dough, I thought that was what you were trying to control. If you want to add some tenderness to the finished crust you can also add some fat to it.

Dough Clinic / Re: Complications with dough management

Always remember though that those wonderful aromas coming from the oven while the pizzas are being baked will never be enjoyed by those eating the pizza, they are lost forever, it's only the less volatile aromas that the consumer gets to enjoy, sorta like comparing EVOO to Pomace grade olive oil. In the final end though you are absolutely correct, whatever YOU like the best is the way for YOU to go.

Newbie Topics / Re: Basil and olive oil

Bags will be much better for this application.

A lower temperature will allow for a longer bake, a longer bake is conducive to a crispier crust as well as a crust that retains its crispiness.

Yes, if you bake at your proposed temperature or above 550F you will want to reduce or eliminate the added sugar.

Neapolitan Style / Re: Help me with a hybrid dough

Why more dough absorption?

Dough Clinic / Re: Complications with dough management

Amen to that! When we love what we do it shows in our work. I'd rather spend 50-years doing what I love to do than 1-hour doing something that I don't like doing.

General Pizza Making / Re: When to add the oil

I haven't see that for a long time now. Just something different to be sure.

Pizza News / Re: East Coasters Mock Chicago Square Cut Pizzas

Your pizza looks great! :drool:

If you want to do some experimenting now you might try reducing the yeast level, maybe in 0.1% increments to see that improves the dough prior to opening (you indicated that it was getting big, but that's a pretty subjective term).

Dough Clinic / Re: Complications with dough management

Doktah;

I'm not exactly sure what you mean in your second paragraph about re-balling the dough.

Dough Clinic / Re: Cold prove leading to loss of elasticity

It sounds as if they might also be including the wheat germ too, if this is the case I would highly recommend keeping the flour refrigerated or frozen as germ oil will rancidify rather quickly. This can also be true for whole-wheat flours too.

Dough Clinic / Re: New pivetti flour

Assuming you mean fresh basil leaves. Wilted they are great, charred, not do great, so I always put mine on IMMEDIATELY after removing the pizza from the oven and let the latent heat of the pizza wilt the basil and release the wonderful aroma, in some cases I may pull the pizza out but leave it on the peel, apply the basil leaves and put the pizza back in the oven holding it towards the top of the oven to quickly

wilt the basil, then apply a drizzle of EVOO to the pizza, slice and serve. With some more heavily topped pizza I've been known to add the basil leaves on top of the sauce so they are covered by the cheese and other toppings thus protecting them from the high oven heat.

Newbie Topics / Re: Basil and olive oil

The procedure is very simple, immediately after mixing scale and ball the dough, lightly oil each dough ball and drop into individual plastic bread/bread type bags (DO NOT USE ZIP LOCK BAGS), pull the bag snug to the dough ball, twist the open end to form a pony tail and tuck the pony tail under the dough ball as you place it in the fridge. When ready to use, remove from fridge and allow to warm AT, repeat AT, NOT TO, room temperature until the internal ball temperature reaches 50 to 60F, then roll the bag down around the dough ball and invert it over a floured surface, the dough ball will fall free from the bag inverting the bag as it does so. Flour the entire dough ball and open by your preferred method. Used bags can be stored in a container or another bag in the fridge and reused many times if desired.

General Pizza Making / Re: Cold fermenting in plastic bags.

Failure to cross-stack or allowing the dough to warm up too long after CF can also result in bubbles like that but those aren't too bad so I really wouldn't worry about them unless they were part of a bigger or different problem.

Dough Clinic / Re: All Trumps High Gluten, bromated v unbromated dough diffs

No, I have not worked with that particular flour. I have never heard of a semi-whole-wheat flour. When the outer layer of the wheat berry is removed (that is what we call bran) the remainder is endosperm aka white flour after milling. There is such a thing as long extraction flour which contains a bit more bran as well as ash content but it is a long call from being "semi-whole-wheat".

Whole wheat flour contains roughly 20% bran, do you have any idea of the bran content of this flour? Since they say it contains bran it will require a higher dough absorption, my guess might be in the 70 to 72% range? To allow for hydration of the bran I would advise using an autolyse with this flour. Just all of the flour + all of the water, mix together and allow to hydrate for 1-hour, then add remainder of ingredients and mix together as a dough, be sure to mix it JUST until it starts to smooth out, DO NOT OVER MIX THE DOUGH as doughs containing high levels of bran do not tolerate over mixing well at all.

Dough Clinic / Re: New pivetti flour

Peter;

It didn't used to be that way. I made a very good living when I went to work for Jewel Tea Bakery in Melrose Park, Illinois in 1962, by 1964 I had worked up to a line supervisor on the second shift and I was making about \$11,000.00 a year with full benefits. Like I said, today nobody really wants to work, much less go the extra effort so the baking industry has gravitated to the position that everyone is expendable and that position is now reflected in the pay scale. To give you an idea of how much that \$11,000.00 yearly income was, when I took my first position at the AIB in 1965 my salary was \$6,200.00 a year. During those first few years I went to night school and took every opportunity to learn as much as possible, I started my first group in 1967 and continued to grow it right up to the time when AIB made the move from Chicago to Manhattan, Kansas (1976/77). I continued to grow the Experimental Baking Group in Manhattan and finally split myself off from it to allow me time to teach classes and develop the Bakery Assistance activity which I

was Director of when I finally retired 5-years ago.

In the end I can say that I was blessed with good decision making and a desire to succeed, I was rewarded with a job (I don't like to call it that, it was really participation in a very professional family of true experts in all subjects related to food and baking). I ALWAYS looked forward to the challenges each day would bring and I was rewarded well for my efforts. Here's a stat you don't hear much of, during my nearly 50-years at AIB I only took 7 sick leave days, total! (I could have taken 14 each year). Four of those days were used when I got my pacemaker and three were used when I almost died from food poisoning in St. George, Utah. Granted, there were days when I probably should have stayed home but I didn't. Point is, most of us have the opportunity to make our lot in life, one just has to "work" to find it.

General Pizza Making / Re: When to add the oil

Those bubbles are perfectly normal. When your flour has been over fermented it will begin to break down and become sticky, very extensible and oven spring will be reduced, after that it just keeps getting worse until you can pour the dough. No chance of reviving it either as the gluten has been severely degraded. You won't get any "off" flavors or aromas, just a more intense fermentation flavor and aroma which some might call "off". At some point you will get off flavors and aromas but that point will be after the dough breaks down and is unmanageable so it's kind of a moot issue.

Typically, the higher the protein content the more fermentation the dough will tolerate before breaking down (assuming U.S./Canadian flours).

Dough Clinic / Re: All Trumps High Gluten, bromated v unbromated dough diffs

How about this;
50% Power Flour
50% KABF Flour
2% Salt
1% Sugar
0.375% IDY
62% Water (65F)
2% Oil

Mix just until smooth using delayed oil addition mixing method.

Immediately after mixing scale and ball.

Lightly oil dough balls and place into individual plastic bread type bags (follow normal procedure for cold fermenting in plastic bags).

Remove bagged dough balls from fridge about 90-minutes prior to opening into skins.

Roll bag down around dough ball, invert over a floured surface, flour dough ball on both sides and open into a skin.

Dress and bake.

Note: For a crispier pizza bake at 550F.

Neapolitan Style / Re: Help me with a hybrid dough

It sounds like your dad was the last of a breed, they don't make real bakers anymore. Those working in bakeries today are seldom, if ever educated in the trade, they're human robots just doing what they're told to do without any knowledge of why they're doing it. It used to be that when I went into a bakery and asked people how long they had been in the baking industry I'd get answers with

two digits, now if I get two years I've found an "old timer", most are measured in months. Sadly, It's JUST a job anymore. Now with the closing of AIB there isn't anyplace for the baking industry to send people for formal training anymore either, and the price is being paid in high employee turnover just like many other industrial companies.

General Pizza Making / Re: When to add the oil

The only time you proof the dough after opening it into a skin is if you want to make a thicker finished crust (like a thick crust pizza), otherwise, for a thin crust pizza you open the dough ball into a skin, dress it and bake it.

As to those high absorption doughs, they usually use an autolyse to help the flour absorb the water, they also require specialized handling (we recently had a good video here showing how it's done, maybe Peter can find it for you). Save those high absorption doughs for making AFTER you gain good proficiency making lower (60 to 65%) absorption doughs for now. As for opening the dough while still cold, I can't say if that will work for you or not, you will need to try it to find what works best for YOU with YOUR dough made with YOUR dough management procedure.

Dough Clinic / Re: Cold prove leading to loss of elasticity

Mike;

Yes, to the best of my knowledge, bromated flour is still the flour of choice in NY and NJ pizzerias. Bromate (a carcinogen) is converted to bromide (not a carcinogen) during the baking process and as long as the residual bromate is at 20ppb (parts per billion) or less it is deemed to be safe. At one time (back in the 60's and early 70's it was thought that all of the bromate was converted to bromide during the baking process as tests of the time couldn't detect levels as low as 20-ppb. The Japanese developed a test that could detect such low levels and the newspaper headlines were "Bromate found in baked bread" OMG! We're all going to die of cancer! The amounts being detected were in the single digit ppb range. Because of this bromate was taken off of the approved food ingredient list in many countries. The truth is that the air you breathe or the water you drink is more dangerous than the small amount of bromate residual in bread products. The U.S. set a limit of 20-ppb for residual bromate with a maximum limit of 50-ppm in bromated flour. Most bromated flours made today incorporate bromate at less than 15-ppm (BUT it COULD be as high as 50-ppm). At the commonly accepted <15-ppm level you probably won't see much difference in flour performance until you really begin to stress the flour out at around 4 to 5-days (CF) or 2 to 3-days RF. NOW, if the level used is higher, all bets are off the table as bromate is a VERY EFFECTIVE DOUGH STRENGTHENER. As for flavor, the tests that we did at AIB many years ago showed no impact on finished product flavor until the bromate level exceeded 75-ppm. As for crumb structure, bromate tends to promote a closer/tighter crumb structure, especially at higher levels >20-ppm. Unless the dough is subjected to very long fermentation times or the flour is weak or a composite flour (multi-grain) bromate levels much above 40-ppm will restrict dough expansion during baking leading to a condition known as "scalping" in white pan bread production where the top crust separates from the loaf and is then pulled off at the vacuum depanner.

We used to refer to bromate as a "crutch", it was seldom ever really needed and it was used more as a precautionary measure than as an essential ingredient, with the consumer health safety concerns over potassium bromate new dough strengtheners were developed aka bromate replacers, these for all practical purposes, are just as effective as bromate but without any of the health safety implications associated with bromate and are commonly used today to help

strengthen otherwise weak or highly stressed doughs.

Probably more than you wanted to know.

Dough Clinic / Re: All Trumps High Gluten, bromated v unbromated dough diffs

Absolutely! This is why I encourage those not as skilled at opening a dough ball to open the dough at a colder temperature. Also, the type of flour can have a great impact, a weak flour may be very soft and extensible at anything but a cold temperature, but for most folks, using a "typical" U.S. pizza type/bread type flour, a cold dough right out of the fridge will be excessively tough and elastic to open easily, in addition, there is also a possibility that the dough will be cold as it goes into the oven which dramatically increases the probability of severe bubbling or in some cases taking on more of the appearance of pita than pizza in the oven. :(

Dough Clinic / Re: Cold prove leading to loss of elasticity

By "cross-stacking" you will also prevent the development of excessive condensation in the individual containers which results in a wet dough. The biggest benefit to cross-stacking is that it is conducive to achieving a consistent fermentation rate which results in more consistent finished dough performance.

Dough Clinic / Re: Cold prove leading to loss of elasticity

Here is what I'm suggesting;

Lightly oil each dough piece as you place it into the individual dough boxes, leave the box(es) open until the internal dough ball temperature reaches 50F, then lid the boxes for the duration of cold fermentation. When you want to use the dough, remove from the fridge and KEEP COVERED/LIDDED, allow the dough to set AT room temperature until the internal dough ball temperature rises to 50 to 60F (anything in that temperature range will work OK), then remove the dough from the container and proceed to open into a skin by your usual manner. DO NOT RE-BALL the dough.

Dough Clinic / Re: Cold prove leading to loss of elasticity

Unless you're making bread, ditch the "window pane" test for gluten development, instead, just mix until the dough "just" takes on a smooth appearance. Your mixer will think kindly of you and you will get a finished crust with a more open crumb structure with better bake-out properties. You don't mention anything about your finished dough temperature or how you are cold fermenting your dough, but you should be looking for a finished dough temperature in the 70 to 75F range and either cross-stacking/leaving containers open until dough reaches 50F internal dough ball temperature or plastic bagging (preferred). Failure to do any of these can lead to a weak dough condition, especially after 3 to 5-days in the fridge. Also, you don't mention which "00" flour you are using but do be aware that some of the Caputo flours are not designed for more than about 12-hours of fermentation time while others are designed for longer fermentation times and might be better suited to your application.

More information would be helpful.

Dough Clinic / Re: Cold prove leading to loss of elasticity

In your dough formula, what type of yeast are you using and how are you adding it.

Shop Talk / Re: All Trumps Unbromated/Unbleached - Inconsistencies?

Which A.T. flour are you using: #50143; #50121; or #50111?

Shop Talk / Re: All Trumps Unbromated/Unbleached - Inconsistencies?

No, DO NOT EVER vacuum package pizza crusts or tortillas! Both are prone to clostridium which can be (usually is) deadly. There is a track record for clostridium growth in tortillas (two cases that I'm aware of) out of Canada. Gas flush packaging uses either carbon dioxide or nitrogen with about 0.5% oxygen to prevent growth of clostridium. The material you are thinking of is a marine colloid such as Xanthan or Carageenan gum for increasing moisture retention in baked products. Balchem is a company specializing in these ingredients and they have a product that they call Ticaloid Lite which I've personally used in this application and it works very well.

Dough Clinic / Re: Different Stages of a Par Baked Crust

Mo;

The shelf life of par-baked pizza crusts stored at ambient room temperature (70 to 85F) will depend to some extent upon the method by which it was made (the dough that is). A crust that was made from a dough that was cold fermented for 24 to 48-hours will typically have a shelf life of about 4-days before mold rears its ugly head, if the fermentation period is more along the lines of 5-days you can add another 12 to 24-hours to this but if it was made using a sourdough method where the pH of the finished crust is down around 4.2 or lower you might get an additional 2 to 3-days (possibly more). With refrigerated storage (34 to 38F) it's entirely possible to double these numbers and with frozen storage mold is no longer the issue, instead we are now concerned over things such as oxidative rancidity, freezer burn (a MAJOR issue in home freezers with automatic defrost cycles), with frozen storage periods of more than 45-days there can also be oxidative flavor changes which can render the crust bland/tasteless, even when reheated. In most home freezers with auto defrost we see moisture migration from the crust (freezer burn) within the first two to 3-weeks with it becoming progressively worse as time progresses. By the time the crust has been in the freezer for 60-days or less it is so bad that the crust warps and checks or cracks, because of these potential issues with frozen storage we don't recommend storing crusts or other yeast leavened baked foods for that matter, more than 3 to 4-weeks.

Note:

With the above cited mold issues the appearance of mold will also be influenced by the level of inoculation/amount of exposure to mold.

The issues related to frozen storage are largely related to the crust temperature at time of freezing, the rate at which the crust is frozen and the characteristics of the packaging material used to package the crusts in. Commercial manufacturers also use a gas flush packaging to address the oxidative issues.

Dough Clinic / Re: Different Stages of a Par Baked Crust

Try this;

DO NOT brush the skin with oil, instead just brush the bottom and two side edges with water, then apply your filling, fold the top half of the skin down over the bottom half aligning the edges, crimp the edges using finger pressure, transfer the calzones to a baking sheet, cut or tear a vent hole in each calzone, brush with melted butter and bake at 450/ 232C until golden brown. Because of the moisture content of the fillings calzones do not fry well at all. The only exception to this is when the calzones are fried and then finished in the oven.

Dough Clinic / Re: Sauce filled calzone problem

Peter;

Your second reference is EXCELLENT! That's a good one for the "LIBRARY".

You never fail!

Dough Clinic / Re: adding yeast to dough, does order really matter?

What you will get will most likely be more like a thin crispy style of pizza, go ahead and do it, I promise you nothing bad will come of it and it will serve as a learning experience for you too.

Dough Clinic / Re: Can I swap out a dough for a different type of pizza

Agreed, with small amounts of dough it matters not.

Newbie Topics / Re: Bulk ferment in big ball or unshaped?

Sourdough starters are not yeast based, instead they are bacteria based and we all know, or should know how rapidly bacteria can multiply under a myriad of conditions. Yeast requires a lot of oxygen to get it to reproduce but once you get it reproducing it multiplies very fast.

Dough Clinic / Re: adding yeast to dough, does order really matter?

Thank you for the picture, those aren't the tiny bubbles I was at first thinking of but those are the result of baking at a very high temperature, above 850F.

Neapolitan Style / Re: Tiny Bubbles on the crust

Hummm, I must have been side tracked, didn't know you were looking for second level dough formulas.

You might give this one a try:

Flour: 100% (Strong bread type flour)

Salt: 1.75%

Sugar: 2% (optional)

Oil: 2%

IDY: 0.375%

Water: 62% (70F/approx.)

Target finished dough temperature: 75 to 80F

Procedure:

- 1) Put water in mixing bowl.
- 2) Add salt and sugar (if used).
- 3) Add flour then add the IDY on top of the flour.
- 4) Mix at low speed just until you don't see any dry flour in the bottom of the mixing bowl.
- 5) Add the oil and mix another minute at low speed.
- 6) Mix at the highest speed possible just until the dough takes on a smooth appearance.
- 7) Take the dough directly to the bench for scaling and balling.
- 8) Lightly oil each dough ball and place into individual plastic bread type bags (NOT Zip Lock type bags).
- 9) Twist the open end into a pony tail to close and tuck it under the dough ball as you place it into the cooler/fridge.
- 10) Allow the dough to cold ferment for a minimum of 24-hours (48-hours is the "sweet spot") but dough can CF for 72-hours.
- 11) Remove dough ball(s) from fridge and allow to warm AT room temperature until the internal temperature reaches 50 to 60F.
- 12) Roll bag down around the dough ball and invert over a floured surface allowing the dough ball to fall free from the bag.
- 13) Flour both sides of the dough and open into a skin by your preferred method.

14) The pizzas can be baked on a stone, steel or in a pan/disk.

15) Baking temperature in a home oven is 500F.

Many readers here have used this dough formula and procedure with good success. The formula and procedure are designed to mimic that used by many pizzerias as well as some of the larger pizza chains. Once mastered, it can be modified to provide whatever characteristics you desire in your finished pizzas.

Newbie Topics / Re: Newbie looking for a basic beginner recipe for home oven

Almost NONE of the yeast cells reproduce during dough fermentation, if they did we would have what is known as run away fermentation, think of it like a nuclear explosion of yeast cells, 1 becomes 2, 2 becomes 4, 4 becomes 8, 8 becomes 16, 16 becomes 32, you see the trend. Yeast cells divide by a process known as budding, within the yeast that we add there are mature cells as well as budded cells (cells partially budded with "daughter cells") as well as recently divided cells. During the fermentation process the mature cells DO NOT bud, some of the already budded cells will mature and divide but neither will reproduce, the recently budded cells may mature but they will not reproduce. Any damage done to the yeast cells due to improper hydrating will actually impact the number of cells capable of participating in what we call fermentation.

Dough Clinic / Re: adding yeast to dough, does order really matter?

If you will go to the PMQ web site at <www.pmq.com> and go to the Recipe Bank, and use "pizza dough" for your search words you will find a home made pizza dough "recipe" that I have posted there. This is a well proven dough formula and procedure and will serve to get you started making pizzas from which you can build upon.

Newbie Topics / Re: Newbie looking for a basic beginner recipe for home oven

Give it a try and let's see how it works out for you.

Dough Clinic / Re: Complications with dough management

I see your problem already. A 10 to 20-minute rest (fermentation period) after mixing is WWAAYY too short. Change your 10 to 20-minutes to 2-hours (or more) and I think you will find you will get a smoother dough. You need to allow time for biochemical gluten development to develop some of the gluten before the kneading process, or if you want to develop biceps like the village blacksmith you can develop the gluten through energy input (like a mechanical dough mixer does) but it will take an hour or more of continuous dough kneading to do so. I don't know about you but my biceps are just fine and I've got better things to do with my time so I always opt to let biochemical gluten development do the hard work of gluten development for me, allowing me to save my strength for dressing, baking and eating those pizzas :-D

Dough Clinic / Re: Complications with dough management

Scott;

Once the IDY has been hydrated or the ADY has been hydrated and activated either one can be added directly into cold water without any problem (remember, it's the hydration process that causes the problems here), once hydrated they are both just like compressed yeast/CY.

Compressed yeast/CY, since it is already hydrated, can be put directly into cold water without any problems at all.

Note:

ADY takes about 10-minutes to fully hydrate, during that time it will also activate. IDY only takes about 3 to 5-minutes to fully hydrate so you will not see any activation during that time. This is why we say that ADY is both hydrated and activated prior to addition but IDY only needs to be suspended. When the IDY is added in this manner its performance is essentially identical to that of CY, however if you are replacing ADY with IDY you might want to both hydrate and activate the IDY prior to addition to retain the same performance/fermentation characteristics. This is really not much of an issue with regular doughs but it can be an issue with very short time doughs such as no-time dough or emergency dough.

Dough Clinic / Re: adding yeast to dough, does order really matter?

You will want to use a dial aka stem type thermometer to measure the internal dough ball temperature. Yes, a cold dough can/will promote sticking to the peel as a small amount of condensation can form at the interface of the peel and the dough while the skin is being dressed. If your dough is still lumpy/knotty after kneading it sounds as if you may not be kneading the dough enough, yes, this can result in holes in the skin during opening. Cold dough is definitely harder to open than warm dough. As for your dough weight, it's actually a little more than what I personally use for a 10" skin, I use 7-ounces/roughly 200-grams.

Dough Clinic / Re: Complications with dough management

The "I" in IDY stands for INSTANT as in instant hydrating (actually just fast/rapid hydrating), so if you put the IDY in cold water the water will enter into the yeast cells and remove the glutathione from the cells before the cell walls can swell to seal in the glutathione. The 100F water promotes rapid swelling of the cell wall to limit loss of glutathione from the yeast cell(s). When glutathione is flushed from the cells the yeast isn't killed but its ability to ferment is seriously impaired PLUS glutathione is a serious reducing agent which will make a dough soft and extensible to the point where it's difficult to handle (think "dead yeast" which is used as a more consumer friendly form of L-cysteine/PZ-44).

Dough Clinic / Re: adding yeast to dough, does order really matter?

Allow the boxes to remain cross-stacked until the internal dough ball temperature reaches 50 to 55F. If targeting a 3-day C.F. you can go with 55F but if targeting a longer C.F. go with 50F. Once the targeted dough ball temperature is reached you can apply the lid/down-stack. After the C.F. period remove the box from the cooler and place at room temperature and allow the dough to warm to 50F but not more than 60F (internal temperature) before using the dough. Note: Most pizzerias use 50F as it allows for a longer window of time to use the dough. One other thing, be sure to lightly oil the top of the dough balls as you place the box in the cooler, this will prevent excessive drying of the dough during the cross-stack period. DO NOT oil the box.

Prep Equipment / Re: Doughmate Dough Trays

First of, after the CF period you should allow the dough to warm to 50 to 60F (internal dough ball temperature, NOT external). Since you are getting a lot of sweating in the fermentation containers I'm guessing that your finished dough temperature might be excessively high, you don't mention what it is but I'd suggest targeting 70 to 75F for the finished dough temperature (after mixing). As you are having some issues with opening the dough I's also suggest reducing the dough absorption from your present 66% to possibly 62% as this will make the dough easier to handle both during opening and on the peel, then as you become more

proficient you can begin to increase the absorption incrementally (66% may be too high for your specific flour, dough management procedure or skill level). Remember that the ideal absorption is that which provides the best dough handling properties for YOU. It is NOT recommended that you oil your wood peel, this only makes the dough more difficult to slide off, instead, just use it as it is after lightly sanding and NEVER wash a wood peel, just wipe it down with a damp towel. Lastly, you don't say what the dough weight is for the size pizza you are making so we can't determine if your dough weight is correct or not. If you are not using sufficient dough weight you might be stretching the skin too thin which will significantly increase the tendency for the skin to adhere or exhibit poor release properties from the peel.

Dough Clinic / Re: Complications with dough management

For cinnamon rolls we want a sweet tasting roll not necessarily a well fermented flavor so for this reason I normally like to target a finished dough temperature between 70 and 75F/21.1 and 23.9C, in some cases I will target a finished dough temperature of 80F/26.7C and ferment the dough at room temperature for only 2 to 3-hours before using it to make my cinnamon rolls.

The reason why I am A.R. on temperature is because it is the temperature of the dough that drives fermentation and as I've always said "Without temperature control you cannot have effective dough management" Without effective dough management you cannot have consistency from one dough to the next.

By far, the best way to judge a pizza dough to determine if it has been sufficiently mixed is by its appearance. If you stop your mixer after each minute of mixing you will be able to see the dough progressively becoming smoother. As soon as the dough has taken on a smooth (not lumpy) appearance, it has been sufficiently mixed. With just a little time you will be able to look at the dough as it is mixing and see it take on the desired smoothness, once you see that, you're done mixing. As a rule, with pizza doughs as well as pastry doughs it is better to error on the under mixed side of the equation than to over mix the dough. The reason for under mixing a pastry dough is because it will receive significant gluten development during the following rolling and/or folding/forming procedures.

It is impossible to answer your question regarding your mixer as all mixers are different but suffice it to say that low speed should only be used to combine the ingredients together prior to mixing the dough at a higher speed where gluten development will actually take place, with most home type mixers I'm guessing that this will be either speed #2 or #3 but in the end it will be the highest speed at which the mixer will mix the dough without showing strain or overheating the motor.

If you don't have a spiral design dough arm on your mixer you will most likely need to periodically stop the mixer to pull the dough down off of the top of the "C" hook aka "J" hook. If your mixer has a spiral design dough arm you will not need to do this as the design of the arm pushes the dough down to the bottom of the bowl rather than allowing it to climb up the hook.

Dough Clinic / Re: Cinnamon rolls

And I remember very well back in the late 1970's and early 80's when Chicago pizza patrons were sending pizzas back to the kitchen from some of the new pizza places because the pizzas were "burnt". It was kind of a culinary shock to Chicagoans that anyone would actually eat a burnt pizza! One has to remember that it's the huge amount of variation/difference between pizzas made in different regions, even cities and towns across this great country (and now you can add "the world") that has driven pizza to the pinnacle of culinary enjoyment that it has

achieved. All of the things that make those pizzas different are the very things that have driven and continue to drive the popularity of pizza. Long Live Pizza!

Pizza News / Re: East Coasters Mock Chicago Square Cut Pizzas

For bulk fermentation it is generally considered better to use a fermentation container that is smaller in diameter and deeper in depth than a rectangular shaped shallow box. The reason for this is because the smaller diameter X deeper container allows less surface area for evaporative cooling and drying which means the dough ferments at a more constant rate (as a bulk dough) ASSUMING WE ARE TALKING ABOUT A REAL "BULK" DOUGH SIZE. If you are referencing 20-ounces of dough as a bulk dough for all practical purposes it is really nothing more than a large size dough ball and it acts as such during fermentation. For home bulk dough fermentation I've found that a pasta pot works extremely well when I'm fermenting several pounds of dough. Save the dough boxes for cold fermenting your dough balls (be sure to follow the cross-stack procedure) to avoid disappointment when you open the boxes to use the dough balls.

Prep Equipment / Re: Doughmate Dough Trays

Not to worry, even though your dusting/bench flour might be malted the malt will not convert any starch to sugar as there is not sufficient time for that to happen when used as a dusting flour.

Dough Clinic / Re: Using all purpose flour when shaping dough

JD;

Well, it all depends if you are mixing your dough by hand or using a mechanical mixing device. If you are mixing the dough by hand the IDY must be suspended in warm (100F) water prior to addition. The best way is to add it to the dough water in the mixing bowl, however, if you are using a mechanical mixing device where the total mixing time will be 5-minutes or more the preferred way to add the IDY is to just add it (dry) right on top of the flour when you begin mixing. If the total mixing time will be less than 5-minutes it is recommended that the IDY be first suspended in 100F water and mixed into the dough water prior to beginning the mixing process.

Dough Clinic / Re: adding yeast to dough, does order really matter?

If your dough rises and then collapses this is what is referred to in the bread making circles as the first full rise which represents about 60% of the total amount of fermentation the flour used in the dough will tolerate before complete break down. In a case like that all you need to do is to re-ball the dough and wait for the dough balls to ferment sufficient to be opened into skins, which depending upon temperature, amount of yeast, amount of salt and flour strength can take anything from 90-minutes to several hours.

Neapolitan Style / Re: Over fermentation issues (CY or Flour issue?)

Your dad should have known Don Kinstrand?

General Pizza Making / Re: When to add the oil

Bruce;

Welcome to the site!

The next time you make your N.Y. style pizza take some pictures, top, bottom, and a cut slice showing the internal crumb structure and send it over with a list of what you like and dislike about the pizza, also be sure to give us your dough formula as well as the entire dough management procedure including all temperatures and

times. Baking conditions will also help. With this information there are many of us here who can help you achieve the characteristics you are trying to get in your pizza. You might go to my web site <www.doughdoctor.com> and view some of the videos I have posted there on making New York style pizza.

New Forum Members / Re: Living in Japan forces the necessity to learn to make NY Pizza

John;

From the looks of the pizzas in your pictures I'd say your pizzas are somewhat thicker than a typical New York pizza, however it's YOUR pizza and YOUR version of a New York pizza so it is what it is. If your customers like it....go for it. Case in point, we have AJ's New York Pizza, Google: AJ's New York Pizza, Manhattan, Kansas. As the name indicates we sell a New York style pizza (by the slice) but the pizza is different from a true New York slice in that it is crispy (more of a New Haven style pizza), so crispy that one can pick a slice up by holding just the edge (something you could NEVER do with a true New York slice) but yet people just love it (five awards for best pizza in 10-years) and three stores, so Adam is doing something right. You HAVE to play to the preferences of YOUR audience! A true N.Y. slice would never sell here as it is much too soft, so we made it crispy and people HERE love it. If 700 or 750 grams of dough works for whatever size you are making and people like it.....go for it!!!! Never over think success, just accept it.

Dough Clinic / Re: 20" (50cm Pies) im up to 24oz (700g) dough balls to get up to size

But puff pastry dough doesn't contain any yeast.

Dough Clinic / Re: Blitz Pastry method?

Rolls is correct with the name of the butter "LURPAK". I am sure that there are other butter brands that will work equally as well. You want to have a butter that will NOT be incorporated into the dough during mixing, shredded butter should work OK if it is a coarse shred. As for dough absorption I think 50% is too low, I'd go with 55% or a little more. If you cut the finished dough with a sharp knife you MUST be able to see the pieces of intact butter in the dough. The larger the pieces of butter the more predominant the flake will be.

Dough Clinic / Re: Blitz Pastry method?

Dough that is opened and used at a temperature under 50F exhibits a strong propensity to bubble during baking and dough that is much above 60F is beginning to ferment at a faster rate so it is becoming increasingly gassy which can also result in large bubbles in the finished crust as well as the fact that the dough as it ferments becomes increasingly more difficult to open and shape into a pizza skin.

Newbie Topics / Re: Dough ball questions

Actually, after you take the dough out of the fridge you are not proofing it, instead you are tempering it. The ideal temperature to allow the dough ball to come to before you begin opening it into a skin is in the 50 to 60F range. As a newbie you may not be very proficient at opening the dough so you may find it a bit easier to open the the lower end of the temperature range (50 to 55F), remember, this is the INTERNAL dough ball temperature so you will need to have a dial aka stem type thermometer to measure the temperature.

Newbie Topics / Re: Dough ball questions

When we did the work on gas v/s electric ovens we had identical ovens of gas and

electric. There was a Blodgette deck (gas and electric as well as an XLT (gas and electric) and the gas always gave a faster bake. We even went so far as to work with XLT to modify the electric air impingement oven to see if we could get it on par with its gas counterpart, we changed finger configurations to and bottom and worked with the fan speed then replaced the fan with new ones having moving more air, when all the dust had settled we couldn't get the electric oven to bake the same as the gas oven.

Shop Talk / Re: Opening a NY Style Sliceshop

Most shops will use a separate oven for reheating since the oven will be opened constantly as slices are reheated. Also, it's not very efficient to have the oven reheating the slices "out back" in the kitchen. Most shops have it right in front of the customer. Remember, the reheat time will likely only be a minute or so.

Shop Talk / Re: Opening a NY Style Sliceshop

Your idea is sound but your timing is off, instead of pouring the water when you place the pizza in the oven you should do it several minutes prior to placing the pizza in the oven. You should not be trying to flood the oven with steam as you would when making certain types of breads, instead you just want to add a little moisture/humidity to the oven. The amount of water added needs to be measured so it is all evaporated at about the same time the pizza is done baking. I'm not sure the use of lava rocks is the best idea either as it increases the surface area for evaporation which puts a lot of moisture in the oven all at once (this is called "flooding" the oven with steam, instead you want as little area for surface evaporation as possible. Think a 2" diameter piece of pipe, 6-inches long (automotive tailpipe comes to mind) with a flat piece of steel welded to one end so it will hold water and stand upright in the oven, experiment with the amount of water added to the pipe. The issue that you will need to work out is when you add the water to the pipe it will be very hot thus releasing steam rapidly into the oven (not what you are looking for). Maybe pour boiling water into the room temperature pipe and place it into the oven a minute or so prior to placing the pizza in the oven would work better? Like I said, this will be the challenge.

Dough Clinic / Re: Humidity in oven.

Hang with us and you'll be making great pizzas in short order. Parallei's advice is spot-on. I have a Dough Management Procedure posted here that you might try, it's easy to follow and makes a good pizza too, then once you have mastered that you can begin experimenting with variations to the formula or dough management procedure to satisfy your curiosity or make a pizza that is more specific to your likes.

The most important thing is to have fun of your pizza journey!

Dough Clinic / Re: Joe Heffernan/The Independent, Seattle/ChefSteps dough recipe

Your assumptions about refrigerating the dough are absolutely correct. In addition to allowing the dough to be held for days rather than hours it also provides for much improved dough consistency and financial return, just ask Papa John's if it's any cheaper to provide refrigerated dough from a commissary once a week as opposed to making fresh dough every day at each store.

Newbie Topics / Re: Are American Pizzas (New York etc) made with hard or soft wheat?

Optimum dough fermentation for a straight dough is best defined as first full rise +

25% of first full rise time. However since the straight dough procedure is seldom used when making pizza and instead a hybrid procedure is more commonly used employing different fermentation conditions there is no hard and fast rule for determining optimum fermentation, the best definition I can give you is optimum fermentation is that fermentation time which provides the best overall dough handling properties at the time of opening the dough balls into skins by whatever method you opt to use. Forget bread dough technology, it doesn't apply to pizza dough. The only real way to determine optimum fermentation is through experimenting under CONTROLLED conditions, this means that you will need to strive to maintain those factors which affect the fermentation rate as a constant, think finished dough temperature, dough absorption, type, amount and freshness of the yeast, room temperature, refrigeration temperature, internal dough ball temperature at the time of opening (50 to 60F). In other words, Effective Dough Management.

Dough Clinic / Re: Pizza aerobics

I can't say much about your dough process as you don't include the finished dough temperature, but I can say that 20-minutes for the dough to warm to 50 to 60F (NOT ROOM TEMPERATURE) is mmuucchh too short, instead use a thermometer to measure the internal dough ball temperature to determine the time for your specific conditions.

To replace your bread flour with Caputo "00" flour is totally possible but I would advise you to select a flour with a long fermentation tolerance if you plan on following your present procedure. Any oven that will bake at 700F or higher will handle the "00" flours just fine.

Also, be aware that all flours are different so you may need to adjust the dough absorption with the new flour.

Dough Clinic / Re: Joe Heffernan/The Independent, Seattle/ChefSteps dough recipe

A biga is nothing more than a pre-ferment for use when making dough. In the baking industry a plastic biga is referred to as a "sponge" to be used with the sponge and dough process of making bread, if the biga has sufficient water to make it a liquid it is referred to as a brew in the baking industry. The purpose of these is to condition the gluten in a portion of the flour and to develop a level of flavor through fermentation in that flour.

A biga will usually contain from 30 to 50% (though sometimes more) of the total formula flour with an absorption of between 50 and 60% (again, it can be greater than this).

The fermentation time for a biga is usually in the 12 to 24-hour range with yeast levels (as compressed yeast, though any type of yeast can be used at correct substitution levels) of 1% for the shorter times and 0.25% for the longer time, but this should only be used as a guide as the amount can/will change with factors such as flour strength and temperature in the fermentation area.

To start a biga place the water (75F) in an appropriate size container, add the yeast and stir to suspend the yeast, then add the flour and mix in until the flour has been fully hydrated, that's all the mixing that is required. Note the temperature of the biga as well as the room temperature. lightly cover the biga (I just drape a piece of plastic over the container) and allow to ferment for the desired time. Then transfer to a mixing bowl, add the remainder of the flour and the other ingredients as well as the water (cold/45F), mix the dough in your normal manner just until it takes on a smooth appearance. At this point some prefer to bulk ferment the dough, my own preference is to scale and ball it at this time, and cold ferment for 24-hours or

allow the dough balls to ferment at room temperature for about 6-hours for use on the same day as the dough was mixed. You can adjust the amount of flour in the biga, the amount of yeast or the fermentation time to vary the flavor of the crust.

Neapolitan Style / Re: Biga - so many questions and so many things to learn!

By us the code requires that ALL ovens be totally under a hood, gas, electric or otherwise! Best to check with your codes department AND be sure to get their opinion in WRITING prior to purchasing your oven/ovens. Gas ovens will exhibit superior and faster baking properties due to the higher concentration of moisture in the air within the baking chamber due to moisture/water being a byproduct of combustion, in an electric oven the air is much drier so heat transfer is not as good and baking/reheat times are longer (about 20%). If you opt to go electric be sure to get an estimate of operating cost from your local utility company. I'd still opt for a full size electric deck over a couple of the smaller ovens if space permitted.

Shop Talk / Re: Opening a NY Style Sliceshop

While I can't prove it, my thoughts have always been that the Italian "00" flours probably contained a portion of U.S. or Canadian hard wheat to give it the longer fermentation tolerance that we see in some of the newer flours. I don't follow the Italian wheat varieties or the wheat breeding programs associated with developing their wheat so I have to plead total ignorance but I have seen what the breeders can and have done with U.S. wheat varieties so it wouldn't surprise me at all if they have developed soft wheat varieties with decent fermentation tolerance. To give you an example, wwaayy back in the 70's it was said that hard red winter wheat could not be developed with much more than about 16% protein content, the breeders proved that to be wrong, very wrong as then developed a couple of varieties with protein contents approaching 25%, yes! 25% protein content! I was able to test some of the flour from those super high protein content wheat varieties and boy were they ever STRONG! They were so strong that we couldn't over mix them in our mixers and fermentation tolerance was through the roof! Those characteristics were so diametrically opposed to what was desired that further work on those varieties was stopped and needless to say seed was never released for planting, no one wanted to run a risk of any of that stuff getting mixed into the normal HRW crop, and there was a fear that the DNA of the protein might be different too which could potentially open a Pandora's Box with all other wheat varieties. Moral of the story: Never challenge a wheat breeder, and never tell them that it can't be done!

Newbie Topics / Re: Are American Pizzas (New York etc) made with hard or soft wheat?

I believe that I've mentioned this before that high absorption doughs are the one weakness of spiral mixers, they just don't handle them quite as well as planetary mixers do. Holding back a portion of the water is the only realistic way to mix high absorption doughs in a spiral mixer. When we did it we used to add 70% absorption to the dough right up front and then gradually add the remainder of the water after the dough was partially developed. This worked well for us too.

Starters/Sponges / Re: Need help with biga dough

In the U.S. as well as Canada durum wheat is a different type of wheat than the hard red wheats used for making strong flours. The durum wheat produces gluten that is very tough and elastic which is excellent for pasta production which is why we typically reserve durum for use in making pasta, it is also widely used in making

oriental noodles. The types of wheat used for milling into flour for bread and roll production are varieties of hard red winter, hard red spring, or hard white wheat. We also have varieties of soft wheat which can be either soft red or soft white wheat varieties. The soft wheats are typically lower in gluten forming proteins which also produce a softer, more extensible gluten characteristic. In the U.S. and Canada soft wheat flours are reserved for use in making pastries, cookies and biscuits which is why they are referred to as "pastry flours".

Newbie Topics / Re: Are American Pizzas (New York etc) made with hard or soft wheat?

A huge risk that is run by following the above "edit" note is that of washing (separating) the gluten from the starch (this is how we "wash" gluten from the flour). If the gluten is even partially separated from the flour it is impossible to re-incorporate it thoroughly and the end result is a dough that has a lumpy appearance which is somewhat weaker too. We ran into this very issue in the bread and bun industry when using the brew process (essentially a biga) where the gluten would be separated during agitation (only 1-r.p.m. sweep agitation) resulting in dough weakness, this eventually lead to the industry, for the most part reverting back to the sponge and dough process (the sponge is essentially a 50 to 55% absorption biga) which after the fermentation period is placed into the mixer and mixed with all of the other ingredients at the same time to produce the desired dough characteristics.

Starters/Sponges / Re: Need help with biga dough

Why not just place a full size deck oven right behind the counter, you will have greater capacity, more consistent temperature and in my opinion it will look more "professional". I've seen this done many times with great success.

By the way, Marsall deck ovens would be a an option to look at for this application as they have a thick deck for storing a lot of latent heat which you will need for quick reheating of the slices. I'd also go with gas if at all possible, as it's much more efficient and actually gives a better bake.

Shop Talk / Re: Opening a NY Style Sliceshop

However, if you are asking about how the factors involved in making dough for consumption which can be tossed as seen in the video, the factors are:

2 to 2.5% salt.

Flour with a high protein content.

Optimum dough absorption, NOT MAXIMUM, probably in the 58 to 60% range.

Optimum dough fermentation for the yeast level employed.

It is interesting to note that in the video we see the dough balls being partially opened using a pastry pin prior to hand tossing, this is important as it provides a more uniform thickness dough skin, without thin spots, which makes it MUCH easier to toss without tearing. You have heard me advocate this many times for those who might be "toss challenged".

The real key here is to mix the dough just until it develops a smooth appearance and then allow biochemical gluten development to develop the gluten for you. This results in a strong and extensible gluten structure as opposed to mixing which develops a more elastic gluten structure.

Dough Clinic / Re: Pizza aerobics

The dough looks like it can take another 2 to 3-minutes of mixing, but what you have is indeed much improved.

Starters/Sponges / Re: Need help with biga dough

That metal clicking, like "tink, tink, tink" is the agitator hitting the bottom of the bowl. With the bowl in the fully raised position run the mixer through each of the gears, if you get the same tinking sound you will need to adjust the bowl to agitator clearance, if you don't get the tinking sound with an empty bowl but only when there is dough in the bowl the bowl tabs aka "ears" are worn and not locking the bowl down securely allowing the pull of the dough to lift the bowl slightly which allows the agitator to contact the bowl bottom. Try holding the bowl down securely in place while mixing a dough, if the tinking sound goes away you know what the problem is. A little bit of this isn't a big issue for now, but over time the bowl locking pins will wear and the problem will get worse eventually leading to the bowl jumping off of the arms while a dough is being mixed. I've seen this on any number of mixers over the years, the only real solution to the issue is to either replace the pins or get a new bowl, or both. Some of the smaller mixers (N-50) used to be equipped with a locking mechanism to lock the bowl onto the pins (all of the large mixers have them but many of the smaller mixers don't). The locking mechanism used on the small mixers differs from those used on the large mixers in that it is shaped like a flat hook which is fastened to the bowl arms and moves laterally so as to swing over the top of the bowl tabs thus locking the bowl down. Your mixer may have once had them or it may be possible to retrofit these locks onto your mixer thus preventing further wear.

Prep Equipment / Re: Refurb Commercial KitchenAid 8Qt

I'd go with 0.15 to 0.2% IDY with your dough management process. Using my dough management process I normally use 0.3%.

Dough Clinic / Re: In cold fermentation, does it matter when I ball the dough?

With regard to weighing the yeast, if your scale will not weigh 1-gram then try this, weigh 5-grams and put it into 50-grams of water, stir well to suspend the yeast in the water and then weigh 11-grams of the suspension. Within that 11-grams of yeast suspension will be 1-gram of yeast. Discard the remainder of the suspension or make some bread with it.

Neapolitan Style / Re: Over fermentation issues (CY or Flour issue?)

Are you saying that the dough balls represented in the picture are over fermented?

Neapolitan Style / Re: Over fermentation issues (CY or Flour issue?)

Not too shabby! :chef:

Now you can begin experimenting with the dough formula to achieve the characteristics you're looking for which will make it "YOUR" pizza.

Neapolitan Style / Re: Almost same formula, 5 times the amount of yeast. Am I missing something ?

We need to know what your finished dough temperature was, and yes 1% IDY was too much yeast. I would have suggested using 0.25 to not more than 0.3% IDY for a 72-hour fermentation period. You also want to use the SAF (RED LABEL) yeast, NOT the GOLD LABEL, as stated, the gold label is a high sugar tolerant form of IDY BUT it also has a very low tolerance to salt. Typically we see a slowing of fermentation rate when salt levels above 1% are used with this type of yeast. My guess is that your finished dough temperature was too high which would explain the fermentation rate which you were experiencing, a good finished dough temperature to target is 70 to 75F/21.1 to 23.8C.

Dough Clinic / Re: Can I fix a dough with too much yeast?

Can you provide us with a photo of the over proofed dough balls? Too bad the video didn't show a fast forward of the dough balls after 6 to 8-hours.

Neapolitan Style / Re: Almost same formula, 5 times the amount of yeast. Am I missing something ?

Matt;

Go to Bulbtown@bulbtown.com/<www.bulbtown.com> to see what they have in their very vast inventory of bulbs. In addition to a huge selection their prices are very good too, we buy all of our landscape light bulbs from them.

Chitchat / Re: Mini lightbulb question

With 0.5% CY and 60% dough absorption and less than 24-hours total fermentation time the dough should not be over fermented however that doesn't mean that the flour/flours that you are using have sufficient fermentation tolerance to allow the dough to be fermented for more than about 12-hours. A quick way to test for this is to replace your existing flour blend with 100% bread type flour, if the dough performs better you will know what the issue is. This is based on the assumption that you have the finished dough temperature under control in the 75 to 85F range, if the dough is any warmer than this it can accelerate the fermentation rate resulting in the potential for dough collapse.

Neapolitan Style / Re: Over fermentation issues (CY or Flour issue?)

Only if the total dough weight is 20-ounces or more.

Dough Clinic / Re: In cold fermentation, does it matter when I ball the dough?

The non-stick finish on the Lloyd's Pans WILL NOT come off. We used them for MANY years and never had a problem with the finish, I used to demonstrate the durability of the finish (you can do this yourself) by rubbing the edge of a quarter briskly across the pan, the quarter would be abraded as demonstrated by a flat spot where it was rubbed on the pan but absolutely NO damage to the pan or its finish. I can also show you pans that have been in commercial (pizzeria) use daily for over 10-years and the finish is still intact. If you want some pans without any finish on them you might look into cake pans, these are usually available in steel or aluminum, remember though that you will need to season these pans prior to use and you will need to be highly protective of the seasoning by never soaking the pans in soapy water or allowing them to remain wet for any length of time, failure to do this will result in the seasoning coming off of the pans like a bad sunburn, you will then need to strip all of the seasoning off of the pan and start all over again. One last thing, with the Lloyd's pan, it will need to be washed (soapy water will not harm it) prior to the first use, it should then be lightly oil for the first bake, after that the use of oil in the pan is optional. We always use a light application of oil for the deep-dish pizzas but never oil the Lloyd's disks for thin crust pizzas. To clean the pans and disks just wipe them off using a clean towel and they're ready for the next use.

Stones/tiles/steel, Pans & Accessories / Re: Sicilian, Detroit and Chicago deep dish pans in Germany

From the title of the post I was expecting this to go in a totally different direction.
:-D

Off-Topic Foods / Re: Your favorite Instant Pot recipes

The benefits of bulk fermentation are essentially non-existent with such a small size dough. You could just as easily scale and ball the dough right after mixing and I'm betting you would get the same results. Your IDY percent is OK for up to about 3-days cold fermentation. Try this, after mixing, scale and ball the dough, cold ferment for 3-days, remove from the fridge and allow to warm until the internal temperature of the dough ball reaches 60F/15.5C before you begin opening it into a skin.

Dough Clinic / Re: In cold fermentation, does it matter when I ball the dough?

Please refer back to my above post.

Dough Clinic / Re: In cold fermentation, does it matter when I ball the dough?

The research that we did at AIB indicated that a dough which expands more during baking (increased oven spring), for whatever reason (including increased dough absorption) will produce a crispier finished crust. In a deck oven or stone hearth oven the crust is being baked at a much higher temperature than the toppings due to the evaporative cooling effect of moisture in the sauce and toppings.

Dough Clinic / Re: Correlation between hydration and cook temp and time

From personal experience I personally like the Rocker Knife (PKR20) because it seems to work better with deep-dish pizzas than the (PPK17) and it cuts all the way through the edge crust better on thin crust pizzas but in the end I think it all comes down to personal preference.

Stones/tiles/steel, Pans & Accessories / Re: Cant Decide between rocker knives

JPChicago;

The delayed oil mixing method was not used in bread production during the time your father was employed in the baking industry as the type of fat used in wholesale bread making at the time was either a plastic fat (shortening) or liquid bread shortening both of which really don't require a delayed addition like vegetable oil does. Today vegetable oil is much more commonly used and it is metered into the horizontal mixer at the end of the first minute of mixing.

As a side note, I'm also from Chicago (far south side) Tinley Park. During the very early 60's I worked in the Jewel Tea Bakery, 1955 W. North Avenue, Melrose Park, IL. There was also Burney Bros. Bakery, Sara Lee Bakery, Gonella Bakery and a sweet goods/pastry bakery whose name I don't remember anymore as well as two bun plants which made buns for McDonalds. Just out of curiosity, can you share with me what years and which bakery your father worked at?

General Pizza Making / Re: When to add the oil

It is impossible to fully answer your question without knowing a lot more about the dough in question which is probably why you have had a problem finding a definitive answer, and even then the answer will be specific only to YOUR dough. The factors which would influence the answer to your question would include such things as;

Dough formulation.

How and how much the dough has been mixed.

The finished dough temperature.

Size/weight of the total dough as well as the weight of the individual dough balls.

Type of container(s) used to ferment the dough as well as the dough balls in.

The strength of the flour.

Actual room temperature.

Dough Clinic / Re: In cold fermentation, does it matter when I ball the dough?

Whereas Danish butter is relatively pliable even when taken right out of the fridge and it doesn't melt like our regular domestic butter does. The Lakpur brand is what we have available to us here in Manhattan, KS. Once you try it in pastries you will never use domestic butter again.

Dough Clinic / Re: Blitz Pastry method?

But, keep in mind that when using the delayed oil addition method of mixing the gluten development isn't impaired.

Dough Clinic / Re: Using oil to intentionally weaken dough

Try this, after allowing the biga to ferment overnight add the remainder of the water to the mixing bowl along with the salt (no need to mix), then add the remainder of the flour (all of it), and mix at low speed until the biga and flour are incorporated, then mix at a higher speed for at least 5-minutes. Let me know what the dough looks like.

Starters/Sponges / Re: Need help with biga dough

I just checked my pans, you are correct. The pans are tapered.

Stones/tiles/steel, Pans & Accessories / Re: Pizza Hut pan specifications

The purpose of adding oil is not to hinder gluten formation but instead to provide flavor both directly (flavor of the oil) and indirectly (oil holds/retains flavors). It also lubricates the dough for improved expansion properties as well as coating the cell structure for improved gas retention both of which result in better oven spring. Oil also exerts a tenderizing effect upon the crumb resulting in a less chewy finished crust which is achieved through the lubricating effect as mentioned above.

Old school is to add the oil to the water and mix together (why?) it will not form an emulsion. The oil immediately separates from the water and floats to the top of the water, when the flour is added the oil is absorbed into the flour rendering a portion of the flour incapable of forming gluten which leads to perceived inconsistencies in dough absorption and very real differences in dough handling properties. By using the delayed oil addition mixing method the water is added first (salt and sugar can be added to the water if desired) and then the flour is added along with the yeast, it is then mixed until no dry flour is observed in the bottom of the mixing bowl, the oil is then added and incorporated while mixing at low speed, once the oil is incorporated at low speed the dough is mixed at a higher speed to develop the gluten to a point where the dough takes on a smooth, somewhat satiny appearance. This is all the gluten development needed or desired for pizza dough production that will be further subjected to a period of fermentation. Putting oil into an autolyze is, in my opinion counter productive since the function of an autolyze is the achieve better hydration of the flour, this is especially so when high dough absorptions are employed.

Dough Clinic / Re: Using oil to intentionally weaken dough

If you REALLY want to see what the crumb structure looks like do as we did when we did our research on pizza, turn it over and cut it from the bottom up using a razor knife or a VERY SHARP serrated knife. This way you do not drag the sauce

and cheese down over the crumb as you do when you cut the pizza from the top.
Stones/tiles/steel, Pans & Accessories / Re: Question about cutting the pizza

It sounds like you are not allowing sufficient time between bakes to allow the stone to fully recover its latent heat (in short, the stone is cooling off). If your oven has bottom heating elements you will need to move the stone closer to the heating element to speed up the recovery time or get a thicker stone, maybe a baking steel. It looks like you are using a "00" flour so you may find that you will need to increase the sugar level to achieve top crust color after moving the pizza stone closer to the bottom heating element. Assuming that you are allowing at least an hour for the stone to fully heat up?

General Pizza Making / Re: Bottom not cooked?

The only work that I've been involved in with amylose, not high amylose (starch) flour was in research on low calorie bread back in the days of low calorie breads in the early 1970's. Since amylose is a resistant (non-digestible) starch we were looking at it as a possible substitute for micro-crystalline alpha cellulose in making bread similar to the then popular New Horizons low calorie bread. We don't fully understand the bread staling phenomenon even today. It has been shown to be at least partially due to retro-gradation (crystallizing) of the starch while other studies have implicated the protein fraction of the flour more than the starch fraction. Some of the more effective enzyme anti-staling agents used in white pan bread production are based on the starch model. These use a heat resistant amylase enzyme to hydrolize a portion of the starch in the baked bread, thus releasing its bound water making for a softer, more moist crumb structure which the consumer perceives as being less stale. Since a resistant starch would resist being hydrolized it would remain intact, acting more like a fiber than a starch, hence, there is less starch present to participate in the staling process. I would guess if it's a softer pizza that you're after this might be something to look at in greater depth. I've never looked at staling as an obstacle to be over come with pizza since many of the characteristics of staling are the same characteristics that we are trying to achieve in pizza. Take par-baked crusts for example, most would agree that they make pretty decent pizza (both thick and thin crust), a crust can't get much more stale than a par-baked one and yet we still think it's pretty good in many cases.

Dough Clinic / Re: Low amylose flour?

Scott;

Not that I'm aware of, by design they all round a pretty tight ball. The rounding bar is the only truly adjustable rounder but when getting a lose ball you also get a poorly rounded ball.

Shop Talk / Re: Rounder and divders

That's correct, there is indeed calcium in the mozzarella cheese too but it doesn't interact with the sauce in the same manner as a fine powdered cheese does, just like swallowing a piece of chalk doesn't work as well as drinking the milk. Which is probably why they don't say to eat a piece of cheese to counter the effects of ingesting an acid or alkali as much as we might like to it just doesn't work as well :-D.

I use Parmesan and/or Romano as I'm always trying to up the flavor profile of the mozzarella cheese. If I'm not worrying about the acidity of the sauce my preference is to use shredded Parm and/or Romano in addition to the mozzarella.

Dough Clinic / Re: Which are the factors that affect digestibility?

My all time favorite is just Stanislaus 7/11 Ground Tomatoes (with peel). Use it straight from the can with nothing added, then add a little fresh basil (sliced into strips) and maybe a little crushed garlic over the top of the sauce, add the cheese and dress to the order. DO NOT add any garlic or onion product to the sauce! This will act as a catalyst resulting in gelling of the tomato pectin within 24-hours. If you JUST GOTTA have garlic or onion in the sauce put it in a small amount of oil and nuke it to over 190F to deactivate the enzymes responsible for the gelling of the tomato pectin, then add it. I don't like doing this as it potentially reduces the flavor impact of the onion/garlic.

Newbie Topics / Re: Newbie with a sauce question

I got the idea to pursue this about 25-years ago when I was reading an article on what to do if someone ingests different poisonous/harmful materials. One of the things mentioned in the article for acids or caustics was to drink milk as the calcium content works to buffer the acid or alkali, this got me to thinking about the acidity of the tomatoes, and sure enough it appears that the calcium content of the cheese works in a similar manner to that of whole milk as it also seems to buffer the acidity of the tomato in the sauce and the flavor is right at home on a pizza too. Just goes to show ya, answers to problems can often be found in the darnedest places.

Dough Clinic / Re: Which are the factors that affect digestibility?

Does Combs, St. Paul or Pettigrew ring a bell with you? Just wondering (they're in N.W. Arkansas).

New Forum Members / Re: New member from Arkansas

My guess is that the dough was over fermented to the point where it was becoming "bucky", when it's like that the dough will exhibit very elastic properties with any work put into it, like trying to open the dough into a skin. Best thing to do in a case like that is to re-ball and play the waiting game until the dough relaxes again which will allow it to be opened into a skin relatively easy.

Dough Clinic / Re: Dough is out of control!!

If the pizza has a crispy crust it has to be somewhat dry resulting in some thirst....hence its popularity as a bar food. Eat pizza = drink more beer! ;D
If you use a tomato based sauce it's always going to be a bit acidic as tomato is an acidic fruit. You can tone this down a little by adding a powdered cheese (Parmesan & Romano) to the sauce. The calcium content of the cheese helps to balance the acidity of the tomato.

Dough Clinic / Re: Which are the factors that affect digestibility?

The Dutchess divider/rounder machines aka "shaker machines" are great machines and have been around for a very long time. ^^^ I see you have the steel plattens (as they are called), these are (in my opinion) better than the plastic ones. When set-up to do a 36-piece divide & round they are the industry standard for making small scale hamburger and hot dog bun production runs. :chef:

Shop Talk / Re: Rounder and dividers

With those conditions the dough will not be properly baked out, so in that case I would expect to find that it has an alcohol aroma, the same would be said for raw dough which the dough that you've described is just half a bubble off of.

General Pizza Making / Re: Effect of hydration; is there a simple answer?

No, not always. Flour characteristics, dough formulation, fermentation and bake will be the major contributors to chewier eating characteristics.

Dough Clinic / Re: Higher hydration doughs

While you're at it get yourself a dial/stem type thermometer too as you will want to have one so you can measure the water and dough temperatures. Additionally, do you have an oven that gets hot enough to bake a pizza made with "00" flour? The oven needs to be able to reach temperatures north of 750F, if not, you would be better served using a domestic bread type flour.

Dough Clinic / Re: Dough is out of control!!

Even when alcohol is added to the dough, such as in the case of making a beer crust, there is no additional residual alcohol in the finished crust....it's that volatile.

General Pizza Making / Re: Effect of hydration; is there a simple answer?

You're going to have to experiment to find out. The key is in having sufficient R.H. to prevent a skin/crust formation on the dough. A good way to do this at home is to place a wet towel in the area where the donuts will be proofed (an insulated ice chest works well) and prevent exposure to drafts.

Dough Clinic / Re: Yeast donuts recipe?

Welcome!

Whereabouts in Arkansas?

New Forum Members / Re: New member from Arkansas

Sandrutz;

Just confirming that you are pre-hydrating/activating the ADY prior to addition and not just adding it dry as you would IDY. You can save yourself some work by doing the following:

- 1) Add the ADY suspension to the dough water and mix into all of the flour.
- 2) Add the salt directly into the flour in step #1 above.
- 3) Mix the dough at this point until it just until all of the flour has been wetted, then add the oil and mix for 1 additional minute at low speed, then mix at medium speed just until a smooth dough appearance is achieved.
- 4) You're not going to see much, if any difference between "bulk" and ball fermenting with such a small dough size so you could ball and CF after 50-minutes room temperature fermentation if you wish.

Note: This all based on the assumption that you are machine mixing.

Dough Clinic / Re: Advice on the moment of balling and delayed oil

The preferred way to add IDY is to add it to the dough after a few minutes of mixing providing that the dough will be machine mixed for a minimum of 5-minutes after the IDY has been added. The second preferred method, and possibly the most used, is to add it directly into the flour. By design, IDY hydrates very quickly (that's where the "I" comes from), so it is easily damaged if not properly hydrated (95 to 100F water). Yeast will exhibit about a 20-minute lag phase after addition before it begins to actively ferment in a dough environment at a temperature between 70 and 85F.

Dough Clinic / Re: Autolyze experiments

An autolyze is necessary when using whole-wheat flour or any type of multi-grain

blend (lots of discussion on this), and it is also useful when working with high absorption doughs (over 70%), as well as when mixing the dough entirely by hand. When machine mixing I've never found any great advantage to using an autolyze. In my world an autolyze is what the old time bakers used to refer to as a "soaker" consisting of just flour and water. As soon as you put yeast into the picture you no longer have an autolyze, but instead you now have what's called a biga, a sponge or a brew. It has a very different effect on the flour than an autolyze.

Dough Clinic / Re: Autolyze experiments

Please share your entire dough mixing process.

Starters/Sponges / Re: Need help with biga dough

It's a straight sided pan. The deeper pan allows for better protection of the toppings from getting scorched during baking. You might also want to get a deep pan gripper while you're at it too. A 1-inch wide flexible blade cake decorating spatula is the preferred tool to use for running around the side of the pizza and to help glide the pizza out of the pan. DO NOT USE A KNIFE!

Stones/tiles/steel, Pans & Accessories / Re: Pizza Hut pan specifications

You have a biga and you have a dough, I will assume that you want to use all of the flour in the biga and none in the dough side. I will also assume that you want to ferment the biga for 24-hours at room temperature/ambient (whatever that might be), based on these assumptions I would suggest using 0.25% CY in biga #1; 0.15% in biga #2 and 0.1% in biga #3. For IDY use only 40% as much IDY as you did CY.

Neapolitan Style / Re: Recipe for dough with 100% biga

Nothing if the picture is of the biga, if it is of your dough its under mixed.

Starters/Sponges / Re: Need help with biga dough

As a reference most pizzerias are paying around \$3.00 plus change per pound for Grande shredded.

Pizza Cheese / Re: Grande Cheese \$25 for 5lbs? Is it worth it?

We used to have a bunch of old P.H. pans at AIB. They were nesting pans with a horizontal line indented in the pan about 5/8-inch above the bottom of the pan, this was the height to which they would proof the dough to.

Stones/tiles/steel, Pans & Accessories / Re: Pizza Hut pan specifications

No, it's not just in your head. You are spot-on. Anytime non-gluten forming flours are added we always use a sufficiently strong flour to make up for the dilution of the gluten by the non gluten forming flour(s).

Dough Clinic / Re: Considerations when adding chia, flax, other seeds to dough?

Please excuse me for my confusion, but a "biga" made with 45% absorption, wouldn't it be a sponge rather than a biga? I normally think of a biga as being made with 60% absorption or more.

You mention adding water until the dough is 65% hydrated but what is the total dough absorption? For example, if the total dough absorption is 68% and you add water until it is 65% hydrated wouldn't you be adding just 65% of 68 or 44.2% absorption? Or maybe the use of the word "hydrated" is incorrect in this instance and maybe you mean 65% absorption? To answer your question regarding the yeast amounts we would need to know at what temperature you plan on fermenting

the biga at.

Neapolitan Style / Re: Recipe for dough with 100% biga

It certainly can as the diastatic malt will convert starch into fermentable sugars but 2% is a high dose of diastatic malt, if you are experiencing stickiness of the dough it is most likely due to the high malt level, in that case just begin backing it down to eliminate the stickiness.

Dough Clinic / Re: Is my dough still good

Measure the internal dough ball temperature at the time of opening, by doing this you will be able to temper the dough ball to this same temperature any time of the year, regardless of room temperature and the dough will always perform/handle in a similar manner. Most pizzerias allow the dough ball to reach 50F before opening but many home pizza makers will allow it to reach a higher temperature with 60F being a pretty common temperature, just remember that the higher the dough temperature the more difficult it can be to open if you are not proficient at opening a dough ball into a skin.

Dough Clinic / Re: Mixing Times

3 to 4-days is what one might refer to as the suggested optimum, it can still be good to use for some time after that. It all depends upon how well the dough was refrigerated as well as the freshness of the CY and the strength of the flour.

Dough Clinic / Re: Is my dough still good

For bread you are going to have a tough time with a 50/50 mix, I suggest starting with a 65/35 blend (35% being the seeds). You will need to pre-hydrate the seeds prior to addition to the dough. If you will go back into the archives you will find where I've provided instructions on how to find the optimum absorption for the multi-grain blend of a multi-grain dough. It's important to get this right as it will have a huge impact upon the finished bread quality as well as the quantity of seed that can ultimately be incorporated into your dough. Remember to develop your seed blend first, then do the absorption determination, if you change the seed blend composition the absorption will change and you will need to find the absorption of the new blend.

You will also want to keep your total dough fermentation time on the short side (6-hours?) and is adding a sour don't get too heavy handed as both fermentation and the sourdough starter will weaken the dough making it more difficult to carry the seeds without collapse.

Dough Clinic / Re: Considerations when adding chia, flax, other seeds to dough?

Sure, Any regular dough formula will work for this WITH the following changes;

- 1) Increase fat content to 10% in the form of butter or margarine (Danish butter works far better than any other type of butter).
- 2) Freeze the butter and cut into peanut size pieces (keep frozen).
- 3) Mix the dough as you normally would (just until smooth), then add the butter and mix in just until the butter pieces are incorporated into the dough). In don't mean as a part of the dough, you just want to have the butter pieces incorporated as pieces in the the dough).
- 4) After mixing, turn the dough out of the bowl and sheet the dough using a rolling or pastry pin to about 1/2 to 3/4-inch thickness and give it a 4-fold (Google it if you don't know how), then cover with a sheet of plastic for 20-minutes and give it a 3-fold and wrap in plastic and refrigerate for 24-hours.

Remove dough from fridge and allow to warm to 55F, then sheet out to desired thickness (3/16 to not more than 1/4-inch thick, unless you're making a pan style pizza, then sheet it to 1/2-inch thickness) cut to desired diameter, dock with a blunt dough docker, dress and bake.

This will give you a crust similar to the old Tony's Italian Pastry Style Crust (frozen pizza).

Dough Clinic / Re: Blitz Pastry method?

That's my kinda pizza! Looks GREAT!

Tom Lrhmann/The Dough Doctor

Dough Clinic / Re: Is my dough still good

I was in charge of the Experimental Baking Group at AIB when the bromate thing hit the fan and we all had a good idea of what was to follow so we embarked on a rather lengthy study both in-house and through collaboration with the baking and allied industries to find an acceptable substitute for potassium bromate. The study continued for several years and during that time we all learned a lot about how different dough strengtheners work both by themselves and when used in combination with other dough strengtheners. Today we (the baking industry) have some excellent oxidative enzyme type dough strengtheners to work with as a replacement for potassium bromate but for the most part they are only used in very specific applications such as frozen dough and some specialty breads and are not generally in wide use for a couple of reasons such as:

1) We found that bromate really wasn't needed except in continuous mix bread aka batter whipped bread (common in the 50's and 60's), instead it was being used as a crutch to help maintain product quality with less than stellar performing flours available at the time.

2) Wheat breeders were developing new and stronger wheat varieties for the then popular continuous mix bread processes BUT as continuous mix bread fell from popularity (rightfully so) by the early to mid 70's the baking industry had flour being supplied to it by the millers that was too strong for the bread making process which replaced continuous mix bread, the sponge and dough bread making process. In some bakery plants they used a flour brew process where 30 to 40% of the flour was fermented in the liquid brew (think biga), in this case the new flour created even more issues as the brew flour could not be increased above 40% due to gluten separation so the finished breads were always showing signs of excessive strength (too much volume/height and wild break and shred) were critical issues as the faults interfered with high speed bagging of the bread.

3) Issue #2 above was of the highest critical nature to the baking industry at the time (we also worked on that too as we began researching ingredients known as "reducing agents") which included things like L-cysteine, glutathione aka dead yeast, various vegetable powders (onion and garlic), potassium sorbate and a few others). With #3 resolved, the baking industry seemed to settle down and began making decent bread once again and with the stronger flours available they soon learned that bromate really wasn't all that necessary so when the bromate replacers became available they were pretty well met with a yawn except for a few specialized applications like the frozen dough previously mentioned.

4) Due to the growing consumer concerns over the use of bromate most bakeries readily deleted bromate from their dough formulas with no ill affects to finished product quality.

Today flour can still be had that is bromated but there are strict Federal guidelines limiting how much bromate (in total) can be used. For the most part we can buy

flour in 50# bags that is either bromated or non-bromated, your choice. As a side note, Interstate Brands Corporation Bakeries began producing a white pan bread which they called "Grandma's Bread" this bread was unique for the time in that it was made with a non-bleached flour, this means the flour had a natural creamy/yellowish color and the finished bread had a corresponding yellowish crumb color, they opened the gap on their sheeting rolls at the moulder for a slightly more open crumb structure and a whole new direction was created for white pan bread, that was one of "old fashion", like grandma used to make. From that point on most flour being shipped to bakeries was now un-bleached. This still exists to this day.

It's really fun and interesting to see all of this unfold especially when you're in the thick of it and in some way you realize that history is being made before your very eyes and you're a part of it.

How sad to see AIB go the way of the DODO BIRD as no one will ever be able to have such great exposure in the future.

That's our trivia lesson for the day.

Pizza News / Re: Local opinion piece, bleached vs unbleached

So? where did the numbers come from?

The formula of 140 minus flour temperature = water temperature is correct for doughs having a targeted finished dough temperature in the 82 to 88F range. It comes from the Red Star "Directions for Use Guide doe Instant Yeast".

The 130 minus flour temperature = water temperature is correct for use with doughs having a targeted finished dough temperature in the 70 to 78F range.

As there are so many variables involved with mixing a dough one has to keep in mind that these formulas are not precise but they will get you close to the temperature range you want your finished dough temperature at. This will allow you to easily adjust the water temperature (in 5F increments) for following doughs to zero in on the exact water temperature needed to give you the desired/targeted finished dough temperature you want for YOUR specific dough formula mixed in YOUR mixer in YOUR kitchen/shop.

New York Style / Re: Describing the feeling of finished Dough

Don't worry about the black spots, if anything the dough actually looks to be a bit under fermented.

Dough Clinic / Re: Is my dough still good

Just guessing, 0.375% IDY and 62% dough absorption.

Dough Ingredients / Re: Sourdough Bread Machine Flour Mix

How in the world do you come up with 130F water temperature? 145 minus flour temperature (45F) = 100F water temperature. If you are using flour right out of the fridge you might be better off bringing it out the day before you plan on using it and putting it in a bowl to warm to room temperature. The warmer flour will hydrate much better and more quickly during the mixing process which is better suited to the high speed mixing of a food processor.

New York Style / Re: Describing the feeling of finished Dough

It would read better if he/she knew what the hXll he/she was talking about!

- 1) Need to study up on why bleached flour became popular in the U.S.
- 2) KBRO3 is indeed a known carcinogen but it is converted to bromide (which is safe) during the baking process and KBRO3 was never detected, then in the 1970's the Japanese perfected a test procedure that could detect KBRO3 in ppb

(parts per billion) not ppm (parts per million) as previous tests could detect. They found trace amounts (ppb) of residual KBRO3 and it was immediately banned in many countries. Today the legal limit for KBRO3 is 15-ppm at which level residual even at ppb cannot be detected.....argument: "but that doesn't mean it isn't there". By that logic I guess we should stop eating eggs and ground meat since both are assumed to be E-coli positive (now you know why you should not eat raw/under cooked hamburger or eggs, yes that includes cake and cookie batter too (no more licking the bowl). But wait, doesn't cooking kill the bacteria? Yes it does, but does it kill 100% of it? You won't know for sure unless you test what you are about to eat, so lets just avoid eating ground meat and eggs as well as anything made with them. This seems absurd to me, in view of what is in our drinking water, in the pure city air which we breathe, in the city swimming pool (speak of chlorine), how about the mercury in the ocean fish that we eat? It just goes on and on and on, I for one, decided a long time ago to cut my losses and stop worrying about the foods that I eat, I believe in redeeming social value, by this I mean I select foods that are known to be more nutritious such as whole wheat breads/flours, etc. and I really don't care much about the "additives" in them, I eat potatoes but always order with the skin on if possible, I never peel an apple (not even when making apple pie), I drink juices with the pulp (fiber is good for us). Worrying about too many things will give you high blood pressure or an ulcer and in my world those are also dangerous and should be avoided too.

Eat and drink in moderation and be merry!

As for being banned in Europe, true, it is, but then so is aluminum as it pertains to any kind of food. Why? Because a researcher found aluminum in the brains of persons who had died with Dementia so aluminum (yes pots and pans too) were immediately banned. We've all seen pock marked aluminum pots and pans, now you know where all that aluminum went! False! It doesn't quite work that way, and the aluminum found in the brain matter was discovered to be normal

Pizza News / Re: Local opinion piece, bleached vs unbleached

John;

Do you mix to temperature or time?

New York Style / Re: Describing the feeling of finished Dough

If the dough is over fermented you will find that the dough is too extensible, it may also be sticky and it can collapse under the weight of the topping ingredients resulting in a tough, chewy finished crust. If the dough is REALLY over fermented it will become "bucky" (difficult to stretch without it tearing), it may also exhibit excessive memory characteristics at opening resulting in the dough continually snapping back, note that under fermentation will impart a lot of the same characteristics as excessively over fermented, the main difference being that the under fermented dough generally doesn't tear as readily.

New York Style / Re: Describing the feeling of finished Dough

It appears to be an inactive sour which is designed to provide a flavor only (hence the need to add yeast). We recently had some discussion here on a similar product from Red Star.

Dough Ingredients / Re: Sourdough Bread Machine Flour Mix

I think your problem stems from the use of a sheeter to open the dough. The sheeter at least partially degasses the dough and at the very best creates a small, bread like cell structure in the dough (in fact, this is exactly how we get that nice, small/fine crumb structure in white sandwich bread). There are a few things that

you can do to achieve the characteristics that you are looking for, first is to optimize the dough absorption. To do this begin increasing the dough absorption by 5% (from the appearance of your dough it appears to be a bit low in absorption for what you are trying to achieve) then make 2% adjustments after that if necessary. The softer dough will more readily expand during the proofing period and during the oven spring phase of baking. If your final proofing time is still too long (more than 75-minutes) increase the amount of IDY to 0.4%. I don't know what you are looking for in the finished crust but for a pan style pizza your dough looks to be kinda thin in the pan so you might also want to experiment with trying a heavier dough weight in combination with the above recommendations. I'd suggest trying a couple pizzas each with a dough weight of 18, 20 and 22-ounces. With the heavier dough weight you will get a more pronounced raised edge during the baking process if that's what you are looking for.

By the way, when I make deep-dish pizza my dough scaling weight for a 12-inch pan is 16-ounces which is a dough loading of 0.14159 (ounces of dough per square inch of pan surface area), based on this I would use 21.8-ounces of dough in a 14-inch pan.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

What is the dough weight that you're using for that pizza and what is the diameter? After the CF period are you allowing the dough balls to come up to at least 50F before opening them?

It appears that you are opening the dough using a sheeter, is this correct?

The pan shown appears to be a 1-inch deep pan, what is the target thickness for the finished crust?

I have an idea of what the issue is but I just need a little more information.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Your problem could be due to insufficient yeast, excessive salt, insufficient sugar for the dough management procedure being used and probably a few other things too but I could do a much better job of answering your question if I could see your entire dough formula as well as dough management procedure.

By the way, when mixing large doughs like that we typically have to use 65 to 70F water temperature. A quick and easy way to find the desired water temperature is as follows: 145 minus flour temperature = water temperature for a finished dough temperature in the 80 to 85F range.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Josh;

Many home type mixers are actually pretty efficient at mixing dough so don't count them out as inefficient, also we can make up the difference in time by mixing at a higher speed (more r.p.m.). While mixing is important from a commercial point of view in that it allows for faster, easier handling of the dough (a sticky dough really bogs things down in a pizzeria when we're trying to scale and ball the dough) it is not nearly as critical when making pizzas at home as we are dealing with only a few pizzas at a time. Remember, the main reason for mixing to get that dry, smooth skin is to facilitate dough handling only. If you don't mind putting up with a sticky or tacky dough you could actually stop mixing as soon as the dough forms a ball that doesn't look like "brain matter" about 5-minutes into the mixing process after adding the oil.

We teach a true no-knead mixing process to home bakers and it involves mixing with a wood spoon, no kneading or anything else. The resulting dough looks like oatmeal, it is transferred to an oiled bowl, the dough itself is lightly oiled, it is then

covered with a piece of plastic and allowed to room ferment for 2 to 3-hours, it's turned out of the bowl, kneaded a few times and balled then placed back into the oiled bowl for another 3-hours. It is then turned out of the bowl and divided into multiple pieces for our pizzas or made into a single pizza depending upon the dough size. The resulting crust eats quite tender and has an open, porous crumb structure. Not too shabby for pizza made at home from a dough that didn't need any kneading. The process also makes great bread too, I normally make round loaves from this dough.

Your proposed method for measuring the temperature in the refrigerator is the same that we used except that we used oil instead of water since it doesn't support microbial growth.

Dough Clinic / Re: Mixing Times

Peter;

I'd almost forgotten about that video. What a trip down memory lane! That's an excellent video on the entire dough mixing process as well as dividing and balling/rounding the dough. Can you put the video into the "tool box" for easy future reference? I'm really glad that we got all of our pizza research done when we did, AIB is no more, and I don't know of any research facility that is doing or has interest in doing both basic and applied research on pizza.

New York Style / Re: Describing the feeling of finished Dough

As soon as the dough has a smooth appearance you're done with the mixing process. Biochemical gluten development will take care of the rest for you during the fermentation process.

New York Style / Re: Describing the feeling of finished Dough

Your pizzas are not round? Nothing wrong with this but it might be indicative of an underlying dough or formulation issue? Is your dough soft and extensible at opening, or does it tend to fight you (too elastic)?

New York Style / Re: stretching and lunching methods

No, because you are just pushing the top of the dough down so you're still reading the temperature at the top of the dough, plus the area that the IR thermometer is reading (collecting data from) is larger in diameter than a finger poke thus leading to an incorrect reading. The only way we were able to get consistently accurate internal ball temperature using an IR thermometer was to actually cut the dough ball in half and measure the temperature of the center portion. This was the only way we could get meaningful data on frozen dough balls too when we were doing studies on freezing of different type of dough and had to accurately measure the internal ball (core) temperature. The solidly frozen outer shell of the dough ball prohibited us from using a dial/stem type thermometer. We once used a drill to drill an entry hole to insert the stem into, this worked but it was a real pain. Ultimately we used a meat cleaver and a chopping block to split the dough balls in half allowing us to measure the temperature more quickly using the IR thermometer.

Dough Clinic / Re: Mixing Times

While not technically the same (Absorption is a characteristic of flour to take up and retain water or other liquid, expressed as a percent of the flour weight) while (Hydration is the ability of flour to absorb water or other liquid, there are two aspects to hydration, 1) Total amount of liquid absorbed and 2) The rate at which it is absorbed) the two terms are used interchangeably by home bakers.

Dough Clinic / Re: Correlation between hydration and cook temp and time

I also just "crunched" your numbers. Your 10-inch skin has 2.80-grams of dough for each square inch of surface area while the 12-inch skin has 2.74-grams. So, if the 10-inch is OK your dough weight for the 12-inch should be 316-grams + change (I'd call it 320-grams), not a big deal, but possibly a contributing factor.

Dough Clinic / Re: Sauce running through dough

An IR works fine at the mixer but you will need to use a dial/stem type thermometer to measure the internal dough ball temperature prior to opening.

Dough Clinic / Re: Mixing Times

CT;

An autolyse probably won't help much if any in this case.

Do Not Mix To Temperature! Instead, mix the dough just until it becomes smooth, then measure the dough temperature. Adjust the finished dough temperature of following doughs by manipulating the water temperature up or down as needed to give you a finished dough temperature in the 70 to 75F range. When adjusting the water temperature move it in 5F increments.

DO NOT allow the dough to warm to room temperature, instead, allow it to warm AT room temperature until it reaches 50 to 60F. If you allow the dough to warm to a higher temperature (like room temperature) the dough will easily become almost too soft to easily work with, sound familiar?

Dough Clinic / Re: Mixing Times

I think your problem is due to the way you are opening the skin. You are opening it with thin spots rather than a relatively uniform thickness across the entire diameter of the skin. You might try partially opening the skin using a rolling pin or pastry pin, open the skin to within about 2-inches of full diameter and then finish opening the skin to full diameter by table stretching. Not knowing your dough weight there is also a possibility that your dough weight is too light for the 12-inch pizza. Typically we see dough weights of 10 to 12-ounces used for 12-inch thin crust pizza skins. Remember, thinner does NOT make for a crispier finished crust. You might try using 12-ounces dough weight just to see if it helps resolve the issue, if it does you can fine tune the dough weight for the type of pizza you're making.

Dough Clinic / Re: Sauce running through dough

Wow! With an 18-inch pizza being 26% larger than a 16-inch pizza an 18-inch pizza selling for only a dollar more than the 16-inch is quite buy! Better keep that one under your hat. ;D

Newbie Topics / Re: Is it right formula??

And when you bake your pizzas remember to prevent any char on the crust as that has been shown to have some potential health issues too. Might as well stop breathing the air too or move to a mountain top home where the air is cleaner. Moderation, everything in moderation.

Dough Clinic / Re: Air Bubbles

Sure, that's how you optimize the dough absorption for a specific dough formula and management procedure.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Is the bubble formed inside the crust or under it? What does the bottom of the pizza look like?

Dough Clinic / Re: Air Bubbles

Steve;

Much of what you are asking can be found in the function of ingredients located in another section of this web site. As you have probably already noticed we don't like to deal with "recipes" more than we have to since a recipe is based on volumetric portions and as such are rather imprecise, whereas "formulas" are based on weight measures and are very precise and repeatable, additionally formulas are usually expressed in "bakers percent" where flour is always expressed as 100% and each ingredient is expressed as a percent of the flour weight. This allows for easy checking of the formula to determine if it is in correct balance and to see if any ingredient might be sufficiently high to impact the dough, dough handling or any of the finished product quality characteristics. Bakers percent also allows for very simple manipulation of the size of the dough while keeping all of the ingredients in correct proportion to the flour weight.

As to why we "tweak" formulas, it can be for a number of reasons such as, to better fit into our specific dough management procedure, to achieve a specific end product (crust) characteristic, to allow the dough to be better opened by a particular method, or to be better baked in a specific type of oven or specific oven conditions.

When I was teaching pizza classes I always told my students that knowing the function of ingredients allows you to effectively steer the dough or finished pizza to the characteristics that you are looking for. Take salt, for example, if the amount shown in bakers percent is less than 1.5% and the complaint is that the pizza crust has a bland or starchy taste the first action to take would be to increase the salt to at least 1.75% and probably not more than 2.5% (this is the normal range for salt addition in a pizza dough). On the other hand, if the yeast level is low and the salt level is high (3 to 3.5%) and the complaint is that the dough is difficult to open (too elastic) the problem is most likely due to the high salt level slowing the rate of fermentation so in the end the dough is not getting sufficient fermentation to properly condition the dough/gluten for easy opening into skins. It's just like steering a car, you know that turning the steering wheel changes the direction of travel we do the same thing with our doughs only in this case our knowledge of the function of ingredients is the steering wheel while the dough and finished crust characteristics are the direction of travel.

If I remember correctly, I believe it was Pizza Today Magazine in which I wrote an entire article devoted to the function of ingredients, maybe Peter can find it in the Way Back Machine?

Dough Clinic / Re: How do you know a dough recipe will be good?

This is precisely why I always tell people to use the "difference" in diameter as a percentage when pricing their pizzas. For example, a 12-inch pizza has 113-square inches of surface area and a 14-inch pizza has roughly 154-square inches, the difference being 41-square inches. If you divide 41 by 113 and multiply by 100 you get 36.28% which simply means that the 14-inch pizza is 36.28% larger than the 12-inch pizza. If you follow this simple math you won't fall victim to the size v/s cost issue shown in the video, remember that the underlying reason for being in business is to make money. Many of my followers have heard me ask a very basic question: "Why do you want to make different size pizzas?" The correct answer to this question is "so my customers can have more of the same pizza by ordering it in a larger format". If you can buy one 12-inch pizza pan for \$10.00 but want two, the cost will be \$20.00, it should be the same when buying pizza, unless you opt to make the classic blunder of discounting the price of your pizzas, that's a whole

different story though.

Newbie Topics / Re: Is it right formula??

Visually, the dough balls look pretty good to me. The question is, do they open easily? Do they provide you with the finished crust you are looking for?

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Travis;

We've had a fair amount of discussion here on fermentation in ball form v/s bulk. A big piece of the puzzle is how big of a dough are we talking about. Look at it like this, if the bulk dough weighs 600-grams and the dough ball weighs 600-grams there will be little to no difference in the amount of fermentation the dough receives, assuming all things equal. If we have a 10-pound dough ball and bulk ferment it heat of fermentation/metabolism will increase the temperature by approximately 1F per hour of fermentation time but if you were to divide that dough into 1-pound pieces and ferment as dough balls the heat of fermentation/metabolism would be more easily dissipated in the smaller dough mass, plus it would show a greater response to the environment, warming faster in a warm room or cooling faster in a cold room. So, as you can see you need to know all of the details of the scenario in order to fully answer your question.

Newbie Topics / Re: CF Bulk vrs Balled

You "might" be able to push the 40 to 50% mark but keep in mind that vital wheat gluten is very tough and rubbery so it has to be used judiciously. For each 1% VWG you add you will increase the protein content of the flour by 0.6%. It is generally accepted that 10% VWG is about the maximum you will want to add, and at that level you want to make sure the dough receives plenty of fermentation to help mellow the gluten making opening the dough a lot easier. One other thing, for each 1% VWG added you will need to increase the dough absorption by about 1.25%. ALWAYS be sure to disperse the VWG into the dry flour before allowing it to come into contact with any water.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

While Kamut flour is similar to wheat flour and it has a high protein content but it is lacking in the ability to produce a strong gluten matrix like wheat flour. For this reason it is almost always included in a blend with wheat flour usually at 25% or less of the wheat flour.

It typically exhibits a higher absorption value than many wheat flours due to its high protein content (it is the protein which carries a great deal of the water, however as this type of flour is usually more like a whole grain flour the presence of the bran (fiber) also exerts a great influence on the absorption properties. Defatted soy flour, which has roughly 51% protein content, will typically carry its weight in water (100% absorption) is great for supplementing something with protein but it has no gluten forming proteins in its composition so it is also used in much the same manner where the amount used does not exceed much over 25 or 30% of the total wheat flour weight.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Probably either the #4 or #6 speed, but in the end it will be the fastest that your mixer will easily handle the dough at.

General Pizza Making / Re: When to add the oil

Most breads and rolls are going to be moulded/shaped by a rolling or folding

process and any excess flour on the outside of the dough ball will be incorporated into the shaped dough piece resulting in large, undesirable holes and tunnels, pizza crusts, on the other hand, are formed by flattening the dough through a stretching process so no flour gets incorporated into the shaped dough so there is no issue with excess dusting flour on the dough and during the shaping process most of the dusting flour that is applied to the dough ball is removed by handling of the dough during the shaping process.

Newbie Topics / Re: Flour, sourdough loaves v. pizza

A strong bread type flour will be best for that application.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Some flours exhibit a slow hydration rate (this is also common to coarse ground flours too) which would explain why the dough seems to dry up as it ferments. You can easily get around this by using an autolyse as part of your dough making process, this is also beneficial if you are hand mixing your doughs too.

Dough Clinic / Re: Tough cornicione/pizza

Depending upon the dough formulation it may or may not survive. Don't worry, it'll be safe to eat but it may not turn out as well as you hope. Just putting the dough back into the fridge will not quickly stop the fermentation process, it may continue for days in some home refrigerators. What to do? What to do? On the morning that you plan to make pizza later in the day re-ball the dough. Don't try to ball it tight, just get it into a ball shape, lightly oil it and place it back into the fermentation container. Pull the dough out of the fridge about 3-hours before plan to open it into a skin.

Some issues you may face:

- 1) The yeast ran out of nutrient and began cannibalizing itself resulting in a wet, sticky dough with little oven spring.
- 2) The dough has become excessively acidic making the pizza difficult to bake properly.
- 3) The yeast has consumed all of the sugar normally used for crust color development making the pizza difficult to bake properly.
- 4) The dough becomes over fermented with all of the good things associated with an over fermented dough such as a dough that feels like putty, difficult to open without tearing, sticky, lacking oven spring, etc.

Newbie Topics / Re: Is it safe to put dough back on the fridge?

Most of the time the "stir" speed is slower than necessary when mixing just to hydrate the flour prior to the addition of the oil.

General Pizza Making / Re: When to add the oil

Partially opening the dough using a sheeter or rolling/pastry pin and then finishing the opening process by hand to full diameter is a procedure which we developed a good number of years ago as a teaching aid for those who were deemed to be "toss challenged". The process is now used in a number of pizzerias. I have a video on the process. If you would like to view the video just send me an e-mail at <thedoughdoctor@hotmail.com> requesting the video and I'll be glad to send it to you. The procedure is also very useful when one is having a problem opening the dough by hand and continually getting a very thin center section to the opened skin. We've discussed this procedure many time here in the past.

Dough Clinic / Re: Naughty words - dough roller...and hydration rates...

Actually, the dough really doesn't look to be all that bad. The reason for the dough being soft and a bit sticky is most likely due to the use of an all purpose flour. There is no standard to which all purpose flour is held such as there is for bread and pizza type flours. All purpose flours can contain anything from a low of 9.2 to as much as 11% protein content, even worse we have found that some all purpose flours are made from varieties of soft wheats as opposed to the more commonly used hard wheat varieties. My standard (go to) flour is a strong bread type flour with 12 to 12.8% protein content. You are correct in assuming that vegetable oil can be substituted for the olive oil with the only difference being in flavor.

Dough Clinic / Re: Dough Doctor's Basic Dough Recipe

Just an observation, 0.3% IDY and 3% salt is a bit of a mismatch for optimum yeast performance. There is a distinct possibility that the high salt level is suppressing the yeast activity/fermentation enough to affect the oven spring characteristics of the dough. A quick test for this would be to re-run the dough but reduce the salt to 2% to see if that improves the oven spring characteristics.

Dough Clinic / Re: poor oven spring/texture after 3 day ferment

Whole-wheat dough = 100% whole-wheat flour.

Wheat dough = any blend of whole-wheat flour and white flour.

Most people find it a lot easier to make a wheat crust than a whole-wheat crust but you can make a pretty decent whole-wheat crust if you want to go to the effort of finding the correct dough absorption to use for your specific whole-wheat flour.

Neapolitan Style / Re: King Arthur Whole Wheat Flour Dough

The addition of any kind of fat to the dough formula will go a long ways towards making for a more tender eating crust, but what struck my interest was your comment on how the dough just gets more sticky as you allow it to rest/ferment (did I read this correctly?). If this is indeed the case you might be dealing with a flour with a high level of starch damage. There is just no way you can ferment a dough made with a high starch damage flour for more than an hour or so. You might look around to see if you can find a similar flour to that which is being used by Greenwich Pizza/Jolibee Foods Corp. The flour they had been using was made from U.S. hard red spring wheat milled there in the Philippines.

Dough Clinic / Re: Tough cornicione/pizza

The stickiness you noted is not due to damaged starch, instead it is due to unabsorbed water in the dough. The bran is slow and difficult to get fully hydrated and until it absorbs its share of the water the dough will be sticky. The best way to get around this is to use an autolyse (whole-wheat flour + all of the water) and allow this to set for at least 1-hour. If you do this in the mixing bowl all you need to do is to add the remaining dough ingredients and carefully incorporate at low speed for a minute or so, then complete the mixing process at a higher (medium) speed. The finished/mixed dough SHOULD feel tacky but not overly sticky. I think your observation on the fermentation of your dough was due to the dough becoming stiffer as the bran continued to hydrate during the fermentation process. If you are planning to allow the dough to ferment much more than 1-day you might want to think about providing some nutrient for the yeast in the form of adder sugar (1 or 2%) or 0.25% of a 20L diastatic malt powder). If your yeast is running out of nutrient to feed upon adding more yeast will just make matters worse.

Neapolitan Style / Re: Neapolitan with Stoneground

We have had significant discussion here on how to determine the absorption of

whole-what flours, if you read back in the archives you should be able to find the procedure. Just a tip, the dough absorption of a whole-wheat dough will be close to 75% due to the delayed absorption properties of the bran.

Neapolitan Style / Re: King Arthur Whole Wheat Flour Dough

The reason for developing the dough until it develops a smooth skin is to reduce the stickiness and amount of dusting flour required during the scaling and balling (rounding) process. Even at that level of gluten development the dough is still far from fully developed so there is little or nothing to be gained from mixing it any less. If you want to optimize an open cell structure you should concentrate on optimizing the dough absorption for the type of pizza you're making as well as the baking characteristics of your oven. For a less chewy finished crust I suggest using a lower protein, bread type flour with a protein content in the 12 to 12.8% range in conjunction with 48 to 72-hours cold fermentation time.

Dough Clinic / Re: Mixing Times

Your question is impossible for me to answer as I don't know anything about your flour, type of dough agitator, dough size/amount of flour used or dough formulation all of which will impact dough mixing time, and then for good measure let's add ability of the mixer to mix whatever the dough size is at a sufficiently high R.P.M. (stir) is not it, so I'm guessing you're either mixing at too slow of a speed or the mixer doesn't have enough Oomph to do the job at a higher speed with your dough size. All of that aside, you should be mixing your dough at something between 115 and 125 R.P.M. if you are trying to develop the gluten mechanically, at that speed it should take 8 to 10-minutes to achieve the desired smooth appearance (this is assuming you have a reverse spiral dough arm, if you have a straight "J" hook or "C" hook you will need to go to about 150 R.P.M. to get the dough to come off of the hook for decent mixing action.

May I suggest an easier mixing method?

Put water in mixing bowl.

Add salt and sugar (no need to mix).

Add flour and yeast (yeast on top of the flour unless ADY).

Mix at low speed just until you don't see any dry flour in the bowl, then add the oil.

Mix one more minute at low speed after adding the oil.

Mix at the highest speed possible (see above) until a smooth skin is developed on the dough.

Measure the dough temperature (70 to 75F).

Scale and ball.

Lightly oil.

Refrigerate 24 to 72 or more hours.

Dough Clinic / Re: Mixing Times

Yes, but the perceived saltiness is greater due to the "pretzel effect".

Focaccia Style / Re: Brine percentage

ADY, IDY and CY all smell the same after the ADY and IDY have been hydrated BUT keep in mind that it is perfectly NORMAL for CY to have the aroma of a very well use diaper pail (think of the wonderful aroma of ammonia), this can happen if the yeast hasn't been sufficiently washed prior to centrifuging and packaging. The manufactures seem to pay a little more attention to this with their home consumer packages than they do with their 1-pound packages intended for the commercial baking industry. And above all, don't forget that it isn't the aroma of the yeast that provides those wonderful aromas and flavors in our baked goods, it's the by-

products of the fermentation process combined with the baking process that are truly responsible for all that good stuff.

Dough Ingredients / Re: Cake yeast ?

Very high absorption doughs are better hand mixed than machine mixed, the reason being that the high absorption doughs are so slack (soft/fluid) that it is difficult to get consistent gluten development unless special mixing attachments are used. Some home bakers will use a flat beater aka paddle to mix the dough until a reverse spiral dough arm can be used to complete the mixing process. As for incorporation of air during the mixing process it's about the same for both hand kneading and machine mixing. The reason why we often see those large bubbles in the hand kneaded dough is because the dough is actively fermenting during the kneading process, it's not the air that's being incorporated. Many home bakers of both bread and pizza like to machine mix the dough to a point where it comes together and then finish by removing the dough from the mixing bowl and hand kneading.

Focaccia Style / Re: Flour, water, salt, yeast - Quick question

All ingredients are calculated as a percent of the total flour weight.

Here's how its done:

using your calculator;

1) Enter the flour weight.

2) Press "X".

3) Then enter the ingredient percent you want the weight for.

4) Then press the "%" key.

5) Read the weight of the ingredient in the display. The ingredient weight will always be given in the same weight measures that the flour was shown in.

Newbie Topics / Re: Basic hydration calculation

I use 1.75% salt in the dough (bakers %) and all of the brine solution goes onto the fully proofed dough after making a series of finger pockets to hold little puddles of the brine, then very lightly sprinkle with a little flake salt or sesame seeds.

Focaccia Style / Re: Brine percentage

If you have ever made bread at home and had it collapse, even partially collapse in the oven, you might have noticed that the finished bread had a crumb structure that was similar to some form of an art gum eraser in the making. The open porous crumb structure allows for effective moisture migration towards the heat (the oven air) while a more dense crumb structure restricts the migration of moisture resulting in a higher moisture content in the finished product. So when the bread dough cited above collapses it becomes more dense and retains more water/moisture in the finished product, in many cases this can dramatically change the entire character of the crumb structure. This is also one of the reasons why when a dough is opened 100% by sheeting, be it by machine or rolling/pastry pin, it is more difficult to obtain a finished crust that is as crispy as that from a dough that was opened by hand, and in many cases the crust formed by the sheeting process may not retain its crispiness as well as a hand opened dough. This is why in many cases we allow a skin formed by the sheeting process to proof for a few minutes after forming as this allows the dough to develop a better internal cell structure which is more conducive to removing moisture during the baking process.

Dough Clinic / Re: Correlation between hydration and cook temp and time

It was applied to 500-grams of focaccia dough.

Focaccia Style / Re: Brine percentage

The auction closed this evening, Hobart N-50 mixers went for just over \$500.00 each and Hobart A-120 mixers went for just a tad more. The Hobart HL-200 mixers went for around \$3,000.00 each. Attachments for all sizes of mixers went REAL cheap as

did stacks of Lloyd Pans (many were brand new) which sell for \$25 to \$40.00 each. Hobart M-820 mixers went for about \$5,000.00 each which is a real deal considering they were like new and that's what a used one (a well used one) was selling for 10-years ago. The Marsal deck oven went for about \$1,800.00 and an XLT and Middleby-Marshall WoW (both air impingement ovens) went for a little over \$3,000.00, not a bad price for low mileage ovens. Pizza tools like dockers, cutters, Equalizers, etc. were nearly give aways as they were sold in groups. The end of a 100-year era! :(

Events Calendar / Re: Equipment from AIB is now for sale online.

With doughs in the 56 to 68% absorption range it is all done as a single step but with high absorption doughs (over 70%) allowing the dough to rest for about 10-minutes usually helps in shaping the dough.

In most references where they mention "rolling the dough" they are actually referring to the balling of the dough so depending upon a host of factors the rest period between rolling and opening can be anywhere from something measured in minutes to hours. In bread production this rest period is commonly referred to as "intermediate proofing". When making pita or Barbari the rest period is usually around 20-minutes.

Dough Clinic / Re: Missing link?

Peter;

You found it! It's the May, 2011 article.

I'm looking for the location of the Lost Dutchman's Gold Mine, can you see if you can find it for me? :-D

Man! You're good!

Shop Talk / Re: Brick oven temp?

Nope, doesn't work that way, the lower the absorption the denser the dough is during baking due to restricted oven spring so it doesn't bake out as well hence requiring a longer baking time at a lower temperature.

Dough Clinic / Re: Correlation between hydration and cook temp and time

Peter;

That's not the article I was referencing but it's still a good article ^^

I wrote that one after I had been contacted by a number of new operators who had bought used ovens and couldn't get them to bake a decent pizza (hence my closing comments). In one case the individual had an oven that was sold to him as a "pizza" oven but tracing the serial number back to the manufacturer showed that it had been built for a major seafood chain and it was still equipped with the proprietary seafood finger profile which looked nothing like a pizza profile. If I remember correctly I think I wrote the article for my column in Pizza Today Magazine.

Shop Talk / Re: Brick oven temp?

Andy;

I wrote an entire article on this very topic some time ago as too many people don't

choose the oven based on their store concept.

DELCO (delivery/carry out) pizzas need to be as dry as possible to reduce deterioration in the box due to excess moisture from the pizza toppings. Deck ovens are very poor at removing excess moisture from the top of the pizza as they have no forced airflow, air impingement ovens, on the other hand, can be set up/top profiled to provide the maximum amount of airflow to the top of the pizza for maximum/optimum dryness thus reducing the amount of steaming the pizza is exposed to in the box. Additionally, there is no chance of short baking a pizza during busy periods which can result in a tough, chewy pizza. To further address the chewy issue we have found that the use of a lower protein content flour (11.8 to 12.4% range) is also helpful in reducing the perceived toughness when the customer receives their pizza.

Shop Talk / Re: Brick oven temp?

Take note: There is still some time left to bid on auction items, I was just there www.equip-bid.com/auction/6096 and there are scads of pizza pans and screens, the pans are mostly Lloyd Pans with an average value of \$25.00 each right now bids are in at less than the cost of a single pan!!! Looks like Hobart 20-qt, bench top mixers went for around \$2,000.00 each and 12-qt mixers for around \$500.00 each.

Some really sweet deals there.

Dough Clinic / Equipment from AIB is now for sale online.

What do you hope to achieve by a faster bake time? Remember that longer baking times help to develop a crispier pizza crust and also help to develop more crust flavor. If you want to have a buttery flavor why not use Butter Flavored Crisco? Works great!

Let's streamline your process:

Put water in mixing bowl, add salt and sugar, add the flour and Butter Flavored Crisco then add the yeast (you didn't mention it but I'll assume you using it).

Mix at low speed for 2-minutes then at medium speed for about 8-minutes or JUST until a smooth dough is formed.

Your desired finished dough temperature range should be 75 to 80F.

Take the dough immediately from the mixer to the bench for scaling and balling.

Place dough balls into dough boxes and lightly oil the top of each dough ball.

Immediately place in cooler cross-stacked for 2-hours or until the INTERNAL ball temperature reaches 50F, then down-stack and place a lid on the top box.

Allow to cold ferment for at least 24-hours (48-hours is better).

If dough is properly managed it will be good for up to 72-hours in the cooler.

To use, remove dough from cooler, allow to temper AT room temperature until the INTERNAL dough ball temperature reaches 50F, the dough balls are then ready to be opened into skins by your preferred method. Once you begin opening the dough balls they will remain good to use for up to 3-hours so be sure to pull only what you will need out of the cooler for not more than a 3-hour period.

Any dough not used in the 3-hour period should be opened, put onto wire pizza screens and placed into a wire tree rack in the cooler (cover with a plastic bag to prevent drying) and used during the next busy period. To use the pre-opened skins, remove from the cooler 20-minutes prior to use, remove from screen, re-stretch if necessary, dress to the order and bake. Do not save the opened skins from one day to the next.

Any unused opened skins can be added back to fresh dough at a rate not to exceed 15% of the fresh dough weight.

Shop Talk / Re: Brick oven temp?

At anything above 70% I always use an autolyse (1-hour) and due to the very fluid nature of the dough the mixing time will be relatively long to get any gluten development in the mixer. With all of this being said, you should really be posting to Craig as he is the one most familiar with his dough formula and procedure.

Dough Clinic / Re: 80% HD question

I have personally never made a Detroit style pizza with more than 68% absorption, more typically I will use something closed to 65% depending upon the absorption characteristics of the flour I'm using at the time. I'm not familiar with Craig's Detroit dough formula but I see your notation regarding the flour. How does the KAAP flour differ from what Craig's formula calls for using? Flour is usually not one of those "one size fits all" things so using a different flour can really upset the apple cart. I don't know if that the case here or not.

Also, did you take into account the water content in the starter when calculating the dough absorption, if not that would have added about another 7% water.

Dough Clinic / Re: 80% HD question

We used to use 5-grams of salt in 90-ml of 100F/38C water, so your proportions are very close to what I've used in the past. We used to also sprinkle the dough with flake salt too.

Focaccia Style / Re: Brine percentage

Something between 500 and 550F should work well for you. All ovens are a bit different so you will need to experiment a little to see what temperature works best for your specific dough formula and dough management procedure. Hopefully you are planning on a dine-in with some DELCO as opposed to a DELCO store only in which case an air impingement oven would be a much better oven choice.

Shop Talk / Re: Brick oven temp?

Generally speaking, higher dough absorption performs better with higher baking temperatures and there comes a point where it's essentially mandatory or the dough will collapse in the oven when it should be experiencing oven spring. Lower absorption doughs are usually best baked at lower oven temperatures. Dealing with deck ovens a lower temperature means 450 to 525F and a higher temperature means 550 to 650F and more. Many deck ovens will not reach a sufficiently high temperature to effectively handle the truly high absorption doughs which will require a baking temperature of 700 to 900F. As the dough absorption rises the dough becomes softer and more extensible so it rises faster and a little sooner during the oven spring stage of baking, this is why you are seeing a more open cell structure, you should also get a more tender eating crust which is more crispy too. As opposed to many home ovens, any commercial oven should bake a better pizza at comparable temperatures due to the greater heat/temperature recovery of the commercial oven resulting in the pizza baking at a more constant temperature than non-commercial ovens which in many cases lack decent heat recovery, this is especially evident when baking multiple pizzas back to back.

Dough Clinic / Re: Correlation between hydration and cook temp and time

Yes, using a malted flour would allow him to reduce or eliminate the sugar but since he is using so much sugar I'm assuming he likes the sweetness imparted by the sugar and he'd lose that if he reduced or eliminated the sugar. The "00" flour and 460F are not an issue due to the sugar helping with the browning reaction.

Dough Clinic / Re: Cook times and temps

The AIB On-Line Auction is still in progress. In anyone is located within a reasonable driving distance to Manhattan, Kansas you might want to take a look at the equipment which is for sale which includes mixers (right now there is a Artofex Twin Arm Dough Mixer which emulates hand mixing with a \$250.00 bid on it). There are also MANY 12 AND 20-quart Hobart mixers as well as larger mixers too. It looks like much of the pizza equipment is on pages 12 and 13 of the listing. To view the auction go to <www.equip-bid.com/auction 6096 (you may need to go into the current auctions to find it as I did). The auction closes on 11/25.

Events Calendar / Equipment from AIB is now for sale online.

Pizza dough should not be sticky, it can be soft, very soft but not sticky. I have no problem peeling a pizza made on a 72% absorption dough into the oven using fine grind corn meal under it, I've done higher but seldom do I venture into that territory anymore. A common cause of a sticky dough is excessive diastatic malt or in some cases excessive fermentation, if neither of these seems to apply in your case try using an autolyse (1-hour) in your dough mixing procedure, it can help a lot.

Dough Clinic / Re: Putting pizzas in the oven without a peel or screen in a pizzeria?

OK, let's start at the beginning, first you will need to WEIGH all of your ingredients, no more portion amounts (cups) as different individuals portion your ingredients differently, but 100-grams is ALWAYS 100-grams, regardless of who might weigh it.

Next, you're using the delayed oil addition mixing method but you are adding the oil way too late in the mixing stage, instead, mix the dough for just 2-minutes at low speed and then add the oil, mix one more minute in low speed and then mix 8-6-minutes in medium speed. Forget the window pane test, it's used only for bread making, not pizza as it is used to determine gluten development and we really want to MINIMIZE gluten development when making pizza dough. As soon as the dough has a smooth appearance it is done mixing.

Measure and record the finished dough temperature.

Take the dough directly to the bench and immediately begin scaling and balling the dough (this must be accomplished within 20-minutes or less of completion of dough mixing).

Lightly oil each dough ball and place into the fermentation container, take it IMMEDIATELY to the cooler (uncovered for 3-hours), then cover for the duration of time in the cooler.

When ready to use the dough remove from the cooler 2-hours before you open the dough balls into skins using your dough sheeter/roller.

Prepare the pans by greasing with Crisco.

Fit the sheeter dough piece into the greased pan(s).

Allow the pans of dough to rest at room temperature for 30-minutes (this time may be varied depending upon desired final crust thickness).

Cover the pans of dough and place in the cooler for storage until needed.

Give this process a try, it should provide a much greater level of consistency to your product.

Dough Clinic / Re: Cook times and temps

Peter;

I was once told that "perception is reality and reality is just a perception", perception and reality don't always go hand in hand though. You're right, blowing under a pizza to help release it from the peel is perceived as one thing (almost like coughing on the pizza to some) while blowing out birthday candles on a cake is yet another thing entirely (in this case the cake is more dangerous than the pizza due to lack of a post "blowing" kill step which the pizza will receive. Then too, how many times have you seen someone wipe their hands on an apron or towel tucked into the apron ties (think Emeril Legasse), and then handle your food? BAD IDEA! Most people never give it a second thought but if you're in food safety it makes you cringe. Fifty years at AIB taught me a lot about food safety, but reality has taught me if it doesn't kill me it will only make me stronger, now if we can just convince our customers of that.

Dough Clinic / Re: Putting pizzas in the oven without a peel or screen in a pizzeria?

In reviewing your attached material I'd venture a guess and say that pizza might not be permitted. However it should be very easy to get a final word on this, just contact the authorities and ask them about how they view pizza. While a plain cheese pizza is one thing that they might allow without refrigeration one with meat and or vegetable toppings is yet another. If you were to have an oven in which you would heat the pizza slice to a temperature above 160F (minimum temperature for a "kill" step) this might influence their opinion in a positive way for you.

Shop Talk / Re: Cottage industry question

The "blowing trick" while effective, doesn't always set too well with the customers in a pizzeria operation.

Dough Clinic / Re: Putting pizzas in the oven without a peel or screen in a pizzeria?

Peter;

It's interesting to note that the reason why I mentioned the Calumet brand baking powder is because it is one of the few that is based on soda and SALP (sodium aluminum phosphate). This is important as SALP has a slower reaction rate than the other food acids so it functions more like yeast in reaction rate rather than reacting very fast as many of the two stage baking powders do. It's also interesting to note that the residual acid component has a significant impact on finished crust flavor, SALP imparts what we call a "biscuit" like flavor (due to the use of SALP based leavening systems in biscuit mixes) that's why we associate the flavor with biscuits, then there is GDL (glucano delts lactone), the residual GDL imparts a decided sweet taste to the crust, and SAPP (sodium acid pyro phosphate) is the leavening system of choice for use in cake donuts, in fact the flavor of a cake donut is that of SAPP. The next time you eat a cake donut run your tongue across the back of your teeth and you'll feel a roughness, this is a phosphate coating from the SAPP. Due to health concerns in Europe SALP is not on the approved food ingredient listing (it doesn't have an "E" number), so CAPP (calcium acid pyro phosphate) is used as a replacement. Aluminum is the issue, at one time aluminum was thought to be associated with Alzheimer's Disease but that was disproved many years ago. CAPP has not been widely available in the U.S. due to the availability of SALP and since they both perform in a similar manner why have two products? We are beginning to see more applications of CAPP though in specialized products where the biscuit like flavor is not desired so if you happen to see CAPP in the ingredient declaration this is the reason. We use SALP in the WRISE product because the biscuit like flavor imparted by any residual SALP is the least offensive in a yeast

leavened product. With that said, some refrigerated doughs are made using GDL with the reason being the superior stability offered by the GDL over all of the other food acids. When you have a dough system that is 100% chemically leavened and the chemical leavening system is based on GDL and soda it is incredibly stable until it goes into the oven, the biggest down side to GDL is its low neutralizing value so you need to use significantly more of it to get the same performance you get from SALP and SAPP which in the end means a higher formula cost. In short, when you see GDL being used there has to be a very good reason for using it.

Chicago Style / Re: Baking powder dough?

That article sure brings back memories. :)

Chicago Style / Re: Baking powder dough?

If you are making doughs infrequently during the day and have concerns over any dough in the bowl drying out (your 5-minute time limit doesn't suggest this though) all you need to do is to use a flexible plastic bowl scraper to scrape down the bowl after each dough.

Shop Talk / Re: Properly cleaning a spiral mixer with non-removable tub?

One of the biggest problems with using baking powder along with yeast is that the soda portion of the baking powder (BP) is neutralized by the acids formed during the fermentation period which results in the acid component being left without any alkali (soda) to work with. This results in a lighter finished crust color and depending upon the food acid used in the baking powder a "different" finished crust taste. In commercial practice a combination of both yeast and chemical leavening can/are used (examples include DiGiorno Frozen Pizza as well as many popular take and bake pizzas) BUT plain BP is not used, instead a coated/encapsulated chemical leavening is used. The trade name for this product is "Wrise" manufactured by Wright Enrichment Company. For home pizza makers you can make a version of this product by using Calumet Brand baking powder and regular Crisco. Use 2% BP and an equal weight of Crisco and work together VERY WELL in a small bowl using a table fork. The fat encapsulates the soda portion of the BP and prevents it from going into solution thus preventing it from reacting with the acids formed during fermentation until the fat is melted in the oven at which time it reacts to give enhanced oven spring. I've got a number of dough formulas for these combination leavened doughs posted in the RECIPE BANK at the PMQ web site <www.pmq.com>.

Flavor wise, 100% chemical/BP leavened crusts leave a whole lot to be desired flavor wise, reminds me of the old Chef Boyardee Pizza kits that we had when I was a kid back in the early 50's, empty the bag of dough mix into a bowl, add warm water and mix, allow to rest a few minutes, spread onto a cookie sheet, add the sauce and cheese and into the oven it went.

Chicago Style / Re: Baking powder dough?

Huh? Unless you're making VERY different doughs there is absolutely NO need to wash a mixing bowl between doughs. What is the reasoning behind this?

Shop Talk / Re: Properly cleaning a spiral mixer with non-removable tub?

Just pour in some very hot water (amount will vary with size of your mixer) no soap is needed. Cover bowl with a sheet of plastic and allow to steam for 15 to 30-minutes, then scrub using a plastic bristle pot brush, bail out the water and add clean warm water (100F+/-) to rinse, then add some sanitizer and wipe down.

Shop Talk / Re: Properly cleaning a spiral mixer with non-removable tub?

If you are using your regular flour for a peel dust you might try using fine corn meal, semolina flour, rice flour, my personal favorite is a blend of equal parts of fine corn meal, semolina flour and my regular pizza flour.

There is also a little "knack" to peeling pizzas into the oven. You will want to shake the peel just before dressing the skin to make sure it's still free from the peel, then shake it again after dressing the skin (better to know the skin is sticking to the peel before the oven surprise).

One more thing, it's common to open the skin on the table and then pick it up and transfer it to the peel for dressing and peeling it into the oven as opposed to opening the skin right on the peel.

There has been a lot of discussion on how to peel a pizza into the oven here.

Dough Clinic / Re: Putting pizzas in the oven without a peel or screen in a pizzeria?

With that level of IDY in a biga that is fermented for 15-hours at 70F room temperature, plus the fact that the biga is increasing in temperature due to heat of metabolism the flour in the biga has been pretty well damaged by enzymatic activity as well as the acids formed by the fermentation process. For this reason I would not include the flour in the biga as part of the total flour. This is the same thing we do with a sour. It is impossible to tell just how much of the flour is still viable but my best guess would be 0 to 20% at the very most.

Dough Clinic / Re: Biga percentages

Maybe she's of the opinion that only DEPLORABLES shop at Walmart? WM meats are what is referred to as "previously frozen" which some think of as not as good as fresh, Like you I see no difference. When we're shopping for steak (which is rare since we eat mostly venison), our "yum" factor doesn't even begin to kick in until we see a cut of meat that is over 1.25-inch in thickness. Many of the WM cuts are, in my opinion, too thin (to control the cost), my wife bought one of those 3/4-inch thick steaks many years ago and it is still serving me well as a replacement sole on one of my hunting boots, needless to say we didn't shop WM for meats again for several years, then we found that WM also carries thick cuts too (just like our local supermarket) so we tried it and it was as good as what we were getting from the supermarket as fresh meat.

Chitchat / Re: Walmart meat

The pivotal question is how long are you fermenting your biga?

Dough Clinic / Re: Biga percentages

Here you go;

DOUGH: (In bakers percent)

Flour: 100%

Water: 65%

Poolish: 20%

Salt: 3%

Oil: 2.5%

IDY: 0.5%

POOLISH: (In true percent)

Flour: 49.76%

Water: 49.76%

IDY: 0.466

Note: While the above percentages should total 100% due to rounding the actual total is 99.986% (close enough for our work).

I have no idea of what your dough ball weight will be so you will need to do it yourself, here's how to do it.

- 1) 4 X desired dough ball weight = calculated dough weight.
- 2) Add 5% for dough loss = ACTUAL dough weight.
- 3) Add up the bakers percents in the dough and divide the sum by 100.
- 4) Divide the actual dough weight by #3 above. This will give you the new flour weight needed to make your 4 dough balls.
- 5) Calculate each ingredient weight using bakers percent and your new flour weight. (ingredient percent X flour weight, press the "%" key and read the ingredient weight in the display. Note: Ingredient weight will be in the same weight units as the flour is shown in).
- 6) Repeat this for each ingredient and the dough has been completely resized.

Now for the POOLISH:

- 1) Using your calculator, enter the calculated poolish weight for the resized dough, then enter 49.76 and press the "%" key, read the amount of flour needed for the new poolish in the display.
- 2) Enter the calculated poolish weight for the resized dough, then enter 49.76 and press the "%" key, read the amount of water weight for the new poolish in the display.
- 3) Enter the calculated poolish weight for the resized dough, then enter 0.466 and press the "%" key, read the amount of IDY to be added to the new poolish.

DONE!

General Pizza Making / Re: Large dough recipe:

Try 2-hours before balling the next time, I think you'll get a better dough.

Starters/Sponges / Re: My biga dough ball is big and lumpy

I don't understand your question about oiling the shells? Are you making par-baked shells too? Need more details on that one in order to answer.

The dough weights you are showing for the different size pizzas (are they all for the same type of pizza?) are all over the board weight wise for the sizes. Of the three sizes (10, 14 and 16-inch) and the weights shown for each 10, 18 and 23-ounces) which diameter and dough weight represents your best pizza? With this information I can calculate the dough weights for each of the other sizes.

To give you the desired dough temperature for YOUR dough I first need to see your entire dough management process, beginning to end, complete with all times and temperatures.

In view of your circumstances, I suggest that you please give me a call so that we can discuss some of this over the phone.

Please feel free to call me at 785-537-1037 (please e-mail me with date and time at <thedoughdoctor@hotmail.com> we are in the central time zone).

Dough Clinic / Re: Yeast enough?

Here's what your dough formula looks like in bakers percent;

Flour 100% (800-ounces)

Yeast 0.625%

Sugar 2.125%

Salt 1.125%
Oil 1.625%
Water 57%

How it's done: Divide the ingredient weight by the total flour weight (800-ounces in this case) and multiply by 100.

Example: Yeast/ 5-ounces divided by 800 X 100 = 0.625 (0.625%)

Do this with the weight of each ingredient and you should get the same numbers that I got.

See, wasn't that easy? :-D

What am I looking at here?

Yeast: Too high for IDY and too high for ADY and too low for CY. What kind of yeast are you using?

Sugar: The percentage looks OK if you're using a deck or air impingement oven.

Salt: At 1.125% the salt level is too low for optimum flavor in the finished crust and the low salt level might be working against you if you are using ADY or IDY because low salt and high yeast makes for fast, uncontrolled fermentation rate.

Oil: Typical range for oil is 1% up to 10% (more typically 2 or 3% at the high end) so the oil is OK.

Water: The dough absorption is 57% which would indicate that you are trying to make a thin crispy or pan style pizza. Typical dough absorption for this type of pizza ranges from 56 to 63% but there can be a lot of variability in dough absorption.

Possible issues experienced with a dough formulated such as shown;

Possibility of blown dough.

Once dough is ready to open it doesn't last very long due to over fermentation.

The dough might feel sticky in the mixing bowl and during the scaling/balling process.

Finished crust lacks "something" in flavor. Some might describe the flavor as "starchy" which is common for a low salt product.

Note:

Are you measuring and recording the finished (mixed) dough temperature for each dough you make? This will have a great impact on how the dough ferments. Unless the inside temperature of your shop is varying with seasonal changes if you control the finished dough temperature you will get the same rate of fermentation all year long, and even if your shop is 10 to 15F cooler or warmer due to seasonal changes controlling the finished dough temperature will eliminate much if not all of the temperature variation. Lastly, you are making doughs based on 50# of flour weight which means you are scaling and balling upwards of 83# of dough at a time. You must be able to get the entire dough processed (scaled, balled, boxed or bagged, and in the cooler) within 20-minutes. Are you achieving this? If not you are introducing a level of variability that most pizzerias find unacceptable.

We can work with you to address these issues.

Dough Clinic / Re: Yeast enough?

The dough looks to be a bit under mixed. Did you mix it until it developed a smooth skin?

Starters/Sponges / Re: My biga dough ball is big and lumpy

It looks like it was cut from the top down? Or was it cut when still very hot which caused the cheese and toppings to draw down over the cut area obscuring much of

the view of the crumb structure?

Also, see if you can get a picture up close.

Dough Clinic / Re: Air Bubbles

Fermentation is a very important aspect when it comes to the dough, it both directly and indirectly affects the flavor of the finished crust and it has a significant impact upon how the dough handles and bakes too. This is why short fermentation times are not all that popular when making pizzas, especially if a flavorful crust is desired. Fermentation times of 8 to 12-hours can and certainly are employed when making pizza crust but the flavor really isn't all that spectacular, but then again it all depends upon what you're looking for in the crust. If you just want "pizza" you can make an emergency dough and be eating pizza within two hours of starting the mixer but if you want something a bit better than a "belly stuffer" it's going to take a bit longer. Unless a dough reducing agent is used in the dough as an ingredient (PZ-44 or dead yeast) short fermentation time doughs will tend to be more elastic than those made using a longer (24-hours +) fermentation time.

When it comes to fermentation you can get different flavors from room temperature fermentation than what you get from cold fermentation so the two processes are not interchangeable from a flavor and aroma standpoint and which one you decide to use will be based on your own personal preferences. Because commercial bread is made using what might be described as a room temperature fermentation process many people equate the crust flavor obtained from a room temperature fermentation process as to being similar to that of "bread" while that from the cold fermentation process is best described as being more in-depth and complex and someplace down the road you might even want to try your hand at using a sourdough starter to develop a truly different/unique crust flavor profile resulting from the different micro-flora that are used to generate the leavening gas as well as the different acids, and quantity of acids formed during the sourdough fermentation process.

Keep reading and learning and soon you'll be making truly great tasting pizzas and the best part of it is that you will not have to share any of them with your tight lipped "friend"! When he comes to askin' just remind him that "what goes around comes around", but by all means do suggest that he join the family here at Pizzamaking.com, we'll be glad to help him. :chef:

Dough Clinic / Re: Flour vs Oil

Do you have a scale or access to a scale that can weigh in ounces? If so, portion each ingredient and weigh it. Do this three times and write down the weight each time. I'll figure the average ingredient weight for you and convert your "recipe" into a dough formula based on bakers percent. It's a LOT easier to review a dough formula than a dough "recipe". You might have a hard time figuring out the amount to leave as a tip now but in short time we'll have you working in bakers percent like a math major. :chef:

Dough Clinic / Re: Yeast enough?

Vertically, bottom to top.

Dough Clinic / Re: Air Bubbles

Can you please provide us a picture of the bubbles?

The shape of the bubble is important to know. Since you are sheeting a rather cold dough (only 1-hour tempering after CF) this might be where the problem is stemming from, but I really need to see a picture of the cut surface to tell. Best way to cut the crust is to invert and cut using a razor knife or VERY SHARP serrated

blade, the photograph the cut surface across the entire diameter of the pizza.

Dough Clinic / Re: Air Bubbles

What is your finished dough temperature, dough formula and how are you managing the dough?

Just for the records, 1% CY is the typical CY level used in most pizza doughs.

Dough Clinic / Re: Yeast enough?

Yael:

Your advice is "spot-on"! ^^^

I would probably want to go to something in the 5 to 10% range for added fat to the dough formula. Try using something like Butter Flavored Crisco or Lard/ bacon fat for the flavor aspect.

Dough Clinic / Re: Sicilian Dough Chewy

About 100,000 square feet of it (that's the size of the baking labs) Cake & Pastry Lab, Bread Lab., and the Cookie, Cracker & Pizza Lab.

Some of the large scale equipment was special built and designed just for AIB.

Prep Equipment / Re: Equipment from AIB is now for sale online.

Steve;

The plastic bag approach is a good one and should work well for you in this application. If it were me, I'd put them into the freezer for the first two days then transfer to the fridge for the remainder of the time, bring out, allow to warm to 50 to 60F internal ball temperature, turn out of the bag onto a floured surface and begin opening into skins.

Dough Clinic / Re: Flour vs Oil

If you want to have a hand mixed dough without getting your hands doughy it's a good mixer but if the type of pizza you're making or the dough management procedure requires a more developed dough a spiral mixer would probably be a better choice.

Dough Clinic / Re: Dual Arm / Diving Arm Mixer

I've seen that too which makes one wonder why are you putting dusting flour on the dough balls? The answer was easy once I had an opportunity to really watch the process in real time. They were not taught the advantages to cross-stacking and they knew all too well that the dough balls get wet and sticky in the dough box (in view of the fact that they are not cross-stacking the boxes) so they put the dusting flour on to help absorb the condensation which forms on the dough balls, end result is still sticky, but not AS sticky. When you oil the tops of the dough balls and cross-stack properly the end result is not sticky.

You be the judge, which method do you want to use?

By the way, to help sway you a little, there are many significant benefits to being able to cool those dough balls quickly and consistently as is afforded by proper cross-stacking. There is a reason why it is so widely practiced in places where dough failure is not an option.

Dough Clinic / Re: Flour vs Oil

That my friend is a tell tale indication of an over mixed pizza dough! The more you mix the dough the more bread like the finished crust becomes, if you want a more open, porous crumb structure you must mix the dough just until it comes together and forms a smooth skin on the surface (the smooth skin eliminates much of the

stickiness associated with an under mixed dough) but if you don't mind contending with a sticky dough you can remove the dough from the mixer as soon as it comes together and begins to ball up. Many home pizza makers don't mind dealing with a sticky dough, I do it all the time (at home), but in a commercial setting it's usually out of the question as it can take too long to process and then you will have the enterprising employee(s) who will discover the benefits of copious amounts of dusting flour or oil in making the sticky dough handle better :(

Dough Clinic / Re: Did i over work my dough?

Steve;

What was the total flour weight you used?

You can do the math yourself, just divide the ingredient weight, salt in this case, (23.92) by the total flour weight and multiply by 100. If the resulting percent is over 3% the answer is yes. The typical range for salt in U.S. pizza dough is 1.75 to 2.5%, world wide it is 1 to 3%.

There are a number of things which influence the salt level used in pizza dough, here are a few of them;

- 1) Type of salt used. (It isn't the "salt" it's the sodium content).
- 2) Salt content of toppings (sauce is a topping).
- 3) Proximity to ocean/sea.
- 4) Local tastes.
- 5) Demographics of customer base.
- 6) Dough formulation, especially with regard to flour, yeast and sugar.
- 7) Environmental conditions. Think dough and fermentation temperature.
- 8) Personal tastes.

I could write a chapter in a book on this alone, probably should :-D

Dough Clinic / Re: Too much salt?

Mark;

An understanding of mixer types will tell you what went wrong.

Spiral dough mixers are designed to develop the gluten while mixing the dough, fork type mixers, on the other hand, are designed to incorporate the dough ingredients while imparting minimal gluten development, they were actually designed to replicate hand mixing of the dough in pastry dough applications.

I would suggest that you look at pulling a dough as soon as it begins to come together in the spiral mixer, record that time, and then make a couple more doughs with incrementally longer mixing times, this should give you something closer to what you are looking for.

By the way, with your dough formulation the mixing time you used in the spiral mixer should have given a pretty well developed dough structure, nothing like I would have expected from a fork type mixer using a much shorter mixing time and different mixing action.

Dough Clinic / Re: Did i over work my dough?

With individual containers like that you will want to oil the container too which makes removing the dough a lot easier as there isn't the room afforded by the larger dough boxes for getting a plastic dough scraper under the dough ball to facilitate lifting it out, and since there is only one dough piece in the container you don't need to worry about the dough balls clustering if the container is tipped or bumped.

Dough Clinic / Re: Opinions on Oiling Dough Balls and Proofing Boxes

Look for an ash content of 0.52 to 0.54% which is typical to North American high

protein flours.

Dough Clinic / Re: Flour specs like W, P/L and others

Can you provide a picture of your pans?

Dough Clinic / Re: Opinions on Oiling Dough Balls and Proofing Boxes

I won't tell if you don't tell! :-D

Somebody once said "drastic times call for drastic measures", you do what ya gotta do sometimes. While you manual might have said not to use anything above speed #2 for bread or pizza dough I bet it didn't reference a 70% absorption dough in the sentence ;D

Dough Clinic / Re: 70% hydration dough not coming together in Kitchen Aide Mixer

It has nothing to do with time, it's all about optimizing fermentation for your specific flour. Too much fermentation results in weakening of the gluten film making it over soft and extensible and easily stretched too thin, insufficient fermentation will result in a dough that is difficult to open due to its memory characteristics (elasticity) which leads to over stretching in an attempt to get the skin to remain at the desired size after opening, this is where thin spots can again be formed. Dough which has been properly fermented will open easily with only enough elasticity to facilitate handling.

Dough Clinic / Re: Sealing dough ball

We normally see that happening with large capacity mixers when trying to mix doughs that are sized too small for the bowl size. The only way to address the issue is to increase the speed of the mixer, this will allow centrifugal force to pull the dough off of the agitator allowing for effective interaction between the agitator and the dough rather than allowing the dough to just go for a free ride around the inside of the bowl while clinging onto the agitator.

Dough Clinic / Re: 70% hydration dough not coming together in Kitchen Aide Mixer

When Googling "Manitoba wheat flour" this is what I got.

[Currently this term is used to refer to any flour that irrespective of the variety of wheat used or the production area, has resistant features similar to those of American flour. With an index of bread making capacity (W) greater than 350, the Manitoba flour is classified as a special flour]

To put it in simple terms, if you are buying Manitoba flour, you are buying someones version of an American bread type flour which will most likely be different from the domestic flours.

Kinda what we've been saying all along.

Dough Clinic / Re: Flour specs like W, P/L and others

You might try first reducing the dough absorption in 2% increments to see if that helps you open the balls without thin spots. Then try reducing the bulk fermentation to 18-hours before scaling and balling.

Dough Clinic / Re: Sealing dough ball

Enchant;

That sounds like the work of the hated "J" hook.

Dough Clinic / Re: 70% hydration dough not coming together in Kitchen Aide Mixer

Josh;

Too many people are A.R. over sealing the bottom of the dough ball. It's not necessary. The most important aspect of balling the dough is to be CONSISTENT in how you do it. I think I show it being done in one of my videos.

Dough Clinic / Re: Sealing dough ball

That's pretty close to S.O.P. Here I thought you were going to ask if it would hurt a sourdough starter in if it was taken directly out of the freezer and put directly into boiling water :-D

Dough Clinic / Re: starter and thermal shock

Just oil the top of the dough balls and you'll be just fine.

Dough Clinic / Re: Opinions on Oiling Dough Balls and Proofing Boxes

All other users combined, that's what made that statement so interesting to me. It's a lot like the DiGiorno brand of frozen pizzas, at the time of my retirement, the DiGiorno brand of frozen pizza had 23% of the ENTIRE frozen pizza market for their single brand, think Schwan's/Marshall Foods (Tony's, Red Baron, Freschetta) is big? They only had 19% of the market for their three flagship brands COMBINED.

Sometimes you have to take a step or two back to see just how big the picture really is.

Dough Clinic / Re: Doctor, where is the mistake

To replace 0.5% ADY with CY use only twice as much CY as ADY.

To replace ADY with IDY use 75% as much IDY as you do ADY.

Dough Clinic / Re: Is there any problem with this dough and if yes, which?

Too much oil? Yes.

Do you need to oil the box? No.

The biggest issue with oiling the dough boxes is that should the box be tipped the dough balls will cluster to one side of the box and on the following day instead of finding a bunch of individual dough balls you will find just one big old ragged dough ball. :(

Dough Clinic / Re: Opinions on Oiling Dough Balls and Proofing Boxes

0.25% of 20L dry malt powder is the recommended dosage for an unmalted flour.

Dough Clinic / Re: 70% hydration dough not coming together in Kitchen Aide Mixer

Thanks Craig, I'm familiar with essentially all of the equipment shown, you can safely consider it to be very lightly used and very well maintained (remember, AIB was a show place too). If anyone has a sincere interest in buying something and has any questions about it feel free to reference the item(s) in a PM to me and I'll try to answer any questions you might have.

Prep Equipment / Re: Equipment from AIB is now for sale online.

Just to weigh in here, North American flours are tailored specific to the needs/demands of North American bakers, in general it might be said that they are designed specifically for use in high speed, automated bakery operations. If a lower protein flour option is selected such as one made from varieties of hard red winter wheat (typically 10.2 to 11.2% protein content) the flour becomes more applicable

to both home and small scale bakery operations however it must be remembered that essentially all bread flours, regardless if they are made with hard red spring wheat, hard red winter wheat or hard white winter wheat or a blend of them, are genetically designed to have protein properties that are strong and elastic with excellent resistance to over mixing and over fermentation, that's just the nature of the beast. When McDonalds (hamburger chain) went International I was on the Bakery Products Task Team, our job was to show local bakers/bakeries how to make a "McDonalds Bun". These buns were at first brought in frozen from a bakery in the U.S. or some other location until a specific number of stores were opened, then a large automated bakery was built specifically for the dedicated production of McDonalds hamburger buns (France, U.K., Germany, Turkey, Russia, to name but a few). In most cases bakers didn't even know what a hamburger bun was, let alone a "McDonalds Bun", and in all cases their local flours were not suited for the production/high speed production of the buns. This meant that we also had to work with the local flour mills to arrange for the correct type of wheat to be imported and milled to U.S. specifications, we were then able to work with the individual bakeries to produce the desired quality "McDonalds Buns" which were then distributed to the local McDonalds stores. As we brought more commercial bakeries on-line we didn't need to bring in frozen buns from the States anymore (damned expensive to air-ship frozen hamburger buns half was around the world). Today there is a network of commercial bakeries producing McDonalds Buns around the world with most, of them using a flour that was not even available to them back in the 1980's. Since McDonalds is said to be the second largest user of wheat flour in the world (think of that, it's pretty impressive) some countries may have started planting North American wheat varieties while others, even today, I am sure are still importing wheat specifically for this application. By the way, Weber Bros. Bakeries was the first German bakery to produce McDonalds Buns. and France was the last country that we built a bakery in and trained their production personnel before the team was disbanded. Just for the record, Australia and New Zealand were the most challenging but also the most rewarding, and Panama was the funniest by far! Czechoslovakia and Slovenia were the most interesting and scary but that's another story.

Dough Clinic / Re: Doctor, where is the mistake

When we studied hand mixing techniques back in the 1980's we found that the critical aspect to stretch and folds was that sufficient time was allowed between stretch and fold session for the dough to sufficiently relax. Failure to do so resulted in the dough becoming progressively tighter with each stretch and fold session until the dough became unmanageable. The time needed for the dough to relax was variable and dependent upon flour strength, dough formulation, dough temperature and environmental temperature.

General Pizza Making / Re: Difference on impact from stretch and fold

Your assumption is absolutely correct. In commercial bread making where sponges rule the game we do essentially this very thing by adjusting the percent of the total flour in the sponge to balance the desired dough/finished product characteristics. For example, when making white pan bread a 70/30 sponge dough system is typically used since it provides a good balance of dough handling properties and dough strength needed to withstand the mechanical shock/impacts encountered when the fully proofed dough is conveyed to the oven for baking while still providing a finished loaf with all of the desired finished product characteristics. Hamburger buns, on the other hand, are typically made using an 80/20 sponge dough process (80% of the total flour is in the fermented sponge), this is because in

the production of hamburger buns a very soft and extensible dough is needed to provide the desired symmetrical shape and since the dough is not proofed to the height of a bread dough it is less prone to mechanical shock damage (generally defined as collapse) than dough used for white pan bread production.

Starters/Sponges / Re: Polish Experiment with Question!

Peter;

Good point!

It takes about 45-minutes for whole-wheat flour to fully hydrate so both experiments should have been on an even footing BUT if the dough absorption was NOT optimized for the inclusion of the whole-wheat flour you are correct in that it might have been sufficiently low in absorption to exhibit an inhibiting effect on the rate of fermentation in the dough made with the yeast. We typically do not see much of an inhibiting effect due to low absorption when sourdough starters are used due to the nature of the bacteria as opposed to yeast cells.

Starters/Sponges / Re: Polish Experiment with Question!

I agree with Yael in that while All Trumps flour (14+% protein content) is the gold standard for making N.Y. pizzas in N.Y.C. it is not really necessary to use such a high protein flour. When we did our pizza seminars we made great N.Y. pizzas using flours in the 12.2 to 12.8% protein range (U.S. flours). The main advantage to using a very high protein flour in this case is to achieve the desired fold ability and chew that one has come to expect from N.Y. pizzas. However, we found that today, not everyone appreciates that amount of "chew", so we are seeing more N.Y. "style" pizzas being made using lower protein flours which still produce pizzas with all of the desired characteristics but with less chew.

Dough Clinic / Re: Doctor, where is the mistake

The picture that you've attached is that of the type of tree rack to which I was referencing.

Dough Clinic / Re: Best Practices for hand-stretching bases in advance ?

Unless the whole-wheat flour was malted the polish with ADY most likely ran out of nutrient for the yeast after around 6-hours while the polish with the sourdough starter was based on bacterial fermentation, not yeast fermentation so it didn't need a source of amylase enzyme to convert starch to sugars for the yeast to feed upon during the fermentation period. In essence you were comparing apples to watermelons since the mechanism for fermentation between the two tests/doughs is so different. The stickiness of the sourdough fermented dough was due to the acidity of the dough which breaks down the protein rendering a weaker or very poor gluten film depending upon the quality of the protein in the flour being used.

Starters/Sponges / Re: Polish Experiment with Question!

The dough looks pretty good to me.

Dough Clinic / Re: Is there any problem with this dough and if yes, which?

Does your KA mixer have a "J" hook or a reverse spiral dough arm? With higher absorption doughs I've found a "J" hook and spiral dough arm to be a difference without a distinction due to the small diameter of the mixing attachments. Still, the reverse spiral dough arm will perform better at developing the gluten than the "J" hook. If it will perform good enough to form a cohesive dough using your flour and dough formula remains to be seen. Keep in mind that high absorption doughs do require longer mixing times than lower absorption doughs do there is a possibility

that you are just not mixing the dough long enough to sufficiently develop the gluten allowing for the formation of a dough ball in the mixer. Aside from that, you are adding a lot of malt and also a lot of sugar to the dough formula which is giving you a sweet taste in your finished crust and depending upon your oven and baking conditions, a dark crust color.

Dough Clinic / Re: 70% hydration dough not coming together in Kitchen Aide Mixer

With your reach-in cooler a finished dough temperature in the 70 to 75F range will work much better for you.

Dough Clinic / Re: Inconsistent Cook on Bottom of Pizza

Dry yeast: is it IDY (instant dry yeast) or ADY (active dry yeast)?

What is your water temperature?

Tom Lehmann/ The Dough Doctor

Dough Clinic / Re: A question about Pizza dough

Those dough balls look really under fermented to me!

Dough Clinic / Re: Some issues I've been having, dough rising a lot, hard to stretch, crust forming

What we regularly do is to open the dough balls into skins, place the skins on screens and put the screens with the opened skins into a wire tree rack and place in the cooler (uncovered for 30-minutes) then cover with a plastic bag until ready to use. To use the pre-opened skins, remove from the cooler and remove skin from the screen, dock the skin and place on a dusted peel or a baking platform, dress to the order and bake. We have used this ourselves at pizza shows and at stores where the staff gets slammed at "crunch" time. The process works quite well.

Dough Clinic / Re: Best Practices for hand-stretching bases in advance ?

U.S. and Canadian flours are all milled similarly (Manitoba) I'm betting money on this, is probably a Canadian milled flour, as such it would be a hard red spring wheat variety and most likely be of high protein content, I'm guessing around 13+%. As to particle size distribution in a typical U.S. / Canadian flour the range will be from about 15 to 220-microns with most of it clustered around 100 to 150-microns in size. I have not seen any particle size distribution data on European or Italian flours so I don't know how they would compare.

You have to remember that when it comes to wheat flour it's a lot more than just protein content and particle size, genetics plays a huge part in the quality picture. U.S. and Canadian wheats have been bred for very specific characteristics (crop yield, disease and pest resistance, resistance to drought, maturity, protein content and protein quality (as it relates to stronger gluten). Other countries have different flour needs so they have developed their wheat varieties to have different characteristics which may or may not be compatible with pizza production.

Dough Clinic / Re: Flour specs like W, P/L and others

For anyone interested, AIB (American Institute of Baking) is selling their equipment from one of the training labs. To see the online auction go to: equipbid.com/manhattan_kansas and look for the AIB heading.

Prep Equipment / Equipment from AIB is now for sale online.

I agree with Yael that 0.8% ADY is excessive for a 24-hour CF dough. The most I typically use is 0.5% but that amount can change depending upon the finished

dough temperature. You also stated that the dough balls flowed together so I'm assuming (we all know what that means :-D) that you're using dough boxes. I didn't see any mention of cross-stacking the dough boxes when placing them into the cooler, are you cross-stacking? If so for how long? Not cross-stacking long enough is as bad as not cross-stacking so the time is an important too. One common error associated with not cross-stacking or not cross-stacking long enough is associated with the dough blowing. To correct this the yeast is reduced (sometimes to ridiculously low levels) which addresses the blown dough but now there isn't sufficient yeast to provide the necessary leavening during the critical oven spring stage of baking which results in setting the stage for the "dreaded gum line" and a tough, chewy finished crust.

Dough Clinic / Re: Bulk RF vs Balled CF Need Help Please

The Alveograph is seldom used as a testing/measurement tool with American flours, with the quality of protein in these flours it really isn't necessary. To a great extent U.S. flour quality as well as dough quality characteristics are pretty well tied in to protein content of the flour. This is not the case with most European flours which are made from varieties of wheat having significantly different protein/gluten attributes so the Alveograph is much better suited to differentiating quality characteristics between different flours. You might want to do a search to see if you can find a cereal research facility such as the Canadian Grain Research Facility in Winnipeg, Manitoba, Canada. There is also a facility in France as well as in the U.K (Leatherhead), Australia also has one called the BRI (Bread Research Institute). I would think that a research facility near you with access to your local flours would be able to answer your question. As a side note: A good number of years ago France was buying a significant amount of U.S. wheat (DNS #2) dark northern spring wheat #2 (the most common exported wheat from the U.S.) U.S. Wheat Associates asked me to travel to France to survey the wheat/flour market to get a better grasp of where/how all of this wheat was being utilized. France, at the time was claiming that they had the best flour in Europe, or something to that extent. So where was a large portion of all that wheat going? Turns out it was being milled and blended into the local French flour to improve its overall baking properties and sold as French flour. I have no idea if this is still the case or not as it has been too many years since then. The point is that you might find a pretty decent flour with a lot of the DNA of a U.S. flour being marketed as domestic flour.

Dough Clinic / Re: Flour specs like W, P/L and others

Absolutely! Adding more water actually reduces the energy input into the dough due to the softer dough condition. When mixing pizza dough just mix it until you achieve a smooth, satiny appearance to the dough. You will find that as you continue to mix the dough it will become progressively smoother in appearance and become MUCH easier to work with immediately after mixing. Your mixing time should be in the range of 9 to 11-minutes. If you stop the mixer every 2-minutes, or so, you will be able to see the dough becoming less sticky as you handle it.

Dough Clinic / Re: Inconsistent Cook on Bottom of Pizza

The missing piece to the puzzle was the finished dough temperature. If the dough balls are expanding too much it might be due to the finished (mixed) dough temperature being too high or you are covering the containers right away as you place them into the fridge, instead, cross-stack them (just another way of saying to leave the containers open until the internal dough ball temperature reaches 50F/9.9C) this usually takes 2 to 3-hours, then proceed with covering the containers aka "down-stacking" for the duration of the CF period.

Dough Clinic / Re: Some issues I've been having, dough rising a lot, hard to stretch, crust forming

Delivery v/s dine-in pizza.

- 1) In commercial practice they are both made using the same dough as it would create a nightmare trying to use different doughs.
 - 2) This is not to say that DELCO stores don't use a dough formula developed to be more compatible with the rigors of DELCO, they sometimes do.
 - 3) The changes made for a specific DELCO application are to use a slightly thicker crust, think Domino's.
 - 4) Lightly oil the skin prior to dressing.
 - 5) Go easy on the sauce and toppings.
 - 6) Use an air impingement oven as opposed to a deck oven to achieve a drier pizza.
 - 7) Allow pizzas to steam off prior to boxing.
 - 8) A cut pizza tends to hold up better but your customer will dictate what they want in this regard.
 - 9) Boxes to have steam vents.
 - 10) Ripple sheets or Pizza Savors are an asset.
- Note: A lower protein content flour might benefit DELCO pizzas by reducing chewiness (#1 complaint of DELCO pizzas).

We discussed all of this not too terribly long ago.

General Pizza Making / Re: Urban myth or truth? Different dough served in the pizzeria and in delivery

OMG! Where to begin, can you share your dough formula and dough management procedure as well as finished dough temperature? And then there's the matter of the yeast, 1% IDY is wwaayy too much for the average pizza dough. Instead, the amount of IDY should be something between 0.15 and 0.4% depending upon how the dough is being managed.

Dough Clinic / Re: Some issues I've been having, dough rising a lot, hard to stretch, crust forming

I forgot to add that this can also be caused by placing the pan directly on a hot deck. Place a screen under the pan for the first five minutes of the bake then complete the bake on the deck if you want to. The rapid heat transfer results in gas bubbles coalescing into large gas pockets which you are seeing, placing a screen under the pan reduces the rate of heat transfer thus eliminating the problem.

Dough Clinic / Re: Inconsistent Cook on Bottom of Pizza

Those are from gas pockets being formed on the bottom of the crust. Reduce the dough absorption by 3% to see if that improves the situation, if you see some improvement you might need to make further reductions in dough absorption.

Dough Clinic / Re: Inconsistent Cook on Bottom of Pizza

Wheat as we know it and durum are two entirely different animals. The gluten formed from the durum wheat has a very tough and rubbery characteristic. The hard wheat varieties grown in the U.S. are bred for a specific purpose or characteristic. Most commonly bread making properties, yield, agronomic characteristics as well as resistance to pests and disease.

Newbie Topics / Re: Are American Pizzas (New York etc) made with hard or soft wheat?

That's impossible for me to say as every flour has an "optimum" absorption. My "go to" absorption is 62% and from there I decide if I need to further increase or decrease the absorption to achieve desired dough handling and performance characteristics.

Dough Clinic / Re: Doctor, where is the mistake

Hard wheat varieties are used for 100% of the bread and pizza flours in the U.S. Most bread flour are milled from either straight HRW (hard red winter) or a blend of HRW and HRS wheat varieties while the high protein/gluten flours are milled exclusively from HRS (hard red spring wheat) varieties. Over the past few years there has been growing use of HWW (hard white wheat) varieties in making flour but for now these wheat varieties are relegated mostly to making whole grain/whole-wheat flours. In Australia the use of HWW is almost exclusive to all types of bread and pizza flour.

By the way, All Trumps flour is the main flour used in New York and AT flour is milled from varieties of HRS wheat.

Newbie Topics / Re: Are American Pizzas (New York etc) made with hard or soft wheat?

It's not the age of the oven, it's the heat/temperature in the oven that is both creating and releasing those aromas. There is a point of diminishing returns when it comes to oil and retention of those aromatics. Our research showed that 1.5% (flour basis) was the tipping point, beyond that we didn't detect any appreciable increase in crust flavor/aroma. A bunch of years ago I did work on Paradise Island, Bahamas for a locally owned pizza chain. One of the things I was asked to address was the lack of flavor in the pizzas, when addressing this all I did was to include 1.5% oil in the dough formulation and that was all that was needed to give them the flavor profile they were looking for. Sometimes things are easy, sometimes they ain't.

Dough Ingredients / Re: The effect of yeast percentages on taste

If you are having a problem with the turning peel you're probably not allowing the pizza to set long enough before moving or spinning it.

Dough Clinic / Re: when to add salt and oil to dough?

I think I might know what's happening but first, can you please send a picture of the bottom of a pizza where this is occurring so I take a look at it? Just pop the entire pizza out of the pan and invert it then take a couple of photos of it.

Dough Clinic / Re: Inconsistent Cook on Bottom of Pizza

Steve;

Refrigerated dough is a whole different store from frozen dough. It is most likely made in-house as it's made with IDY, the last five words in your response told me that. In any case, the dough is wwaayy short on fermentation, it's not too much more than a glorified emergency dough. The next time you use it try allowing it to ferment in the fridge for 48-hours before using it. Let's see if that improves the finished crust in any way.

Dough Clinic / Re: Store bought dough would not create crisp crust - suggestions appreciated

The dough you bought was it frozen bread dough or frozen pizza dough? The reason why the dough was so easy to open is because it had a good healthy dose of a dough relaxer (used as a processing aid when making frozen dough). The dough

relaxer (L-cysteine or dead yeast) are the most commonly used. Look on the package ingredient declaration to see if L-cysteine appears. If dead yeast is used it does not need to be declared separately as it is included in with the live/active yeast. Further, frozen dough has essentially NO fermentation time on it. I think this is what is causing the issue for you. To use frozen dough and get a better product try this:

- 1) Slack out the frozen dough by placing it in the fridge over night.
- 2) Remove the dough from its packaging, lightly oil it and place in a fermentation container (bowl, bag, etc).
- 3) Place at room temperature for 1-hour (make sure the dough is covered).
- 4) Place the dough back into the fridge for 24-hours to cold ferment.
- 5) Remove the dough from the fridge and allow it to warm until the internal dough ball temperature reaches something in the 50 to 60F range.
- 6) Turn the dough out of the container onto a floured surface and proceed to open into a skin for immediate use.

We developed this procedure back when we did pizza seminars at AIB and it worked quite well for us as we demonstrated the use of frozen dough to our students.

Dough Clinic / Re: Store bought dough would not create crisp crust - suggestions appreciated

I think this will help you a lot;

- 1) Adjust the yeast level to 1% compressed yeast/CY OR 0.5% active dry yeast/ADY OR 0.4% instant dry yeast/IDY. Be sure to remember to activate/hydrate the ADY prior to addition.
- 2) Adjust the water temperature to give you a finished dough temperature (after mixing) of 75 to 80F/23.8 to 26.6C.
- 3) Immediately after mixing divide the dough into desired weight pieces for the size pizza you are going to make.
- 4) Form each piece into a ball.
- 5) Lightly oil each dough ball and place into individual plastic bags (like bread bags).
- 6) Twist the open end of the bag into a pony tail and tuck it under the dough ball as you place it into the fridge.
- 7) Allow the dough balls to cold ferment (CF) for a minimum of 24-hours (48-hours is better). Experiment to find what works best for YOUR specific dough.
- 8) To use the dough, remove from the fridge, allow to warm AT room temperature for 2-hours.
- 9) Turn the dough out of the bag allowing it to drop onto a floured surface.
- 10) Open the dough ball into a skin by your preferred method.
- 11) Dock the dough skin or begin dressing the skin.
- 12) Take dressed skin to the oven for baking.

Dough Clinic / Re: Doctor, where is the mistake

Wood peels are used as a prep peel and metal blade peels are your oven peels (for removing baked pizzas from the oven).

Prep Equipment / Re: Seasoning aluminum peel

Your IR thermometer only measures surface temperature, you want to measure the internal temperature of the dough ball which is different from the surface temperature. A low cost dial/stem type thermometer is what you want to use to measure the internal dough ball temperature.

Dough Clinic / Re: How to determine internal Dough ball temp before

opening

Suspending the yeast in a quantity of water and then using a portion of that water will work fine. Here are some things to keep in mind if you opt to go that route.

1) Make sure that the water you suspend the yeast in is 100F if using ADY or IDY. You don't have to worry about water temperature if using CY.

2) Remember to include the water that the yeast is suspended in as part of your dough water/absorption.

3) If using ADY be sure to allow 10-minutes to activate and hydrate the yeast. This is not necessary if using IDY.

4) ALWAYS stir the yeast suspension well immediately before you subdivide it.

Here is a simple example of how to make a yeast suspension and subdividing it for a smaller yeast amount.

50-grams of water (weighed).

1-gram yeast.

Stir well to suspend the yeast in the water.

Allow to activate if using ADY.

Stir well.

Weigh desired amount.

In this case every 5-grams of the solution will provide approximately 0.1-gram of yeast, if your scale will weigh out to 1-gram accurately you are able to weight the yeast out to 0.1-gram divided by 5 = 0.002-gram.

While not as accurate as a good scale this method is plenty accurate for home use.

Tip: A trip to The Dollar Store will get you a package of small, plastic communion cups that work great for weighing out small amounts of liquid, just remember to rinse the cup with the remainder of the dough water.

Dough Clinic / Re: Yeast measurement

Ditto! Tried it once and until the seasoning fully cured it was indeed worse, that's the "good" news, the "bad" news is that it seemed to take forever for the seasoning to fully cure.

Prep Equipment / Re: Seasoning aluminum peel

Q.J.;

You took the words right out of my mouth! :-D

Dough Clinic / Re: Causes of thin spots?

Most starters as well as doughs leavened only with a sourdough starter typically don't do all that well in a cold fermentation environment, and if you spike the dough with yeast the yeast will quickly become the dominant micro-organism resulting in a loss of a lot of the flavor notes derived from the starter.

Starters/Sponges / Re: Does Anyone 48 Hour or More CF with Ischia (or other) Starter?

When you open an oven in which pizzas are being baked the aroma is wonderful! Those are the aromatic compounds which are retained in the oils, even just a small amount of fat in the dough will retain these compounds, those which are not retained are lost forever which makes for a pretty good case for adding some oil to the dough formula.

Dough Ingredients / Re: The effect of yeast percentages on taste

We've discussed this a few times before and if you ask ten different people you will probably get at least five different answers. My procedure is to begin opening the

dough ball with the top side down as less dusting flour is required (more flour adheres to the rough bottom than the smooth top) and then flip the partially opened skin over to finish opening then turn it over again for docking and/or dressing. This means that the skin ends up top side down (bottom side gets dressed). In tests that we did at AIB we found that we got fewer bubbles (large bubbles), less sticking to the peel and if there was any drying of the dough ball the dry, scaly dough skin was on the bottom of the finished pizza where it posed no problems.

Note: When plastic bagging the dough there is no top or bottom to the dough ball so this becomes a moot issue in that case.

Overall, it doesn't seem to be an overly critical issue which side goes up or down as long as you're not experiencing problems cited above and you're happy with the finished pizza.

Dough Clinic / Re: Why does the top of the dough ball become the bottom of the pizza?

Hopefully at least 1/4-inch or thicker. Be sure to allow at least an hour for it to thoroughly heat up and if at all possible, if you have a bottom burner or heating element in your oven, move it close to the bottom heat source for the first part of the bake then move it to a higher rack position for top color.

Dough Clinic / Re: Need More Flavor

Remember, oil retains flavor compounds released during baking, that's why my mother always told us kids to "keep the butter dish covered in the fridge". Ever have a slice of wedding cake that tasted like a cigarette? Yep, the fat in both the cake and the icing retained all of those wonderful aromas of that smoke filled room. Try as you might, you cannot remove the flavor compounds absorbed into the crust during baking.

Dough Ingredients / Re: The effect of yeast percentages on taste

You're already over dosed on the diastatic malt and there is no benefit to using honey over regular table sugar so my advice is to delete the honey, reduce the diastatic malt to 0.25% and add 4% table sugar then adjust as necessary. I'm guessing that the lack of browning is why you're not getting the flavor profile you're looking for. Are you baking on a stone or steel? In not how are you baking your pizzas?

Dough Clinic / Re: Need More Flavor

- 1) Go to 72-hours cold fermentation.
- 2) Utilize a sourdough starter in place of the IDY you are presently using.
- 3) Increase the olive oil to 2%. Try using a pomace grade olive oil as it has a more "robust" flavor.
- 4) Baking has a significant impact on crust flavor but you didn't provide any details so I cannot comment but make sure the crust is getting a good, solid bake with a little char if possible.

Dough Clinic / Re: Need More Flavor

Here is my home made hand mixed dough process;

Put 75F water in bowl

Add salt and sugar (if used).

Put yeast in a small portion of water at 100F, stir to suspend and allow 10-minutes to hydrate & activate.

Pour yeast suspension into the dough water in the bowl.

Using a wood spoon mix well to incorporate.

Scrape dough out of the bowl onto a floured surface and knead for a minute or two. Form into a ball and place into lightly oiled bowl (I re-purpose my mixing bowl).

Allow to ferment at room temperature for 1 to 2-hours (not critical).

Turn dough out of the bowl onto a floured surface and knead several minutes just until the dough becomes smooth.

Lightly oil the dough ball and place back into the bowl to ferment for desired length of time or place into bread bag and refrigerate for 24 to 72-hours before use.

So, to answer your question, I would have kneaded it a few minutes until the dough took on a smooth appearance and placed it back into the bowl or a plastic bag (Walmart bags work in a pinch) to continue fermenting for the desired length of time.

Dough Clinic / Re: Forgot to knead before first rise

The yeast itself has nothing to do with it, pizzerias use the same yeast that is used by many home pizza makers, be it CY, ADY or IDY, but like other things in life, it ain't what you got that counts, its how you use it. Most pizzerias will use dough with anything from 24 to 72-hours cold fermentation time. Could they be using an inactive sourdough? Sure they could. We just recently had some discussion here on one from Lesaffre/SAF Yeast. Since dough becomes more acid the longer it ferments and acid is tart, the sweetness you mention is confusing because sweet is just the opposite of tart. You also mention "savory" which is is not usually mentioned when describing crust flavor so I'm wondering if you are not being confused by possibly the flavor of the sauce which they use which might be described in those terms (sweet and savory).

Dough Ingredients / Re: The effect of yeast percentages on taste

The real flavor/taste of raw yeast is much like that of musty newspapers. Some restaurants use frozen dough for their dinner rolls and the finished rolls have a very distinctive "yeasty" flavor owing to the fact that high levels of yeast and little to no fermentation is used in making frozen dough. What you are tuning in to are the flavors resulting from the by-products of fermentation. Buy a frozen bread dough, slack it out and make a pizza with it and you will get the same flavor profile, I've heard it likened to that of home made bread too (like Grandma used to make), that's because many home bread recipes use a lot of yeast and short fermentation times (just like that frozen dough mentioned above). It doesn't surprise me at all that you like a sourdough flavor since it's something like an exaggerated fermentation flavor. Those who like a well fermented flavor usually appreciate a sourdough flavor but those who think a well fermented flavor is like smelling a brewery generally don't appreciate a good sourdough flavor.

Dough Ingredients / Re: The effect of yeast percentages on taste

The REALLY great thing about working in bakers percent is that it allows you to change any one ingredient (like water) without changing any other ingredient amount, so no, don't change anything but the amount of water being added to the dough. As many people here will attest to is the fact that I personally like to use individual plastic bags to store my dough in. The bags are like bread bags and can be bought at your local supermarket as food storage bags, they come on a roll and sell for only a couple of dollars. Hopefully you will have them available to you, but if not you can use any low cost, stackable, plastic food storage box with a snap on lid. Just be sure to put a couple of small holes in the lid to release pressure and then be sure to leave the lid off for the first 2-hours after placing them in the

fridge, after that they can be lidded for the duration of refrigerated storage. Be sure to lightly oil the dough ball just before placing it in the box to prevent drying while the lid is off and to facilitate removing the dough from the box/bowl.

Dough Clinic / Re: First attempt at making dough

In my response cited by Peter I explained how the delayed salt addition mixing method impacts gluten development and development of a lighter dough color as well as a lighter crumb color in the finished product. While this might have validity in bread production it has essentially no validity in pizza production, the reason being that in pizza the dough is never mixed enough to achieve the oxidation by exposure to air during mixing (explained in my response) and any change to a brighter crumb color is all but impossible to distinguish in the crumb structure of a pizza crust (in bread it is easy to see, but not in a pizza crust). As for flavor, the shift in flavor is much too subtle to detect in a dressed pizza (again, bread is a different story). In my opinion, the delayed salt addition mixing method has no real value in making pizza doughs, and the greatest challenge when using the delayed salt addition mixing method whether it be for bread or any other dough application is in not having a pre-scaled portion of salt left over at the end of the production run, Oops! With all of this said, there is one place where the delayed salt mixing method IS almost universally used in dough production and that is in commercial frozen dough production (both bread and pizza). When making these doughs the absorption is minimized to some extent to help control ice crystal development in the dough and the doughs are mixed very cold (60 to 65F) with full gluten development being the objective. This means that the dough is going to be VERY tough and difficult to mix (specially designed mixers are employed) so steps are taken to help reduce the mixing time, these steps are use of the delayed salt addition mixing method as well as inclusion of a dough reducing agent such as L-cysteine/L-cysteine hydrochloride or glutathione (dead yeast) or even possibly deodorized vegetable powder (onion and garlic). This just further reinforces my observation that was responsible for me getting into pizza research back in the early 1960's, that observation was that bread and pizza technologies are very different.

Dough Clinic / Re: when to add salt and oil to dough?

It sounds like your flour might be too strong so first thing I would do is to see if you can find a lower protein/weaker flour to try. You can also experiment using your existing flour and increasing the finished dough temperature by increasing the water temperature in 5F increments. This will provide for a faster fermentation rate so the dough will receive more total fermentation within a 24/48-hours period of time. Be sure to measure and record the finished (mixed) dough temperature when doing this. The use of a "00" flour will also provide for a more extensible dough but at a higher cost. If you experiment with this type of flour, unless your oven can get up to at least 800F/427C you will need to add at least 2% sugar to the dough formula or a small quantity (0.25%) of a 20-L diastatic malt powder, this is because the "00" flours are not malted so the yeast will run out of nutrient during the fermentation period and the finished crust will be severely lacking in crust color. Once you get the dough details worked out you can divide the dough into individual pieces, form into balls, wipe with oil and place into individual plastic bags to cold ferment (this process has been discussed here a number of times), then just remove from the fridge and allow to warm to 60F/15.5C, turn the dough out of the bag onto a floured surface and begin opening the the dough ball into a pizza skin.

One last thought, another reason why your dough might be difficult to open would

be due to insufficient dough absorption. Again, using your existing flour, increase the dough absorption by 5%, this will provide a softer dough that might prove easier for you to open, again, if you need to add more than 5%, do so by all means but only work in 2% increments after the initial 5% increase. Every flour has a "sweet spot" when it comes to dough absorption so you'll need to experiment to determine what it is for YOUR flour, using YOUR dough formula, using YOUR dough management procedure, and YOUR skill set for the type of pizza YOU want to make.

Dough Clinic / Re: First attempt at making dough

Personally, I think you like the flavor from fermentation ^^^. You're not alone in your preference either as most of use here have similar tastes. You will probably want to look at a 48-hour fermentation period as this provides many of the finished product flavor characteristics you have experienced. You can certainly go to a longer fermentation period too, it all depends upon personal tastes, formulation and how the dough is being managed. At some point you might want to try your hand at making a sourdough crust to see if you like that kind of fermentation flavor profile too as it is entirely different from that achieved from using commercial yeast.

Dough Ingredients / Re: The effect of yeast percentages on taste

Here's what I do personally. Remove the tomatoes from the can and tear into pieces, place into colander to drain for 20-minutes +/-, add a little salt and mash slightly then apply to the pizza skin. Save the juice for the next time you make pasta.

Neapolitan Style / Re: How much of what is in the can do you use?

Using the delayed salt addition mixing method is fine if you are making bread where you actually want to have significant gluten development but when making pizza dough where you DO NOT want to have significant gluten development in the dough during mixing, the salt is best added in the water for machine mixing or in the flour when hand mixing. If you are using a coarse granulation salt it should be dissolved in a small portion of the water and added soon after incorporating the flour. We don't like to add the oil to the water since it will float on top of the water and when you add the flour a portion of the flour will become oil soaked rendering an unknown portion of the flour incapable of absorbing its full amount of water and more importantly that portion of the flour which has been oil soaked will not be able to develop gluten. What this all leads up to is a greater level of inconsistency in your doughs.

Dough Clinic / Re: when to add salt and oil to dough?

For the Lloyd's pans you can dip in hot soapy water, scrub with a soft plastic bristly pot brush, rinse and sanitize then wipe dry. For the old seasoned pans NEVER put them into water (if you do the seasoning will begin to come off like a bad sunburn and you will need to strip them back down to bare metal before re-seasoning). Just wipe out with a dry bar towel and you'll be just fine. IF you should ever need to wash the seasoned pans here's how:

Grasp pan in hand, dip in soap water, lightly scrub with a soft plastic bristle pot brush, dip in rinse, dip in sanitizer solution, wipe dry, place in oven at 350 to 400F for force dry. Please note that at NO TIME did I say to release your grip on the pan, after picking it up the only time you will put it down is when you place it in the oven to force dry.

Shop Talk / Re: Cleaning Pans - What's the best method?

Two things to remember about screens.

1) If you are going to be baking on them ALWAYS season the screens first and then DO NOT wash them as you stand a good risk of the seasoning peeling off.

2) Don't proof directly on the screen as the dough can flow into the screen openings and expend during baking effectively locking the pizza to the screen. However, if you transfer the skin to another screen (this places the raised spots there the dough flowed into the screen openings off register) you can store pre-opened skins on screens and you can even proof the dough to some extent providing the dough absorption isn't too high to allow the dough to flow into the screen openings.

Screens are also great for baking bread sticks and calzones too, and if you're baking pan style pizzas in a deck oven or on a stone/steel slip one under the pan to control the bottom heat so you don't get too much bottom crust color or worse, a burnt bottom crust.

General Pizza Making / Re: Pizza Screens

For sausage I like to use breakfast sausage, and for my potatoes I use frozen hash browned potatoes, crispy fried bacon bits fresh tomato slices and some cheddar cheese. They're also good with a TEX-MEX twist by using 25% Maseca Flour to replace an equal amount of white flour in the dough formula and using picante sauce for the sauce.

Other Types / Re: Breakfast Pizza

From the picture I would not have pressed the dough down either, I do like to pull the dough up onto the sides of the pan so they are a little thinner but that's just a personal preference. Overall, that's a good looking deep-dish pizza. :drool:

Chicago Style / Re: Petezaa's deep dish with semolina

We did it for many years. While we had some success using raw eggs we had a better product using scrambled eggs as a topping. There was a pizzeria in the Columbus Convention Center Food Court that served a breakfast pizza.

Other Types / Re: Breakfast Pizza

I've written a couple of articles on ovens. The air impingement ovens are by far the best ovens for DELCO shops as they give you the driest pizzas possible, deck ovens are not as well suited to DELCO as they are not as good at providing a dry pizza which is important in this application.

New Forum Members / Re: New User - Hot Shop

Do you keep a 500-gram bag or individual packets in the Mason jar?

Dough Clinic / Re: Causes of thin spots?

I normally use 0.375% IDY for a 24-hour cold ferment.

New York Style / Re: NY pizzeria yeast amount

Sure you can, done it any number of times. You can also experiment with baking your pizzas on a screen and then decking them for the last 15 to 20-seconds.

Dough Clinic / Re: Cooking lower and slower in wood fired/gas rotating oven

Insufficient dough absorption is just another way of saying that sufficient water has

not been added to the dough to make it sufficiently malleable to be opened easily. I realize that water/absorption is only part of that equation but if the absorption isn't correct for the flour being used the dough will always tend to fight you during the opening process rather than stretching out evenly for a more uniform skin.

Dough Clinic / Re: Causes of thin spots?

John;

Without question, those are the best scrapers for plastic dough trays/boxes.

Neapolitan Style / Re: Dough sticking to plastic tray

I deplore metal scrapers in a plastic dough box, it has been voted as the #1 way to tear up you plastic dough boxes. Plastic dough scrapers are just too plentiful and work just as well, if not better.

Neapolitan Style / Re: Dough sticking to plastic tray

If you are looking at ways to cut commercially made pizzas be aware that Colbourne Manufacturing makes an ultra-sonic cutter (20,000+ strokes per second) for cutting pizzas into slices or shapes without any loss or distortion of toppings or crust. All of the New York school pizzas are per-sliced at the manufacturing facility using the ultra-sonic cutters. Additionally, some work is also being done using water jet cutting but the ultra-sonic is easier to install into an existing production line. Anything developed for the retail (pizzeria) industry will have to be low cost, effective, durable, easy to use, safe to use and easy to clean. Right now the retail industry uses pizza wheels, rocker knives of various design (The "Equalizer" by Lloyd Pans is an example of a modified design rocker knife used for cutting multiple slices at once) and even large French/Chef's knives to cut pizzas. If you should want to discuss this with me you may contact me at 785-537-1037 (let me know by e-mail before you plan to call) or you may e-mail me directly at <thedoughdoctor@hotmail.com>

Stones/tiles/steel, Pans & Accessories / Re: New Pizza Cutter Idea

Glad to hear that all went well, we wouldn't want to disappoint those guests! :-D

Dough Clinic / Re: 4 day cold ferment neapolitan

Remember that you can manually round the dough to just about any level of "tightness" you want, it sounds like you have been rounding your dough loosely which is common for those who wish to use the dough balls relatively soon after rounding. Most rounders are designed to round the dough tightly, some even use two rounders in tandem, or pass the dough balls through the rounder twice as this provides for a better dough ball shape especially after several days of cold fermentation. You're not doing anything wrong, the rounder is just doing what it was specifically designed to do.

Shop Talk / Re: Rounder and divders

Scott;

Yes, track/screw/cone type rounders are not well suited to handling the soft and usually sticky/tacky dough consistency associated with sourdoughs. A good alternative is is a horizontal or belt type rounder sometimes called a bar type rounder. This is a horizontal belt with a specially designed bar placed diagonally across the belt. As the dough ball moves along the belt it contacts the rounding bar causing the dough ball to spin forming it into a ball, however, some oil is required with the use of these rounders. If you're interested in knowing more about this type of rounder I think AM-Manufacturing uses then in some of their high volume hot

press equipment packages.

Shop Talk / Re: Rounder and divders

Walter;

The best thing about the free standing models as opposed to the bench top models is that they can be easily rolled aside, out of the way, when not in use.

Shop Talk / Re: Rounder and divders

I can't argue with you on that! For me though, no matter how you cut it, it's still a cheese pizza! :chef:

So much for history and lore. :(

Maybe someone can shed more light on this? ^^^

Dough Clinic / Re: Which are the factors that affect digestibility?

The Marsal ovens are great ovens but they do not get as hot as a wood fired oven can. With that said, they will certainly serve you well for making New York style pizzas. Also, in New York City it is common to use All Trumps flour (14% protein content) so any good, strong Canadian flour should work well for you.

Dough Clinic / Re: ny pizza help!!!

It appears as if there is too much top heat being applied to the pizza during baking. Sometimes spritzing the top of the pizza (cheese) with water can help.

Dough Clinic / Re: Cheese boiling/oiling/bubbling

Definitely cool it on a rack, I typically use a spare pizza screen for a cooling rack. If you don't you will just force moisture back into the baked crust and run the risk of getting a gummy crust or collapse of the crumb structure during the cooling of the crust.

Sicilian Style / Re: Need help proofing my Sicilians

I didn't either, I always thought that the Margarita had the colors of the Italian flag in honor of Queen Margarita/Margherita. ???

Dough Clinic / Re: Which are the factors that affect digestibility?

When you see this beginning to happen in the oven break out your handy "bubble popper" aka BBQ fork to deflate it and press it down a bit. It will also help if you cool it upside down too as this will help to flatten the top.

Sicilian Style / Re: Need help proofing my Sicilians

Now I'm beginning to wonder where the green color on a Margarita came from????
Hummm :o

Dough Clinic / Re: Which are the factors that affect digestibility?

You just put the IDY into about 5 times its weight of water at 95F. and remove an equal amount of dough water. No other changes are needed. Many of us already do something similar to this when we need to use just a very small amount of IDY, For example, let's say you need to use 1/10-gram IDY but your scale won't handle anything that small, what to do?? Just weigh 1-gram into a container with 10-ounces of 95F water, stir well to SUSPEND the IDY and portion out 1-ounce of the suspension, there will be approximately 1/10 of a gram of IDY in that 1-ounce of yeast suspension, just make sure you also reduce the dough water by 1-ounce too. If the IDY is unopened you will lose about 25% of the gassing power from the IDY after 2-years of frozen storage. If the package is opened all bets are off of the table.

We found the best way to store IDY is to leave it in the original container, use what you need, fold the packaging down tightly to the IDY in the package and secure with tape or a rubber band. To use the next time: DO NOT use directly from the fridge or freezer!! Instead, remove from the fridge or freezer and allow to set at room temperature overnight, then use what you need and repeat the above procedure. This will reduce the probability of forming condensation in the package which is death to the IDY. We never recommended holding IDY after opening for more than 3-months (refrigerated or frozen) for home use. If you're into vacuum packaging you could break a 454-gram brick down into smaller portions and vacuum package for refrigerated or frozen storage of a year or more. Opening a package and putting it into a glass jar with a tight fitting lid serves no useful purpose as the idea is to exclude as much oxygen from the package as possible, that's why the 454-gram bricks are vacuum packaged. By folding the packaging down around the IDY and securing tightly you effectively reduce the head space in the package and reduce the contact with the air in the package which is necessary for effectively storing the IDY.

Neapolitan Style / Re: Yeast - Fresh or IDY

Condensation = water which will be absorbed into the dough over time, then when you go to bake the pizza there is a wet spot in the dough which produces copious amounts of steam or vapor pressure resulting in a beautiful bubble on your pizza.

Sicilian Style / Re: Need help proofing my Sicilians

In one of the later tests that we did on pizza we looked at what was the major cause of heart burn with individuals who ate pizza but had stopped eating it due to the heart burn issue. While it is true that highly acid foods can cause heart burn, in pizza we found that it was the dried basil and dried oregano that were more often than not the culprit. When we deleted these ingredients from the pizza and replaced them with fresh basil or oregano leaves our test group said that they did not experience the heart burn they had previously experienced and indicated that if given the opportunity to purchase the pizzas made using the fresh basil and/or oregano they would consume pizza more frequently. As an off-shoot from this study we also found that our sensory panel could taste the cheese better than when the dried counterparts were used. We confirmed these observations by making pizzas using only fresh basil and/or oregano and putting them out at the Ohio Pizza Show as well as the PMQ Pizza Show and asking samplers for their comments. The #1 comment was: "What kind of cheese was used to make this pizza? It has a great flavor!" We were using 4-ounces of Grande whole milk mozzarella on our 12-inch pizzas.

Dough Clinic / Re: Which are the factors that affect digestibility?

The crust that forms is actually insoluble so spraying with water really doesn't help much. Mixing it into the dough as you've done is OK and you'll probably not even notice it with a thin crust pizza but in some cases it will form hard little bits (like what's this?) in the finished crust. The best way I've found to address this is to just leave the dough alone after covering it, then orient it so the crust is on the bottom when you open the dough into a skin. The way crackers are made is to sheet the dough into a continuous ribbon and apply heat along with airflow to the top of the dough to form a dry skin/crust. The dough is then laminated (referred to as dry laminating) and the process repeated again to achieve the desired flakiness in the finished cracker.

General Pizza Making / Re: Left the lid off in the fridge - dry dough - what should I do?

You can certainly speed up the proofing process by placing the panned dough into an environment where you have not more than 105F with 85 to 87% relative humidity. A warm place with a damp towel draped over the pan seems to work pretty well for me (just be careful so the towel does not contact the dough or it will stick to it). I use a piece of plastic when proofing at room temperature but when proofing at an elevated temperature I get too much condensation formation on the plastic which drips onto the dough, the damp towel provides the humidity while preventing condensation from forming.

You will have to experiment with proofing times under YOUR conditions to arrive at a proofing time. Using four pans of panned dough, allow to proof for 15, 30, 45 and 60-minutes prior to baking, dress each pizza the same and bake all at the same temperature, then pick the one that you like best. If you have kept track of the times and temperatures and you can replicate the proofing conditions you will have your parameters for making your Sicilian style pizzas.

Sicilian Style / Re: Need help proofing my Sicilians

When we did studies on IDY we found that 95F was the ideal water temperature for suspending the IDY in. A variation of as little as 5F higher or lower resulted in a reduction in gassing/fermentation performance with a greater loss in performance with a lower water temperature than 95F. This is not due to a difference in the yeast itself but instead in the way the yeast agglomerates are designed. They are designed to be fast/instant hydrating, as a result when hydrated in cold water glutathione is leached out of the cells which impairs the ability of the yeast to ferment and the now free glutathione will act as a reducing agent (just as "dead yeast"/RS-190) does making for a softer, more extensible dough condition at the expense of an inconsistent rate of fermentation.

Neapolitan Style / Re: Yeast - Fresh or IDY

Your issue is with fermentation, not proofing of the dough. Proofing is done after you fit the dough into the pan and it ends when you bake the pizza. Most Sicilian pizzas are proofed for about an hour before baking.

By all means reduce the yeast! Remember, we're making pizza dough, not nitroglycerin. Even in commercial application we have to make yeast and/or temperature adjustments for walk-in coolers which are very efficient and reach-in coolers which are not as efficient.

After you take the dough out of the fridge and open it up to fit the pan it will warm up quit fast but it's normal to pull the dough out of the fridge a couple hours before that to allow the dough to warm up (50 to 60F), so now the dough is actually at fermentation temperature already. I usually cover my Sicilian style pizzas with a sheet of plastic for the proofing stage. You will need to experiment with the proofing time depending upon your dough formula and dough management procedure to determine what time actually works best for you.

Sicilian Style / Re: Need help proofing my Sicilians

When using IDY how are you adding it? The conversion from CY to IDY is to use roughly 60% less, not more. If you are machine mixing you can add the IDY directly into the flour providing the total mixing time is 5-minutes or more. The other way to add it is to suspend it in a small amount of 95F water (USE A THERMOMETER) and stir to suspend, there is no need to activate it as done with ADY.

The only real difference between CY and IDY is moisture content (approximately 80% for CY and 6% for IDY). Because IDY is instant hydrating (that's where its name comes from) it is very easily damaged if hydrated in water that is too hot or

especially too cold.

Neapolitan Style / Re: Yeast - Fresh or IDY

The amount of diastatic malt, like all of the other ingredients, is based on the TOTAL flour weight which includes both the flour in the dough and the preferment.
Dough Clinic / Re: Getting crust to brown without being too overcooked and hard.

Pizzaman123;

That, my friend is how you can start another sourdough starter having like characteristics to the mother starter from which it was made.

Neapolitan Style / Re: Window Pane Test

Made my day and got a good laugh from the thread. :-D :-D :-D

Off-Topic Foods / Re: Decaf

The easiest way to remove dough balls from a plastic tray is to use a specially designed dough scraper, designed just for removing the dough balls from the box with minimal distortion as well as scraping any residual dough out of the tray/box after its been emptied. The corners of the scraper are radiused the same as the inside box corners to make this an easy and effective task.

Neapolitan Style / Re: Dough sticking to plastic tray

Huh? I always thought it was how one referenced a baby cow, "decow" and decaf were standing out in depasture" :-D

How to make decaffeinated coffee taste better: put some type of flavoring into it.....like Baileys Irish Cream.

Off-Topic Foods / Re: Decaf

A sourdough starter and a biga are different animals. In the baking industry bigas are called liquid ferments or "brews" and are typically used at levels of 20 to 45% of the total flour weight with total fermentation time running from as short as one hour to as much as 5 or 6-hours. Sourdough starters are much more acid and also have a higher TTA (titratable acidity) which is why they are typically used at lower levels. They are allowed to ferment for days, not hours to develop their unique flavors and the type of fermentation is different too, in a biga the fermentation is yeast based while in a sourdough starter it is primarily bacterial based. For many years bakers have used "sours", not to be confused with sourdough starters, these sours are nothing more than old dough which has been allowed to ferment to develop acidity as well as flavor. It must be noted that the flavor obtained from these "sours" is nothing like that obtained from a sourdough starter.

Neapolitan Style / Re: Window Pane Test

If your total dough weight is around 18-ounces or less there is essentially no difference between bulk and dough ball cold fermentation. This very topic was discussed in significant detail not too terribly long ago.

General Pizza Making / Re: Bulk vs ball ferment

In order to be able to stretch the dough (window pane test) to see a clear gluten film at the mixer (immediately after mixing) the dough MUST be fully developed in the mixer, no two ways about it. You either develop the gluten matrix mechanically (mixing) or biochemically (fermentation). Bread doughs, by nature are essentially fully developed at the mixer but pizza doughs are only mixed to a point of just

being incorporated or just to a point on being smooth, they are then subjected to rather lengthy fermentation times which allow for biochemical gluten development to take place, this is why if you stretch out a dough ball at the time of opening you will be able to see a much better formed gluten film than you did after mixing.

Neapolitan Style / Re: Window Pane Test

My own personal preference is the KD-8000, I'm sure there are better scales available but for the money, capacity and accuracy the KD-8000 is awfully hard to beat. It also takes regular flashlight batteries that never seem to wear out. I use mine all the time for baking, making preserves and fruit butters, jerky and any other kitchen chore requiring me to weigh something. The only thing it might be lacking is the "finesse" in scaling accuracy to make very small doughs, but then I don't make those really small single pizza size doughs so it's not an issue for me, but if it was I could buy a second, smaller scale with the capacity and accuracy needed for those specific tasks. For those interested in my opinion on commercial application scales for use in a pizzeria the scales offered by AND Weighing <www.andweighing.com> / Stein Carlsen <scarlsen@andweighing.com> are really hard to beat. We used them at AIB for a good number of years and like a Timex watch, "they took a licking and kept on ticking", they're extremely durable, accurate and again, they use regular flashlight batteries.

Dough Clinic / Re: Scale recommendations.....

The longer you allow the dough balls to cold ferment the softer and more extensible (less elastic) they will become, additionally the longer the CF time the more flavorful the finished crust will become after baking. I suggest experimenting with different CF times to see what works best for you under YOUR specific conditions. I'm not sure what you mean by "letting it proof for a few hours"? The only proofing the dough receives is after the dough is fitted to a pan, such as when making a deep-dish pizza. When the dough balls are removed from the fridge after the CF period this is to allow the dough to warm sufficiently for ease of opening the ball into a skin, it is not a proofing period in the true sense. The difference between AP and bread flour is that AP flour has no specific application (that's what All Purpose means, while "bread" flour means that the wheat varieties that the flour is milled from are selected for their ability to make a strong dough (strong gluten) and have good fermentation tolerance which are all desirable characteristics for a bread type flour and are also desirable characteristics for a pizza flour too. In short, you have a better idea of what you are getting with a bread flour than with an all purpose flour. Some all purpose flours are quite good and work well for both bread and pizza while others do not. Bread type flours can generally be counted on to perform in a satisfactory manner across the board.

Dough Clinic / Re: HELP!!! Having trouble with 00 Tipo flour.

First off, put the "00" flour aside for now as it will not give you a dough that will brown properly (hardly at all) given the baking temperature you are using, instead, use a bread type flour that has been malted (it will indicate this on the bag). Rather than working with a "recipe" in volumetric portions get a scale that will weigh in grams so you can weigh all of your ingredients, then get a thermometer to measure the dough temperature. I have a feeling that your water temperature might be WAY too warm. Fresh/compressed yeast isn't necessary you can use either active dry yeast (ADY or instant dry yeast (IDY) which form do you have available to you locally?

Here is a very good dough formula which I am showing in both bakers percent as well as grams.

Flour: 100% 600-grams
Salt: 2% 12-grams
IDY: 0.4% 2.4-grams OR ADY @ 0.5% 3-grams
Water: 390-grams/ml (75F/23.8C)

Procedure:

Put water in mixing bowl, then remove a small quantity (50-ml) and heat it up to 100F/37.7C (use the thermometer as this temperature is rather critical), put the yeast into the slightly warmed water along with a pinch of sugar and stir to suspend the yeast, set aside for 10-minutes to allow yeast to hydrate/activate, then pour into the water in the mixing bowl. Add the salt and immediately add the flour and begin mixing by hand or machine. If mixing by machine mix until a smooth dough is achieved, if mixing by hand just mix until ingredients are well incorporated, then cover the bowl with a piece of plastic and set aside to ferment for 90-minutes, turn the fermented dough out of the bowl (use a plastic scraper) onto a floured surface and knead the dough several minutes until it begins to look smooth, lightly oil the mixing bowl, form the kneaded dough into a ball and lightly oil it, then place it into the oiled mixing bowl, cover with the plastic and allow to ferment for 1 to 2-hours, turn the dough out of the bowl and knead for a minute or two, form into a ball, lightly oil and place back into the mixing bowl, lightly oil the top of the dough ball and place the bowl of dough into the fridge to cold ferment for 2-hours, then cover the bowl with the sheet of plastic and allow to continue cold fermenting for 18 to 48-hours. After the dough has cold fermented, remove it from the fridge and allow it to set at room temperature until the internal temperature of the dough ball reaches 60F/15.5C, it is then ready to remove from the bowl, place it onto a floured surface and open into a pizza skin by your preferred manner. Bake the pizza on a pre-heated pizza stone or steel as hot as possible (allow at least 1-hour to heat the stone or steel). If you want more color on the crust add 2% (12-grams) sugar to the dough formula.

This should give you a pretty decent pizza to begin working with.

Dough Clinic / Re: HELP!!! Having trouble with 00 Tipo flour.

I don't know too much about it except that it is milled from soft wheat varieties as are other "00" type flours. The fermentation for this flour is limited to about 24-hours and it is not malted. It's just a guess, but I would think that Caputo "00" Pizzeria Flour would be a good substitute. Any U.S. milled flours are going to be made from hard wheat varieties so the dough is going to be somewhat different.

Dough Clinic / Re: Polselli Super

I like it too, but my go to peel dust is a blend of equal parts of semolina flour, my regular pizza flour and fine grind corn meal. If you query 50 people as to what their favorite peel dust is you will get 50 different opinions. If it works for you and you're comfortable with it, use it. Many pizzerias use nothing but fine corn meal, some use rice flour and some use wheat bran or rice bran, just about anything goes.

Neapolitan Style / Re: Pizza hydration

When substituting ADY with IDY a good rule is to use 25% less IDY than the amount of ADY you're replacing. When it comes to high speed mixing and IDY even when using a VCM (1825 r.p.m. and about 70-seconds mixing time) the recommendation still stands to suspend the IDY in a small portion of 95 to 100F water. The reason for this is to endure that the yeast agglomerates (particles that you see in the bag) are thoroughly incorporated into the dough as opposed to be enveloped in the dough.

New York Style / Re: difference between IDY and ADY (glutenboy method vs what Gemignani says)

Chicago Bob is spot on! When using a pan you will also be using a release agent such as oil or shortening in the pan which facilitates removing the finished pizza from the pan. Oil will give you a different crust characteristic than shortening. I like to say that oil will provide some level of a fried effect while shortening will provide a bread like crust. By increasing the amount of oil in the pan you can achieve a truly fried crust characteristic, oily like CB said, but fried and crispy. As for baking on a stone, I never liked the idea of baking pan pizzas on a stone as it can be difficult to control the bottom bake. When I bake pan pizzas in a deck oven I always place the pans on a pizza screen to give control over the bottom crust color. For something a little different you might try putting some cheese in the the outer crust (like P.H.) or how about putting some pepperoni in the crust rather than cheese?

Thick Style / Re: Pan thick style vs with Stone

That's a very good point with the excess bench/dusting flour. When the absorption reaches a point where, for whatever reason, excess dusting flour must be used to facilitate handling of the dough, and that flour cannot be removed before the pizza is taken to the oven any flour that is on the bottom of the skin can burn, resulting in a bitter taste. I've found this to be somewhat more problematic when the pizza is baked directly on the deck/stone than when it is baked on a screen, disk or pan. One might think of this as collateral damage from having a dough with an excessively high absorption.

Neapolitan Style / Re: Pizza hydration

As with everything else, there are limits to the absorption used when making pizza crusts. To a point, increased absorption will promote greater porosity in the finished crust but only if the gluten strength is sufficient to carry the amount of water being added, and the oven is hot enough to provide the extra oven spring made possible by the higher absorption, additionally, the crust must set fast enough to lock-in the increased volume without collapsing. All of this must be balanced against the amount of fermentation the dough is subjected to as fermentation has a mellowing/weakening effect upon the gluten structure of the dough which means even though a flour might be sufficiently strong to carry high a high dough absorption if it is subjected to excessive fermentation the gluten will be sufficiently degraded to render it incapable of carrying the high absorption and dough collapse or reduced oven spring will be the end result. Added on to all of this, there are certain genetic properties of the wheat from which the flour is made which will allow the protein/gluten structure to effectively carry more water than other wheat varieties. When breeding for new wheat varieties this is but one of the criteria assessed to determine if a variety will be released for future planting. Indeed, dough absorption can be a rather complex issue.

Neapolitan Style / Re: Pizza hydration

I'm in the same boat, back when using a wood fired oven I was making doughs in the 70 to 75% range but now you will most often find me using something in the 62 to 65% range. The type of pizza that I most often make is a N.Y. or New Haven style using cold fermentation in the 2 to 4-day range. I like the flavor and textural properties of the finished crust when made this way, just my own personal preference.

Neapolitan Style / Re: Pizza hydration

A quick test to see if your dough is being over fermented for the specific flour being used is to reduce the total fermentation time by 1/3 (33.33%), if you see an improvement make further adjustments in the fermentation time. Also opening the dough in oil as opposed to flour might also be responsible so be sure to follow up on that too.

Dough Clinic / Re: Causes of thin spots?

Welcome to the site!

I've visited Istanbul many times in the past, in fact it was my favorite city for holding regional meetings when I was on the McDonalds (hamburger chain) International Task Force. I used to stay at the Divon Hotel. Beautiful city with GREAT shopping.

New Forum Members / Re: Hello from Istanbul

The wood peels are not intended to be used in the oven, instead they are intended to be used as a prep-peel. In this application I think they are more forgiving than a metal peel as the wood will not contribute to the formation of condensation under the skin as a metal blade peel can in if is allowed to ever get cold (this is a good reason for keeping your peels close to the oven). For many home pizza makers this can't always be done so care must be taken to prevent putting an opened skin on a cold metal peel. With a wood peel it really doesn't make too much difference if the peel is cold or not. I've also noticed that you can leave a dressed skin on a wood peel longer than on a metal peel before it begins to show a penchant for sticking. Its these two characteristics which make it more forgiving.

Neapolitan Style / Re: GI metal perforated versus solid turning peel

I would be inclined to go with the Deerfield unit. Good name and strong reputation in freezing equipment.

Dough Clinic / Re: Blast Freezer question

Why not use bags? They are a lot easier to manage than trays and require a LOT less space too.

Neapolitan Style / Re: Help with dough process

The link took me to one that is only rated to -18C (-0.4F) which is not cold enough. You will need to have one that is rated to -37C or something close to it.

Dough Clinic / Re: Blast Freezer question

Since you are going to be using the dough over a 4-hour period of time I think you might be ahead of the game by refrigerating the dough balls immediately after forming and then pulling the dough on a schedule which will allow the dough to warm over a 5 to 6-hour period of time before it is opened into skins for immediate use.

Neapolitan Style / Re: Help with dough process

That's a difficult question to answer as I have no idea of how strong your starter is or if it is a "natural" starter or one based on commercial yeast. The refrigeration process will slow the rate of fermentation regardless of the type of starter being used so I'm guessing that your best bet will be to refrigerate the dough balls and to give them at least 4-hours, or more, to regain activity before opening into skins once you're at the event.

Good Luck!

Dough Clinic / Re: Need some help in a pinch

You'll be making over 40 pizzas, over what period of time? What is your dough ball weight? How are you planning to bake the pizzas? In a typical home oven this could be an all day affair, if you have a commercial deck oven, depending upon the size of the oven and size of the pizzas it could take anything from 30-minutes to an hour or more.

Neapolitan Style / Re: Help with dough process

Hopefully the dough felt slightly soft and slightly tacky too, if it didn't you might find that you are too low on absorption.

Dough Clinic / Re: Whole wheat

I've been to the store in Olathe, KS many times as it's near to where my son lives. The dough is yeast leavened, 50% absorption, and formed using a dough sheeter/roller. They use cutter pans (40-degree shoulder angle) and bake in deck ovens. To use the cutter pan just drape the sheeted skin over the pan and crimp cut by rolling a rolling pin over the top of the pan.

Cracker Style / Re: Pizza Shoppe-style?

Kelly;

While you might "suck" at math, I'm betting that you can figure out the amount for a tip to leave after a meal out, right? If you can do that you can work with bakers percent.

Let's start with your dough "recipe" for a 12" pan. The first thing to do is to get a good scale that will weigh in grams. There are many very good ones available on the internet priced at or under \$50.00.

Portion each ingredient three times and weigh the portion each time and write it down. After you have done this for each ingredient add up the total weight for each ingredient and divide it by three, this will give you the average ingredient weight. Now divide the average weight for each ingredient by the total flour weight and multiply by 100. You have now put your dough "recipe" into a formula based on bakers percent. By the way, flour is ALWAYS 100%.

A 9-inch pan has a surface area of $3.14 \times (4.5 \text{ squared})$ or $3.14 \times 20.25 = 63.585$ square inches.

A 12-inch pan has a surface area of $3.14 \times (6 \text{ squared})$ or $3.14 \times 36 = 113.04$ square inches.

The difference in pan size is $113.04 - 63.585 = 49.455$ square inches.

Divide 49.455 by $113.04 \times 100 = 43.75\%$ difference in pan size. The 12-inch pan is 43.75% larger than the 9-inch pan. Or to put it another way, the 9-inch pan is 43.75% smaller than the 12-inch pan.

To find out how much flour to use in your dough formula for the 9-inch pan:

$100 - 43.75 = 56.25\%$ Your new dough formula will use only 56.25% of the flour weight needed to make the dough for a 12-inch pan.

This is where being able to calculate the amount of a tip comes in handy:

To find your new flour weight for the 9-inch pan, using the flour weight for the 12-inch pan multiply the weight by 56.25 and press the percent key and read the new flour weight in the display.

To find the weight for each of the other ingredients enter the new flour weight for the 9-inch pan then press "X" and enter the bakers percent for that ingredient and press the "%" key, read the ingredient weight in the display.

In this case the flour weight is the cost of the meal and the percent of each ingredient is the amount of tip you want to leave.

You can also use an Excel Spread Sheet to find the ingredient amounts too but you first need to convert your dough "recipe" into a formula based on bakers percent.

Dough Clinic / Re: Math & Pizza

Additionally, you didn't provide any information on how you activated the ADY.

Dough Clinic / Re: Dough Not Rising - Help!

Yup, you've identified the culprit. When using a plastic fat, like Crisco, the dough acts as if it were glued to the pan with contact cement. The fat holds the dough to the pan sufficiently long for it to fully relax and not pull away from the edges. When using oil the only really effective action is to press the dough out in the pan several times with at least a 30-minute rest period between each session of fitting the dough to the pan. You can also use your Crisco on the sides of the pan and olive oil on the center portion of the pan if you want to go that route. In my experience even a fully relaxed dough will tend to pull away from the sides of the pan when using only oil in the pan unless you press fit it into the pan multiple times.

Dough Clinic / Re: Pressing dough to edge of pan

Proofed, frozen and straight to the oven = Freschetta brand frozen pizzas.

I am not aware of anything along the lines of what you are looking for, nothing that small.

To make pre-proofed frozen pizza you will need to have a freezer capable of reaching temperatures in the -25 to -38F range (ammonia refrigerant) or it will need to be a cryogenic freezer using an industrial cryogen (liquid carbon dioxide or liquid nitrogen) usually adjusted to freeze at -45 to -60F.

Dough Clinic / Re: Blast Freezer question

Thank you Peter, I don't know what we'd do without you!

Dough Clinic / Re: Whole wheat

When you re-ball an over fermented dough the gluten tightens up to the point of being non-elastic (don't need to tell you that) :-D.

You will then need to allow time for the gluten structure to relax once again, depending upon how much over fermented the dough is, this could take anything from 2 or 3-hours to as much as 5 or 6-hours.

Why did the dough blow?

What was the finished dough temperature?

Was the correct amount of yeast used?

Did you leave the dough box open (cross-stacked) for a few hours when you placed it into the fridge?

Did you leave at least 2-inches of space between the dough balls in the box?

Did the amount of dough placed into your fridge cause the temperature to rise in the fridge?

Remember, when loading several dough balls into a home fridge it may be advantageous to lower the finished dough temperature to the 65 to 70F range to compensate for the home fridge.

New York Style / Re: Rescuing balled CF dough

Actually, whole-wheat flour really doesn't make an unusually dense loaf of bread IF YOU USE THE CORRECT DOUGH ABSORPTION. If you do a search in the archives you will find discussion on how to find the absorption of YOUR SPECIFIC whole-wheat flour. I've also written an article on it too. Getting the absorption correct is the key in making decent dough and finished products using any kind of whole-

wheat flour, you will also need to make a "soaker" from the whole-wheat flour aka autolyse. Forty five to sixty minutes is about right for the hydration time as the bran takes some time to hydrate.

Dough Clinic / Re: Whole wheat

Even low temperature pasteurization requires heating to 180F and maintaining that temperature for 30-minutes.

I'll take a pass on anything canned at 140F.

New York Style / Re: Cooked Sauce yuk!

Matt;

Fermentation is more than carbon dioxide production, it is also production of acids and the effects of various enzymes on the gluten forming proteins of the flour. Refrigeration of the dough limits the production of acids and the work of the enzymes resulting in under fermented dough characteristics and performance properties. There is a point in dough rheology where both under fermented dough and over fermented dough have identical characteristics and the only real way to sort them out is by TTA (titratable acidity) of of dough itself with a greater TTA being present in the over fermented dough.

Dough Clinic / Re: Causes of thin spots?

That's a "new" one to me.

New York Style / Re: Cooked Sauce yuk!

The only thing I would add is after baking with your new starter, if you like the results, use a portion of it to start another one (use different tools and containers) as a back-up reserve. Starters are easily lost through contamination regular bakers yeast is a contaminant in this case and it can be all but impossible to replicate your original starter. This is why we always say if you don't like your new starter, sanitize your tools, possibly change locations where it's made, and try another one, but just like your computer data, it's always a good idea to back it up. I store my back-up in the fridge and only feed it weekly and it does quite well.

Note:

When I was at AIB my first starters were total failures in my opinion, we had sooo many yeast cells floating around in the air that the yeast always became the dominant micro flora and the resulting flavor was always like that of yeast leavened dough. It wasn't until we took it out of that environment that we were able to make a decent sourdough starter.

Dough Clinic / Re: what sort of flour to use to make my own starter?

To be considered whole-wheat all of the flour used in making the crust has to be whole-wheat (no white flour allowed). However, if you want to make a wheat crust I would recommend using a blend of 70% white flour and 30% whole-wheat flour.

Dough Clinic / Re: Whole wheat

Matt;

Typical causes are:

Insufficient dough fermentation.

Excessive dough fermentation.

Insufficient dough absorption.

Opening technique.

Insufficient dough weight.

From the looks of the opened skin I'm guessing insufficient dough fermentation is the problem here.

If you want to see if it's technique use a rolling pin and carefully open the dough to within 2-inches of the full diameter, then complete the opening of the dough skin by hand.

Dough Clinic / Re: Causes of thin spots?

Keep us posted on your progress.

New York Style / Re: Troubleshooting my Last Bake

Commercially manufactured sauce as well as tomato products are indeed cooked, they are heated under very controlled conditions to render them safe for the canning process and then quickly cooled to prevent further loss of volatiles which detract from the flavor profile of the product.

New York Style / Re: Cooked Sauce yuk!

How do you measure the oven and baking steel temperature, do you use an IR thermometer?

New York Style / Re: Troubleshooting my Last Bake

In looking at the color of your last pizzas, what is the protein content of your flour and please confirm if it's malted or un-malted. How does the bottom of the pizza look? Decent color or light? I'm guessing that the problem might be a bake issue so also please provide baking information such as temperature, baking platform (what are you baking your pizzas on?) as well as rack position in the oven.

New York Style / Re: Troubleshooting my Last Bake

Oops! Sorry about that!

Good catch there, you're right, it should equal 75%. So the corrected absorption should be $107.8 + 75.95 = 183.75$ which is 75% of 245 (total flour weight). The dough side water amount should show as 75.95-grams while the absorption next to it should be shown as 75%.

Dough Clinic / Re: Martin's Potato Roll - Is it worth the HYPE?

Your calculations are indeed correct.

Dough Clinic / Re: Best recipe for thin crust dough?

Allow me to correct it for you.

It looks like you are using 245-grams of total flour weight.

SPONGE:

Flour: 196 g (80%)

Water: 107.8 g

IDY: 3.675 g

DOUGH:

Flour: 49 g

Water: 26.95 g ($107.8 + 26.95 = 55\%$ of 245)

IDY: 1.225 g

The remainder of the math looks to be OK.

Milk: A high priced form of water. Contains lactose sugar which contributes to crust color development, the formula already has 13% sugar plus dehydrated potatoes for PLENTY of crust color development. The flavor improvement from

milk comes from the butterfat content the formula already contains BUTTER. The calcium content of the milk might improve the handling properties of the dough but you can get the same improvement using calcium sulfate at 0.25 to 0.5%. Calcium sulfate aka GYPSUM is readily available from many sources including pharmacies.
Dough Clinic / Re: Martin's Potato Roll - Is it worth the HYPE?

The easiest way to find the "desired water temperature" is to subtract the flour temperature from "145". As for mixing time, whatever time it takes to achieve a smooth, appearing dough, this is usually around 8 to 11-minutes, I've never seen it in the 3 to 4-minute range in a planetary mixer. The amount of ADY specified is indeed correct.

Dough Clinic / Re: Best recipe for thin crust dough?

How big is your "bulk" dough?

Newbie Topics / Re: Bulk CF and balling

Flour: 100% (12 top 12.8% protein content)

Salt: 2%

ADY: 0.5%

Oil: 1%

Too bad you don't use any water, but if you did I would expect it to be in the 52 to 55% range.

Mixing: That 20-quart mixer is a poor choice for this type of dough as it isn't powerful enough and there is a distinct probability of destroying the composite sacrificial gears in the mixer. A larger planetary mixer or a small spiral mixer would be a much better choice. Remember, no mixer, no dough.

Put water and yeast suspension in the bowl first, then add the flour and salt, mix 2-minutes at low speed, add the oil and continue mixing at low or medium speed (3rd. speed is for mixing cake batters only) until a smooth dough is achieved.

Target finished dough temperature is 75 to 80F.

Take dough to bench immediately after mixing and scale 10.5 to 11-ounces for 12" pizzas.

Form dough into balls, place into dough trays, wipe the top of each dough ball with oil, cross-stack in the cooler until the internal dough ball temperature reaches 50F (about 2-hours +/-), then down-stack or cover the dough boxes and allow to cold ferment for a minimum of 24-hours (36 to 48-hours is better). Remove dough box from cooler, allow to warm AT (AT) room temperature until the internal dough ball temperature reaches 50F then begin opening into skins for immediate use. Once you begin opening the dough balls into skins the remainder will remain good to use for about 3-hours.

Optional: After opening the skin use a docking wheel to dock the skins prior to dressing.

Dough Clinic / Re: Best recipe for thin crust dough?

With less than 4-minutes mixing time there is a distinct probability that the yeast is still present in the dough in the form of agglomerates (clumps) rather than dispersed as single cells. This means that you will experience inconsistent yeast activity/fermentation and some of the yeast cells will die and release glutathione into the dough making it soft and sticky/tacky. So in your case it is highly suggested that you suspend the IDY in warm (95F) water prior to adding it to the dough. From your description it sounds like a HOT dough rather than a "warm" dough. Remember, you will begin to damage the yeast at temperatures approaching 120F and thermal death point is at about 140F. In any case, I think

you need to be looking at using cold or ice water for the bulk of the dough water to get the finished dough temperature into the desired temperature range of 75 to 80F.

New York Style / Re: Troubleshooting my Last Bake

I second the motion. ^^^

Newbie Topics / Re: Barley Malt

Allowing the dough balls to come up to room temperature is allowing them to warm up too much, you only want to allow them to warm AT (AT) room temperature until they reach an internal temperature of 55 to 60F. In a commercial/pizzeria we use 50F which allows the dough balls to have a 2.5 to 3-hour use period after they reach 50F. It's normal for the dough to stick to the box, this is why they make special hard plastic scrapers for removing the dough balls for the box with minimum distortion. You can also use a flexible bowl scraper pretty well to the same effect.

Dough Clinic / Re: Dough sticks to box

Here is a good starting point for your potato buns;

Flour: 100% (strong bread type flour with about 12% protein content)

Salt: 2%

Dehydrated potato flakes (non-sulfited): 8%

Sugar: 13%

Shortening: 4%

Instant dry yeast: 2%

Water: 75% (variable)

The buns are best made using an 80/20 sponge-dough process with 1.5% of the IDY in the sponge and the remaining 0.5% added to the dough side as a yeast spike. Sponge absorption should be 55%. The dehydrated potato flakes are added at the dough side. The dough should be mixed to full gluten development. The dough then goes directly from mixing to forming with about a 60-minute final proof before baking at 420F/215.5C for about 15-minutes.

Dough Clinic / Re: Martin's Potato Roll - Is it worth the HYPE?

Proofer;

What part of San Diego are you in? My wife is from La Mesa, (she was a school teacher at Chesterton Elementary School) not too far from the country club.

New York Style / Re: "Achieve a Lighter, Tastier Thick Crust Pizza"..

Formulation Change from Tom L.

Going back to the previously asked question, what was the finished dough temperature (temperature of the dough immediately after mixing)? This is a very important temperature as it will determine how the dough ferments. Also, what is the total mixing time in the processor? If the total mixing time is less than 4-minutes it is highly recommended that the IDY be suspended in a small amount of warm (95F/32.2C) water prior to addition to the dough.

New York Style / Re: Troubleshooting my Last Bake

Additionally, don't forget to lightly oil the dough balls as you place them into the containers and leave the lids off for at least 2-hours or until the internal dough ball temperature reaches 50F, then apply the lids. This will keep condensation from forming inside the containers making for a wet, sticky dough with a penchant for

bubbling during baking.

If you research this in the archives this is what we refer to as cross-stacking and down-stacking.

New York Style / Re: Troubleshooting my Last Bake

Mouly;

You mention problems with transferring the prepared skin from the table onto the peel. You might think about getting a short handle wood prep peel. The opened skin is placed on the peel with a little dusting flour under the skin, the skin is then dressed right on the peel and peeled into the oven.

Dough Clinic / Re: What can cause dough to be too stretchy?

Sure, do it all the time.

Here is the basic procedure:

- 1) Mix
- 2) Scale and ball
- 3) Cold ferment for 24-hours
- 4) Remove dough from cooler and allow to temper AT room temperature for 60-minutes.
- 5) Open dough balls and place into prepared pans.
- 6) Allow panned dough to rest at room temperature for 45-minutes.
- 7) Re-stretch dough to fit pan as it will shrink back during the 45-minute rest period.
- 8) Allow the dough to rest for 30-minutes, and re-stretch again if necessary and place in the cooler. Cover with a sheet of plastic to prevent drying.
- 9) The panned dough should be ready to use after about 2-hours in the cooler and it will keep for the entire day.

Note:

All dough formulas are different so you will need to experiment with the time in step #8 to determine the correct time that will allow the dough to rise to the desired height during baking.

The dough can be taken directly from the cooler to the prep station and then directly to the oven for baking.

Dough Clinic / Re: Detroit Style - New Way of doing things

Allowing the dough to rest (begin to ferment) for 20-minutes before scaling and balling and CF reduces the ability of the dough to be cooled at a consistent rate so it is actually introducing variability into the process. Finished dough temperature becomes MUCH more critical and that 20-minute rest period has to have a very hard line, not 25 or 30-minutes (we all know human nature). On the other hand it can give you the fermentation effects of a longer time with a shorter fermentation time and maybe more importantly, it can improve the handling properties of the dough during the scaling and balling process, this is important with some high absorption doughs which tend to be somewhat sticky immediately after mixing. To someone making pizzas at home I really don't think it means a lot as to which way you do it (with or without a 20-minute rest period prior to scaling and balling) as you are not trying to make 200 pizzas all look alike and you are not dealing with "hired help" to make the pizzas so staying on schedule is not that much of an issue and if it is you know exactly who to blame ;D

Dough Clinic / Re: My First Post - American Style Dough

To answer your questions, by "rest" you mean fermentation, the answer is yes because this is where the biochemical gluten development takes place. More

mixing time/mixing at a higher speed will also develop the gluten, this is basically the way its done in modern high speed bread bakeries where gluten development is a critical factor. Temperature also plays a role as it controls the rate of fermentation. Colder doughs or colder fermentation environments retard the fermentation process so a longer fermentation time is required for the biochemical gluten development to take place.

I think you're over thinking this, just about any properly managed dough will have full gluten development at the time the dough is being opened into a skin. We have discussed machine mixing v/s biochemical gluten development a number of time here, a search through the archives should provide you with some additional reading material.

Newbie Topics / Re: The elasticity and gas problems strike a somewhat experienced pizzaiolo...

What you are referencing is referred to as "webbing" of the gluten film, it is an indication of under development. Pizza doughs are always under mixed so don't look for a clear gluten film after mixing unless you're making bread. If you have managed your dough properly you will be able to see a clear gluten film in your dough balls when you open them into skins. When we held our annual pizza seminars we used to open a 12-ounce dough ball to nearly 30-inches in diameter with 4 to 5 people standing in a circle opening the dough together, you could clearly see your skin details through the dough membrane when it was opened about as far as we could get it to go without tearing.

Newbie Topics / Re: The elasticity and gas problems strike a somewhat experienced pizzaiolo...

Wipe the top of each dough ball with a little oil before placing the box in the fridge. This will prevent the dry skin from forming. We have discussed this method numerous times if you want to search the archives for some extra curricular reading. When cross-stacking the idea is to allow the dough boxes to remain cross-stacked until the internal dough ball temperature reaches 50F, then the boxes can be down-stacked or lidded.

Newbie Topics / Re: The elasticity and gas problems strike a somewhat experienced pizzaiolo...

Don't worry about over kneading the dough by hand, it is all but impossible to do so. As for gluten development, biochemical gluten development will do that for you given that the dough will be allowed to ferment for at least 6-hours after mixing. You say your crust does not get crispy, what kind of color are you getting on the top and bottom of the crust? In some convection ovens you get too much top color and not enough bottom color which indicates a poor bake which can result in a less than crispy crust. Also not using sufficient dough for the pizza size can result in loss of crispiness (I personally use a dough loading factor of 0.088 to 0.097 for my 12-inch pizzas). In addition to experimenting with the rack position you might also experiment with turning the convection feature on your oven off as this can result in a more balanced top and bottom bake.

Dough Clinic / Re: My First Post - American Style Dough

Two things might be at play here. First, the salt level is VERY LOW at only 0.2%, I suggest increasing it to something in the 1.75 to 2.5% range, and second I see you are using dough boxes, are you cross-stacking them for at least two hours before lidding them? If you are not cross-stacking them the dough is both over fermenting as it cannot cool down at a consistent rate and it is also sweating in the box (both

of which result in the dough balls flowing together into a single mass).

Newbie Topics / Re: The elasticity and gas problems strike a somewhat experienced pizzaiolo...

Doing the easy things first, I'd suggest increasing the dough absorption in 2% increments to 62 and 64% to see if that helps. High baking temps demand a high absorption dough that expands readily. Also, when opening your skins be sure to keep your fingers away from the edge.

In the mean time if you can share exactly what you are doing aka dough management (be sure to include times and temperatures) it will help us to better determine what the issue might be.

Dough Clinic / Re: Why the edge isn't puffed ? (photo)

While all of the things you've mentioned will most certainly contribute to a soft, limp crust I believe that the number one, and most common cause results from improper baking. Baking the pizza at too high of a temperature or short baking (not baking long enough) the pizza are common causes. Additionally, dough that is too dense or opened into a skin that is too thin are also likely causes. A dense dough often results when the dough is opened into a skin by manually pinning the dough to shape it. A skin that is too thin results when one doesn't have sufficient dough ball weight for the size of pizza being made or they erroneously believe that by making the dough thinner it will bake out crispier. The last of the common things that I've found results from allowing the dressed or sauced pizzas to set for a period of time before baking. In this case the moisture from the sauce and/or toppings will migrate into the dough where it will be impossible to bake out resulting in a limp crust AND the development of the "dreaded gum line" just under the sauce. Aside from all of this, remember, just placing the hot pizza on a metal pan or cold surface will result in condensation forming at the interface of the crust creating a wet, soggy pizza. I could probably write a book on this topic alone but these are the most commonly encountered reasons for a limp crust when making pizzas at home, a whole new chapter is started when we discuss this problem at the pizzeria level.

Dough Clinic / Re: The science of sloppy dough

The sweetness and impact on crust color from honey and sucrose are the same. Honey is a mix of dextrose and fructose while the enzyme invertase in the yeast (and other microorganisms) hydrolizes the disaccharide sucrose into its component sugars dextrose and fructose, so in the dough both end up being the same. This is one reason why it can be difficult to ascertain if sugar (sucrose) or honey was used as an ingredient in a yeast leavened baked product. With regard to flavor from honey, aside from sweetness, you would need to get to around the 5% level to detect and flavor from the honey, also keep in mind that the darker the color of the honey the more robust the flavor is, it's also cheaper too. Commercial grade aka bakery grade honey is about the color of black coffee so some care has to be taken or the color of the honey can impact the crumb color making it a dirty gray color, not too bad in a pizza crust but it can be a real problem in bread items where a greater crumb portion is present and more readily visible to the consumer.

Newbie Topics / Re: Caputo Confusion

No difference in taste, just convenience and one less thing to go wrong, go wrong, go wrong, go wrong.

Dough Clinic / Re: gooey dough

I've worked with a number of mobile pizza operations over the years and from what I've seen is that yeast performs better than a sourdough starter under these conditions. This is because the yeast leavened doughs tolerate the cold temperatures better than the culture you have growing in your starter which likes to be kept warm and as you know is counter productive to keeping the dough for any period of time as it tends to get away from you as you have already indicated. Your best bet might be to freeze the dough balls a day ahead of time and set them out to thaw on the day of the event. Thawing time should be relatively short owing to the smaller size dough balls you will most likely be working with (TIP: flatten the balls into "pucks" when you freeze them as they will slack-out faster in this form). You could have one stack of dough trays covered in an insulating wrap (this will be your main supply) and another stack of dough boxes without the insulating wrap which will allow them to slack-out in a few hours and be ready for use. Since all doughs are different you will need to experiment to determine how long these slacked-out dough balls will remain good to use, I'm guessing several hours.

Dough Clinic / Re: Dough Management for Mobile Units

BJ;

I forgot to show the oil in my dough formula. I normally include 2% oil in the dough. When adding the oil use the delayed oil addition mixing method, by this method you hold out the oil for the first 2-minutes of mixing, then add it, mix 1-minute at low speed then continue mixing at medium speed until you get the targeted smooth dough consistency.

Dough Clinic / Re: gooey dough

If adding a liquid fat such as oils and melted solid fats in most cases they should be added using the delayed oil mixing method to prevent them from being absorbed into the flour. When adding a solid or plastic fat such as butter, margarine or lard they are best added right along with the flour.

How to determine if the delayed oil addition method needs to be used? Place a small quantity of the fat in question in a small bowl, sprinkle with flour, if the flour absorbs the fat the delayed fat addition method should be used, if it isn't absorbed into the flour the fat can be added along with the flour.

NOTE: Solid/plastic fats should always be added at room temperature or slightly softened. The only exception to this is when we are making a dough where we want to have pieces of the fat dispersed throughout the dough, in that case the fat is frozen and shaved/chipped, and added as a frozen fat so it does not become incorporated into the dough but instead remains as individual fat pieces. This is how a pie crust and many biscuit doughs are made.

New York Style / Re: "Achieve a Lighter, Tastier Thick Crust Pizza".. Formulation Change from Tom L.

Your first step is to convert your dough (recipe?) into a dough "formula" based on bakers percent. To do this you will need to have the weight of each ingredient including the weight of the starter added to the dough. Then divide the weight of each ingredient as well as the starter by the weight of the flour and multiply by 100. This will give you the ingredient weight in bakers percent.

Once you have your dough formula in bakers percent you can manipulate the size of the dough as desired.

To find the ingredient weight for a new flour weight, using your calculator, enter the new flour weight, then press "X" and enter the bakers percent of the ingredient you want the weight for, now press the "%" key and read the weight of the ingredient in the display. Repeat this for each ingredient including the starter and

you will have all of the correct ingredient weights for the new flour weight.

Newbie Topics / Re: Bulk Dough Making

In my humble opinion, a New Haven pizza is just a crispy version of a New York style pizza so any New York pizza dough formula should work well for you.

New York Style / Re: new haven dough recipe

I think the ingredient missing from your dough formula is sugar. If you add sugar you can manipulate, to some extent, the rate and way the crust bakes. I'd go back to your best effort at 100% bottom airflow and add 1% sugar to the dough formula. This will result in the crust browning faster and absorbing heat better for a more thorough bake in the short baking time being employed. If 1% sugar isn't sufficient go to 2% sugar, from there make incremental 0.5% adjustments in the amount of sugar.

NOTE: Due to the extremely efficient heat transfer properties of an air impingement oven the response to sugar in this type of oven is rather fast and at times dramatic so once you find a sugar level that works for you you will need to be "spot-on" with removing the pizzas from the oven, not a problem with a conveyor model but this can be problematic with air deck ovens which is one of the main reasons why I don't encourage fast bakes with this type of oven.

Dough Clinic / Re: Dough Experiments - Guidance

For ADY use 1/3 more than you would if using IDY.

Dough Clinic / Re: Suggestion for oven temp

Forgot to add, try making your pizzas using different types of fats, such as pomace grade olive oil, bacon fat (really good), butter (both fresh and aged for about 3-weeks by letting it set on the kitchen table).

**New York Style / Re: "Achieve a Lighter, Tastier Thick Crust Pizza"..
Formulation Change from Tom L.**

Your pizza looks pretty AWESOME!

**New York Style / Re: "Achieve a Lighter, Tastier Thick Crust Pizza"..
Formulation Change from Tom L.**

Are you looking to use this for your cold fermentation space or are you planning to use it just for temporary holding of the dough for use during the day? The reason why I ask is because I've used prep-table storage at many pizza shows and I can attest to the fact that it just isn't up to holding any quantity of dough under sufficiently cold conditions to work if you are going to CF the dough for much more than about 18-hours. The units were never designed for that purpose. While not the best choice, a much better option for holding the dough during the CF period in a small shop would be a reach-in cooler or a rack type cooler. Reach-in coolers will not allow you to cross-stack the dough boxes so you will need to off-set then front to back for the cross-stack period.

Shop Talk / Re: Need help with dough storage!!!!

Big Dave used to have his "Old Faithful", here's mine;

Flour: 12 to 12.8% protein content 100%

Salt: 1.75%

Sugar: (optional) 2%

IDY: 0.375%

Water: (variable) 64%

Mix just to a smooth consistency.

Targeted finished dough temperature: 75 to 80F.

Immediately scale and ball.

Place in fermentation container(s).

Wipe the top of each dough ball with a little oil.

Place in fridge UNCOVERED for 2-hours.

Cover container(s).

CF for 24 to 48-hours. 48-hours is better than 24-hours.

Remove from fridge and allow to TEMPER AT room temperature for 2-hours or until the center/core temperature of a dough ball reaches 60F before starting to open into skins.

The window of time to use the dough balls is about 2-hours from the time they reach a core temperature of 60F.

Dough Clinic / Re: gooey dough

I've had my best success with NY style pizzas using a baking temperature of 500 to 550F. If you don't mind your pizzas being a little softer and chewier bake at 700F.

Dough Clinic / Re: Suggestion for oven temp

BJ;

Try increasing the yeast a little, now that you are controlling the rate of fermentation your dough might need a little more yeast to meet your specific needs or you might try increasing the finished dough temperature by 2 to 3F. I'd try the increased dough temperature first (increase the temperature of the dough water by 5F) and if that doesn't work go with the increased yeast.

Dough Clinic / Re: gooey dough

Regarding your peel issues, get your fermentation dialed in correctly and then, if you still have problems peeling the pizza into the oven begin incrementally reducing the dough absorption to tighten the dough up a little. Remember, every dough has a "sweet spot" when it comes to absorption, you can't just take an absorption percent and plug it into your dough and expect it to always work. This is due to lot to lot variations in flour absorption (we recently discussed this there) as well as differences in the specific way the dough is being managed as well as ones ability to handle a soft dough.

Dough Clinic / Re: What can cause dough to be too stretchy?

Here's a tip to keep condensation from forming in the fermentation container. Lightly oil the dough ball as you place it into the fermentation container, then place into the fridge but DO NOT cover it for at least two hours, then apply the lid and condensation will not be a problem. Warm dough going into a cold fridge will ALWAYS form condensation on the top of the container, by leaving it uncovered (cross-stacked) for at least two hours the dough will have sufficiently chilled so condensation will not be much, if any, issue after covering. This same condensation will make the dough sticky and it might be what's causing the dough to stick to the container too.

Newbie Topics / Re: CF dough sticking?

Gluten is what makes the finished crust tough/chewy and fermentation degrades the gluten (sufficient fermentation will turn a dough into soup as it destroys the protein/gluten) so a longer fermentation time will naturally give rise to a more tender eating crust. Actually, 24-hours is a pretty short fermentation time even

with the short bulk fermentation time (which is really just fermenting the dough in ball form unless your total dough weight is more than about 18-ounces). My suggestion is to keep the IDY at the same 0.3% level, adjust the water temperature to give you a finished dough temperature in the 75 to 80F range ball immediately after mixing and CF for at least 48-hours. Bench mark from there to find the fermentation time that works best for you.

Newbie Topics / Re: Struggling with tough crusts

The type of fat used won't impact the way the dough handles to any great extent, I say this because oil, being a liquid, will help to make the dough a tad softer however it does not impact the extensibility characteristics of the dough. Plastic type fats are most commonly used in thick crust and pan-style pizzas where they help volume of the crust by providing additional strength to the dough during final proofing which in turn improves oven spring characteristics of the dough.

**New York Style / Re: "Achieve a Lighter, Tastier Thick Crust Pizza"..
Formulation Change from Tom L.**

Proofer;

You will need to use 0.6% IDY to replicate the performance of 1.5% CY. I'm not sure what you mean when you ask about different volumes when referencing fats? Assuming you are weighing your ingredients an ounce of oil is the same as an ounce of butter or lard just as an ounce of ice is the same as an ounce of water.

**New York Style / Re: "Achieve a Lighter, Tastier Thick Crust Pizza"..
Formulation Change from Tom L.**

I use a simple pastry brush with soft bristles. In this case less oil is more desirable, all you want is an oil shine on the skin. Spraying puts WWAAYY too much oil on the skin.

Tip: A good artificial bristle paint brush 1.5 to 2-inches wide works great.

Dough Clinic / Re: Sauce bleed -through

My preference is to add the water, then suspend the CY in the water, add the flour and salt together and mix just until a smooth dough is achieved. This results in a more uniform dough than is achieved if the flour is added in stages.

If you are using a dough absorption over 70% you may find it advantageous to put the water in the bowl followed by the flour and mix just enough to incorporate the flour, then allow this (autolyse) to rest for about 30-minutes, add the CY and mix for 2-minutes then add the salt and mix until a smooth dough is achieved.

Neapolitan Style / Re: adding flour during mix

I've never heard of pure lecithin being an egg "replacement". One whole egg only contains about 125 milligrams of lecithin with the remainder being mostly water, protein and fat. While the lecithin could be a stand-in for the fat content it certainly won't coagulate like the egg protein does and it will contribute little to no impact upon the browning reaction due to the protein content and this doesn't even address the nutritional properties of the egg.

Dough Ingredients / Re: Bakingbusiness.com Article: Emulsifiers

I was in Sydney, Australia a number of years ago when we had a monsoon come shore, it dumped the equivalent of 42-inches of rain in 24-hours, it was like having a fire hose pointed directly at you for 24-hours! Not exactly something I would want to go through again if I could help it.

To all of our friends in the path of the storm I echo the words of Jackitup; Stay safe!

Chitchat / Re: Houston Floods.....AGAIN!!!

It all depends upon how big your "bulk" dough is weight wise, will assume it's in a bowl. There are also lots of other factors which could influence how the dough preforms under such conditions too, such as the finished dough temperature and if the dough is covered or left open for a period of time (cross-stacked) after being placed in the fridge. The short answer to your question is that if your total dough weight is about 18-ounces or less your "bulk" dough is really just a larger size dough ball and it will act as one during the cold fermentation period.

Neapolitan Style / Re: Bulk Ferment in Fridge for 48 hours??

Yes, but please define "portable" for your specific needs.

Pizza Ovens / Re: Deck ovens

The attachments as well as the attachment method appear to be very much like that of a Hobart mixer. You might want to see if Hobart mixing attachments will fit it.

Prep Equipment / Re: Second-hand Mixer Score

While Teflon works with releasing baked dough (crust) it will not release raw dough as is the case when peeling a pizza into the oven. Sticking is not an issue with an oven peel since the dough is already baked and crusted. The idea with a prep peel is to put a coarse material onto the peel as a "peel dust" before placing the dough skin onto the peel, the peel dust will act as ball bearings under the dough to allow it to be easily shuffled off of the peel either in a single stroke or several short strokes.

Stones/tiles/steel, Pans & Accessories / Re: Non-stick Peel

Also, as I've said so many times before, oil/fat is a "tenderizer" as such it contributes greatly to a more tender eating characteristic of the finished pizza. If you want to see this first hand just buy two packages of tortillas, one a regular tortilla and the other a fat free tortilla, eat one of each and you will see how it influences the texture of the tortilla. It does the same thing in pizza crusts too.

Newbie Topics / Re: Struggling with tough crusts

Absolutely! There really isn't anything very special about the PH thick crust dough that would prohibit its use in making a thin crust pizza. There are some commercial frozen pizzas being made using cold pressing equipment which requires the skin to be pressed onto a special pan, and since a pan comes into play oil is needed to facilitate release of the crust from the pan (crusts are par-baked) hence they are fried as opposed to being baked in the traditional manner and don't forget about the Celeste brand frozen pizzas, they are made using a fried crust. Frying absolutely improves the crispiness of the finished crust (any crust formulation), so if you want to use a PH thick crust clone dough formulation and bake it in a pan using oil as a thin crust go for it, it will absolutely work.

American Style / Re: PH pan rolled thin?

I did quite a bit of work with the different Caputo flours last year, the Caputo Pizzeria, while high in protein content doesn't exhibit good fermentation tolerance which is a characteristic of the soft wheat protein as opposed to the amount of protein present. When it comes to adding sourdough starters it's a wild guess as to how much to use unless you know both the pH and TTA of the starter you're adding. It might be a case of your starter just being too strong at the 20% level so

my first inclination would be to use it at a lower use level, maybe try it at 15% and then 10% to see if that helps any. Remember, a dough that has excessive acidity will be weak and tear easily and it also might show signs of being difficult to achieve a decent bottom crust color.

Dough Clinic / Re: A Couple of Dough Management Questions

First off, 0.2 to 0.3% IDY is not exactly what I'd call a "trace" amount of IDY, it's essentially a full dose of IDY for a CF dough. This in itself might be the source of some of your issues? I wouldn't recommend going to the lower finished dough temperature as you've proposed since it will be much more difficult to consistently achieve (the further your targeted finished dough temperature is from the room temperature the more difficult it will be to consistently achieve your targeted finished dough temperature. My advice is to keep it where it's at in the 70 to 75F range.

Tom Lehmann/ The Dough Doctor

Dough Clinic / Re: stretch and fold and FDT

It's impossible to comment on your question regarding the yeast amount as we don't know how much you're presently using, but the advice you got about using a fork type mixer and not cross-stacking is incorrect in my humble opinion. The reason for cross-stacking is to achieve improved consistency in cooling the dough balls AND to eliminate the formation of condensation within the dough box due to the dough being warmer than the ambient temperature in the cooler. It's just a matter of basic physics.

Dough Clinic / Re: A Couple of Dough Management Questions

With 1Kg. of flour weight you will need to use approximately 3.75-grams of IDY or 5-grams of ADY when using the dough management procedure I've described. 7-grams would be WAAAY too much.

Dough Clinic / Re: Pizza dough - 2 and 3 days cold ferment

There's a reason why it is highly suggested that flour not be consumed raw. It's a miracle that this doesn't happen more than it actually does when you consider how wheat is handled and processed into flour.

Pizza News / Re: GM Unbleached AP Recall

Forget the "window pane" test unless you're planning to make bread. If the dough is too sticky for you to easily handle just lightly oil your hands. You only need to mix the dough until the lumps are worked out of it, bio-chemical gluten development will take care of the rest for you.

After mixing the dough the temperature should be in the 70 to 75F range (achieve this by adjusting the water temperature). After mixing, immediately scale and ball, place the dough balls in your fermentation containers or lightly oil the dough balls and place in individual Food

Saver plastic bags (like bread bags) DO NOT use Zip-Lock bags. We have discussed how to use the plastic bags many times here so a quick search will give you full details on how to do it if you wish to go that route.

Be sure to lightly oil the top of each dough ball after placing it in the container and leave it uncovered for at least 2-hours, then apply the lid for the remainder of the time in the fridge.

When ready to use the dough remove from the fridge at least 2-hours prior to use time. You want the dough to warm to an internal temperature in the 55 to 60F range before opening, once the dough has reached this temperature it will remain

good to use for a period of 2 to 3-hours depending upon temperature.

Dough Clinic / Re: What can cause dough to be too stretchy?

JPB;

Bleed through can be a problem if you are stretching the dough very thin and not applying a light film of oil to the skin before saucing. It can be a problem resulting in a gum line on just about any type of skin/crust if you allow the dough to set for an extended period of time after saucing (again lightly oiling the dough helps here too). My dough weights for a 12-inch pizza go as low as 9.5-ounces and I've never had an issue with bleed through even when the pizzas are staged for a few minutes prior to going into the oven (this is with a decent sauce that isn't separating), and when I'm using fresh tomato slices as I typically do at this time of the year I ALWAYS lightly oil the dough skins prior to application of the tomato slices.

NOTE: Bleed through tends to be more of a problem with doughs that do not contain any oil/fat than with doughs that contain 1 or 2% oil/fat, this is because the oil in the dough helps to prevent the migration of moisture from the sauce/toppings into the dough before, during and after baking.

Dough Clinic / Re: Sauce bleed -through

Agreed, more information would be useful, but also keep in mind that this is a common problem if the dough is not being opened correctly. be sure to stretch the edges of the dough as well as the center section, failure to do so usually results in an overly thin center section. I have some video footage of how to open a dough ball shown on my web site <www.doughdoctor.com> that may be helpful.

Neapolitan Style / Re: thin spot in my dough when stretching

Just make sure you ball the dough immediately after mixing (finished dough temperature 70 to 75F), and leave the containers OPEN for at least two hours after placing them into the fridge, then lid. It is suggested that you lightly oil the top of each dough ball after placing in the fermentation container as this will prevent the dough from drying out during the time its uncovered. When you remove the dough from the fridge for final use allow the dough balls to warm to an internal temperature in the 55 to 60F/12.7 to 15.5C range before beginning to open them into skins. Once the dough balls have reached the target temperature range they should remain good to use for a period of 2 to 3-hours. Just remember to keep them cover to prevent drying after you remove them from the fridge.

Dough Clinic / Re: Pizza dough - 2 and 3 days cold ferment

You should be fine with 1 to 2% oil. It will promote improved/greater oven spring and flavor in the finished crust.

Dough Clinic / Re: Oil in dough

??????? ???

Dough Clinic / Re: Sauce bleed -through

I didn't see any mention of finished dough temperature which has a very high probability of being another variable, and one which has a significant impact upon the amount of fermentation the dough will receive in any given period of time. If the dough was warmer it could account for the difference, additionally, the 3-hours warming period after CF could also be a contributor. As for the differences in yeast, if the CY was fresh and used at the correct substitution level I wouldn't expect any issues, but if the CY was not properly stored or old, or used at the incorrect substitution level for ADY it could be a contributor. By the way, the correct

substitution of CY for ADY is twice as much CY as ADY.

Dough Clinic / Re: What can cause dough to be too stretchy?

The sauce gets cooked on the pizza during the normal baking process so there is no need to cook the sauce prior to application on the dough skin. Some like to "bloom" their herbs, if that's the case just put the herbs in a little oil and lightly heat then add to the sauce and stir in. If you like the aroma of the sauce when it's being cooked just remember that those aromas are lost forever and will never be enjoyed as part of your pizza flavor profile. Plus cooking the sauce prior to use leaves the door open for something to go wrong during the cooking process, like scorching the sauce, when this happens it doesn't take much to ruin the sauce.

New York Style / Re: Cooked Sauce yuk!

If you're looking for a way to make your bread softer and maybe extend the shelf life by a day or so the oldest trick used by bakers to create a softer bread with improved shelf life characteristics is the use of mashed potatoes/potato flakes in the dough. Typically, 5 to 10% dehydrated potato flakes is all that's needed (remember that potato flakes will require an increase in dough absorption equal to about 2.5 times the weight of potato flakes being added. We use 2.5% dehydrated potato flakes in pizza dough that was developed for use in Japan where they wanted a soft eating finished crust. A couple of things to keep in mind, the addition of potato flakes to the dough will increase crust color development and be sure to use non-sulfited potato flakes as the sulfites (added to prevent the potatoes from oxidizing to a brown/gray color) will also adversely impact the yeast activity. Overall, we have found very little real application for "emulsifiers" in pizza dough. The two main ones being used are SSL (sodium stearoyl lactylate) and DATEM (diacetyl tar taric acid esters of mono glycerides). Both of these act in a similar manner in both bread and pizza doughs as dough strengtheners (prevents/minimizes dough collapse as it is mechanically transferred to the oven for baking) and most importantly, in pizza dough it enhances oven spring by about 15%, but consider this, in bread that's 15% of a dough that has a height of about 115-mm while for a pizza crust that 15% of 2 to 3-mm for a thin crust or maybe 15 to 20-mm for a thick crust.....in pizza that equates to a 0.3 to 0.45-mm height enhancement for thin crust or a 2.25 to 3-mm height enhancement for a thick crust. The standard deviation in height for both types of crusts exceeds those enhancements! So why are they use? The answer is to ensure that the dough doesn't suffer total collapse at the hands of the consumer.

In my early years at AIB I did much of the applications work on the use of emulsifiers in different dough systems. By the way, try to stay away from using a high ratio cake shortening in any pizza dough, these specialized shortenings contain poly-sorbates aka "Tween" to enhance batter aeration of the batter, the insidious thing about the poly-sorbates is that water can be mixed into water in their presence, without physical agitation, this means that if used in the dough, the water released from the sauce/toppings can/will migrate directly into the dough to create a wet, pasta like gum line under the sauce thus destroying the textural properties of the finished crust.

Dough Ingredients / Re: Bakingbusiness.com Article: Emulsifiers

I had one of the old M-800 Hobart mixers back in the 60's and early 70's. If I remember correctly there is a
n oil fill cup located on top of the planetary mechanism. Also, be sure to lubricate the bowl lift mechanism and adjust the agitator to bowl clearance (use a nickel) to set the clearance. You might be able to get a schematic on it directly from Hobart

Corporation in Troy, Ohio.

Prep Equipment / Re: Grease commercial mixer

Looks a lot like the old P.H Big Foot pizza.

Pizza News / Re: Fast Casual Chain & Pizza

No "rule" but there is a procedure.

1) Calculate the absorption for the amount (weight) of "00" flour.
2) Calculate the absorption for the amount (weight) of rye or whole wheat flour. For rye flour and whole wheat flour use 75%.

3) Add the two absorptions and this will be the total amount of water to add to the dough. Note: The actual, final absorption may need to be adjusted slightly, but this will get you close enough to make pizza on your first "go around".

When expressing the dough absorption in bakers percent divide the weight of water added by the total/combined weight of the "00" and rye or whole wheat flours and multiply by 100.

Dough Clinic / Re: Flour Experimentation

The dough management procedure is the same whether the dough is mixed by hand or machine.

Newbie Topics / Re: Tom Lehmanns Dough Management

Steven;

I will assume your room temperature is 70F. which is pretty normal, so you will need to use water at about 65F to achieve a targeted finished dough temperature on the 80 to 85F range. The easiest way to find the desired water temperature for a targeted finished dough temperature in the 80 to 85F range is to subtract the flour temperature from 145 which will give you the approximate desired water temperature.

Newbie Topics / Re: Water Temp for NY Style

It's not a case of "could it be the problem", it is the problem. Cold dough right out of the cooler will always bubble unless the dough has been specifically formulated for use in this manner. Why don't you just pre-open the skins, place them on pizza screens and store in a wire tree rack (covered with a food contact approved plastic bag) in the cooler? This way all you need to do to fill an order is to remove a skin, turn it off of the screen and manually clean it up a little (hand/table stretch) then dress it to the order and it's ready for the oven. Because of the greater surface area and reduced cross section the skin will have warmed sufficiently so as to reduce or eliminate the bubbling by the time you're finished dressing the skin, and if you want to go the "belt and suspenders" route, just dock the skin immediately before beginning to dress it.

Dough Clinic / Re: Cross Stack and Seal

Jared;

I'm confused over exactly what flour/flour blend you used. Was it whole wheat flour, was it rye flour, a blend of rye flour and whole wheat flour or a blend of "00" plus whole wheat and rye flour?

To answer your basic question, both whole wheat and rye flour have a significantly higher absorption than "00" flour and unless this higher absorption rate is accounted for either/both will result in a dry, stiff dough. By the way, both rye and whole wheat flour will have a shorter fermentation requirement than "00" flour.

Dough Clinic / Re: Flour Experimentation

Q.J.;

Spot-on! There is also less head-space for the condensation to collect in. At the end of the day the sheet pans are also faster and easier to clean, not to mention the fact that they are significantly cheaper to purchase too.

Dough Clinic / Re: Cross Stack and Seal

If your oven is of one of the newer generation air impingement ovens (less than 10-years old) it may bake pan pizzas at the same time and temperature as your thin crust pizzas. If your oven is one of the older designs start at 435F for 7.5-minutes and bench make from there.

There are just too many different designs of air impingement ovens as well as finger profiles to be more specific.

Dough Clinic / Re: What temp and time?

One trick that will work well in high volume situations is to use aluminum sheet pans. Place the dough balls onto the sheet pans and lightly oil the top of each dough ball, then slip a food contact approved plastic bag over the entire sheet pan, pull the bottom of the bag up over the first row of dough balls then pull the top down and tuck it under the pan. This works quite well and is commonly used in commercial pizzeria applications. The plastic bags can be reused a number of times too. Just be sure to use a plastic scraper to lift the dough balls off of the pan as a metal scraper will gouge the aluminum sheet pan. The best way to store the sheet pans is in a rolling vertical rack with a 5-inch shelf spacing.

Dough Clinic / Re: Cross Stack and Seal

That would make a lot more sense :-D

Newbie Topics / Re: Yeast %

Are you sure about those dough weights? They seem pretty light to me for those sizes. I've never been able to open one pound of dough to much more than 30-inches and at that it was too thin for making a decent pizza in my opinion. For a 40-inch pizza I would be using something closer to 6# of dough as opposed to a little over one pound. Am I missing something?

Newbie Topics / Re: Yeast %

Plastic Food Saver bags! They work better than dough boxes, a lot cheaper too. If you will search back in the archives (not very long ago) we had quite a bit of discussion on this very topic.

Stones/tiles/steel, Pans & Accessories / Re: Dough trays - cheaper alternatives?

Some commercial wood fired ovens will have decks 6 to 8-inches thick which hold a LOT of latent heat. The downside is that ours took 3-days to reach full operating temperature from a cold oven which is a real pain. The one thing that I got out of it is an appreciation for a dual fuel (wood and gas) oven. The gas is used to maintain an idle temperature during the night and on any days that the store might be closed while the wood does the work during business hours. Back when all of our ovens were either wood or coal/antracite fired there was good reason to live above the shop if you were a baker or pizzeria operator.

Neapolitan Style / Re: Manage floor temp w many bakes

When was the last time you saw prime rib advertised as being fast baked/roasted?

Baking develops flavor, just try a pizza before and after baking to prove this to yourself. A longer/slower bake for the type of pizza being made will always have more flavor than one that is baked as fast as possible. Sometimes it's only a matter of a few seconds more bake that makes the difference between a good pizza and a great pizza. Case in point, one of the major box pizza chains has an OK pizza but if they would bake it 30-seconds longer it would be a much better pizza all around, I guess corporate feels that they would loose too much business if they baked their pizzas for 30-seconds longer, you can only wonder if they ever looked at the other side of the coin?

Neapolitan Style / Re: World record for fastest bake

If you will provide us with your present dough formula and procedure I will be glad to change it up to produce more of the characteristics which you are looking for.

Dough Clinic / Re: Not NY Style dough formula please

Yael;

I hope there ain't any shakin' going on while you're there.

Got a little shaky when I was there last.

Dough Ingredients / Re: Cake yeast ?

It's really hard to say what the issue might have been but it might indeed have been the difference in oven temperature or how the pizzas were actually baked between on the screen and on the deck. When on the deck even just a few seconds can/will make a significant difference. I've got a hunch that that's where the issue was at.

Dough Clinic / Re: Same dough and yet, hmmm?

Moose;

Are you using "exotic" hardwoods? From the picture it looks like maybe blood wood, tiger wood, maple and possibly ebony? In any case BEAUTIFUL!

Stones/tiles/steel, Pans & Accessories / Re: pizza cutting boards?

Yael;

I've worked in China (Chengdu) and know what you are talking about, in a case like that what I did was to simply add the IDY directly to the dough after it had been mixed to a point where it had just come together in a mass. All it needs after that is at least 5-minutes of mixing and it's good to go.

Dough Ingredients / Re: Cake yeast ?

Compared to your cutting boards it must look like I'm cutting my pizzas on a rock! Great idea with the long one, the pizzas should remain hot a little longer on the wood board than on a serving tray when multiple pizzas are the order of the day. Now, the multi-colored one, my personal opinion, is that it's GEORGOUS! :drool: :drool: Makes my plain maple board look like a stone!

Well done!

Stones/tiles/steel, Pans & Accessories / Re: pizza cutting boards?

Let's see;

Compressed Yeast/Fresh Yeast/Block or Brick Yeast/Wet Yeast/CY

Disadvantages:

- 1) It must be kept refrigerated at all times.
- 2) It has a very limited shelf life, and you may not know how it was stored or how old it is when you buy it.

3) The amount that you use one week will likely be different from the amount needed the following week due to normal deterioration of activity.

4) Must be kept separate from salt and/or sugar.

Advantages:

1) Like Craig said "It sounds cool".

2) Can be added directly into cold water without issue.

3) Can be added to a machine mixed dough just as it is.

4) Lower cost if you are buying it by the pallet load and you are reasonably close to the point of manufacture.

Sorry, I really can't come up with many good reasons for using CY over IDY for most applications.

Dough Ingredients / Re: Cake yeast ?

I might add that your dough ball count per box appears to be a bit high for the size of dough box you're using. There should be a minimum of a 1" space around each dough ball.

Neapolitan Style / Re: Longer fermentation in room temp

All of my peels are from <MrPeel.com> They WILL ALWAYS warp if NOT handled properly.

I also have a peel from <portionpeels.com> which I like a lot as it has laser burned circles on the top side to help size and keep your pizzas round. I believe their peels are also from Mr. Peel.

1) Wipe the new peel with mineral oil over ALL surfaces. This will help to seal the wood.

2) NEVER/NEVER/EVER wash your peel. Wipe it with a slightly damp towel if it needs cleaning.

3) Over time your peel may develop rough spots, these are easily removed by LIGHTLY sanding with a 220 or finer grit sand paper, and then resealing.

4) Periodically wipe your peel down with a little mineral oil.

5) Remember, wood peels are prep peels, they are not meant to remove pizzas from the oven.

Dough Clinic / Re: Basic questions

Michiel;

A good temperature to begin opening the dough balls into skins is 60F when making pizzas at home. What kind of yeast are you using ADY, IDY or CY? In any case, when mixing the dough by hand as you are the yeast should be suspended in the dough water. A good procedure is to add water to the bowl, add the yeast (if ADY or IDY it will need to be hydrated/activated in 100 to 105F water first), CY can be added directly to the cold dough water. Then add the salt and IMMEDIATELY add the flour, mix until the flour is hydrated then add the oil and following your normal mixing procedure from there.

Newbie Topics / Re: I don't like my pizza's.

It's a lot easier to open the skin and place it onto a wood prep-peel, then dress it as desired and peel it into the oven. Fine corn meal, semolina flour or rice flour are all good for use as a peel dust.

Dough Clinic / Re: Basic questions

Yes, it's a good idea as it will prevent the lid from being blown off due to pressure build-up in the container.

Dough Clinic / Re: gooey dough

My suggestion is to use 0.5% ADY which should be hydrated/activated in about 5 times its weight of water at 100 to 105F.

Adjust the temperature of the remainder of the water to give you a finished dough temperature in the 75 to 80F range (favoring 75F).

To address your peel dust issue please provide your complete dough management procedure.

Dough Clinic / Re: Basic questions

Michiel;

These are my suggestions;

Reduce the salt to 2% (this will allow for slightly more fermentation within your 24-hour period of time.)

Eliminate the semolina flour and replace with your regular white flour. (semolina flour tends to make for a tougher, more elastic dough).

When you're getting ready to open the dough balls into skins you want to allow the dough balls to warm to 55 to 60F before opening the balls into skins. Allowing them to get too warm can result in the dough becoming too bucky/elastic.

Let us know how this works for you. One other thing: Try to target a finished dough temperature in the 70 to 75F/21.1 to 23.9C range.

Newbie Topics / Re: I don't like my pizza's.

Huh? First time I've ever heard that about malt syrup. Malt, whether dry or in syrup form comes in two flavors, diastatic (enzyme active) and non-diastatic (non-enzyme active). Non-diastatic malt is used in the same way that sugar is used with one significant difference, it can provide a flavor other than sweet. At low use levels the flavor is said to be slightly "nutty" while at higher levels (above 3%) the flavor imparted is more like that of malted milk balls (candy). Diastatic malt (usually in the dry, powder form) is used at much lower levels, typically from 0.25 to as much as 0.5% depending upon the Lintner value so it is never used at levels high enough to contribute a flavor. The diastatic malt is a source of alpha amylase enzyme which converts wheat starch into sugars which can be metabolized by bakers yeast. Since this action takes place over time it is commonly used to support long dough fermentation times. It can also contribute to crust color development too as the residual sugars produced will contribute to the browning reaction during baking. Since the starch component of the flour is implicated with the staling process, many commercial bakeries will add diastatic malt to their dough formulations to help with reducing the amount of starch present (it's hydrolized into sugars) which in turn helps to provide for a softer, slower to stale finished bread. When an excess amount of diastatic malt is added to the dough formula the dough will become more and more sticky over time which can make the dough especially difficult to handle during the dough forming stage. This stickiness is impossible to address and has been known to gum-up bread and bagel forming equipment.

I've never heard of any form of malt being associated with making stronger doughs or affecting the dough texture aside from stickiness, but at high levels it could easily hydrolize sufficient starch (starch carries only a small amount of the water prior to baking) which will release the water being carried by the starch to provide for a slightly softer dough, maybe that's what you are seeing? But at levels like this you would also be experiencing significant stickiness in the dough at the same time.

General Pizza Making / Re: First time with diastatic malt

In addition to reducing the dough absorption you will also want to NOT lid the containers right away. Instead, lightly oil the dough ball(s) and leave them UNCOVERED for at least 2-hours after placing them into the fridge, this will allow the dough balls to cool without the formation of condensation in the container which I am sure is contributing to the sticky dough condition. After the 2-hour period (uncovered) apply the lids BUT make sure there is a small hole in each lid to vent off any gas formation inside the container. You could also just place a piece of aluminum foil over each container and LOOSELY crimp the foil to the container.

Dough Clinic / Re: gooey dough

You're not going to get the same flavor or textural properties with a 6-hour dough that you would get with a 20-hour cold fermented dough. So now that you have the "ingredient", make your dough and give it the usual 20-hours cold fermentation.

Dough Clinic / Re: Rise Time

I think Amolapizza's suggestion to just keep the dough in bulk longer is an excellent one. When you scale and ball a bulk dough it has a similar effect to re-balling a dough (tightens it up and re-strengthens it). If your flour has the strength to tolerate the additional fermentation this approach might be your best bet. If you should find that the dough is too soft and sticky this would be an indication that you have exceeded the fermentation tolerance of the flour, if that's the case your best bet might be to further reduce the finished dough temperature by utilizing some or all ice water in the dough formulation.

Neapolitan Style / Re: Longer fermentation in room temp

Actually, putting the torn/peeled mozzarella on this way presents the side with the greater surface area to the heat so the moisture has a greater surface area from which to evaporate. Physics #101.

Dough Clinic / Re: FRESH MOZZARELLA ON ROMAN PIZZA: WATERY BASE???

From the looks of your pizza you're struggling to open the dough. Please provide details on your finished dough temperature and dough management procedure, this is where the flavor and texture of the finished crust are largely developed and the dough is conditioned for opening without dough memory/snap-back.

Newbie Topics / Re: I don't like my pizza's.

Where on earth did you get the idea to allow the dough to warm to room temperature before using it? I always say to allow the dough to warm AT room temperature until it reaches 50 to 55F (50F for use in a pizzeria). Doing this will not create a gassy dough ball and it will give you about a 2.5 to 3-hour window of time to use the dough balls from the time they reach an internal temperature of 50F. If when doing this you still have a gassy dough we will need to look at your finished dough temperature. Your room temperature of 25C/77F is pretty typical for a pizzeria so it's not a problem at all.

Dough Clinic / Re: Question for the Dough Doctor

Because I'm familiar with the Eurobib as they are at Pizza Expo, but when it comes to spiral mixers, buy whatever you're comfortable with, I've yet to see or hear of a bad one, with that said, take heed if someone takes issue and complains that they have actually used a bad one, you will have narrowed the field of selection down by at least one.

Prep Equipment / Re: Kitchenaid Mixer has burnt out - What can I use for

Neapolitan pizza dough?

Your intuition is correct as there just isn't any significant call for it outside of the commercial market. With that said, you can make a fair to middlin' version of it very easily. Just use and U.S. household butter, freeze it and shave it into strands/ribbons like you would a hard cheese or chocolate. Immediately put the shaved butter back into the freezer for at least an hour, remove from freezer and place between two pieces of waxed paper, tap with the handle of a table knife to break the frozen butter into pieces 3/16 to 1/4-inch in size. Immediately place back into the freezer until ready to use. Use a dough absorption of about 56 to 58%, mix until the dough just begins to smooth out, then add the frozen butter chips and mix JUST until they are fairly well incorporated (better to error on under mixing than over mixing. Remove dough from mixing bowl, roll out to about 1/2 to 3/4-inch thickness, give a 3-fold and place into the fridge to rest about an hour, or until the dough can be sheeted again the same way. Rest the dough in the fridge after the second 3-fold for 4-hours, then scale into desired weight pieces (I an inverted coffee can to cut circles), pin out the cut circles of dough to full diameter, the skins can be rested for holding in the fridge or used immediately if the temperature of the dough is at 50 to 55F which it usually is after pinning it out to full diameter. If you store the full size skins in the fridge you will need to allow them to warm to 50 to 55F before use, it won't take very long.

By the way, if you want to read up on how the bakers did this before the advent of hard fat flakes study up on the "Blitz" method of making laminated pastry.

Tom Lerhmann/The Dough Doctor

Cracker Style / Re: What Hydration Makes it "Cracker"?

I've never tried them, but don't let that stop you from giving them a try. When I'm working with fresh mozzarella I slice and layer between clean bar towels for about an hour prior to use. You're over thinking this, it'll give you a headache. :)

Dough Clinic / Re: FRESH MOZZARELLA ON ROMAN PIZZA: WATERY BASE???

I agree with Jeff. In my world dough that has been properly managed for cold fermentation really doesn't need to be degassed or re-balled, but room temperature fermented dough can be a totally different story. Dough that has been bulk fermented at room temperature should be "punched" when it reaches its maximum height and just begins to recede a little. Otherwise, the dough will be naturally degassed when you scale and ball it. Dough balls that are fermented at room temperature and become over fermented, for whatever reason, are usually re-balled at the soonest opportunity, this re-balling significantly tightens the dough ball necessitating the need to ferment the dough balls for additional time to allow them to loosen up for ease of opening and reduce dough memory (snap back) of the opened skin.

Note:

In bread production, when a bulk dough (regardless of the temperature at which it is fermented at) reaches its "first full rise" (this is where the dough ferments to its maximum height and then begins to recede on its own as described above) it is deemed to have received 2/3 of its optimum fermentation so after being punched, the dough is given the final 1/3 additional fermentation time before it is scaled and balled. Since pizza doesn't abide by the same rules as bread you have a lot more latitude in fermenting the dough with regard to time and temperature BUT if you venture into the over fermented dough territory, when you go to open the dough balls into skins you will find the dough balls tough and bucky and impossible to

open by any means.

Dough Clinic / Re: When to degas the dough?

I'm still seeing the same thing. Typical to what we get when using hard fat flakes. Where the fat flakes melt out a void is developed which forms the oval shaped void called a "fish mouth" where there are no fat flakes to melt out the crumb structure consists of smaller round shaped cells. I think we're looking at the same thing just calling them by different names.

Cracker Style / Re: What Hydration Makes it "Cracker"?

A trip over to the local metal salvage yard can turn up some real treasures on a good day.

Stones/tiles/steel, Pans & Accessories / Re: Fabricating your own baking steel

It all depends upon the application and type of pizza I'm making. If it's more of an artisan (I'm using that term loosely) I prefer to use the fresh, ditto for New York and Neapolitan, but if it's for most others as well as DELCO I usually opt for a shredded low moisture mozzarella.

Dough Clinic / Re: FRESH MOZZARELLA ON ROMAN PIZZA: WATERY BASE???

Cut thin and place between towels to drain as best you can or peel it like an orange (that's how I do it) and place the pieces on top of the pizza as the last ingredient. In some cases with home-made cheese we find it necessary to apply the cheese about half way through the bake.

Dough Clinic / Re: FRESH MOZZARELLA ON ROMAN PIZZA: WATERY BASE???

Yes, you only activate the ADY in approximately five times its weight of water, never all of the dough water as you are indicating. Once the ADY has been hydrated and activated it can safely be added directly to ice water if necessary.

Dough Clinic / Re: Autolyse

John/Pete-zza;

Sorry, I don't see any "pin holes" I only see a laminated cell structure with some very classical "fish mouthing". Maybe what you are calling "pin holes" is what I'm seeing?

Your dough looks very much like the dough that we make using hard fat flakes. When it comes to mixing a cracker type crust we have had our best success using a planetary type mixer with a pastry knife attachment. With this attachment the mixing time is significantly longer than with a regular dough mixing attachment but it does a great job of blending the ingredients into a homogeneous mass while distributing the fat evenly throughout the dough. This is the preferred attachment for making pie dough too so it's no wonder that it works well in this application. The least effective mixer for making the cracker type dough is the spiral mixer, they were never designed for cutting and blending which is what is required for making a cracker type dough.

Cracker Style / Re: What Hydration Makes it "Cracker"?

If you are going to be mixing doughs on a regular basis, my advice is to "bite the bullet" and buy a spiral mixer. It will most likely be the last mixer you'll ever need to buy (unless you need a larger mixer). Google (Eurodib dough mixers) and take a

look at the Eurodib Model LM20T. It's priced at just under \$1,000.00 but as an investment it will be cheaper than several smaller mixers that you may burn-out over the years. This mixer also has the added feature of an 8-Kg. dough capacity while mixing smaller doughs like a "walk in the park".

Prep Equipment / Re: Kitchenaid Mixer has burnt out - What can I use for Neapolitan pizza dough?

Peter;

I think too many people are too wrapped up in dough formulation as a distinguishing feature between thin crispy and cracker. We found that not to be the case at all, you can make a very good cracker type crust using 2% total fat if you are willing to go the lamination route as you can get with 4 to 8% fat by mixing a shaggy dough (about 45-75-seconds). When we did the development work back in the 70's we found that a plastic shortening worked much better than an oil in this application as it did not soak into the flour thus destroying any ability to create crispiness. When we did the development work we looked at how saltine crackers are made (under mixed using a spindle type mixer) and then also looked at how a long to medium flake pie crust is made (has a lot of the characteristics of a cracker type crust) and used that as the basis for our development work. More lately, in the 90's we were looking at the use of hard fat flakes in very under mixed (shaggy) doughs to achieve this. While the results were pretty good we thought the crust was more like that of a laminated croissant than what we were looking for. In my archives I've got the entire procedure using the hard fat flakes captured on a DVD. We ended up using this approach when we were asked to develop a dough for use in making pizza cones where it worked beautifully with just a little modification to allow it to be pressed into the desired cone shape while still retaining the desired flaky characteristics in the finished crust/cone.

Cracker Style / Re: What Hydration Makes it "Cracker"?

One of the characteristics of bread staling is loss of flavor. Are you sure this is not what you are picking up on? Bread staling takes place most rapidly at temperatures between 20 and 50F which is why we don't store bread in the fridge (home freezers are not much better either), if you want to make croutons just slice the bread and store in the fridge overnight and you'll have nice firm bread on the following day.

Dough Clinic / Re: Soapy taste, leftover pizza?

ADY should be activated in 100 to 105F water to prevent glutathion from leaching out.

Dough Clinic / Re: Autolyse

Thin crispy style crusts are indeed sheeted as are cracker style crusts but the absorption is a bit higher, usually around 45% along with a longer mixing time as previously noted. Thin crispy crusts tend to be more dense than cracker style too. We use to say that you know when you're eating a pizza made on a cracker crust when you have crumbs in your lap. A number of years ago we saw commercial attempts at this type of crust, Schwan's probably had the most visible as it was called their Italian Pastry Crust Pizza. While the crust appeared to be laminated it really wasn't, instead it was made using hard fat flakes mixed into the dough to give it a laminated and cracker like appearance. So, what does a real cracker crust look like? It looks like a saltine cracker and it eats somewhat like one too. For those who are old enough to remember, this is the type of crust that put Pizza Hut on the map, it's the original thin crust that they had back in the early 60's, what they have

now is more of a thin crispy style. A good example of thin crispy is that made by the Pizza Shoppe (Kansas City) as well as any number of pizza buffets our local Pizza Ranch has a fair to middlin' version of a thin crispy crust.

The only place that I can think of off hand that might still make a cracker type crust (they use to at least) is Incredible Pizza (Springfield, MO.)

Cracker Style / Re: What Hydration Makes it "Cracker"?

Are you pre-activating/hydrating the ADY prior to addition or just adding it dry?

Dough Clinic / Re: Autolyse

Cracker type crusts are typically made using a dough absorption somewhat less than 50% and a mixing time of 2-minutes or less. The dough is handled much like a long flake pie crust and has to be formed using a dough sheeter/roller as it's too tough to open any other way. When the dough is mixed longer to form a homogeneous dough mass the end result will be a thin crispy crust as opposed to a cracker type crust. We have had previous discussion on making cracker type crusts. If you have ever visited Incredible Pizza you have had their cracker type crust. It holds up really well on a buffet line.

Cracker Style / Re: What Hydration Makes it "Cracker"?

One of the characteristics of salt is that it tightens the dough, if you omit the salt from the dough formula you will always get a softer, more slack dough consistency than if the salt were present at normal levels.

Dough Clinic / Re: Starter is not dissolving in water

Craig;

Bread type flours will typically use a combination of benzoyl peroxide for bleaching and ADA for chemical oxidation/maturing of the flour. ADA is too slow acting for use as a bleaching agent. Chlorine gas is more typically used in some pastry flours but mostly in high-ratio cake flours where it plays a VERY significant roll in functionality of the flour in making high-ratio cakes.

Dough Clinic / Re: Bleached vs unbleached?

It appears that you might be washing the gluten from the flour in your starter. When I make a starter I always use at least 75% absorption in the starter and then add it to the dough as an ingredient without trying to suspend it in the water.

Dough Clinic / Re: Starter is not dissolving in water

Three questions which I have are:

- 1) What was the finished dough temperature?
- 2) How did you make the poolish? Possibly 20% is too much.
- 3) What was the total dough fermentation time between mixing and use of the dough?

Dough Clinic / Re: Autolyse

Not wrong, just differently. It may not be just one thing but instead an accumulation of several little things/differences that is responsible for the difference. Mixers, water, temperature are but a few things that can add up to make a difference.

Dough Clinic / Re: Bleached vs unbleached?

Fine corn meal works well as does semolina flour or even rice flour all make for a good peel dust.

Dough Clinic / Re: How to get pizza into oven?

I've done this two ways, maybe one of them will work for you.

This is for a small oven.

Using your metal oven peel, remove the entire pizza from the oven, immediately slip the peel under the pizza removing it from the screen and transfer it back into the oven.

The other method involves the use of long handle tongs, slide one side under the screen (you may need to flatten one side using a hammer) grasping the screen, then pull the screen out from under the pizza leaving the pizza on the oven deck. If the oven is sufficiently large you can simply use a spinning peel to lift the pizza off of the screen and place it onto the oven deck then remove the empty screen.

Dough Clinic / Re: Which kind of dough should we use with a pizza screen ?

Bleaching and oxidation of flour are two entirely different processes. Chemical ageing of the flour is accomplished using Maturox aka ADA (azodicarbonamide) while bleaching is done using benzoyl peroxide and sometimes chlorine gas. The flour is milled the same whether it is bleached or not.

Dough Clinic / Re: Bleached vs unbleached?

When vegetables become our main source of protein the world will be at the whims of Mother Nature in a big time way, specific crop types will become dominant and more widely grown thus lowering resistance to insects, fungus and a host of other insidious attacks suffered by plant species, when this happens we will have a much larger audience competing for a smaller "piece of the pie", and that ain't going to paint a pretty picture. We saw some of this very thing happen just a few years ago when there was a world wide shortage of wheat, remember that time? If not let me remind you, flour (when/if available) was selling for nearly \$50.00 a bag! The flour that was available was flour by name only, not the best by any stretch of the imagination, but it was "flour". Much of Asia has transitioned from rice to wheat since the 1960's so the "audience" was size able to say the least. There was an essentially catastrophic wheat crop failure in the U.S., poor planting and growing conditions in Canada, Drought in Australia and poor harvest conditions in Mexico and much of Latin America. Even Russia suffered the same failed crop conditions! What many people don't realize is that the world wheat surplus, which is usually measured in weeks or months was down to being measured in days and finally in hours. There was fear of civil unrest due to food shortages world wide. Yes, there were other crops available for consumption but their prices had sky rocketed and they were not being grown in sufficient quantity to off-set the wheat shortage, plus don't forget the gluten equation, there are a lot of foods that need gluten. So why not just use gums to replace gluten? Great idea, only one problem, since everyone else thought of that too the cost of ALL types of gums/binders had become cost prohibitive and non-available, we like to refer to this as the domino effect. My point is, if it can happen to wheat it can happen to any other plant. A lost plant crop can be easily converted to animal feed to grow live stock a a source of food, but eating corn/wheat/ milo/bean crop failure is not my idea of fine dining, I'd rather it be fed to the live stock first and then eat the live stock. Just my humble opinion.

Off-Topic Foods / Re: The End of Meat ?

Joel;

I've been retired from AIB for 5-years now. I put in just shy of 50.

Dough Clinic / Re: Best way to prepare for multiple pizzas

I used to tell my students that the ingredients are like bricks and mortar and you're the brick mason. Depending upon how they are assembled you can make a privy or a castle. It ain't the ingredients that makes for as great pizza, it's how they are put together and managed that makes the difference. To answer your question though, the dough formula that we used for over 35-years as our "base" dough formula for making both thin and thick crust pizzas with a refrigerated dough ball life of 3 to 4-days is as follows:

Flour (12 to 12.8% protein content) 100%

Salt: 1.75%

Sugar: 2%

Oil: 2%

IDY: 0.375%

Water: 62%

We used the delayed oil addition mixing method as well as my dough management procedure for refrigerated dough. Pizzas were baked in a variety of different ovens, B.P Deck, Marsal Deck, Lincoln Air impingement, XLT Air impingement, WoodStone Wood Fired, a TurboChef and an Air Deck to name but a few.

Dough Clinic / Re: How should I go about this?

There is a commercial product that some pizzerias and large wholesale manufacturers use that looks a lot like bread crumbs, it's called Pizza Crisp.

Dough Ingredients / Re: Breadcrumbs

Yup, once the ADY has been hydrated and activated it can be safely added into the cold water without any problems.

Dough Clinic / Re: Which kind of dough should we use with a pizza screen ?

If it were me, I'd round the flour weight off to 50-pounds then calculate the ingredient weights from the percentages that you have listed. Note: When based on 50# of flour the water at 63% calculates out at 31.5-pounds divided by 2.2 = 14.3 L. (less than your 14.9 L.). But still using the original 49.97-pounds of flour weight 49.97 X 63 (press the "%" key) and read 31.48-pounds in the display. 31.48 divided by 2.2 (pounds in a liter) = 14.3 L.

Dough Clinic / Re: How should I go about this?

Joel;

0.6% IDY is a bit on the high side and could certainly contribute to over fermented/blown dough. I suggest reducing it to something in the 0.3 to 0.4% range.

Wow! You're right in my back yard!

Send me an e-mail with your contact information and I'll try to get down to see you (35-miles away).

<thedoughdoctor@hotmail.com>

Dough Clinic / Re: Best way to prepare for multiple pizzas

Ditch the ZipLock bags, instead go with Food Saver bags. They're a LOT cheaper and they will work much better in this application.

Prep Equipment / Re: sufficient humidity for dough retarder/proofer?

Screens are not a problem at high baking temperatures IF there is a pizza on it. The pizza will absorb heat thus protecting the screen, but an empty screen in a wood fired oven can be a disaster. In the baking industry we have a similar problem

with tin plated pans, tin melts at about 450F and we do a lot of baking in the 465 to 475F range so it's important to have dough in each and every loaf pan on the strap (in our case there were 5 loaf pans to a strap). If one of the pans went into the oven empty the tin would melt off of the empty pan destroying not just the pan but the entire strap of pans which was quite expensive.

Dough Clinic / Re: Which kind of dough should we use with a pizza screen ?

I can't answer your question on yeast amount as I don't know what type or how much you are presently using, but there is a lot more to over fermentation of the dough than too much yeast such as how you're managing the dough as well as the finished dough temperature.

All of that aside, here is what I'd do;

Use 65F water temperature (looking for a finished dough temperature in the 75 to 80F range.

Immediately after mixing scale and ball the dough.

Lightly oil each dough ball and place into individual plastic Food Saver bags (NOT ZipLock).

Twist the open end into a pony tail and tuck it under the dough ball as you place it into the fridge.

Cold ferment for desired time.

To use, remove from the fridge and allow to warm to 50 to 60F internal temperature.

Roll the bag down around the dough ball and invert over a floured surface allowing the dough ball to fall free from the bag onto the floured surface.

Open the dough balls into skins by your preferred method.

Dress to the order.

Bake.

Note: The dough balls will remain good to use over a 2 to 3-hour period of time once they reach 50 to 60F.

Dough Clinic / Re: Best way to prepare for multiple pizzas

You will want to wipe it down/sanitize it between different applications. Before worrying about relative humidity you're going to need to figure out a way to stabilize the temperature. At 80% R.H. you're close enough to the dew point that any loss of temperature will result in condensation forming (you already know that). The problem with small boxes like wine coolers is that even once you get everything dialed in your dough box and dough will be cooler than the ambient in the box so you're going to get condensation forming on the dough and dough box surfaces, and if it cools the temperature in the wine cooler you'll get condensation forming on the inside surfaces. This is why, for the most part, the baking industry has moved away from using temperature & humidity controlled rooms for fermentation, instead they just control the temperature, prevent any drafts and lightly cover/drape the dough container (dough trough) to help capture the carbon dioxide formed during fermentation which will blanket the dough (green house effect) thus preventing moisture loss, also, keep in mind that the environment inside of the wine cooler will be HIGHLY caustic due to the acids formed during fermentation, it has a nasty habit of getting behind panels and into places where it will corrode anything that isn't high grade stainless steel.

Prep Equipment / Re: sufficient humidity for dough retarder/proofer?

To answer your screen question, screens can be used with any dough that will not flow into the screen openings either due to high absorption, or the need to proof the dough on the screen (especially when combined with high dough absorption).

As a general rule, 66 to 68% absorption is about the highest dough absorption you will want to use with a screen, this is assuming a fully dressed pizza. If you are making par-baked crusts you can get away using a higher absorption as there isn't the weight of the toppings pressing the dough down into the screen openings both prior to and during baking. Just make sure you season your screens well before using them, failure to do so can result in the dough welding itself to the screen during baking, and NEVER soak a seasoned screen in water, just wipe it clean and you're good to go.

As for your IDY question, DO NOT hydrate IDY in cold water, use only 95 to 100F/35 to 37.7C, water, failure to do so will leach out glutathione from the yeast cells resulting in poor yeast activity and inconsistently soft doughs. If you search back through the archives you will find significant discussion on both screens and their care and use as well as IDY. The only time you really need to pre-hydrate IDY is when mixing dough by hand or if machine mixing for less than 5-minutes, otherwise just add the IDY right on top of the flour and begin mixing.

Dough Clinic / Re: Which kind of dough should we use with a pizza screen ?

Correct, Norma and I spoke about this some time ago. They're about twice as big and a lot easier to use than the P-38 version.

Stones/tiles/steel, Pans & Accessories / Re: What can opener do you use to open your #10 cans?

The biggest down side to high absorption doughs is that it's really difficult to make a decent cracker type crust using high absorption values. :-D Aside from that, as you keep increasing the absorption the dough will eventually become too sticky to handle without using excessive amounts of dusting flour and all the collateral damage resulting from the excessive dusting flour, then too the dough will over expand during oven spring resulting in potential collapse. At some point you will see an impact upon bake time and temperature but more so than that will be a higher than normal, or desired, residual crumb moisture content resulting in a pizza that retains its crispiness for a time period measured in seconds. This is one reason why when we bake at very high temperatures crispiness takes a back seat. By the way, as moisture content goes up (especially over 68%) we need to bake at ever increasingly higher temperatures which means a shorter bake time and a less crispy crust or at least a crust which doesn't retain its crispy nature, then at some point we just can't bake out all the moisture and that's where the real fun begins.

Dough Clinic / Re: Any "downsides" to a higher hydration dough??

Food contact but probably not reheating. They're entirely different functions.

Dough Clinic / Re: Soapy taste, leftover pizza?

Just be sure to wet the sand or it won't serve the intended purpose.

Prep Equipment / Re: Hobart A 200 restoration

First things first, it's important to know how you are mixing your dough, by hand or machine, it makes a difference.

Newbie Topics / Re: ok- last question for a bit! Salt in the flour??

From the picture, the dough appears as if it might be somewhat under absorbed. Add to that the small amount of yeast called for suggests the possibility that maybe there isn't sufficient yeast in the dough (the % is correct but is the actual amount added to the dough correct?). Remember, as you knead the dough you are developing the gluten so the dough is becoming increasingly tenacious (rubbery),

this is normal especially for a low absorption dough which it appears you might be working with. The first thing I would do is to increase the dough absorption by 5% to see if that provides for an easier to knead dough, you might need to further fine tune the absorption if you see some improvement at 5%. Even if the dough is a little tacky (not sticky) that's fine as it'll improve as the dough is developed and as it ferments. Let us know how this works and send a picture of the dough.

Dough Clinic / Re: Any good recipes/techniques with these ingredients?

Works out in the field but in the kitchen?

Stones/tiles/steel, Pans & Accessories / Re: What can opener do you use to open your #10 cans?

I always thought it was an instrument used to measure precipitation/rainfall? In the baking industry we have used graduated cylinders into which we put a measured amount of dough at 85F and tamped it flat, then placed it into a temperature controlled cabinet (90F) with a piece of foil over the top to prevent drying. The test was used to measure/compare the activity of yeast over a 3-hour period of time. Since all flours are different I'm trying to figure out how this would relate to assessing/determining the correct fermentation for any given flour. What am I missing?

Neapolitan Style / Re: Follow up on Pluviometer readings

As a baking fat (one that is included in the dough formulation) soy bean oil at typical levels (2% and less) really isn't all that bad when pizza is consumed as a part of a healthy and varied diet, but when it's used as a frying fat the complexion changes significantly, in fact, frying doesn't help the nutritional profile of any fat or the food fried in it. This is not to say that we should avoid all fried foods, but we might want to think of them in moderation as part of a healthy diet. I'm in total agreement with what Peter said but I'd like to add that when you look at the animal diets from which conclusions are made the diets are always "HIGH" in whatever they are testing, for years we have always said that this is not realistic and at best it supports potential or trends not absolutes as many try to interpret the results of these studies. Again, let me state, moderation and variety are essential to a healthy diet. If there is anything that does worry me it is sprouts and spinach, two of my favorites, and baby spinach has just been involved in another recall again. :(

Dough Ingredients / Re: Soybean oil: Healthy or Harmful

Ditto that opener for me too. I got mine at a sale many years ago. Never fails. I do suggest cleaning the top of each can prior to opening for sanitary reasons.

Stones/tiles/steel, Pans & Accessories / Re: What can opener do you use to open your #10 cans?

I totally agree, Neo. pizzas are probable the all time worst selection for a DELCO pizza. Their acceptable life is measured in single digit minutes.

Dough Clinic / Re: Hybrid Dough - Delivery

My reference to ml v/s grams is that "ml" is still a volumetric portion and subject to a certain amount of potential variation (especially when considering the small amount of flour being used), the difference would be small so I added the "Questionable but maybe". When I ran the bake labs at AIB we always used the smallest graduated cylinder possible when working in milliliters. The larger the cylinder the greater the potential for error either by eyeballing or due to residual water in the cylinder after pouring the water out. Working with such small amounts

of flour is always difficult as you almost need an analytical scale. Whenever possible we always weighed the water, yes there was residual water in the weigh container but at least it was a constant error which we could cope with.

Dough Clinic / Re: hard dough that tears when kneading

Adjust the water temperature used in making your dough to give you a finished dough temperature of 70 to 75F (favoring 70F). Ball the dough IMMEDIATELY after mixing, lightly oil the dough balls and place into individual plastic bags, twist the open end to form a pony tail and tuck it under the dough ball as you place it into the fridge (34 to 38F), allow the dough balls to ferment in the fridge for at least 24-hours (48-is better) before using. To use, remove from fridge, allow to warm to 60F, roll the bag down around the dough ball, invert the bag and dough ball allowing the dough ball to fall free from the bag onto a floured surface, open into a skin by your preferred manner, dress and bake.

This should eliminate the need to re-ball and give you an overall, better and more consistent product.

Following this procedure the temperature of your kitchen will have minimal impact upon the dough.

Dough Clinic / Re: Work with pizza balls

Ceramic just means that it has been hardened by application of heat (in a kiln).

Stones/tiles/steel, Pans & Accessories / Re: Are these quarry stones ok to use at home?

Without knowing how you're making your dough and more about the flour you're using I can only speculate.

- 1) Your dough needs more water (higher absorption).
- 2) Your flour is too strong.
- 3) Your scaling is off. You indicate 80-ml, not 80-grams, of water, perhaps that's your problem? Questionable but maybe.

Why are you not weighing the salt? It should be about 2.5-grams which is more than the ADY which you are weighing.

- 4) The ADY should be about 0.625-grams.

- 5) I don't see any mention of activating the ADY prior to addition to the dough, perhaps that is contributing to the problem.

- 6) What is the water temperature and what is the finished dough temperature?

Much of what you've described is indicative of an under absorbed and under fermented dough, there is nothing sacred about 64% absorption so don't hesitate to increase the dough absorption, all flours are different, some will require a higher absorption than others.

- 7) Are you using dusting flour to help with kneading the dough? If so it is highly possible that the dough is picking up sufficient dusting flour to really upset your dough absorption. Remember, with such a small dough size just 10-grams of dusting flour can through off your dough absorption by as much as 6% or more. I know this isn't much help but maybe it'll give you some insight into what the cause might be.

Dough Clinic / Re: hard dough that tears when kneading

The higher protein flours are used in hamburger and hot dog bun production for the resilience it imparts to the crumb structure. When made using low protein flour the crumb structure lacks resiliency and becomes somewhat crumbly.

In hamburger bun production, if you want to add seeds as a topping all you need to do is to lightly spray the surface with water and the seeds will stick just fine

PROVIDING THAT YOU HAVE NOT ALLOWED THE CRUST TO BECOME DRY PRIOR TO APPLICATION OF THE WATER SPRAY. If the crust has dried a cooked starch application will be your best chance to make the toppings stick after baking. To make the cooked starch just add 1-ounce of corn starch to 1-quart of water and heat just until it begins to simmer, allow to cool until warm (not hot) and carefully brush onto the top of the buns just before adding seeds, etc. The starch wash also imparts somewhat of a shine to the crust too.

Dough Clinic / Re: Tom Lehmann's guide to burger buns

Sounds like it was what is referred to as a "long flake" crust. This is where the fat is refrigerated until firm but not hard, it is cut into the flour until the fat pieces are about the size of cherries. The pie dough is then formed into pucks, placed on a sheet pan and covered to prevent drying, place in the cooler over night then brought out on the following day. They are allowed to warm AT (NOT TO) room temperature until the dough can be rolled to about 3/16-inch thick, fitted into the pie plate (pan), filled, top crust applied, sugared or egg washed and baked.

Dough Clinic / Re: Tender Flakey Pie Pastry Crust

There are at least two documented cases of clostridium in vacuum packaged tortillas coming from Canada, that's two too many! Work that was done at AIB (American Institute of Baking) back in the 50's confirmed that clostridium can grow in bread stored in an anaerobic environment, this is reason enough for ME to take vacuum packaging VERY seriously. When I refer to just plain freezing I'm referring to non-vacuum packaging of the product and then placing it into the freezer for storage.

Shop Talk / Re: frozen/vacuum sealer pizza for delivery and pickup.

Just about any unmalted flour can be successfully used for high temperature pizzas.

Dough Ingredients / Re: New King Arthur '00' Pizza Flour

None, it will just show up as another ingredient at .5%, the sum of the percentages will also increase by 0.5% to 167.75%. That's one of the nicer things about working in bakers percent, since all ingredient weights are based on the total flour weight if you change the weight of any ingredient (except for the flour) everything else remains the same. If you were working in "true" percent if you change the weight of ANY ingredient the percent of ALL the others has to be recalculated.

Dough Clinic / Re: Getting crust to brown without being to overcooked and hard.

Scott;

I've seldom ever really found it necessary to go with a dough divider as it's really pretty easy and accurate to scale the dough by hand like Walter said, it's the rounding that catches up with you, so hand scaling isn't all that bad but you can really "grease the wheels" with a dough rounder. By far, the most efficient method for hand scaling the dough is to cut it into strips (called ropes) and then use your cupped hand to work it out to about the same diameter along its entire length, then cut a piece off and weigh it, the idea being to find the length that gives the targeted weight, once you develop a feel for it this method can be VERY fast. During our seminars two of us could scale and ball (using an AM Dough Rounder) 85# of dough into 10-ounce dough balls in less than 20-minutes. We used to make a challenge out of it to see how many pieces we could cut that were the exact

targeted weight, my personal best was, I believe, seven dough pieces in a row. I might add that we only did this once a year so it wasn't like we were doing it every day either! We could also round (ball) the dough manually in under 20-minutes too by using the two handed balling procedure (shown in my dough making video at [<www.doughdoctor.com>](http://www.doughdoctor.com)) but I'll be the first to admit that it'll catch up to you sooner than later.....give me a mechanical dough rounder!!!

Shop Talk / Re: Rounder and divders

Yael;

The problem with durum semolina flour has to do with the type of gluten it produces, a very tough and elastic gluten, to be sure. This is why it is mostly used for the production of pasta. It can help produce a crispy crust but at the expense of added toughness as the pizza cools off, like in a DELCO scenario. It's for this reason that we've always suggested to limit its use to not more than 25% of the total flour weight.

Dough Clinic / Re: Quest for a tender neapolitanish pizza

Durum semolina does you no favors if your main concern is tenderness.

Dough Clinic / Re: Quest for a tender neapolitanish pizza

There are, but you will need to change gears and look at bakery dividers (ram and knife). These are designed to degas fermented doughs for consistent scaling weights. The bad news is that they are large (even single and double pocket dividers are pretty large for a pizzeria) they're potentially expensive and they may not work well with weights much under about 10-ounces. Even the big wholesale manufacturers divide the dough prior to fermentation, they then round (ball) it and give it an intermediate proofing period just prior to final shaping (usually hot pressing). In other cases they will process the fermented dough on a stress free sheet and die cut processing line (think of processing 4,000-pounds or more of dough per hour before ordering one) which minimally degasses the dough while forming it into a continuous sheet from which individual pizzas are die cut and then usually go to an oven for par-baking, then to cooling and a trip through the finishing room where the par-baked crusts are dressed, then blast frozen, individually packaged, boxed, palleted, and placed into a holding freezer to await transportation to a distributor.

Shop Talk / Re: Rounder and divders

As long as you are at or above the 50 to 55F range you'll be fine.

Dough Clinic / Re: dried out crust after parbaking

The somerset is a good unit and it works very well, too bad they staged the video using previously rounded dough balls...dumb mistake! The other rounder that I like a lot is the AM Manufacturing rounder, you wouldn't go wrong with either one.

Shop Talk / Re: Rounder and divders

Shrink wrapping and putting the pizza in a plastic bag are essentially one and the same. Airflow in a package? Go back and read the article referenced above by PIZZA_NOT_WAR and I think you will have both questions answered. A number of years ago I had a person contact me regarding a problem he was having, some of his packages were blowing up (bulging), his concern was how to find a gas permeable packaging material to allow the gas to escape!!! He didn't even recognize the potential of what he was for causing illness or worse! This is why I always recommend that anyone getting into anything more than just plain freezing

ALWAYS have a microbiologist on staff. The question of the day referencing the issue cited above: Would you consume anything taken from a bulging can? How about a canned product taken from a jar with a domed lid?

Shop Talk / Re: frozen/vacuum sealer pizza for delivery and pickup.

No, your problem is due to collapse of the crumb structure resulting from insufficient baking of the crust. It is NOT a drying out issue. In order for the problem to be resolved you have to achieve an internal temperature of 185 to 190F to fully set the structure, anything less than that and the structure will collapse upon cooling. The idea behind par-baking is to achieve a full internal bake (185 to 190F internally) while developing a finished crust color that might be best described as being "sandy" in color. If you get too much color during the par-bake the crust will either get done too soon or it will get too much color when the pizza is fully baked. If you want to see an excellent example of something that is par-baked just take a look at those par-baked dinner rolls that you'll be buying in a few weeks to go with your Thanksgiving turkey.

The reason for using a screen under the skin during baking is because it helps to reduce some of the bottom heat (remember, pizzas ovens are designed to provide more heat to the bottom of the pizza than to the top during baking).

Dough Clinic / Re: dried out crust after parbaking

Your case is not so uncommon where you are looking for a characteristic that you might or might not get so in that aspect it's always elusive. When this happens the issue is almost always attributable to some kind of inconsistency in what is being done. In reading through your formula and procedure it appears to me that your are not being specific on times and temperatures (remember the acronym "GIGO" garbage in garbage out. In this case it's "IIIO" inconsistency in inconsistency out. You're on the right track by buying a thermometer so you can document things like flour temperature, room temperature, water temperature and finished dough temperature. By tracking these you will be able to develop a chart for determining the correct water temperature to use to achieve your desired finished dough temperature. This is vitally important as you are bulk fermenting and just a few degrees difference in finished dough temperature can make a big difference in the total amount of fermentation the dough received over the following 18 to 20-hours.

Which brings me to times, pick a time that works for you and then just be CONSISTENT, use that time fermentation time consistently. You will also want to be measuring the dough temperature when you scale and ball it and again when you go to open it into a skin. While the 2-hour difference between when you begin opening the dough balls until you finish opening them may not seem like much, it can make a HUGE difference in the finished crust depending upon the temperature of the dough balls at the time when you begin opening them. I think after you begin addressing these inconsistencies your results will be much more consistent and you will either have your 10 or possibly 11 or at the very least you will be able to make adjustments to the dough/process which will allow you to move closer to the desired finished crust characteristics.

Dough Clinic / Re: Quest for a tender neapolitanish pizza

You have the wrong type of dough docker (metal pins?) The most effective dough docker is the DDCH7755 from American Metalcraft <www.amnow.com>. I'm sure there are others like it but this will give you an idea of what it looks like. Since you have an IR oven set the emitter temperature at 650F for both the top and bottom, if the oven doesn't show emitter temperature set the actual baking temperature at

400F. If the oven has an open chain conveyor, bake on a screen but if it has a woven wire band you can bake directly on the band. Baking time will be a bit longer at about 3-minutes.

Dough Clinic / Re: dried out crust after parbaking

What you have described is a classical case of dough collapse due to insufficient par-baking. The minimum par-bake time in an air impingement oven will be about 2-minutes at not more than 400F and even then it won't be the best par-bake either. This is because if the oven is profiled to bake pizzas on a raw dough skin, as most are, it has full open fingers across the bottom and a combination of open and partial or even closed fingers across the top which results in the top of the skin receiving less bake than the bottom (that's a similar heat pattern to that which is used to bake pita). Now you know why the skin wants to "pita" during baking. Since I didn't see anything about docking, I'll assume you're not docking the skin. Your best chance to accomplish what you are trying to do is to dock the skin, place it on a pizza screen and bake it at 400F for 2-minutes. You may need to adjust the baking time and temperature slightly but this will get you very close. A difference of 10-seconds in bake time can mean the difference between success and failure....it's that sensitive. Also, immediately upon removing the par-baked crust from the oven turn it upside down for cooling.

Dough Clinic / Re: dried out crust after parbaking

Here is a good starting dough formula:

Flour: Bread type flour with 12 to 12.8% protein content 100%

Salt: 1.75%

Sugar: 2%

IDY: 0.375% or CY: 1%

Water: 62% (variable)

Oil: 2%

Put water in mixing bowl, add salt and sugar, add flour and yeast on top of the flour. Mix until no dry flour can be seen in the bottom of the bowl, then add the oil and mix an additional minute at low speed, then finish by mixing 8 to 10-minutes at medium speed. Target finished dough temperature is 75 to 80F.

Take directly to the bench for scaling and balling.

Scale and ball entire dough in not more than 20-minutes.

Place dough balls in dough boxes and lightly oil the top of each dough ball.

Cross-stack dough boxes in the cooler until INTERNAL dough ball temperature reaches 50F.

Down-stack and kiss the dough good night.

Allow to CF for a minimum of 24-hours (48-is better).

Remove about a 3-hour supply of dough balls from the cooler and allow to set AT room temperature until the internal dough ball temperature reaches 50F.

Begin opening the dough balls into skins as needed. They will remain good to use for about 3-hours.

Any unused dough balls can be opened and placed on screens and stored in the cooler in a wire tree rack (cover with a plastic bag to prevent drying)

To use these pre-opened skins, remove from cooler 20 to 30-minutes prior to anticipated use time, then REMOVE FROM THE STORAGE SCREEN and place onto your baking platform (screen, disk, pan, etc.), dress and bake as normal.

Note: Pomace grade olive oil is better for use in the dough than EVOO, it's cheaper too!

Dough Clinic / Re: Dough recipe for commercial conveyor pizza oven at 550 degrees

Also, when checking around, don't forget to look for steel cake pans, they come in both steel and aluminum and are available in a host of different sizes. I've got a few in 8 and 12-inch (square) X 1" deep with a dark green finish (called Bake-Prep) that work reasonably well.

They went for next to nothing when AIB liquidated its baking facility.

Shop Talk / Re: Metal Proofing Pans vs Plastic Proofing Trays

Check the bags to make sure they all have the same milling lot number. Also, remember that storage can/will affect the flour too. If the flour has been stored for a period of time (slow turn over by your distributor) it will dry out. Flour will typically have about 14% moisture content at the time of milling and bagging but it can dry out to as low as about 10% due to long storage times (+/- 3-months) from the date of milling.

Dough Clinic / Re: Can you explain my observations?

Have you looked at the pans from Crown Cookware <www.crowncookware.ca>, they carry a lot of the same type of pans that Allied carried. We had a few of their pans when I was at AIB and they held up as well as those from Allied Metal.

Shop Talk / Re: Metal Proofing Pans vs Plastic Proofing Trays

Use only the unglazed, not the porcelain. When I got mine the size was 14 X 14, 6 X 6 is pretty small. I got mine from an independently owned local tile and carpet store though I recently saw some at our local Habitat for Humanity Restore for next to nothing.

Stones/tiles/steel, Pans & Accessories / Re: Are these quarry stones ok to use at home?

The easiest way to find R.H. is to use two dial/stem type thermometers, using two Styrofoam cups, push on thermometer stem through the sides of one cup and place into the box, the other thermometer is pushed into the other cup (about an inch from the top) so the tip is just touching but not penetrating the opposite side. Wrap a piece of paper towel or absorbent cloth around the stem portion inside the cup, fill the cup with water (to about an inch BELOW the thermometer stem) at the same temperature that the other thermometer is reading.

The thermometer w/o water is the dry bulb and the one with water will be the wet bulb. Begin monitoring after 30-minutes in the box. A 4 to 5F difference in temperature will be indicative of approximately 80% Relative Humidity/R.H. If you go on-line you can download a relative humidity chart showing the temperature differential between wet and dry bulb measurements for any desired R.H. at any dry bulb temperature.

Prep Equipment / Re: sufficient humidity for dough retarder/proofer?

In that case, wouldn't it just be a lot easier to grease the pan and place the dough ball(s) onto the pan to ferment? When making focaccia I normally weigh out the dough so I'm working with a single dough ball per focaccia sheet. After about an hour to hour and a half use a rolling pin or pastry pin to partially open the dough ball to somewhat the shape of the pan, cover again and allow to finish fermenting, then hand fit the dough the rest of the way to fit the pan, set aside and allow to proof for 45-minutes, re-stretch the dough to fit the pan if necessary and allow to continue proofing to desired height, dress the focaccia as desired and bake. Remove focaccia from the baking pan immediately after baking and allow to cool on a wire rack. After cooling they can be placed back into the pan if desired. If you

don't remove them from the pan immediately after baking the bottom will become soggy due to condensation.

Dough Clinic / Re: Could I let proof my foccacia dough directly on the pan ?

Why not just put the dough balls into a suitably sized plastic bowl? You are going to need to remove the fermented dough balls from the pan anyhow to oil/grease the pan. If you grease the pan you can place the dough balls directly onto the pan to ferment then press the dough into the pan by hand. We do something similar to this with deep-dish pizzas and it works well. If you are planning to oil the pan this won't work as the dough will absorb the oil during the fermentation time. You're still going to need to cover the pan to prevent the dough from drying out and forming a crust during the fermentation period.

Dough Clinic / Re: Could I let proof my foccacia dough directly on the pan ?

What we're talking about here is one way slice operators recon their slices for sale. Heated/humidity controlled box straight to a deck oven for about 1-minute then handed off to the customer. It'll be crispy and have the visuals but it will not have the overall flavor since so many of those flavors are highly volatile and are lost soon after baking, much less cooling.

Neapolitan Style / Re: Help on modifying the level of browning on a Neapolitan pizza bottom

You will experience drying of the dough at anything less than 80% R.H. Constant 80% is what you want.

Prep Equipment / Re: sufficient humidity for dough retarder/proofer?

The characteristics you're looking for are achieved at very different baking temperatures. You might try baking at 900F+/- to achieve the leoparding and Neapolitan characteristics, then remove the pizza from the oven to cool for a few minutes, place it back into the oven for a second bake (directly on the deck) and hope this will brown the bottom and provide additional crisp without significant adverse impact upon the top of the pizza. This is similar to the way a store bought frozen pizza is made and handled, have you ever baked one that wasn't crispy? Another approach might be to experiment using a par-baked crust. For this you will want to bake the crust at not more than 450F, cool it, then dress it and give it a final bake at about 650F. Some experimenting will be needed but either method holds some promise.

Neapolitan Style / Re: Help on modifying the level of browning on a Neapolitan pizza bottom

A good RH to shoot for is 80 to 82%. If you get much above this you will get condensation forming with and opening or closing of the door or on anything placed in it that is not at the operating temperature of the box.

Prep Equipment / Re: sufficient humidity for dough retarder/proofer?

Maybe a New Haven style pizza? Think of it as a crispy New York style pizza.

Neapolitan Style / Re: Help on modifying the level of browning on a Neapolitan pizza bottom

Most everything you like about the flavor of the 7/11 product will be compromised by traditional canning methods so in my opinion, freezing is the lesser of two evils.

Dough Clinic / Re: Is it good practice to jar (canning) smaller quantities of 7/11 tomatoes?

Maesh;

You came to the right place. Tell us what you have been doing and we'll see what we can do to get you on track to making some great pizzas.

New Forum Members / Re: Two Failed Attempts and Looking to Get Better!

The 7/11 Ground Tomatoes with skin is my favorite also, I use it just as it is right from the can or I add fresh basil and garlic to the skin at the time of saucing.

Sauce Ingredients / Re: Wowzer! Stanislaus 7-11 Tomatoes...

Matt;

The implication is indeed correct.

Dough Clinic / Re: Cold then warm then cold?

That's a good height for the boxes. Try using white mineral oil to treat the wood. We use it here in the U.S. all the time to treat out wood bench tops. If you can't find it on line or through a local distributor try asking for it as a local pharmacy, if they don't have it they should be able to get it for you. A pint will go a long ways.

Prep Equipment / Re: Upgraded Dough Boxes

Beautiful AND Fantastic!

Prep Equipment / Re: DIY Pizza workbench

I can't tell from the pictures what the dimensions are but also keep in mind that you don't want the boxed to be too big/tall with regard to the size of the dough balls. This is why commercial boxes are made in two basic heights to accommodate large or small dough balls. A box that is too high/tall will have excessive head space which is conducive to drying of the dough balls. Since cross-stacking is desirable when using dough boxes the dough balls are usually lightly oiled after being placed into the box to prevent drying during the cross-stack period so drying of the dough balls is usually not an issue even with a partially filled box.

Prep Equipment / Re: Upgraded Dough Boxes

Assuming you mean you are going to bake pizzas for 200 to 250 people. Individual pizzas or large pizzas which will be sliced? In so how large? Is your oven a single or a double stack? Over how long of a period of time will you be making the pizzas? Keep in mind that you will only be able to bake 5 to 6 pizzas at a time (depending upon size) with an average baking time of 7 to 8-minutes (at best), so probably figure on about 35 pizzas per hour per deck (that might even be a bit optimistic). If you do a 16-inch pizza (5 per deck) and cut it into four slices you will get about 50-square inches per slice or about the same as a 8-inch individual pizza which should be sufficient for one person. $250 \div 4 = 63$, 16-inch pizzas will be needed. $63 \div 5 = 12.6$ (13) full oven bakes. Assuming an 8-minute bake (?) this means 104-minutes for a single deck or about 52-minutes of baking time for two decks (call it an hour).

Take this with a grain of salt as it's based on a lot of assumptions. Guessing you will need a total of 3 possibly four people to do this.

Shop Talk / Re: Advice please

Try this instead, immediately after mixing (targeted finished dough temperature 75 to 80F) scal and ball the dough, lightly oil the dough balls then straight into the fridge (uncover ed for at least 2-hours, then cover) and allow to cold ferment for 48-hours, remove from fridge, allow to warm AT room temperature until the dough

balls reach an internal temperature of 50 to 60F, then open into skins, dress to the order and bake, this should address the dough memory issue and improve the crispiness of the finished pizza at the same time.

Tom Lehmann/ The Dough Doctor

Dough Clinic / Re: Dough help, still not quite right

Matt;

The only problem that I see is that you don't have a clue as to how much actual fermentation the dough is really getting so inconsistency is going to be the name of the game over time.

Dough Clinic / Re: Cold then warm then cold?

Bleaching is done only to remove the beta carotene (yellow) pigments from the flour, it is 100% purely a cosmetic treatment.

As to why the new flour is performing differently I cannot say. You are dealing with two different milling lots and don't forget that we have had very high temperatures lately and there is no way of telling under what conditions the flour has been exposed to or for how long.

Dough Clinic / Re: Bleached vs unbleached?

To the best of my knowledge the two main ways to measure flour particle size distribution is either by super sieving or by Micro-Trac Particle Size Analyzer. I worked with the Micro-Trac back in the late 1970's looking at a whole range of flours to see if particle size distribution varied much between the different mills and if particle size distribution had a significant impact upon flour performance characteristics. Surprisingly, we found very little variation in particle size distribution (this is amazing and a testament to the knowledge of the flour millers) between different mills and milling companies for like flour types and when we experimentally milled flours with different particle size ranges the only impact we saw was on both total flour absorption as well as the rate of hydration once water was added to the dough.

I think this is why we usually don't see much research done on particle size.

Dough Ingredients / Re: Flour Particle size distribution very interesting :)

Things that may cause a dough ball to flatten during the fermentation period:

- 1) Dough absorption (higher = flatter)
- 2) Amount of gluten development during mixing (more = less flat). To a point, then it's reversed.
- 3) How tightly the dough ball is rounded (tighter = less flat)
- 4) Use of additional enzymes = flatter.
- 5) Finished dough temperature (higher = flatter)
- 6) Temperature of room or fridge (higher = flatter)
- 7) Flour strength (stronger = less flat)
- 8) Failure to cross-stack = flatter.

Those are the high points.

Dough Clinic / Re: Dough balls cold ferment

66 to 68% will probably give you the best results at those temps, don't know your dough formula but there should not be any sugar, eggs or milk in it if you are looking for optimum crispiness.

Dough Clinic / Re: Hydration Percentage, Baking Time, and Oven Temperature

Without knowing your dough formula and how you're managing it I can't say very much except to maybe try to knead in more flour, then give the dough some bulk fermentation (2-hours?) which will allow time for the newly incorporated flour to hydrate, then ball and allow the dough balls to rest until they can be opened.

Newbie Topics / Re: High hydration balling

Lower absorption doughs are slower to expand (oven spring) in a very hot oven so they tend to retain more moisture than higher absorption doughs which expand more freely and as a result exhibit better bake-out resulting in a crispier finished crust, now, if the crust will RETAIN that crispiness is a totally different matter, one which depends more upon baking time/temperature than dough absorption.

Dough Clinic / Re: Hydration Percentage, Baking Time, and Oven Temperature

I think a better solution might be to experiment with finished dough temperature. Begin incrementally reducing the finished dough temperature to see if you can get improved results. I'm guessing if you can get it down to something in the 60 to 65F range you might get away with it. That still doesn't address a sub-par refrigerator though, but it might allow you to use it for dough storage only.

Desperate times call for desperate measures.

When I was in Quito, Ecuador our cold room (can't call it a cooler or refrigerator) was nothing more than an insulated room packed with frozen meat and seafood for use by the hotel restaurants. No electricity, no nothing! The only way we could hold dough in that room was to make dough as cold as possible, which was right at 60F, using ice and ice water. The longest time we could get from the dough was 48-hours so we were able to make it work for us.

Dough Clinic / Re: At what temperature should I be doing a cold ferment?

When dough is fermented prior to being placed in the fridge two things happen, (1) the dough becomes less dense and a much better insulator which allows the dough to continue fermenting for a significantly longer period of time at a faster rate, this is exacerbated by the development of heat in the dough through heat of metabolism which is continually warming the dough to some extent. (2) The acids and enzymes will continue to work on the gluten to further weaken it during that extended CF period. Why not reverse your order? CF first, then RT ferment? This will help to reduce the acid development so the protein/gluten isn't exposed to the acids for such a long time. Remember, fermentation is much like marinating a tough piece of meat, the right amount is beneficial but too much will give the meat all of the fine mastication properties of a piece of liver.

With this said, I have no way of knowing if you are exceeding the fermentation tolerance of your flour or not. Not all flours will tolerate that kind of fermentation, so you may need to experiment with different fermentation times to find out what is right for your specific flour.

Dough Clinic / Re: Reballing..is it hopeless..or am I just doing it wrong?

Looks great!

Try brushing the skin with melted butter (edge to edge) then sprinkling with a cinnamon-sugar mixture before adding the apple, this turns the crust into something more like a pastry than a pizza crust. I do this with my dessert pizzas and it adds a whole different dimension to the flavor.

Dessert Pizza / Re: Apple Pizza Desert I serve in my restaurant

36 to 38F is an excellent temperature to operate a walk-in, reach-in or home refrigerator at.

Dough Clinic / Re: At what temperature should I be doing a cold ferment?

No two lots of flour are made from the same grist (blend of wheats) so it is up to the flour miller to do his/her magic to produce a finished product with the consistency we have come to expect. This is why so much testing is done on wheat and flour as it provides the tools/information needed by the flour miller to develop a grist to meet the specific needs of the flour being milled. Even with all of the data available and "magic" performed, things still go awry once in a while, and if that's not enough, with imported flour the conditions under which the flour is held during shipment may not always be the most conducive to maintaining the quality of the flour. Even domestic flour is highly subject to unfavorable storage conditions during distribution, so despite the best efforts, flour is still possibly the single most variable ingredient we work with. This is why in commercial applications the bulk flour delivery is always accompanied with a Farinograph report of the flour which shows flour absorption, mixing time, and strength characteristics for that specific lot/shipment of flour, using the Farinograph report the production facility will then make the necessary changes to their processing of the dough to maintain a consistent quality dough.

Flour is variable, especially when it comes to absorption, you may not always see it at home but it is still there, sometimes though it is more evident than at other times for any number of reasons.

Dough Clinic / Re: Inconsistencies in hydration between sacks of flour

RETURN IT! 40F is the absolute HIGHEST temperature that you should be holding any refrigerated food at and once you open the door or put anything into it 40F is just a passing memory.

Dough Clinic / Re: At what temperature should I be doing a cold ferment?

Yes, if it's placed in the fridge right after mixing, scaling and balling.

Dough Clinic / Re: Dough balls cold ferment

Here's a list of things that will help:

Finished dough temperature: 75 to 80F (favoring 75F).

Tightly round/ball the dough.

Lightly oil the dough balls, not the inside of the box. Best is to place dough balls into unoiled box and then lightly wipe the top of the dough balls with oil. This will prevent the dough balls from skating around in the box.

Leave the dough box uncovered for at least 2-hours (preferably until the internal dough ball temperature reaches 45F) then apply the lid.

These simple steps should effectively address the problem you're experiencing.

Dough Clinic / Re: Dough balls cold ferment

Richard;

I think your problems stem from two issues, one is due to the fact that you are tightly lidding the fermentation container right away upon placing it in the fridge, instead do this, lightly oil the dough ball when you place it into the container, then leave it UNCOVERED for at least 2-hours before applying the lid. If you use a snap on lid be sure to make a couple pressure release cuts/holes in the lid, a much better option is to use a loosely fitting cover, like a piece of aluminum foil.

Secondly, I don't think you're mixing your dough long enough, it needs to be mixed just until the dough takes on a smooth, satiny appearance. What is the finished

dough temperature? You should be looking for something in the 75 to 80F range.
Dough Clinic / Re: Dough wet and sticky after 24 hour cold ferment

Huh? I just Googled it again and it gave me the entire process step by step including temperatures, no I'm not a member either.
Google: AACC ash measurement procedure for flour.

Dough Ingredients / Re: how to get the ash content from self milled flour?

It sounds like the dough just needs more fermentation when it's made with that specific flour. If that's out of the question you can also increase the finished dough temperature to something in the 84 to 86F range, that will provide more fermentation to the dough within the same time period.

Dough Ingredients / Re: Rogers nothing added flour for Canadians

May I ask why you want to measure the ash content of your flour? The ash content has little, if any, impact on flour performance. It does impact the color of the finished crumb (not a big deal with pizza), it is used mostly to provide some measure of flour extraction as well as a quasi measure of flour quality as it relates to protein content. By this I mean that you can have two flours with the same protein content but different ash contents, as a rule the flour with the lower ash content will be the stronger of the two, that's about where the usefulness of ash content ends. In the U.S. a typical patent grade flour made with a 78% extraction will have about 0.54% ash content while whole wheat flour will go about 1% or a bit more.

If you want to accurately measure the ash content of the flour Google "AACC Approved Methods" and you will find the approved method for determining the ash content of flour.

Dough Ingredients / Re: how to get the ash content from self milled flour?

Breaking the dough down into the smallest size pieces possible will be the best way to handle the dough, this means scaling it into desired weight pieces, and form into balls, lightly oil each dough ball and place into individual plastic food bags (like bread bags) DO NOT use Zip-Lock bags. Pull the bag snug to the dough ball, twist the open end into a pony tail and tuck the pony tail under the dough ball as you place it into the fridge. To use the dough you will need to remove it from the fridge about 90-minutes prior to use, roll the bag down around the dough ball and invert it over a floured surface, flour the entire dough ball and begin opening into a skin by your preferred method.

Dough Clinic / Re: Dough Storage

Probably at least 4-hours.

Dough Clinic / Re: Pizza dough, fridge bulk ferment

Probably not as there will probably not be sufficient time for the dough balls to sufficiently relax for opening into skins, a much better approach would be to mix the dough, take immediately to the bench for scaling and balling, lightly oil each dough ball and place into individual plastic bags, twist the open end of the bag into a pony tail and tuck in under the dough ball as you place it into the fridge. To use the dough ball(s) remove from fridge about 90-minutes prior to the time when you want to open them into skins, roll the bag down around the dough ball and invert over a floured surface allowing the dough ball to fall from the bag into the flour, flour both sides of the dough ball and open into a skin in your normal manner.

Dough Clinic / Re: Pizza dough, fridge bulk ferment

After cleaning out your skivvies the real fun begins with cleaning the mess outta the microwave. :-D

Chitchat / Re: I just exploded a stick of butter in the microwave

QJ;

Your "funny thing" observation might be giving us some insight into the problem, as the dough is warmer with the molasses/oatmeal bread and you don't have the keyholing problem this would lend credence to the fact that we are probably on the right track with increasing the finished dough temperature. This just underscores why it is important to always monitor finished dough temperature and in the case of bread making, target the same finished dough temperature, regardless of the type of bread being made.

Dough Clinic / Re: Bread question for Tom

If I understand you correctly you make the "dough" in the afternoon, divide into 30.8-ounce pieces and cold ferment the dough pieces overnight, in the morning you remove it from the fridge at 6:00 a.m. and allow the dough to rise (no sure how much it's going to rise as it just came out of the fridge) and then at 7:45 a.m. you mould and pan the dough, allow it to final proof for 75-minutes, then bake at 350F for 35 to 40-minutes. If this is correct the dough does not receive sufficient fermentation time (typically 3 to 5-hours at room temperature for pan style loaf breads). Pan breads react very differently to yeast level than pizza doughs, as you can almost walk the volume/height of the bread up or down using adjustments in the yeast level. An increase in yeast level will only result in more dough expansion (oven spring) which will only further exacerbate the problem. Instead, try increasing the finished dough temperature which will allow the dough to ferment longer and faster in the fridge. I would suggest going up in 5F increments. Let's see if that will effectively address the problem. One other thing, just to confirm, your pans ARE dark colored, right? I also suggest looking for a finished internal loaf temperature of a little over 200F (193F is really not sufficient for what you are doing). I don't know your dough formula but the loaves look to be a bit light in color (camera or actuality?), you can develop a stronger side wall on your loaves by using sufficient sugar in the formula to achieve a nice brown/mahogany colored top and side wall.

Dough Clinic / Re: Bread question for Tom

QJ;

By the way, the official name for that fault is "keyholing", if you cut a slice from the loaf it will look like an old fashion keyhole.

Dough Clinic / Re: Bread question for Tom

QJ;

That's an easy one to answer, Assuming you're removing the loaves from the pan immediately upon removal from the oven and the loaves are sufficiently baked (at least 20-minutes for a 1-pound loaf) insufficient dough fermentation is the answer. I've seen it happen hundreds, if not thousands of times over my years in running the Baking Research Lab at AIB.

Dough Clinic / Re: Bread question for Tom

2% IDY with extended room temperature fermentation time would be considered outrageous. That amount of yeast would probably metabolize all available sugar in 6 to 10-hours.

Dough Clinic / Re: Volume vs Fermentation

Your mixing attachment, looks like it should do the job, just watch the dough during mixing, you do not want to see the dough grabbing onto the attachment and going for a ride around the inside of the mixing bowl, if it does you will need to mix at a higher/faster speed. If the mixer complains when you do that you will need to down size your dough so as not to overload the mixer.

Newbie Topics / Re: Help me with making dough

No, it just takes more time to achieve the same level of fermentation when using a smaller amount of yeast. This is why we use a higher yeast percentage when making a no-time/emergency dough than we do when making a 5-day cold fermented dough.

Dough Clinic / Re: Volume vs Fermentation

Your dough looks to be extremely under mixed. This could be the result of a "J" hook on your mixer as opposed to a reverse spiral dough arm, can you show a picture of your dough mixing attachment? Then too it might be due to mixing a very small dough size where the mixing action is quite poor. It can also result from mixing at too low of a speed, generally 1st/low speed just doesn't cut it as you need to do the bulk of mixing at a higher speed. A correctly mixed dough should come out of the mixing bowl looking smooth. If you go to my web site

[<www.doughdoctor.com>](http://www.doughdoctor.com) I have a series of videos posted and in one of those videos I show how to stage the ingredients in the mixing bowl and mix the dough to the proper consistency. While the video is made using a commercial size mixer you can achieve the same characteristics using a smaller size mixer too.

Newbie Topics / Re: Help me with making dough

By allowing the dough to proof for a longer time in the pan immediately prior to baking will impart a more open, porous crumb structure to the finished crust.

General Pizza Making / Re: Final proof time for pan pizzas (working on Roman al taglio)

The issue is not protease enzymes but instead amylase enzymes which convert starches into sugars. Flours with unusually high levels of damaged starch will exhibit a fairly high initial absorption since damaged starch readily absorbs water (native/intact starch does not readily absorb water), then as the dough begins to ferment the enzymes contained with the yeast hydrolyze the damaged starch very fast, releasing the water it absorbed in the process, hence a "gooey" dough. This could potentially be compounded if the wheat from which the flour was milled had a low Falling Number value (under 200).

There are some countries where the flour is milled on purpose to achieve a higher than normal level of damaged starch as it allows for the addition of more water to the dough BUT it also limits total fermentation time to something like 60 to 75-minutes.

Neapolitan Style / Re: Hydration - How low can I go?

JPB;

It's simple math, each yeast cell metabolizes sugars during the process which we call "fermentation" as a byproduct each cell produces acids, alcohol, and carbon dioxide plus a small amount of heat resulting from the heat of metabolism. It is primarily the carbon dioxide that is responsible for the increase in volume/decrease in density of the dough during the fermentation period so the more yeast cells you

have doing this the more carbon dioxide is being produced within any given period of time and the dough becomes greater in volume. Because commercial yeast is somewhat standardized, meaning if you add "X" amount of yeast, within a given period of time you will get a specific amount of fermentation taking place and if you add "2X" amount of yeast you will (with fairly good predictability) get twice the amount of fermentation taking place (assuming there is sufficient nutrient to feed all of the yeast). With a sourdough you have a bacterial culture which can exhibit a different growth rate than yeast and add to that you have no idea of the concentration so it's no wonder that you will see a different change in dough volume, you're sorta comparing apples and watermelons from a microbiology point of view.

All things equal, less yeast means less fermentation (less effects of fermentation on the dough and flour) so a dough made with less yeast will show more signs of under fermentation than a dough made with more yeast at any given point of time. This is not to say that doughs made with smaller yeast levels will always show signs of under fermentation, they will just need more time to ferment the dough to the same magnitude that a greater yeast level did in a shorter time. The characteristics of the finished crust will reflect the amount of fermentation the dough received.

Dough Clinic / Re: Volume vs Fermentation

You may call me anything you want, just don't call me late for dinner, especially if pizza is being served. :-D

The only thing you need to do is to pull the twisted end tighter under the dough ball, you want to have the bag nice and snug around the dough ball.

Newbie Topics / Re: "Goosey" dough issue (after baking)

It sounds a lot like a high starch damage flour. Try making a dough, immediately scaling and balling after mixing and open the dough after 60-minutes, let me know if the dough handles OK, allow another dough ball to ferment for 2.5-hours to see if it goes all slimy on you.

Neapolitan Style / Re: Hydration - How low can I go?

If I might offer a suggestion; reduce the amounts of olive oil and ADY by 50% which will bring them more into line with what is typically used for the dough management procedure it appears that you are using. Also, adjust the water temperature to give you a finished dough temperature in the 75 to 80F range which means you will most likely want to start with 65F water and make further adjustments with following doughs if necessary.

Prep Equipment / Re: First batch of dough with the NutriMill

If your oven heats from the bottom move the stone to a lower rack position, if it has a broiler you can also turn on the broiler while moving the stone to a lower rack position, my guess is that your stone isn't retaining sufficient latent heat so it needs to be closer to the bottom heat source. The other option is to get a thicker stone.

Dough Ingredients / Re: Having trouble with the bottom of the crust

Either one works OK, the carbon dioxide generated by the yeast as it ferments will help to provide a protective blanket over the surface of the dough to further prevent drying. However, "loosely" is a pretty subjective term, my definition could be defined as a piece of foil placed over the container with the overlapping edges pulled down but not crimped or fastened to the fermentation vessel/container. In this case you will still need to allow the container to remain uncovered for 2-hours or more before applying the loose fitting lid, if not you will find condensation

forming on the underside of the lid.

Newbie Topics / Re: Help me with making dough

Where is the stone positioned in the oven and what is the thickness of the stone?

Dough Ingredients / Re: Having trouble with the bottom of the crust

The length of proof time will depend on a number of things such as dough temperature, amount of yeast used in the dough, amount of salt used in the dough, room temperature, dough absorption and to some extent the use of fat in the dough as well as the total dough absorption and flour strength. My advice has always been to proof the dough in the pan sufficiently to give you the desired volume/height and crumb structure characteristics that you are looking for. In most cases this time will fall somewhere between 45 and 75-minutes, but in some pizzerias where the dough will be placed in the cooler for storage for use later in the day the final proofing time can be as short as 20 or 30-minutes outside of the cooler, but keep in mind that the dough will continue to proof, to a more limited extent, in the cooler to in reality the final proof time is longer than 20 or 30-minutes.

General Pizza Making / Re: Final proof time for pan pizzas (working on Roman al taglio)

I can't say that I've ever made a "trash" pizza for practice. Instead, I've always tried to make a decent pizza, with whatever I've had on hand. This way it becomes an effective learning process. You can use the house brand tomatoes as well as the house brand mozzarella cheese but always strive to make the best pizza you can, even if you're just practicing opening the dough ball into a pizza skin, make the best you can, you will be rewarded for it as your other skills will improve at the same time and you will expand your horizons for making pizza with different ingredients and learning how to cope with different quality ingredients, you might be surprised at how good a pizza you can make using "no name" canned tomatoes and "no name" mozzarella cheese. Just about anybody good pizza maker can make a decent pizza using the "best" ingredients (whatever those might be) but it takes a master to do it using common, no name ingredients.

Just the opinion of someone who's been there and done that.

Dough Clinic / Re: Dough,Dough, Dough

To be honest with you, there is absolutely nothing wrong with using a 12%/12%+ protein content flour to make your pizzas. My go to flour has, on average, 12.2% protein content and I use it to make most of my pizzas.

Newbie Topics / Re: Help me with making dough

At 14mm I think the steel will give better results than the unglazed tile.

Newbie Topics / Re: Help me with making dough

When using individual containers like this just remember to lightly oil the dough balls and leave the lids off of the containers until the dough reaches an internal temperature in the 45 to 50F/7.2 to 9.9C range. If you lid the containers right away you will get significant condensation forming in the containers. There have been some recent posts on this very topic. If you don't want to go to the trouble of lidding the dough balls sometime after they have been put into the fridge you can use individual plastic bags for storing the dough balls, with this method all you need to do is to lightly oil the dough ball, drop it into a bag (like a bread bag), twist the open end into a pony tail to close and tuck it under the dough ball as you place

it into the fridge, no need to come back to it until you are getting ready to make your pizzas. To use the dough ball just remove from the fridge about 90-minutes prior to opening (exact time is determined by the length of time needed for the dough ball to warm to 50 to 60F/9.9 to 15.5C, then just roll the bag down around the dough ball and invert the bag allowing the dough ball to fall from the bag onto a floured surface, flour the dough ball and begin opening it into a skin by your preferred method. The bags can be reused several times if desired. A number of posters here use this method as do I. It works very well for all but the very high absorption doughs.

Newbie Topics / Re: Individual proofing boxes from Ikea

How thick are they?

Newbie Topics / Re: Help me with making dough

Tomatoes are an acid fruit to begin with, if they are commercially canned citric acid is added to further acidify them to help retain their color and as a food safety measure. Unless it's strictly a flavor thing for some varieties of low acid tomatoes, I don't know why cider vinegar or lemon juice (citric acid) would be added to the sauce. At least with the tomato varieties we work with here in the U.S. (both canned and fresh) if there is a frequent complaint about the sauce it might be that it is too acid, so aside from a flavor thing I'm at a loss as to why additional acid would be added (assuming the sauce is not going to be canned).

Sauce Ingredients / Re: Vinegar or lemon in sauce

I think with a little more practice at opening the dough balls into skins you will be very happy with the results. Try this to see if it will work for you, use a rolling pin or pastry pin to open the dough ball to about 2 to 3-inches smaller than the desired finished diameter, then finish opening the dough by hand to the full diameter. We used this method to train those who were challenged in ability to open the dough into a skin. By partially opening the dough using a pin you get as much more uniform thickness across the entire diameter, once you get the hang of it you will gravitate away from the pin altogether.

Newbie Topics / Re: "Goosey" dough issue (after baking)

No need to tie a knot in the bag to close it, just twist the open end into a pony tail and tuck it under the dough ball as you place it into the fridge.

Cracker Style / Re: Thin Style Pizza

Note:

In the excellent post by Rolls he recommended a pizza screen in his equipment list, just make sure you season the pizza screen before using it or the screen and pizza will be "as one" after baking. To season the screen just wipe it down with oil and place it into an oven at not over 400F for about 20-minutes, remove it from the oven and repeat the process again. The screen has now been seasoned and is ready for baking. DO NOT wash your screens, instead, just wipe them down with a clean towel, if you get crud on it just allow it to bake off. As you continue to use the screen the seasoning will continue to darken to a black color, this is normal and desirable. Note that once a screen has been properly seasoned it does not need to be oiled for any future use.

Newbie Topics / Re: Help me with making dough

Ditch the Zip-Lock bags and plate, instead go with plastic Food Bags, or in a pinch plastic shopping bags will work OK, lightly oil the dough ball and drop it into the

bag, pull the bag down around the dough ball and twist it to close, tuck the twisted pony tail under the dough ball as you place it into the fridge, to use the dough ball just remove from the fridge about 90-minutes prior to the time you want to use it (you are looking for an internal dough ball temperature between 50 and 60F when you open it), turn the dough ball out of the bag onto a floured surface, make sure the entire dough ball is well floured and you're ready to begin opening it into a skin.

My advice is to forget about using the beer for now until you've mastered your first few pizzas, then begin by replacing 50% of the water with a lager beer, master that and increase to your liking.

By the way, adding oil to the dough will not do much for the crust color, you need to add sugar, milk or eggs for that, use sugar for now.

Newbie Topics / Re: "Goosey" dough issue (after baking)

While softened water does contain some sodium it is not sufficient to impact the dough with regards to salt level, additionally, soft water tends to make for a softer dough with slightly less absorption capacity. The best water to use when making dough is just plain old hard water. We have discussed the effects of hard and soft water in previous posts.

Newbie Topics / Re: "Goosey" dough issue (after baking)

Brent;

That's ascorbic acid, not citric acid. The AA is most likely encapsulated to provide a slower reaction as AA uncoated reacts in the mixing bowl. The enzymes which would be appropriate for use in a bread improver are most likely oxidative enzymes which function in a similar manner to low levels of potassium bromate. The rest appears to be nothing more than enriched wheat flour used as a filler/diluent. In short, it appears that you may have taken the nothing added flour and turned it into a regular bread type flour by adding the improver.

Dough Ingredients / Re: Rogers nothing added flour for Canadians

OMG! I agree with the others on the malt, 4% is WAY TOO MUCH for any kind of diastatic malt, and add an extra "WAY" if the flour you're using is already malted. Your dough fermentation rate must be crazy fast too with 1% IDY and only 1% salt. I would suggest reducing the amount of IDY to not more than 0.5% (half of the amount you're presently using) and increasing the salt to something in the 1.75 to 2.5% range. At 1% salt the crust will typically have what is referred to as a "starchy" taste.

Note: A typical characteristic to excessive diastatic malt is an excessively soft, sticky, gummy crumb structure, when you bite into the crust it will stick to your teeth, sound familiar?

Newbie Topics / Re: "Goosey" dough issue (after baking)

Without knowing your dough formula and management procedure I can't comment on the dough absorption, but if you're having difficulty handling the dough you might want to back the absorption down by 5% and as you become more proficient then begin increasing the absorption gradually, remember, every dough has its own sweet spot when it comes to absorption, it is not one of those "one size fits all" type of things and when you add in the proficiency factor you add a whole different dimension to the dough absorption.

Dough Clinic / Re: First Pizza

The thing that you do want to watch is the finished dough temperature which can

change (increase) on warmer days unless you're in an air conditioned environment, but then you wouldn't be concerned over the humidity. As a general rule, 70 to 75F is a good targeted finished dough temperature but your specific method of dough management might call for something different, point is, just strive to keep it constant by adjusting the water temperature as necessary.

Neapolitan Style / Re: Hydration on very humid days

Harvest King like "00" flour? No way! They are two entirely different flours milled from very different types of wheat.

Pizza Ovens / Re: Baking pizza at high altitude

When it comes to air impingement ovens Lincoln, XLT, and all others except Middleby Marshall you can buy most of the electronics from the industrial supplier McMaster Carr.

Dough Clinic / Re: Oven Parts

From the looks of your first pictures it looks like there is a lot of residual dusting flour on the baked crust which might explain the dry mouthfeel. Two minutes probably isn't sufficient mixing, which would result in a tacky dough requiring more dusting flour and the dusting flour is more likely to adhere to the tacky dough, try going for 6-minutes on your next dough, then go for 8-minutes, go directly from mixer to bench for scaling and balling, then lightly oil the dough balls, and plastic bag them (don't use Zip-Lock bags), hopefully the 0.9% yeast is CY, but if by chance it's IDY reduce the amount to 0.4% or if ADY use 0.5%. Allow the dough to cold ferment for 48-hours, then remove from the fridge and allow to warm to 50 to 60F before opening it into a skin for immediate use.

Dough Clinic / Re: Getting closer !!!

I've baked pizzas at elevations from San Diego, California to Quito, Ecuador and everything in between, including Denver, Colorado. The fact that the water will boil off sooner at high elevations only results in a drier finished product. To prevent this we typically bake at a higher temperature providing a shorter bake time thus conserving moisture in the product. The reduced atmospheric pressure at the higher elevations will increase oven spring and bake volume (sometimes rather significantly depending upon altitude) which helps with getting a thorough bake with the reduced bake time. This is easily addressed by adjusting the yeast level to give the same volume as achieved at sea level (if that's what we're looking for). Just out of curiosity, have you checked the color of the gas flame to make sure you have sufficient oxygen? I've seen this problem at high altitude a number of times over the years and if the gas fuel mixture is not correctly balanced the oven will still operate but not as efficiently.

Pizza Ovens / Re: Baking pizza at high altitude

Jr07;

If you tell us what type of pizza you are making and provide a copy of your dough formula and dough management procedure we might be able to provide you with some helpful suggestions.

General Pizza Making / Re: How to make dough more relaxed

It's just a matter of preference as to whether one uses a poolish or not but if one is mixing their dough by hand a poolish makes the mixing process a bit easier.

Dough Clinic / Re: Napoletana Pizza Dough with a Poolish

If it's just the outer crust/rim that you want more color on egg wash will work as will milk wash or even just painting it with olive oil.

Dough Clinic / Re: What can I add to dough for good browning of pie

Just don't over work it when you're rolling it out, I think it'll be fine.

Let us know how it turns out.

Cracker Style / Re: 48 hour room temperature proof...bad or not?

When we reference "ambient" temperature as it pertains to dough storage we are typically referring to temperatures in the 70 to 85F range. But when asking what is the ambient room temperature? It is what it is.

Starters/Sponges / Re: bulk retard vs ball retard

Are you following the current posts on this very topic?

Neapolitan Style / Re: Browning "white" neapolitan pizza

To address your question regarding acidity and crust color development, during fermentation three main acids are produced, acetic, lactic and propionic, this is why the pH of the dough and also the finished crust is decreased with longer fermentation times or conditions resulting in a greater amount of fermentation. It is well recognized that lower pH environments have an inhibiting effect upon crust color development, this explains why sourdough breads have such a light crust color. Conversely, a higher pH will promote more crust color development, but before you run off and start thinking about adding soda to the dough remember that yeast is an acid loving micro organism so it fares much better in an acidic environment than it would in an alkali environment (this is why yeast fermentation produces acids as a byproduct, to improve its environment for its own survival), all micro organisms pretty well operate this way, producing byproducts conducive only to their own survival. If you were to add soda to the dough to enhance crust color the yeast would ferment very sluggishly, if at all, depending upon the amount of soda added, and the finished crust flavor would not be something you would be drooling over.

Dough Clinic / Re: Too much leoparding but very white crust

Here is how you remove those dents from the bowl.

Materials needed:

A bag or two of fine sand

Make a square wood frame about 5 to 6-inches high and about 18-inches square.

What to do:

Pour the sand into the wood frame.

Wet the sand (to about the consistence needed as if you were building a sand castle.

Place the bowl into the sand so the dent you are removing is at the 6 o'clock position.

Push the bowl down firmly to nestle the bowl into the sand.

Using an auto body hammer with a convex face carefully begin working the dent out starting at the edges of the dent and going around it working towards the center. If you don't have or can't borrow an auto body hammer use a carpenter's claw hammer (it has a convex face). Go slow, use many taps from the hammer and the dent will be worked out. The reason for using the wet sand is because it provides support for the surrounding metal so all that is worked out is the dent. Repeat this for each dent. I used to repair dented bowls for our A-200 mixers at AIB this way and they came out just fine.

NOTE: DO NOT USE A BALL PEEN HAMMER.

After you get the bowl "de-dented" let me know if you need help adjusting the bowl clearance.

Prep Equipment / Re: Hobart A 200 restauration

I don't have a "recipe" but I do have a dough "formula" in bakers percent.

Sponge:

Flour: 60%

Water: 50% (based on the weight of the sponge flour)

Yeast: 0.25% (based on the weight of the sponge flour)

Set Temperature: 70F/21C

Allow to ferment 18 to 24-hours at room temperature.

Dough:

Flour: 40%

Salt: 2%

Sugar: 2% (optional/don't know what type of pizza you are wanting to make)

Water: 60% +/- (based on TOTAL flour minus what was added to the sponge)

Note: Yeast percentage is based on CY (compressed yeast).

New Forum Members / Re: Introduction - Stiff starter

Sallam;

Less dense = lighter in weight for a given volume.

Better insulator = resists temperature change.

Resistant to temperature change = more difficult to change the temperature.

In all probability, room temperature fermentation is going to be the best when using a sourdough starter.

Starters/Sponges / Re: bulk retard vs ball retard

Maybe it's just the angle of the picture but it looks more like an A-120 (12-quart) mixer. In any case you will want to replace the useless "J" hook and get a reverse spiral dough arm for your mixer, you'll be glad you did after trying to mix your first dough. That was a really great find, you've got most of the attachments (all of the most commonly used ones) with it too. Good Deal!

Be sure to bolt it down to the table you mount it on, we've had more than one take a walk off of the bench at AIB (not a pretty sight). If the bowl is rusted you can have it tin plated to restore it to "like new".

If there are any dents in the bowl, pretty common) let me know and I'll let you know how to remove them (do NOT go beating away at them with a hammer!).

When you get a reverse spiral dough arm you will want to check and probably reset the clearance between the bottom of the dough arm and the bowl, it makes a big difference in how the doughs mix.

Prep Equipment / Re: Hobart A 200 restauration

Additionally, I think it's the increase in acidity of the dough that is preventing the crust from developing more color. If you make a pizza from the dough at 24-hours and the crust develops better color this would give validity to that premise.

Dough Clinic / Re: Too much leoparding but very white crust

Try these:

www.Fourstarfarms.com

www.maine grains.com

Resources / Re: Flour Source in Eastern MA

You can add sugar to the dough formula about 3% should be right. You can also replace 50% (1/2) of the water with whole milk. Be sure to scald the milk first, then allow it to cool in the fridge for a few hours before using it. Either of these should improve the color of your finished crust.

Dough Clinic / Re: What can I add to dough for good browning of pie

Mixing time is the same regardless of how long you plan to CF the dough. Mix the dough JUST until it takes on a smooth appearance, more than that is not necessary or desirable.

Dough Clinic / Re: Mixing Time

It really doesn't work that way, pick one, cold fermentation or room temperature fermentation and go with it. After the dough has cold fermented it will be significantly less dense making it a better insulator and more resistant to temperature change so it will be just all that much more difficult to manage, even in ball form. Another question is, how does your sourdough starter perform under refrigerated conditions? Some starters go all but dormant at refrigerated temperatures so placing the dough in the fridge would be an exercise in futility as not much will happen. Additionally, my comments on a dough made using refrigerated dough management v/s room temperature dough management was based on the use of yeast, not a sourdough starter. The use of a sourdough starter will essentially wipe out any perception of flavor change as it will dominate the flavor profile.

Starters/Sponges / Re: bulk retard vs ball retard

Being a home pizza maker I will "assume" you are working with smaller size doughs, less than 1Kg. in total weight? Please confirm or tell me what your total dough weight is.

Starters/Sponges / Re: bulk retard vs ball retard

Your starter is comprised of various yeast and bacteria strains, refrigerated temperatures will dramatically slow but not stop the growth rate of both, however some bacteria are more adaptive than others and will adapt to the cooler temperature and thrive thus taking over the medium and becoming the dominant strain (this is how sours are "lost").

New York Style / Re: What we have here...

Yes it does, hard, potable, tap water is the best just do long as it isn't sulfur water. Distilled and soft water are not recommended as they result in a softer, slightly weaker sough condition.

Dough Clinic / Re: Water

It also helps to reduce the amount of dusting flour picked up by the dough during the opening process, and because I open my dough by bench stretching the dough slides much easier on the bench top when the top (smooth) side is placed down.

Neapolitan Style / Re: Dough ball, which side is the bottom?

We just recently quite a bit of discussion on this very topic, if you check back a week or two you should be able to find it.

Pizzerias (box chains) use a refrigerated dough ball method of dough management

because it allows them to use the dough over a several day period and it provides much better consistency than and of the room temperature/ambient fermented doughs. As a home pizza maker you will most likely be using all of the dough that you make at one time so room temperature/ambient temperature dough management is a viable way to manage the dough, however you will need to modify the dough formula by using less yeast and paying special attention to the finished dough temperature (70 to 75F) failure to do so can end up resulting in over fermented dough. Oven spring will be about the same for both methods of dough management, as for flavor, it's hard to describe as it's pretty subtle, but room temperature/ambient fermentation provides a finished flavor similar to that of white pan bread (U.S. and U.K.) while cold fermentation provides a more complex flavor without the acidity common to crusts made from temperature/ambient temperature managed doughs.

Starters/Sponges / Re: bulk retard vs ball retard

I always orient the dough ball so the top of the dough ball becomes the bottom of the skin.

Neapolitan Style / Re: Dough ball, which side is the bottom?

Sure, you will need to make an emergency dough.

Double the amount of yeast.

Replace 2% of the water with vinegar.

Reduce the amount of sugar in the dough by 50%.

Adjust the dough water temperature to give you a finished dough temperature of 85 to 90F. (about 80F water temperature +/-)

From that point on process as directed but do not CF, instead just bag the dough balls and place on the counter top to ferment for 2-hours, then turn out of the bag onto a flour dusted surface, and open into a skin for immediate use. Don't go expecting much in terms of flavor or "digestibility" and you won't be disappointed. If you want to learn more about Emergency Doughs go back in the archives as we've had quite a bit of discussion on the topic.

Dough Clinic / Re: What am I doing wrong???.....

Rolls;

You are correct, we developed that test when we had our AIB Pizza Seminars and it works very well, but there is one problem with it, it is almost impossible to accurately describe how to do it much less interpret the results as your thumbs are pulling apart. I'm planning to do a new pizza video series with PMQ later next month and that is going to be one of the things that I'll be demonstrating, once seen it is easy to understand and do.

Dough Clinic / Re: Mixing Time

Absolutely correct, the milk will provide lactose sugar which readily browns during baking (the sucrose will not brown during baking unless yeast is present to invert it into reducing sugars). Eggs will also contribute to the browning process, but if you want more color just add some dextrose/corn sugar and you will get all the crust color you want.

Off-Topic Foods / Re: Type of flour for scones?

All commercial wheat varieties, world wide, in use today are hybrid varieties, so much so that they are not even named anymore (not since the 1970's) they are just designated by number sequences. If you want to play with a certified pure variety search for Turkey Red wheat, it is still grown, mostly in N.W. Kansas, and available

on a limited basis. You might be able to find some on the Internet. Once you find it you will need to mill it into flour. I'm not aware of anyone selling Turkey Red flour. If you want to make the crust more digestible, think fermentation.

New Forum Members / Re: New home pizza maker with too much to learn

Additionally, I'm betting that your finished dough temperature is too hot (as indicated by the use of "lukewarm water" as opposed to cool/cold water) A dough that is too hot will experience excessive fermentation (further compounded by the use of 1.7% ADY which is way too high, a better level would be 0.5%) which will result in the yeast consuming all of the available sugars with little or nothing left for browning plus a byproduct of fermentation is acid which will also inhibit crust color development so the excessive fermentation is serving you a double whammy. With only 1.3% salt I'm also betting that the finished crust leaves a bit to be desired in the flavor department, the crust might even taste "starchy" which is an indication of insufficient salt. Since salt also regulates the fermentation rate it is further compounding the excessive fermentation issue cited above, sometimes ya feel like you just cant win.

I can't comment on the malt powder that you're using as I don't know the L (Lintner) value of it. I always use a 20L malt powder at 0.25% when I'm working with an unmalted flour. As for mixing the dough, just mix it until it takes on a smooth appearance. Use just a small amount of the water at 100F to suspend and activate the ADY in and adjust the temperature of the remainder of the water to 60F. Be sure to add the cold water and the yeast suspension to the bowl first, then add the flour, malt powder and salt and sugar if you are using it last, then begin mixing. Mix just long enough to achieve a smooth dough appearance. Measure the finished dough temperature, you are looking for a temperature in the 70 to 75F range. Immediately scale and ball the dough, wipe the dough balls with a little oil and place into individual plastic bread bags (not ZIP-LOCK), twist the open end into a pony tail and tuck it under the dough ball as you place it into the fridge to ferment overnight. When you're ready to use the dough on the following day remove the dough balls from the fridge about 90-minutes before you plan on opening them into skins, once opened, dress and bake immediately.

I think this will get you started to making a much better pizza. Keep us posted on your results.

Dough Clinic / Re: What am I doing wrong???.....

In one word: ABSOLUTELY. There are just so many variables at play when it comes to mixing time that providing an approximate mixing time is like trying to predict the weather. The mixing attachment type and speed, the type of mixer, size of the bowl, size of the dough, dough absorption, flour characteristics, dough formulation, even the surface texture of the bowl comes into play. Don't worry about the time, instead mix the dough JUST until it takes on a smooth appearance and then adjust the water temperature to give you the targeted finished dough temperature

Dough Clinic / Re: Mixing Time

When the dough is bulk fermented prior to CF there is no way I can say how long you will need to CF the dough balls as I have no idea of how much fermentation the bulk dough has already received.

We just recently discussed bulk fermentation and ball fermentation, for many home pizza makers there isn't any difference if you bulk ferment or ball ferment because of the minor difference in dough size. Due to the higher ambient temperature room temperature/ambient fermented dough formulas will contain less yeast than CF dough formulas.

With regard to allowing your dough balls ferment at room temperature (25C/77F) the answer is: only until they can be easily opened into skins.

With regard to allowing the dough balls ferment at 18C/64F) the answer is the same.

Dough Clinic / Re: How should the dough after bulk look like ?

It's just added as you would any other dry ingredient, I've always added it right on top of the flour.

Dough Clinic / Re: Found NY style Pizza in Vegas. But, how to make dough without NYC water/flour?

N.Y. style pizza is made with the highest protein flour commercially available because it provides the desired finished crust characteristics, namely chew and foldability which allows the slice to be folded for consumption on the run. Soft water is easily addressed by the addition of 0.25% calcium sulfate to the dough, or you can "bite the bullet" and just reduce the dough absorption slightly to compensate for the slightly softer dough resulting from the use of soft water as compared to hard water. This has been discussed here at great length and I've also written a published article on the topic.

Dough Clinic / Re: Found NY style Pizza in Vegas. But, how to make dough without NYC water/flour?

Roberto;

Did the shape of the pizza affect the way it tasted? If not, don't sweat it! Free form pizzas are a popular item.

Your finished pizza looks just fine, and I bet it tastes as good as it looks too. :drool:

Neapolitan Style / Re: Dough testing and procedure from Austria ;)

Have used them for many years, great performance, great price, just don't buy into the claims that you don't need to rotate/spin the pizzas during baking. Not much not to like about the ovens.

Shop Talk / Re: Marsal Oven

Your dough ball looks great, I might suggest putting just a "wipe" of oil in the bowl before placing the dough ball in it, this will allow for an easier release (removal) of the dough from the bowl, in some cases you might be able to just invert the bowl for a few seconds or give it a tap on the counter top and the dough ball will fall out on its own giving you a nice symmetrical dough piece to open.

Neapolitan Style / Re: Dough testing and procedure from Austria ;)

That is strictly a personal preference. For me, my personal preference is for cold fermented dough. My entire 50+ year career in dough research has centered around bread and pizza (with cookies, pies, pastries, cakes, etc. tossed in for good measure) so I'm very familiar with the fermentation flavor in bread (room temperature/ambient) fermentation (which is the way most commercial breads here are made) so when I eat pizza I like to have a different flavor in the crust which is why I lean towards CF (cold fermentation) doughs. Over the years I've heard many people say their crust tastes "breadly" which comes from the fact that most all Americans have consumed a substantial amount of commercially made bread in their lifetimes so they are, knowingly or unknowingly, familiar with that type of fermentation flavor and are looking for something different in their pizza crusts. Additionally, CF doughs are a lot easier to manage over an extended period of time as evidenced by the fact that most U.S. major pizza chains and pizzerias use

some type of CF dough management procedure. In the end though it all boils down to personal preference, what you like and what works best for you is what you will want to use.

Dough Clinic / Re: How should the dough after bulk look like ?

Their "Bread Flour" comes in at 12 to 12.2% protein content. Their commercial equivalents would be any of the following:

Harvest King

Ben Hur

Rex Royal (slightly higher at 12.4%)

Washburn's (slightly higher at 12.4%)

Full Strength and Superlative would also be close at 12.6% protein.

Dough Clinic / Re: What is my flour doing to my starter and IDY, and why?

What dough absorption are you using and how does the dough feel as compared to using one of the other flours that is working better for you? There is a possibility that the flour has oxidized which would cause it to perform normally at first but become tight and bucky during fermentation, tight/bucky doughs resist expansion and typically produce lower than expected volume bread with a tight/dense crumb structure.

Can you provide any pictures of product made with the flour?

Dough Clinic / Re: What is my flour doing to my starter and IDY, and why?

I can't answer your question without knowing how you were making the SF starter and I'm not sure I understand your question regarding the IDY.

Dough Clinic / Re: What is my flour doing to my starter and IDY, and why?

Roberto;

A bulk fermented dough will look gassy if fermented for an extended period of time, that's what fermentation does.

Why bulk ferment? It's just another method of dough management used in making pizza dough, plus it provides a slightly different crust flavor than the cold fermented dough management procedure. As compared to a cold fermented dough it can be more difficult to manage as the dough can be exposed to a greater range of variables including finished dough temperature as well as ambient temperature. As for mixing the dough, the "window pane" test is for making bread, not pizza, so all you need to do is to mix/knead the dough JUST until it comes smooth, more mixing than that is not needed or desirable unless you wish to have a bread like crumb structure in the finished crust.

You say you leave the dough balls come up to room temperature, what is room temperature? The fact is that 18C is roughly 64F which is already about the ideal temperature for opening the dough into skins. (ideal temperature range for opening dough balls into skins is 50 to 60F/9.9 to 15.5C).

Dough Clinic / Re: How should the dough after bulk look like ?

Kelly;

First, the thermal death point for yeast is 140F so 170F is definitely out of the question. The purpose of the fermentation time (9-hours) is to all for hydration of the flour resulting in a cohesive dough. Yes, the dough is very tough and difficult to roll out but that comes with the territory of making a cracker type crust.

Additionally, it is the effect of the rolling process that brings the dough together and further helps to make it cohesive, you really don't need a cutter pan, you can roll the dough out and drape it over a screen of desired diameter and cut the

excess off using a DULL table knife or bench scraper, then transfer the dough to another baking platform or a baking stone/steel. The one change I would suggest making to the dough formula is to increase the salt level to 2% for improved crust flavor.

Dough Clinic / Re: Cracker Crust Rise

1) Bought Caputo and didn't like it and trying to use it up by blending with another flour.

2) Trying to achieve a certain protein level and can't buy that flour or don't have it on hand.

I can't come up with another good excuse for blending flours. My approach has always been to find an appropriate flour for the task at hand and work with a single flour whenever possible. Blending the Caputo kinda defeats the reason why it was purchased in the first place, which might take us back to #1.

Dough Ingredients / Re: Mixing Flours

Higher absorption doughs tend to experience better bake-out during the baking process which is also why they also tend to give the crispiest pizzas. Lower absorption doughs resist oven spring and are more dense so they do not bake-out as well which results in a potentially less crispy and softer crust feel which is usually somewhat more chewy too.

Chitchat / Re: Types of fire/heat?

This may seem silly, but my first question is: Do any of you have any experience operating a pizzeria?

New Forum Members / Re: Introduction - Potential Owner

With 15+ pounds of dough weight you can achieve a true bulk fermentation of the dough as it is large enough to not be influenced by the surrounding air temperature and it will also generate and retain the heat being generated by the yeast as it ferments (heat of metabolism). The key step to effectively managing a bulk dough like this is in consistently achieving the targeted finished dough temperature, even missing it by a few degrees can/will impact the fermentation rate of the dough.

Dough Clinic / Re: Immediate balling vs bulk

And because you are making a suspension (not dissolving the yeast), you will want to keep agitating the suspension (stirring or otherwise) right up to the point where you are ready to weigh out the amount of the suspension that you want to use.

General Pizza Making / Re: Dough Doh!

While on the island of St. Thomas I came across a pizzeria called Pizza Amore they make a great N.Y. style pizza. Water source: Since the island has no fresh water all of their potable water is processed from rain water (collected locally of course). The flour being used was General Mills All Trumps (non-bromated).

I've written articles on the topic and I'm on record as saying that there is nothing special about New York City water when it comes to making a N.Y. style pizza.

There is nothing magical about All Trumps flour either (bromated or non-bromated), as just about any quality high protein (13.8 or 14.2%) wheat flour will work just fine.

This is not to say that water doesn't affect the quality of a pizza dough and resulting crust (indirectly) it can and does, just read up on discussions on hard and soft water to learn more. Sulfur water is also deemed to be potable we will want to

exclude that but just about anything else will work fine.

Dough Clinic / Re: Found NY style Pizza in Vegas. But, how to make dough without NYC water/flour?

Speaking just for myself, I've noticed that there is a decided difference between a really, really really good cookie and a really, really, really bad cookie: It takes me just a little longer to eat all of the really, really, really bad cookies. :-D :-D :-D

Off-Topic Foods / Re: Best cookie I've eaten

And you didn't invite me to share that great looking pizza with you :'(

You're off to a great start! :chef:

Dough Clinic / Re: Thank You Tom

I would also suggest getting some litmus paper strips to monitor the pH as you go through the process.

Starters/Sponges / Re: dough with 80% starter

I allow my doughs to cold ferment for a minimum of 24-hours but I like to leave it ferment for 48-hours whenever possible. Occasionally I'll leave it go for 72 to 96-hours. The reason for the long fermentation time is primarily to develop flavor in the finished crust. If you will read through some of the archived posts here you will find a lot of good discussion on fermentation time. When fermenting the dough you have options of cold fermentation or room temperature/ambient fermentation.

Doughs that are managed at ambient temperature will provide a crust flavor that is slightly different from one that has been cold fermented, ambient temperature fermented doughs may also be more difficult to manage, especially for a beginner, as they are more temperature sensitive and can be more inconsistent in performance if not managed properly.

Dough Ingredients / Re: How long do you let your dough rest?

Salt and sugar seldom ever do good things for a starter, ditto for yeast in a concentrated medium. Could you add the yeast and/or starter to the water with the salt/sugar? Sure you can, but Murphy's Law dictates that one day you will get distracted and leave them together in the bowl too long and impair the fermenting properties of the yeast or starter which will leave you scratching your head for a day or more trying to figure out what went wrong. Make it a good habit to keep the starter/yeast and the salt/sugar separated and avoid disappointment. Think of it like looking both ways before crossing a road, 99% of the time you can get away without doing it but then there is that one time when you should have.

I suggested a spiral mixer only because they are about as "bullet proof"/trouble free as a mixer can get. Don't just take my word for it, poll others here to see what they think about spiral dough mixers.

No need to slurry a starter, it will be worked in just fine by the normal mixing action of any mechanical mixer. When I make a starter it's pretty loose to begin with (actually it's pour able), but even a plastic starter, like a sponge will be incorporated just fine.

Dough Clinic / Re: Salt/Yeast direct contact

It sure wasn't me you were listening to. I always advocate getting the ENTIRE dough scaled and balled WITHIN 20 minutes of stopping the mixer. The reason for this is to get the dough balled and in the cooler before the dough begins to ferment and change in density (become less dense) which effectively makes the dough more difficult to efficiently cool for optimum shelf life properties. Before I can answer

any question on bulk fermentation I need to know the size/weight of the dough that is being bulk fermented. If the dough weight is less than about 1.5-pounds you're kidding yourself with bulk fermentation as you are just fermenting a slightly larger dough ball, if you are talking about bulk fermenting 5-pounds of dough or more, that's a different story, not you can bulk ferment.

So, what's your total dough weight that you're bulk fermenting?

As for removing the dough from the fridge prior to use, you only want to leave it out long enough to reach 50 to 60F internal temperature which is usually around 2-hours, or so.

With a 70% absorption dough the autolyse is probably going to reduce the mixing time a little and possibly give you a little drier dough to work with during scaling and balling.

Dough Clinic / Re: Immediate balling vs bulk

The crust color developed through the addition of malt tends to be of a slightly redder hue than that developed through the addition of sucrose.

Most people would not see the difference.

Dough Clinic / Re: Diastatic malt vs sugar in home oven

One of the biggest problems with any AP flour is that there is no real standard for it ("all purpose" just what is that flour intended for?) it can be milled from soft wheat varieties (think cake and pastry flours) or it can be milled from hard wheat varieties like bread flours are. This can pose a problem when changing brands of AP flour too. I've seen protein levels for AP flour from a low of something in the 9% range to as high as 11.5%, this is why some swear by AP flour while others swear at AP flours. It is also why I don't ever recommend using an AP flour. Bread flours, on the other hand, are designed for baking bread and bread like products (pizza included) and as such they are much better defined as to the type of wheat they are milled from as well as the protein content falling within a usable range for making pizza.

Sicilian Style / Re: AP vs. Bread Flour for Sicilian-style pies

When hand mixing we found it best to put the salt (and sugar if used) into the bulk of the dough water then suspend the yeast (regardless of the type used) in a small portion of 95 to 100F water for ADY (ADY will need a 10-minute activation period) or IDY (IDY requires no activation period), but you can just dip a small amount of the dough water out of the bowl (before adding the salt/sugar) to suspend the CY in as it is not temperature sensitive, add the suspended yeast to the dough water containing the salt/sugar and immediately add flour and begin mixing.

When mixing by machine put the dough water in the bowl and add the salt/sugar, then add all of the flour and add the CY or IDY on top of the flour and begin mixing. If using ADY you will need to suspend it in a small portion of 95 to 100F water to hydrate/activate it, then after 10-minutes activation add it on top of the flour and begin mixing.

A sourdough can be added to the dough water when hand mixing just as the yeast suspensions are added, but when machine mixing it is better to add it on top of the flour just prior to starting the mixer.

Hopefully you're considering one of the spiral dough mixers for mixing your doughs.

Dough Clinic / Re: Salt/Yeast direct contact

Before answering your question I would like to know if you are machine mixing (assuming you are) and more importantly, what type of yeast are you using?

Dough Clinic / Re: Salt/Yeast direct contact

We recently had quite a bit of discussion here on DELCO pizza which might be of interest to you.

New Forum Members / Re: New here! Opening a new place soon!

Before I can really help you I've got to ask you to put your dough "recipe" into a dough "formula" based either in weight measures or bakers percent, that will help tremendously with the diagnostics allowing us to give you some meaningful direction, also it will go a long ways in helping you produce a more consistent product.

Dough Clinic / Re: What am I doing wrong???.....

If you are planning to sell whole pizzas a rocker knife is fast and easy to use.

Prep Equipment / Re: What is your favorite pizza cutter for high traffic events?

It would get up to full operating temperature, eventually. With the elements not generating full heat potential the oven would cool when opening the door, like you never need to to that when using a deck oven! Multiple bakes were impossible unless we waited about 15-minutes before loading the oven again as the deck was sooo ssslllooowww to recover.

What a breath of fresh air when we got the Marsal gas oven! :chef:

Dough Clinic / Re: Wondra Flour for Pizza Crust Recipe?

Equal parts fat and flour/100% fat = a roux, great for thickening a gravy.

Even a pie crust with 35 to 50% fat will have some water in it to form some gluten as a binder.

From a practical standpoint 15 to 25% fat will be about the maximum amount used in making pizza crusts. A number of years ago croissant pizza crusts were popular. These were made with roughly 20 to 25% fat or which 5% was incorporated into the dough with the remainder added as hard fat flakes and incorporated into the dough at the end of the mixing stage. You saw the same dough being used by Burger King in making their breakfast sandwiches.

Dough Clinic / Re: How much oil is enough

There are a whole lot of other things at play here which can cause flattening of the dough ball.

- 1) Some gluten development is needed to retain leavening gas but in pizza production it isn't as important as it is in bread production.
- 2) Flour strength will play a significant role in determining how well the dough ball retains shape during fermentation.
- 3) How tight the dough is rounded will impact how well the dough ball retains its shape.
- 4) The dough absorption also affects how well thew dough ball retains its shape.
- 5) The amount of salt used also plays a role.
- 6) The amount of yeast used will have an impact.
- 7) The finished dough temperature will play a role.
- 8) The use of oil in the dough will also impact how the dough ball looks after fermentation.
- 9) Failure to cross-stack is a major contributor to dough ball collapse.
- 10) Improper (warm) cooler/fridge temperature.

Any one or combination of these factors can/will affect how the dough ball looks/performs after the fermentation period. It is impossible to say that any one factor has caused a dough ball to flatten or collapse without knowing the dough formulation, flour strength characteristics and dough management procedure in great detail.

Dough Clinic / Re: Understanding dough ball structure

You will need to use about 5% oil to see a significant softening effect but if you mean creating a more tender eating crust 2% is a good starting point.

Dough Clinic / Re: How much oil is enough

Damaged starch is usually limited to something between 6 and 12% in most flours (we've discussed the impact of damaged starch when its at a high level before, very high dough absorption but the damaged starch is the first to be hydrolized so it quickly releases its water turning the dough into soup). On average, gluten forming protein (VWG) has an absorption of 2 to 2.5 times its weight. The remainder of the water that we add (which isn't absorbed primarily by the protein and damaged starch) is used to adjust the viscosity of the dough.

Dough Clinic / Re: Two different flours, same hydration question

JPB;

It is true that increasing the dough absorption plays a part in how well the dough opens but not as much as fermentation or relaxation time.

Dough Clinic / Re: Time in balls vs extensibility

Every flour is different and unique in it's own way, or said another way, no two flours are alike. Each and every flour will exhibit its own absorption and mixing properties, some flours exhibit sticky or slightly sticky dough characteristics which can be inherent in the flour and for all practical purposes, impossible to correct while others demonstrating the same characteristics can be addressed by changes to the dough absorption or mixing time.

Typically, a dough that is made using an autolyse (I think that's what you were referring to) will be less sticky and easier to handle than a dough made without using an autolyse.

If you are faced with a sticky dough make sure you are not adding diastatic malt in combination with a malted flour or that you are not using it in excess as too much malt will create a sticky dough condition that cannot be addressed.

Dough Clinic / Re: Two different flours, same hydration question

When we had an electric deck oven and it was failing it took close to 15-minutes to bake our thin crust pizzas. We replaced it with a Marsal gas deck oven and our baking times went down by approximately 50%. Additionally, there are a good number of deck ovens in use for making pizzas that are not actually designed for making pizza, they were designed to bake bread so they will always have a steel deck and a burner BTU capacity of around 85,000 BTU. Not exactly the oven you would want to have for a high volume shop.

Dough Clinic / Re: Wondra Flour for Pizza Crust Recipe?

Once the dough is balled it is typically allowed to cold ferment anything from 18 to 96-hours or more, it is then removed from the fridge and allowed to warm to 50 to 60F before opening.

If you use a different dough management procedure where the dough is fermented for a period of time prior to scaling and balling you only need to allow the dough

balls sufficient rest time to relax sufficiently for ease of opening.

Dough Clinic / Re: Time in balls vs extensibility

Nick57;

It potentially could. That's how we bake pound cakes and fruit cakes in retail bakeries where we want to bake longer without overly drying out the product or developing an overly thick, heavy crust on the product. In many cases you can get the same effect by simply spraying water on the pizza or just the rim immediately before placing it in the oven.

Tom Lehmann/The Dough Doctor

Chitchat / Re: Types of fire/heat?

Good news and bad news about burning wood with a higher moisture content.

The Good News: It will potentially give a very slight increase the moisture content/humidity within the oven which can result in better heat transfer to the pizza and possibly shorten the baking time by a few seconds.

The Bad News: High moisture content wood does not burn as hot as dry wood thus effectively negating the good news.

Note: DO NOT confuse this with adding low pressure steam to an oven, in that case you're flooding the oven with steam which condenses on the product thus cooling it and delaying setting of the crust structure and enabling the product to be baked longer.

Chitchat / Re: Types of fire/heat?

You're on the right track, however, I might suggest that you begin your experimenting using what would be termed a strong bread type flour (12.2 to 12.8% average protein content). Make your doughs sufficiently large so as to get at least three dough balls from each dough, make a pizza from each dough ball at 48, 72 and 96-hour intervals. Always make the same pizza and photograph your results as well as entering your comments into a log book.

Have fun doing it. We look forward to hearing about your results.

Dough Clinic / Re: Flour suggestions for NY Thin Style dough

George;

That certainly might be, there is a reason why the manufacturers put an expiration date on their products, not that the product will fail after that date but they know, through their own testing, that they cannot ensure satisfactory product performance after that date. To further cloud the issue it the yeast packets, at any time since they were packaged, were subjected to less than ideal storage conditions the shelf life would be compromised so the yeast performance would be even poorer than expected after the expiration date.

Neapolitan Style / Re: Dough problem after bake

- 1) Define a "rise". I know what a "full" rise is, by definition it is when the dough rises and then begins to recede on its own, this is also typically considered to be about 80% of the full fermentation time the flour can handle.
- 2) Finished dough temperature is what drives the rate of fermentation, the warmer the dough (within reason) the faster it will ferment.
- 3) Yeast needs some nutrient to sustain vigorous fermentation, this can be in the form of malted flour or added sugar.
- 4) Flour strength also plays a significant part in fermentation, the stronger the flour or the greater its tolerance to fermentation the greater the time needed to

reach the first "full" rise as described above.

Dough absorption and water carrying capacity of the flour can impact the rate of fermentation too and it will also significantly impact the way the dough looks at any stage of fermentation. With high dough absorption the dough can look to be well fermented but in reality still be under fermented.

General Pizza Making / Re: How to get multiple rises with yeast ratio

Delivery no, customer pick-up yes. It took a bit for customers to get used to the concept but they're on board now. No customer complaints that the pizza was delivered later than promised, no complaints that the pizza was stuck to the top of the box, seldom ever a complaint, and no headaches associated with delivery. Like Walter said, if you really want a great pizza, come in and enjoy one!

Shop Talk / Re: Keeping pizza hot and not soggy when transporting to customers

Dry wood and gas bake pretty similarly at the same temperatures, both release moisture into the oven as a result of combustion (assuming a direct fired oven which most home ovens are), electric ovens on the other hand create a very dry heat which conducts heat rather poorly so products baked in an electric oven typically require a longer baking time which can be as much as 20% longer than that required in a wood or gas fired oven baking at the same temperature. With wood it is also possible to have a variable in the amount of moisture in the wood being burned which can affect the way products bake. With all of this said, I've never heard of anyone adjusting the dough absorption due to the fuel being burned in the oven. However, as a rule, most wood fired ovens are operated at a higher temperature than gas ovens which allows the operator to increase the dough absorption to achieve specific finished crust characteristics not otherwise achievable when baking at lower temperatures. In this case I'm referencing baking at temperatures in the 800 to 1,000F range.

Chitchat / Re: Types of fire/heat?

George;

Your salt level is really very low at just over 1% which can result in an inconsistent fermentation rate. The next time you bake you might want to increase the salt level to 25 to 30-grams which is a more realistic level for pizza dough and as a side benefit it will improve the flavor of the baked crust. I'm guessing right now your crust has a slightly "starchy" like taste, the increased salt level will effectively address this. Additionally, how long do you pre-heat your oven prior to baking?

Neapolitan Style / Re: Dough problem after bake

Just use clarified butter/ghee as regular butter will burn.

General Pizza Making / Re: Help with pizza sticking to pan

If you are making a N.Y style pizza you really need to be using a high protein content flour, something in the 12.8% to 14.2% protein content will work best for this application. In New York All Trumps flour is very popular, it has a protein content of 14.2%. An easy to find flour is Pillsbury Bread Flour aka Pillsbury Breadmaker Flour which has a protein content of about 12.2% and is available in most supermarkets.

Dough Clinic / Re: Newbie Questions regarding Dough Recipe

Par-bake crusts can easily be stored for up to a total of 4-days at room temperature. Not knowing the time of the year or the relative humidity of the room

in which the crusts are being stored I suggest wrapping the cooled crusts in stretch wrap (not tightly) to prevent further moisture loss. Don't worry about staling, that is not an issue with pizza crusts but mold is, this is what we recommend not storing for more than 4-days since mold will usually begin colonizing on the 5th day.

If you go back in the archives here you will find more posts on par-baking pizza crusts.

General Pizza Making / Re: Prebaking a shell and preventing burnt crust

One thing that will usually help in cases like this is to blend at least 25% Crisco or some other plastic shortening into the oil. For example, if you make a blend of 3-ounces of oil and 1-ounce of Crisco and heat in the microwave to melt the Crisco into the oil then use this blend for your pan oil. This is a trick I learned when I was working in a bakery to prevent bread loaves from sticking in the pan.

Also, I know not what type of oil you are using but be aware that sometimes a changer in the type of oil being used will also help. Peanut oil is what has been used commercially for a good many years.

General Pizza Making / Re: Help with pizza sticking to pan

We have discussed this many time here, maybe Peter can dive back into the archived and reference some of the posts for you.

When changing a "recipe" based on volumetric portions into bakers percent it is recommended that you portion out the ingredients three times and weigh the sum on each ingredient then divide the sum be three which will give you the average ingredient weight. With all of the average ingredient weights written down we can begin changing your recipe into a dough formula based on bakers percent. Assign 100% to the flour weight as it is ALWAYS 100% regardless of the weight. Now, using your calculator, divide each ingredient weight by the weight of the flour and multiply by 100, this will give you the bakers percent for each ingredient.

Example:

Flour weight: 650-grams.

Ingredient weight: 17-grams.

Divide 17 by 650 X 100 = 2.61%

To use bakers percent:

Decide how much flour you want to use.

Tip: If you want to double the dough size just double the amount of flour. If your dough makes 3 dough balls and you want to increase the dough size to make 4 dough balls just use 1/3 more flour weight.

To calculate ingredient weights:

Put 100% next to your new flour weight, remember flour is ALWAYS 100%.

Using your calculator, enter the flour weight then press X and enter the percent of the ingredient you want the weight for then press % and read the weight of the ingredient in the display.

Example:

Your new flour weight if 975-grams.

The ingredient percent is 2.61%

975 X 2.61 (press the "%" key) and read the ingredient weight in the display.

If you are "math challenged" there are several spread sheets out there that I'm sure anyone here can direct you to that will do all the work for you, all you will need to do is plug in the flour weight, can't get much easier than that.

Dough Clinic / Re: Help with recipe conversion from standard measurement

to percentages

Amen to that!

A little dusting flour or oil on your hands doesn't hurt a thing, adding more flour is a totally different thing which is what you were probably told not to do.

Dough Clinic / Re: 73% hydration dough

If it was collapsing when touched it was most likely over proofed.

What was the finished dough temperature?

How much of what kind of yeast was used?

Did you leave the container open for a couple of hours after you placed it in the fridge?

A little dusting flour or oil on your hands will go a long ways in helping you handle a soft/sticky dough.

Dough Clinic / Re: 73% hydration dough

While it was difficult to read the bag label it does not appear to indicate that the flour has been malted. If your dough formulation does not already contain at least 2% sugar you might try it again with at least 2% sugar included in your dough formulation. The cake like texture is a direct result of the baking powder contained in the flour "cocktail" as I like to call it. To improve the crumb structure increase the amount of yeast you're using. You are including yeast in the dough formulation as opposed to just adding water to the "cocktail" , aren't you? If you are not doing do what you are making is reminiscent of the old Chef Boy Ardee pizza kit, but even that has some sugar in the dough formula but in this case since there is no yeast the sugar HAS TO BE dextrose/corn sugar.

Dough Ingredients / Re: King Arthur Flour's "Pizza Flour Blend": problems

NO.

Dough Clinic / Re: Dissolving Instant Yeast

Rather than going into a detailed explanation, if you Google it you will find a definition of the spice "savory".

Sauce Ingredients / Re: Is "Savory" really an ingredient?

In a dough the water is pretty well taken up already by the flour and other ingredients, the 5-minutes mixing allows for a slow/controlled rate of yeast hydration while also at the same time ensuring thorough distribution of the yeast throughout the dough. When you put the IDY into 95F water there is no other competition for the water aside from the yeast so it hydrates much faster but as I've said numerous times before, this is also a problem in that you will get some glutathione being leached out of the yeast cells, yes, even with 95F water but the damage will be minimized.

Dough Clinic / Re: Dissolving Instant Yeast

I'd say that was a fair statement. Most pizza makers, both home and pizzeria, use IDY for its ease of use, greater consistency and long shelf life.

Dough Ingredients / Re: Different yeast

That's not the question you asked, but you your "wondering" question is included in my response as I have indicated how they are used/added to the dough.

Kinda reminds me of a Little Suzie an Joke. Little Suzie comes home from school one day and asks her mother "where did I come from?" Her mother proceeds to

explain the "facts of life" to her in full detail, then she asks Suzie why she asked about it, little Suzie responds "Well, my friend Johnny said he was from Pennsylvania and I was just wondering where I came from" :-D

Dough Ingredients / Re: Different yeast

Compressed Yeast: C.Y./fresh yeast/wet yeast/brick yeast/block yeast.

About 70% moisture content.

Must be stored under constant refrigeration, should not be frozen in a static freezer.

Highly perishable.

Shelf life about 3-weeks.

Can be suspended in the dough water (any reasonable temperature) but usually just crumbled and added on top of the flour when machine mixing.

Active Dry Yeast: ADY/dry yeast.

About 8% moisture content.

Unopened shelf life of 6 to 12-months.

Opened shelf life of about 3-months.

Must be suspended and activated in 100 to 105F water prior to use.

Once activated it can be added directly to any reasonable temperature dough water.

Instant Dry Yeast: IDY/instant yeast.

About 3% moisture content.

Unopened shelf life 12 to 24-months.

Opened shelf life: 3 to 6-months.

Is usually added dry to the flour when machine mixing but should be suspended in 95F water when mixing doughs by hand or employing machine mixing times of less than 5-minutes.

Once the IDY is suspended in 95F water it can safely be added to the dough water at any reasonable temperature.

IDY when suspended in 95F water is to allow for hydration of the yeast, it is not to activate it as is done with ADY.

NOTE: The word "instant" in this case refers to the hydrating properties of the yeast, not the activation of the yeast.

IDY is extremely sensitive to the temperature of the water it is suspended in, even a 5F variance can/will impact yeast performance to some extent.

IDY can be used in the making of "goodie bags" whereas ADY cannot.

When an autolyse is used in making the dough the IDY can be sprinkled on top of the autolysed dough and machine mixed. Note that a minimum 5-minute mixing time is necessary.

Conversions:

CY: 16-ounces

ADY: 8-ounces

IDY: 6-ounces

Dough Ingredients / Re: Different yeast

Maybe you have a very thin white sauce?

Dough Clinic / Re: Crust Color Differences between Sauced and Unsauces Pizzas

Without know which flour you are using I can only say:

Use a dough absorption of about 60%.

Cold ferment the dough for 12 to 24-hours.

Make sure you have at least 2% sugar in the dough formula or 0.25% of a 20L diastatic malt.

Dough Clinic / Re: Crispy crust ?

Welcome to the wonderful world of wheat flour. :)

Pizza News / Re: King Arthur AP recall

When mixing the dough by hand both types of yeast will perform very well but I tend to give the nod to the use of ADY in this application since it is designed specifically to be suspended and activated prior to use while the IDY could conceivably suffer some damage by being suspended in the water if the temperature isn't correct (it is more sensitive to the temperature of the water in which it is suspended than ADY), this is why I might give the nod to ADY over IDY in this specific application, on the other hand the IDY has better shelf life properties so if you are planning to open a large package and use from it over a period of time the IDY might provide more consistent performance over the long haul, six of one, half a dozen of the other, take your pick.

Dough Clinic / Re: Dissolving Instant Yeast

If you are asking if the finished dough temperature influences or is influenced by the temperature at which the dough will be fermented, the answer is yes, but regardless of at what temperature the dough will be fermented, 76 to 78F is still a good target finished dough temperature but do keep in mind that when you will be fermenting at elevated temperatures such as room temperature fermentation consistency in achieving the targeted finished dough temperature is more important than the actual finished dough temperature itself. Where long dough fermentation times are employed it is the common practice to develop a targeted finished dough temperature and then adjust the yeast level to accommodate the fermentation time, when doing this the temperature of the dough must be a constant so achieving the targeted temperature is critical.

Dough Clinic / Re: Desired Dough Temp & Fermentation Temp

which "00" flour are you using?

Dough Clinic / Re: Crispy crust ?

Another thing to consider is the correct, and many time "legal" dosage for some of the more commonly encountered additive ingredients such as potassium bromate, azodicarbonamide, ascorbic acid, and L-cysteine hydrochloride which is measured in ppm (parts per million) based on the flour weight.

Dough Clinic / Re: Caputo 00 Pizzeria vs Americana

Either ADY or IDY will work equally as well in situations such as you have described, however, since ADY is designed to be pre-activated I might lean a little more towards using ADY for applications where the yeast must be suspended and activated prior to use. Why ADY over IDY in this specific application? Because, overall, IDY tends to be a little temperamental with regard to the temperature of the water it's suspended in so there exists a potential for damaging the yeast if one gets careless with the temperature of the water the yeast is put into. ADY while still responsive to water temperature is not as temperamental. In reality I'm probably "cutting hairs" since as I stated in another post recently any difference in

yeast performance is going to be hard, if not impossible, to see under home baking conditions. On the other hand, if defense of IDY, it has better shelf life properties than ADY so if you do not use an entire package of ADY within a given period of time the IDY will most likely prove to provide more consistent results over a longer period of time. Like the grocer says, "six of one, half a dozen of the other", take your pick.

Dough Clinic / Re: Dissolving Instant Yeast

Walk-in coolers have significant in and out traffic during the hours the store is open and few, if any are actually operating at the set temperature, most are doing good to be operating at 50F truth be known. This would be especially so if the dough is placed anywhere near the door and the door opening isn't equipped with plastic strip curtains in addition to the regular door. We always made our dough at the end of the day when there was minimal traffic in and out of the cooler, and then there was no traffic during the night when the dough was cooling down.

Dough Clinic / Re: Blown dough?

Good call Peter, I totally agree. Anything over 24-hours is a bit of a stretch for a dough made with 72% absorption to begin with.

Dough Clinic / Re: Blown dough?

Danny;

This very topic was just discussed the other day. 0.25% of 20L diastatic malt powder is the answer you're looking for.

Dough Clinic / Re: Caputo 00 Pizzeria vs Americana

Your IDY is high at 0.55%. I suggest reducing it to 0.375%. One question, what is the temperature of your walk-in cooler, and what time of the day did you make the dough?

Dough Clinic / Re: Blown dough?

I was also thinking not more than 12-hours at room temperature or if you want to go to 24-hours use a cold fermentation procedure: Mix; scale; ball; cold ferment 24-hours; temper AT room temperature for 90-minutes, open dough balls into skins for immediate use.

Dough Clinic / Re: Caputo flour rescue

I agree with Rolls that for most home ovens with limited temperature capability a dough absorption in the 55 to 65% range works best. My personal "go to" absorption for most of my home pizza making is 62% absorption unless I'm trying to make something different/special like ciabatta, and even then it's only in the 70 to 75% range. You also learned a valuable lesson too, colder doughs are easier to open/handle than room temperature/ambient temperature doughs, this is why we seldom allow a refrigerated dough to warm fully back to room temperature for opening, instead we only allow the dough to warm to something in the 50 to 60F range (internal dough ball temperature) before opening it into a skin.

Dough Clinic / Re: 80% hydration dough

It's the temperature of the water that causes the fissures to close up so the faster you can wet the IDY the better off you'll be in the long run when the IDY is exposed to so much water all at one time.

Dough Clinic / Re: Dissolving Instant Yeast

Adding fat to the dough always helps to make for a softer, more tender eating crust. If you want to see first hand what fat will do just buy two packages of tortillas, one fat free the other one with normal amount of fat, you'll be surprised. Another thing to do is to add lecithin to the dough, lecithin is an emulsifier which will allow the fat to bind to the water for increased water retention.

New York Style / Re: Purposely undercooking crust

Craig;

You thinking is spot-on, for those applications as well as those where the dough will not be machine mixed for at least 5-minutes suspending the IDY in a small amount of 95 to 100F water is the preferred way to go. You won't need to wait for it to activate, just add it to the water and stir or whisk until it is completely suspended and it's ready to add directly to the colder dough water.

Dough Clinic / Re: Dissolving Instant Yeast

I can't tell anything from your pictures as the slice is shown as cut from the top down. In order to tell if we are looking at a real gum line or just a false gum line I need to ask you to show a picture of the edge of the slice when cut from the bottom to the top. To do this just invert the slice and carefully cut through the crust using a VERY SHARP serrated knife or a razor knife. By cutting it in this manner you will not drag sauce and cheese down into the crumb thus obscuring vision of the important crumb just under the sauce, with that I should be able to determine just what we have going on there.

Dough Clinic / Re: the dough underneath the sauce was still raw, what could it be ?

Peter;

Sifting doesn't impact the total flour absorption, it can, and I say that cautiously, allow the flour to hydrate more quickly as there can be a greater surface area exposed to the water, but the amount of water actually absorbed (total absorption) is not affected. Lumpy/clumpy flour is a result of exposure to high humidity or Indian Meal Moth infestation (their webbs result in clumping of the flour), both of which are good signs that the flour should probably be discarded. While flour may clump as a result of packaging, the clumps readily break-up so they really don't create a problem, even when mixing totally by hand. While nobody wants to talk about it the main reason for sifting flour goes back to when baking at home was not just a hobby, but part of everyday life, the flour was stored in a metal lined deep drawer, or metal lined box and it was too valuable to through out (for any reason) as a result the flour became infested over time and sifting made it all good again (my, how times have changed). I was raised on home made bread, the store bought bread, which was bought when we went into town every two weeks, was a treat for us kids (because it was soft) but it was an act of kindness for the women who got a reprieve from needing to bake bread for a couple of days, did I mention that our kitchen cook stove was dual fuel? Yep, dual fuel, corn cobs or wood. Mostly corn cobs as we were a small dairy farm. Now think of this, an Illinois farm, summer, hot and humid, no air conditioning and no fans and baking bread with that cook stove three times a week (need I say more?) The house was heated by dual fuel too, either corn cobs or coal (both burned long and hot, but in the winter it was always coal at night as the huge pieces that we burned lasted through the night). The farm is now a subdivision and those who live there don't have a clue about what the land once was. Sorry to digress.

Dough Clinic / Re: Sifting

As it pertains to making yeast leavened doughs, it will remove insects and larvae (worms) from the flour, it will remove any non-flour material (paper, string, etc.), it will give you a little exercise (could be a good thing) but aside from that, no, sifting flour today serves no real useful purpose.

Dough Clinic / Re: Sifting

In Chicago, Ceresota brand flour is a very popular flour to use for thin crust pizzas, it comes in at around 11.8% protein content.

Dough Clinic / Re: Please describe the various types of thin crust pizza

The "I" in IDY (instant dry yeast) stands for instant hydrating (it hydrates much faster than ADY (active dry yeast), this is why the manufacturers recommend that it be added to the flour, not to the water when making a dough. The flour will compete for the water and allow for a more controlled rate of water absorption by the IDY, if the IDY is placed into an environment where there is an abundance of water the yeast will absorb water faster than the fissures in the particles can seal closed which allows for a flushing effect upon the yeast cells as water freely enters and leaves the cells, this flushing effect removes glutathione (the amino acid contained within the yeast cell) which severely impairs the ability of the yeast to ferment as it should. This is why if you read the direction on a 1# bag of IDY it clearly states to mix the IDY with the flour. We did studies on this many years ago at AIB and found that yeast performance became quite variable when the IDY was suspended in 60F water (average dough water temperature). We didn't do tests on water colder than that but I'll put money on the table betting that the IDY won't fare any better (probably worse) since the colder water slows the sealing of the fissures. We did look at suspending IDY in warm water and found that 95F water was the best water temperature for suspending the IDY in. It is interesting to note that when the water temperature was at 90F we found a 5% loss of gassing power from the same IDY. At 100F the gassing power was essentially the same as when the IDY was suspended in 95F water so for this reason we (and I believe the manufacturers do too) that when necessary, the IDY be suspended in 95 to 100F water.

OK, I understand that this means little to making pizza dough at home where the standard deviation is measured in light years and a 5, 10 or 15% loss of yeast gassing power will most likely go unnoticed, even a slightly softer, more extensible dough (remember that glutathione is a reducing agent, think "dead yeast") will most likely go unnoticed, so take it as you may, the IDY is still being damaged, to what extent is a great unknown and as I used to tell my students "Consistency is the most important ingredient in making pizza or any other product", without it, what do you have?

Dough Clinic / Re: Dissolving Instant Yeast

With your addition of more flour during the dough mixing (this is not recommended) it is impossible to determine just what is happening with your dough but I have a very strong suspicion that the dough "recipe" is all out of balance, because of this I'm suggesting that you start over again but this time following a known dough "recipe". After you have mastered the "recipe" we'll get you started on working with a dough "formula" which is based on ingredient weights rather than inaccurate volumetric portions. To see a dough "recipe" for home made pizza please go to the Pizza Marketing Quarterly web site at [<www.pmq.com>](http://www.pmq.com) and click on the RECIPE BANK option, once there use "home made pizza dough" for your search and you will find my home made dough recipe listed. We have used this "recipe" for many years and it works well for making both

thin and thick crust pizzas. As a side note, I think you will find my dough "recipe" much easier to put together than what you have been working with.

Dough Clinic / Re: why after baking, the pizza dough is hard as rock? what mistakes am i doing?

Danny;

I sounds like a New York style crust is what you are looking for. I would suggest using a lower protein flour, possibly something in the 12% protein content range (Pillsbury Bread Flour) to reduce the chewiness to what you are looking for.

Dough Clinic / Re: Please describe the various types of thin crust pizza

From the looks of the pizza I'm guessing that it might have been baked in a very hot oven. This would allow for a short bake time resulting in reduced color to the top of the pizza while still providing a darker bottom crust color. Short baking times are notorious for giving pizzas with a soft eating characteristic and little to no crispiness in as little as a minute after baking.

Dough Clinic / Re: Mack and Manco dough

Like I said, we used 0.25% 20L malt powder to replicate typical malting done by the flour miller, 0.249 is close enough, I'm not going to argue over 0.001%

Dough Clinic / Re: adding diastatic malt powder to my flour to match all trumps malted

QJ is spot-on, you actually run the risk of damaging the IDY by putting it into suspension prior to adding it to your dough. Just add it dry right on top of the flour and it'll be just fine. That's how it is designed to be added. There are only two times when the IDY really needs to be suspended in 95F water prior to addition, one is when mixing the dough entirely by hand and the other is when mixing the dough by machine but the total mixing time will be less than a total of 5-minutes.

Dough Clinic / Re: Dissolving Instant Yeast

Unless you are approaching the absorption carrying capacity of the flour, increasing the dough absorption will contribute to a firmer, more crispy crust, but as you aptly noted, it can also become more difficult to handle.

Neapolitan Style / Re: Hydration Test

Foreplease;

There is no way of telling just how much malt has been added to the flour, even the Falling Number won't help since it only provides an indication of amount of total diastatic activity (natural in the flour + added malt), not just the malt that is added by the flour miller. If you have an unmalted flour made from good, sound wheat, the addition of 0.25% of a 20L diastatic malt powder should provide the flour with a FN value something under 300 (indicating a normally malted flour). The actual amount of malt added by the miller is totally immaterial and unless you have access to a FN instrument the best you can hope for is to get close to a normally malted flour. We determined the use level of 0.25% 20L diastatic malt powder using the Amylograph instrument (prior to the invention of the Falling Number which is much faster). If you want to replicate the exact malting of a flour you first need to get a FN value of the flour, then add whatever amount of diastatic malt or amylase enzyme is needed to give the flour a FN value in the 200 to 250-second range.

Dough Clinic / Re: adding diastatic malt powder to my flour to match all trumps malted

Norma;

Yes, a Fish brand oven is a reel type oven. I'm not familiar with the pizza referenced but it might be a thin crispy type crust (typically made with 40 to 45% absorption) or a cracker type crust made with 45 to 50% absorption but mixed only 45-seconds, or so, and handled much like a long flake pie dough or possibly a biscuit dough. Both of these pizza types generally turn out pretty crispy regardless of the type of oven used. They're also great for pizza buffets too, think Mr. Ghatti's or Incredible Pizza, Pizza Street, Pizza Ranch, etc.

New York Style / Re: Purposely undercooking crust

Good, open cell structure, strong bottom bake (I bet it's crispy!) and a very good top bake, (I like it that way) can't ask for much more than that! Great looking pizza! Fantastic, considering it's only your fourth attempt! :drool:

New York Style / Re: First major success

Peter;

Since the term is used so frequently in reference to reel type ovens I assumed, maybe incorrectly, that it was in reference to the reel oven, but then we all know about those who "assume". :-D

New York Style / Re: Purposely undercooking crust

So your question is; Why is there a variation in the amount of flour in bags from the same delivery.

Your observations are spot on, we've seen this all the time over many years, but we don't see much variation in the actual weight of the bag when you include the tape and thread. This is why I've always advocated weighing each and every bag of flour. The variations you are encountering are from the fact that the bags are automatically filled on high speed handling equipment. While any one bag might be "off weight" if you weigh a group of ten bags the average of the ten will be correct. By the time the equipment adjusts for an off-weight the bag has already moved on and the next bag is being filled. This is why the weight seems to float between slightly heavy and slightly light with a few spot-on for good measure. It's only the bags that are out of set tolerance that are automatically pulled from the line. We've also documented that the closer you are in dough absorption to either of the extremes of high or low, the more apparent these variations become.

Also, keep in mind, as I've said so many times before, flour is not a constant, it's really quite variable. The age of the flour or wheat from which it is milled will affect it, the conditions under which it's stored will affect it, and the grist (collection of wheat varieties) from which it is milled will affect it. The millers do a great job in providing us with flour as good and consistent as it is. I have two heroes in my life, the flour miller and Betty Crocker!

Dough Clinic / Re: Can you explain my observations?

When mixing dough by hand I like to add the water then the salt and sugar and the yeast (both ADY and IDY are added in a water suspension) then the flour, I then begin hand mixing to incorporate everything, then I allow the dough to rest (autolyse) for 45 to 60-minutes before continuing with my hand mixing process. When machine mixing I add the water first, then the salt and sugar followed by the flour. IDY or CY are added right on top of the flour, but ADY is added in a water suspension. Mixing is then started. If oil is used I follow the delayed oil addition dough mixing method.

General Pizza Making / Re: Flour , water , salt, yeast. What is the right

order to add them?

The one place where the individual tins really shine is when you're dealing with a high absorption dough.

Shop Talk / Re: Metal Proofing Pans vs Plastic Proofing Trays

I'm, still trying to find the pizza in it? :-D

Dough Clinic / Re: Tom Lehmann's guide to burger buns

There are generic pizza boxes and there are pizza boxes with custom printing on them. Many pizzerias will sell advertising space on their pizza boxes to help off-set the cost of the boxes.

Chitchat / Re: Pizza boxes?

The spots, actually "speckles" as they are referred to as are most commonly associated with oxidized particles of wheat bran, they are harmless and don't show up in the baked product. Once in a while we come across something that's similar which is caused by yeast agglomerates resulting from using ADY as one would IDY (adding it directly to the flour or dough rather than suspending it in water to hydrate and activate prior to addition). The same can result from the addition of IDY directly to the dough and not mixing the dough long enough after the IDY addition (5-minutes is recommended). This is why my preferred method is to add the IDY directly into the flour as it's hard to go wrong that way.

New Forum Members / Re: Dots on pizza dough

Why not just make your own? A food mill will allow you to make your own from fresh or canned tomatoes.

Sauce Ingredients / Re: Ground Tomatoes

What are the dough weights and production numbers we're looking at? Will this be for a conventional (yeast leavened) dough or a sourdough?

Shop Talk / Re: Rounder and divders

I'm not sure about hamburger buns being more "healthy" than pizza but here goes.

0) No "rules" or "standards" but they are expected to be soft and pliable.

1) A strong bread type flour with 12 to 12.8% protein content works best.

2) Typical salt level is 2%, this is to provide a controlled rate of fermentation, dough strength, and flavor to the finished bun.

3) Typical sugar level is 13%.

4) Dough absorption is variable between 58 and 62% depending upon the absorption properties of the flour.

5) No need to use milk in a hamburger bun dough formula.

6) If you want to achieve a flavor from the milk use at least 5% butter milk solids. NOT LIQUID MILK.

7) I can think of no logical reason for wanting to use milk of any kind in a hamburger bun aside from flavor see #6 above.

8) Absolutely correct.

9) This process is essentially a small portion of the flour made into a roux and added as an ingredient. If the flour is not malted, does not contain any amylase enzymes and has been milled from wheat with absolutely NO sprout damage it can be beneficial in making a softer bread/bun BUT if the flour has been malted or contains amylase enzymes or has been milled from wheat having ANY sprout damage the enzymes will hydrolize the damaged starch(cooked starch) in the roux

converting it to sugar and releasing the water to create a wet, sticky dough.

10) 4 to 6% fat is typically used.

11) Today oil is mostly used as it promotes a softer crumb structure but indeed butter could be used.

12) If a plastic fat is used it can be added up front but if an oil is used it should be added 1 to 2-minutes into the mixing process (delayed oil mixing procedure).

13) When potato flour is used it is common to add it at 2% of the flour weight. Be sure the dehydrated potato DOES NOT contain any sulfites.

14) Yes, that's how it was done prior to the advent of dehydrated potatoes.

15) 80/20 Sponge & dough process with 3.5-hours sponge fermentation time.

16) It provides the necessary control over fermentation to produce finished buns with the desired flavor and even more importantly, finished shape characteristics along with the resilience needed to hold up to having a hot meat patty placed in it along with high moisture content condiments without either cracking into pieces or turning soft and gummy in the consumer's hands.

The sponge is made using 80% of the flour, 55% absorption based on sponge flour weight and 3% compressed yeast, set temperature is 75F/23.8C, sponge mix time is generally 4 to 5-minutes, sponge is then allowed to ferment for 3.5 to 4-hours, it is then brought to the mixer where it is incorporated into the remainder of the dough ingredients and mixed to FULL gluten development and in many cases a little more. It is then given a 5 to 10-minute rest period and divided, given a final proof time of 5 to 8-minutes and rolled to a diameter slightly larger than the pan cup, it is then panned, given a final proof (100 to 105F/37.7 to 40.5C) with 86 to 88% R.H. and baked at 440F/226.6C for about 12-minutes.

17) I've not had good success making hamburger buns as described above using the cold fermentation process. The internal crumb structure is always too open and porous.

18) You are looking for a very small and fine crumb structure.

19) Each is formulated differently as there are different expectations for the finished bun.

20) Brioche Buns:

AP Flour: 100%

Salt: 2%

Butter milk (scalded): 5%

IDY: 1%

Sugar: 6.75%

Whole egg: 22%

Unsalted butter (slightly softened): 8%

Water: (100F) 50%

Place water in mixing bowl, add salt, sugar, buttermilk and beaten whole egg, add flour, IDY and butter. Mix using a flat beater until a dough is formed, allow to ferment 3 to 4-hours, scale to desired weight and form into balls, flatten balls to about 3/8-inch/9.5 mm., place on greased baking sheet and allow to proof until at least double in height, apply egg wash or milk wash, bake with steam in the oven at 400F. (if over doesn't have steam place a sheet pan filled with hot water in the oven 30-minutes prior to baking, do not remove until after the buns have been baked).

Potato Buns:

Strong bread type flour: 100%

Salt: 2.5%

Sugar: 4%

Butter: 5%

IDY: 1.25%

Re-hydrated Potato Flakes: 8%

Water: 55%

Target finished dough temperature: 80F

Remixed straight dough procedure:

Place water in mixing bowl, add salt, sugar, flour, potato, IDY and butter.

Mix to form a well incorporated dough (about 7-minutes).

Allow to ferment for 2-hours.

Remix to a smooth, extensible consistency.

Allow dough to rest for 15-minutes.

Divide into desired weight pieces and form into balls.

Allow dough balls to rest for 10-minutes (variable).

Roll out to desired diameter.

Place formed dough pieces on a greased baking sheet.

Allow to final proof (95 to 100F/35 to 37.7C) with 85 to 87% R.H. (proofing time will be variable).

Bake at 420F/215.5C for approximately 15-minutes.

Regular burger buns:

Sponge:

Flour: 80% (strong bread flour)

Water: 55% of the sponge flour weight.

Compressed Yeast: 3%

Mix together for 5-minutes (target temperature is 75F.

Allow to ferment for 3.5 to 4-hours.

Dough:

Flour: 20% (strong bread flour)

Salt: 2%

Compressed yeast: 1%

Sugar: 13%

Oil: 5%

Water: 58% based on TOTAL FLOUR WEIGHT. To find the dough water weight calculate total dough absorption and subtract the weight of water in the sponge, the remainder will be the ACTUAL amount of water to add at the DOUGH side.

Procedure:

Add the dough water to the mixing bowl, followed by the salt and sugar, then add the flour and the compressed yeast.

Mix at low speed for 2-minutes, add the oil or shortening and the fermented sponge, mix at low speed for 2-more minutes, then mix at medium speed until the dough is fully developed and extensible. Target finished dough temperature is 80F/26.6C.

Allow the dough to rest for 10-minutes, then scale into desired weight pieces and form into balls.

Allow dough balls to intermediate proof for about 8-minutes (or until they can be rolled/pinned out to desired size)

Place on greased baking sheet and allow to proof at 100 to 105F/37.7 to 40.5C for about an hour or until the buns are fully proofed.

Bake at 440F/226.6C for about 12-minutes or until the buns have a solid brown color.

21) A good replacement for egg wash is whole milk. Do you really sacrifice an egg every time you make egg wash? I just fry up what I have left over as a treat for the baker "ME" :chef:

22) Tips:

Always remove baked buns from the baking pan immediately after baking. Cool on a wire rack/screen.

Add variety to the buns by spraying them with whole milk before baking and sprinkling with sesame seeds, poppy seeds, grated Parmesan cheese, fine chopped onion, garlic, or a blend of herbs.

If the buns do not flow out sufficiently during proofing and baking (look like baseballs) the dough may need more fermentation, mixing or increased dough absorption.

I worked with Weber's Bakery in Germany helping them produce hamburger buns for their McDonald's contract back in the 80's during which time I was on the McDonalds International Bakery Products Task Force working with different baking companies world wide helping them produce hamburger buns aka "McDonalds Buns" for their McDonald's restaurants.

Dough Clinic / Re: Tom Lehmann's guide to burger buns

There is also a commercial product called "Through Dough" that works quite well. Its main use is to practice acrobatic dough tossing.

Neapolitan Style / Re: Pizza Slap Practice Dough

It would be a step in the right direction. You're at 1.25% sugar right now, I'd go to 0.5% and bench mark from there. If your flour is already malted you might be able to delete the sugar entirely if necessary.

General Pizza Making / Re: How much Cheese on a pizza?

Oil is a lubricant and the lubricity it provides to the dough helps it to expend. Oil also helps to seal the gas cells within the dough which helps them to better retain the leavening gas produced by the yeast, together these two benefits of oil will result in improved oven spring. However, like all good things too much can be bad too. The addition of up to about 5% oil can be beneficial to oven spring but more than that could have a detrimental affect upon oven spring (it would depend upon the dough formulation). The addition of oil will also have a significant impact upon the mastication properties of the finished crust (oil is a tenderizer) but I did not address this because the question was on oven spring. Oil can also interfere with gluten development which we address through the delayed oil addition mixing method, maybe that's what happened to cause your crusts to go flat during baking?

Dough Clinic / Re: Higher hydration doughs

Great answer!!! ^^

Makes perfect sense.

Dough Clinic / Re: Has anyone else had trouble since the pandemic?

The dough appears to be a little under mixed but it won't hurt in the least. It'll be just fine.

Dough Clinic / Re: my dough balls are not baby butt smooth

Not knowing anything about your oven, but can you "dome" your pizzas to achieve the cheese melt (assuming you meant "now as opposed to not), this is done a lot of times where we need to dry off the top of the pizza to achieve the top color and cheese melt we're looking for. The moisture being released from the toppings is blanketing the top of the pizza during baking thus effectively keeping the top cool, by doming the pizza you move the pizza into the intense heat at the top of the oven at the end of the baking cycle just long enough to achieve the top characteristics you're looking for.

General Pizza Making / Re: How much Cheese on a pizza?

It sounds just like the product RS-190 aka "dead yeast" from Lesaffre/Red Star Yeast. The active ingredient in the dead yeast is glutathione, an amino acid contained within the yeast cell. The cell membrane has been denatured allowing for the release of glutathione into the dough where it acts as a reducing agent much like L-cysteine which is the active ingredient in PZ-44, an ingredient commonly used to impart added extensibility to a dough. Too much will certainly result in a "droopy" dough condition which we used to affectionately refer to as "elephant snot". These materials are potent with actual use levels measured in ppm (parts per million) based on flour weight. Because of this the L-cysteine in PZ-44 is cut with whey to make scaling easier, the RS-190 has a lot of "fluff" remaining from the yeast cells so the material is not pure glutathione. In both cases (PZ-44 and RS-190) the recommended use level is generally considered between 1 and 2% of the flour weight. Like Brylcream, use more only if you dare. ;D

Dough Ingredients / Re: Question About Using Nutritional Yeast

That work shows what we we found as a difference between "true" bulk fermentation and balled dough CF, even to the point of needing more than 24-hours CF to achieve decent finished crust characteristics (this is why I have always said that a dough that is scaled and balled right after mixing and cold fermented can be used after 24-hours but is at its best with at least 48-hours cold fermentation. We saw pizzerias go through something of a hybrid dough stage at one point where they were still bulk fermenting but placing the bulk dough in the cooler, what they accomplished was a finished dough that had bulk fermented characteristics on the inside (core) of the dough mass and CF characteristics where the dough was up against the fermentation container as this allowed heat to transfer away from the dough so the fermentation was totally different in that area, the issue now was that when the dough was used there was no way to distinguish between the two different fermented areas and they were roughly mixed together, the end result was finished pizzas with a blotchy/mottled crust color (less crust color development from the center of the dough mass due to more fermentation and less color from the outer portion of the dough mass where the dough was fermented more like we see in a CF dough). When using strong, tenacious U.S. flours fermentation is a vital key in achieving a tender eating and crispy finished crust characteristic, this is because fermentation conditions the gluten and sets the stage for the oven spring and resulting open crumb structure needed to achieve these characteristics. Weaker flours, milled from soft wheat varieties, typically yield dough that is much more extensible due to the nature of the gluten so they do not usually require a long fermentation time to achieve these characteristics but without the fermentation time there is not the same flavor development either, which is a good case for the use of a biga or sourdough starter with soft wheat flours.

Dough Clinic / Re: Higher hydration doughs

When we did the work we saw very little difference between bulk and balled dough when the total dough weight was 1.5-Kg. The benefits of bulk fermentation come when the dough is sufficiently large so as to continue to heat up due to heat of metabolism which allows the dough to actually increase in the rate of fermentation due to its increasing temperature over the fermentation time. Smaller size doughs/dough balls simply do not have the mass to allow for this to happen and because of this the rate of fermentation is not as predictable or consistent as the dough will be more impacted by the temperature of the room. As an example, when I first started in the baking industry we used to have special rooms with highly

controller temperature and humidity (fermentation rooms) just for fermenting our bulk doughs. This was all based on small scale testing that showed this was needed in order for the bulk dough to maintain a predictable/consistent rate of fermentation, then it was discovered that the mass of the bulk dough retained so much latent heat and developed such good insulating properties that it was all but impossible to impact the rate of fermentation of the dough through environmental influence. Based on this, almost overnight the fermentation rooms disappeared and doughs/sponges were bulk fermented at room temperature (regardless of whatever it might be). This practice is still in place today. This is what got us to looking at bulk v/s balled fermentation as it pertains to pizza production back in the early 80's.

Dough Clinic / Re: Higher hydration doughs

You just want to know WHICH Caputo "00" flour you're getting as it can make a big difference in how you manage the dough.

Dough Clinic / Re: Repacked Caputo flour

YT is good but it does have its limits....don't believe "everything" you see and hear on YT. :o

Dough Clinic / Re: Which are the factors that affect digestibility?

The idea is to bring the dough balls out of the cooler and allow them to warm (temper) to 50-55F at most pizzerias but at home we typically go up to 60-65F as we will only be working with a very limited number of dough balls. The dough has already been fully fermented when we remove it from the cooler and we really don't want it to ferment any more than necessary if at all possible after that. If a pizzeria were to allow the dough to come up to 75 or 80F they would need to use all of the dough within a very short period of time (well under 2-hours) or it would over proof resulting in an out of "spec." finished pizza. Additionally, the dough is extremely difficult to open when right out of the cooler and it will bubble profusely too when baked, by allowing the dough to temper as described above the dough opens much more easily and bubbling is minimized or eliminated completely. Depending upon one proficiency at opening the dough balls as well as the dough absorption, many home pizza makers find that a colder dough is easier to manage than a warmer one.

Dough Clinic / Re: Why Does This puff Up So

The Roto Flex ovens are a horse of a different color than the reel type ovens, they're designed specifically for baking pizzas. Additionally, they rotate horizontally as opposed to vertically for the reel ovens.

New York Style / Re: Purposely undercooking crust

When baking pizzas in "reel" type ovens it is all but impossible to achieve a very crispy crust characteristic unless the pizzas are par-baked, this is why true Chicago thin crust pizzas have the unique eating properties of something approaching cooked ravioli. Those ovens were never designed for baking pizza (they're bakery ovens) but in specific applications they serve the purpose quite well.

New York Style / Re: Purposely undercooking crust

That's the amount you would add to an non-malted flour to achieve the same malting as used by the flour miller in making malted flour. The exact amount will occasionally be varied by the flour miller depending upon the quality (sprouting damage) of the flour he/she is milling at the moment. The more sprouting damage

the less malt or amylase enzyme they will add and the less sprouting damage the more malt/enzyme they will add. High quality flour always has little to no sprouting damage but in some years, especially those where there is significant rainfall during the harvesting period, sprouting damage cannot be avoided so the miller addresses it by adjusting the malt/amylase enzyme amount that is added to the flour at the time of milling.

Dough Clinic / Re: adding diastatic malt powder to my flour to match all trumps malted

I would suggest targeting a finished dough temperature of between 70 and 75F. A container that is tall, like a trash container (but approved for food contact) is better than a wide, open container since it will allow for the entrapment of carbon dioxide (heavier than air) over the dough (greenhouse effect) which will help to protect the dough from moisture loss as well as temperature changes in the room. The loose covering is only to prevent air movement in the room from disturbing this protective layer of carbon dioxide. This is how the "BIG BOYS" do it in commercial bakeries.

Dough Clinic / Re: Proofing multiple batches

That's an easy one to answer, use 0.083% based on the total flour weight.

Dough Clinic / Re: adding diastatic malt powder to my flour to match all trumps malted

If you are referring to bulk fermenting the dough (proofing is done after forming in some manner) and the time will be 24-hours or more you shouldn't have any issues with just tossing them all into a single appropriately sized container, loosely lidding/covering it and allowing it to ferment in that manner.

Dough Clinic / Re: Proofing multiple batches

That depends, what will the time difference be between the first dough off of the mixer and the last?

Dough Clinic / Re: Proofing multiple batches

If you are asking if you can suspend C.Y. in 75F water, the answer is yes. The temperature of the dough water is used to control the finished/mixed dough temperature.

Can you adjust the dough formulation so no refrigeration is required, yes you can. I'd start by adjusting the C.Y. level to about 0.15%, target a finished dough temperature of 80F (about 70F water temperature), scale and ball immediately after mixing and allow to ferment at ambient until the dough can easily be opened into skins. I can't say how long this will take as the time will vary with the strength of the flour as well as the ambient temperature. Time to roll up the sleeves and begin experimenting.

Dough Clinic / Re: AVPN recipe

Your procedure is a sound one that others have successfully used, but worried about the expense of the olive oil that you're brushing on the edge of the skin? OMG! How much are you using? Seriously, I can't envision you using more than a few grams at most, far less costly than the other ingredients you are putting on the pizzas for your guests. However, if this is an issue for you why not just use any low cost vegetable oil? Or how about using a blended oil such as one made by blending 20% olive oil into 80% vegetable oil. This is commonly done in cases where economy is an important factor.

Depending upon the viscosity of the sauce that you are using, pre-saucing for as much as 20-minutes before baking can lead to moisture migration into the dough which will lead to creation of a gum line after baking, you probably don't want to hear the solution to this problem but it involves the application of a very thin layer of oil to the surface of the skin prior to saucing. This very thin layer of oil creates a barrier which helps to prevent the movement of moisture from the sauce (which is about 90% water) into the dough.

Another option to explore is to utilize the assistance of a helper in preparing the pizzas. You can have everything pre-portioned for each pizza so while one pizza is being baked the next one is being prepped.

If your dough is dry enough you might also try placing the skins on seasoned pizza screens, this would allow you to fully prep all of the pizzas ahead of time (no more than absolutely necessary), and place the pizza into the oven on the screen, after a very short baking time you will be able to lift the pizza off of the screen to finish baking right on the deck. This procedure has been discussed a number of time here in earlier posts, the procedure is referred to as "decking" the pizza.

It looks like you might want to do a little experimenting in preparation for your next pizza party. :pizza:

Dough Clinic / Re: How to prepare many pizzas in advance before baking ?

One other thing, will you be machine mixing or hand kneading the dough?

Dough Clinic / Re: Dough recipe for use in a roccbox?

Before getting into the nuts and bolts of your request, you say you only have "granulated" yeast available to you. This is what us "Yanks" refer to as dry yeast. Can you tell me if it is ADY (active dry yeast), directions will call for it to be activated prior to addition to the dough, or is it IDY (instant dry yeast) not necessary to activate prior to addition to the dough. If in doubt, send a photo of the packaging and we should be able to tell.

Dough Clinic / Re: Dough recipe for use in a roccbox?

Not really. you're kinda at the mercy of your supplier unless you can see a manufactured/package date on the package. If there is no packaging well?????. Old time bakers used to take an egg size piece of dough immediately after mixing and form it into a ball then toss it into a bucket of warm water, if it floats in a few minutes the yeast is still alive but quality still unknown. Outside of laboratory instrumentation, that's about the best you can hope for. By the way, color and aroma are not good indicators of quality either. The one thing that does indicate sub-par quality in C.Y. is a slimy appearance and feel to the C.Y. wet and/or sticky are OK but not slimy.

My son has a place on Boot Lake, about 20-miles east of Park Rapids.

Dough Clinic / Re: AVPN recipe

No way! If, and that's a BIG "if" the yeast is fresh and hasn't been temperature abused in any way, expect something more like 3-weeks shelf life. With ADY you will get 6 to 12-months and with IDY up to 12-months, assuming proper handling. Whereabouts in Northern MN? Close to Park Rapids or D.L.?

Dough Clinic / Re: AVPN recipe

While I'm not familiar with the dough formulation cited, in looking at it the procedure says it all, after mixing the dough (not actually kneading) remove it from the mixing bowl and pin it out to size, place it into the prepared 14" diameter pan (1/2-cup of oil seems like a lot of oil) and allow it to proof until the dough fills the

pan, then cover and place in the refrigerator for 4 to 24-hours, remove from the fridge, dress and bake.

Here are my issues with the dough formula and procedure: The formula only contains 0.89% salt which is really not enough for optimum flavor, instead it should be between 1.75 and 2.25% for best crust flavor. The temperature of the water is not cited so I would recommend using 70F water but reserve 1/4 cup heated to 100F to activate the ADY in. Once activated, the ADY can be put into the colder water in the mixing bowl. You should be looking for a finished dough temperature of about 80F after mixing. I do not recommend proofing the dough to fill the entire pan because it will continue to proof in the fridge and you need to allow space in the pan for the increase in dough volume, instead, only allow the dough to proof to filling about 1/2 of the pan, then cover and place in the fridge where it will continue to proof until the dough is sufficiently cooled to slow the rate of fermentation. Once stabilized in the fridge the dough should keep for about 24-hours without any problems. Many operators of pizzerias manage their deep-dish/pan style pizza dough in a similar manner. To use the dough just remove from the fridge, dress the fully proofed dough (be gentle) and bake.

The length of time needed to get the initial 1/2 proof will depend upon the kitchen temperature as well as the actual finished dough temperature, expect about 45 to 60-minutes if you hit the numbers cited. How long in the fridge? I'd go at least 12-hours with 24-being even better for flavor. Deep-dish pizzas are all about the flavor of the crust (because there's so much of it) it isn't good you have to wallow through so much of it that it destroys the pizza experience. Experiment using butter instead of oil in the dough, or how about blending some ghee into the pan oil? Have fun experimenting! You'll be rewarded with a lot of great tasting pizza!

:chef:

Dough Clinic / Re: Pan Pizza

CY is indeed the same animal as "fresh yeast" I used that as the yeast type since you were referencing the AVPN dough formulation which requires the use of only CY (compressed yeast)/fresh yeast/wet yeast. To use IDY (instant dry yeast) use 40% as much IDY as CY. This figures out to 0.3% IDY to replace 0.75% CY. As for your questions on the yeast levels the amounts you are referencing are for the AVPN type dough formulation, NOT the dough formulation that I provided for you. If you plan to use the supplied dough formulation used the yeast amounts cited in the dough formulation with the conversion to IDY if that's the type of yeast you wish to use.

Please note that there are two different yeast levels cited, one is for a same day dough while the other is for a 2-day (48-hour) dough.

Dough Clinic / Re: AVPN recipe

Here is a one day pizza dough formula that we used in our Woodstone wood fired oven.

Flour: 100%

Salt: 2.25%

CY: 0.75%

Water: 58%

Put water (75F) in bowl, reserve a small amount for the salt, add the CY and stir to suspend the yeast in the water. Add 1/2 of the flour and stir in. Allow to rest for 30-minutes, add the salt to the reserved water and add it to the dough along with the remainder of the flour. Mix until free of lumps and allow to ferment for 1-hour, turn out of the bowl onto a floured bench and knead until smooth (about 10-minutes).

Scale into desired weight pieces, form into balls, wipe the dough balls lightly with oil and place into individual plastic bread bags, pull the bag snug to the dough ball and twist the open end to form a pony tail, tuck the pony tail under the dough ball as you place it into the fridge, allow to cold ferment for at least 6-hours but can go longer. To use, remove from fridge and allow to set at room temperature for 2 to 3-hours before turning the dough ball(s) out of the bag onto a floured surface, open by hand into skin for immediate use. Once you begin opening the dough balls they will remain good to use for about 2-hours.

To make this into a 2-day dough just reduce the yeast to 0.5%. Manage the dough in the same manner except hold it for 48-hours in the cooler before use. In my opinion, a 2-day dough is MUCH better than a 1-day dough.

Dough Clinic / Re: AVPN recipe

Could you please provide the specific dough formula and dough management procedure you are planning to use.

Dough Clinic / Re: Pan Pizza

Your pizza looks really good. :chef:

Dough Clinic / Re: Side crust color and dough handling

The word "agitate" is being used as a synonym for "mix" , in many cases the mixer manufacturers refer to the different mixing attachments as agitators too. Kneading the dough by hand is a very gently way of developing the gluten, so unless you're a "gluten" for punishment and want arms that would put the village blacksmith to shame, it is all but impossible to over develop the gluten when hand kneading. The main reason for this is because kneading the dough exposes the gluten matrix to air/oxygen which repairs the gluten bonds being broken by over mixing, sorta like an endless loop. But on the other hand, high speed mixing, like when a VCM is used can easily turn an otherwise good dough into soup by over mixing, which might only take a couple of minutes.

Dough Clinic / Re: agitating dough vs kneading

I'm confused by your dough formula. 58% = dough absorption; 0.2% = (compressed yeast?); 0.11% = ? Salt should be in the 1.75 to 3.25% range and yeast (as compressed yeast) in the 0.175 to 0.2% range.

Are you planning to do your mixing by hand or machine for your same day dough? Do you want to stay close to the AVPN concept or are you just looking for a good same day dough for your wood fired oven?

Dough Clinic / Re: AVPN recipe

Diastatic (enzyme active) malt contains amylase enzymes which hydrolyze starch into sugars, it does not hydrolyze proteins. Non-diasratic malt does not contain any viable amylase so it does not hydrolyze any starch into sugar, hence non-diastatic malt is nothing more than just another sweetener (sugar).

Dough Clinic / Re: Non-diastatic malt syrup

Agreed, 2% would be a good starting point. The difference in dough absorption with and without malt syrup would be easily within standard deviation for absorption and undetected. Yes, you can also use molasses, just be sure it's unsulfured.

We used to use molasses or industrial grade honey (very dark) at 3% in our multi-grain crusts along with butter for the fat source.

Dough Clinic / Re: Barley malt syrup

Yep.

Dough Clinic / Re: Non-diastatic malt syrup

Actually, it's the kettling process that gives the traditional bagel that chewy texture, those that are used for making bagel sandwiches are typically made using the steaming process since it makes for a more tender eating bagel. The non-diastatic malt syrup used in a bagel formula provides for the crust color that is characteristic to a bagel and to an extent, the "nutty" flavor of the bagel. A good number of posters here have used it in their pizza doughs too.

Dough Clinic / Re: Barley malt syrup

Non-diastatic malt is a type of sugar. Like sucrose (table sugar) it provides residual sugar for crust browning while at the same time providing a unique "malty" (think malted milk balls/candy) flavor when used at higher levels.

Dough Clinic / Re: Non-diastatic malt syrup

The yeast level looks OK (but I have a question: How do you have a "preferment without any yeast?) so I would reduce the bulk fermentation time by 8 to 12-hours and proceed from there as normal.

Dough Clinic / Re: Was this dough overproofed? Please take a look at my latest pies with Poolish

Either flat or rounded works fine. If you are tearing the bottom of the pizza when turning/spinning you are not allowing the pizza to set undisturbed long enough.

Prep Equipment / Re: Should my metal peel have a sharpened edge?

There is no seasoning of a peel but a new wood peel should be sealed using mineral oil. If you check back in the archives you should find any number of discussions on the topic including how to seal a wood peel using mineral oil. Just DON'T EVER WASH IT, wipe it down with a slightly damp towel but don't put it in the water. With time/use you may find the surface getting a bit rough, just lightly sand the top surface with a 200-grit, or finer, sand paper and reseal and you'll be good to go again.

Stones/tiles/steel, Pans & Accessories / Re: Pizza Peel Question

It does appear that the bulk dough was somewhat over fermented which is why it was so gassy and difficult to ball. When faced with that situation I normally degas the bulk dough by slapping in on ther counter top several times and then proceed with scaling and balling.

Dough Clinic / Re: Was this dough overproofed? Please take a look at my latest pies with Poolish

It's in pizza dough, regardless of what it's baked in or on.

Dough Clinic / Re: Effects of bake temps vs bake times

Setting the pizza on a screen will create an air gap/thermal break which will slow down the rate at which the crust bakes thus allowing more time to get the toppings done without burning the crust.

Dough Clinic / Re: Can't get toppings to cook no matter the temperature before crust burns

Unless you are using non-diastatic malt at very high levels, above 5% the effect of

the malt will be on the crust color only.

Dough Clinic / Re: Non-diastatic malt syrup

In a practical setting the answer might be no but in a research setting where we are looking for differences due to the affect of a variable which we introduced, the answer is absolutely.

Neapolitan Style / Re: Hydration Test

The appearance of those pizzas is very reminiscent of diced cheese. The issue can stem from the use of frozen cheese or subjecting it to too high of a temperature during baking.

Dough Clinic / Re: What causes "pock marks" on cheese?

In a deck oven (which you have) the typical baking time is about 7-minutes. This is why you are seeing the fast bake at around the 7-minuter mark. Your oven does not have the top heat capability to provide a faster bake.

Dough Clinic / Re: Can't get toppings to cook no matter the temperature before crust burns

Fat in one form or another is a pretty common ingredient in pizza doughs. It provides lubricity to the dough, it helps to seal the gas cell within the dough for improved oven spring, it also helps to retard moisture migration from the sauce and toppings into the dough/crust, and it helps with finished pizza flavor by imparting it's pun unique flavor such as is the case with olive oil or non-deodorized lard or capturing and retaining flavors otherwise lost during baking. We have discussed this a number of times before and it might be included in the function of ingredients here.

Dough Clinic / Re: Effects of bake temps vs bake times

Waiting for the dough to come to room temperature will involve quite a bit of additional fermentation which will become a variable with future doughs, I would suggest scaling and balling the bulk dough as soon as it comes out of the fridge as that will provide for a more consistent form of dough management.

Dough Clinic / Re: Cold Bulk Ferment and the process

If the bake temperature wasn't confirmed before each bake all bets are off of the table. I withdraw my comments. Only one variable at a time is allowed.

Neapolitan Style / Re: Hydration Test

A couple of different things come to mind, can you provide a picture?

Dough Clinic / Re: What causes "pock marks" on cheese?

My experience is that it's mostly a matter of oven temperature with #2 being baked in a hotter oven than #8, however, both fermentation and dough temperature as well as dough absorption can impact bubbling too.

Dough Clinic / Re: Bigger black bubbles on Neapolitan

I can see a progression in edge thickness as the dough absorption is increased. Could tell more if the slices had been cut from the bottom as this gives a much better view of the center section of the crust.

Neapolitan Style / Re: Hydration Test

Your pizzas look like they were baked at too low of a temperature which would

explain the dull appearance too.

Neapolitan Style / Re: not sure - stretching, baking, thickness

It really doesn't matter much if you take a bulk dough of that size directly to the fridge or if you allow it to ferment for a period of time prior to placing it in the fridge. If it were me, I'd scale and ball the dough immediately after mixing, and get it into the fridge right away. Let biochemical gluten development do the work for you and as an added bonus you will have better consistency in your doughs. I like to lightly oil the dough balls and place them into individual plastic bread bags as there is no cross-stacking/leaving and down-stacking involved (leaving the dough un-lidded for a couple of hours in the fridge before lidding the containers). To use the dough just remove it about 2-hours prior to use, and allow it to warm to 50 to 60F before opening the dough balls into skins.

Dough Clinic / Re: Cold Bulk Ferment and the process

I don't remember, but if you contact Steve Green at PMQ Magazine <steve@pmq.com> I'm sure he can provide you with information and probably even contacts as they have a person in Japan and a presence at the show. I did a series of seminars at one of the food shows in Japan a few years ago, I no longer remember the name of the show or the venue but it was the large building shaped like an upside down pyramid, you can't miss that building!

Newbie Topics / Re: Dough handling+baking

Beg my pardon? For what? :-D Feel free to jump in at any time.

Dough Clinic / Re: Effects of bake temps vs bake times

Chicago pizzas are baked for a very long time. Thin crust pizzas typically in the 25 to 30-minute range and deep-dish pizzas in the 40 to 45-minute range. I can't speak about HRI pizzas as I've done too much work for them over the years.

Dough Clinic / Re: Effects of bake temps vs bake times

No, that's not what I said. What I said only applies to cracked or steel cut. Whole-wheat flour can be used at 100% to make a whole wheat crust since you can develop the gluten in the whole wheat flour it includes as a part of the flour equation so when you add up the white flour percent and the whole-wheat flour percent the sum is 100%. Due to the VERY SLOW hydration of the bran portion of the whole wheat flour it is advisable to prepare a "soaker" with water and whole wheat flour and allow this to soak for 30 to 60-minutes prior to addition to the dough. I've written an article on how to determine the absorption of whole-wheat flour and I've discussed it several times here in previous posts. If you don't get it right the finished crust will eat more like cardboard than anything else. Done correctly, whole-wheat crusts are a bit soft and chewy with a somewhat crispy outer layer.

Dough Clinic / Re: Mixing in steel cut cracked wheat w/ 2 other flours

That is a very high and broad protein range for an A.P. flour. The problem is, do you know anything about their cake flour? High ratio cake flour or low ratio cake flour? There's a HUGE difference. Is their cake flour milled from hard or soft wheat varieties? BIG difference. Minnesota Girl (11.8% +/-) or Buccaneer (11.4 +/-) would be a much better route to go without the need to blend. Do you have any of these available to you?

Dough Clinic / Re: Break and shred

To answer your question on bake time v/s temperature, bake time has the greatest impact upon the crispiness of the finished crust in respect to achieving a crispier crust as it allows more time to develop a crispy layer on the crust. Think of a Neo. pizza baked at 900+ F. It's crispy when it first comes out of the oven but within a minute or so it's like limp pasta.

The oven being referenced is called a "reel" oven, they're a mainstay pizza oven in Chicago.

Dough Clinic / Re: Effects of bake temps vs bake times

If you want to see differences in dough absorption you really need to make 2% incremental changes.

Neapolitan Style / Re: Hydration Test

12% protein content flour is a bit on the high side for white pan bread. Most white pan bread producers use flour with a protein content in the 10.8 to 11.6% range. Typically, the higher the protein content the more pronounced the B&S will be.

Dough Clinic / Re: Break and shred

Steel cut wheat is not considered as part of the flour equation as you will get very little gluten development from it. Instead, look at it as just another ingredient added to the dough. Unless you want the grittiness of the steel cut wheat in the finished crust they really need to be soaked for an hour or more prior to addition to the dough. Steel cut wheat, like whole wheat will have an absorption of something close to 75%. If you will search back to previous posts on whole wheat flour you will find the procedure for determining the absorption of your specific product at hand. The best way to add the steel cut wheat is to mix the dough for about 50% and then add the soaked steel cut wheat and mix to completion. They will add a chunky texture and something of a "nutty" flavor to the finished crust.

Dough Clinic / Re: Mixing in steel cut cracked wheat w/ 2 other flours

As long as it is controlled, by that I mean the break isn't excessive and the shred isn't wild and the top crust is still attached. It's one of the criteria we used to quality score breads on when we offered product scoring (evaluation) as a service to the industry. Large wholesale bakeries like to minimize B&S as if you have it you must be able to control it, this is a critical aspect for them as a poor shred can have jagged pieces of crust sticking out from the loaf which will snag on the bag as the loaf is being mechanically bagged resulting in a slit in the bag and an unsaleable product. If the break is excessive the loaf may not fit into the bag, just all kinds of problems when you're bagging bread at upwards of 60 loaves per minute from a single bagging machine with multiple machines bagging 7,500 loaves per hour for each bread line.

Dough Clinic / Re: Break and shred

It says in the literature "room temperature" for storage. It is not recommended that you store it in the fridge as this will lead to condensation forming in the container over time which will ultimately adversely impact yeast performance. The literature also says the container has a "use by" date on it. This is all provided at the link you supplied.

One thing I might add, back in the 60's when we were looking at some of these non-domestic (for the U.S.) yeasts we found that we got slightly better shelf life by transferring the yeast to a small plastic bag and placing it back into the original container. Twist the top of the bag to close and apply the lid. This seemed to help keep moisture away from the yeast when stored for longer periods of time. I had

even recommended this to the manufacturers at the time. I don't know if they ever acted on it or not.

Dough Clinic / Re: How do I store ADY?

So much of the answer to this question depends upon variables such as:

Strength of the flour.

Amount of yeast used.

Amount of sugar used,

Amount of salt used.

Temperature of the fridge.

How well the fridge holds a CONSTANT temperature.

Finished dough temperature.

Those are the highlights.

Neapolitan Style / Re: Pizza dough expiration / max fermentation

Suspending IDY in cold water can result in leaching out of the glutathione from the yeast cells, IDY is especially prone to this problem due the the "I" in its acronym. The "I" stands for instant as in instant (actually fast) hydrating. IDY should always be suspended in 95 to 100F water in cases where it needs to be suspended prior to addition to the dough.

New York Style / Re: difference between IDY and ADY (glutenboy method vs what Gemignani says)

Remember it's designed specifically for high sugar (above 5%) dough formulations, also keep in mind that this specific type of yeast has a very low sodium tolerance. If the salt level is above 1% it will significantly impede the yeast action.

Dough Clinic / Re: Differences in dry active yeasts?

The gap between the cap and the side wall is the break and the striated portion (looks like shredded wheat) is the shred. It is a desirable feature in white bread. You can minimize it by placing the dough into the pan with the seam straight down the center of the pan. Also more mixing which creates a softer, more extensible dough will help to minimize it, while most strengthening additives will promote it as will SSL or DATEM. The use of a weaker flour will also minimize it too. Like a goof farmer takes great pride in plowing straight rows a good baker takes great pride in making loaves with about 1-inch of break and a well controlled shred.

Dough Clinic / Re: Break and shred

Because all equipment is different as are kitchens it all boils down to experiment with what you have, read/learn as much as you can and most importantly, PRACTICE, PRACTICE, PRACTICE.

Dough Clinic / Re: The best pizza recipe regardless the price, the time, the equipment, etc. ?

While I have seen experimentally grown winter wheat flours with protein levels in the 20% range the highest commercially available flours are just a tad over 14% protein content. Most pizzas are best made with flour having a protein content in the 12 to 13% range.

Dough Clinic / Re: Side crust color and dough handling

Forget the jar, you're obsessed with the jar (sounds like a movie line), just roll the package down onto the yeast and secure with a rubber band. The package is designed to protect the contents for upwards of 6-months to a year (unopened of

course) so the jar isn't serving any useful purpose unless you're pulling a vacuum on it.

Dough Clinic / Re: Differences in dry active yeasts?

Yael;

You stole my line. :-D

Dough Clinic / Re: Side crust color and dough handling

The answer to both questions is yes. You will need to experiment to find the mixing time and speed that works best for the bread. I'm guessing that you might have better luck with a spiral mixer than a planetary mixer in this case. Regarding no knead pizza dough, it's been done effectively on a commercial basis for more years than I've been around. The processing facility will have to be designed from the ground up around the process. In both cases you will most likely need to deviate from the original procedures to some extent but that goes with the scale-up.

Dough Clinic / Re: Actually 2 questions

Yep, that's why I mentioned the oven as a possible cause first,

Dough Clinic / Re: Side crust color and dough handling

My New York style pizza dough ball weights are typically based on a dough loading of 0.106-ounces per square inch regardless of the diameter.

Dough Clinic / Re: Why Does This puff Up So

Once the yeast packet is opened it is best to just discard the remainder but if you want to save it DO NOT remove it from the packet, instead just fold the packet down tightly against the yeast left in the packet and secure the folded top with a binder clip or paper clip.

Dough Clinic / Re: Differences in dry active yeasts?

Is there a reason why you are adding so much VWG? Usually half of that amount is sufficient. Additionally, you are using 70% absorption but do you realize that of that 70% the gluten by itself is accounting for nearly 20%? That means the effective dough absorption is only around 50% which would explain why the dough is so elastic. As for the white edge I'm guessing it is due to one of two things, either the oven or late/delayed oven spring. You see the same thing on hamburger buns where it is called the "break" and it forms a white ring around the circumference of the bun just below the crown. It is also present in white pan bread where we call it "break and shred", in this case it usually occurs on only one side of the loaf (but it can be present on both sides). If this is the case the cause for it is excessive dough strength (remember all that VWG? That's where it's coming from). So if that's the case, a simple reduction in VWG should address the problem. For starters I would recommend reducing the VWG to 5%, you will need to reduce the absorption at the same time so for each 1% VWG increase or decrease the dough absorption by 2%.

Dough Clinic / Re: Side crust color and dough handling

Do you know what was missing? No mention of the finished dough temperature. If the dough was ready to open in just 12-hours and the dough appeared to be gassy I'm putting my money on the horse that says your finished dough temperature was too high. The nearly 0.5% IDY didn't help matters any either. I'd suggest reducing the IDY to not more than 0.4%, adjusting the water temperature to give you a finished dough temperature of 75 to 80F, balling the dough immediately after mixing, lightly oiling the dough ball, placing it in an open bowl in the fridge for

2-hours, then covering/lidding the bowl, allow the dough to cold ferment for a minimum of 18-hours (not 12) but longer is better, bringing the dough out of the fridge for at least an hour prior to use (look for an internal dough ball temperature of 55 to 60F).

Dough Clinic / Re: Why Does This puff Up So

I was once asked this very question by a major box pizza chain, the answer was 1-hour. We mixed the dough at 95F, just barely balled it, after an hour it was opened into a skin, dressed and baked for our lunch. More typical time between balling and baking I would say is 24-hours. For me, using cold fermentation I normally use 48-hours as that is where my preference for crust flavor is at. I totally agree that there are many variables that can affect the time between balling and baking, some of those variables have to do with dough handling properties while other variables have to do with personal flavor preferences. For the shortest rest time between balling (assuming balling immediately after mixing) and baking formulate the dough with 2% compressed yeast (or equivalency in IDY or ADY), dough absorption about 60%, moderate protein content flour (11 to 12%), target a finished dough temperature of 95 to 100F, mix the dough to full gluten development, ball moderately loose, lightly oil the dough ball, it should be ready to open in 45 to 60-minutes. DO NOT complain to me about the flavor! ;D

Dough Clinic / Re: minimum time between balling and cooking

Amount of protein present in a serving divided by the serving weight (in the same weight units) X 100 will give you a very rough estimate of the amount of protein in the flour. However, this does not address the issue of gluten forming quality of the protein. This is why it is also important to know what the intended use of the flour is. An example of this would be durum semolina flour, it can have a protein content of say 13%, the same as a high protein bread type flour but in application they perform very differently.

Dough Clinic / Re: Dough just won't come together? No gluten development?

Basically, it's just a difference in moisture content of the two types of sauce. Red sauce is, on average, about 90% water so as the pizza bakes the moisture is driven off of the sauce, the moisture laden air is cooler than the surrounding air so it settles down around the pizza, enveloping it in a cooling layer of moisture laden air, thus reducing crust color development. Whit sauce doesn't have this amount of water (at least mine don't) so this cooling effect is either diminished or not in play which allows the crust to begin developing color faster with more total color development. This DOES NOT apply for baking in an air impingement oven as the high velocity airflow in these oven remove the cooling, moisture laden air (that's one of the ways they are able to bake faster than a conventional deck oven).

Dough Clinic / Re: Crust Color Differences between Sauced and Unsauced Pizzas

There are different types of dry active yeast, such as active dry yeast (ADY) and instant dry yeast (IDY) and even protected active dry yeast (PADY) and within the IDY spectrum there are various strains for specific applications such as high sugar, and freeze tolerant and a new one that is extremely temperature sensitive. However, if you are asking if there is a significant difference in the same yeast types between the different manufacturers, the answer is no.

Dough Clinic / Re: Differences in dry active yeasts?

If you will provide your exact dough formula by weight and bakers percent as well as your complete dough management procedure I might be able to determine just what the cause is.

Tom Lehmasnn/The Dough Doctor

Dough Clinic / Re: Why Does This puff Up So

Gluten is formed when the wheat proteins glutenin and gliadin are agitated/mixed in the presence of water. Biochemical gluten development is the result of a number of factors coming together including movement of the dough as it ferments and changes to the protein due to exposure to acids and enzymes from the yeast and byproducts of fermentation which all work together to develop gluten in either cold or warm fermented dough. Biochemical gluten development is by far, the oldest method for developing gluten, and I might add, still the best. The only reason why it isn't used more as the sole method for gluten development is due to the initial poor handling properties of the dough and the amount of time it takes to accomplish. When making yeast leavened products at home neither of these are typically an issue so the process is well implemented for home baking but it's a whole different story in a commercial setting.

General Pizza Making / Re: Sifting and autolyse?

I might suggest that you find out what flours are available to you and who the manufacturer(s) is/are and then contact the manufacturer directly and ask them what the protein content and typical application of those flours are. You should be looking for a strong bread type flour with 12 to 13% protein content. Even here in the U.S. we find that many flour suppliers are just merchants and know little about the flour they're selling, to them flour is just flour, we have six different kinds, which one do you want? Sound familiar? Many of us here at this web site will contact manufacturers directly with questions regarding flour or whatever when we have a question.

Dough Clinic / Re: Dough just won't come together? No gluten development?

Six gallons is about 50-pounds of water but flour has a much lower density so the volume needed for 50-pounds of flour is much greater.

Prep Equipment / Re: Flour Storage Products

Cakes are a different story when it comes to sifting the flour as it helps to prevent lumps in the batter. Depending upon the type of cake being made some like to sift the flour and sugar together with the minor ingredients.

General Pizza Making / Re: Sifting and autolyse?

What he said is correct, some sourdoughs are significantly less sour/tart than others. We did a study on this quite a few years ago where we made Panatone using a sourdough and it turned out quite good. It all has to do with the bacteria that you're culturing and how it's managed.

Dough Clinic / Re: sourdough pizza acidity / ferment identification / criscito

Crispy? Crunchy Chicago style thin crust? I can't say that I've ever seen those adjectives used in the same sentence with Chicago style thin crust. The four corners (party cut) are always the first to go as they have a little something that might be construed as being crispy, but the rest of the pizza is closer to a ravioli (it's that soft). That's not to say that a crispy Chicago style pizza isn't a good thing, and it can be made, but it really isn't a Chicago style pizza when made

crispy/crunchy.

Cracker Style / Re: crispy crumbly

Sifting of flour is helpful if you are bored and have nothing else to amuse yourself with or just need the exercise. It can also be helpful if you have infested (buggy) flour or potentially infested flour and really don't want to eat the little critters or need the additional protein they contribute to the flour.

As for the autolyse, it is still used by a lot of home bread and pizza makers, especially if you are making doughs with a high absorption.

General Pizza Making / Re: Sifting and autolyse?

What was the finished dough temperature? A dough that is too warm will act exactly as you've described.

Newbie Topics / Re: Dough deflates during cold fermentation?

The honey, or dried honey (a special product designed specifically for these types of applications, is used only in the glaze. For your glaze use 100% powdered sugar, add 10% boiling water and 5% dark colored honey. Heat to 115F and adjust the final viscosity through the addition of simple syrup (2-parts sugar and 1-part water boiled together until clear) add to the icing hot. If you need to adjust the honey flavor you can replace a portion of the simple syrup with honey. Too much honey will prevent the icing from setting up resulting in a wet, sticky donut. While yeast raised donuts don't typically contain eggs they can be used. Whole egg will make for a firmer donut crumb while egg yolk will make for a softer donut crumb. 2 to 5% egg can be used but remember to take the water content into consideration when calculating the dough absorption. Whole egg is 75% water and egg yolk is 50% water.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Michael;

There are a number of good places to find pizza peels on the Internet but for your specific application you might want to see if you can get your hands on a piece of aluminum that you can shape into a simple pizza peel for transferring the pizzas from the counter to the oven. While not a permanent piece of equipment, you can also use a piece of corrugated cardboard too, or how about 1/4-inch thick plywood, or some tempered Masonite? You will want to have your peel about an inch wider X longer than the largest size pizza you plan on making and the handle only needs to be 6 to 8-inches long, use a sanding block or file to put a mild taper on the bottom of the leading edge and you're good to go. Remember, DO NOT wash it! Only wipe it down with a slightly damp towel. If you make one out of wood you might want to seal it using white mineral oil. We have discussed this a number of times here in previous posts.

There is a food show in Japan with an American Pavilion where pizza is demonstrated along with ingredients and supplies. If you want to get information on the show contact Steve Green at PMQ Magazine <steve@pmq.com>

Newbie Topics / Re: Dough handling+baking

Given sufficient time either salt or sugar can kill the yeast but the greatest issue is that of damage to the yeast cells which can impair their ability to ferment a dough so what you get is inconsistent yeast performance, like previously said, not a big deal with home bakers and pizza makers but it can be a real game changer for any kind of bakery or pizzeria. Additionally, when the salt/sugar pulls moisture out of the yeast it is also removing some of the amino acid glutathione which is a

reducing agent, making the dough softer and to some extent weaker. This may not be a problem for the home baker but again at the commercial level where failure is not an option it can be a game changer when the dough begins to collapse or otherwise fail out at 3 or 4-days refrigerated time.

Give the potential for damage to the yeast it is still not a good idea to allow the yeast to come into direct contact with the salt or sugar.

Dough Ingredients / Re: Salt vs.Yeast

The first pizza slice being handled is definitely thicker across its entire cross section than the other pizza slices. The fact that it has also been docked might lead one to believe that it has been proofed prior to dressing and baking. This is common at pizzerias where they pre-open the skins which allows them to proof for a period of time prior to use.

Dough Clinic / Re: Dough just won't come together? No gluten development?

The foil is reflecting a lot of the heat away from the pizzas during baking so I don't recommend its use. 30-minutes is an unrealistically long baking time for anything but some of the pan pizzas, which I assume you are not making. You can bake directly on the steel unless you have some aversion to doing so, or you can bake the pizza on a piece of ovenable aka bakers parchment paper. It sounds like you may not be adding any sugar to the dough formula? If you can share your dough formula and tell us what kind of flour you're using it would also help.

Newbie Topics / Re: Dough handling+baking

Did I miss it or something? You don't ever mention anything about temperature in your post. Without temperature control you cannot have effective dough management. you can adjust the yeast level up or down but unless you can achieve effective dough management inconsistency will rein supreme in your land.

Forget about the ambient humidity, instead concentrate of finished dough temperature, trying to achieve a finished dough temperature in the 75 to 80F range is a good starting goal. Do this by adding flake or shaved ice to the dough water to get a temperature of 65F. For dough mixing use the delayed oil mixing procedure and assuming (we all know what that means) you are using a 60 or 80-quart planetary mixer with a reverse spiral dough arm you should put the water in the bowl first, followed by the flour then the remainder of the dry ingredients, mix at low speed just until you don't see any dry flour in the bowl (about 1.5 to 2-minutes, add the oil and mix another minute in low speed, then mix 8 to 10-minutes at medium speed or just until the dough takes on a smooth, satiny appearance. Measure the finished dough temperature. Take the dough directly to the bench, do not "pass go" do not collect \$200.00, immediately scale and ball, lightly oil each dough ball, place into your individual containers, leave the lids off for at least 2-hours before lidding. Make sure you get the entire dough processed within 20-minutes, this is an important step. This should give you a dough that will be good to use over a 3 to 4-day period with the "sweet spot" at about 48-hours. To use the dough, remove from the cooler, allow to temper AT room temperature until the internal dough temperature reaches 50F, you can then begin using the dough, it will remain good to use for the next 2 to 3-hours.

An even better method is to place the dough balls onto aluminum sheet pans and cover each pan of dough balls with a food contact approved plastic bag, place the pans of dough in a wheeled rack in the cooler, no need to cross-stack or lid anything. Follow the same procedure for using the dough. We have discussed this procedure here a couple of time in previous posts.

Shop Talk / Re: dialing in the dough

Walter;

Wishing you a a very speedy and complete recovery!

Shop Talk / Re: Smiling With Hope Pizza Closing for a bit

If you want to see the delayed oil addition mixing method just go to my web site <doughdoctor.com> and watch my dough making video series. You would be surprised at how few pizzeria operators actually understand very much about the technology involved in mixing dough and making pizza in general. We are trying to educate operators and we're succeeding at it too, just look at the knowledge here in dough mixing as well as at the PMQ web site <www.pmq.com>, it just takes time.

Dough Clinic / Re: Oil in 00 dough

Yep, just make sure you oil the dough balls lightly prior to placing in the bags, then just grab a bag as you need it just as you do when using dough boxes. From the time you open the first dough ball the rest will remain good to use for for 2 to 2.5-hours on average.

Dough Clinic / Re: Dough help, still not quite right

Based on a 20 degree L. malt powder use 0.25% to replicate commercial malting of the flour then add whatever amount of non-diastatic malt powder or syrup you need to achieve the desired crust color.

Dough Clinic / Re: NY Style Dough Too Crispy

Sourness from the cultured rye flour (it's quite acidic) plus fermentation from the yeast (remember it's accelerated due to the increased acidity) would create accentuated sourness over time. ?

Newbie Topics / Re: Instant Sourdough Yeast

IF the cultured rye flour is indeed inactive as stated, it's my guess that what has been observed is yeast fermentation from minute particles of the IDY which would be impossible to identify much less sort out of the mixture and the acidity of the cultured rye flour would certainly help to accelerate any yeast activity. Just my "SWAG". :)

Newbie Topics / Re: Instant Sourdough Yeast

Please send me your e-mail address at <thedoughdoctor@hotmail.com> and I'll copy you on my correspondence with the National Accounts Manager, Sandi Cazalet (she was at P.E.).

Tom

Lehmann/The Dough Doctor

Newbie Topics / Re: Instant Sourdough Yeast

I've contacted Lesaffre and got the answer directly from the manufacturer. It contains no viable lactobacillus. It is indeed a mixture of inactive cultured rye flour and IDY.

Newbie Topics / Re: Instant Sourdough Yeast

That's a lot of baking, fine if you want it crispy but if you want the softer (fold-able) texture common to the N.Y. style pizzas you will need to bake at a higher temperature for a shorter time. This may not be possible in your oven so I would

suggest adding 2% sugar to the dough formulation which will help to reduce the baking time thus giving you a softer, more pliable finished crust. One other thing, you might also try increasing the dough absorption in 2% increments as I think you might be a bit low on absorption considering the durum flour and the spelt in the dough formulation.

Dough Clinic / Re: NY Style Dough Too Crispy

Typically, thin crust pizzas are made using a higher protein content flour than thick crust/pan style pizzas are made from. That might have been the difference?

Dough Clinic / Re: Flour

Pizza, pretzels, bagels, French bread/baguette, bread sticks, and croutons can all be made using the very same basic dough formula. The only minor difference might be an adjustment in dough absorption if your pizza dough has an absorption over 55%. For home use in making croutons just form the dough into a ball, place it onto a lightly greased sheet pan, cover it with a suitably large bowl to prevent drying and allow it to proof for about 2-hours or until it at least doubles in size, then dock the dough by cutting a couple slits across the top, spray it with water and bake it at 400F until golden brown, remove from oven, cool on rack, when cooled place in the fridge overnight (place in a paper bag for best results). Then cut into 3/8 to 1/2-inch thick slices, cut each slice into 1/2-inch square cubes, transfer the cubes to a sheet pan and place in a 350F oven to toast lightly. For savory croutons place into a bowl, spray with oil (lightly) add savory as desired, cover the bowl and shake to coat the cubes. Pour out onto a cookies sheet and place back into the oven at 350F for a few minutes (just to heat the croutons up, then immediately transfer to an air tight container for storage. Store at room temperature.

Dough Clinic / Re: Dear Dough doctor..... pizza dough leftovers

It has to do with the U.S. labeling regulations, the "cultured rye flour" is the flavoring and the fact that the LAB is shown in brackets immediately following the cultured rye flour means that these are the ingredients used to make the cultured rye flour. You will see similar things on the label of various bakery products such as where lecithin is shown as an ingredient immediately followed by brackets showing the source of the lecithin.

Newbie Topics / Re: Instant Sourdough Yeast

If it's something that you just add water to to make a pizza dough, it really isn't "flour", instead it's what is referred to as a "mix", in this case a pizza dough mix because it contains other ingredients than just flour. While they may not want to share with you the amounts of those other ingredients they should be willing to tell you what those other ingredients are.

Dough Clinic / Re: Flour

That would be the cultured rye flour.

Newbie Topics / Re: Instant Sourdough Yeast

Since none of those you mentioned contains any gluten forming proteins the short answer is no, they will not work as a sole flour for making pizza crust, but for the most part they could potentially be utilized as a part of the flour blend, making a composite flour. In this capacity they might be used to replace up to about 20% of the total wheat flour.

Dough Clinic / Re: Flour

The "cultured rye flour" is the tip off that it's a dry, inactive sourdough material that is being added. The ingredients following it in brackets are the ingredients of the "cultured rye flour".

Newbie Topics / Re: Instant Sourdough Yeast

Mineral yeast food was once widely used by all bakeries across the U.S. but now most large retail bakeries as well as essentially all wholesale bakeries have eliminated using it as it has little demonstrated impact upon the dough or finished product. A typical mineral yeast food consists of calcium salts (the most effective ingredient), ammonium salts (this is where M.Y.F. got its name) and usually some type of oxidizing agent (used to be bromate) but now widely discontinued. Bakers have, for the most part, replaced M.Y.F. with calcium sulfate at 0.25 to 0.5% flour basis.

Dough Clinic / Re: Dough just won't come together? No gluten development?

Yael;

I agree with you on the absorption as the dough does appear to be under absorbed, with that in mind, since we don't know anything about the flour, I'm beginning to wonder if this might be one of those flours that are milled to a higher than normal level of starch damage? This would explain the abnormally high dough absorption. If my suggestion to ferment it for a couple of hours is followed this might provide some insight. If the dough softens excessively during this fermentation period the problem is most likely one of high starch damage, if it doesn't it might be a case of just poor gluten quality, remember, this is a soft wheat flour and soft wheat flours are not known for their gluten forming quality characteristics, hence their main application in cakes, cookies and pastries.

Dough Clinic / Re: Dough Knead problem

The dough looks to be very rough to me. If you are sure of your scaling weights I would suggest allowing the dough to ferment at room temperature for about 2-hours (maybe a bit longer), then turn it out of the bowl and try kneading it at that time. If this produces a better product you might then want to look at testing with a higher yeast level.

Dough Clinic / Re: Dough Knead problem

There was recently some discussion on making a sourdough starter and then drying it to be added to a dough at a later time as a flavoring material. This would work great using the poorboy's sourdough, then you can store the dried material in the fridge to be added to your emergency doughs . We have been doing this for nearly 30-years now in commercial crust production where the dough is never really fermented but yet we still want to have a decent crust flavor. As an added plus....it's a lot cheaper than what they are asking for the sourdough yeast product!

General Pizza Making / Re: a two-hour pizza

KD-8000 is also my preference in scales. It's a great scale and uses common flashlight batteries. Cost is now about \$45.00 but worth every penny. We also use it when making jerky and when canning.

Prep Equipment / Re: Need a digital scale: looking for best value..is a Taylor what I need?

Ascorbic acid is used in ppm (parts per million), a typical use level would be between 90 and 180 ppm.

Dough Clinic / Re: Dough just won't come together? No gluten development?

The size of the mixture has little to do with it, over a 24-hour period of time at ? temperature the yeast will have consumed all of the available nutrient available to it, once this happens it will begin to cannibalize itself to ? extent. due to the great number of unknowns it is safer to assume the yeast is spent and not include it in the yeast percentage.

General Pizza Making / Re: a two-hour pizza

"Proving the yeast" is rarely done in a pizzeria setting and never done in a commercial setting here in the U.S. I Europe the practice is more common.

Newbie Topics / Re: Activating CY

I think the "after taste" you are referring to is just a lack of flavor in the finished crust, most people relate it to a "starchy" taste. If you want to develop a bit more flavor and stay with a no-time type of dough process you might try using a "poor boy's sourdough". The day before you intend to make pizza, into a cereal bowl add 25-grams of flour and 25-grams of water and 1/5 to 1/4 of your total SAF IDY. Stir it together, drape it with a piece of plastic wrap and allow it to ferment at room temperature until you are ready to make pizza on the following day. To use, just pour it into your dough water but remember to reduce the dough water by 25-grams (which is already in the sourdough), use the full complement of yeast as that which is in the sourdough is pretty well shot.

If you like the flavor contribution you can experiment with different amounts of the sourdough addition.....A word of CAUTION! This can become addictive! :-D

General Pizza Making / Re: a two-hour pizza

If you provide your dough formula I can convert it to a short time dough for you.

New York Style / Re: Emergency dough in a Blackstone oven

No, just double the amount that you would use for a "normal" fermentation time.

General Pizza Making / Re: a two-hour pizza

Peter;

This is a good example of where IDY is suspended in warm water and allowed to hydrate/activate prior to addition to the dough as it covers both bases for hand and machine mixing of the dough.

Newbie Topics / Re: Activating CY

For an "emergency" dough such as you are making double the yeast, cut the sugar in half, and adjust the finished dough temperature to 90 - 95F, immediately after mixing scale and ball, allow the dough to ferment for 1.5-hours, then open into skins, dress and bake. Why the double amount of 60-L malt? If it was flavor you were going for you can go with 4 to 5% non-diastatic malt for a malted milk like flavor in the finished crust.

General Pizza Making / Re: a two-hour pizza

While the vitamin C tablets are essentially the same as those intended for use as a dough strengthener, there is one significant difference, the vitamin C that you buy to take as a vitamin supplement is not micro-encapsulated so it reacts very fast in the dough, it has pretty well fully reacted by the time the dough comes off of the mixer while the micro-encapsulated form intended for use in strengthening dough

doesn't fully react for at least an hour, maybe a little more.

Dough Clinic / Re: Dough just won't come together? No gluten development?

Because in the box the humidity cannot be dissipated as it is in the house. Additionally, the dough balls gain temperature and this too cannot be dissipated due to the insulating properties of the box.

Dough Clinic / Re: Why is the humidity higher in plastic dough boxes??

Heat can very easily pass through cling wrap as it is a very poor insulator as insulators go.

Like I said previously, the environment will pretty well stabilize at about 85% R.H. without any apparent condensation, now, if you were to place that box into a cooler, as the walls of the box get colder the moisture in the box will begin to condense on the colder surface of the box walls and eventually drip onto the dough balls creating a wet, sticky mess at the time of opening them into skins.

Dough Clinic / Re: Why is the humidity higher in plastic dough boxes??

Something else to consider is that the garlic you are adding is a reducing agent (it weakens the dough) so you might want to run a test without the addition of the garlic powder, also you are adding 3% potato flakes, check the ingredient label on the box to see if the potato flakes are sulfited (some form of sulfite, like sodium metabisulfite, would be shown as an ingredient). Sulfites are added to potato flakes to help keep them white and prevent them from turning darker in color during processing, sulfites are also a reducing agent so you want to make sure you are using a product without added sulfites. While on the topic of potato flakes, 3% potato flakes will account for about 5% absorption so your dough with 56% absorption and 3% potato flakes is going to handle more like a dough with only 50 to 51% absorption which may account for the crust not rising and baking properly, especially around the edge.

Dough Clinic / Re: Dough just won't come together? No gluten development?

I'm sorry but I don't understand "the warm air from the dough did not escape into the box". Cling wrap will allow for transmission of moisture. Just wrap something in it and place it in the freezer for a couple of months.

I don't know what your finished dough temperature was so I cannot comment but it seems to me that it might be easier to just target your finished dough temperature to be the same as the room temperature, but do keep in mind that due to the heat of metabolism the dough is warming at the rate of approximately 1F per hour which can also lead to increased humidity (warm air holds more moisture than colder air). With a RH of about 75% the dough is usually pretty easy to handle but above that things begin to get a bit dicey.

Dough Clinic / Re: Why is the humidity higher in plastic dough boxes??

The increase in relative humidity (RH) that you are seeing is coming from your dough as it is giving up moisture to the warm air surrounding the dough balls. When you put the dough in the fridge you cooled the box as well as the air in the box but the dough balls were warmer than the air so the moisture given up by the dough condensed on the inside of the box. The air will ultimately stabilize when the RH reaches about 85 to 87%. Remember, anytime the surrounding air temperature is cooler than the dough temperature you are going to get some condensation to a greater or lesser extent.

This is why we always want to cross-stack/or leave the boxes open for a period of time when using dough boxes in the cooler/fridge as it reduces/eliminates the condensation problem.

Dough Clinic / Re: Why is the humidity higher in plastic dough boxes??

Compressed yeast is an agglomerate of billions of yeast cells, it is not melted, nor is it dissolved, it is suspended in water (that's the correct term).

While yeast and salt can be put together in water it is generally not a good idea since if you get too much salt in the water it will damage the yeast impairing its ability to ferment. The same can be said for sugar too, so, while not necessarily deleterious to the yeast it is not a good idea to put the salt and yeast together in the water. When making sponges for making bread it is common to put salt into the sponge to help control the rate of fermentation of the sponge. A sponge for bread making will typically contain 60 to 80% of the total flour, all or most of the yeast, salt can be from none to 2% of the total flour weight and water at 50 to 55% of the weight of the flour in the sponge.

Newbie Topics / Re: Activating CY

What you are experiencing is called "raising the grain", we need to do this when refinishing gun stocks too. We wet the wood and allow it to dry, then using 220 grit or finer sand paper lightly sand off the "whiskers" as they are called, then repeat again until no more whiskers are raised, it's then time to apply any stain (only on the gun stocks, not on a peel) and the final finish which in your case should be mineral oil.

Stones/tiles/steel, Pans & Accessories / Re: Wooden pizza peel in WFO?

Rolls is absolutely correct, one thing I might add though is if you are mixing your dough totally by hand it is easier to incorporate the compressed yeast (CY) if you first suspend it in the dough water. Otherwise, just crumble it on top of the flour and begin mixing.

Newbie Topics / Re: Activating CY

Are you cross-stacking the dough boxes? If you don't cross-stack you will get condensation in the boxes which can raise havoc with opening the dough balls into skins. With cold fermentation I think the best flavor is had at between 48 and 72-hours.

Dough Clinic / Re: Dough just won't come together? No gluten development?

Most of my "go to" pizzas are N.Y. style and I use 10-ounces of dough for a 12-inch pizza which gives a dough loading of 0.08849 (ounces per square inch).

Dough Clinic / Re: Dough vs peel...Pros vs well, me

We did look at it at one time but since it is really not intended for pizza application we did not pursue any further evaluation. Our impression of the flour was that it was designed to be more of a "chef's" flour, for general use in the kitchen but not specifically as a baking flour. There were just too many other flour options that worked just as well and at a lower cost too.

Dough Clinic / Re: Wondra Flour for Pizza Crust Recipe?

You say "as thin as possible", there is such a thing as getting the skin too thin. Remember, thin does not equate to crispy. Thin equates to a finished crust that is crispy only for the first minute or two after removing the pizza from the oven, it

then quickly picks up moisture from the air as well as the toppings and becomes quite soft, sometimes even tough and chewy.

Dough Clinic / Re: Dough vs peel...Pros vs well, me

Additionally, you do not want to fully develop the gluten, instead, mix the dough JUST until it takes on a smooth, satiny appearance, then as the dough is fermented biochemical gluten development will take care of the gluten development for you providing a dough with good extensibility characteristics, ready to be opened into a pizza skin for dressing and baking. If you are planning to cold ferment the dough for about 24-hours you can go with as much as 1% fresh yeast/compressed yeast/CY.

Adjust the water temperature to give you a finished dough temperature of 75 to 80F/23.8 to 26.6C. Scale and ball the dough immediately after mixing, lightly oil the dough ball and cold ferment it for at least 24-hours. I like to cold ferment my dough balls using the plastic bag method (discussed here in numerous posts), then remove the dough from the fridge and allow it to temper AT room temperature for about 60-minutes before turning it out of the bag onto a floured surface and opening it into a skin ready for dressing and baking.

Newbie Topics / Re: Correct way to make pizza?

The dough is SUPPOSED to tear pretty easily when it is correctly mixed. Pizza doughs are UNDER MIXED by design. With this said, biochemical gluten development takes place during the cold fermentation period giving the dough a very fine, well developed gluten structure that has very extensible characteristics. If you take a dough ball that has been cold fermented for at least 24-hours and stretch it in your hands you should be able to see a very nice, strong but yet extensible gluten film. As for the dough balls, after the cold fermentation process they should be "just kissing" as shown in your picture of the boxed dough balls. Is it possible that you are looking at this all wrong?

Dough Clinic / Re: Dough just won't come together? No gluten development?

I think it's a combination of two things, the Wondra Flour is milled very fine and it is "instantized", they do this by a process of wetting the flour and then drying it again, this procedure allows the flour to hydrate more quickly.

Dough Clinic / Re: Wondra Flour for Pizza Crust Recipe?

Wrinkling is generally caused by the dough contracting, snapping back. A major cause of this is insufficient dough fermentation. This might be an area you would want to investigate further in your testing.

Dough Clinic / Re: Dough vs peel...Pros vs well, me

DOP;

SAF/Red Star/Lesaffre Yeast recommends that IDY be suspended in 95 to 100F water for addition when very short mixing times (under 5-minutes) are employed.

New York Style / Re: difference between IDY and ADY (glutenboy method vs what Gemignani says)

Wondra Flour has a protein content averaging about 10.5% and is available both malted or un-malted so you will need to read the label to see if it is malted or not if that's important to you. As for formulation, any decent dough formulation should work OK but owing to the low protein content keep the finished dough temperature between 75 and 80F while keeping the total dough fermentation on the short side.

I would expect that the total dough absorption would be in the 56 to 58% range. Wondra Flour is designed to hydrate quickly so it may look different in the bowl at first.

Dough Clinic / Re: Wondra Flour for Pizza Crust Recipe?

To begin can you share a picture of your mixer and the dough agitator with us? Also, what is the bowl capacity and what is your flour weight? How many speeds does your mixer have? At what speed are you mixing the dough?

Dough Clinic / Re: Dough just won't come together? No gluten development?

Just washing the hands isn't enough. you have to scrub with a hand brush and that won't even thoroughly clean the hands. Just look at your hands under a magnifying glass to understand why. Gloves make it a lot easier to clean and sanitize the hands which is why any USDA inspected processing/manufacturing facility requires that all line personnel upstream from packaging wear gloves.

General Pizza Making / Re: Pizza shops handling raw sausage bare handed?

It's all the cracks and fissures in our skin and under the fingernails that make our hands so difficult to clean thoroughly. Gloves eliminate 95% of that making the hands much easier to clean. Don't forget to sanitize each time after a thorough washing too, gotta do both. ;D

General Pizza Making / Re: Pizza shops handling raw sausage bare handed?

The only benefit that gloves provide is that your hands can be more thoroughly cleaned when wearing them. If not used properly they are of no value.

General Pizza Making / Re: Pizza shops handling raw sausage bare handed?

The issue isn't one of contaminating the sausage as the oven should take care of any contamination but instead it's an issue of cross contamination. Any ground meat is more prone to contamination than sliced meat but even that doesn't address the cross contamination issue. Would you ever consider putting raw sausage on a salad? Of course not but that's essentially what happens when you handle raw meat/sausage and then go directly to prepping a salad without removing the gloves or thoroughly (operative word being "thoroughly") washing ones hands.

General Pizza Making / Re: Pizza shops handling raw sausage bare handed?

It all depends upon the size/weight of the dough and how well you are capable of consistently achieving the targeted finished dough temperature and to a lesser extent how consistent the room temperature will be. Since the dough is much more prone to change in the bulk form I would have to say that anytime you are bulk fermenting you are going to experience significantly more variability in the finished dough as well as the finished pizzas.

Dough Clinic / Re: Bulk Cold Ferment vs Dough Ball Cold Ferment

The last turn brings the smooth side back to the top and the rough side to the bottom so as the donuts are lifted out of the fryer the rough side will drain rather than hold the oil resulting in less fat absorption.

I just realized too that I forgot to add the whole eggs to the dough formula. Typically 8 to 10% whole egg is used in the dough formulation. remember that whole egg is 75% water when calculating the dough absorption.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

After the poolish has matured to the desired level add it to the dough side ingredients but keep in mind that an 18-hour poolish is a long fermentation time for a poolish so in all probability the flour contained in the poolish will be "shot" as the protein will be badly degraded so I suggest not using more than 10 to 20% of the total flour in the poolish. Add the poolish to the dough ingredients as you would any other ingredient but make sure to take the water content into account when calculating the total absorption, you can then manage the dough in your usual manner.

Dough Clinic / Re: Starter timing confusion

Donuts are fries in one of two ways, surface frying which requires that the donut be flipped/turned so as to fry both sides. The other is to fry the donut submerged using a submersion screen on top of the donut. Submersion limits donut expansion but can contribute to uniformity of shape. A good example of submerged donuts is that of the Bismark (not the battleship, the jelly filled donut). Most Bismarks are submersion fried since the white ring due to dough expansion during surface frying will be a weak spot for the jelly to leak through during injection.

My first shop started out as a donut shop for several years until donuts became a bad thing so we transitioned into a pizza and sandwich shop. I was also a training consultant for Pillsbury when they acquired the Mr. Donut chain.

2% shortening is correct but the range can go as high as 5%.

On average, your donuts should weigh the same coming out of the fryer as the dough did when going in. Total fat absorption will be some place between 16 and 20%.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

Begin your experimenting with 10% sucrose. The type of flour to use will be a strong bread flour with 12.8 to 13.2% protein content. Yeast will be about 3% CY with salt at 2%, shortening at 2% and water at about 54%. Mix to a smooth dough plus two minutes. Finished dough temperature should be 80 to 82F. After mixing allow the dough to bulk ferment for 1-hour, then divide into smaller manageable pieces and form into loaves, not balls as you will be rolling it out into a rectangular shape later on. Set the dough loaves aside, cover with a sheet of plastic and allow to ferment again 45 to 60-minutes. Exact time may vary. Roll out dough to 3/8 to 1/2 -inch thickness and place onto an oiled pizza screen for final proofing. Proof at 85 to 90F with 75% relative humidity. Proofing time will be about 45-minutes. Fry at 365F for about 20-seconds on the first side, turn and fry about 55-seconds on the second side, turn again and fry about 30-seconds before removing from the fryer. Place onto a screen to drain. Allow donuts to cool about 1-minute before icing, this is important as the heat of the donut helps the icing flow over the donut. Use the hand dip method for icing the donuts.

Off-Topic Foods / Re: Dunkin' Donuts Yeasted Donuts copycat

How was the dough bulk fermented? Plastic bag, lightly covered bowl, uncovered, tightly lidded, other?

Dough Clinic / Re: How long can we store the dough in the fridge ?

SAF IDY contains sorbitan monostearate and ascorbic acid as "added ingredients" in their commercial packages of IDY. The sorbitan monostearate is used to help with rehydration of the dry yeast and the ascorbic acid is added to counter the slight reducing (dough softening) effects of the glutathione present with all forms of dry yeast.

Dough Clinic / Re: What is the point of ADY when IDY appears to be superior?

Remember what I was once told: "Every oven is a law unto itself and only itself" Literally translated: Every oven is different. You will need to experiment to find out what works best for YOUR pizza, made by YOUR dough formula, managed by YOUR procedure, in YOUR oven. I can say this though, make sure you allow the pizza to set, undisturbed after peeling it into the oven, long enough for it to release cleanly from the deck. Failure to do so will result in tearing the skin/crust as you try to move it leaving a pile of toppings on the deck while you're busy creating some new four letter words. Think of it as you would when searing a steak.

Dough Clinic / Re: How and when to turn the pizza in the WFO oven ?

Without at least the sauce on the skin it is literally impossible to learn anything from baking an un-topped skin. If you had flipper the crusts over after about 15-seconds and then baked for another 15 to 20-seconds you would have made pita not pizza. Pita is baked at 750 to 900F for 25 to 30-seconds. Just for the record, pita and pizza can be made from the same basic dough formula, (flour: 100%/Salt: 2%/ CY: 1%/Water: 52%/ Oil: 1% optional) it's all in how the dough is handled and baked.

Dough Clinic / Re: Critique my dough/process - first time "experimenting"

No, that's used for bread doughs. The dough should not show signs of collapse and when you begin to open it the dough will not fight you (too elastic).

Dough Clinic / Re: Proper Quantity of yeast

In one word...no. At 50F you will still get fermentation taking place.

Shop Talk / Re: Question about streamlining dough process

I agree with Craig, especially when you consider that you can pitch both and go with a natural starter if you're so inclined and still make a great product.

Dough Clinic / Re: What is the point of ADY when IDY appears to be superior?

The highest I ever go with the salt is 2.5% and when fermenting in a similar manner I use 0.15% CY. If you go too low on the yeast you run the chance of not having sufficient leavening power to support the weight of the topping ingredients and the pizza collapsing during baking resulting in a difficult to bake crust with the eating properties of shoe leather.

Dough Clinic / Re: Proper Quantity of yeast

Some pizzerias will manage their dough directly out of the walk-in cooler but to do so the type of pizza being made must accommodate dough absorptions in the 60% range and a dough sheeter will be required to open the dough into a skin. Where hand forming methods are used (the majority of pizzerias) the dough is brought out of the cooler, and allowed to warm to 50F before being used, once the dough warms to 50F it will remain good to use for up to a maximum of 3-hours. Any dough not used in this period of time can be opened into skins, placed onto screens and then into a wire tree rack, placed in the cooler and after 30-minutes covered with a food contact approved plastic bag and saved for use as pre-opened skins during the next rush period. To use these pre-opened skins they will turn them off of the screen and finish opening them to full size or just touch them up a bit before dressing and baking.

A few stores will also convert any unused dough balls into bread sticks, garlic knots, etc. These will be par-baked and only require a short finish bake at the time of final use.

Shop Talk / Re: Question about streamlining dough process

IDY isn't "stronger" than ADY, it is just more concentrated as it has a lower total moisture level.

As for hydrating/activating the ADY prior to addition to the dough, it has been proven scientifically many times that overall yeast performance as well as dough consistency are improved when the ADY is hydrated in 100F water prior to addition. IDY was developed specifically for addition directly to the dough without any pre-hydration/activation. Studies that I did at AIB many years ago showed that IDY has a shelf life of up to two years while ADY has a projected shelf life of 12-months. Because of the fact that it doesn't need activation and its better shelf life properties IDY had gained a lot of popularity for use in goodie bags as well as complete pizza mixes.

Dough Clinic / Re: What is the point of ADY when IDY appears to be superior?

If you are making a "master poolish" 20% would be about right but if you're making pizza at home why not put all or at least half of the yeast in the poolish?

Dough Clinic / Re: CY % in Poolish vs. Final Dough????

As I was reading your question poaching them was exactly what I had in mind.

Dough Clinic / Re: Best & Fast way to prep chicken breast toppings?

Without knowing the bulk dough weight as well as the finished dough temperature and how it's being stored in the fridge it's impossible to answer your question outside of a SWAG.

IF your dough size is small, under 1Kg. in weight, there is little to no difference between fermenting the dough in bulk as opposed to fermenting it in scaled dough ball form. If your total dough weight is at or under this weight the finished dough temperature and how you are storing the dough will be the determining factors as to how long the dough can be held in the fridge.

Need more information.

Dough Clinic / Re: How long can we store the dough in the fridge ?

The percent dough absorption used will be determined by both the flour absorption properties as well as the style of pizza you are making. If by YOUR dough management procedure YOU find that you can open the dough balls easier using a slightly lower dough absorption, by all means do so. As for dough management with high absorption doughs, if you want you can go with an autolyse to give you a slightly easier dough to handle at the same total dough absorption. If you are looking for a dough management procedure that works well with dough absorption values up into the mid to high 60% range I can send you my Dough Management Procedure that has a very long standing track record of giving very manageable doughs for both hand and machine opening without being sticky on the peel (if you do your part). To get a copy of my Dough Management Procedure just e-mail me at <thedoughdoctor@hotmail.com> and ask for my Dough Management Procedure.

Dough Clinic / Re: Pedantic Question

Low calorie for pizza is all about the toppings. Here is a good dough formula:
Flour: 100% whole white wheat flour.

Salt: 1.75%
Oil: 1%
IDY: 0.375%
Water: 67% (variable)

For the toppings:

Ripe tomato slices for the sauce.

Light on the cheese.

Concentrate more on vegetable toppings.

For a meat topping consider skinless chicken breast.

NOTE: Check at your local supermarket to see if they have a Mozzarella cheese analog from Galaxy Nutritional Foods. This is a soy tofu based product with "0" cholesterol and when blended 50/50 with your regular cheese makes a decent healthy cheese alternative.

Newbie Topics / Re: Low Calorie Pizza

While the dough was over fermented, it was not over fermented to the point of full collapse so it appears that there was still sufficient strength left to support the weight of the toppings, that being said, fermentation develops flavor in the finished/baked crust so it would be expected to be flavorful but difficult to handle the dough. From the looks of the crumb structure it appears to be in the process of collapsing as evidenced by the thick, heavy cell walls, a reduction in yeast level should still give a good flavor but with improved handling properties and a finer, more porous finished cell structure in the crust which will most likely result in a crispier crust too.

Dough Clinic / Re: Did I let my dough proof too long?

The idea with the bags is to eliminate all head space within the bag, not to reduce drying but to eliminate condensation which will form within that head space. Pull the bag into direct contact with the dough ball, give it a spin to form the pony tail and tuck it under the dough ball as you place it in the cooler/fridge.

If you make a dough without yeast and allow it to set at room temperature for 24-hours you will have an un-risen dough, without any yeast after the 24-hour period. I've done it before, not on purpose, but it still came out the same way.

Dough Clinic / Re: Pedantic Question

Your dough will exhibit a pronounced tendency to stick to an un-seasoned screen, pan or disk. To season your screen wipe it with salad oil and place in the oven at 425F. for about 20-minutes, remove, allow to cool for a couple minutes and repeat. After the second application you should see the aluminum taking on a slight amber tint, this will continue to darken with use. DO NOT wash any seasoned pan or screen as it can result in the seasoning coming off like a bad sunburn. Instead, if they ever need to be cleaned because debris is beginning to clog the screen openings, turn your oven to its highest setting and bake the screen for 30-minutes, then you can just tap the screen to dislodge most of the offending material and at the very worst it will now be easier to clear the openings using a common table fork.

Dough Clinic / Re: Lehmann's naturally leavened recipes

Could have been a typo (maybe they meant to show "1.5%") it's close to 1.47%? In any case, don't sweat it, go with the calculations.

Dough Clinic / Re: Bakers Percent/Formula Question

Agreed, the dough really appears to be over fermented.

The only time I ever go over 1% compressed yeast is when I'm making an emergency dough for use within about 2-hours. You don't indicate what kind of yeast you are using but even if it's compressed it's too much and if ADY or IDY wwaayy too much for what you are doing.

Dough Clinic / Re: Did I let my dough proof too long?

Allow me to elaborate on my previous response.

The ingredient amounts can very easily be scaled up or down to give you any size dough you wish to make but the issue is in the dough management procedure (unknown to me at this time), there are some dough management procedures that just do not lend themselves to being scaled up into a production size dough as they will not be able to provide the overall dough tolerance and consistency needed in a pizzeria operation where failure or inconsistency is not an option. If you want to see a copy of a bullet proof dough management procedure that you can use as a template for developing your own effective dough management procedure feel free to contact me at <thedoughdoctor@hotmail.com> and I'll be glad to send you a copy. Just ask for my Dough Management Procedure.

New York Style / Re: Scaling dough recipe up

Yael;

You're a pretty smart "cookie"! ^^

You nailed it!

Dough Clinic / Re: Bakers Percent/Formula Question

OMG! Where to begin....

The poolish provides flavor and sets the stage for potential crispiness and to some degree tenderness. Depending upon the amount of fermentation and temperature it can also impact crust color too.

The % of poolish and its impact upon the dough are dependent upon such things as the strength of the flour, the fermentation tolerance of the flour, the amount of yeast used in the poolish, the temperature of the poolish and the fermentation time.

All I can say is that when I use a poolish with a 12.8% protein content strong bread flour I use 100% absorption, 1/2 of my yeast and 85F water. I will typically allow the poolish to ferment for about 90-minutes. I'm sure others have their own favorite ways to use a poolish.

Starters/Sponges / Re: Poolish %

We once had a lab tech that made his pizza using ketchup for the sauce. Can't say I took an immediate liking to it.

Newbie Topics / Re: What is the worst pizza you have eaten?

Without knowing your dough management procedure it's impossible to say if it can be scaled up or not.

New York Style / Re: Scaling dough recipe up

The easiest way to make a par-baked crust is to add about 1/2 of the sauce to it prior to baking, this will limit the bubbling significantly. Once it's par-baked you can store it at room temperature for up to 3-days. If you refrigerate it be sure to allow a couple hours at room temperature for the crust to warm up before adding the remainder of the sauce and dressing it for baking. Best results will be had by baking it on a pizza screen as opposed to on the deck for the final bake.

General Pizza Making / Re: Pre-made Pizza Crust

Whenever you want to reduce or scale up a dough in size all you need to do is to adjust the total flour weight then use bakers percent to calculate the amounts of the other ingredients. I have no idea where that dough formula is coming from? ???

Dough Clinic / Re: Bakers Percent/Formula Question

After any bulk fermentation process the dough is going to be gassy and difficult, if not impossible to cool for stabilization so you're going to be looking at bulk fermenting, scaling and balling and then using the dough balls within the next 2 to 4-hours or so. The only option would be to open the balls into skins as soon as possible, place onto screens for storage and place into a wire tree rack stored in the cooler, be sure to place a plastic bag over the rack after an hour to prevent drying. By opening the balls into skins they can be more efficiently cooled for holding throughout the day.

Dough Clinic / Re: Changing recipe for bulk ferment

Are your screens seasoned? From what I see in the picture it appears that they may not be seasoned?

Dough Clinic / Re: Lehmann's naturally leavened recipes

If you go to the PMQ (Pizza Marketing Quarterly) web site <www.pmq.com> and go into the Recipe Bank, use "home made pizza dough" for your search you will find my time proven home made pizza dough formula/recipe that I developed for local farm families to use when making fast and easy pizza. I use it all the time when I'm at my son's home and he wants me to make pizza for dinner.

The pizza dough mix that we used when I was a child was essentially a slightly modified baking powder biscuit mix, you can make something similar by putting together a simple pizza dough (be sure it contains some honey or corn sugar, don't use table sugar as it will not develop crust color) and replace the yeast with baking powder at 5% of the total flour weight. Mix all ingredients together, scale, ball, cover with a piece of plastic, and set aside to rest for about 20-minutes, then lightly oil your fingers and begin opening the dough onto a lightly greased pan, immediately sauce and dress as desired and bake at 425F/218C.

Dough Clinic / Re: Kid-friendly pizza dough recipe

After re-balling you will typically need to allow the dough ball to rest for at the VERY MINIMUM, an hour but this can easily double in time before you can re-stretch the dough.

Is your sourdough active at refrigerated temperatures?

Dough Clinic / Re: Lehmann's naturally leavened recipes

When I was a very young child I would always look forward to making pizza using the Chef BoyArdee Pizza Kit that my mother would buy from the supermarket (food store back in those days). The dough (as a dry mix, just add water) and the sauce are provided, so you just add water, mix and spread out onto an greased pizza pan or cookie sheet, add the sauce and your choice of toppings and 20-minutes later we were eating pizza. Not fancy or extravagant but for my first real introduction to making pizza it wasn't a bad experience. The good news is that you can still buy it at your local supermarket! :chef:

After the kids get the hang of making pizza you can always advance them on to making your own yeast leavened dough but if the kids attention span is anything like mine was doing that right up front would have been second only to sitting out

in the yard and watching the grass grow.

Dough Clinic / Re: Kid-friendly pizza dough recipe

Q.J. is spot on, consistency is the name of the game. If the cross-stacking and down-stacking are posing a problem you can always place the dough balls onto an aluminum sheet pan, lightly oil the dough balls and slip a food contact approved plastic bag over each sheet pan. This procedure has been discussed in a previous post. Store the sheet pans in a vertical pan rack for mobility and you're good to go as there is no need to cross-stack or down stack when using this process, it will cut at least two or more hours off of the process before kissing the dough good night.

Dough Clinic / Re: Changing recipe for bulk ferment

You might start with this:

Flour: 100% (KABF)

Salt: 2%

Sugar: 2% (optional)

Olive oil: 2%

IDY: 0.4%

Water: 65% (70F)

Procedure:

Put water in mixing bowl first, then add the salt and flour, add the IDY on top of the flour, mix just until you don't see any dry flour in the bowl, then add the oil and mix just until the dough takes on a smooth consistency. Targeted finished dough temperature: 80F.

Immediately scale and ball, lightly oil the dough balls and place into individual plastic bread bags, twist the open end into a pony tail and tuck under the dough ball as you place it into the fridge to cold ferment for 24-hours. Remove from fridge, allow to warm AT room temperature for 1-hour, open into a skin, dress and bake. The dough, when made in this manner should be able to be used as soon as 24-hours to a far out as 48-hours, maybe a little more. This process allows you to make the dough at a time when it's convenient for you and use it anytime within the next 2-days or so.

Dough Clinic / Re: Dough help, still not quite right

Your dough fermentation time seems rather short to me (lack of sufficient fermentation time is a major contributor to excessive elasticity in the dough). My suggestion is to mix, scale, ball, and cold ferment the dough balls for 24 to 48-hours before opening them into skins and dressing for baking. If you don't want to go that route I'd suggest increasing the finished dough temperature to increase the fermentation rate. I see in your last post that you are up to 1.5% IDY which is a very high yeast level for a pizza dough, so if this doesn't improve the handling properties of the dough concentrate your efforts on either temperature or changing over to a cold fermentation process. As a last resort you might need to change your flour or flour blend to something a little weaker and better suited to your short fermentation process.

Dough Clinic / Re: Dough help, still not quite right

Craig;

That's the "Through Dough" I had previously mentioned. Back in the days of the "Pizza Cruise" excursions, classes were held using this product to teach the art of pizza tossing/spinning. For a number of years it was all the rage at Pizza Expo. The wet towel works well too but this stuff is much closer to the real thing.

Dough Clinic / Re: Dough to throw?

The idea here is to make a single dough which all contestants will have to work with. The dough has to be totally stable at room temperature so yeast is never used. Remember, it's for exhibition purposes only. The All Trumps flour was used to provide the necessary gluten for extensibility without tearing. Because there is no yeast in the dough it has to be mixed/developed to essentially full gluten development being careful not to over develop the gluten. You want to have good extensibility while still retaining sufficient elasticity so the dough will withstand the rigors of being continually tossed. We always worked with the Team to get the extensibility/elasticity balance just the way they wanted it.

Dough Clinic / Re: Dough to throw?

Anne;

I don't recommend what you are proposing for a pizzeria operation, instead, how about just adjusting your dough formula to allow you to mix, scale and ball the dough in the evening when you have the walk-in space and dough boxes available and then be able to use the dough on the following day, I'm presuming at around 11:00 a.m.? This would mean modifying your dough formulation for an 18-hour cold fermentation process. I assume you are using IDY? If that's the case the only change you will need to make will be to the dough water temperature. You will need to adjust the water temperature to give you a finished dough temperature in the 80 to 85F range. Assuming you are using a planetary mixer and a mixing time of about 10-minutes your water temperature should be between 70 and 75F. With a dough ball weight of about 10-ounces your cross-stack time will be about 2-hours.

Dough Clinic / Re: Changing recipe for bulk ferment

We used to make exhibition dough aka acrobatic dough for the U.S. Pizza Team the formula which we used was as follows:

Flour: 100% (All Trumps)

Salt: 6%

Oil: 2%

Water: 65% (variable).

You need to machine mix the dough to develop a smooth, extensible consistency.

Targeted finished dough temperature: 80F

Immediately after mixing scale and ball the dough. It will be ready to use in approximately 30-minutes and remain good to use for ??????

If you are looking for something to practice acrobatic dough tossing you might want to look into "Through Dough".

Dough Clinic / Re: Dough to throw?

"Whacking" the dough down on the bench top actually helps to relax the dough for the following handling procedure. Bread bakers have been doing it for hundreds of years just prior to forming the dough ball into a shaped loaf.

Why do some do it and others don't? Habit, training, who knows? In the end you do what works for YOU and what YOU are comfortable with.

Dough Clinic / Re: Slapping it around

To achieve a finished dough temperature in the 70 to 75F range you will need to use colder water when making your dough. When I was working with Greenwich there in the Philippines we were using dough water in the 60F range to achieve our targeted finished dough temperature.

Dough Clinic / Re: In need of guidance

A little oil on the hands, wipe your hands on the dough ball(s) and drop it into the bag.....done.

We did a study a number of years ago to determine if spraying of hand wiping put more oil onto the dough ball. Spraying put significantly more oil onto the dough ball than wiping the oil on with your hands.. This was done as part of a study where we were trying to reduce the fat content of the dough as much as possible.

Dough Clinic / Re: Oil option(s)

Expense, and I've already got the salad oil so why stock yet another ingredient? Over spray can be an issue too.

Dough Clinic / Re: Oil option(s)

I've never done it before but it should give you an interesting take on a Chicago type of deep-dish pizza. Without question it should be tender and flaky. If it works for you an experiment you might want to look at would be using a double thickness (two pie skins) as this might give a crust thickness more in keeping with a Chicago style pizza.

Keep us posted on your results.

Dough Clinic / Re: Will Tenderflake Deep Dish Pie Shells work for Chicago Deep Dish Pizza?

The only time I use an autolyse is when I'm working with high dough absorptions (above 70%). When using a mechanical dough mixer you can use 100% of the flour in the autolyse but when hand mixing I suggest not going over 75% as the remaining flour will help to disperse the ingredients into the dough after the autolyse period. When hand mixing it takes some effort to mix the dough to a smooth consistency much less actually over mix it, and with bromated flour it is all but impossible to over mix the dough by hand.

Dough Clinic / Re: Kneading AT and Autolysing

Craig is correct, most, if not all planetary type mixers do have a dough weight sweet spot that falls within a fairly narrow range. I've found over the years that this applies to essentially every mixer utilizing a vertical bowl design. Spiral dough mixers which utilize a horizontal bowl design typically have a much wider dough weight range sweet spot. It all has to do with the way the dough interacts with the agitator and the bowl. In a spiral design mixer the dough reacts more with the agitator than the bowl, hence the difference.

Prep Equipment / Re: Murenking / Aikok dual hook mixer

Victor;

Since every starter culture is different it is not unusual to achieve different flavors or magnitudes of sourness/tartness from the different cultures. The micro flora that your specific culture consists of is most likely producing a lower pH which results in the more tart flavor profile of the finished/baked crust. I would suggest using less of the starter when making your doughs. A good starting point would be to use 5% less and bench mark from there.

Starters/Sponges / Re: Sourness in Pizza Dough

My personal favorite:

Death....Natures way of saying "slow down".

Chitchat / Re: Life's Meaningful Quotes.....

We used to demonstrate frozen dough in our pizza seminar. What we found to work quite well with frozen dough is to slack it out in the cooler over night on an 18 X 26 aluminum sheet pan, then bring it out of the cooler, brush the dough balls lightly with salad oil and slip a large, food contact approved, plastic bag over the sheet pan containing the dough balls, pull the bottom of the bag up over the dough balls and then bring the top down and tuck everything under the pan. Allow the dough balls to remain at room temperature for 1-hour, then place back into the cooler for 24-hours. After the 24-hour cold fermentation period the dough balls will be ready to open. Because most commercially made frozen dough contains L-cysteine you should be able to take the dough directly from the fridge to the prep-table for opening and immediate use. I would suggest using a dough docker with your frozen dough. Any dough balls not used during the first day of use can be left in the cooler for use on the following day but remember FIFO. This process will give your frozen dough much of the flavor characteristics typically obtained with dough that's made in-house and you will also find that it's much more consistent when managed in this manner.

Shop Talk / Re: Pizza Dough

Suggestion, have you thought about par-baking the crusts with only the sauce, then add the remainder of toppings and just finish baking. This will reduce the baking time by about 50% for most pizzas. You can make the par-baked crusts about an hour in advance of using them without any issues at all.

General Pizza Making / Re: Multiple pizzas

Craig;

I'm betting if she was on a diet that she'd have the pizza cut into only two slices!

:D :-D :-D :-D

Chitchat / Re: Food Quotes

If the food was good, don't ask to see the kitchen.

I've never had a pizza I couldn't learn to like.

Chitchat / Re: Food Quotes

Great looking peel!

Treat it with mineral oil to protect it and it should last a very long time.

Stones/tiles/steel, Pans & Accessories / Re: Wooden pizza peel in WFO?

I think what you were seeing was the loose ends of the piece of dough being tucked into the body of the dough as it was being prepared for sheeting, this is a far stretch from actual rounding/balling of the dough.

General Pizza Making / Re: Pizza with last minute balling ?

Just as an FYI, there is essentially no difference when bulk fermenting 1.5 Kg. of dough as opposed to fermenting in dough balls. The reason for this is because up to about 1.5-Kg. dough weight a bulk dough is really nothing more than a larger size dough ball. True bulk doughs will ferment much differently than a dough ball which is the reason why so many pizzerias have transitioned away from bulk fermentation to dough ball fermentation over the past 50-years.

Dough Clinic / Re: Higher hydration doughs

6C (42F) is not considered to be a safe food storage temperature. In a commercial

application it is not even considered as a legal refrigerated temperature, and this doesn't take into account what happens when we are in and out of the fridge many times during the day, which Yael has alluded to. This has to be taken into account when calculating how much yeast to use as well as the total CF time. This is important if you are getting your information from a commercial (pizzeria) source where they have a commercial walk-in or reach-in cooler. Everything revolves around temperature. :-D

Dough Clinic / Re: Which are the factors that affect digestibility?

I've seen nothing unusual with the exception of some spot shortages of yeast and flour early on but nothing lately.

Dough Clinic / Re: Has anyone else had trouble since the pandemic?

You're going to want to scale and ball the dough and then leave it out at room temperature to relax sufficiently for opening into a skin. The only issue is that 2 to 3-hours might be a bit excessive, if it is, go ahead and open the dough when it's ready and place the opened skins on a lightly floured plate or something and hold in the fridge until about 30-minutes prior to use, then remove, allow to temper AT (NOT TO) room temperature for 20 to 20-minutes, clean up the skins a bit, dress and bake as needed.

If your total dough weight will be less than about 1.5-Kg. there is little to no difference between fermenting in a ball or bulk fermenting as you don't achieve the bulk fermentation characteristics with such a small dough size (it responds more like a large dough ball).

Dough Clinic / Re: 4 day cold ferment neapolitan

All cards are off the table if the pizza is not completely baked, then and only then can you begin looking at various fermentation times (keep in mind that since acid is produced as a byproduct of yeast fermentation/acids inhibit crust color development) you may need to reassess the baking of the pizzas to get it correct for the fermentation time being employed at the moment.

Dough Clinic / Re: Which are the factors that affect digestibility?

That's really not a lot of fermentation time if "digestibility" is what you are looking for. Remember, fermentation is also a part of the digestion process. The enzymes convert a portion of the starch to sugar for use as a yeast nutrient and the acids produced by the yeast as a byproduct help to break-down the proteins plus there will be some proteolytic enzymes present which will also work to break-down proteins but all of this requires some time which is why a longer fermentation time might serve you better than the short fermentation time you are presently using.

Dough Clinic / Re: Which are the factors that affect digestibility?

Why not just "bulk" (how much dough weight are we talking about?) and then ball and allow to rest until the dough balls can be easily opened into skins? By going to a higher dough absorption, depending upon your baking temperature) you may have a higher finished moisture content in the crust which will certainly contribute to a softer crust BUT it is a double edge sword in that it will also contribute to a tougher/chewier crust at the same time. If you want to have a softer, more tender eating finished Neo. type crust you might be better served using a lower protein content flour than what you are presently using. Keep in mind though that by doing so you may not be able to ferment the dough as long as low protein flours typically exhibit a lower fermentation tolerance as compared to higher protein content flours.

Dough Clinic / Re: Higher hydration doughs

Steve;

The mechanics of the finished dough temperature are as follows:

Temperature is the #1 driver of fermentation, a higher temperature will boost or speed up the rate of fermentation and a lower temperature will slow it down. Even a few degrees F. will make a difference. A warmer dough temperature than desired can result in more fermentation taking place before the dough is sufficiently cooled to control the fermentation rate, this results in two things happening, 1) The dough becomes less dense and a better insulator making it even more difficult to cool, 2) As the dough is fermenting it is also gaining temperature due to heat of metabolism and this heat must be extracted in order to control the rate of fermentation during the CF period. The inverse is also true when the finished dough temperature is colder/cooler than targeted. The closer your targeted finished dough temperature is to 90F the more critical the finished dough temperature is and the more important it is to keep the temperature as constant as possible. At colder finished dough temperatures, say at 70F, the yeast is not as sensitive to slight variations in temperature so we have a little more latitude in the actual temperature. This is all due to the fact that yeast, as a microbe becomes exponentially more active as the temperature of the substrate which it's in approaches 90F. This issue exists in commercial operations with both walk-in and reach-in coolers (tends to be worse in reach-in units due to their reduced efficiency over the walk-in units) but it can REALLY be a problem in home refrigerators which have a 200+ "Energy Star rating" plus they are seldom operating at peak efficiency because we are constantly opening and closing the door over the CF period of time. This is also the reason why residential refrigerators and freezers are not permitted in commercial applications, they typically don't have the reserve capacity to EFFICIENTLY handle things (dough) that are a bit warmer than desired, which results in more fermentation than anticipated at any projected point in time.

New York Style / Re: All Trumps vs Kryol for homemade NY Style

When I make the higher absorption Neo. doughs I always start out at 75% absorption and adjust accordingly for the absorption properties of the flour from there, so I would not implement any changes, but if you want a softer, more tender eating pizza I would just add some oil to the dough formula. Start at 2% and go up from there to give you what you want, remember, as with any high absorption dough, to reduce the dough absorption by the same % as you add oil.

Dough Clinic / Re: Higher hydration doughs

Actually, there is nothing at all wrong with taking something from different formulas and/or procedures and bringing them together to make something that is unique specifically to what you are doing, that's one of the fun aspects of making pizza (the other is eating it). The work generally centers around trying to figure out how to make those different parts all fit together and play well together to give you the pizza that you want and can make great on a consistent basis.

Dough Clinic / Re: Reshaping Dough After Delayed Fermentation

Steve;

I apologize for the assumption. :-[

As you well know, even the yeast has to be weighed, it's the one ingredient that we typically use which can give variable results with only a small change in the amount used.

When it comes to temperature monitoring, these are the temperatures which we are usually targeting, but like so many other things pizza, they are not cast in stone, they will be somewhat variable with the type of dough management process employed as well as conditions specific to our different kitchens and equipment at hand.

Finished Dough Temperature: 70 to 75F.

Down-stack Temperature: 50 to 55F.

Cooler/fridge Temperature: <40F.

Temperature to Begin Using the Dough after Cold Fermentation: 50 to 60F.

Ideal Fermentation Temperature: 90F. & 85 to 88% R.H.

Ideal Final Proofing Temperature: 95 to 105F & 85 to 88% R.H. Note: In common practice many use 95 to 100F as the optimum "practical" final proofing temperature as R.H. (relative humidity) becomes difficult to control above 100F.

I have not included baking temperatures as they are so widely variable and vary with oven type/design, pizza being made, as well as altitude above sea level.

New York Style / Re: All Trumps vs Kryol for homemade NY Style

That's a very good and valid point that Yael brings up regarding a home fridge. We encounter a similar issue in commercial practice between a reach-in cooler and a walk-in cooler with the reach-in unit not holding temperature as well as a walk-in.

Dough Clinic / Re: Reshaping Dough After Delayed Fermentation

Do you know what the Lintner Value (degree-L) of your diastatic malt is? for a 20-L the amount needed is only 0.25% of the total flour weight (316-grams in your case) but if it's 60-L the amount would only be a third of that 0.083-gram. Maximum would be about 0.5%. The amount you are presently using is 2.2%. These numbers are based on using unmalted flour but I'm guessing your flours are all malted already so that further strengthens my case that your dough might be over malted which would be responsible for the dough balls flattening out during the CF (cold fermentation) period. You might try leaving the malt out to see if it helps.

The amount of IDY is quite high too at 3-grams for 316-grams total flour weight = 0.949% (almost three times what might be considered a "normal" level of 0.375%, this would explain why the dough balls get gassy soon after removing from the fridge. Lastly, I'd suggest measuring the actual finished dough temperature after mixing. This is important as it regulates the rate at which your dough will ferment. Ideally, you will most likely be best served with a finished dough temperature in the 75 to 80F range, whatever temperature you use remember that consistency is actually more important than the actual temperature itself.

Dough Clinic / Re: Reshaping Dough After Delayed Fermentation

Steve;

One thing that you might want to do is to begin transitioning from a dough "recipe" in volumetric portions to a dough "formula" based on actual weight for each ingredient. There are any number of good scales available on the Internet that many of us here use (I personally love my KD-8000). This change will give you the accuracy and repeatability needed to develop your dough formula(s). A good dial/stem type thermometer for \$7 to \$12.00 will take care of your temperature needs (be sure to look for one with a hex nut under the head as this will allow you to calibrate the thermometer as needed). Once you have your dough based on weight measures it can be put into bakers percent for ease of evaluation and it will greatly help you manipulate the size of the dough too if you should want to increase or decrease the actual dough size.

New York Style / Re: All Trumps vs Kryol for homemade NY Style

In reading your post I have some questions, what was the actual finished dough temperature for the Kyrol and All Trumps doughs? Did you optimize the dough absorption for the All Trumps flour or did you just plug in the same absorption you used with the Kyrol flour? I ask these questions because some of what you mentioned could be due to a difference in fermentation between the two doughs resulting from a difference in finished dough temperature which could have a significant impact upon the dough depending upon how you are managing your doughs. The dough absorption can also be highly variable especially in view of the fact that you are dealing with different brands as well as different suppliers, not to mention the fact that the absorption of any flour can/will vary from bag to beg or lot to lot, and even the age of the flour will have a significant impact upon its performance in both the dough as well as the finished crust. As you can see, there are a lot of variables at play here.

New York Style / Re: All Trumps vs Kryol for homemade NY Style

I'm suspecting some major problem/problems with your dough formula/recipe. Please provide details of your flour, dough, dough temperature, and how you are baking the pizzas and I'll be glad to offer my suggestions.

Dough Clinic / Re: Reshaping Dough After Delayed Fermentation

The two factors most responsible for "digestibility" of the crust are fermentation and quality of bake. The longer the dough is fermented (within reason) and the more solid (complete) the bake is the more digestible the finished crust will be. From your pictures I'm guessing that your targeting too thick of a crust for high temperature baking which can easily result in not getting the finished crust as well baked as it could be.

Dough Clinic / Re: Which are the factors that affect digestibility?

The 50 to 55F dough ball temperature after cold fermentation is the internal dough ball temperature. Depending upon your ability level at opening the dough into skins you may find it easier to open the dough at 50 to 55F or at a higher temperature as the dough becomes softer and more extensible at the higher temperatures which can be problematic for someone without the skill set to open the softer dough.

Dough Clinic / Re: Dough science - minutes after cold ferment but before baking?

I'm in agreement with Yael in his assessment that your dough might be over fermented at 72-hours room temperature fermentation, especially in view of the fact that we don't know the dough temperature or the room temperature. Your IDY amount (1/6th of a Tsp.) works out to 0.5-gram, and assuming 152-grams of flour in your 1-cup portion this works out to 0.328% IDY. This is very close to the accepted amount to use for the same length of fermentation time in the cooler/fridge, not at room temperature, unless room temperature is defined as <40F. If you don't want to cold ferment I'd suggest dialing the room temperature back to 24-hours and if that works for you then begin increasing the fermentation time in 12-hour increments to find what works best for you. While doing this though I would highly advise that you keep track of the finished dough temperature as well as the room temperature as both are highly prone to changing over time.

Dough Clinic / Re: I haven't been able to duplicate my bubble crust after succeeding once.

Not more than 0.5%. The numbers I gave are representative of what it takes to replicate the malting of the flour that takes place at the flour mill.

Dough Clinic / Re: Getting crust to brown without being to overcooked and hard.

What is your normal level of hard fat flakes?

Dough Clinic / Re: Difference in bottom browning

If you add up all of the bakers percent of your dough formula and divide it by 100 you can then take any amount of dough that you want to make and divide it by this number to get the amount of flour needed to make the desired amount of dough, once you know the amount of flour it is a simple procedure to calculate the amount of each ingredient (yeast included) to make that amount of dough. Since we are dealing with a "formula" which is a mathematical equation the number/amounts will always be correct if you didn't make any errors in your math.

Example: Flour 100%, Salt 2%, Oil 2%, IDY 0.4%, Water: 62%

Add up all of the percentages: 166.4%

Divide by 100: 1.664

New dough weight: 2,000-grams.

Amount of flour needed to make 2,000 - grams of dough: $2,000 \div 1.664 = 1201.923$ -grams (call it 1202-grams).

Now you can calculate the new ingredient weights based on the new flour weight.

Flour: 100% = 1202-grams

Salt: 1202×2 (press the percent key) 24.01-grams.

Oil: 1202×2 (press the percent key) 24.01-grams.

IDY: 1202×0.4 (press the percent key) 4.808-grams.

Water: 1202×62 (press the percent key) 745.24-grams

To check your math add up the total ingredient weights and you should get 2,000-grams or something very close (variances due to rounding): $1202 + 24.01 + 24.01 + 4.808 + 745.24 = 2,000.68$ -grams.

General Pizza Making / Re: Do I increment yeast just like any other ingredient?

An optical fireplace at that. All the heat will go right up the chimney.

Hearth Ovens / Re: initial wood oven questions

As long as the dough is allowed to remain at a temperature which supports yeast fermentation (40F to 125F) it will continue to ferment which in short time will break down the dough making it overly extensible and sticky to work with and it will no longer support the weight of the toppings during baking resulting in the dough collapsing. If your dough is becoming dry and crusty just wipe it with a little oil and cover it with something, like an inverted bowl for a single dough ball or a sheet of plastic for several dough balls, then try to keep it at the LOWEST temperature possible to retard the rate of fermentation. Properly done this can allow you to hold the dough for up to 4 or 5-days (in the fridge of course), but at room temperature, assuming 60F as the lowest practical room temperature you might be able to coax the dough out to 5 or 6-hours IF you mix the dough as cold as possible which will be about 60F. At this point you could re-ball the dough re-oil the dough balls and cover them again to extend the time by maybe another 2 or 3-hours depending upon the room temperature. If the room temperature is at 80F or above the most you will be able to hold the dough will be about 4-hours then you will have to use it or re-ball it. Once re-balled at that temperature you're probably

going to need to use it pretty soon. All of this depends upon your dough formulation and your flour strength so without knowing what the dough formulation is and what the flour strength is all of this is pretty meaningless. But you do get an idea of the progression of the dough if left to ferment at room temperature.

Dough Clinic / Re: How to Keep the dough ready to use (room temperature) as long as we can?

No, the dough does not absolutely have to go directly from the mixer to the fridge, it all depends upon the management procedure that you are using. The fermentation of the dough develops flavor in the finished crust as well as lightness and tenderness and to a great extent it will also be responsible for helping to develop the desired crispiness in the finished crust too. During fermentation acids (formed as a result of fermentation) as well as enzymes contained in the yeast attack the gluten forming proteins in the flour making them weaker as well as hydrolyzing them (that's the role of proteolytic enzymes) or breaking them down into their basic amino acids (protein building blocks). These attacks on the protein are what helps to develop some of the gluten (biochemical gluten development) but when left to go unchecked (too much of a good thing never turns out to be very good) it will weaken the protein to the point where the dough becomes overly extensible, maybe stringy, wet or sticky and then it will no longer be capable of supporting the weight of the topping ingredients during baking resulting in collapse of the dough which in turn results in an inability to bake the crust properly, and a tough, rubbery eating finished crust. If the dough is only moderately over fermented it may not collapse but the finished crust may take on an acid or sour taste due to the excessive acid formation. This excessive acid formation also works to inhibit crust color development at the same time.

Dough Clinic / Re: Forgot to put dough in the refrigerator--- is it ruined?

An excessive amount of shortening flakes would give you the fried effect as they will melt out with the oven heat and since they are distributed throughout the dough those near the surface will impart a fried effect. We see this when we make pastries using the blitz dough method.

Normally you need to get up to something in the 6 to 8% range to see this. A lot of the bake to rise/oven rising pizzas being sold today contain yeast for flavor and dough conditioning, encapsulated leavening for oven spring and fat flakes to create the desired open cell structure.

Dough Clinic / Re: Difference in bottom browning

Without knowing your dough formula or at least the ingredients it is hard to say anything for sure, but I'm guessing the sugar might have been deleted.

Dough Clinic / Re: Difference in bottom browning

At 0.5% IDY your yeast level is on the high side even for CF at 38 to 40F. At 0.375% IDY you can expect to get very good dough performance out to 3 possibly 4-days. Your high yeast level combined with the high CF temperature would account for the results you are getting with your dough. Yes, I would think that a reduction in yeast level would be of benefit in this case. I say "in this case" because you are already at a high level, now if you were down at say, 0.2% I would probably say that I don't recommend a further reduction in yeast level, while this will address the dough issue there is a distinct probability that there would not be sufficient yeast to provide the desired oven spring characteristics, especially in the center section of the skin covered by the toppings, this would result in a thin center section with

poor baking properties, less than desired crispiness and most likely the development of that old "dreaded gum line".

Your pizzas are looking quite good, I hope you are enjoying them :)

The best part of experimenting with pizza is the standing excuse to eat pizza at every opportunity.....all in the name of science or pizza development, which ever excuse works best for you. :-D

Dough Clinic / Re: Some advice please.

R.C.

Are there any independents in your area? Remember that the big box chains are a poor indicator of what your local population REALLY wants in a pizza. They all operate on the theory of "make it and they will come" and they can't make any changes so they're locked into the corporate pizza image. The independents, on the other hand, know they cannot compete with these big box chains on a pricing basis so they compete differently, by providing a different product from that the big box competition sells.....what the local consumers are looking for. You say that you want to make the best pizza, best by who's determination? Certainly not mine or yours, that determination must be left up to your local customers, your job is to try to identify what the local independents already know about your local consumers preferences and then build upon that. Open with a limited menu and do "specials" to improve sales on your slowest night of the week. Let me define "specials". These are not discounted items. We never discount our pizzas, if we do our customers will lose perception of value of our pizzas, you know the old story: Hey! you sold that same pizza as a two for one last week! Why should I pay full price now? Or, you will be in to "specials" shopper's boat where you get those calls asking "what is your special today and how much is it?". By "special I mean that on the slowest night of the week you might offer a type of pizza that you otherwise do not offer...for example deep-dish. Some times we do special toppings, like a seafood pizza, even a multi-grain crust, or a Margarita pizza made with upscale ingredients on an "artisan" crust. These are all priced at or above our regular pizzas, but they are all "SPECIAL" too. You can do this to improve sales on the slow night of the week but more importantly it is used to give some insight as to what your customers are REALLY looking for in a pizza. Once you identify likely candidates you can move them to your regular menu and keep fishing with different pizzas on your "special" night. If you find yourself in a situation where you just have to do "specials" in a more traditional sense, again don't discount but instead "bundle". Keep the pizza at its regular price and add something else for free or at a discount price. This can be as simple as an order of bread sticks or garlic knots (your cost about \$0.30) or a 10" dessert pizza (your cost about \$0.50) How do you do this? Take a 10" skin, brush with melted butter or butter flavored oil, sprinkle with a cinnamon-sugar mixture, bake, drizzle with powdered sugar-water icing (powdered sugar + water to make a thick paste, store in a squeeze type condiment bottle and drizzle over the hot pizza) cut and serve. If you're customers want a little more in their dessert pizza add chopped pecans, streusel and some apple slices or other fruit pieces, drizzle with icing and serve or up-sell it by offering it a la mode. Dare to be different! :)

General Pizza Making / Re: The best way to go about Thin Crust?

That's about what I was expecting at 45F. I seriously doubt that they would make it to 48-hours.

Make some pizzas from the dough and let us know what you think.

Dough Clinic / Re: Some advice please.

45F would be considered as marginal for CF but if you limit the CF time to something less than 48-hours you should be OK.

Send some pics showing the same dough balls after 24, 36 and 48-hours in the cooler.

The use of oil in a pressed dough will certainly help the dough flow out under the pressure of the press head but it really won't address any snap-back/shrinkage /dough memory after pressing. For that you will need to add some dead yeast (RS-190) or PZ-44. Either one will effectively address the dough memory issues experienced with press forming the dough skins.

Dough Clinic / Re: Some advice please.

It sounds like you want to be another Pizza Hut which isn't a bad thing unless there is one close by, that being the case you will not win over any P.H. customers. I don't know what is available in terms of pizza where you are planning to have your store but it sounds like a lot of what is available right now is made from pre-made crusts which makes being different kinda hard. It's the "kinda different" part that will put you on the map. So, for pizza type I'm assuming that you are wanting to target P.H., actually early P.H. wasn't a bad pizza at all. What do you have in mind for your store concept? That will be an important thing to know for your oven selection.

General Pizza Making / Re: The best way to go about Thin Crust?

The dough press is a good and valuable piece of equipment BUT only in the right application, if it doesn't make the pizza you want, it will serve better duty as a boat anchor, the same thing can be said for a dough sheeter, it all depends upon what characteristics you are looking for in the finished crust and physical properties of your dough (some are so soft that they cannot be sheeted while others are so stiff that they cannot be pressed. First you decide what characteristics you want and then you build around that. If you are having problems with your hands you might want to give extra consideration to a crust that is 100% formed using a hot press. If you don't mind a flat edge just about any hot press will work for you but if you want a raised edge your only option that I'm aware of is the Lil Torro hot press from A-M Manufacturing but you will need to have a separate die head for each diameter pizza that you make due to the raised edge feature. Even then you will need to decide what type of raised edge you want on your pizzas as they will need to know this when making your die heads.

General Pizza Making / Re: The best way to go about Thin Crust?

Define "far burbs" please. I'm a south sider (Tinley Park, 175th St.)

New Forum Members / Re: Cheers from the Chicago Burbs

Can a pizzeria be successful without a dough sheeter? Is Domino's successful? Is Papa John's successful? Those are probably the most visible chains that don't use a dough sheeter.

Keep in mind that hand tossing/slapping/bench stretching all produce crusts with somewhat similar characteristics while pressing (hot or cold) produces different crust characteristics while sheeting the dough forms yet another characteristic, and then there are the hybrid methods where the dough is partially sheeted and finished off by hand tossing (this method, done correctly produces crust characteristics similar to those of a hand opened dough. It really isn't a matter of which method should I use but rather which method will give me the finished crust characteristics that I want.

Life is complex enough in an independently owned/operated pizzeria so I like to use the same dough for all of my pizzas, just change the dough weights for the different

sizes, use less dough for thin crust skins and more dough weight for thick crust/deep-dish pan style pizzas (and allow for an hour or more of pan proofing). Then too, the style of pizza that you want to make may/will dictate the method you use to open the dough into skins, for example, a New York style pizza will require that you hand open the dough to achieve the desired crust characteristics while a thin cracker or thin crispy will dictate that you use a dough sheeter to open the dough into skins.

The first thing that you do is to decide upon what type/kind of pizza you want to make and then build your equipment package around that with the major considerations being dough management, how the dough will be opened into skins, and what oven will work best to produce the pizza in question. To stir the pot a little let's add in your store concept, DELCO will most likely run the best using an air impingement oven while casual dining will probably be better served using a stone hearth or deck oven.

Lastly, to your last question; ABSOLUTELY!!! there are many independents opening all of their dough by hand and they wouldn't have it any other way. Is it right for everyone? No, see above discussion.

General Pizza Making / Re: The best way to go about Thin Crust?

Are you a north sider, south sider or west sider?

I'm a very X south sider.

New Forum Members / Re: Cheers from the Chicago Burbs

Toppings are applied thinner in the middle and heavier towards the edge.

Newbie Topics / Re: topping movement?

The edge of the pizza is the first part to bake due to exposure to heat from three dimensions, top, bottom and the side whereas the center of the pizza is only being baked from the bottom (not from the top due to the protective sauce, cheese and toppings). As a result of this the toppings tend to flow inward towards the center of the pizza. We used to instruct our students to build the pizza like a volcano, low in the center and higher out towards the edges (in reference to toppings). As the pizza bakes the toppings will flow towards the center. Since every dough is somewhat different in how it responds in the oven you may need to experiment a little to see what the ideal topping placement is for YOUR pizza. This issue is mostly associated with the thicker dimension thin crust type pizzas baked in a deck oven. Air impingement ovens do not show this characteristic due to the intense airflow to the top of the pizza holding everything in place BUT when a bubble forms in the dough the cheese and toppings WILL slide off of the bubble in any type of oven. In a pizzeria the common response is to pop the bubble and rearrange the toppings on the top of the pizza as it comes out of the oven.

Newbie Topics / Re: topping movement?

I don't remember anymore, but it was about 3-years after Czechoslovakia broke up. I was traveling extensively throughout all of Europe and the Middle East at that time. I would have to go back and check my old records but I think I was there for McDonalds at the time reviewing and discussing their flour needs. Like I said...it's been some time ago.

New Forum Members / Re: New member from Slovenia

Actually, the sponge, in this case, is more like a sourdough starter than a "sponge" so the refrigerated temperature will effectively control (not stop) any further enzymatic and bacterial activity so it should about a week without any feeding or

indefinitely if you re-freshen it every week. You're in uncharted territory as we used to use it and re-freshen it twice a week when we made our rye breads.

Dough Clinic / Re: Not quite sure why this works

Welcome!

There is a wealth of pizza expertise here ready to help you.

I was in your country a number of years ago making a series of presentation to your flour millers.

I don't know if it is available in your domestic market or not, but your commercial bread flour is quite good and well suited to making pizza.

New Forum Members / Re: New member from Slovenia

A couple of things you're not taking into consideration.

The gluten forming proteins will be significantly damaged as a result of the long RT fermentation so the sponge will no longer act like a 55% absorption sponge, it will be a lot softer and weaker. This is why we don't take the flour in the sponge into account and reduce it from the dough formulation.

Because of the variability within the sponge due to variations in finished sponge temperature and room temperature we have never had good luck in adjusting the dough to a fixed weight (you need to use "true %" not bakers percent to do this), You can try it if you want to but reproduce-ability is less than spectacular. To convert your formula to true % just take your formula in bakers% and calculate the ingredient weights, add up the total for ALL ingredient weights, then divide the weight of each ingredient by the sum of the formula ingredient weights. This has now put your formula into true %. One last step to take: Decide what you want your TOTAL dough weight to be. Enter the total dough weight in your calculator and press "X" then enter the ingredient percent that you want the new weight for and then press the "%" key and read the new ingredient weight in the display window. By the way, after you have converted your formula to true % do a final check on your math: Add up the total percentages and they should give you a sum of 100 or VERY close to 100, if it doesn't, you did something wrong.

Dough Clinic / Re: Not quite sure why this works

And if you don't want to clean your oven regularly (that's how you prevent the condition described) you can always resort to baking on a screen, disk or pan. :-D

Dough Clinic / Re: How to avoid burnt flour inside the oven

Start out using the sponge at 50% of the flour weight (just like an ingredient). Use your normal dough formula (minus the yeast). Think of it this way, make your normal dough, add 50% sponge, incorporate the sponge into the dough. Depending upon a number of factors such as dough temperature, room temperature, flour strength, and actual dough formulation you might need to adjust the final dough absorption as well as the amount of running sponge added. Manage the dough in your normal manner.

Dough Clinic / Re: Not quite sure why this works

The general rule for GF is if you don't like what you have try something different from someone else.

The only thing many (not all) GF formulas have in common is that they usually contain some type of gum as a gluten substitute, this is because gums act as a film former and cohesive agent much like gluten does but that's about as far as the similarity goes.

General Pizza Making / Re: more extensible, flexible dough?

I seriously doubt that the yeast was doing much, if anything for you after the 2nd 12-hours at RT as there would not be sufficient nutrient for the yeast to feed upon for that long so I'm guessing that you also had some wild yeast and quite possibly some bacterial fermentation going on too (this would account for the improved flavor you got). You might experiment using a "running sponge", this is where you make a sponge using all of the yeast and 55% absorption, then adjust the water temperature to give you the same finished dough temperature you got before, set the mixed sponge aside to ferment at room temperature for 24-hours, then use 1/2 of the sponge to make your new dough without any added yeast. Build the running sponge back to full size by adding more flour and water as well as 1/2 of the yeast. Allow this to RT ferment for 24-hours and then split in half, placing into individual plastic bags and place into the fridge. To use the sponge again, remove both bags and allow to RT ferment for 12-hours, use one bag to make your new dough, remove the other sponge from its bag and rebuild to its full size as described above. You will most likely need to experiment with finished dough temps as well as RT fermentation times to see if you can get something close to replicating the flavor profile. Keep in mind that it is not unusual RT ferment for several days to develop some flavors, but once you've got the flavor profile to where you find it acceptable you can go with 24-hours at RT after replenishing/rebuilding the running sponge. This may sound somewhat similar to a sourdough starter but you develop a different micro-flora in the sponge than you do in a liquid ferment. We used to use these all the time when making rye breads when I worked in a small German retail bakery.

Dough Clinic / Re: Not quite sure why this works

When cooking commercial pasta I just cup my hand and pour what looks to be the right amount of salt into my palm, then into the pasta water. That's about as scientific as I get when making pasta at home but when I'm in a restaurant where things are a bit different I always go with 1% of the water weight but I don't weigh the water in this case, I just go by 2# in a quart or 2.2# in a liter. Never been disappointed.

Off-Topic Foods / Re: Survey: Salting pasta cooking water

Better get a donut fryer with a submersion screen.

Other Types / Re: Fried Dough

There are no rules for manipulating or balancing a GF dough formula since there are literally hundreds if not thousands of different approaches to making GF dough, but dense, heavy, tough, chewy are all adjectives associated with GF crusts. We worked on this for two years and finally considered it to be a wasted effort. When I was working with some of the major GF players helping to develop some of their products we found that to change any of the physical characteristics of the dough, batter or finished product we had to go back and completely reformulate the product. How difficult is this? One bread product that I developed was considered to be pretty good, then one fine day the manufacturer of the soy flour that I was using ceased production of that specific product and we soon found out that the formula would not work with any other soy flour, we had to go back and reformulate the entire product all over again, not an easy task as there is no GF technology to work with.

General Pizza Making / Re: more extensible, flexible dough?

It all depends upon your "room" temperature. If it is under 75F/24C it can be used

over a 3 to 3.5-hour period of time but if the temperature is higher plan to use the dough within 90-minutes.

If the dough is getting dry and crusty just wipe the entire dough ball or dough surface with a very light application of oil and drape a piece of plastic sheeting over the dough. Any over proofed/over fermented dough can either be made into other products such as garlic knots, breadsticks, or open the dough into skins, brush it edge to edge with melted butter and then sprinkle with a cinnamon-sugar mixture and bake just enough to brown the crust, then make a simple icing made by mixing powdered/confectioners sugar with a SMALL amount of warm water just until a thick paste like consistency is achieved, store this in a plastic squeeze type condiment bottle and drizzle some of the icing over the top of the pizza to make an excellent dessert pizza. The other option is to add it back to your new/fresh dough at a level not to exceed 15% of the fresh dough weight.

Dough Clinic / Re: How to Keep the dough ready to use (room temperature) as long as we can?

Don't worry about the oil, the amount you are adding to the dough balls will be but a small fraction of a percent. In your case the dough boxes make perfect sense, and your dish washer will have a new gained respect for you. Look at the WRH dough boxes at www.wrh.net. or Paul Bartley at <pbartley@wrh.net> you might ask him if they have and seconds that they can sell to you at a discount. Their seconds are only color blemishes. They have different colors so you can identify the day of the week dough was made. Or you can use a grease pencil to write the production date on each dough box. Be sure to get a couple of scrapers to remove the dough from the box as well as a box scraper which will greatly ease box cleaning.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Thanks Pat.

I don't deal with volumetric portions very much anymore so I never remember the conversion weights, and when converting a recipe to a formula I always portion first and then weigh those portions, it's the most accurate way since we all portion differently.

Dough Clinic / Re: Need a low-rising dough

I agree with Craig, the dough looks just fine to me. It has a nice smooth appearance and the stickiness that you see is completely normal. If you use a plastic scraper to remove the dough from the bowl and place it onto a very lightly floured surface it will handle just fine.

Neapolitan Style / Re: Something wrong with dough

Are you using the same Caputo flour that Craig used?

Neapolitan Style / Re: Something wrong with dough

Looks about right, nice and "mellow" (soft and extensible/doesn't look to be sticky at all).

Dough Clinic / Re: Non extensible dough problems

No, do not increase the oil when decreasing the dough absorption, let fermentation take care of softening the dough for you. If you are worried, start out at 55% and come down from there if necessary.

Dough Clinic / Re: Need a low-rising dough

Almost impossible to over mix a dough (referencing gluten development) with any of the home mixers and flat out impossible to do it by hand mixing. Biochemical gluten development is by far the best way to achieve gluten development. If the picture is of your dough being stretched, the dough is just pulling apart and tearing due to insufficient gluten development.

Dough Clinic / Re: Non extensible dough problems

I don't know the exact year that OSHA mandated the safety cage but I think it was in the mid 80's. If you can find a pre-safety cage mixer go for it! The safety cage was so hated that they had to up-grade it on the new Legacy series making it MUCH MORE USER FRIENDLY, and that was touted as a selling point for the Legacy mixers. Since just about every restaurant has an A-200 or A-200-S (S = stir feature) they're pretty common at restaurant sales and on the internet.

Shop Talk / Re: Mixing large quantities by hand

An emergency type dough is your best bet for a relatively decent pizza in short order but you're still looking at around 2.5-hours from mixing bowl to table. It is possible to make a fried pizza dough (think Celeste) in about an hour from mixing bowl to table. You will not have any option as to the type of crust that you are going to make as it will be just a "fried crust". Take any pizza dough formula, adjust the dough absorption to give a nice supple but not sticky dough in the mixing bowl (normally around 62% but this will vary with flour and formulation). Adjust the water temperature to give you a dough between 85 and 90F (about 95F water). The yeast level should be doubled. Mix to a smooth dough, immediately scale and ball, lightly oil the dough balls and set aside to proof for 30-minutes but not more than 45-minutes, roll the dough out using a rolling pin or open it by hand (NOTE: Don't open the dough ball into a skin larger than what you are going to fry it in/frying pan). Once the dough is opened set it aside to proof for about 15-minutes (a pizza screen works well for this). Fry the dough in a frying pan with a good amount of oil (345 to 365F). Fry on one side and watch for it to begin bubbling then flip it over to fry on the other side until lightly brown in color, turn it once again to get the desired color and place onto towel to drain. While still hot place onto a screen and dress the pizza as desired, place back into 475F oven to finish baking. We did these all the time when fried crusts were all the rage. They're hard to get by the "food police" these days.

Other Types / Re: Fried Dough

Mike;

I DO NOT recommend putting the dough into the freezer to fast/super cool it as this will only chill the outer portion of the dough. Instead, use the plastic bag procedure discussed a number of times here. With that procedure you just bag the dough balls, place them in the fridge and forget about them until the next day, then remove from the fridge, allow to warm to 50 to 55F, turn the dough out of the bag and you're good to go.

Dough Clinic / Re: Yeasty beastly question

That mixer shows a reverse spiral dough arm, that's a good thing, now the bad news, it has the old style safety cage over the bowl, trust me, it's a pain in the arse. Workable, but still a royal pain. The silly thing keeps falling off and it doesn't just snap right back on either. With time you'll come to hate it as much as everyone else. You can't over ride it either, if you do and someone gets hurt, well.....you don't want to go there.

The safety cage is not a deal breaker, you just need to know about it right up front

so you can practice putting it back on before putting it into use.

Shop Talk / Re: Mixing large quantities by hand

I see a an extensively under mixed dough. I also don't see any starter in your dough formula? As you are machine mixing the dough I would suggest going with a longer mixing time to achieve more gluten development. Seldom can you follow a dough formula precisely step by step in a different environment and get the same end results. Even with mixers, you can easily see as much as a 10 to 15% variance in mixing time between two mixers of the same make and model. Also note that Craig mentions using 62.5% absorption which figures out at 312.5-grams for your 500-grams of flour weight. If you are using the same mixer as Craig is remember that dough development in any planetary mixer is influenced by the amount of dough in the mixing bowl. Then too, in Craig's formula he says not to use less than 2.5% salt (12.5-grams per 500-grams of flour weight).

I think mixing your dough a bit longer and allowing it to rest at room temperature for 30 to 60-minutes immediately after mixing will make a world of difference.

Just my observations

Dough Clinic / Re: Non extensible dough problems

Pre-bake. Different dough formulas, management procedures, forming technique/method, types/styles will all influence the amount of bake shrink a pizza exhibits. If we measured the diameter post bake everybody would be using a different size pan, screen, disk or hand forming to a different size all to make the same size pizza in the end. When calculating thickness factor/dough loading again we use pre-bake diameter.

Dough Clinic / Re: Pizza Size

Just make sure you get the reverse spiral dough arm with your Hobart mixer. You DO NOT want a "J" hook.

It looks like you will be mixing about 44-pounds of dough a day. How do you plan on fermenting it in such a tight space?

Shop Talk / Re: Mixing large quantities by hand

My advice is to leave the lid off for the first two hours in the fridge and then leave it on for the duration of time in the fridge. Leave the lid on during the tempering period too, failure to do so can result in a crusted dough. I say oil the top of the dough ball when you place it in the cooler as this will prevent any crusting during the "cross-stack" period (un-lidded time in the fridge). The moisture dripping in the container is due to condensation collecting on the lid due to a warm dough and a cold container so the moisture released from the dough travels upwards to the lid which is cold and causes the moisture to condense out which you see as water in the container. Aside from making for a sticky dough it can also result in wet spots in the dough where the water vaporizes during baking resulting in bubbling of the dough. Excess dusting flour adhesion can also be a problem.

The main reason for leaving the lid off though is to allow for consistent cooling of the dough ball and minimize the affects of variations in finished dough temperature on the dough fermentation rate.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Actually, butter flavored popcorn oil is different from other types of butter flavored oils. The butter flavoring is compounded to release at only slightly elevated temperature (like that of popcorn just after popping) and once released, it

dissipates rapidly, this is why when you get to the bottom of the box the popped corn is wet and soggy but not buttery as it used to be. Why not just make your own? Buy some butter, allow it to set at room temperature for about 30-days, this will ripen the flavor (make it stronger) then melt the butter gently in a double boiler and add just enough of your preferred oil to retain the pour-able characteristics when it cools back down to refrigerated temperature, store at refrigerated temperature to prevent further flavor change, now you have made your own butter flavored oil. If you use shortening rather than butter there is no need to age the shortening and you only need to add enough oil to keep it liquid at room temperature, you've now made your own liquid bread shortening. Liquid bread shortening is stored at room temperature.

American Style / Re: Why is this happening to the bottom of my Pan Pizza?

Your dough absorption is at 60%. How does the dough feel after mixing? Try to drop your baking temperature to around 800F. What oven are you using? What is your present baking time? If you can send a picture of the dough after mixing it might help us in assessing what the problem might be due to. If you are planning to use a short RT fermentation time such as 6-hours I would suggest increasing the finished dough temperature to something in the 80 to 85F range for a faster fermentation rate.

How are you adding the IDY to the dough? This can impact the fermentation rate too.

Dough Clinic / Re: Non extensible dough problems

Not enough fermentation time but could be exacerbated by a finished dough temperature that is too cold....what was your finished dough temperature? You IDY level is also quite high at 1.2% (a more typical level is 0.25 to 0.5%). Are you baking at 750+ F? If not you might try changing over to a strong bread type flour such as Pillsbury Bread Machine Flour, available from most supermarkets (this is especially true as you are not using any sugar in your dough formula. With a long RT fermentation period I would suggest adding 2% sugar to the formula to help support a vigorous fermentation rate.

Dough Clinic / Re: Non extensible dough problems

100 dough balls at what weight each?

The Hobart A-200 (20-quart) mixers are 110V. There might be a small spiral dough mixer around 25-quart capacity that would serve you better.

Shop Talk / Re: Mixing large quantities by hand

Just for "smiles and grins" try using a rolling pin to open the dough just a little larger in diameter than your pan, then carefully place the dough into the pan. This might help with a dough that is rather gassy.

American Style / Re: Why is this happening to the bottom of my Pan Pizza?

Kuhne;

The recommended/preferred method to add fresh yeast (compressed yeast) CY is to simply crumble it up and add it just as it is into the flour. Just don't let it come into direct contact with the salt or sugar. If you are hand mixing your dough you may find it easier to incorporate the CY by first suspending it in the dough water. No special precautions are necessary, just add the CY to the water and whisk until completely suspended then proceed in making your dough in your normal manner. Don't forget to use the correct conversion for CY from IDY (about 2.5 times as much CY as you were using IDY) or if you want to go from CY to IDY use 40% as

much IDY as CY.

Dough Clinic / Re: Using fresh yeast for the first time, have a question

You can freeze the dough in your home freezer for 10 to 15-days without any problem. Make the dough and make a pizza from one of the dough balls, freeze the other two, the next week slack-out (thaw) one of the dough balls and make another pizza, then on the following week slack-out the third dough ball and make a pizza, now we've got you down to pizza one day a week rather than 3-days in a row :).

Dough Clinic / Re: Single dough ball...

In one word, no. The dough management procedure would still remain the same if you hope to get similar results. As for reducing your dough size to 1/3 of what it presently is, I can't say for sure as I don't know what the total dough weight is right now, but if it's only around 16-ounces you had best have an accurate electronic scale that weighs to a fraction of a gram, or better yet, a laboratory balance or your scaling errors will make getting consistent results all but impossible.

Dough Clinic / Re: Single dough ball...

We do LOTS of apples, peaches, tomatoes and venison jerky. We started years ago using the oven and then went on to a round one and then to one of the stacking types with square trays. Over time all have failed so a few years back we bit the bullet and bought a "commercial" one from Cabela's. We really flog it during apple harvest when making dried apple slices and again during deer season (I normally process one of my deer into jerky just to keep my sons and grand children well stocked. We really like the increased capacity and shorter drying time and so far it is holding up quite well.

Off-Topic Foods / Re: Dehydrator

Use the lightest colored honey you can find. The best one for your application would be "water white" the lightest grade of honey. It will provide all the sweetness but without the characteristic honey flavor. Lacking that, see if you can find high fructose corn syrup (HFCS) it is essentially the same thing but a LOT cheaper. I've found HFCS at our local supermarket from time to time. Sucrose (table sugar) has a sweetness rating of 100 while fructose has a relative sweetness rating of 110. You can get the same sweetness from sucrose as you can from honey or HFCS but you will need to use 10% more.

General Pizza Making / Re: Pastry style dough/Jioio's pizza

Just as a "general knowledge" for vital wheat gluten (VWG) for every 1% that you add to the flour you will increase the protein content of that flour by 0.6% and for each 1% VWG added you will need to increase the dough absorption by 1.75%. The easiest way to do the calculation is to ask yourself how much you want to increase the protein content of your flour by, then divide that number by 0.6, this will give you the percent (bakers percent) of VWG that will need to be added to give your flour the desired new protein level. Then multiply the percent gluten added by 1.75 to calculate how much additional water (increase in dough absorption) will be needed to compensate for the drying effect of the VWG. ALWAYS DRY BLEND THE VWG INTO THE FLOUR.

Forum Info / Re: Flour VWG protein calculator

Zorboz;

You say it's missing something, are you talking about the crust or the whole pizza?

The \$64,000.00 question is..... what is it missing?

General Pizza Making / Re: Pastry style dough/Jioio's pizza

Mine is just plain old carbon steel (3/8-inch thick) that I got at our local welding shop. A piece of cast iron plate would be great but I've not come across any, pretty hard to find, at least around here. Be sure to season it well to keep it from rusting.

Stones/tiles/steel, Pans & Accessories / Re: baking steel in poland ?

A good pizza stone should work well for him but if a steel deck is in his future I'd see if I can get one cut at a local metal fabricator (welding shop). It would probably be cheaper than getting one shipped to him. As for thickness, I'd go for anything from 6.5mm on up to 12mm.

Stones/tiles/steel, Pans & Accessories / Re: baking steel in poland ?

The major difference between durum flour and regular, patent or straight grade wheat flours is in the gluten forming proteins. In durum flour the gluten that is formed has a very tight matrix and is not soft and extensible as wheat flour gluten. This is one of the reasons why pasta has its unique dough properties and retains them through the cooking process.

Dough Ingredients / Re: The confusion surrounding the term "semolina"

In most cases you're going to find that the protein content is too low and they may have been milled from soft wheat varieties rather than hard wheat varieties so the gluten forming proteins will not be as strong either. My advice is to stay with a good bread quality flour.

Dough Ingredients / Re: Has anyone ever tried to make Neapolitan pizza in a WFO with any of the Bob Mill

I see how it differs from a Chicago stuffed pizza with the fully baked crust being added during the building of the pizza.

To control the rise of your dough I suggest two things that you can do. One is to reduce the yeast by 50% and the other is to reduce the amount of water being added to the dough. For this type of crust I'd suggest starting at 50% absorption and going up from there if necessary. I don't know how much 4-cups of YOUR flour weigh so I can't be any more specific. I stand to be corrected on this but if I remember correctly, 1-cup of flour??? weighs in at around 4.75-ounces so $4.75 \times 4 = 19\text{-ounces}$ $\times 50\% = 9.5\text{-ounces}$.

Dough Clinic / Re: Need a low-rising dough

Do you have any kind of softer white cheese available to you? White cheddar cheese is commonly used to make mozzarella cheese softer. You might experiment with different types of cheese at a 50% replacement for the mozzarella. Once you find one that provides the desired softness you can adjust the substitution level as necessary to get the desired melt and stretch.

Dough Clinic / Re: Strentching cheese effect after delivery

I used one for a couple of years. Think of it as a manually operated air impingement oven. They will do anything any other air impingement oven will do with the added bonus of infinite control over baking time.

Like any other air impingement oven you will need to use some type of baking platform with this type of oven.

Shop Talk / Re: Garland Air Deck Oven

They might work if you have enough of them and if they will absorb the moisture from the air before it can soften the crust (very questionable) as it doesn't take very long for the crust to soften.

Dough Clinic / Re: Avoid soggy and chewy dough due to hot bag

Actually, what you are referring to is a "stuffed" pizza. Very common in Chicago and surrounding area. Edwardo's is the pizzeria that put it on the map as they were possibly one of the first pizzerias to really commercialize this type of pizza. That top crust is nothing more than the bottom crust sheeted very thin. After putting the top dough skin in place and crimping it to the inside of the pan (crimping it to the bottom dough) roll over the top of the pan with a rolling pin to crimp cut the excess dough away from the pan, then cut or tear a couple steam vents into the thin top skin and par-bake just until the top crust develops a sandy color, remove from the oven and apply toppings and place back into the oven to finish baking.

Dough Clinic / Re: Need a low-rising dough

Freezing the dough is not done for convenience, instead it is done to extend the useful life of the dough from days to weeks or months as is the case with commercially frozen dough. There is a commercially frozen type of dough that is called pre-proofed frozen dough. This type of dough is different in that the product is fully formed, proofed and then frozen (think Freschetta frozen pizzas) but in order to make this type of frozen dough the product has to be frozen cryogenically at temperatures of -60F or lower. Even commercial mechanical blast freezing at -35F won't work in this application.

Dough Clinic / Re: Freezing dough balls:

Their procedure pretty much follows what we have used with the exception of putting the dough back into the cooler and expecting it to cool down and retard fermentation within a reasonable period of time. They might be working on the assumption that the added fermentation the dough receives after being placed back into the cooler brings the total fermentation to some predetermined, desirable fermentation level, however, bringing the dough balls from the freezer, and allowing them to slack-out in the cooler and then placing them at room temperature until the dough balls double or triple in size would result in a dough that is in itself an excellent insulator which would greatly hinder cooling of the dough ball resulting in even more dough expansion....how many dough balls are placed into a dough box??? The original procedure that we developed calls for just leaving the dough balls out at room temperature until they reach 65 to 70F and then placing them back into the cooler where they will now expand to about double, or a little more by the time they are ready to use. Are you sure you got the "straight and skinny" on leaving them out of the cooler until they doubled to tripled? That just doesn't sound right to me.

Dough Clinic / Re: Freezing dough balls:

What can you tell us about your background? Any work history in food service? Do you have any prior pizza experience? Any idea at this time as to what kind/type of pizza(s) you might want to make? What can you tell us about the restaurant concept? Many of us here have or have had stores so you have a potential treasure trove of information available to you here. In addition to Pizzamaking.com there is also the PMQ (Pizza Marketing Quarterly) Think Tank and Recipe Bank at [<www.pmq.com>](http://www.pmq.com) where you can get assistance from other store operators/owners. PMQ also has a connection with China that might be of interest to you in finding supplies, they also have a presence in the American Pavilion in one of the larger

food shows in China. Query Steve Green at PMQ about details on this show if you are so interested.

Welcome to Pizzamaking.com,

New Forum Members / Re: Pizza shop in Japan

Greg;

Welcome!

I hope you're planning to roll up your sleeves and and start tossing some dusting flour around.

Remember, the best pizza dough recipe (formula) will be the one that produces the pizza that you like the most, so you will need to experiment with making dough from existing formulas as well as modifying those formulas to get exactly what you like but in the mean time be prepared to eat a lot of pizza, that's the excuse I have used for years and it has worked well for me :).

New Forum Members / Re: Looking to make the perfect pizza, always looking.

The problem is rampant here in Kansas too. What do you mean I will be expected to work for five days a week? I go out with my bro's three nights a week and that would interfere with my social life! Do you mean I've got to work to get paid??? What a rip-off! Mind you, we are looking for both line workers as well as managers.....nearly impossible to find these days. If you do find a good fit, don't ask about coming in to cover an absent employee (get paid time and a half) it ain't gonna happen. It will interfere with their "social" life.

When I was actively interviewing applicants for positions at AIB one of the most commonly asked questions was "How long will it be before I make Vice President? One even went so far as to query how long it would take for him to make President!!! Heck I was only hiring lab techs!

Go figure.

When I had my shop back in the 60's people used to come to me asking for a job that they could work at and get paid for, I fear those days are gone. :(

Shop Talk / Re: Finding eager Employees

If it were me, I'd develop a burning appetite for pizza, open the dough into a skin(s), dress it and bake it and enjoy it, then make a note to myself to remember to put the dough in the fridge the next time I make dough.

The problem is that the dough has already seen plenty of fermentation and putting it in the fridge will not stop the fermentation for quite some time so it will be fermented even more, thus ruining the dough if it has not already been ruined.

Who knows? You might really like it!

Dough Clinic / Re: Forgot to put dough in the refrigerator--- is it ruined?

Peter;

Just home. In a commercial frozen dough operation the procedure would be very similar with the exception that blast freezing (mechanical: -25 to -35F or cryogenic: -45 to -60F) would be employed and then the dough would be held in a storage freezer at -10 to -15F for up to 20-weeks. However, the slacking-out and cold fermentation part are the same. There was one commercial pizza chain (Pizza Magia) that used the process as I've described in my response BUT they only held the dough for a maximum of 10-days. Static freezing (0 to -15F) does not afford the luxury of a 20-week frozen shelf life.

Dough Clinic / Re: Freezing dough balls:

And then some!

It's by far the best surface I've ever made pizzas or bread on.

The best way to periodically clean it is to use a metal blade bench scraper, be sure the blade is squared (sharpened perpendicular to the sides) and the ends are slightly rounded. NEVER SHARPEN WITH A TAPERED EDGE AS IT WILL DESTROY THE WOOD in short order. Hold the scraper at about a 40 to 45 degree angle and push it across the wood top, the squared edge of the blade will scrape off any material without gouging the wood surface (hence its name "bench scraper". Be sure to regularly reseal it with a generous coat of mineral oil and it will last forever.

General Pizza Making / Re: Wood surface for preparing pizzas

For home freezing of your dough I think you will get the best end result by taking the dough directly from the mixer to the bench/counter top, scaling and balling, then setting the dough balls aside to relax for a few minutes (10 to 20-minutes) Using a rolling pin flatten the dough balls into "pucks" about two inches or so in thickness, lightly oil the pucks and place on a cookies sheet (anything flat will do) and place into the freezer for about 3-hours, then remove from the freezer and place into individual plastic bags or wrap in stretch wrap and IMMEDIATELY place back into the freezer. The dough pucks will keep for up to 10 to 15-days in the freezer. To use the frozen pucks, remove from the freezer, unwrap and place into lightly oiled container (cover the container) to slack-out/thaw overnight in the fridge, then the dough has fully thawed bring the dough out of the fridge and allow to warm at room temperature until the dough reaches 65 to 70F, then place it back into the fridge to cold ferment for not more than 2-days, turn the dough out of the container onto a floured surface and open into skins by your preferred method. We have used this method for over 20-years with great success.

Dough Clinic / Re: Freezing dough balls:

I see two potential issues here. 1) Your conversion from ADY to CY is incorrect, it should be only twice as much CY as ADY not three times, so this means that your yeast level is at least 33% greater than you figured. 2) You are covering the dough (lidding the containers) as soon as you put them into the reach in cooler which as you say, is not operating at its coldest as there is considerable use of the cooler during the night so what is happening is that you are protecting the dough from being cooled in an environment which is not at a temperature best suited to efficient/consistent cooling of the dough. Add to that the fact that you did not provide the critical finished dough temperature which if it varies by only 4F can/will have a dramatic affect upon the rate of fermentation. The doctor's orders are:

- 1) Adjust the yeast level as explained above.
- 2) If #1 above does not improve the situation leave the lid off of some of the containers for at least 3-hours and then apply the lids. Be sure to LIGHTLY oil the top of the dough for those containers which you will be leaving the lid off of. Let me know how the dough feels/looks in the morning.

Note:

You will most likely need to adjust the time that the containers are unlidded (cross-stacked) to find what time is correct for your specific set of conditions.

Dough Clinic / Re: Yeasty beastly question

In the fridge, be careful that you don't let it even think about getting down to 32F. I lost a bunch of it that was last summer so I set our fridge temperature a little higher. I just stuff it into a clean plastic bag and secure it with a twist tie and store

in in the vegetable drawer. It keeps for several days.

Dough Clinic / Re: Keeping fresh basil and rocket leaves

Not bad looking at all!

Dough Clinic / Re: Dough timing

The "magic" temperature range that you are looking for is between 36 and 40F/2.2 and 4.4C.

Anything warmer than 40F/4.4C will allow the dough to continue fermenting (at a very slow rate but still fermenting). Also, remember that it is not just the yeast that you are trying to slow down, it's also the accompanying enzymatic activity.

Dough Clinic / Re: dough management

I agree with Hermit, nice looking tray of dough balls. Let us know how they work for you and by all means show off your finished pizzas!

Dough Clinic / Re: Dough timing

How the dough ball is rounded can have a significant influence on how the dough retains its shape if you're using multiple dough balls in a dough box and it can also have an influence in how the dough ball opens into a skin, truth be known, if two different people were to round the same dough these differences will be present. When it comes to dough rounding the rule is to be CONSISTENT, CONSISTENT, CONSISTENT, and in this regard the dough rounders are as consistent or even more so than humans (hand rounding). This means that you don't want to have a mixed bag of dough balls that are both hand rounded and machine rounded. All machine or all hand is the recommended way to go for greatest dough consistency.

Dough Clinic / Re: What is your doughball production rate?

I never finished my last response due to an errant key stroke.

Why not make a bag with a moisture controlling insert like Gore Tex, this material is silver colored on the side facing the heat and moisture so it will effectively reflect the heat back into the bag while allowing steam/moisture to escape from the bag. One of the issues we have to contend with is the fact that once a pizza drops below 140F it is no longer considered to be safe to eat so at that point in time the delivery is terminated. Research that we did a number of years ago indicates that a single boxed pizza in a common insulated bag is good for about 35-minutes before the temperature drops below 140F while two pizzas in a double bag are good for about 45-minutes so temperature isn't the issue, it's moisture.

An insulated bag is nothing more than a glorified sauna for the pizza as there is no provision for the steam to escape from the bag, and if you leave the bag open to ventilate it you also lose the heat so your delivery time is drastically reduced, this is where I've thought about the Gore Tex and its ability to ventilate steam/moisture while retaining heat...just one of my crazy thoughts.

Right now your best bet is to allow the pizza to steam off for a few seconds before cutting and boxing it, then use a plastic mat or ripple sheet under the pizza to hold it off of the bottom of the box allowing the bottom of the pizza to breathe a little. Use a heavy weight corrugated box to prevent the possibility of any condensation from forming in the box. Make sure the box has ventilation holes in it. Make sure the ventilation holes are opened when building the box, keep your insulated bag closed to retain heat unless you want to deliver a cold soggy pizza.

That's about the best you can hope for at the present time.

Dough Clinic / Re: Avoid soggy and chewy dough due to hot bag

Better find a way to get them covered or they'll get crusty. How about some Walmart bags? Cover the entire tray with a large plastic bag, ya gotta get'm covered.

Dough Clinic / Re: Dough timing

Peter;

Wow! That's a pretty dear price to pay for a book. In my opinion, Baking Science and Technology by E.J. Pyler is as good/informative and a LOT cheaper to boot.

Off-Topic Foods / Re: Preferred method of storing bread

Peter;

Ron Wirtz used to be our V.P. of Information Resource for a number of years at AIB. Small world.

Off-Topic Foods / Re: Preferred method of storing bread

The formula is given in bakers percent.

1) Decide how much flour you want to use (by weight).

2) Using your calculator: enter the flour weight then press "X" followed by the ingredient percent that you want the weight for, then press the "%" key and read the ingredient weight. The ingredient weight will be in the same weight units that the flour weight was expressed in.

EXAMPLE: You want to use 16-ounces of flour. What is the weight of the salt at 2%? 16 X 2 (press the "%" key) and read 0.32-ounce in the display window.

If you want to work this in grams: 454 X 2 (press the "%" key) and read 9.08-grams in the display window.

Do this for each ingredient and you have the weights for each ingredient.

Dough balls go in the "fridge".

Dough Clinic / Re: Dough timing

Yes, just be sure to wipe the top of the dough with a little oil to prevent the formation of a crust. It may form a soft but pliable skin and that's fine (that's what the oil is supposed to do). This will add more consistence to your dough as it will not be as influenced by the room temperature which can/will vary.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Fred;

Assuming you are planning t make a thin crust pizza.

I have no idea of your dough formula so here's mine.

Flour: (strong bread flour) 100%

Salt: 2%

IDY: 0.5%

Sugar: 1%

Oil: 2%

Water: 62% (65F)

Use delayed oil mixing method if using a dough mixer.

Take the dough directly from mixer to scaling and balling. Oil the dough balls and place into individual plastic bags, twist the open end to form a pony tail and tuck it under the dough ball as you place it in the fridge.

Leave the dough in the fridge until you come home, remove the dough from the fridge immediately upon your arrival so it can begin to warm while you're getting

things ready and allowing the oven to pre-heat. Turn the dough ball(s) out of the bag onto a floured surface, and begin opening the dough ball into a skin by your preferred method, dock the skin and dress to the order, bake and enjoy!

Dough Clinic / Re: Dough timing

Brad;

Sure do.

Since it is imperative that we get the dough from the mixer into the cooler within a 20-minute window of time we looked at the length of time it would take for two people to completely process (scale, ball, box, oil, and place in the cooler) a dough based on 50-pounds of flour (approximately 82.5-pounds of dough). We used a 12-ounce dough ball as an average scaling weight. We found that we could completely process the dough in an average time of 17-minutes resulting in an average processing rate of 110 dough balls in 17-minutes or roughly 6.5 dough balls per minute for the two of us. We also did this with a single person but we used the AM Dough Rounder and Catch Table to round the dough balls and we found that one person could accomplish the same thing in just 22-minutes using the dough rounder. We used to demonstrate both procedures to the students of our annual pizza seminar just to prove to them that it really can be done, mind you, this is not something that we did every day either, for the most part we only did it during the pizza seminar so we were not as "fine tuned" as we might have been if we did it regularly. In one of my sessions at Pizza Expo this year I discussed this very topic and how to do it. If you go to my web site <www.doughdoctor.com> I have some videos which show the dough rounding technique used. For scaling we just cut the bulk dough into strips trying to keep them uniform in dimension then the dough is cut into the lengths necessary to provide the correct weight (weight becomes a function of length). We made a game out of this with our students where they vied to see who could cut the greatest number of dough pieces weighing 12-ounces without the need to add or subtract dough from the cut piece. My personal best was 8-dough pieces and my average was between 4 and 5.

Dough Clinic / Re: What is your doughball production rate?

At 12.7% protein content I'm betting that it will work just fine. I don't put much, if any, faith in the Alveograph when it comes to hard wheat flours. Soft wheat flours yes, but not hard wheat flours.

Dough Ingredients / Re: attempt to find the right flour

Try to find a patent grade flour milled from hard red spring wheat having a protein content of approximately 12.5% and a falling number value of approximately 235. This should get you in the ball park.

Dough Ingredients / Re: attempt to find the right flour

That's better yet!

Next time I'm in town I'm going to stop in at D.T. and see if they have any.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Who's laughing at you now? :)

Spot on! That even beats my soft paint brush...Do you think Best Buy would have them?

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Not unless you bake it on the delivery run. There have been any number of attempts to improve the present situation but to date all have failed.

There have been electrically heated bags which effectively allow for the delivery of a hotter soggy pizza. Then there are the heated disks (magnetic resonance is used to heat the disks) which are placed into a special pocket in the bag, again, a hotter soggy pizza. Heating is not the solution, instead the solution lies in a way to get the steam and moisture laden air AWAY from the pizza. I've said this before, and I'll say it again, WHY NOT

Dough Clinic / Re: Avoid soggy and chewy dough due to hot bag

Hummm? They'd make great bags for putting my dough ball it too. I'm going to have to pick up a few the next time we go shopping.

Thanks for the tip!

Off-Topic Foods / Re: Preferred method of storing bread

JPB;

I should have added that whenever you leave the lid of in the fridge you should LIGHTLY oil the top of the dough to prevent any dry crust from forming (thanks for calling it to my attention), it might form a leathery crust but it won't be a dry one and that is what really matters. I have a soft bristle paint brush that I use occasionally to remove excess dusting flour when it exhibits a stubborn streak and doesn't want to fall off on its own. In pizzerias we use what is called a "bench brush" Same thing but in a horizontal format and passes muster by the food safety people.

You just want to make sure it has LONG,SOFT bristles so they just sweep over the dough removing excess dusting flour without digging into the dough.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Rolls;

The good news though, is that here in the U.S. "semolina" refers to stream of coarse flour taken when milling durum wheat. While not as widely available there is also a "semolina" stream that can be removed when milling hard red or winter wheat varieties too, but the primary use for these for making pasta from "hard wheat" not durum wheat. The difference is primarily in color with the hard wheat pasta being darker (somewhat gray) in color and the finished pasta is not as firm textured....not very appetizing for the purists but it is cheaper to buy as hard wheat is more readily available and at a lower cost. I used to work with the fellow who developed the method for extracting a semolina flour stream from conventional hard wheat mills.

Dough Ingredients / Re: The confusion surrounding the term "semolina"

What you are experiencing is completely normal for a pizza which has been placed in an insulated bag for 30-minutes.

Dough Clinic / Re: Avoid soggy and chewy dough due to hot bag

JPB;

A short time ago I got to thinking about why I was raising so much discussion when I made mention of things that happen during bulk fermentation, then it hit me!

What most on this board are referring to as bulk fermentation is in reality (to me at least) almost the same as fermenting a dough ball. When my mind thinks "bulk" fermentation it is visualizing a minimum of 10-pounds of dough to as much as 1,000-pounds or more (now that's bulk fermentation) while most of us here are

visualizing probably only a couple of pounds of dough at the most, to me that is essentially a single dough ball since the small size means that it responds to outside influences more like a single dough ball than a bulk dough mass. Now to answer your question, If you are bulk fermenting your dough in the cooler/fridge I think you will achieve more consistent dough performance by leaving the lid off for at least two hours. The reason for the more consistent performance has to do with the dough having a greater tolerance for variation in the finished/mixed dough temperature when the lid is off of the fermentation container for a period of time in the fridge. The length of time that the lid is left off of the container will need to be experimentally determined but as a rough guide if the finished dough temperature is in the 70 to 75F range the time will probably be between 1.5 and 2-hours and if the temperature is in the 80F range it will probably be in the 2.5 to 3-hour range. While there is no absolute when it comes to finished dough temperature most pizza and bread type doughs seem to perform best when the finished dough temperature is between 78 and 82F. As I've said before though, consistency is more important than the actual temperature itself. I'd rather have a dough come off of the mixer consistently at 73F than 73F one time and 80F the next time. You can change your dough management procedure to accommodate just about any finished dough temperature but you can't accommodate inconsistencies in temperature. By leaving the lid off of the fermentation container for a period of time in the cooler/fridge we have modified our dough management procedure to accommodate slight/minor changes/inconsistencies in the finished dough temperature, when faced with major inconsistencies in the finished dough temperature (more than 5F) you will have to accept the final outcome as it is since there isn't a whole lot that we can do to accommodate that kind of change. To be fair though, for some, they might not see all that much of a change or inconsistency in dough performance with extreme swings in finished dough temperature, the reason for this is attributed to one of two things, 1) They don't care about the change (pizza is pizza, as long as it tastes good I'm not too concerned). There is nothing wrong with this view, many home pizza makers have it, and once in a while I have it too. 2) Their dough management procedure might be such that it either doesn't show the effects of more or less fermentation or the finished pizza is of a type that isn't impacted very much by temperature/fermentation variations, examples of this might be a thin cracker or thin crispy type of crust.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

I picked up some information on cauliflower crusts while at Pizza Expo. The ingredient statement looks like it might work for you. For more information contact <www.cauliflower.net> or <foodservice@caulipower.net>.

When going with a non wheat flour based crust forget about going for a type/style of crust just focus on finding a decent crust to put under the toppings.

Neapolitan Style / Re: dough alternatives no flour

Have you Googled "gluten free flour alternative" I know that there are a lot of them out there but I also know that in many cases rice flour is also included in the formulation so you might need to do a little question asking before you buy one.

Neapolitan Style / Re: dough alternatives no flour

That's why we have oven rakes and brooms, to help remove debris and flour from the deck. Sometimes when a shop is really busy it's hard to take a minute to clean the deck, but as you observed, there is a price to pay.

New York Style / Re: To everyone who drops their dough ball in a bowl of

flour, or a load of bench flour...

Nope, procedure just says to take the dough directly from the mixer to the bench/counter top for scaling and balling, no additional handling required. Don't forget to cross-stack.

Dough Clinic / Re: dough management

Bread staling is not a function of moisture loss, instead it is a function of retrogradation (crystallizing) of the wheat starch. Potato starch/flour has been used in the same way for over 100-years where the potatoes are peeled, cooked and mashed and then added to the dough. The potato starch holds a tremendous amount of water and increases the moisture content of the baked bread too, additionally, unlike pre-gelatinizing a portion of the wheat starch, the potato starch set-up to form a much softer gel than wheat starch so in this manner it performs as a bread softener but not as an anti-staling agent. With bread staling there is a decided firming of the crumb structure, a loss of flavor and a change in mouth feel (mastication properties). Things which have a marginal impact upon bread staling are mono-diglycerides, DATEM, sodium stearoyl lactylate (SSL) but the greatest impact on bread staling has been accomplished through the addition of enzymatic anti-staling agents such as maltogenic enzyme preparations which hydrolyze starch over time to provide a softer bread out beyond 7-days. In the baking industry this is a key ingredient for ESL (extended shelf life) breads and rolls allowing commercially produced breads to have a shelf life of 10 to 14-days on average.

Off-Topic Foods / Re: Preferred method of storing bread

There has been a huge amount of research done on "bread staling" and all of it shows that bread stales faster at temperatures between roughly 60F and 20F. If you are making croutons this is the temperature that you want to hold your bread at prior to cubing. If you don't mind eating stale bread and are only concerned with mold growth refrigeration or freezing of the bread is the way to go. Many restaurants buy par-baked dinner or hard rolls and finish them off just prior to serving. The par-baked rolls are actually fully baked but not to final color so they still stale under refrigerated conditions as well as during the freezing and thawing/slacking process but they are returned to a palatable condition again by the reheating process so as long as they are served hot or warm they aren't too awfully bad, but once they cool they are actually much worse than they were prior to the final baking. Does this sound familiar? Think last Thanksgiving when we all enjoyed the American Thanksgiving favorite, "brown and serve rolls", everyone takes one the first time they are passed around the table but no one ever asks for seconds so the dog gets what's left in the basket and even the dog doesn't eat them, instead he just buries them in the back yard, probably the best place for them.

If you want to keep your bread the freshest possible, place it into a close fitting plastic bag and just keep it at room temperature or in a warm place in the 70 to 90F range. Since bread is essentially sterile with reference to mold, when it first comes out of the oven any mold that grows on the bread will be due to post baking contamination. To reduce the level of this contamination place the depanned loaf with a clean cotton towel over a cooling screen and then cover the loaf with another clean towel, when cooled to about 100 to 105F place into a clean plastic bag for storage. With reasonable care it will last for about 4-days before you see any mold growth. It takes about 4-days for mold spores to vegetate and it's in the vegetative state that we see the mold growing on the surface of the bread. Which brings up one last point, it is best to not slice the bread if you are planning to store

it as the process of slicing the bread drags mold spores from the surface into the moist crumb portion which provides an even better growth conditions for the mold. Why doesn't store bought bread get moldy? Store bought/commercial bread is made with mold inhibiting agents such as calcium propionate or potassium sorbate as well as a final bread pH/acidity adjusted to 5.2 or lower. If you make a sourdough bread that is sufficiently acid/sour you might have noticed that it doesn't mold very fast at all, this is due to the acidity of the bread which by itself is a pretty good mold inhibitor. Raisin bread is another example of a bread that doesn't mold very rapidly, this is due to the high level of tartaric acid in the raisins which effectively inhibits mold growth. Raisin juice concentrate is occasionally used as a mold inhibiting agent in some types of breads because of this, but the color and flavor contribution of the RJC must be compatible with the flavor and color profile of the finished bread.

Off-Topic Foods / Re: Preferred method of storing bread

The 10-Cm height boxes should work well for your application.

Dough Clinic / Re: dough management

I see that you are also using Caputo flour, unless you are baking your pizzas north of 750F most would generally agree that you're just wasting your money.

Dough Clinic / Re: Fresh Yeast Recipe

Typical use levels will be about 25% less, no need to pre-hydrate/activate, and longer shelf life (unopened packages have a 1-year shelf life), and greater/improved consistency in performance.

Dough Clinic / Re: Fresh Yeast Recipe

B.J.;

It is advised not to freeze compressed yeast (CY) as it is not intended to be frozen. The freezing process will inflict damage to the yeast cells resulting in poor to inconsistent performance. Your best bet is to buy some instant dry yeast (IDY).

There are many formulas posted showing the use of IDY. You can get it at your local supermarket where it is marketed as bread machine yeast.

In a "Neo" type dough sugar is an optional ingredient. All it will do is to promote crust color development. As for salt, I'd suggest going with 1.75 to 2%.

Here is my formula:

Flour (All Trumps) or any strong bread type flour, (Pillsbury Bread Flour) from your local supermarket works well.

Salt: 1.75%

Sugar: (optional) 2%

IDY: 0.375%

Olive oil: 2%

Dough Clinic / Re: Fresh Yeast Recipe

The thing that makes rice flour such a good peel dust is that it is so S-L-O-W to hydrate. Did you ever try cooking the stuff?

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

No, I said "Once it's time to use the dough remove it from the fridge and allow it to warm to a minimum temperature of 50F".

This normally takes from 1.5 to as many as 3-hours depending upon the room

temperature and size of the dough ball.

Dough Clinic / Re: Wet Unworkable Dough

Not too shabby for an emergency dough.

Neapolitan Style / Re: "Emergency" nearly-politan dough?

The only problem that I can see is that I didn't get an invitation to the pizza party! Oh, I see, you wanted to eat it all by yourself...can't blame you, I'd have done the same thing! :).

Now that you have a good base line to work from you can experiment with par-baking the crust with only about 1/2 of the sauce, then add the rest of the sauce and dress to the order and place back into the oven to finish baking.

Can you make as good of a pizza at home as you can get at your local pizzeria? Without question!

If the gum line persists with your single baked pizza try increasing the yeast level just slightly, if that doesn't do the trick reduce the amount of sauce by 25%. I've written on this subject a number of times and all I can say is that there are a number of things which can cause a gum line and only when you discover the REAL cause and make the necessary correction will it completely go away.

Once again, GREAT PIZZA!

Sicilian Style / Re: How will this work...

Ya got the makin's for your pizza, add some fresh tomato slices and cheese and pop that baby in the oven!

Sicilian Style / Re: How will this work...

Considering the very limited specifications provided on the Italforni oven I'm inclined to go with the B.P. oven. We had a double stack for use in our pizza seminar one year, they worked well for baking all of our pizzas but were not suited to the application at hand which was geared to commercial/pizzeria pizza production. Definitely go with the stone deck as opposed to the steel deck option. I might change my mind if there were more specifications on the Italforni but for now, with the information at hand, this would be my choice. Keep in mind that both ovens are quite good and you probably wouldn't go wrong with either. It is interesting to note that the B.P. oven door opens upward so you could place it anywhere on a suitable counter top while the Italforni oven (doesn't say) but appears to open downward so you would need to place it on some type of stand or on the front edge of a counter top.

Dough Clinic / Re: Questions on two ovens

Lookin' good! :) :) :).

Sicilian Style / Re: How will this work...

We have done a number of studies looking at both gas and electric ovens in both deck and air impingement configurations. Due to the dry heat in the electric ovens the baking time will always be longer than in the gas counterpart, and it is absolutely correct that when a load is put on a deck oven the gas one will out perform its electric cousin. This is not true with the air impingement ovens as they are not load responsive by their design, they just take longer to bake the same pizza. As for deck thickness, pizzas are baked from the bottom up and a thicker deck typically holds more latent heat than a thinner deck so it doesn't cool off as rapidly, many times allowing multiple pizzas to be baked in the same approximate area on the deck before any change in bake is noticed. Thin decks are notorious for

cooling off quickly and for the most part, the electric elements just can't put enough heat back into the deck before you see a change in the bake. As for spinning or rotating the pizzas, I have never seen a deck oven with a door that did not require the pizzas to be spun or moved on the deck.

Shop Talk / Re: Helloo & Q on deck ovens!

Sounds like you're on track to enjoying some good pizza today!

Don't forget to let some of that shredded Parmesan fall onto the edge of the pizza too, the toasted Parmesan cheese will add both visual eye appeal as well as a great flavor to the crust portion.

Sicilian Style / Re: How will this work...

If you open a skin only from the center you stand a greater probability of getting the center portion too thin and when you lay the skin flat there will almost always be wrinkles in the skin and since the skin is under a certain amount of tension there will usually be more shrinkage during baking than there would be if the edge was opened (stretched) too.

General Pizza Making / Re: Edge Stretching

Agreed, possibly a stronger flour (bread type flour with at least 12% protein content is suggested) and combined with an autolyse process might help. Dough temperature and dough management procedure are also important considerations, but the bottom line still remains, more water (higher dough absorption = softer dough) no getting around it.

General Pizza Making / Re: Increased hydration without the slop

Fit the dough to the pan, allow it to proof for about 45-minutes, then go back to it again and make sure the dough is still fitting the pan, especially in the corners, if it isn't now's the time to push the dough back into the corners or where ever necessary to get a good pan fit. Allow the dough to proof for 60-to 75-minutes or longer (can't say for sure as I don't know your dough formulation, dough temperature or room temperature). After the dough has proofed, lightly brush with olive oil, scatter on some pieces of sliced fresh garlic, and a fresh basil leaves that have been rolled and sliced forming strips, apply sauce of your choosing or better yet, slices of fresh tomato, then add shredded mozzarella cheese and some shredded Parmesan cheese and bake at about 450F (500F at the very hottest). Should make one great pizza. :)

Sicilian Style / Re: How will this work...

Pizza boxes just like paper will absorb aromas from any environment in which they are stored. I'm betting that those boxes spent some time at a pizzeria before ending up at that warehouse. Many years ago, back when we use to use those things calls pans and paper (they really did exist, you can look it up) I had one of my suppliers comment to me that he could actually smell my letters and that they smelled like pizza. Your clothes will do exactly the same thing, the dog wouldn't let me alone when I got home from the shop.

Chitchat / Re: Possible contribution to the "Pizzeria Smell"

Once I ground the crack down so both sides were even we could bake right on the deck or use screens without any difficulty.

Cracker Style / Re: Cracker Crust - stone vs cutter pan?

Does Tony G. have any restaurants/pizzerias in Toronto? :)

Dough Clinic / Re: Help with my dough!!

Actually, there is no reason why you can't bake a pizza in a pan or on a disk in an oven with broken stones, it's when you try to bake a pizza DIRECTLY on the deck with a damaged deck that the real fun begins as the dough can stick in the cracks or those same cracks will impede the ability of your peel to get under the crust to spin, move or remove the pizza from the oven. I once had a Bakers Pride deck oven with a crack right across the middle of the stone (composite decking material) it was always a pain as the peel would constantly get hung up on it so one fine day I took a hand held grinder and flattened the crack out by grinding off the high side of the crack, problem solved and we never had any problems with it after that.

Cracker Style / Re: Cracker Crust - stone vs cutter pan?

With regard to yeast level the rule for an emergency dough is to double your normal amount of yeast. As for finished dough temperature, increase it by 10F. and you should be ready to use it in about 3 to 4-hours.

Neapolitan Style / Re: "Emergency" nearly-politan dough?

By dense I mean that the dough doesn't look "light and airy". In reading through the dough making procedure I thought I read where it said to place the dough back into the mixer at one point. Placing the dough back into the mixer after a fermentation period is what constitutes a remixed straight dough.

If you are looking for a dough formula more like that which is used by your local pizzeria try this one for starters:

Flour (Pillsbury Bread Flour) 100%

Salt: 1.75%

Sugar: 2% (variable) You can delete it if you wish.

Olive oil: 2%

IDY: 0.4%

Water: (65F) 58%

Put water in mixing bowl, add salt and sugar, add flour, add IDY and mix just until you don't see any dry flour, then add the oil and mix until the dough has a smooth, satiny appearance (better to error on under mixing than over mixing).

Check the temperature of the finished dough, you are looking for something around 75 to 80F.

Take the dough directly to the bench for scaling and balling.

Place dough balls into non-oiled dough trays, then wipe the top of the dough balls with a little oil (doesn't need to be olive oil).

Place OPEN trays of dough in the fridge for 3-hours, then cover to prevent drying. An alternate method is to completely oil each dough ball and place into individual plastic food bags (recycled bread bags work well too (DO NOT use Ziplok bags). Twist the open end of the bag into a pony tail and tuck it under the dough ball as you place it into the fridge.

Dough will be ready to use after 24-hours but is best after 48-hours, will keep in the fridge for 3 or more days.

To use boxed dough, remove from fridge about 2-hours prior to use to allow the dough to warm to 50 to 55F, remove dough from box using a hard plastic scraper, place in some dusting flour and open into skins by your preferred method. If using individual plastic bags remove from the fridge about 90-minutes prior to use (again check the dough temperature as you are looking for 50 to 55F so the time may vary).

Invert the bag over a floured surface or bowl of dusting flour allowing the dough

ball to invert the bag as it falls out, pat off excess dusting flour and begin opening the dough ball into a skin.

Need help converting from bakers percent to weight measures? We have resources to help with that here too.

Dough Clinic / Re: Help with my dough!!

I'm wondering if you're not possibly trying to compare apples to oranges here. The dough that you almost always see being used in a "professional" shop is quite different from the one that you are using. The dough absorption is optimized to give decent handling properties and oven spring while also being capable of retaining its shape in the dough boxes. This is important for two reasons to the pizzeria. 1) It allows for a higher dough ball count in each dough box. 2) It prevents the dough balls from touching in the dough box which can result in misshapen dough balls as well as difficulty in removing the dough balls for the box. The cell structure that you see on the bottom of your dough pieces is entirely normal for any dough. As for oiling the bottom of the trays, this is something that we really don't recommend in a pizzeria since it adds to the lateral spread of the dough balls and it also allows the dough balls to skate around in the dough box so if the box is ever tipped in handling (that could never happen....right? :)) all of the dough balls are found huddled at one end of the box when opened for use. Oops! At home it's OK but you still get the spread of the dough balls. How do you get the dough out of the box without oil? A plastic scraper is used to remove each dough ball, and because of the lower absorption (than what you are using) the dough ball retains its shape while being scooped out of the box.

As for the bubbles, the dough looks to be very dense to me, for whatever reason, and any gas that is formed has to go someplace and since the gas is buoyant in the dough it rises upwards where you see it collected under the uppermost skin on the dough as a large bubble.

In the end, the proof of the pudding is in the eating, did the dough perform well in making pizza? Tony's procedure is based on what is called a remixed straight dough procedure where the dough is mixed, fermented, remixed, panned, proofed in the pan, dressed and baked, so unless you are seeing bubbles like this forming on the dough as it is proofing in the pan I wouldn't be concerned about it.

Dough Clinic / Re: Help with my dough!!

Blue eyes;

You are absolutely correct, all of which you mentioned will contribute to a soft dough...in addition to the increased dough absorption.

High absorption doughs are not usually handled like a "normal" absorption dough, instead they are handled using a plastic scraper, they are then folded and stretched (call it kneading if you wish) a couple of times prior to opening into a skin. As was mentioned, this folding and shaping of the dough (re-balling) has a strengthening effect upon the dough. If you find that your dough is not rising it might be a case where the yeast is depleted due to excessive fermentation, or if you see yeast activity in the dough but not as much as expected/desired you might need to add more yeast to the dough.

By the way, Pizza Expo this year was one of the best ever! Biggest news is from the yeast manufacturers. There are two new yeasts in the offing for the baking/pizza industry. One is a yeast that does not ferment maltose (this means that you can control the amount of fermentation by adjusting the amount of sugar (like sucrose) that you add to the dough. The other is a yeast that STOPS fermenting, not just slows in fermentation rate, but STOPS at temperatures below 45F. This is a

bombshell! It might rewrite (I'm already planning to do it) dough management as we know it. Just think, you could have a dough last for weeks, not days in the cooler, and then when you take it out and allow it to warm back up again to above 45F the yeast resumes fermenting again!!! Pretty COOL! I've been asked to do some research on this so I hope to be able to report in greater detail early this summer.

Dough Clinic / Re: What are parameters that promote gluten relaxation or overly soft dough?

I might also add that if you cold proof the dough in a container that was not left open and allowed to breather for the first couple of hours in the fridge, or plastic bagged the dough ball may be quite wet when you open the container, if that's the case I'd suggest letting the dough dry out a bit before turning it out into the dusting/bench flour or it will pick up flour like a wet sponge and it won't come off either.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

My dusting flour is the same as I use for my peel dust, equal parts of fine corn meal, semolina flour and regular flour. Never had a problem with it. The only thing that sticks is what needs to stick, the rest just falls right off as I'm opening the dough ball (I use the bench stretch method for opening the dough as it is less messy in the kitchen, but when working in a pizzeria I like to hand toss).

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

After increasing the absorption the dough will exhibit more oven spring when placed in the oven to bake which will probably mitigate what you have seen when trying to bake the colder dough which you presently have.

But if you insist, and want to go with the added expense, a great proofer is the Econo Proofer from Belshaw Brothers, in Washington State. <www.belshaw.com> This proofer is different from others in that it has multiple doors rather than one full length door. This feature prevents the proofer from significant temperature and humidity changes due to opening the door. The foot print is about 32 X 38-inches, about 6' tall and 110V. and it's on wheels so it's pretty handy to use.

Dough Clinic / Re: Dough handling problem...

The whole idea is to get the entire outside surface of the dough ball floured, as you pluck it out of the flour most of it will fall off, if it doesn't just pat it a couple of times and the rest will fall off, then as you open the dough ball into a skin any excess flour that might still be adhering to the dough will come off, you could accomplish the same thing by very carefully sprinkling flour onto the dough ball but this is a LOT FASTER and it looks a lot more professional too.

New York Style / Re: To everyone who drops their dough ball in a bowl of flour, or a load of bench flour...

Duke;

I do it every so often and what I do is to place one pizza two rack positions down from the uppermost position and the other pizza one position up from the lowest rack position and then as indicated, I swap the position of the pizzas about half way through the baking process. They're not exactly the same but they're close enough for table fare. If you should find that one pizza needs a touch more time than the other, move it to the upper position and allow to continue baking while you're

serving up the first pizza, this is usually enough time to finish that second pizza.

General Pizza Making / Re: Getting the Crust Right?

The amount of yeast used will have little if any impact since this is a temperature issue. I assume you are already using a thermometer and what you are saying is that it takes 2 to 4-hours for the dough to warm enough (50 to 55F) to be easily opened into skins for immediate use. Actually, 2 to 2.5-hours is about an average time for the dough to warm to this temperature so you're not too far off base where you're presently at, so let's approach it from the stand point of "how can I use my dough right out of the cooler?" The easiest way is to simply increase the dough absorption to a point where the dough can be opened with only normal effort right out of the cooler, and then all you need to do is to allow the opened skin rest in a warm area (on a heated shelf is perfect) for just a couple of minutes. Once you have the dough opened into a skin it will warm very rapidly. Just keep in mind that now you will be locked into using the dough right out of the cooler. This is how we do it in shops with a very limited space or in pizza trailers.

Dough Clinic / Re: Dough handling problem...

DB1;

Are you comparing granulated sugar (sucrose) to dry or liquid malt?

As for making the best pizza possible, I have to say this to you: That is not a decision for you to make, let your customers make that decision, they're the ones who will be paying for it. I don't say this to be mean or anything but it is a mistake that many operators make, especially new/newer operators. I've done blind preference testing many times and some times the results are rather surprising.

Dough Clinic / Re: Tony's master recipe w/starter and some questions

DB1:

If you are getting too much color in your deck oven this might be an indication of too much sugar (malt) in the dough formula. What temperature are you baking at? Have you confirmed the baking temperature of the oven deck using an infrared thermometer?

The key to getting that VERY OPEN crumb structure is a high absorption dough and a hot oven. However, you made mention of putting the pizzas in a box for DELCO, and that presents a bit of a problem since the very actions needed to achieve the sought after crust characteristics are in opposition to what it takes to improve the DELCO characteristics of a pizza. A long slow bake will provide the best DELCO characteristics, not a fast hot bake, truth be known, the air impingement ovens are the best when it comes to making DELCO pizzas due to their excellent moisture management baking properties. If you need to improve the holding properties of your pizzas while in the box there isn't very much that can be done since steaming a pizza post bake has never resulted in anything good coming to the pizza. To make sure you are doing everything possible to help your pizza survive the "box" here are some of the more effective tools used in the industry right now.

- 1) Bake your pizzas as long as possible.
- 2) Do not try to achieve an overly thin crust.
- 3) Allow pizzas to steam-off for a few seconds prior to cutting and boxing.
- 4) Use ripple sheet, Dri-Pie, Pizza Savor mats under the pizza to hold it off of the box allowing the bottom of the pizza to breathe.
- 5) Use a heavier weight cardboard box to prevent steam from condensing on the inside of the box.
- 6) Make sure your boxes have steam vents built into them.

7) This sounds silly, but make sure those steam vents are being opened.

As an experiment you might want to try a dough with no added sugar in conjunction with a malted flour, this approach has allowed us to get the longest bake possible which contributes to achieving a crispier crust up front while at the same time ridding the pizza of some of the excess moisture from the top of the pizza. In my experience the pizzas which hold up best in a DELCO environment are the thin crispy or thin cracker types, this is why we see this type of pizza commonly used in the pizza buffet chain stores.

Dough Clinic / Re: Tony's master recipe w/starter and some questions

Sure, parchment paper works fine, a lot of folks use it for two reasons, 1) Makes peeling the pizza into the oven a snap. 2) No mess in the oven.

New York Style / Re: Okay to Use Parchment?

I'd look into getting one of the smaller spiral design mixers. You can buy a new one for less than most used planetary mixers and you can mix doughs as little as 25% of the rated capacity, and they are about as close to bullet proof as you can get. We just recently had some good discussion on spiral mixers here just a few weeks ago. If you just gotta have a planetary mixer I'd suggest opting for a 40 or 60-quart capacity as this will give you room for growth and if you should want to sell it in the future you can sell a 60-quart mixer much easier than you can sell a smaller one.

Just my opinion.

Shop Talk / Re: Figuring capacity

Actually, you will probably get a crispier crust if you open the dough by hand or at least roll it out to something close to full diameter and then hand stretch it the rest of the way.

You are going to need a scale that will weigh in grams. These are available for around \$20.00 or a little less.

Flour: 100% (Pillsbury Bread flour) 500-grams.

Salt: 2% (10-grams)

Instant dry yeast/Bread Machine Yeast: 0.5% (2.5-grams)

Sugar: 2% (10-grams)

Oil: 2% (10-grams)

Water: 58%/70F (290-grams)

Procedure:

Put water in bowl, add salt and sugar, then add the flour and the yeast, mix until a dough begins to form, add the oil and continue mixing until the dough begins to take on a smooth appearance (I don't know if you will machine mix or hand mix). Check the temperature of the dough, you are looking for 75 to 80F. Scale the dough into 9-ounce pieces, form into balls, oil each dough ball, place into individual plastic bags (bread bags or food bags) don't use Zip Lok bags. Twist the open end of the bag to form a pony tail and tuck it under the dough ball as you now place it in the fridge. The dough will be ready to use after 24 or 48-hours (24-hours is the earliest but the crust will be better if allowed to remain in the fridge for 48-hours. To use the dough, remove from the fridge and allow to warm at room temperature until the dough reaches 50 to 55F, this will take about 90-minutes. Invert the bag over a bowl of flour allowing the dough ball to strip the bag inside out as it falls into the flour. Roll the dough around in the flour to ensure it is thoroughly floured, then begin opening the dough ball(s) into skins on a lightly floured counter top.

These dough balls will make 12-inch pizzas. If you have a pizza or biscuit stone you can bake the pizzas directly on the stone (500F/allow oven to heat for at least 1-hour with the stone in a middle rack position). If you don't have a stone you can use a seasoned pizza screen or a dark colored (dark colored on the outside) shallow pizza pan. Very lightly oil the pan and fit the opened skin to the pan, dress with a about 3-ounces of sauce and 5 to 6-ounces of shredded mozzarella cheese, sprinkle with a little grated Parmesan cheese and bake until the bottom of the crust is nicely browned, drizzle on a little extra virgin olive oil as soon as the pizza comes out of the oven and enjoy. For herbs, use sliced or diced/crushed garlic and fresh basil leaves, or if you want, you can use the dried basil and oregano. If you don't have a pizza sauce you can use sliced fresh tomato (my personal favorite) or just buy a quality can of whole crushed tomato and use it just as it comes out of the can, you can experiment with the sauce later if you want to.

Dough Clinic / Re: Thin crust

Can you provide us with a bit more information on the type of thin crust you're looking for? Or if you don't know the type, what are the physical characteristics you're looking for in the crust?

Dough Clinic / Re: Thin crust

Mark;

Also look at the Dahlen ovens too as they're great electric ovens.

Sveba Dahlen <www.sveba-dahlen.com>

Shop Talk / Re: Hello & Q on deck ovens!

Here is a pretty straight forward thin crust formula that has a proven track record in both deck and air impingement ovens. It can be baked on either pizza screens or power pans or right on the deck if using a deck oven.

Flour: 100% (flour with 11.5 to 12.5% protein content works best/this is considered to be a bread type flour)

Salt: 1.75%

Sugar: 2%

Yeast: IDY (0.375%) or ADY (0.5%) or CY (1%)

Water: 58% (65F/18C)

Oil: 2%

Add water to mixing bowl followed by salt and sugar, add flour and yeast, mix about 2-minutes in low speed, add the oil, mix 1-minute in low speed, then mix at medium speed for about 8-minutes or until the dough just takes on a smooth satiny appearance. Target finished dough temperature is 75 to 80F/24 to 27C.

Manage the dough by your normal dough management procedure or follow my Dough Management Procedure posted elsewhere on this web site. For scaling weight start at 9-ounces (255-grams) for a 12-inch diameter crust. As for baking time and temperature, as you did not provide specific information on your oven or the finger profile I can only provide a rough estimate as to time and temperature, set the temperature at 465F/240C and the time at 6-minutes for starters and adjust as necessary.

Note:

If you have access to a dough sheeter you can also make a thin crispy crust that is almost cracker like by reducing the dough absorption to something about 45% (this dough will be too stiff to open any other way except by using a sheeter), the dough can then be laid over a cutter pan and cut by rolling a rolling pin or pastry pin over the top of the pan allowing the trimmed dough to fall into the pan. The skin is then

ready for docking and dressing to the order.

In all cases the pans or screens that you use will need to be well seasoned or dark in color to achieve a decent bake as well as to prevent the crust from sticking. You should also have a good docking wheel as thin crust skins usually need docking to control bubbling.

Shop Talk / Re: thin crust recipe for a conveyor oven

A Hobart A-200 (20-quart capacity mixer) is rated to mix 4 to 5-Kg (8.8 to 11-pounds) of pizza dough at 55% absorption. If you can share your dough absorption and scaling weight we can provide more in depth information.

Shop Talk / Re: Figuring capacity

Just prior to me retiring we had a maintenance worker push a Hobart-A-200 mixer on a very similar cart as yours across the shop floor, one wheel dipped into the shallow recess in the floor where the floor drain was installed and over it went...Oops!

Prep Equipment / Re: Got a mixer...Welbilt w20

If you have not already done so, I'd suggest bolting the mixer to the cart. They have more than a tendency to walk off of carts and bench tops.....I've seen it happen and it ain't pretty, and worse if someone tries to catch it. Also be VERY CAREFUL when moving it around, those mixers are all top heavy and it doesn't take much provocation to coax one into taking a dive off of a cart.

That's a good mixer, it should serve you well.

Prep Equipment / Re: Got a mixer...Welbilt w20

Speaking about music at a restaurant, several years ago my wife and I and two friends were in Topeka, Kansas and decided to stop at Red Lobster for lunch, we had been there previously so we knew their food was decent. We were seated but soon discovered that we could not carry on a conversation due to the loud music and besides, it was "head banger" stuff so I personally was not overly impressed by their selection of music to dine by. At one point I asked if they could tone down the music a bit so we could have a conversation....no luck! Asked again when the food was delivered, again....no luck! We ate our meals and left, no dessert, no tip, except for my hand written complaint on our meal ticket about the type and volume of the music and their lack of response.

We have NEVER EATEN AT A RED LOBSTER SINCE THEN (that was about 7-years ago). As one would expect I was not very quiet about our less than ideal experience at Red Lobster and I found out from a good friend of mine in Topeka that they had implemented the type and volume of music to increase the table turns during the lunch hour, it seems that too many business people were coming in and occupying tables for what they thought was too long of a time. Go figure!!!

Chitchat / Re: Article: Effect of Music on Restaurant Business

I would apply my standard Dough Management Procedure but most food trucks are not going to have the space to accommodate it so I would begin with using individual food bags for the dough balls rather than dough boxes. If at all possible I would mix, scale bag and refrigerate the dough for 24 to 48-hours off site and load the cooler with dough balls on a daily basis or as needed. If possible, I would like to see the dough balls warm to 50F but again, that may not be possible in the confines of the food truck so I might be inclined to increase the dough absorption by about 2% over that which you would normally use and work with the dough directly out of the cooler/fridge. A couple of tools that you will want to have handy are a correct

(flat tipped) dough docker and some kind of a bubble popper (a BBQ fork works well).

Dough Clinic / Re: Food Truck Dough Management System?

Keep in mind that you're going to need a decent size mixer (how much dough/how many pizzas a day are we looking at making?), food bags (easier and lower cost than dough boxes) and refrigeration to store the dough in.

Dough Formula:

Flour: Pillsbury Bread flour will work well (available just about everywhere) 100%

Salt: 1.75%

Sugar: 2%

Oil: 2%

IDY: 0.4%

Water: 58% (variable) (70F)

Add water to mixing bowl, add salt and sugar, add flour and IDY, mix about 2-minutes at low speed, add the oil and mix 1-minutes at low speed, then mix 8-minutes at medium speed. Target finished dough temperature is 75F. Take dough DIRECTLY to the bench for scaling and balling, oil the dough balls and place into individual plastic food bags, twist open end to form pony tail and tuck it under the dough ball as you place it onto a sheet pan for storage in the cooler. Dough will be ready to use after 24-hours but it will be better after 36 to 48-hours. It will keep in the cooler for up to 3-days, maybe 4-days.

Remove dough from cooler, allow to warm TO 50 to 55F, invert the bag over a bowl of dusting flour allowing the dough ball to strip the bag inside out as it falls from the bag, open into skins by your preferred method, fit onto the screen, dress to the order.

Note: Add 1-ounce of shredded Parmesan cheese to the top of a 12-inch pizza for added dimension of the cheese flavor. If you are making 12-inch pizzas start out using 270-grams of dough for your dough balls then adjust accordingly to give you the crust thickness you're looking for.

Shop Talk / Re: Dough for cooking on screens in convection?

If your oven is a dedicated oven just for baking pizzas, it sounds like it might be, I would suggest trying to wrap your hands around some oven decking material or in a pinch you can use commercial un-glazed floor tiles to create a solid baking deck to bake your pizzas on. I know you asked about using pizza screens so what I am proposing is baking your pizzas on the screen at 500F and then just as the pizza is finished baking, remove it from the screen to finish baking for about 30-seconds right on the deck surface. This will give you the best screen baked pizza possible if you are looking for crispiness.

To up the quality scale a little you might try drizzling a little EVOO over the top of the pizza immediately as it comes out of the oven, or at least brush the rim of the pizza with EVOO.

Shop Talk / Re: Dough for cooking on screens in convection?

I've not seen that one here before but it is a very cool idea!

Shop Talk / Re: Pizza boxes - innovative designs

That's a first for me! I've never seen a road/street with the name "Lehmann" (even spelled with two n's) in it.

Thank you for sharing! :)

Chitchat / Re: Lehmann Way

Aside from stacking four 10" pizza boxes one on top of another, I don't recall ever seeing a box with multiple shelves in it. I'm not even sure how it might be made.

Shop Talk / Re: Pizza boxes - innovative designs

You might try Old World Spices and Seasonings in Kansas City or even Pizza Blends.

Shop Talk / Re: Bringing a product to stores question

Is it animal, vegetable or mineral?

Cooked or not cooked?

Frozen, refrigerated or RTU?

Making those little tables that go on top of the pizza to protect it from the box is one thing but a meat topping might be a totally different story so we really need more information.

I will offer this though, due to the Federal Food Security Laws very few people set up their own manufacturing plants anymore, most are manufactured under contract by some kind of co-packer.

Shop Talk / Re: Bringing a product to stores question

Are you planning to attend Pizza Expo next week? Great opportunity to rub shoulders with some of the worlds best. Tony G. will also be there too so it would be a good opportunity to actually talk to him about his class.

Newbie Topics / Re: Pizzaiolo Training ?

And, don't forget to use a dark colored pan and to put a pizza screen under the pan during baking to prevent excessive bottom color. Your baking temperature will probably fall between 450 and 500F.

Get yourself a deep-dish pan gripper and a flexible blade spatula to help get your pizza out of the pan after baking. Deep-dish pizzas are best cut using a rocker knife but if you don't have one a French/chef's knife will also work.

Newbie Topics / Re: Newbie question about "pan" pizza.

Nat;

I'm not sure that I fully understand your question of fitting a 20" pizza into a 10" box? Aside from folding or cutting it into quarters I'm not sure how it might be done. Could you please elaborate?

Shop Talk / Re: Pizza boxes - innovative designs

Two things jump out at me.

- 1) Use of A.T. and "00" flour which are significantly different flours.
- 2) Failure to provide the quantity and temperature of the water in which the ADY is hydrated/activated in. Your directions seem to indicate that you are using all of your water to hydrate the yeast when in fact, only a small portion of the water is used to hydrate the yeast in (that water should be at a measured 100 to 105F) while the remainder of the water should be adjusted in temperature to provide a finished dough temperature off of the mixer at something between 70 and 75F. This temperature will be variable and could be as high as 85F depending upon your exact dough management procedure, environment, and dough formulation. Since you are indicating that your dough is soft but not dense enough I would guess that your dough absorption might be OK but your dough temperature is too high (hot) which will increase the rate of fermentation resulting in gassy, less dense dough.

I would also suggest that you move away from using a dough "recipe" based on volumetric portions to a "formula" based on ingredient weights. To do this you will need to have a low cost scale capable of weighing in gram weight units. This will provide you the scaling accuracy needed to achieve a consistent dough quality.

Dough Clinic / Re: soft dough

A gassy, bubbly appearing dough is typically an indication of an over fermented dough. When you try to open a dough ball into a skin with those characteristics present and it is overly elastic you know the dough is over fermented. If you were to allow the dough to continue fermenting it would eventually start to become extensible again but you would see the weakness in the dough as it would not stretch well (too extensible) and in all probability it would collapse under the weight of the topping ingredients unless baked in a very hot oven on the oven deck.

Dough Clinic / Re: Difficult gassy dough

The bottom of the crust looks like the dough could have used more mixing or fermentation to further relax the dough. The top would have flattened out much more if you had inverted the crust onto a cooling rack immediately after removing it from the oven #6 in my previous response.

Newbie Topics / Re: Crust came out uneven

A "natural" starter will bring more of the lactic acid forming bacteria to the game than IDY so it will potentially give a softer, more relaxed dough as it becomes over fermented using a starter as opposed to IDY.

Dough Clinic / Re: Difficult gassy dough

And I'd suggest forgetting the honey unless you have some ulterior motive for adding it.

Dough Clinic / Re: No-knead Pizza Dough recipe calls for 8-24 counter rest. Need pizza in 5 hours

Craig;

Aside from the obvious, the oil is used mostly to bridge any air gap between the dough and the pan surface where in that case the oil conducts heat much better than air which in turn results in a more evenly browned crust, additionally, if you have enough oil in the pan you can also achieve a fried effect upon the crust which increases the crispiness of the crust, but in this application oil works much better than shortening.

Dough Clinic / Re: What causes this?

Joe;

I was referencing the rate of fermentation, not the actual dough consistency. The outer portion of the dough will cool to some extent during the refrigeration period (the core of the dough will be pretty much unchanged temperature wise) unless you're dealing with a pretty small dough. What you are seeing is the effect of a colder dough which is a stiffer dough and when we are dealing with high absorption doughs that added firmness due to the cooler temperature can make handling the dough much easier. You could probably achieve the same effect by placing the dough in the freezer for a short time prior to opening it.

Dough Clinic / Re: Fermentation Questions

A dark colored pan will reflect heat away from it providing a somewhat poorer quality of bake to the crust in any given amount of time as compared to a dark

colored pan. You might want to replace the pan with one having a dark colored anodized finish or you can also season the outside of your existing pan to achieve a darker color. You might also try using a little more oil in the pan too. The function of the oil is to breach any gaps between the dough and the bottom of the pan during the baking process which helps the crust to bake better and in many cases also provides for a crispier finished crust.

Dough Clinic / Re: What causes this?

I agree that 83F is probably too warm for home baking considering that the dough will go into your home fridge, follow Parallel's advice and use colder water to achieve a finished dough temperature between 70 and 75F. The overly elastic characteristic is referred to as a "bucky" dough which is a sure sign characteristic of an over fermented dough.

Dough Clinic / Re: Difficult gassy dough

Your dough skin/pizza skin looks pretty good to me. If they (the bubbles) prove to be a problem, which I don't think they will, you can always run a dough docker around the portion of dough inside the raised edge.

Dough Clinic / Re: too many bubbles in my stretched dough?

More gluten development resulted in a stronger dough which accounted for the "taller" dough balls and the improved gas retention of the dough resulted in the improved porosity. The greater resistance to opening (elasticity) was also due to the greater gluten development.

Dough Clinic / Re: Anyone ever tried stretch and folds over multiple hours?

If you feel adventuresome you might give this a try:

Open a phyllo dough to the same diameter as your pizza skin. VERY LIGHTLY brush the phyllo dough with water, place the pizza skin on top of the phyllo dough and dock, lightly oil the pizza dough and dress then bake.

We did work many years ago at AIB where we were looking at combining different doughs and dough formulations in this manner. We never tried phyllo dough but we did use puff pastry dough and got some interesting results. Some commercial pizzas are made in a similar manner, two different doughs are made and automatically layered one on top of the other, they are then docked (to lock them together) and sent on down the line to the finishing room where the skins are dressed using automated equipment.

New Forum Members / Re: Newb looking for my ideal pizza a cracker bottom with a little bit of chew above

It still looks under baked to me. Are you using any oil or shortening in the pan? Is your pan dark colored? A Fish oven can have one of three different deck surfaces, open grid, composite, steel. Which deck surface do you have on your shelves?

Dough Clinic / Re: What causes this?

Hey Nick;

You must be following the same guide as we are! We do EXACTLY THE SAME THING AS YOU DO! Spooky!!! :)

The only difference is that we pop the sponge in the microwave after each meal preparation and we use a cap full of bleach in our dish water.

We do all defrosting in a bowl of cold running water (just a trickle is all that's needed) or in the fridge as required. I've got a box of plastic gloves (not the latex kind) that I keep in the kitchen for those times when I'm making pizza using

fish/seafood, and raw sausage.

Chitchat / Re: ServSafe and implications for home cooking

The only type of crust that the characteristics which you have described are not common with is a thin, cracker type of crust. Some things that you can do that MIGHT minimize the toughening are as follows:

- 1) Do NOT place the pizza on a flat surface at any time, place it on a wire screen (pizza screen) or a cooling rack. If you need to place it on something for serving use a cardboard pizza circle, never metal, plastic or glass as this will worsen the problem by allowing moisture to be driven back into the crust resulting in toughness.
- 2) The toughness can be mitigated to some extent by increasing the fat content of the dough. An increase of up to 8% added fat can result in a more tender eating crust.
- 3) Always brush the dough skin very lightly with oil to create a moisture barrier between the sauce/toppings and the dough/crust prior to applying the sauce to the skin.
- 4) If you are using any semolina flour in the dough formulation delete it for a more tender crust after cooling.
- 5) Keep in mind that pizzas which are hot baked will always exhibit this issue more often than a pizza which is baked at a lower temperature for a longer time.

Dough Clinic / Re: Pizza shows horrible chewiness when cooled down

Without actually seeing what the pizza looks like it is difficult to say just what the problem might be but here are a few things to look at:

- 1) Dough Absorption too low (typically, 58 to 60% is a pretty good place to begin).
- 2) If you are opening the dough by hand you might want to try using a pie/pastry pin or rolling pin to get the dough shaped to the pan, then finish fitting the dough to the pan by hand.
- 3) Too much yeast in the dough formula.
- 4) Insufficient final proof time prior to par-baking.
- 5) Par-baking at too high of a temperature (400 to 425F) is a good starting point.
- 6) Try inverting the crust onto a pizza screen or cooling rack IMMEDIATELY upon depanning the crust. This will do wonders to flatten the top.
- 7) Over baking the crust. With par-baked crusts there is a very fine line between properly baked and over or under baked. If you see sunken or translucent spots in the finished crust after cooling this is an indication of insufficient baking.

Newbie Topics / Re: Crust came out uneven

Peter;

Yep, done that myself any number of times. Just keep an eye on it so you don't end up freezing it. In a commercial setting you're better off just using it, maybe taking a day off of the refrigerated shelf life if it is too warm. The reason for this is because we have no idea of the rate of cooling, but one thing is for sure, it is faster then it is in the cooler. If we start making adjustments for missed dough temperature targets we are sending a message to the crew that it is OK if you miss the targeted finished dough temperature as you can just put the dough balls in the freezer for a period?? of time and all is good and nobody will be the wiser...it doesn't quite work that way, and then add in the probability that who ever was going to pull the dough out of the freezer got side tracked doing something else and the dough balls end up getting frozen. Just too many "what ifs" at the store level but perfectly OK at home.

Dough Clinic / Re: Fermentation Questions

Mike;

There are two answers to your question. Yes, you can pull already sheeted dough from the day before to use in making pizzas but then there is the "no" answer in that the sheeted dough from the day before will perform (rise) differently from dough that was just sheeted. If it were me, I'd just use it as add-back and incorporate it into my new/fresh dough.

Dough Clinic / Re: Sheeted dough management

Con Agra's Ultra-grain is a whole wheat flour milled from select varieties of hard white wheat as opposed to hard red wheat which we are accustomed to seeing with whole-wheat flour. The U.G. flour is also milled to a smaller particle size than "regular" whole-wheat flour. Because it is milled from hard white wheat varieties the bran doesn't have the bitterness associated with the bran from hard red wheat varieties (the bitterness is due to the presence of tannin in the dark colored bran). The whole thrust behind this flour is to provide a more nutritious type of flour (as compared to white patent grade flours) due to its whole-wheat/whole-grain nature but without the objectionable flavor characteristics associated with whole-wheat flour. Due to the smaller bran particle size the dough also performs quite well for a whole-wheat flour. U.G. has been very successful in getting kids to eat baked products made with whole-wheat flour as it doesn't look too much different from white flour and the taste isn't all that bad either....many don't even know that they are eating a product made with whole-wheat flour. That's quite an accomplishment. I like to use U.G. as the basis for all of my multi-grain breads, rolls and pizza crusts.

Neapolitan Style / Re: A test using ConAgra Ultragrain for a Neapolitan bake

A cracker type crust is made much like a long flake pie crust dough or a hand made biscuit dough meaning that it is just barely mixed resulting in a very "shaggy" dough (if you can call it "dough" at that point). Portion out what you will want to use for a single crust and by cupping your hands around the "dough" and a little patting, shape it into a puck, wrap in a piece of stretch wrap and ferment at room temperature for at least 6-hours or overnight in the fridge. That's the easy part, not get ready to "earn your stripes". If RT fermented, remove wrapping, flour the puck and using a pie/pastry pin (works better than a small rolling pin) begin rolling the puck to open it into a skin (about 8 to 9-ounces for a 12" skin). If the dough was CF, remove from the fridge and allow to warm to 60F then remove wrapper and begin opening using your pie/pastry pin. You will need to cut the skin to the desired diameter. This skin is opened 100% by sheeting. Use the pin correctly and DO NOT roll it off of the dough, instead roll it to the edge of the dough and change the direction. This is a lot of work, trust me, so just take your time. After the skin is opened, dock it well and then place a cardboard circle or pizza screen over the dough and cut it to diameter.

New Forum Members / Re: Newb looking for my ideal pizza a cracker bottom with a little bit of chew above

Actually, what you are describing is more of a thin crispy crust than a thin cracker type crust. To achieve the characteristics you have described I would begin my quest using any dough formula for a thin crispy or New York style crust and experiment with baking it at progressively higher temperatures. This will give you the bubbles you're looking for as well as the crispy bottom but it will retain a certain softness/chewiness. Wait! Didn't I just describe a New York style thin crust pizza? :) In any case, here's a dough formula that should get you started:

Flour: All Trumps 100%

Salt: 1.75%

IDY: 0.375% (variable depending upon your dough management procedure)

Oil: 2%

Sugar: 2%

Water: 60% (variable)

New Forum Members / Re: Newb looking for my ideal pizza a cracker bottom with a little bit of chew above

Actually I'm a fan of using malted flour for home baking but I'm not a big fan of adding it to the dough as an ingredient.

Dough Clinic / Re: Low Diastatic Malt

Alex;

Well, here goes. Mind you, these are my own personal views.

#1) There is a shift in the balance of acids produced between cold and warm fermentation temperatures which results in a flavor shift. In the end it is up to you to decide which flavor you want. Keep in mind that with warm fermentation there are also more changes to the gluten structure of the dough too which you will need to be aware of and address accordingly. Protease enzymes are the main culprit here as they are more active at the warmer temperatures.

#2) Yes, it adds another dimension of flavor to the crust.

#3) In the truest sense your dough size is not usually large enough to qualify as a bulk dough (bulk ferment) To achieve the benefits associated with bulk fermenting the dough you are going to need to have a minimum of at least 10-pounds of dough, 25 -pounds would be better. The benefits of bulk fermentation come from the heat of metabolism generated by the yeast during the bulk fermentation period. For many home pizza makers bulk fermentation is fermenting one, maybe two pounds of dough. That's a single dough ball in the world of fermentation so in my book it doesn't qualify as bulk fermentation...sorry.

#4) To me, this makes the least sense of all the methods. Why? Because when you RT ferment the dough becomes less dense and is a MUCH better insulator, then you ball it and put it into the fridge, good luck at cooling it down, and if you did manage to cool it down it will be hard/difficult/impossible to consistently replicate the cooling rate and amount of fermentation the dough actually receives because it is being cooled so slowly. Can it be done? Sure! Does it make good/great pizza? Sure! Can you do it consistently? According to the people who contact me regularly the answer is no, and there lies the problem. Think of it this way, if the dough temperature is 5F different it may take a significantly longer or shorter time to get the rate of fermentation under control in the fridge, plus, don't forget that due to the heat of metabolism the dough is actually trying to warm up to the tune of about 1F per hour which makes cooling the dough just that much more difficult in a home refrigerator which is questionable at best when it comes to cooling dough.

#5) The benefit to balling the dough right after mixing is because at that point in time the dough is as dense as it is going to be (the denser the dough the easier it is to cool or freeze) because it conducts heat better than it would if it were allowed to ferment and become less dense). The fact that the dough can now be cooled more rapidly and consistently means that there is greater latitude to missing the desired finished dough temperature without causing a significant impact upon the rate of fermentation which controls the amount of fermentation the dough will receive in any given period of time. This is also why one can hold the dough balls under refrigeration for a longer time when they are scaled, balled and placed into the cooler/fridge within 15 to 20-minutes after mixing.

As a student of the dough, you might want to see if your local library has a copy of Baking Science and Technology, by E.J. Pyler. This is an excellent resource book on all things related to baking. It was the "handbook" required by our Baking Science and Technology (BS&T) students when I worked at the American Institute of Baking (AIB). If your local library doesn't have it you can find it on Amazon, I stand to be corrected on this but I think the cost is about \$40.00 in hard cover.

Dough Clinic / Re: Fermentation Questions

You bet!

Here is my dough formula:

Flour: 100%

Salt: 1.75%

Sugar: 2%

IDY: 0.375%

Oil: 2%

Water: 58% (75F)

Put water salt and sugar in water, no need to stir. Put IDY in just enough 95F water to make a slurry, stir and allow to hydrate for 10-minutes.

Add hydrated IDY slurry to the water, salt, sugar mixture, IMMEDIATELY add the flour and begin stirring as the mixture begins to cling together slowly add the oil and continue working the dough until the oil is incorporated. You're done mixing. Allow the dough to rest for 15-minutes and then hand knead the dough a few times and scale to desired weight pieces and form each piece into a ball. Oil each dough ball and place into individual plastic food bags, twist the open end to form a pony tail and tuck the pony tail under the dough ball as you now place it into the fridge. To use the dough on the following day, remove dough ball from fridge, allow to warm up until the dough reaches 60F, then turn the dough ball out of the bag allowing it to drop into a bowl of dusting flour, then begin opening the dough ball in your normal manner. The remainder of the dough balls can be kept refrigerated for up to 4-days. To use these dough balls, follow the same instructions BUT only allow the dough to warm to 50F before turning it out of the bag.

The dough balls can also be frozen but for not much more than maybe 10-days.

Dough Clinic / Re: Dough not rising well after being in freezer (or fridge)...

With such a small portion of the crust shown it is hard to say for sure, but from what I see it appears that the crust (par-baked) is not fully baked. Par-baked crust is fully baked to set the structure but not enough to create significant browning on it. If you can send me a couple more photos showing the entire top and bottom of the crust I might be able to be a bit more specific.

Dough Clinic / Re: What causes this?

Mike;

It is perfectly normal for an un-topped skin to pass through the threshold and turn into a "pita" during baking, unless it is baked as a par-baked crust using an oven temperature down around 400F.

If you want to make a par-baked crust for any reason just open the dough in your normal manner, dock it and apply about 1/2 of the normal portion of the sauce, then par-bake. When you make a pizza from the par-baked crust just add the remainder of sauce and dress to the order. Remember that a pizza made on a par-baked crust will bake faster than one baked on a raw skin.

I'm not exactly sure what you are asking in the second part of your question, could

you please elaborate?

Dough Clinic / Re: Sheeted dough management

Mike;

Glad to hear of your success! :)

Once you see that you're not going to use the dough, either already opened or in the form of dough balls you can flatten the dough balls a bit by hand (no need to do anything with pre-opened skins) and place in the fridge/cooler for incorporation into your next batch of new dough. The amount to add should not exceed 15% of the total dough weight. This will be about 4 to 5-pounds for a dough based on 25-pounds of flour. Another great option is to open any dough balls into skins, or if you have thin crust skins already opened, stack them 5-high on a screen with a piece of parchment paper under each skin, wrap in a plastic bag or stretch wrap to prevent drying and store in the cooler overnight. On the following day, remove from the cooler as you need them (BUT NOT FOR MAKING PIZZAS) flatten the skins out a bit if necessary, brush with melted butter or butter oil, sprinkle with a cinnamon-sugar mixture (fill a shaker can about 1/2 full with cinnamon and 1/2 with granulated sugar, stir together to make uniform and sprinkle this over the buttered skin, dock the skin well and bake as you would your regular pizzas or a bit less (you will need to experiment with the baking time but temperature should be the same as you use for your pizzas) you want this to be baked to a very light brown color. As soon as it comes out of the oven drizzle it with a simple powdered sugar-water icing and serve as a "thank you".

To make a powdered sugar-water icing just place about 16-ounces of powdered sugar in a bowl, add a VERY SMALL AMOUNT of warm water and stir, keep adding water VERY GRADUALLY until you get the icing to a very thick, just pourable consistency then transfer to a squeeze type condiment bottle for storage. No need to refrigerate as it keeps at room temperature for up to 3 or 4-days. If it gets cold it will thicken but all you need to do is to put it in a hot water bath for a few minutes to soften it up again. These are REALLY GOOD! They can be cut into wedges or party sliced for serving, or try cutting into strips and then cut the strips in half. I normally consider 1-skin to make two orders. If you want to "kick it up a notch" put some streusel topping on it before baking....now we're cookin'!!! :)

Dough Clinic / Re: Sheeted dough management

Welcome!

Can you tell us how hot your home oven will get? Also you you have a stone for your oven? In a pinch un-glazed floor tile can be used as a pretty good hearth surface in a home oven if you don't already have something handy. As for the rest of the details on how to make N.Y. style pizza in your home oven, we're all here to help you enjoy some great pizzas right from your home kitchen. :)

New Forum Members / Re: hello from Mï¿½xico

We have had robotics in the food/baking industry for a good many years now and the number of them being used seems to be growing every year. I can speak first hand about a large bakery in Indiana that has their ENTIRE packaging area occupied by not a single human, it's all robotics. Even in the box store pizzeria commissaries robotics is commonly used to place dough balls into the plastic dough boxes, large commercial freezers are commonly operated by robotics. There really isn't much in the food industry that can't be done by robotics if the volume is great enough, just look at what has happened in the auto assembly industry with robotics. Robotics are now becoming much more miniaturized allowing even greater application in areas where we never considered it just a few years ago. I

look at it like this, so, right now we think that a pizza made entirely by robotics isn't as good as one made by "Guido" in his pizzeria, that's true today, but what happens a few years down the road when the kids are exposed to and raised on pizzas manufactured using robotics? The bar will be set at a different level and to those individuals they may not be too bad, and in the mean time our friend Guido went out of business...for whatever reason. We don't have to like it, but it is a reality that we will need to face. Drone deliveries to our homes, driver less cars, computer screen menus and ordering are just the tip of the iceberg as they go hand in hand with the application of robotics in our everyday lives.

Pizza News / Re: Burger-Flipping Robot Could Mean The End Of Teen Employment

Lifted74;

Your dough formula looks good so I don't think changes are necessary. After mixing the dough temperature should be between 75 and 80F, since I don't know how you are managing the dough I'll suggest taking the dough to the counter and scaling it into desired weight pieces, then forming into balls and lightly oiling the dough balls, drop the dough balls into individual plastic bags, twist the open end to form a pony tail and tuck the pony tail under the dough ball as you place it into the fridge to ferment for 24 to 48-hours. To use the dough, remove from the fridge and allow it to warm to 50F at room temperature, then open the bag and invert it over a bowl of dusting flour or over a well dusted space on your counter top. As the dough ball falls from the bag it will invert the bag as it falls free. You are now ready to begin opening the dough by your preferred method. The dimension of the raised edge is greatly controlled by how you manipulate the dough during the opening process. Keep in mind though as was stated earlier that you will never achieve the same edge results baking on a screen as you do when baking on the oven deck due to the much slower heat transfer when using a screen, but to some extent you can get a higher and slightly more open crumb structure on the edge by carefully keeping your fingers back/away from the edge of the dough piece as you're opening it.

If you can provide some pictures of your efforts they would be helpful in allowing us to guide you to any changes needed.

Dough Clinic / Re: Re-Balling for Oven Spring?

It's hard to say without knowing more details of how you are managing your dough. If you are using a multi-day ferment, the answer might be yes if the dough is getting somewhat over fermented, but if you're using a same day or 24-hour dough it might just tighten the dough resulting in a different shaped edge. If your dough has not yet had the absorption optimized for baking on a screen, just increasing the dough absorption might do the trick, and then there is the old edge forming, manipulating the dough during the opening process to leave a little more dough out on the edge could also work....it all depends.

Dough Clinic / Re: Re-Balling for Oven Spring?

The thing that would need to be controlled are:

Amount of yeast.

Dough temperature.

Dough size/mass (larger doughs heat up more due to heat of metabolism than smaller doughs).

Dough weight as it relates to cooling rate.

Fermentation time.

Type of container the dough is fermented in (aluminum with high heat conductivity

will impact fermentation differently than plastic with lower heat conductivity.
Temperature of the environment where the dough is fermenting.
Dough formulation can/will impact the fermentation rate.
These are just the things that immediately come to mind, I'm sure there are more.
Dough Clinic / Re: multi-day fermentation vs. same day

I'm afraid it doesn't work that way. There are different acids and different amounts of the acids produced during cold and room temperature fermentation which account for a big piece of the flavor picture between cold and room temperature fermentation. Doubling the yeast does not double the yeast activity. Since you have more yeast producing acids when you've doubled/increased the yeast the rate of fermentation will accelerate. This is why some people say that the dough "just got away from them" and fermented way too fast. Additionally, temperature is a main driver of fermentation so now that you have more yeast cells working for you any slight variation in finished dough temperature can result in erratic fermentation. Above all else you have to keep in mind that yeast is a micro organism and it responds to temperatures just as other microbes do, that is a slight difference in temperature at the lower temperature ranges (40 to 50F) will have only a small impact upon the rate of fermentation but at the higher temperatures (80 to 90F) that same magnitude of temperature change will have a significant impact upon the rate of fermentation.

Dough Clinic / Re: multi-day fermentation vs. same day

Teresa;

Before I can answer your question I really need to have more information from you.

- 1) Where will you be marketing/selling the pizza from (your store or another location)?
- 2) Will there be any meat toppings on the pizza?
- 3) Thin crust, thick crust, deep-dish?
- 4) How many pizzas are we looking at making and selling per week?
- 5) What kind of frozen shelf life are you anticipating getting? What is the minimum acceptable frozen shelf life?

With the answers to these questions I can get you pointed in the right direction.

Dough Clinic / Re: From fresh to frozen

I split them in half leaving a hinge of skin between the two halves and dry them, then package into zip-Lock bags and store in the freezer. I then use them just as you would sun dried tomatoes.

General Pizza Making / Re: I have tons of leftover grape tomatoes; any good sauce recipes I can use?

A solid bottom cutter pan is used. Get a dark colored (anodized aluminum) one if you can, if you can't be sure to season it prior to use.

Cracker Style / Re: Cracker Crust - stone vs cutter pan?

A cutter pan without question, but with some type of decking under it.

Cracker Style / Re: Cracker Crust - stone vs cutter pan?

Then you will be baking on a stone or composite deck and the only limitation on dough absorption will be your ability to handle the dough (like peeling it into the oven).

If the dough absorption is too high and the oven temperature is too low the dressed portion of the dough will rise in the oven (oven spring) but then collapse

before the structure can set. If the baking temperature is sufficiently hot the dough will rise and set before it can collapse making for a lighter, less dense crumb structure.

Dough Clinic / Re: Wet dough is for high or low temp oven?

Josh;

Exactly what do you mean by "degas it"? Degassing the dough is different from flattening it as a part of the dough being opened into a pizza skin. If you are pounding the dough out or otherwise working the dough to degas it this might be your problem too. A very easy way for a novice to open the dough ball into a skin is to allow the dough to temper AT room temperature until it reaches 50 to 55F, and then using a rolling pin or pastry pin roll the dough out to about 2-inches LESS in diameter than what you want the finished size to be, finish opening the dough to full size by hand. This is a very easy method to learn and it helps you to learn how to open a dough quite well.

New York Style / Re: Too much gas??

Cassio;

It sounds like you are baking on a stone. In a home oven where the temperature will be around 500F/260C you can use a low absorption dough (45 to 55%) or an intermediate absorption dough (58 to 63%) or a high absorption dough (65 to 72%) without much of an issue. Dough absorptions above 73% are best when baked at higher temperatures (650F/343C) and above.

I wouldn't worry about the crust/pizza drying out too much in your home oven, that's what you are looking for as it will provide for a nice, crispy crust under your pizza...unless you want to have a soft, limp pizza?

Note:

The above is based on the premise that you will be baking directly on a single piece of stone.

Also, keep in mind that all flours are not the same, so dough made with your flour might have a vastly different texture than a dough made with one of our flours at the same dough absorption. As a rule, if your flour has at least 12% protein content the above numbers should apply.

Dough Clinic / Re: Wet dough is for high or low temp oven?

My yeast level for that process is 0.25% IDY.

Dough Clinic / Re: gluten strands

I've always done it on the counter top, I feel too constrained working in a bowl. Clean-up is never an issue for me as there is little to clean-up after the kneading process. The only time that I can remember ever kneading the dough in the bowl was when I used to make bread in our hunting camp. I didn't have a counter top to work on so I was forced to knead the dough in the bowl...can't remember ever getting any complaints on the finished bread. :chef:

Dough Clinic / Re: gluten strands

For a restaurant, it is not what I would call a working or "professional" "recipe" for the following reasons:

- 1) It is a recipe portioned more for home use than commercial use.
- 2) A mixer that small is hard to find in any commercial establishment let alone to mix dough. 12 or 20-quart mixers are about the smallest mixer you would ever find being used in a commercial setting but I've never been in a pizzeria where they were used for making dough except for some small specialty dough.

3) The procedure is totally wrong (too long and complex) for commercial use. Why would you be concerned about undissolved salt or sugar??

4) A million dollars in sales a year on this pizza? Maybe? Hey, people have bought worse! Using the mixer in question? Never.

Just something to keep in mind when thinking of an emergency dough: Emergency dough is a lot like a commercial frozen pizza dough. The formulas are actually quite similar, the only difference is in the final dough temperature. One is cold while the other is hot, and when it comes to fermentation neither has very much fermentation but the much warmer emergency dough will be ready to use soon after mixing while the frozen dough will need to go through a defrost period followed by a warming period before the yeast begins to actively ferment the dough so frozen dough while similarly formulated is not suitable as an "emergency" dough.

General Pizza Making / Re: Pizza restaurants using "emergency-type" dough?

Done it myself a number of times. Think of it like this: Without the yeast in the dough you are just letting the flour and ingredients hydrate, not much more, not much less. Toss the dough back into your mixer along with the yeast, if IDY just add it dry and mix for about 4-minutes or if using a high speed mixer or food processor suspend the IDY or any yeast for that matter in a small amount of water and mix just enough to incorporate the yeast suspension into the dough then begin managing your dough, be it for bread, rolls, or pizza crust by your normal procedure.

Off-Topic Foods / Re: Forgot the YEAST! What can I do with this Dough?

Jon;

Where did you find it in four pages? :-D Most of the stuff that I have to wade through reads more like a doctoral thesis, and then you need to read it over again just to harvest the gems of wisdom/knowledge contained there within. :(I'll say it again, that is by far, the best summary of the issue regarding infused oil I've yet seen. I wish we had it back when we were actively discussing infused oils a while back.

Again, thanks for finding it!

Off-Topic Foods / Re: Garlic Oil

Some of the problems associated with an emergency dough include:

Lack of crust flavor.

Need to make dough continually during the day.

May not exhibit the best properties when opening the dough balls into skins.

Variability with the dough which leads to variability of the finished crust (not acceptable in commercial practice).

Need to discard dough not just at the end of the day but periodically during the day. (think \$\$\$\$)

While emergency doughs "COULD" be used in the everyday operation of a pizzeria they are not intended for that purpose and really don't fare all that well in that application because it seems that you are always short of dough and waiting for it to mature to a point where it can be used (I'm sorry, but we're all out of dough at this time, would you mind calling back/coming back in an hour, our dough will be ready then) Hummm? Or the other side of the coin goes something like this: Boss! We have a boat load of dough that is ready for use and some of it is already over fermented but we don't have any customers in the store! What do you want me to do with all of that dough? Do you REALLY want to go there???

The most popular /common procedure used by pizzerias is to make the dough during down or slow time, scale and ball, cold ferment 24 or more hours before use. The stores can then work to a fixed inventory of their different size dough balls, meaning that they will not run out of dough if that proverbial Gray Hound Bus pulls up outside of their store at 4:00 p.m. Friday afternoon. Even the big box chains operate on dough made from their commissaries on a modification of this procedure. There was once a time (back in the 50's and early 60's) when we used to make a batch of dough in the early afternoon and allow it to ferment in the bowl until the store opened at 7:00 p.m. We would grab a handful of dough and cut it from the bulk piece, then run it through a sheeter cut it to size, dock, dress and bake. Scrap dough was tossed into a container to be used later if necessary, otherwise it was tossed in the trash. The problem with this method was that we frequently ran out of dough, that was then, when pizza wasn't as popular as it is today, and sales were not as high either. Just think of trying to run a pizzeria like that? Yes, it can be done, and it is done but you're better have something else going for you. I remember when we used to plan our trips to Pizza Hut so it coincided with the time when they usually ran out of deep-dish dough (early 80's). We'd order a large deep-dish pizza hoping that they didn't have any ready (proofed) to go yet. As a result they would offer us a medium and a small size which actually gave us more pizza than the single large size did....score another win for the Lehmann family!

By the way, I've only had one pizza that I couldn't learn to like...Lemmy's Pizza, here in Manhattan, KS. They would have had a better product if they had dressed a cardboard pizza circle and served it that way. Was it just me? Well, they were in business here for maybe two years.....you decide.

General Pizza Making / Re: Pizza restaurants using "emergency-type" dough?

JPB;

Whole-wheat flour turns rancid so fast because it contains the germ oil of the wheat which is not very stable. In commercial bakeries we don't even buy it in bulk, instead we purchase it by the pallet to ensure rapid turn over. We consider the shelf life of whole-wheat flour to be not more than 2-weeks unless held under refrigeration or frozen. The reason why the bread that you made using the rancid flour didn't smell rancid is because the free fatty acids (responsible for the rancid aroma) are steam distillable so they are removed during the baking process (for the most part) BUT the resulting bread made with the rancid flour will develop rancidity at an accelerated rate after cooling severely limiting shelf life of the bread.

Dough Clinic / Re: How to tell when flour goes bad?

Jon;

That's an excellent article, short, concise and right to the point, and it pulls no punches. Because of the number of questions we get on infused oil (especially garlic infused) I think this would be a great reference for Peter to put into the references so we can refer the article to anyone down the road.

Off-Topic Foods / Re: Garlic Oil

Thanks for the easy on and off tip. Maybe it's time to think about retiring my metal cans. With the plastic buckets there wouldn't be an urgent need to use a plastic bag as a liner either. Just goes to show ya, you're never too old to learn something new! :)

Dough Clinic / Re: How to tell when flour goes bad?

What I do is to mix the dough using a wooden spoon so as to prevent over mixing the dough (when you think the spoon handle might bread it's time to stop mixing). I then scrape the dough out of the bowl onto a lightly floured surface and lightly oil the bowl, then I give the dough a couple of folds (literally) and place it back into the bowl, lightly oil the top of the dough, drape a piece of plastic (actually a Walmart bag that has been cut open) over the bowl and then I find something constructive or amusing to do for the next couple of hours. Then I turn the dough out of the bowl, and knead it for about a minute, or so, and place it back into the bowl, cover it again and go back to what I was doing for another hour, then I turn the dough out of the bowl again (no need to use a floured surface this time), I then scale into individual pieces and form into balls. I lightly oil each dough ball and place into individual plastic food or bread bags, twist the open end into a pony tail to close and tuck the pony tail under the dough ball as I place it in the fridge to cold ferment overnight/24-hours +/- . Remove the bagged dough ball(s) about 60-90-minutes before I anticipate opening it/them into skins. To remove the dough ball from the bag just invert the bag over a floured surface allowing the dough ball to invert the bag as it falls from the bag, from this point on open the ball into a skin by your preferred method.

By the way, if plans should change and you will not be having pizza for dinner on the following day after making the dough, don't sweat it, the dough will remain good to use if left in the fridge for up to 48-hours, possibly more.

Dough Clinic / Re: gluten strands

What do you want to bet that the non-stick black coating on that pan is nothing more than Teflon? What the photograph shows is the exact reason why we have transitioned to anodized aluminum for the black, non-stick coatings.

Not a problem to continue using it but I'd suggest making a hard plastic scraper to use in the pan rather than a metal one to help "dig" the pizza out of the pan.

There are any number of suitable anodized aluminum pans with a dark finish that will work better than Teflon but keep in mind that those finishes can also be damaged by using metal implements (not as easily as Teflon) so care will still need to be taken. If you want to have a pan that is impervious to all but a vicious attack with a sharp pointed knife look into one of the deep-dish pans offered by Lloyd Pans <www.lloydpan.com> / Paul Tiffany <ptiffany@lloydpan.com> They're a bit pricey at about \$25.00 each but well worth it as you will probably never need to replace it. Others here have used their pans and report good success with them. I've had mine ever since they came out (many years ago) and use it all the time and it still looks a lot better than the pan in the picture. I might add that I use a metal cake decorating spatula to help get the pizza out of the pan too. Look Ma...No scratches! ;D

Stones/tiles/steel, Pans & Accessories / Re: Pizza pros, GET IN! Need expert opinion

Bradtri;

Yep, those buckets will work just fine. I should have mentioned them in my response. If they have the usual snap-on lid you would be well advised to get a delidder (tool for removing those hard to remove lids).

A few years ago I bought a new small chest freezer from Menard's (just over \$100.00) for storing ingredients in. I try to maintain at least 50-pounds of flour in the freezer packaged in metal cans (used to have popcorn in them). I use a plastic bag for a liner in the cans and remove what I need from the freezer to keep the kitchen supplied in flour. Never had a problem, but come to think of it, those metal

can lids aren't so easy to open either, and there isn't a tool made to make opening them any easier.

Dough Clinic / Re: How to tell when flour goes bad?

It is helpful and beneficial but not mandatory. I have made no knead doughs for well over 30-years now and I've found that after letting biochemical gluten development take place a few stretches and folds helps to make a better dough. What I am not a follower of is spending more than a minute or so kneading the dough as a means of developing the gluten, I'll leave that for those with aspirations of developing biceps like those of the village blacksmith.

Dough Clinic / Re: gluten strands

JKB;

Speaking just for myself, it has changed but not so much that I can't relate back to it, and if it did change to the point where I couldn't relate to it, I'd just relegate it to past memory. Much like I do when I go back to the old farmstead and see the house, barn, milk shed and outbuildings while in reality I'm seeing houses, houses, and more houses (it's a subdivision now), but I won't let that rob me of the memories. Then I find my way to Ed and Joe's Pizzeria in Tinley Park, Illinois. Even if the pizza has changed somewhat, the name is still the same and that has to count for something when you're grasping for straws.

Nuff said.

New York Style / Re: pizza doughnut

How to tell when flour has gone bad 101:

- 1) It appears to clump. Those clumps are caused by insect webs (Indian Meal Moth).
- 2) It has dark colored specks in it. (Confused Flour Beetles or Cigarette Beetles)
- 3) You see what appears to be grains of rice in the flour. (These are insect larvae aka "worms")
- 4) You see very small holes in the bag, especially immediately above the upper most flour level. (These are due to all or any of the above).
- 5) Off aroma either due to development of rancidity or exposure to "other" aromatics. (like uncovered butter in the fridge).

Most flours will remain insect free for up to about a year if stored in such a way so as to prevent insects from getting into the flour. (a sealed metal container is the best way to store flour).

For long term flour storage refrigerate it or better yet, freeze it.

If you don't have the refrigerated or freezer space this is a proven method for storing flour for over a year: Place the flour in your freezer (you can do this in small lots if space is an issue) and leave it in the freezer for 6-weeks, then transfer to a metal container that has a tight fitting lid. Flour has been known to be stored for several years in this manner.

If long term stored flour as good as freshly milled flour? It all depends upon the application and your sensory sensitivity. It will function normally in making dough, possibly even better due to the fact that the flour has most likely oxidized to some extent which can make the flour show signs of increased strength, especially during mixing and balling. From a sensory standpoint some will argue that the finished product doesn't have the same flavor as when made from freshly milled flour. This is true, but the question is: is the taste difference perceptible when used in making pizza with all of the other flavors and aromas present? This is a personal thing that you will need to decide for yourself.

Back to #1, 2 and 3 above, these are not considered to be dangerous from a health

standpoint, not appetizing, but not dangerous, think of it as added protein. In some cultures this added protein is a very important part of their diets. Also, in my training I was taught to always look at the inside of the bag, just above the flour to see if there was any signs of insects as this is where they tend to collect. What you do with the flour after finding insects is up to you, if you sift them out you will only get the adult insects and larvae but you cannot sift the eggs out so the problem will return very quickly as the eggs hatch. This is why it is usually recommended that the flour be disposed of if insect presence is noted, plus, they are adventuresome so you can also expect to find them exploring for new territories and setting up house keeping in any number of other food item you might have in close proximity (cake and pancake mixes are a very popular item....take it from someone with first hand experience).

Lastly, where did all those insects come from? They can come from the flour mill, usually in the form of eggs, but today this is a rare occurrence, a much more likely source of introduction comes from the place where the flour is being warehoused or from the store where you bought the flour at, and yes, even from our own homes if we do not regularly inspect the place where we store our flour and/or mixes at. By the way, if you see mold growing on the flour (more common in humid environments), regardless of the color of the mold, it's best to not take any chances and discard the flour.

Dough Clinic / Re: How to tell when flour goes bad?

Here in the mid-west we just say "Hey, let's go out for some pizza". This is almost universally followed by "Where do you want to go?" This is then followed (by the person suggesting going out for pizza) with a suggestion for going to their favorite pizzeria. Point is: Everybody doesn't like the same kind/type of pizza so they go to the place that best meets their needs whether it be quality of food or quality of service (ideally both) but even convenience enters into the picture occasionally too. Pizza did not achieve its great popularity and longevity by being stagnant, instead, it has and continues to evolve as our American tastes continue to change. It wasn't too terribly long ago that you couldn't even give a deep-dish pizza away in St.Louis (thin crust reigned supreme) and in Chicago, any pizza with char on the crust was considered to be burnt and promptly sent back to the kitchen to be baked "correctly", we all know how that turned out. I think it is nice and even interesting to know something about the heritage and ancestry of different kinds of pizzas but to get hung-up absolutes is beyond my meager comprehension, and when it comes to pizza we eat what we like, what tastes good to US at any one point in time. I say this because over time our tastes do change and I for one am thankful that there are enough different "styles" of pizza out there to meet my changing tastes. But at the end of the day, I'm still attracted back to the Chicago thin crust pizzas, not because they're go great (they are very good indeed) but because when I'm enjoying one it brings back a lot of memories of another time (the word for it is nostalgia), and once I've eaten my fill, I snap out of it and go back to my current favorite pizza which for right now is the AJ's #6 (Doctor's Delight) and even though my DNA is all over it I'll eventually tire of it and move on to something different which will , in turn, make me appreciate it all that much more when I go back and have another #6 after being away from it for a time. That's how the world works.

New York Style / Re: pizza doughnut

Now you're talkin' my language! ^^ ^

General Pizza Making / Re: freezing tomatoes to release water for reduction?

Jay;

I stand to be corrected on this, but if I remember correctly the amount of 20L malt powder that is added to make malted flour at the flour mill is about 2-ounces per 100-pounds of flour. This amount will vary with the amount of natural occurring amylase in the flour. What you are experiencing is the reason why malted flour or the addition of malt (either diastatic or non-diastatic) is not recommended for baking at high temps. What I'm afraid that what you are going to find is if you use a malt level that helps with the crust color issue you will not get the other benefits you are seeing from the addition of the malt. In any case, 2-ounces per 100-pounds is equal to 0.0044% of the flour weight. So, using a non-malted flour you might begin by adding half of this amount of 20L malt (0.0022%) and working up from there if necessary. This is equal to 0.022-grams per Kg. of flour weight. Can't weigh this small amount? Just put 2.2-grams of the malt powder in 500-ml of water, at that dilution each 5-ml/grams (close enough) will provide 0.022-grams of malt per 1000-grams/1Kg. of flour weight.

Dough Clinic / Re: Diastatic Malt powder

Walter;

Your response reminds me of a question I used to ask my students "How do you tell a successful pizzeria from one that isn't?"

Answer: The successful one will remain in business for more than one year.

When developing a pizza for a new pizzeria one has to keep in mind that they are NOT developing a pizza for then, instead they are developing a pizza for their customers. They will be on the jury and decide if YOU have a good pizza or not. Here at AJ's we developed a New York style pizza (AJ's New York Pizzeria) but our customer base wanted a very crispy pizza which we gave to them, hey, they were paying for it so they should get what THEY want. Results: Adam has been in business for 9-years now and he has three very successful stores plus voted best pizza by K-State Students, Best Pizza in Manhattan, KS. and just last year one of the three best pizzas in Topeka, KS, where he has one of his stores. They don't do a "Best Pizza" there, instead they do a "One of Three Best Pizzerias" award. To me that's what making a great pizza is all about....being successful and giving your customers what they want.

New York Style / Re: pizza doughnut

Pizzapap;

If you are trying to make what is referred to as open top white pan bread using a conventional type of loaf pan (dark color please) the accepted pan volume to dough weight is on the order of 5cc per gram of dough weight. To check if your dough weight and pan size are a match first weigh the dough piece that will be going into the pan, then multiply by 5. This will give you an idea of the pan size required for your dough weight. To find the pan size (internal volume) just place your bread pan on a grams scale and zero it out, then fill it with room temperature water right up to the top rim, note the weight in grams, since 1cc of water weighs "approximately" 1-gram you now know your pan internal volume. It should be close to the number you got when you multiplied the dough weight by five. If not divide the internal volume of the pan (weight in grams) by five to find the correct dough weight for your particular pan size. Remember, there are MANY, MANY different size loaf pans so you need to do this simple exercise to find the correct dough weight for your specific pan size/dimension/internal volume. If you are not trying to make a loaf of pan bread resembling that which one might buy at the local supermarket or village bakery none of this applies.

Dough Clinic / Re: Over knead vs. under knead

Do you have an idea of what kind/type of pizza you want to make for the events? Have you met with your local SBA to discuss what will be ultimately needed for you to get started in a business? (LLC./Inc.); insurance, permits/license, inspections, any special vehicle insurance. You will soon find out if you haven't already that everyone is standing with a hand out stretched and it ain't to shake your hand.

General Pizza Making / Re: Getting started...

For the white pan bread aspect I cannot answer your question as there are so many variables at play such as:

Do you use a straight dough or sponge-dough procedure?

What is the protein content of your flour?

What is the loaf weight as compared to pan capacity?

What is your dough formulation like?

What are your sponge/dough temperatures?

If using a sponge-dough process what is the sponge % and fermentation time?

How high above the pan edge do you proof the dough?

As for dough mixing for white pan bread it is customary to mix the dough until you can achieve a clear gluten film and good dough extensibility while maintaining the finished dough temperature between 78 and 85F.

Remember, when making white pan bread that the better developed the gluten film is the finer the finished crumb structure and the softer the bread will be.

Dough Clinic / Re: Over knead vs. under knead

Reducing the yeast level can work under some circumstances providing that there is sufficient yeast in the dough to properly leaven the dough and support the weight of the applied toppings during the critical stage of oven spring during baking. If the yeast level is insufficient the dough will not rise as anticipated in the center section where the toppings are applied but the outer edge will rise pretty well as expected. To achieve a less chewy finished crust the best options are as follows: 1) Use a lower protein content flour. 2) Incorporate more dough fermentation into your dough management procedure. 3) Incorporate fat (ideally shortening/plastic fat) into the dough formulation. Begin at 2% and work up in 2% increments and at some point you should see a more tender eating and softer textured pizza.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

JPB;

Didn't somebody one say something about "Outta sight, outta mind"? It happens here more that I might care to openly admit. I just recently found some extra white sauce that I had saved from the last time I made a seafood pizza. Two problems: 1) I still can't remember the last time I made a seafood pizza here (made some for my son over the holidays at his home but not here in our home. 2) It appeared to be in dire need of a shave and because I didn't want to go to the trouble of shaving it I just tossed it out into the toxic waste container. :)

Dough Clinic / Re: There are so many fine ways to mess up dough

Additionally, if you want to have a softer pizza use shortening in it (lard, margarine, butter, Crisco or my favorite Butter Flavored Crisco) at 8 to 10% of the flour weight. Adjust the level accordingly to give the the amount of softness you want.

General Pizza Making / Re: Making a pizza that travels well and people with eat 2 hours later.

To some extent it can also apply to making bread too but it all depends upon the type of bread we're talking about. French/baguette, bolls (cannon balls) or round loaves if the dough is managed correctly really don't need mechanical mixing, but if we're talking about pan breads we are talking about mixing the dough to some level of gluten development.

Dough Clinic / Re: Over knead vs. under knead

That's an easy one!

UNDER.

As long as the ingredients are combined into a homogenous mass and the dough is allowed to ferment you really don't really need any more mixing than that.

Dough Clinic / Re: Over knead vs. under knead

The colder the dough the slower the rate at which fermentation progresses, so, indeed by cooling the dough to 32F the fermentation rate was much slower than it would have been if the dough were held at a higher temperature. Yes, there would be some compromise in flavor development due to fermentation under those conditions...but there is a point in flavor perception where the flavor of the crust is on a plateau, meaning that it is difficult to subjectively flavor shifts resulting from a change in the amount of flavor imparted to the dough as a result of fermentation. To clarify, yes there probably was a flavor difference but it might not have been perceptible and to quote a professor I once had "Reality is but a perception so perception is reality" Based on that astute reasoning the answer might be that no flavor change in the finished crust would be noted.

Dough Clinic / Re: There are so many fine ways to mess up dough

A few other things to put on your "look out" list are:

Make sure your oven will be allowed in the location you have selected.

If wood fired it may need to have a catalytic converter.

Rather than 100% wood fired think about a combination of gas and wood, use the gas option to keep the oven hot when not in use and do all of your baking with wood....best of both worlds.

Make sure your ventilation system is designed for a wood fired oven....better yet, get it along with the oven from the oven manufacturer.

Don't forget to notify your insurance agent of the fact that you will have a wood fired oven...it can make a difference.

Be sure to allow 1.5 times the oven depth as the minimum free space in front of the oven for your oven tenders to work safely in.

Think spiral mixer if you can go with a dedicated dough mixer....they're about as close to "bullet proof" as you can get.

Tools: Oven broom & rake, spinning peel, oven peels, and wood prep-peels.

Shop Talk / Re: Opening a restaurant

Pound for pound, ounce for ounce both dark rye and stone ground whole-wheat flour have significantly absorption values than any of the white flours due to their bran content which is unquestionably slow to hydrate. light rye flour is the most highly refined of the three classes of rye flour being likened to patent flour of the rye flours. The two main characteristics of rye flour are that it exhibits a VERY SHORT mixing tolerance, unlike white patent grade flour which exhibit pretty decent tolerance to mixing, and then there is the issue of stickiness which is inherent in rye doughs. This stickiness is such a dominant trait of rye that back in the late 60's a variety of spring wheat was released for growing called Red River -68. This was a hybrid variety of wheat from parent stock of wheat and rye, the

flour that was milled from Red River -68 was all but unusable due to the stickiness inherent in doughs made with this flour. Plus the mixing tolerance was also quite poor adding to its shortcomings. This was one of those wheat varieties that was released prematurely due to its exhibited drought tolerance (we were in a drought that year) and it seemed like a good idea at the time. Rye is very different from wheat in many ways. With all of that said, if we're talking about adding only 10 or 15% of a flour made from grain other than wheat the amount present will have but a very limited impact upon anything, including the absorption of the dough as the difference in amount of water needed will amount to just a couple percent of the total wheat flour amount, and just about any decent wheat flour with enough protein content to make bread will easily have tolerance for several percent variation in absorption. You can even add soy flour or corn flour at up to about 15% without making any absorption changes (just look at it like you do your "pizza" flour) and you will still make a decent product. It's when you begin incorporating these non-wheat based flours at 25% and more that things start to become very interesting. If you ever used all whole wheat flour and used a dough absorption typical to regular "pizza" flour (about 62/63%) you might have experienced a dry, stiff dough which produced a finished crust with a flavor and texture profile akin to that cardboard.

Newbie Topics / Re: Baker's percentage with combination of different flours?

Are you using a light, medium or dark rye flour?

Newbie Topics / Re: Baker's percentage with combination of different flours?

Bradtri:

Yeah! Right!

I'm fully retired and working as much or more than I did when I was employed full time by the American Institute of Baking.

I know how the retirement gig goes, I've got this love/pastime/hobby/side job, work to keep me amused during my retirement, then you decide on day "Hey, maybe there is something to this!" So you take on more assignments and hire more people and BANG!!! There you are, growing, and with the free time offered by your retirement it will all make perfect sense to you...that's when you know you're hooked! I think you might be in the same group as I'm in where "retirement" is never an option, not at least until someone closes the lid.

Never say "never". I wish you the best of luck with your catering business. :) :) :)

Prep Equipment / Re: Feedback on Eurodib 30qt spiral mixer?

A simple test is to just make one dough with 100% of your regular pizza flour and then make another with 25% of the flour replaced by dark rye flour, then do it again using a 50% replacement and lastly with 100% replacement. If you want to some excitement go so far as to treat all of the doughs in exactly the same manner. While these grains go contain some amount of glutenin and gliadin it has a totally different structure to it so it behaves very differently in a dough system.

Additionally, by treating them as any other ingredient it is much easier to calculate the correct dough absorption as each type of flour will have its own absorption which must be accounted for in the total dough absorption. Just try making three doughs all with the same absorption, one would be a regular pizza dough using your favorite flour, the second would be with 50% of the flour replaced by a dark rye flour and the third would be with 50% of the flour replaced with a whole-wheat flour, I'm betting that by day's end you will see a difference between the doughs.

The only time when we consider one of the lesser flours (whole-wheat, spelt, triticale, buck wheat, and rye) the main flour or include it with the regular white flour (if used in the dough formula) is when it becomes the main contributor to the doughs structure, such as in whole-rye bread (pumpernickel), whole-wheat-bread, etc. The basic science and physics behind baking at home or in a commercial establishment be it a bakery or pizzeria is the same. It's just that we can give our doughs much more care and attention in handling at home than we can in any commercial establishment, that why we can get away with doing things in our kitchens which would be unheard of or impossible in a commercial setting where we have to make allowances for some level of automation.

Newbie Topics / Re: Baker's percentage with combination of different flours?

You are correct, both fermentation time and temperature affect the fate of fermentation. loss of or insufficient elasticity is normally associated with over fermentation of the dough so reducing the fermentation time should increase the elasticity (springiness) of the dough. Those are some pretty good looking pizzas!

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

I'll Amen that! A great crust/edge, rim, whatever you want to call it is well worth eating, just like great bread. Too many times though I've seen it totally destroyed during baking. When I developed the Hearth Bake Disk I was very selfish and took this into account by putting a non-perforated area around the outer edge of the disk. The dimension of this non-perforated section varies with the disk diameter. It is designed to protect the edge of the crust from the high velocity airflow of the air impingement ovens (the disk is designed to work ONLY in air impingement ovens) thus reducing the amount of bake received by the outer edge/rim and preventing it from turning into a "pizza bone" during the baking process. By the way, I did not get paid, nor do I collect a royalty on any Hearth Bake Disks sold by Lloyd Pans. It was a design change to help owners of air impingement ovens produce pizzas closer to that which many of them used to make in their deck ovens but with the speed and convenience features of the air impingement oven.

New York Style / Re: pizza doughnut

Following my 50% rule I'd suggest reducing the room temperature fermentation time by 50% (12-hours) and see what that gets you, then adjust accordingly from there. Be sure to keep a record of your finished (mixed) dough temperature as well as the room temperature as temperature is the main driver of fermentation (the warmer the dough the faster it will ferment or the more it will ferment in any given amount of time. One other thing, regardless of what the recipe says, ADY and IDY are not directly interchangeable gram for gram. On an equal weight basis the IDY provides about 20% more yeast cells than ADY.

Dough Clinic / Re: Dough not rising well after being in freezer (or fridge)...

It's not always a quality issue, you can have the best crust on earth and then destroy it during baking leaving you with a lot of effort and nothing to show for it. Additionally, the United States is a country where bread is not traditionally eaten as "bread" anymore, it is consumed as part of a sandwich (keeps the fingers from getting messy) like a hamburger, hot dog, ham and cheese, etc. When you do see bread being eaten it is essentially always with butter or margarine. Do you see the pattern? Pizza crust is just another piece of bread to many folks, especially young people, since they are not used to eating bread just as it is they want something to put on it, be it ranch dressing, dipping oil, butter, or whatever. I think most kids

would eat the crust more often if you gave them a side of peanut butter to dip it in! This is one reason why the "cheese-in-the-crust" concept did so well when it was first introduced....crust/bread and cheese = hmmm, a cheese sandwich. Now we're seeing it being done using bacon where crust/bread and bacon = bacon sandwich, everything goes better with bacon! :-D

New York Style / Re: pizza doughnut

You have deviated significantly from the original dough management procedure with the addition of the 24-hour room temperature fermentation period. From what you have described I think there are two different things coming into play to raise havoc on your dough. 1) I think your dough is being over fermented. The initial 24-hours at room temperature is probably pushing the gluten to its limit, then after you place it into the fridge it takes a LONG time to cool to the point where fermentation is slowed to a rate that will allow for holding the dough for several days in the fridge. 2) On top of the over fermented dough condition the mere act of freezing the dough damages a significant amount of the yeast resulting in the release of glutathione from the yeast cells (glutathione is a well known reducing agent in that it breaks down the proteins/gluten resulting in a much softer, more extensible gluten structure). Glutathione aka "dead yeast" is also sold as a substitute for PZ-44 for making dough softer and more extensible, which is one of the characteristics that you are seeing.

If you want to continue using your present dough management procedure I would suggest reducing the amount of yeast used in the dough. I can't say how much you will need to reduce it as there are just too many variables in play but I would start with reducing it to 1-gram and then 0.5-gram if necessary. To do this you will need to change from a "recipe" with ingredients measured in volumetric portions (rather inaccurate) to a "formula" where all of the ingredients are actually measured in weight measures (most commonly "grams". To do this you will need to get a good scale that will weigh your ingredients in grams. These are available on the Internet for a very reasonable price (right around \$30.00 or a bit less).

Dough Clinic / Re: Dough not rising well after being in freezer (or fridge)...

Whole-wheat as well as multi-grain/whole-grain doughs of all kinds require some extra handling and techniques in their production if they are to be done correctly. We have discussed this in much detail in earlier posts which you might want to read to help bring yourself up to speed if you have not already done so. I also have an article on the subject in PMQ Magazine (In Lehmann's Terms), you'll need to search through the archives to find it, but it covers all of the "gory" details on how to make these great tasting crusts.

New Forum Members / Re: Planning to open restaurant serving whole wheat pizza

Actually, the dough comes out of the bowl quite easily if you just add a very small amount (about 1-cap full) of oil at the end of the mixing cycle. You just pour it down the inside of the bowl (not on the dough) and let the mixer run for a few SECONDS, the dough will just about jump right out of the mixer. This is how it's done using planetary mixers too. To clean them you just pour a gallon, or so, of HOT water into the bowl, cover it with a sheet of plastic and allow it to steam for 30-minutes, then just scrub it out using a plastic bristly pot brush, bail it out (this is why I like to see a drain plug in the bowl as it makes cleaning so much easier...no need to bail), sanitize and you're done. Many of these mixers are on wheels which allows them to be moved out of the way when not in use.

Shop Talk / Re: new to mixers looking at a spiral mixer

In another thread we have been discussing spiral mixers to some length, you might want to look at those posts. You can't go wrong with a spiral mixer as a dedicated dough mixer, but if it were me, I would opt for a slightly larger mixer. One person can easily scale and ball upwards of 15-kg. of dough in the time that it takes to mix a dough (about 10-minutes). This will free you up to other chores sooner than spending over an hour prepping your dough. Remember, spiral mixers will efficiently mix doughs as small as 25% of the rated bowl capacity.

Shop Talk / Re: new to mixers looking at a spiral mixer

The problem with freezing the tomatoes is that most of the "juice sacks" (there is a correct name for them but it always escapes me) are destroyed resulting in a thin, rather texture less puree after they have been further degraded during the baking process. Just try putting some slices of vine ripened tomato on your pizza to replace the sauce and you will find that you have texture, flavor and eye appeal. One of my favorite commercial ways of replicating this here in the U.S. is to use the Stanislaus 74/40 Tomato Filets (drained for 30-minutes). Even a coarse diced tomato that has been gravity drained to remove most of the juice works pretty well too. You might get a spec. sheet from Stanislaus on their 74/40 product and then take that out to local vendors to see if they can get you something similar. Hand torn pieces of whole plum tomato that have been drained also work well and is widely used in New York City.

General Pizza Making / Re: freezing tomatoes to release water for reduction?

I would have ABSOLUTELY NO HESITATION to use it. SAF Yeast said that their IDY Red Label couldn't be used in dry mixes too, today it is widely used in making goodie bags and some commercial mixes too. Hummm, guess they didn't know that it would work in dry mixes too. (SAF is now part of Red Star). If you don't want it just package it up and send it to me and I'll gladly use it. :-D

Dough Ingredients / Re: Anyone know anything about this Red Star bread machine IDY yeast?

For me, I almost always ball the dough immediately after mixing. Even if mixing the dough by hand. In that case I just mix my dough, divide it into whatever weight pieces I need, and then, using just a little flour on the bench/counter top I form each piece into a ball, oil it and place it into a plastic bag for cold fermentation. When mixing the dough in a dough mixer I again take it immediately to the bench/counter top where it is rounded into a ball using little or no flour. I then bag the dough for whatever CF time I am using. You can see my rounding procedure on videos that are posted on my web site <www.doughdoctor.com> or you can access them through the PMQ (Pizza Marketing Quarterly) web site at <www.pmq.com>.

Dough Clinic / Re: balling technique and schedule

Actually, this is something that we do all the time in pizzerias. There is no problem mixing flour, salt, sugar and IDY (ONLY) together. We refer to them as "goodie bags". We normally use commercial bread bags or Food Bags for this, but in a home setting you can use just about any container. No need to refrigerate, room temperature storage is just fine. How long will it keep? We have used IDY in commercial bakery mixes where we had a 90-day room temperature/ambient shelf life. At home where the conditions might not be as well controlled you will get two weeks without any problem at all. I see where you store your yeast in the freezer, not a problem BUT you might want to consider bringing it out of the freezer the

night before you plan to use it to allow it to come up to room temperature. If you open a cold bag of yeast, or anything for that matter in a room or environment with any kind of humidity you will get condensation forming on the inside of the container as well as the contents almost immediately. Moisture is the biggest detriment to the quality or shelf life of IDY. That what you have heard about not mixing yeast and salt or sugar together is true only for CY but with IDY both the salt and sugar actually help to preserve the quality of the IDY. Keep in mind though that when mixed/blended with the salt and/or sugar the mixture should only be added to the flour and blended in, it is not recommended that it be put directly into the water as this will allow for hydration of the IDY and set the stage for potential interaction between the salt/sugar and the IDY. ADY does not work in this application as it must be pre-hydrated in 100F water prior to addition to the dough.

Dough Ingredients / Re: Any issues w/ keeping pre-measured amounts of flour and yeast mixed in the same container?

Yes, you're correct, you can mix a dough as small as 25% of capacity on a spiral mixer. This means that a 50-qt mixer will handle a dough as small as about 10-pounds/4.54-Kg. in total weight. As for that specific brand of mixer, I can't help you on that as I have no first hand experience with the brand, but as I've said, I've not seen a really bad one yet which is more than I can say for planetary mixers and you can't beat the price with a stick!

Prep Equipment / Re: Feedback on Eurodib 30qt spiral mixer?

Just my humble opinion, but I really think you would be much better served with the 50-quart mixer. You are looking to make up to 50-Kg./110-pounds of dough 3 to 4 times a week. That would be two doughs in the 50-qt. mixer or 4 in the 30-qt. mixer, and 3 in the 40-qt. mixer. The 50-qt. mixer will provide you with your needed capacity for right now while also providing you with capacity to accommodate future growth without the need to spend hours mixing dough. Even with the 50-qt. mixer you are looking at a total time of about an hour, maybe a little more to mix and process two doughs. By the way, I've yet to see a spiral mixer that I really didn't like. As a dedicated dough mixer they are heads and shoulders above any planetary mixer, and they just seem to last forever. I think a number of followers here that have them as well as followers of the Think Tank at the PMQ (Pizza Marketing Quarterly) web site <www.pmq.com>, perhaps some of them will comment on their experience with spiral mixers too.

Prep Equipment / Re: Feedback on Eurodib 30qt spiral mixer?

Depending upon how much you put into the dough. If we're adding 10% or less you can generally expect minimal impact, but when you get up to 15% and more the story can begin to change and at 30% or more the impact can be quite significant. There are a lot of things that will impact the amount that can be added without severely impacting the gluten structure, the size and shape of the material is probably the most critical with the larger particle sizes having the least overall impact.

Dough Ingredients / Re: Do you use any seasonings in your dough?

oops, that was CF time that I gave you. Once it's time to open the dough into skins bring the dough from the fridge and allow it to warm AT room temperature to a minimum of 50F, a lot of pizza makers like to leave it get a bit warmer though so 60F is also quite acceptable.

Dough Clinic / Re: Wet Unworkable Dough

24-hours minimum with 48 even better.

Dough Clinic / Re: Wet Unworkable Dough

Be careful when using immersion blenders as they can easily puree your tomato product resulting in the sauce exhibiting significant syneresis upon standing. I've always found a more gently mixing action to be better. If you are using the blender to break up tomato product use a slower speed if possible and don't get too carried away.

Sauce Ingredients / Re: How to get sauce to be thicker

Or, just add some raw garlic and or onion (garlic or onion powder works well too) to your sauce, refrigerate it over night and thicker sauce you will have.

Sauce Ingredients / Re: How to get sauce to be thicker

Everything is a trade-off of one kind or another. We have eliminated many of the pesticides available to work with so we developed plants with insect or disease tolerance but then someone said that this was not "natural" so the objections were voiced against GMO's. New varieties of food plants are constantly being developed and introduced with unique "resistance" properties (drought, fungus, bacterial, insect) but in short time the very things that the plant resists morph and the resistance is lost or severely compromised so another variety must be introduced to take up the fight. Failure on our part to maintain this ongoing battle can result in world wide food shortages/famine. Just look at what happened just a few years ago when two years of less than ideal growing conditions for all wheat varieties, not just in the U.S. but across the globe, resulted in a world wide shortage of wheat...we all remember what we were paying for a bag of flour back then. Some flour mills were even closed down due to lack of wheat to mill into flour. Yes, we did have drought resistant varieties of wheat to plant but it takes nearly a full year to plant and harvest the seed wheat and then distribute it to farmers for planting which will be harvested 6 to 9-months later. Like many readers here, we try to eat healthy and safe food so we grow our own but that lasts for only so long, then we're forced to visit the local supermarket just like our city brethren for our food, or at least a portion of it. While we don't like all the "stuff" producers/growers use on our food it does make it available without shortages and that's the compromise that my family is willing to accept, maybe some day science will bring us food that is resistant to everything without someone objecting to it but for now we've got to put food on the table.....please pass me the bowl of compromise, it's tasting mighty fine today.

Dough Ingredients / Re: Vegetable Oil vs. Olive Oil

Craig;

We do not consider spelt to be the main source of structure in a dough system. In this regard we look at it in the same way that we look at rye flour. Yes, there is gluten there, yes you can make bread from just spelt or rye but in formulating doughs it is not considered to be the main flour from which we base our percentages on. Rye and spelt, and even buck wheat formulas are specialized formulas that do not conform to the basics of formula balance, this is why we formulate specifically for the use of these flours.

Peter is absolutely correct in that the unique absorption properties of each ingredient added to a dough formulation must be determined so as to allow the total dough absorption to be adjusted to compensate for the absorption properties of that ingredient. When we begin working with flours where bran is present

(whole-wheat flour) we have to compensate in the dough absorption for the absorption properties of the bran. Failure to do this will result in a dry dough and less than ideal finished crust characteristics. The suggested method for determining the absorption properties of whole-wheat flour as well as other types of specialty flours or grains such as used in a multi-grain formulation has been covered in detail in other postings here so I won't go into all of the details of the procedure at this time.

Newbie Topics / Re: Baker's percentage with combination of different flours?

Bakers percent is based on the weight of the gluten forming flours only. All non-gluten forming flours are looked at just as any other added ingredient. For example:

The dough contains 5# of regular bread flour plus 5# of whole wheat flour and 3# of spelt flour. The total gluten forming flour weight is 10# which is equal to 100%. The spent flour weight is divided by 10 and multiplied by 100 to give the correct bakers percent for the spent flour. $3 \text{ divided by } 10 = 0.3 \times 100 = 30$, the spelt flour in this case would be correctly shown as 30%.

If the total dough absorption was 66% it would be based only on the gluten forming flour weight (10#) so to find the weight of the water, using your calculator here are the steps: 10×66 (press the "%" key and read the water weight in the display window (6.6-pounds) Note: The answer will always be in the same weight units (pounds, ounces, grams, kilograms, etc.) that the flour weight is shown in.

The yeast weight (0.5%) is also based on the 10-pounds of flour weight so 10×0.5 (press the "%" key) and read 0.05-pounds in the display window. $0.05\# = 0.05 \times 16\text{-ounces} = 0.8\text{-ounces}$.

Newbie Topics / Re: Baker's percentage with combination of different flours?

AKA a "bee hive" oven. These are used mostly for baking bread type products in this case most likely bolillos.

Pizza Ovens / Re: Pizza (!?) oven found in Mexican ghost town

Welcome to the web site!

The cracker type crust is indeed what PH used to make back in the 60's and early 70's. Today you see it being made at Mr. Ghatti's as well as at Incredible Pizza, there are MANY others but these are possibly the most visible. The dough is made by mixing for only about 2-minutes or a little less, it is then portioned, formed into a "puck" like shape as you would a pie dough, placed on a sheet pan with a little dusting flour under the dough pieces, covered, placed into the cooler and allowed to hydrate for 24 to 48-hours. It is then removed from the cooler and allowed to warm to about 50F and then floured and run through a dough sheeter using 2 or more passes (usually 3 but sometimes 4) it is then placed onto a screen and excess trimmed off using a spatula, it's then dressed and baked as any other pizza. We have discussed this a few times before here if you want to research some of the old postings on cracker type dough/crusts.

Shop Talk / Re: Trying to figure out the Cracker Crust theory

Oops! Sure did mis-type that!! I meant to say that brewers yeast will tolerate about one to two percent MORE alcohol than bakers yeast. Not of critical importance to a baker but critically important to the likes of Augie Busch and Hiram Walker. :)

Dough Clinic / Re: Fresh yeast

But then if we didn't cook/bake our food we might succumb to an early demise resulting from food poisoning, as opposed to waiting for a long time for our prepared foods to do us in. We used to have a food safety director at the AIB who used to say that if it wasn't for the oven bakers would have poisoned mankind thousands of years ago. :-D

Dough Ingredients / Re: Vegetable Oil vs. Olive Oil

Peter;

These are excellent videos. I might add though that what is being referred to as a "tension pull" is the same thing that is accomplished by bench rounding the dough as I've demonstrated in my videos. This is as opposed to forming the dough balls as many do, by picking the dough up and using gravity to assist, keep pulling the dough back up upon itself which really does a pretty good job of degassing the dough as it is formed into a ball. I notice also that while bulk fermenting the dough is mentioned, it is only a single dough ball that is being fermented. My experience is that in bakeries where sourdough breads are made in a similar manner the dough is not bulk fermented (bulk fermentation = 25 to 85-pounds of dough being fermented in a single piece) the reason for this is because the act of removing/portioning dough from the bulk piece and then forming it into a ball is counter productive in that it serves to degas the dough more than what is desired (no degassing of the dough is what is actually desired so any degassing is not desirable).

These are just my own personal observations that I thought I'd call attention to for clarification.

Starters/Sponges / Re: Why Sourdough Bread is One of the Healthiest Breads (Authority Nutrition)

Changes in the finished dough temperature (determined immediately after mixing the dough) will significantly influence the rate at which the dough ferments with a higher temperature resulting in a faster rate of fermentation. If a dough is mixed at a higher temperature at any one time you might expect to find that the dough is fermenting more and thus could be softer and in severe cases over fermented to the point where the dough begins to break down becoming weak and sticky. If a dough is too cold as compared to your other doughs it could exhibit characteristics of under fermentation such as being difficult to open into skins while showing excessing dough memory/snap-back as you attempt to size the dough skin.

Additionally, keep in mind that flour is a variable ingredient and all lots of flour as well as similar flours from different manufacturers may exhibit different dough absorption values. This said, don't be afraid to make the necessary adjustments to the dough absorption to gain an improvement in dough handling properties, remember....we're making pizza dough, not nitroglycerine.

Dough Clinic / Re: Wet Unworkable Dough

Acids are only part of the flavor profile, a good deal of what we perceive as flavor comes from the degradation of flour proteins during the baking process. The more of the proteins exposed to the acids for a longer period the more are broken down during the baking process which also contributes to the flavor of the finished crust. In addition to acids the flour is also exposed to the effects of proteolytic enzymes which also results in more break down of the proteins during baking. Flavor development in yeast leavened products is a very complex thing as there are so many interactions taking place during flavor development, in fact, bread flavor (the flavor resulting from yeast fermentation of a flour based dough) is one flavor that flavor chemists have never been able to duplicate...it's that complex.

Dough Clinic / Re: RT/CF fail, not totally sure why

That would also make sense to me too so a slight adjustment in procedure might be all that's needed to bring the dough back into alignment with where it should be.

Dough Clinic / Re: RT/CF fail, not totally sure why

In one word, no, BUT if you use different strains of yeast such as some of the brewer's yeasts that you alluded to, now you're riding a horse of a different color, and the answer is going to be most likely yes, but remember that all brewers yeast will not ferment dough as we know it very well so you will need to experiment with the different strains to see what works and what you like as a flavor profile. Point is, just because a specific strain of yeast is used in making beer doesn't mean that it will create the same flavor in a baked crust. When I was in Saudi Arabia we made some great home brewed (and highly illegal) beer and wine using the yeast from the bakery. Any kind of brewer's yeast was illegal. The only main difference between brewer's yeasts and baker's yeasts is that while the baker's yeast will tolerate up to about 10% alcohol, brewer's yeasts will tolerate one to two percent alcohol.

Dough Clinic / Re: Fresh yeast

You keep going back to the word "elastic" that is a word that aptly describes a slightly to moderately over fermented dough. The word we use in the baking industry for this characteristic is "bucky" the next stage is known as let-down, this is where the dough now begins to show extensibility once again but in this stage the dough can be difficult to open as the dough wants to form thin spots in the skin as you open it and there isn't much that you can do to correct this. The final stage is break-down, this is where the dough handles like a wet dish towel, it will be extremely extensible and stickiness will begin to appear.

I can't say just why you are getting less flavor development but here are some things to keep in mind when working with two stage fermentation systems;

1) The more flour that is exposed to the effects of fermentation the more flavor the finished crust will have.

2) The temperature of the ferment is CRITICAL, especially with highly liquid ferments. A high absorption ferment employing less than 60% of the total flour is notorious for not developing flavor in the finished, baked product. In the baking industry we refer to these as liquid ferments or "brews". It is believed that the acid content builds so fast in these systems that it blocks the action of the enzymes on the flour so there is less flavor development, especially in the oven where baking plays a big role in flavor development.

3) Any liquid ferment system is much more sensitive to temperature variations than sponge systems where the absorption is almost always under 60%.

Dough Clinic / Re: RT/CF fail, not totally sure why

From your description it appears to be a classical example of an over fermented dough (soft, extensible, tears easily, lacks oven spring). I can't answer your question on flavor as I don't know what you are looking for flavor wise but in this case I would expect to find some tartness in the flavor due to excessive acid build up or if it was REALLY over fermented you can get some "off" flavors developed due to loss of the yeast, additionally you will also get a different flavor from the finished crust because it did not rise during baking, hence it did not bake out and develop the flavors as a result of denaturing proteins during the baking process.

Dough Clinic / Re: RT/CF fail, not totally sure why

JPB;

Those numbers as they relate to a sponge-dough procedure indicate that 60% of the total flour will be used in making the sponge (or preferment if you wish to call it that) and the second number (55%) indicates that the sponge will be hydrated with 55% of its weight in water.

Dough Clinic / Re: Poolish vs. biga

What protease provides is a certain amount of weakening of the gluten structure which is referred to as "mellowing" of the gluten structure. It is this mellowing that improves the dough by making it more extensible as opposed to elastic, this also reduces dough "memory" or "snap-back" at the time of opening the dough into skins and to some degree helps to improve oven spring which contributes to the desired open grain/crumb structure characteristics desired in pizza. When an excessive amount of protease enzyme is present in the dough the dough can be weakened to the point where it actually turns into a batter. This same thing can also happen if the dough is allowed to ferment too long. Protease will remain active in the dough until such time that it is destroyed by the heat of baking (160 to 180F). This is the reason why we seldom recommend the use of protease enzymes in processing systems where scrap dough will be generated, the protease will continue degrading/hydrolyzing the protein in the scrap while it is being saved or collected for re-incorporation into fresh/new dough which adds another dimension of variability into the scrap dough which in turn brings inconsistency into the way the new dough now processes as well as creating inconsistencies in the characteristics of the finished product.

A good example of a protease enzyme at work is in Adolph's Instant Meat Tenderizer; Papaya also contains it (this is why it is eaten after a meal in Latin America as the protease in the papaya can aid in digestion); Fresh pineapple is also a good source too.

Protease = (pro-tea-ace) :)

Dough Clinic / Re: Protease...

When "old" dough is used it is used in either of two ways, it can be added back to fresh dough just as it is but it is recommended that the total amount not exceed 15% of the total fresh dough weight to which it will be added. This is commonly done by pizzerias to avoid tossing out any dough at the end of the day. Due to the age of the scrap dough it does impact the flavor of the dough just as a sponge does, this is why the amount has to be regulated, and you also need to be careful that the new dough weight does not over burden your mixer. The second way it can be used is as a "mother dough" aka "madre de la masa". In this case the scrap dough is usually used as the sole source of yeast for the new dough (again, much like a sponge where all of the yeast is in the sponge with none being added at the dough side). While some do not control the amount of scrap dough when used in this manner if you are going to achieve any level of dough consistency or predictability the amount has to be controlled. Remember, yeast does not multiply in a sponge or a dough so if the scrap dough is still actively fermenting you can calculate how much yeast you're actually adding to the dough when used as a "mother". I've never found any distinct advantage to using the scrap dough as a "mother" except for the fact that it forces us to ferment the dough to which it is added for a longer time which in turn results in a different flavor, but then you can do the same thing by just adding less yeast to the dough and fermenting longer. Sure, there are some inherent flavors being introduced into the new dough with the "mother" but usually the amount added is quite small so the impact on flavor is minimal. When old dough is added back to new dough we recommend to limit the amount added to not

more than 15% of the total fresh dough weight but in reality most shops will add back as much as their mixer can effectively handle. This amount will vary with the size of dough being made in a specific size mixing bowl by a specific mixer. For example, if you're mixing 50-pounds of flour in a 80-quart bowl you have about 86-pounds of fresh dough being mixed. At the 15% rule you can add 12.9-pounds of scrap dough....is your mixer strong enough to handle that? Now, if you are only mixing 40-pounds of flour in the same mixer and bowl the amount of fresh dough being mixed is 68.8-pounds so 15% = 10.3-pounds of scrap dough, BUT since the mixer has extra capacity to mix more dough weight it is common to add more than 15%. How much more? To be honest, they try to mix all of the scrap dough into the fresh dough so as to avoid the need to put it into the trash. The problem here though is that all of that scrap dough can have a significant impact upon both the rheology of the fresh dough and the flavor of the crusts made from it resulting in inconsistencies in the finished crusts.

When dealing with a sponge-dough process we always express the sponge as a ratio like 50/50 or 75/25 with the first number being the percent of the total flour going into the sponge to be fermented for a specific period of time. The second number is the remainder of the flour which is incorporated back with the sponge after the sponge fermentation time. This keeps the entire process extremely consistent. There are some commissary operations considering the implementation of a sponge-dough process to improve the flavor profile of their finished crusts. The main obstacle for them right now is a general lack of understanding of the sponge-dough process, the additional equipment and space needed = \$\$\$\$\$, and the impact of it on the refrigerated shelf life of the dough. It usually reduces it from 5 to 7-days to something more on the order of 3 to 5-days and that means a huge additional cost in distribution.

Dough Clinic / Re: Poolish vs. biga

A dark colored, preferably non-stick flat bottom pan will serve you well, if you want to stay on the "truer" side of the tracks use a square or rectangular shaped pan. Because you will be proofing the dough in the pan the holes will only allow the dough to flow into them thus effectively locking the dough to the pan after baking so you will want to have a solid bottom pan. You might want to look into buying a deep-dish pan gripper to help you get the pizza out of the pan, not a necessity but nice to have.

Sicilian Style / Re: Grandma & Grandpa

My experience has been that if Sicilian style pizzas are baked on a deck surface the bottom of the pizzas get too dark or over done. When baking these in a home oven I like to use the standard issue oven baking rack and if using a commercial deck oven I place a pizza screen under the pan to create an air gap between the pan and the hot deck surface which helps to control the bottom bake.

Sicilian Style / Re: Grandma & Grandpa

Also, experiment with adding a little more water. Different flours will require different dough absorption and it can make a significant difference in how the dough handles.

Neapolitan Style / Re: Pizza dough VERY tough to stretch

If your finished dough temperature is between 75 and 80F you should be good to go. You might want to research some of the earlier threads where we discussed bagging the dough as an option for storing the dough in the fridge.

Neapolitan Style / Re: Starting Out ... Help with Dough?

When I'm shredding my own cheese at home I just coat the end of the block that I'm shredding and the flour or starch helps to keep it from forming difficult to manage clumps of shredded cheese in the bowl. If I need more cheese I coat more of the block and continue shredding.

Pizza Cheese / Re: Powdered Cellulose in granulated cheeses

We have never found an issue with it. It is nothing more than pure, purified cellulose. It is neutral in color and flavor and it has a very high absorption, and it is made to approximately 200-microns in size (finer than flour) hence its use as an anti-caking agent. It serves the same purpose as flour or starch when shredding our own cheese.

Pizza Cheese / Re: Powdered Cellulose in granulated cheeses

Inver;

I would consider anything longer than 6-hours to be a lot of fermentation for a sponge. One method that I've been working with lately is to use a 60% sponge with 55% absorption and allow it to ferment at room temperature for 6-hours, then mix it into a dough (no additional yeast) and then take it directly to the bench for scaling and rounding/balling, followed by a normal dough management procedure (oil dough balls, individually bag, CF for 24-hours, temper AT room temperature for 1.5-hours, remove from bag and open into a skin, dress and bake immediately). So far I've had very promising results with much improved flavor profile in the crust over a straight 24-hour CF procedure.

Dough Clinic / Re: Poolish vs. biga

A good flour for you to work with is Pillsbury Bread flour available at most supermarkets.

Neapolitan Style / Re: Starting Out ... Help with Dough?

Bob;

66% absorption is a "sponge", a soft sponge, but still a sponge. I personally don't like working with sponges when long fermentation times are employed since they seem to have a mind of their own and continually keep trying to rise out of the container. When I do need to use a long fermentation sponge I always drop the yeast level back to not more than 0.25% CY and then come back at the dough side with a full compliment of yeast as the yeast in the sponge will be pretty well useless at that point.

Dough Clinic / Re: Poolish vs. biga

What is the finished dough temperature? Are you following my dough management procedure or a modified version? A simple adjustment in temperature might solve the problem.

New York Style / Re: Too much gas??

In my humble opinion, EVOO is just wasted when used in the dough. Instead, try using a Pomace oil, I like to use the Bertoli brand. Cheap but has a very robust flavor which is ideal for use in the dough. Save the EVOO for a post bake drizzle or use on your salads or as a dipping oil by itself or combined with a little balsamic vinegar.

Dough Clinic / Re: Trying to perfect a no knead american style

Is this Domino's? Great! Please send a large pizza topped with mushrooms,

sausage, fresh tomato, onion and green peppers to (my address).

There ya go...all in 30-minutes or less!

General Pizza Making / Re: Best Frozen Pizza Brand (for when time or money is tight)?

"Better ingredients make better pizzas" Where have I heard that before? While there is a grain of truth in that statement (if it were completely true then PJ's pizzas would be the best available, after all, they do use the "best" ingredients, don't they? They say that they do.) We all know that's hog wash, so what goes into making a truly great pizza? Sure, you need good ingredients to start out with but by themselves they do not make a great pizza. There has to be balance to the pizza in flavor, aroma appearance and crust to toppings. The sauce has to meet your customer's expectations (highly variable) as does the crust, thin, thick, something in between, type of bake, flavor, texture and aroma are prime considerations in the crust. When all of these meld together we have created a pretty darn good pizza and it doesn't take the highest quality ingredients to do this, just knowledge and ingenuity at putting it all together in a very attractive package and presenting it to the customer. I used to use the example of a pile of bricks and a bunch of mortar with my students, what could you build from it? I know what I could build from it and it wouldn't be very pretty or functional, but now ask that same question to a brick mason (one who is knowledgeable in such things) and you can build you a castle if you want one. Same bricks, same mortar, just how they're assembled, that's what makes the difference.

General Pizza Making / Re: [Video] \$5 Pizza vs. \$135 Pizza

Tatoo;

None of the pizzerias that I've helped open over the years have ever gone to a "grand opening", the soft/quiet opening always morphed into full-on business within a few days and word of mouth took care of the rest. If you run into a few hiccups during those first few days don't sweat it, everyone experiences them, learn from them and make corrections as needed and charge on!

Would you like to have increased security in your restaurant? This is what I did; After things settled down a bit I sent a letter to our local police department thanking them for their service to our community and as our way of saying "thank you" we are offering a ??% discount on dine-in service to any (name your town) police officer. To receive your discount just show your ID at the time of paying your check and we'll discount your food (mind you, I said "food" not liquor) by XX%. (I don't remember my exact wording anymore but it was something along those lines). Did it help us any? I can't say, but I can say that we never had any problems at the store.

More recently I've also added active military to the discount list with a simple sign stating that all active military personnel with identification will receive a XX% discount on their food.

In addition, get involved in local school and community programs/fund raisers as they are a great way to gain visibility and a strong loyal following.

These are just a few ideas that you might entertain to help strengthen your community base.

Shop Talk / Re: opening a pizzeria very soon!!! dough amount???

Cooking sauce??

The slowest/longest part of making a great pizza from scratch is waiting for the dough to ferment from a few hours to a few days. If you are really pressed for time and want a "feed me" pizza that is a little better than a store bought one try buying

the CHEAPEST CHEESE PIZZA and toss a couple of them into the freezer for those "special" occasions. Remove from freezer, remove wrapping and add some of your own toppings like slices of fresh tomato (helps to mask the flavor of the stuff already on the pizza), onion, green pepper, pepperoni, etc. Finish with a sprinkling of additional cheese and pop that baby into the oven as per directions on the box and in a short time you can be enjoying a fairly decent pizza, or how about just stopping by a local take and bake pizza shop (Papa Murphy's) for one of their "gourmet delights".

Lots of options to explore without breaking the bank or taking a day off to make and bake.

If you are really into making "on the spot" pizzas at the end of a hard day working at the mine, you might try making some extra dough the next time you make pizza, open the extra dough into skins and freeze, then wrap in stretch film. They'll keep for several weeks in your freezer. Tired and hungry? Remove one of the frozen skins from the freezer, unwrap, place on a lightly floured surface or on a lightly oiled baking pan, take a hot shower and when you come back the skin will be sufficiently slacked -out (thawed) to proceed with dressing (the pizza that is) and baking. By the time you've discovered what has happened to planet earth during your day at the mine on the TV, your pizza will be done and it'll be time to grab a cold beer from the fridge and have your dinner. :)

General Pizza Making / Re: Best Frozen Pizza Brand (for when time or money is tight)?

Fat is referred to as a "tenderizer" meaning that it provides tenderness to the finished/baked product. If you want to see first hand how it impacts the eating properties of a tortilla (just a little different from a pizza crust) buy some fat-free tortillas and some regular tortillas (regular tortillas contain approximately 8% fat). You will find the fat-free ones to be significantly tougher than the regular tortillas (I don't know how anybody can eat them). Increasing the dough absorption changes the dough viscosity to give a different type of bake but it also usually gives a somewhat thinner crust which will quickly become moisture laden from the sauce and toppings releasing water during baking resulting in a very tough, leathery eating experience in a DELCO environment. I think by far, the best DELCO pizza is made using the cracker type crust. This is ASSUMING you are already doing all of the normal things to enhance your DELCO pizza such as using an air impingement oven to ensure the maximum dryness to the top of the pizzas, allowing the pizzas to steam off for a minute before boxing, using a plastic mesh mat (Pizza Savor) or ripple sheet under the pizza in the box, using a box with steam vents that are open (you would be surprised at how many pizzas are delivered in boxes where the vents have not been opened). Nothing good has ever come of a pizza that was boxed, placed into a moon (insulated) bag and run around in a car or some other vehicle for 30-minutes before being placed onto the table for maximum enjoyment. The best that we can hope for is to lessen the impact of DELCO and give our customer a pizza that still qualifies for inclusion on their "acceptable" scale. Just as a side note, I might add that overall, the pizza industry has not been very good at this as evidenced by the great and continued growing popularity of the bake to rise pizzas available in the frozen food section at our local supermarkets.

Dough Clinic / Re: Trying to perfect a no knead american style

I'm all over the board with cheese, but my go-to's are shredded WM Mozzarella with a little Parmesan and a touch of Romano to round out the flavor on my "regular" feed me pizzas. The next step up for me is to use block or ball fresh mozzarella that I tear or peel and use alone or in combination with some dollops of

ricotta for my more "artsy" pizzas which are usually made with slices of fresh tomato and fresh basil with sliced garlic cloves. Lastly, my seafood pizzas are always made using about only 1/3 of the normal amount of shredded mozzarella but in turn it gets a healthier (if cheese can be healthy) dose of shredded Parmesan cheese. I really like the appearance of the shredded Parmesan on the more sparsely topped seafood pizzas, especially when it is lightly toasted. Aside from my standards I like to use a representative cheese as the main cheese or a blending cheese for more specific pizza types, such as Feta for Greek themed pizzas and a Mexican cheese blend from our local HyVee supermarket for the Tex-Mex style pizzas.

Pizza Cheese / Re: Which types of cheese go on which types of pizzas

While some may find them useful, in my world they are never used. A number of years ago my wife's girl friend challenged me to a bread making contest, she with her bread machine and me making it by hand. I won....."hands down". The only really good thing that I've ever seen come from a bread machine is the Pillsbury Bread Flour, available at just about every supermarket in the U.S. This flour was introduced at the overwhelming request of bread maker owners who thought the key to making their own "store bought" bread was in using the same flour used by commercial bakeries. How many times have we heard that about pizza too? Well, the bread makers went away for the most part but the flour has still remained....a blessing for us common pizza makers.

Newbie Topics / Re: Are bread machines worth it?

I buy house brand crushed or mini-diced tomatoes and take it from there myself. About as easy as it comes and just about as cheap as dirt, but better tasting :))

Sauce Ingredients / Re: For when time/money is short, what is the best jarred sauce?

Evelyn and I discussed this a number of times when she participated in our annual pizza seminar. This is when we did some testing and found that in a bulk dough you really couldn't see much if any dough reduction/softening attributed to protease activity, the reason being that it is so difficult to assess in a bulk fermented dough, and then when we subdivided the dough and formed it into dough balls any softening of the dough was lost in reworking the dough as it was formed into balls. But when we repeated this using dough balls you could see some softening of the dough which was attributed to protease activity (but unconfirmed) after 30-minutes. After 24-hours the effect was more noticeable. It is the protease activity which partially accounts for the reason why over fermented dough gets so soft and flows out to look more like a pancake than a dough ball and the thing about protease reduced dough is that it cannot be restored in strength by any means because the protein chains have been broken at random, non-bonding points so they cannot be restored even with the use of oxidation. I used to explain this to my students using a bicycle chain as an example. L-cysteine/PZ-44 or glutathione/dead yeast reduce the dough by cleaving the protein chains at specific (sulfhydryl/SH) bonding points, much like a master link in the bicycle chain, so this means that you can take it apart and put it back together again (in our case using oxidation like ascorbic acid/AA, azodicarbonamide/ADA or bromate/KBRO3, to name but a few. The protease on the other hand, breaks the chain at random points much like breaking the chain using a hatchet, now the chain cannot be put back together again (much like Humpty Dumpty) so the dough is permanently soft or in severe cases more like a batter. This is why I only recommend the use of proteolytic enzymes in very specific applications.

Dough Clinic / Re: Resting During Mixing... Why?!

Tired? Never! I just get all "pumped-up" and I can't wait until they come out of the oven, then I can enjoy some great pizza. If they are not so great I know exactly who to blame!! I love to experiment making different presentations using different toppings and then watch the looks on the faces of my test subjects as the pizzas come out of the oven and are cut and plated before them. Sometimes I will even partake in the obligatory "chef's sample" (a small slice of each pizza) but normally I wait until I've served all of my guests and then I get the last pizza coming out of my oven. Why you ask? Because by then they have eaten their fill, and the last pizza is made to MY specifications with the toppings that I want and best of all....since the others are already full, it's mine, all mine!!! :) At that point the most common comment is "Gosh! That looks awfully good! But I can't eat another bite." Mission accomplished, time for me to enjoy MY pizza without much competition.

Making pizza is too much fun to get tired.

General Pizza Making / Re: Anyone else get exhausted after pizza making?

If you are having a problem with dough memory the problem is most likely to either using a type of flour that is too strong for your dough management procedure or insufficient fermentation. The easiest way to learn how to open a dough ball into a skin is to use a rolling pin or dough sheeter (pizzeria) to open the dough to about 2-inches less than the desired finished size and then finish opening the dough to full size by a combination of table stretching and hand tossing. We developed this method a number of years ago to teach novices how to open the dough more efficiently in the shortest possible time. The more traditional methods can take months, sometimes even years to learn but using this method we have been able to teach the skills needed to open the dough in about 30-minutes. What we have found is that as one develops his/her confidence in opening the dough in this manner they soon begin to make changes to the procedure while still opening the dough in such a manner so the finished skin has a uniform thickness across its entire center section. This method is shown in videos posted on my web site [<www.doughdoctor.com>](http://www.doughdoctor.com) and at the Pizza Marketing Quarterly web site at [<www.pmq.com>](http://www.pmq.com). I also have a video of the procedure being used at a local pizzeria where we train all of our new hires in this procedure. In the video you can see one of the employees opening the dough using a sheeter, the employee is a college student that never worked in a pizzeria until 6-weeks before this video was taken. If you would like to get a copy of this video just send me an e-mail [<thedoughdoctor@hotmail.com>](mailto:thedoughdoctor@hotmail.com) requesting the video of dough being opened at AJ's Pizzeria.

Dough Clinic / Re: How do you stretch out pizza dough?

Peter;

To a lesser extent, yes they do, but unless the flour is damaged due to sprouting prior to milling (almost unheard of in the U.S.) the impact will be minimal as observed in a dough (like bulk dough as opposed to dough balls). The greatest asset of the rest period is to allow time for the flour to more thoroughly hydrate. In large commercial bakeries the usual practice is to fully develop or even over develop (fatigue dough process) the gluten at which point it will more fully hydrate. In pizza making we really don't want to develop the gluten so that method is off of the table leaving only time as the mechanism to achieve full hydration of the flour which takes us back to our autolyse.

Dough Clinic / Re: Resting During Mixing... Why?!

Assuming that you will be managing your dough effectively you should be able to get at least two, maybe three days refrigerated shelf-life from the dough balls. Hopefully you are planning on a soft/quiet opening so you and your staff will have a chance to "test fly" things without getting mobbed right off the bat. This will allow you to make the necessary adjustments to accommodate those pesky things that only show up after the lights are turned on. As for how many dough balls you will need, the answer is as many as you can inventory. Keep track of the number you use and replenish the inventory based on how well things go. Remember, you are going to be the new "dog" on the block so everyone is going to be coming in to check you out. Three hundred dough balls is not unusual, nor is five hundred. In your business plan you should have some daily projections based on observed sales of other pizzerias close by. Increase that amount by a minimum of 50% knowing that if you don't sell out, the dough balls will still be good to use on the following day.

Shop Talk / Re: opening a pizzeria very soon!!! dough amount???

Agreed :) Can't go wrong with it and with just a little care it will last a lifetime. Mine is going on 35-years now. If the handle is too long for you it's an easy matter to resolve with a saw and a piece of sand paper to smooth over the rough edge after cutting the handle to whatever length you prefer.

Stones/tiles/steel, Pans & Accessories / Re: Peel help

Joe;

What you are describing is a process typically used in conjunction with high absorption doughs. The rest period mid way through the mixing process allows for better water absorption into the flour without the need to mix the dough more than absolutely necessary (under mixed dough is usually desirable in pizza production). This is also a form of Autolyse.

Dough Clinic / Re: Resting During Mixing... Why?!

Boy! With the limitations you've placed upon yourself I can't see where you have many choices for what you end up with regarding your pizza characteristics. Obviously you ARE firing up your oven, even if for a short time. Use a frying pan to make a par-baked crust. A thin crust will just take a couple of minutes at most (use a lid to speed up the baking process), and flip it over in the pan to get both sides finished, use your pre-cooked sauce into which you have added your meats and vegetables of choice (this further cuts down time and energy costs). Remove crust from frying pan, add the sauce and cheese and place into cold oven, start oven and bake just until the cheese melts for maximum energy savings or bake a little longer if you wish. I wouldn't worry too much about anything else until such time as you have the ability to make changes to the process which will allow you to manipulate the baking process to achieve something more along the lines of what you are looking for. With all of that said, if you can tell us what you don't like about the pizza you are presently making and what changes you would like to see, maybe we can provide some additional direction for you to work with. Too much information (TMI) is never a bad thing here as it allows the many experts here to better understand exactly what you are doing, what your challenges are and then hopefully provide meaningful direction.

Dough Clinic / Re: How do you cook the crust without burning the cheese?

If you want to maximize the open cell structure characteristic without overly impacting the flavor characteristics of the finished crust one must think about ways to allow the dough to expand more readily/easily during the baking process. In

essence, this is accomplished by making a softer, more extensible dough. Here are the more common methods employed to accomplish this:

- 1) Maximize the dough absorption (this is how we get the open cell structure in Ciabatta bread and English muffins).
- 2) Incorporate a dough relaxing/reducing agent into the dough formula (L-cysteine/PZ-44, glutathione/dead yeast/RS-190, onion and garlic, protease enzymes, in specific cases diastatic malt, and non-heat treated milk).
- 3) Adjust the manner in which the pizza is being baked to allow for maximum oven spring characteristics.
- 4) Addition of volume enhancing agents/strengtheners to the dough formula. These will include DATEM, sodium stearoyl-lactylate (both found in the Di Giorno and other "bake to rise" type crusts), coated ascorbic acid, and to some extent the use of bromate (bromated flour).
- 5) The manner in which the dough is opened can have a significant impact upon the crust cell structure. In general, post forming proofing creates a more open cell structure, but gently hand forming techniques typically provide for the most open crumb structure characteristics. Then there is laminating the dough as part of the forming process, this method creates a very unique "fish mouth" appearing crumb structure which is characteristic of laminated dough. These characteristics can be created by a number of different methods. 1) The dough gently formed into a flat, fairly this shape, and a plastic fat applied to 2/3 of the surface, then the fat free surface folded over 1/2 of the side containing the fat with the last portion containing fat folded over the top forming layers of dough-fat-dough-fat-dough. This can then be rested and the folding process repeated again but without the addition of additional fat. An alternative method is to use commercial hard fat flakes but lacking the ability to secure these you can use butter, margarine, or shortening and roll it out between two pieces of waxed paper to 1/4-inch thickness, freeze thoroughly, remove from freezer, remove waxed paper and place on a lightly floured surface and proceed to chop into roughly 1/4-inch bits and pieces (smaller is OK), immediately place back into the freezer on a flat pan (pie pan works well), now make your dough with no more than 2% oil and mix in your normal manner. At 4-minutes BEFORE completion of mixing add the frozen fat pieces and mix just enough to thoroughly incorporate them (YOU WANT TO HAVE AND SEE THOSE PIECES OF FAT). Remove dough from mixer, place on floured surface and form into a rectangular sheet about 3/4-inch thick, give the dough a 3-fold and place into the fridge for a couple of hours (you can even go overnight if you want), remove from fridge and allow the dough to warm just enough to form into a skin. Dress and bake in your normal manner. NOTE: The amount of frozen fat pieces added to the dough should be a MINIMUM of 8% of the total dough weight, but it can be as much as 20 to 25% (my experience is that 15% works the best).

If you don't want to go this route you can do it the way the cracker producers do it. Start with your regular dough formula processed in the normal manner, when you are ready to open it into a skin, open the dough as thin as you can into a rectangular shape, using a heat source (blow dryer) dry the surface of the dough to form a dry skin (not to bake it or crust it), then give the dough a 4-fold (this is where you fold each left and right side to the middle and then fold one side over the other. Allow the dough to rest until this can be repeated again. Then allow it to rest until the dough can be formed into a skin. The dry dough will help to create the fish mouth pockets (not a true open crumb structure) in the finished crust. There are MANY different ways to fold dough made in this manner, they all achieve a similar end result so if you use a different method it won't change the end result.

Dough Clinic / Re: More fermented vs. less fermented dough?

When we "deck" the pizzas after an initial screen bake we do it for only 30 to 45-seconds to prevent exactly what you are describing. For baking pizzas in a deck oven 6 to 8-minutes is what I would consider as a normal baking time. You can make the crust brown faster (not bake faster) by adding sugar to the formula or if you have sugar in the dough formula and delete it the crust will be somewhat more difficult to brown in the oven. All things equal, I would suggest deleting any sugar, milk, eggs or malt from the dough formula as this would result in less browning/caramelization taking place when you deck the pizza.

Dough Clinic / Re: Reducing bake time

Have you thought about building an outdoor oven? There are lots of posters here who have done just that and they have a great time making pizzas in everything from a modified BBQ grill to a home built or a commercially designed oven for their back patio.

Dough Clinic / Re: How do you cook the crust without burning the cheese?

This sounds like a thin cracker type crust. Any basic dough formula will work but if you don't have one here is one to begin with;

Flour (all Purpose) 100%

Salt 2%

Yeast (IDY) 0.2%

Oil (variable) 0 to 8% (I'll explain).

Water: 45% (80F)

Put water and IDY in mixing bowl, whisk well to suspend the yeast. Wait 10-minutes and add the salt immediately followed by the flour and begin working the dough with a wooden spoon, stirring until you think the spoon might break, then begin working the dough using your hands until you have a crumbly/chunky looking dough. There will still be plenty of flour visible, that's normal. Transfer the dough to a suitably sized container that has been lightly oiled (the one you mixed the dough in should work OK), tent the container with a piece of plastic or foil and set aside to ferment/hydrate for 3-hours at room temperature. Turn out of the bowl and knead just a few times (Really, just a few times, no more) then divide the dough into desired weight pieces and push together to form something like a hockey puck, lightly oil each "puck" and wrap in stretch wrap and place in the fridge for at least 24-hours (I think 48-hours is better). Remove dough from fridge and allow to temper AT room temperature for 60 to 90-minutes or until the dough is JUST pliable. Remove the dough from the wrap and place on a floured surface and using a rolling pin or pie/pastry open the dough up into a skin about 1/8-inch in thickness (you can adjust this if you wish) Dock the dough and place it on your baking platform or prep peel. You can trim the dough to a round shape if necessary. LIGHTLY brush the surface of the skin with oil and dress as desired (easy on the sauce though) and bake at 500 to 550F until the bottom has good color. This produces a very crispy crust with generally excellent crispiness retention. If you want the finished crust to be more tender eating or less "hard" begin adding oil to the dough until the desired tenderness is achieved. The best way to add the oil in this case is to add it to the water but when you do you must begin mixing the dough IMMEDIATELY upon adding the flour. Failure to do so will only result in lumps of oil soaked flour throughout the dough.

If you're handy in the kitchen this procedure might sound familiar to you, it is a very similar procedure that we use to make a pie dough.

Dough Clinic / Re: Dough recipe for a Hamilton, NJ style tomato pie like Delorenzo's or Papa's

It sounds like a case of gluten intolerance more than Celiac disease but that's beside the point, you might also try baking the pizzas on a piece of foil or a large foil tray like the ones used for making fruit and cheese trays at your local supermarket. The bright reflective surface would also serve to protect the crust from being over baked on the hot deck.

Gluten Free / Re: Anybody made gluten-free pizza with an Uuni?

As for the yeast, it all depends upon the type of yeast that is being used. Active dry yeast (ADY) needs to be pre-hydrated in a small amount of 100F water prior to addition to the dough, while instant dry yeast (IDY) can usually be added without being pre-hydrated. Compressed yeast/fresh yeast/block yeast (CY) can be just crumbled on top of the flour and mixed into the dough, or it can also be suspended in a portion of the dough water prior to addition of the other dough ingredients (it's a toss-up with CY, you can use it either way).

The dough management process that you use to make your pizza will dictate if you need to punch the dough or not. Most of the time the main reason for punching it down is to help keep it in the container but secondary effects are that it helps to give the dough a more uniform temperature, and helps to prevent the development of a dry skin or crust on the dough. It does not make the finished pizza less "airy" unless you form the pizza skin using a rolling pin to open the skin to full diameter/size which can result in significant degassing of the dough potentially resulting in a more dense crumb structure in the finished crust.

If your dough is allowed to ferment for too long of a period of time it is said to be over fermented. An over fermented dough MAY be characterized by a strong alcohol aroma, sourness from excessive acid production and weakness in the dough. To some these are the sought after characteristics, to others it is not. In any case this is controlled by the amount of yeast that you add to the dough (less yeast = less of these characteristics) as well as the finished (mixed) dough temperature. Temperature is what drives/controls the rate of fermentation so if you want to have your dough ferment less within a given period of time lowering the temperature of the dough will also help. The two accepted methods for temperature control are finished dough temperature (mentioned above) and dividing the dough into individual pieces for each pizza, forming into balls and placing into the fridge for storage. This will slow the rate of fermentation sufficiently to allow for up to several days of cold fermentation to develop flavor.

There is a whole lot more to it than that, but that's a pretty good thumb nail sketch to answer your questions.

Dough Clinic / Re: Different sources give me different advice on dough? What's the difference?

As strange as it might sound, carrot juice is a pretty decent way to add a level of sweetness to the sauce without actually adding sugar which can result in scorching of the sauce around the edges of the pizza in some instances.

Sauce Ingredients / Re: Basic Primal Flavors

I've got to add that I've seen more otherwise very good pizzas ruined due to the over use of dried oregano and occasionally dried basil. I recently posted our results of a study we did a few years ago in one of the threads here where we investigated what was said to be a loss of flavor in the cheese available today as opposed to years ago. What we found was that there was no loss of flavor at all, but instead the over use of dried herbs was completely overpowering the more subdued flavor of the cheese (for which we pay dearly). When the dried herbs were once again in proper balance or eliminated and replaced with fresh herbs the cheese flavors

became much more accentuated and readily identified by our sensory panel as well as audience participants (at pizza shows) who were our impartial "Guinea Pigs" to further validate the sensory panel findings.

Sauce Ingredients / Re: Basic Primal Flavors

At one time herb infused pizza doughs were pretty popular but we don't see that much of them anymore though there are still some commercial manufacturers producing it. We even used to include sun dried tomatoes in the dough. I can't say that it did a lot for the flavor of the crust but it did add some dimension to the appearance of the finished crust.

Dough Ingredients / Re: Do you use any seasonings in your dough?

Additionally, when the flour is bleached this means that the beta carotenoid pigments (yellow) in the flour have been bleached out making the flour whiter in color. This used to be an important aspect of flour used for making white pan breads but anymore more breads are made using non-bleached flour. As for bromated V/S non-bromated, that's an issue that you will need to resolve based on the health concerns being expressed over the use of bromate in flour. From a flour performance stand point I personally see little if any significant impact of bromate on flour performance in all but some very specific applications such as high absorption dough that will be fermented for a long period of time, and even then, my jury is still out.

Dough Ingredients / Re: How much of a difference does brand of flour make?

If you just want to make a decent pizza try baking in a deep-dish (at least 1.5-inches deep or more), the pan needs to be dark colored or well seasoned to absorb heat, put a little oil in the pan to help improve heat transfer from the pan to the dough. Do not bake on a stone that has not been pre-heated, instead bake on a lower rack position to get more heat to the bottom of the pizza and less to the top. The addition of malt or sugar will also help the crust begin to develop color faster than one made without these browning agents, and lastly, keep your dough skins under 3/8-inch in thickness as this will reduce the amount of dough that will need to be baked.

Just in case you're wondering:

The deep-dish pan will contain the cooler moisture laden air over the top of the baking pizza to help prevent burning the cheese and it will allow you to cover the pizza with a piece of foil during a portion of the baking process to help control the color of the cheese.

The dark colored pan will readily absorb heat for a faster bake.

The oil in the pan will improve the heat transfer from the pan to the dough.

All things equal, the thinner dough skin will bake faster than a thicker one.

The addition of a browning agent (sugar, malt, milk, eggs) to the dough will promote faster crust color development to help bake the crust faster.

You might experiment with some of these to see if any of them help you get what you are looking for. Once you understand these dynamics and how they affect your pizza in your oven you can probably incorporate some of them into your baking procedure to achieve a more specific type of pizza presentation.

One last thing, you didn't mention anything about the temperature of your cheese at the time when you apply it to your pizza, but if you apply the cheese frozen you can slow the rate at which it heats up to get some additional control over the browning of your cheese.

Dough Clinic / Re: How do you cook the crust without burning the cheese?

Stanislaus is my "go to" and Escalon is a close runner-up. If you are looking to make a really unique and different presentation that has the earmarks of an "artisan" pizza be sure to try the Stanislaus 74/40 Tomato Filets (drained for about 30-minutes and placed on the skin just as they are as a replacement for a conventional sauce. This combined with either fresh basil (not the dried stuff) or basil pesto is really hard to beat and it will allow you to stand apart from the others. I can help you with the presentation when the time comes.

Shop Talk / Re: Oven for low commercial production?

You might look at what Northern Pizza Equipment

[<www.northernpizzaequipment.com>](http://www.northernpizzaequipment.com) has to offer. Shop around to get an idea of what you can get for how much before you make the decision to buy. I would also suggest that you might want to look at one of the spiral mixers presently being discussed in another thread here. These are EXCELLENT mixers and will grow with you into the future, and they are going new for about what you might expect to pay for a used 60-quart Hobart or other similar planetary mixer. I would advise staying away from any of the "pocket" mixers such as a 12, 20 or 30-quart capacity mixers for dough mixing as they just don't have the capacity you will ultimately need. If you go with a spiral mixer as a dough mixer you won't be disappointed. So, with a spiral mixer how do you make your sauce? Two options 1) Use a prepared sauce right from the can....don't look down on it, it is used more often than you might think. 2) You can mix it by hand in a stainless steel pot using a hand held stainless steel wire whip. Then too, if you can luck onto a low cost 20 or 30-quart mixer with a flat beater and a stainless steel bowl you might grab it for use as a dedicated sauce mixer. These mixers show up at restaurant sales and liquidation sales all the time.

Shop Talk / Re: Oven for low commercial production?

Ohhhh, poor boy! You didn't get to really enjoy that great looking pizza! :) But your wife did and that what really counts in the end. Your description was making my mouth water already before I saw the picture.

Great Job! ^^^

Chicago Style / Re: First Fully Stuffed Deep Dish under "cruel" conditions

The one, do it all, plow horse of ovens that won't break the bank is a good, old fashion deck oven. If you opt to buy a new one I'd suggest going with a Marsal and Sons oven for well under \$10,000.00 for a single deck. If you search the internet suppliers you can find a good selection of used deck ovens as well for around \$2,000.00 for a single deck. Look for Marsal, Blodgett, and Bakers Pride for the top names. By all means go with a gas oven if at all possible, and buy an oven with a stone or composite deck, I don't recommend buying an oven with a steel deck as many of these ovens (characterized by a steel deck) were built for bakery applications (bread, buns, pastry, etc.) and do not have the high BTU burners needed for rapid heat recovery in pizza production.

You might also want to visit the PMQ (Pizza Marketing Quarterly) web site at [<www.pmq.com>](http://www.pmq.com) as they have a lot to offer to pizzeria operators too, especially in the Think Tank and the Recipe Bank, as well as a good number of instructional videos too, I also have videos posted on my web site at [<www.doughdoctor.com>](http://www.doughdoctor.com) best part of all, like here, it's all free. Between here and PMQ you should find all the help you will need to get pointed in the right direction.

Shop Talk / Re: Oven for low commercial production?

Peter;

Actually, I did come from the bread side (the "Dark Side" if you will) but since my background has always been in research and production I soon discovered the divergence in technology between bread and pizza so I was able to conduct my research on pizza production technology from the very start (or close to it) knowing that it was different from that of bread. So yes, you are correct in assuming that I approached pizza differently from bread from very early on. But I can say this, after trying to pound square pegs into round holes I came to the conclusion that pizza and bread technologies were very different and I set out on what has become a life long quest to understand the aspects of pizza technology. It seems that just about the time you think you have it someone comes up with a different approach to making pizza, such as bake to rise/oven rising, pre-proofed frozen, high fiber, low salt, carbohydrate free, gluten free, and whole-grain/multi-grain. It's all in the game of trying to keep up with the changing technologies of pizza as it continues to evolve.

Dough Ingredients / Re: Help please with IDY adjustment for Room Temperature Ferment vs Cold Ferment

Once I have an edge on the knife I like to use a ceramic rod to maintain the edge rather than a steel, don't ask me why...it's just something I've always done.

Stones/tiles/steel, Pans & Accessories / Re: Sharpening stone

Because New York style pizzas are baked right on the deck but with that said, there is nothing in the laws of physics that says you cannot make your own New York style pizza using a pan, disk or screen. It all depends upon how authentic you want your pizza presentation to be. Making pizzas at home is sorta like buying a burger at Burger King.....you can have it your way.

Newbie Topics / Re: What size pizza pans

All of our knives as well as those of my family members are sharpened using a diamond sharpening block. This is a plastic block with a metal strip glued onto it with industrial diamonds glued onto it. I have two of these blocks, one in a medium grit and the other in a fine grit. It just takes a pass or two to achieve a very sharp edge on the medium grit then a couple of passes over the fine grit to polish the edge and they're good to go. The only down side is that you need to develop a little skill in holding your blade at about a 20 degree angle to the sharpening surface, and they are not particularly cheap at about \$50.00 per sharpening block. These are commonly available at wood working stores like Wood Craft where they are used to sharpen chisel and block plane blades. I also have a couple of "paddle" type diamond sharpeners too these are about 6-inches long and 1-inch wide, made of hard plastic. There is the same type on diamond grit on a piece of metal glued to one end. They work OK but are better for a quick touch-up of the edge than periodical sharpening. I also got these at Wood Craft but my son found his at....of all places.....Walmart a couple of years ago. These smaller ones go for just a few dollars each and are available in coarse, medium and fine grit. The coarse grit is just too aggressive and leaves a very rough surface so I reserve it just for working a nick out of a blade or for getting the edge started on a really dull blade and then the edge gets smoothed up as I continue with the medium and fine grit.

Stones/tiles/steel, Pans & Accessories / Re: Sharpening stone

For up to a 3-day (4-days on the outside) CF I almost always use 0.375% IDY. When I'm targeting 4 to 5-days specifically I reduce the yeast level to 0.25%. But remember that I target a finished dough temperature of 70F (like you do) and I

leave the container(s) open for 2.5 hours for the 3-day CF and 3.5-hours for the 5-day CF. If my dough ball weights are more than 16-ounces I use 0.3% IDY for a 3-day CF and 0.2% for the 5-day CF, and I also go to 3.5-hours cross stacked (open container) time. This is due to the fact that it is much more difficult to efficiently cool the larger dough balls.

Dough Ingredients / Re: Help please with IDY adjustment for Room Temperature Ferment vs Cold Ferment

Emptyfill;

A little or moderate amount of salt will effectively strengthen the dough. This is why in commercial operations it is a common practice to use what is referred to as the delayed salt addition mixing method. The dough will mix out and the gluten will be developed faster resulting in a shorter mixing time to achieve full gluten development without salt, then about 4-minutes before the completion of mixing the salt is added and incorporated into the dough to produce a normal feeling dough with normal processing characteristics. Remember though that pizza dough is NOT mixed to full gluten development or anything even close to it so for all practical purposes this is a moot issue when making pizza dough.

Dough made without salt also tends to be somewhat sticky and more difficult to handle or process where as dough made with salt will always have a drier, less tacky feel which is generally important in pizza production, if for no other reason it will reduce the amount of dusting flour required to process the dough be it by hand or through forming equipment. When it comes to fermentation salt at much more than 2.25% will begin to slow the rate of fermentation and at 3% the effect is quite apparent unless the yeast is increased to compensate for the slower rate of fermentation. At high levels the salt will all but stop fermentation, or so it is said but my experience is that it just slows the rate of fermentation to a crawl. As for its impact upon the flavor of the finished crust we have found that the lowest salt level that you can have before flavor is impacted is 1.75%, below this level the finished crust begins to taste different (like something is missing) and when you get to levels of 1% and less the most common flavor/taste cited is that of starchiness in the baked product. I have seen this a number of times where a pizzeria is making their dough without sufficient salt and the customers are complaining that the crust tastes "starchy". Knowing that flour contains both starch and protein they erroneously go on a quest to get the highest protein flour possible thinking that with more protein there will be less starch...doesn't work that way and they're stuck with the starchy tasting crusts, this is when I'm called in and all we need to do is go back to their original flour and increase the salt level and presto! The starchiness goes away. This used to be a problem a number of years ago when making sodium reduced yeast leavened products but today we have some truly excellent salt substitutes available to work with that are based on all new technologies. They are decidedly better than the "Lite-Salt" that we used to work with.

I hope this also sheds a little light on your question.

New Forum Members / Re: Influence of salt over dough rising

I think I know where you are coming from. I see this quite frequently in some of the newer pizzeria operations. If the dough balls are not cross-stacked or cross-stacked long enough to facilitate efficient and moderately rapid cooling of the dough it will over ferment. When this happens the yeast is generally reduced to a level where the dough no longer blows but now the yeast level is so low so as to reduce the amount of oven spring the dough can exhibit and in many cases the dough doesn't rise properly in the center portion of the pizza. This is where I'm called in to

address the mysterious problem. All that is necessary is to get the dough cooled efficiently (part of a good dough management program) and to restore the yeast level to where it needs to be and life is again good. The same thing will happen if one tries to bulk ferment the dough in the cooler thinking that they are now CF the dough while in fact, they are really just putting the container of dough in the cooler but the dough is not cooling down as planned for due to the density of the dough as well as the heat contribution from the heat of metabolism created by the feeding yeast (about 1F per hour). While I'm referencing dough performance in a commercial pizzeria here the same thing happens in a home setting when we do a bulk CF, or don't control the finished dough temperature, or put the dough into a closed container and then try to CF the dough balls. In many cases the dough over ferments before it can cool down to a point where fermentation rate is controlled.

Dough Ingredients / Re: Help please with IDY adjustment for Room Temperature Ferment vs Cold Ferment

I'm guessing that it should be OK but if you still experience the same problem your all purpose flour might be too weak which will mean that you will need to switch over to using a bread type flour.

Dough Clinic / Re: Fluffing and Collapsing dough?

Peter? Got your ears on? Now that dates me! :)

New Forum Members / Re: How to make a perfect pizza dough

Yep, that's what it was designed for. We used to make a very basic sauce using tomato sauce and some herbs or when in season we used fresh tomato slices for the sauce. For toppings we just cleaned out the fridge...we used sliced hot dogs, hamburger patty, fried chicken, fish, you name it! The only concession we made was to instruct each participant to bring 8-ounces of mozzarella cheese with them. I always donated the flour....Pillsbury Bread Flour, the reason I selected this flour is because it works well and because it was available to everyone at any of our local supermarkets. We mostly used ADY unless someone wanted to bring IDY or CY with them from their home.

We held the training sessions as you would hold a pizza party. Someone in the group would volunteer the use of their kitchen (group size would depend upon the size of the kitchen) and was always set up and guests invited by the volunteer with the kitchen. It was always a lot of fun and a very rewarding experience.

Dough Clinic / Re: Fluffing and Collapsing dough?

Going to 60% will pull you away from the thin crispy type of crust to something what many like to refer to as "American" style crust (more like a Domino's type of crust) but sure you can increase the absorption if you want to. 5% oil is a lot of oil so yes, I would suggest increasing the water by the same amount as oil is deleted. If you want to incorporate less oil but get more impact from it try wiping the surface of the dough with a little oil during the kneading process. This will give your finished dough something of a layered characteristic resulting in a Danish like crumb structure in the finished crusts. In that case you don't need to worry about the oil that you are putting back into the dough through the kneading process as it will only be around 1%.

Dough Clinic / Re: Trying to perfect a no knead american style

If I might add, this would be a great idea to incorporate into the Ohio Restaurant Assn. Show in Columbus, Ohio (normally in late Jan. or early Feb. each year). Many vendors are already there plus a lot more. It is a very low cost show to attend and I

bet that they would be more than glad to collaborate. Properly advertised it could significantly increase our base, just think of how many home pizza bakers there are out there who might attend something like this? Who knows....it could take us in a whole new, untapped direction? Bradie Berry at the Ohio Restaurant Association <bberry@ohiorestaurant.org> would be the person to contact to explore any possibilities.

Chitchat / Re: Pizza Making.com Fest 2017

Pepapi;

I think those "tough spots" were due to the flour absorbing some of the oil. The procedure that you are using is very similar to the one that we use to make a cracker type crust but only with 40 to 45% absorption. The trick here is to let time do the work for you. DO NOT use oil when mixing the dough (it really doesn't need oil for this type of pizza) but if you insist, just oil your hands when you knead the dough to work the oil in that way. Mix the dough until most (it doesn't need to be 100%) of the flour is hydrated, then transfer to a suitably sized container for fermentation (be sure to lightly cover the container during the fermentation process to prevent drying (Tip: Use a container at least several inches higher than the highest the dough will rise to. This will allow for a protective layer of carbon dioxide to accumulate over the dough further protecting it from drying. I like to allow the dough to ferment/hydrate and develop (through bio chemical gluten development) for 24-hours, then proceed as you are presently doing. I like to make this type of dough into a pizza without a pronounced raised edge, just a slight raised edge is what I go for, and my preferred method for opening the dough into a skin is to use a rolling pin to open it to size and then go around the edge and pinch an edge onto the skin. This type of pizza, when done correctly will produce a cracker type crust with great crispiness and best of all, it is notorious for retaining its crispiness. We are seeing pizza buffets beginning to gravitate to either the thin crispy (made with 50 to 55% absorption) or the thin cracker type crust (made with 40 to 45% absorption) for this reason.

Dough Clinic / Re: Trying to perfect a no knead american style

Kristen;

The only problem with cutting from bulk is that you can easily over work the dough making it difficult to fit to the pan. When using a dough ball you can open the dough to fit the pan with minimal handling which makes life a little easier.

Detroit Style / Re: Detroit Pan crust crispness

Hans;

That is the correct dough recipe that Peter has directed you to in the PMQ Recipe Bank. It is an easy recipe to work with and it is not overly sensitive to time or temperature variations. In a number of cases I've left the dough ferment in the bowl after mixing for the better part of a day (5+ hours) and the dough still performed well and gave us great pizzas. I developed the recipe many years ago when I was teaching home pizza making to local farm families and also did a few evening home pizza making classes too. You might ask, why a wooden spoon? The answer is: To prevent over mixing the dough....sounds strange??? You mix the dough until you fear that if you were to try to mix the dough any longer that you might break the spoon, then you know the dough is sufficiently mixed. Like I said, this is a fast and easy to follow recipe. Can it be improved upon? Absolutely! Have fun with it, adjust the amount of ingredients, adjust the fermentation time, cold ferment the dough, but at some point in time I would HIGHLY encourage you to get a scale that will accurately weigh in grams so you can determine the exact weight

of the ingredients and then convert the "recipe" to "formula" based on bakers percent. This will allow you to more accurately make formula adjustments as well as manipulate the size of the dough while keeping it in correct balance. Finding the ingredient weights from volumetric portions and converting those weights into bakers percent have been covered in discussions here fairly recently.

Dough Clinic / Re: Fluffing and Collapsing dough?

At room temperature, fermentation takes place at a much faster rate than at refrigerated temperatures (75F+/- v/s 38 to 42F). Since fermentation progresses at a much faster rate at this elevated temperature if you were to use the same amount of yeast at RF as you do at CF the dough would quickly over ferment and be somewhat difficult to manage as it would be much more sensitive to temperature variations such as finished dough temperature and room temperature. It is for this reason that we have found it to be advantageous to reduce the yeast level when going from CF to RF. With that said, this does not mean that you could not just use the same yeast level for both, but in this case you will need to pay close attention to temperature control and the overall fermentation time will be quite short resulting in a different finished crust flavor profile. We can see this to the extreme when looking at an emergency dough where we increase the finished dough temperature to 90 to 95F, and double the yeast amount resulting in a dough that is ready to use in less than 2-hours at room temperature. There are few who would argue that the flavor of a crust made using an emergency dough leaves more than a little to be desired, BUT it does serve its purpose in that it will give us a dough that is ready to use in a short time.....sure beats not having a pizza to eat. :)

Dough Ingredients / Re: Help please with IDY adjustment for Room Temperature Ferment vs Cold Ferment

Most of the par-baked crusts that I've seen used for making Detroit style pizzas were not baked with anything on then at all. Fit the dough to the pan, allow to proof for about an hour (actual time will be variable due to differences in dough formulation) and bake at 400F just until the crust is firm and beginning to show some color development, remove the par-baked crust from the pan and place back into the cooled pan or another pan which has been greased with Butter Flavored Crisco, then dress in the normal manner. This seems to work quite well. The alternative method is to put only 1/2 of the sauce on the dough when it goes to the oven for par-baking, then when you re-pan the crust you add the remainder of the sauce and dress the pizza in the normal manner. I've never seen any real benefit to par-baking the crust after it is been dressed. You are by far better off just baking the pizza to just short of full bake, then remove it from the pan and deck it for a minute or so to finish off the bottom.

Detroit Style / Re: Detroit Pan crust crispness

OK, first order of business is getting your Mom appeased and happy to sit down and enjoy one of your pizzas so I'm going to suggest that you go to the PMQ web site <www.pmq.com> and go to the RECIPE BANK or you can also just Google "www.pmq.com/Recipe Bank". Use the word "dough" for your search and you will find my no-fail home made pizza dough recipe.

Now, getting back to your original question, it sounds like your yeast level is too high or more likely than not your finished (mixed) dough temperature is too warm/hot. The temperature of the SMALL AMOUNT of water that you hydrate the active dry yeast (ADY) in should be 95 to 100F (use a thermometer), the remainder of the water that you add to the dough should be about 75F. This will give you a finished (mixed) dough temperature right around 80F. After mixing the dough

divide it into desired weight pieces, oil each dough piece (canola oil) and place into individual plastic bags (food bags work great but DO NO use zip-lock bags) or you can also use reclaimed bread bags or in a pinch plastic grocery or Walmart bags work well too. Just pull the bag snug (not tight) around the dough ball, twist the open end to close and tuck the twisted pony tail under the dough ball as you place it into the fridge. The dough will be ready to use after 24-hours but it is usually better after 48-hours. To use the dough just invert the bag over a floured surface allowing the dough ball to fall out under its own weight, then flour the dough ball and begin opening it into a pizza skin by your preferred method. Once you have this mastered you can begin experimenting with different dough management procedures like you see being discussed here. The experimenting part is where the fun is at, and you will still end up with some pretty decent pizza too.

Dough Clinic / Re: Fluffing and Collapsing dough?

Lester;

When you say "pans" am I correct in assuming you are referring to deep-dish pans and not baking disks?

This being the case you will not have the sides of the pan to support the sides of the dough if you make a 12" deep-dish pizza in a 16" pan.

In you are making thin crust pizzas you will find that the moisture laden air over the pizza will collect in the pan forming a moist air dome over the pizza (trapped there by the higher sides of the pan). This can/will impact the way the top of the pizza bakes as compared to the bottom of the pizza and is especially so if you will be baking on a stone.

Newbie Topics / Re: What size pizza pans

JPB;

The only reason why I prefer scaling and balling the dough right away is that it is easier to manage and requires less attention on my part.

When I do a RT ferment prior to a CF I just do it with the individual dough balls. If I want to re-ball after the RT I just pop the dough out of the container (I don't use a bag for RT) ball it, wipe it with oil and bag it, then go on with whatever I'm doing, entertaining, visiting, watching a video). I'm a very firm believer in the KISS principle. My wife says it is not a good idea to get between me and whatever I'm doing when I'm in the kitchen :).

Newbie Topics / Re: Separating dough ball for multiple pies?

To reduce the amount of handling the dough receives I like to divide my dough immediately after mixing. It also eliminates the problem of me forgetting to divide the dough until I'm about ready to make my pizzas...Oops!

Newbie Topics / Re: Separating dough ball for multiple pies?

Even when in the fridge the dough continues to ferment and depending upon your flour absorption properties and the dough absorption used in making your dough, that additional CF time could easily produce a dough that is more extensible than desired.

By the way, your pizzas look great!

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

If I'm baking on screens I have one of each size that I regularly use (10, 12 and 14-inch) They are dirt cheap. If I'm making a deep-dish pizza(s) I normally make only 12-inch pizzas as I have a number of pans in this diameter, and if I'm making pizzas for a group I need a minimum of four pans which are a bit pricey so I use only one

size but have a number of them. All of my other pizzas are either baked on a stone or partially baked on a screen and then decked for the remainder of the baking time. If you are using something like the old "power pans" which look something like a flat disk with 1/4 to 3/8-inch diameter holes in it I also like to have a couple in each of my sizes as they are relatively cheap. The deal is that you need more deep-dish pans since you will be utilizing the pans for a longer time such as for both proofing and baking which combined could easily take an hour or more while screens and disks are used for thin crust pizzas so they are utilized for a much shorter period of time, 10 to 15-minutes so you don't need as many. Some friends of mine work with only a single screen or disk but I like to work with a minimum of two so I can have one pizza in the oven while I'm dressing the next one.

Newbie Topics / Re: What size pizza pans

If you're having a problem with the dough not "picking-up" properly, or at all the problem is almost always due to insufficient dough size to properly interact with the mixing arm. In those cases the most common solution is to use the flat beater at first, until the dough mass begins to form and then change over to the dough arm to complete the mixing process. You have to be careful though as using the flat beater with too large of a dough size or using it too long can/will stall the mixer which is not good for mixer longevity.

Dough Clinic / Re: Dough hook on 5 qt KA mixer question

Kramerica;

In that case the pasta should work fine for you. It's easy to figure out the dough weight for a 16-inch pizza if you know the dough weight used for the 12-inch pizza as you mentioned. Since the 16-inch pizza is 1.778 times larger than the 12-inch pizza just multiply the weight to make your 12-inch pizza by 1.778 and this will give you something pretty close to the dough weight that you will need. As for getting the leoparding the best approach is to use a solid deck baking surface as you are, bake your pizzas right on the deck and employ high baking temperature, you will need to go higher than 500F. The addition of browning agents to the dough such as sugar and DMP will generally contribute to a more even browning of the crust.

Dough Clinic / Re: Testing doughs without cheese?

When I saw your post at first I thought you were a different "Big Dave". The one I know would NOT be getting back into a store though.

If you will contact me directly at <thedoughdoctor@hotmail.com> and request a copy of my sauce formulas I will be glad to send you a copy. These sauce formulas have a track record of over 30-years and make a good starting point to make your own sauce.

New Forum Members / Re: Starting a pizza shop for the second time

Are you planning to do your testing on pizzas with the cheese used under the sauce (such as is the case with Chicago style pizzas) or where the cheese is used on top of the sauce? If used under the sauce the pasta route may not be a viable option due to the significantly higher moisture content of the pasta as opposed to cheese.

Dough Clinic / Re: Testing doughs without cheese?

I wasn't aware that "real" Italians made it any other way. :-D

Sauce Ingredients / Re: Pizza Sauce with Anchovies?

If the two doughs are not rising equally the conversion rate is not correct for your

specific dough formulation. The conversion provided by the manufacturers are based on some unknown dough formulation and it is almost always on the low side, or so I have found, as it puts the dry yeast in a better cost comparison to the fresh yeast.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

There is no comparison between the "J" hook and the spiral dough arm, it is that much better (the spiral dough arm).

Dough Clinic / Re: Dough hook on 5 qt KA mixer question

I like to give the dough several days CF as a dough ball to develop the gluten as well as develop flavor, then open the dough ball into a skin for the pan/deep-dish pizza and allow it to proof/rise in the pan at room temperature for about 30-minutes and then take it to the fridge to CF several more hours. When we do deep-dish pizza I pull my dough balls the evening before we have pizza. I allow the dough to temper at room temperature for an hour or so, then shape it/fit it to the pan and allow to proof/rise at room temperature for 30 to 45-minutes. I then take it to the fridge (piece of foil crimped over the top of the pan to prevent drying) to CF overnight. On the following day, about an hour before I'm ready to dress and bake the pizza I remove it from the fridge and allow it to temper a little (about an hour) then dress and bake the pizza. This gives me a very nice, open crumb structure, with minimum work on my part.

Sicilian Style / Re: Cold Ferment in the pizza pan or in a ball

Considering the amount of ADY used and the amount of fermentation the dough was subjected to I'm guessing that the dough might have been over fermented to the point of becoming "bucky" or extremely elastic.

I would suggest beginning with a cold fermentation process as it's much easier to manage.

Adjust the water temperature to give you a finished dough temperature between 75 and 80F (70F water +/-).

Mix the dough in your "normal" manner.

Check the finished/mixed dough temperature and record.

Immediately scale and ball the dough.

Wipe the dough balls with oil and place into individual plastic bread/food bags.

Twist the open end of each bag to form a pony tail and tuck the pony tail under the dough ball as you place it into the fridge.

Allow the dough to cold ferment for a minimum of 24-hours, 48-hours is much better and you can go even longer if you want.

I'd suggest trying one dough ball at 48-hours, one at 72-hours and one at 96-hours to see what works best for you in YOUR kitchen.

To remove the dough ball from the bag just invert the bag over a bowl of dusting flour, flour the dough ball and open into a skin by your preferred manner. Once you have this mastered you can begin introducing periods of room temperature fermentation to see how it works for you. Speaking just for myself, I use only cold fermentation as I like the flavor it gives and it is so easy to manage. I like to use my dough after 48 and 72-hours cold fermentation time as for me that time gives me the product that I like, but since we are all looking for something different, I encourage you to experiment with cold fermentation, room temperature fermentation and hybrid room temperature + cold fermentation dough management procedures as they will give you differences in flavor as well as physical crust differences too. Experimenting is a fun and rewarding (good pizza) learning process.

Dough Clinic / Re: Fermenting and Proofing question

Aluminum, cast iron or steel, they all work very well. My own personal preference is an anodized black, non-stick finish, deep-dish pan made by Lloyd Pans at www.lloydpan.com. These are a bit pricey at just a tick over \$25.00 a pan but they will last a lifetime. If you can snag a steel cake pan (usually dark green in color) grab it! I've found these at thrift stores on a pretty regular basis, usually in 7 or 8-Inch diameter but they're perfect for individual size pan pizzas. A real find is when you see a 12 or 14-inch commercial cake pan. Don't let a little rust scare you, it will easily clean off and you can then season the pan to seal it and you're good to go. A good alternative to the Lloyd deep-dish pan is a heavy weight aluminum deep-dish pan that has a dark, anodized finish which is either 1.5 or 2-inches deep. These are easily found on the Internet at a very reasonable price.

The choice is yours.

Newbie Topics / Re: Deep dish pizza pan

To add another log to the fire, When we CF the dough we only slow down the yeast activity, it does not stop, so it continues to feed. Through enzymatic conversion of starch to simple sugars (glucose and fructose) the yeast can typically generate enough sugar to support it for several days, after that it runs out of nutrient and the yeast begins to cannibalize itself which releases the plasma material contained within the yeast cells (glutathione) into the dough. Glutathione is a reducing agent, meaning that it breaks down the protein chains making the dough significantly softer, weaker and much more sticky. By adding sugar to the dough formulation we are adding additional nutrient to support the yeast allowing it to continue to actively ferment well beyond the time at which the converted sugars have been metabolized by the yeast. BUT during the fermentation process the yeast excretes acids, carbon dioxide, and alcohol. The carbon dioxide is the primary leavening gas produced by the yeast as it feeds, the alcohol will slowly degrade the protein as will the acids (acetic, lactic and propionic). The formation of these acids is what inhibits crust color development in doughs which have been fermented for several days. The only way to get these doughs to color up is to make sure we have added sufficient sugar to the dough so at the time the dough is used there is a surplus of sugar available to participate in the Maillard browning reaction and ultimately in caramelization which results in the crust color development. Without the added sugar in the formula we can only develop the crust color through application of very high temperatures during baking. It is this inhibiting effect of acids upon crust color development that results in sourdough bread having very little crust color development.

When we reball the dough it is because the dough has become over fermented and weak in structure. The re-balling process does three main things to help the dough 1) It degases the dough making it easier to work with. 2) It realigns the gluten structure which has a strengthening effect upon the gluten/dough. 3) It introduces air into the dough structure which oxidizes some of the protein bonding points within the gluten structure which in turn actually strengthens the protein/gluten /dough to reverse some of the damage to the protein structure caused by the excessive fermentation. I have greatly simplified this for better understanding for those of you who are not cereal chemists and to give everyone a better understanding of what happens during fermentation and why.

I hope this sheds a little more light on the topic.

New York Style / Re: 1st attempt of Tom Lehmann's NY style Dough

Those pizzas look like they were topped with diced cheese.

General Pizza Making / Re: Colony Grill spots on cheese?

The internal structure of your pizza looks a lot like what you provided as your target pizza but the bake on your pizza is stronger than that of the target pizza. To address this you might try reducing the baking temperature for your next attempt.
General Pizza Making / Re: How to make this pizza? | What kind of pizza?

Most screened pizzas seem to bake best at 500 to 525F in a deck oven. This will allow the bottom of the crust to be done at the same time the top of the pizza is finished baking.

Hearth Ovens / Re: Baker's Pride II Forno Classico vs Y600

Very good bake on the pizza too! Great bottom bake from what I can see too. I agree with Hermit about letting the dough cold ferment longer just to see what you think of the flavor that you get with a longer cold ferment. When I developed the dough it was found that we got the best overall results after 2-days of cold fermentation but the dough still performed very well for us on day 3 too, so don't be afraid to experiment and "tweek" things along the way to make it just the way you like it. :)

New York Style / Re: 1st attempt of Tom Lehmann's NY style Dough

Clarkth;

Nope, you assumed wrong, I just take a plastic Walmart or grocery bag and tear it open and DRAPE it over the fermentation container. If you tear only one side of the bag open you can slide the bag over your container (if it's not too large) like a sock and just let the bag drape over the container. You really don't want or need to seal it closed. The carbon dioxide being heavier than air will form a protective layer over the surface of the dough, the purpose of the plastic is to prevent any drafts from blowing the layer of carbon dioxide off of the dough surface.

Dough Clinic / Re: Prevent skin during bulk cold ferment

Norma;

When moisture controlled IQF vegetables are made the vegetables are first partially dehydrated by vacuum drying and then immediately IQF.

This allows the vegetables to retain color and texture much better than regular IQF vegetables, and they just plain don't weep. The main supplier I think is still Con Agra Foods. We used to use them in our pizza seminars all the time.

General Pizza Making / Re: Mickey's frozen pizza in Loganville

Oil it and place (drape) a piece of plastic over the bulk fermenting container to trap the carbon dioxide being released from the yeast on top of the dough creating a mini green house climate over the dough which will prevent it from drying. We do this all the time in large commercial operations and it works very well.

Dough Clinic / Re: Prevent skin during bulk cold ferment

Norma;

As with any vegetable topped frozen pizza the toppings will suffer greatly from a slow/static freezing process (the reason why we harvest our gardens before the first hard frost). All frozen pizzas going into commercial channels that I'm aware of use blast freezing to freeze their pizzas. As I've mentioned before, blast freezing comes in two flavors, mechanical, where we freeze at temperatures of -20 to -35F (the lower temperature is more typical) and cryogenic, where we use an industrial cryogen (liquid nitrogen or liquid carbon dioxide) and freeze at temperatures in the

-65 to -85F range. The blast freezing is essential in forming a smaller ice crystal which doesn't destroy the cell structure of the vegetables like the larger ice crystals creates with static freezing. Tip: use just meat toppings or if you can access them, use moisture controlled/IQF vegetables for the toppings. If you want to see these in action just pick-up a Di Giorno pizza from your local supermarket and you will see them first hand. That's one the secrets to keeping the vegetable toppings looking so fresh on the Di Giorno pizzas.

General Pizza Making / Re: Mickey's frozen pizza in Loganville

Qualities of a "good" pizza;

Since we eat with our eyes it must have an appetizing appearance which means, at least for me, a nicely browned crust with a little browning on the cheese (this is subjective though) and topping ingredients that can be readily recognized (I don't like mystery toppings) and the balance of toppings to cheese must look right so the pizza doesn't appear to be cheap.

Then we eat with our noses too so the pizza must have a tempting aroma and since it is considered to be of Italian origin part of that aroma might be a little basil and/or oregano lacing that aroma.

Lastly the pizza must have a great flavor, the crust or toppings shouldn't taste salty (a somewhat common problem), you should be able to taste the cheese as well as the toppings on a really great pizza or if you want a "good" pizza you can dice the toppings and mix them together so all of the toppings as of one flavor (BORING!) To accomplish this use larger pieces of topping that will retain their flavor and texture better and actually look great. We are actually beginning to see the frozen pizza manufacturers here in the U.S. doing this same thing. The sauce is another thing that contributes to the taste of the pizza, it can be sweet, tangy, or tart whatever you decide on just be sure to keep it the same all the time. My own personal preference for sauce is to slices of fresh tomato with basil leaves under some of the slices, but that's just me. I like the artisan/gourmet appearance it gives the pizza.

And one last thing, let your pizzas look just like everyone else's pizza and your pizza will be judged by your customers just like everyone else's, but make your pizzas look a little different so they stand out and you just might find customers flocking to your door to get one of those GREAT pizzas, what makes them so great? They look different and taste a little different too, like I always tell my clients "Dare to be different".

New Forum Members / Re: How to make a perfect pizza dough

For a 24-hour cold ferment I like to use 1% CY with good dough management practices in place. If you have a problem managing the dough I would advise dropping this to 0.25% CY.

Dough Clinic / Re: dough management

If you add too little water to the dough the resulting dough will be tough, stiff and difficult to work with and depending upon how low the absorption is the dough could be extremely difficult to open into a skin from the dough ball stage. As absorption is increased the dough becomes progressively softer and more extensible making the dough easier to work with and open into a skin. When maximum dough absorption has been exceeded the dough will become excessively soft and difficult to work with, if you're balling the dough the dough balls may not hold their shape and tend to flow together or flatten during the fermentation stage. As for finished crusts, very low absorption levels will require the services of a sheeter to open into a skin resulting in a crust that is flat with little or no raised

edge. If low enough it may qualify as a cracker type crust and possess very crispy eating characteristics but with a dry mouth feel. As absorption increases the dough becomes softer and rises more during baking giving more oven spring to the dough which typically results in more of a raised edge on the crust. Finished pizzas will typically have a nice crispy bottom and edge while having a soft but tender eating characteristic. When the dough absorption is excessive the pizza may be misshapen due to poor dough handling properties, and the dough may collapse under the weight of the toppings, especially in the middle of the pizza resulting in a very thin center section with a very tough, leathery eating characteristic, as there are no toppings around the edge the rim will expand freely as a result of oven spring potentially resulting in an excessively large crust edge. As the dough collapses in the center you may also notice a lack of crust color development in the center section of the pizza resulting the heat altered transfer properties of the dough/crust now allowing heat to pass through into the sauce and toppings without the dough achieving a sufficiently high temperature to develop the desired crust color. There are a good many more things that might be mentioned but these are the main ones.

New York Style / Re: Effects of hydration levels

Yes I do, I've got friends on the north side of Wichita that we visit a couple of times a year, and then there is Cabela's and Gender Mountain as well as Coleman's discount store.

Dough Clinic / Re: Dr.'s email?

Yes, I'm located in Manhattan, Kansas.

Dough Clinic / Re: Dr.'s email?

Dieter;

The old Doughpro hot presses have a heated head and a non-heated, swing out platten. If the head is heating properly and will heat up to around 250F you're good to go. The top head temperature is adjusted to a point where the dough just releases cleanly from the head. Dwell time is typically around 7-seconds, after the platten is lowered the platten is swung out and the pressed skin peeled off of the platen. Be sure to put a little oil on the platten occasionally and be sure to lightly oil the dough balls too for improved pressing. These presses like to have a moderately soft but relaxed dough so it is also common to incorporate a reducing agent into pressed dough formulations to reduce snap-back after pressing. If you find that the dough skin is tearing during the pressing operation the dough is too stiff.

Shop Talk / Re: repairing dough presses and repair parts

Mike;

You can reach me at <thedoughdoctor@hotmail.com> or you can call me at 785-537-1037 anytime after 10:00 a.m. CST.

Dough Clinic / Re: Dr.'s email?

Apone;

Yes, you are correct.

Dough Clinic / Re: Problems handling wet dough. Sticking, etc.

Apone;

I believe some members here have used parchment paper in their wood fired ovens which are also very hot. If you have a problem with your parchment paper burning

you will need to peel the pizzas directly onto the oven hearth using a peel dust to facilitate the dough releasing from the peel. When I make multiple crusts I like to pre-open the skins and just place them on the counter/bench top with a little flour under each one. A trick that I often use is to find some large cardboard pizza circles and put my peel dust on them then place the opened skin on the circle while it is awaiting its turn to be dressed and baked. In a pizzeria we use multiple wood prep-peels instead of the cardboard circles as the skins can be dressed and peeled into the oven with minimum handling. In your case you will need to slide the skin off of the cardboard circle onto your wood prep-peel for dressing and peeling into the oven. If there will be a delay between opening the skins and dressing/baking they can be placed into the cooler/fridge for holding until you're ready to use them. As for getting a stuck, dressed skin off of a peel, you can try lifting it and working a little more peel dust under the skin to see if that will work but all of the handling normally tears the skin so what I usually end up doing is to salvage the toppings and discard the skin, then be sure to THOROUGHLY clean the peel and use a little more peel dust the next time and probably shake it more often too. If you can get some fine corn meal you can use it by itself as a peel dust if you are experiencing severe sticking problems, other wise it is usually blended with something else like rice flour or even wheat bran or semolina flour to make a peel dust.

Dough Clinic / Re: Problems handling wet dough. Sticking, etc.

You are correct that doughs made using bakers yeast are better suited to freezing than those made using a sourdough. When dealing with the conditions encountered in home freezing of dough there is no one dough formula better suited to freezing than any other one. As a general rule the only change to a dough formula that will be subjected to home freezing is to increase the yeast level by approximately 50%, the exact amount of increase will need to be determined through experimentation with your specific dough formulation.

Dough Clinic / Re: Freezing Pizza dough

My own interest in the game is probably a 20 on a scale of 100, but my prediction is that someone, one of the two playing teams, will come out the winner. During game time I plan to keep myself amused with my new, at home, do it yourself root canal kit. :)

Chitchat / Re: Super Bowl Predictions.....?

The three ways that I like to add Mozzarella cheese are shredded (but then the pizza looks so "commercial" and just like everyone else's pizza, then there is sliced, but I never add the whole slices unless I'm adding it under the sauce (Chicago style) instead, I like to break it apart into pieces and use these to randomly place on top of the pizza for more of an artisan appearance and lastly, there are the balls of Mozzarella, like those from Grande. I like to peel these as you would an orange and place the pieces randomly on top of my pizzas, the differing sizes and thickness gives the pizza a great appearance. Some even like to add the fresh Mozzarella cheese in this fashion after baking. I've done this occasionally but I like to put the pizza back into the oven for another minute after adding the cheese in this manner to get a better melt. I did not even mention diced cheese because it is so devoid of any interest, it just looks like a layer of cheese on the pizza, and beside that, you actually need more diced cheese than shredded to get the same coverage. I might add that I'm not going for full coverage when using torn pieces of sliced or peeled balls. My target is 4-ounces for a 12-inch pizza. It all depends upon what look you are going for, if you want the pizza to look like it came from a specific pizzeria/chain you need to use the form of cheese that they use, for me personally, I

always go for a more gourmet/artisan look so I use more sliced or balls than shredded.

Shop Talk / Re: Sliced mozzarella vs shredded

Emulsifiers allow oils to hold water molecules (think mayonnaise) by interfacing between the oil and water. as emulsifiers are hydrophilic and lipophilic (water and oil loving) they hold the two together forming an emulsion. It is this action which can lead to the development of a gum line under the sauce since the moisture in this area can be bound by the emulsifier rather than repulsed (this is why oil is applied to a skin that will be pre-sauced). Additionally, lecithin really isn't very functional in a dough system, the greatest use of lecithin is in the formulation of a pan release oil where the lecithin provides the necessary "cling" properties to the oil preventing it from running off of the vertical sides of the pan.

Specialty-Grain Pizzas / Re: Golden 86

Do you have a specific reason for adding lecithin to your dough formula? When we did the work many years ago looking at the effect of emulsifiers on pizza dough we found that in general, emulsifiers are not well suited to use pizza doughs as their hydrophilic properties tend to promote moisture migration from the sauce and toppings into the dough which under certain circumstances can result in the development of a gum line just under the sauce.

Specialty-Grain Pizzas / Re: Golden 86

Peter;

From their description (pastry, cakes, sweet dough, etc. but no breads) I'm wondering if this isn't what we would call a "graham" flour made from 100% whole soft wheat. This is the type of flour that graham crackers are made with, hence their name. Normally though we don't see protein levels much above 10 or 11% for this type of flour, then too it might be made from a hard red wheat variety which has gluten properties better suited for making pastry than bread/pizza. One thing to note though, while the analysis shows nothing of the presence of fiber/bran (all flour has at least some bran/fiber) from the description it sounds like it is a whole wheat flour, that being the case the bran might be absorbing water over a period of time causing the dough to become more viscous/stiffer and more difficult to leaven/rise. If this were the case the dough absorption would need to be increased to possibly something in the 70 to 75% range remembering that the dough will be initially soft and sticky as the bran will not have sufficient time to hydrate during mixing but that condition should show signs of improvement in an hour or so. Another option would be to make a "soaker" of the flour and all of the water, allow to hydrate for at least an hour, then add the remaining ingredients and mix the dough in the normal manner.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

If the pizzas fail you can always have a cheese on rye sandwich, that partial loaf of (rye bread?) looks awfully good! :)

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

Because bakers usually use this method for rounding bread dough the weight of the dough balls will be as small as 3-ounces for buns and up to 24-ounces for some of the larger pan breads. Like with everything else though, the objective is to develop consistency in your rounding technique so all of the dough balls are about the same with regard to tightness. This is actually pretty easy to do once you have mastered the technique.

General Pizza Making / Re: How I roll!

Did you notice the words "for sweet and savory" in the description of the yeast? There is a possibility that this yeast is not suitable for high salt applications. To test this I would suggest making a dough just as you have been but use only 1.5% salt. Let's see if this gives improved yeast performance.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

These are similar to the old Dutchess manual dough dividers which would have the same problem if not properly maintained. The solution to the problem back then was to thoroughly remove all rust and then just keep it oiled with mineral oil. DO NOT USE ANY OTHER TYPE OF OIL as it will polymerize over time and create a layer of varnish over the surfaces which will gum everything up. You can buy mineral oil from any supplier servicing the BAKERY trade (we used to get it in 5-gallon pails), sometimes it is referred to as "divider oil" or even "rounder oil", regardless of what it is called it's still just plain old mineral oil.

Shop Talk / Re: Dough Divider

Peter and Apone;

I agree, with a little baker's yeast added it might be done effectively, but let's go out on a limb here and try something that we have done with S.F. sourdough, go ahead and produce your dough just as you normally do but when it comes time to dress the skin place it on a piece of parchment paper and very lightly brush with oil, then set it aside to proof/rise for 30-minutes, then place the skin into the freezer, taking care to place it on a board or cardboard circle to keep it flat. After the skin has been completely frozen wrap in stretch film and let's see if it can be held for up to 10-days, maybe a little more. To use the frozen skin remove from freezer, unwrap and place onto a piece of parchment paper which will allow you to easily move the slacked-out (thawed) dough skin. Cover the frozen skin with a large bowl or cardboard box to help keep it from drying out (the oil that you put on the dough earlier will help in this respect, the bowl or box will keep drafts away from the skin while it is thawing. Due to the cross section dimension it won't take too long for the dough to slack-out, as soon as it is slacked-out dress and bake the skin in your normal manner. The reason why we allow the skin to proof/rise between forming and freezing is to give the dough some height to make-up for the oven spring that will most likely be less than normal (this is somewhat like a pre-proofed frozen dough skin (think Freschetta Pizzas). Please keep us informed on your results.

Dough Clinic / Re: Freezing Pizza dough

Peter;

Didn't we just have some discussion on freezing pizza dough?

If you could work your magic again it might set the stage for further discussion.

Thanks,

Dough Clinic / Re: Freezing Pizza dough

That's essentially the same dough rounding method that we use. You can also see it in detail at my web site <www.doughdoctor.com> just click on Learn to Make Pizza Dough and the method is shown in Part 2. The procedure is also shown in a video that I made for PMQ which can be found on their web site at <www.pmq.com>.

I agree that this is a very easy way to round dough pieces. We have literally done hundreds of dough balls at a time without undue strain, as for speed, once mastered it procedure is very fast! We can normally round about 100 to 110 dough

balls in 20-minutes (one person). If anyone has been in one of our seminars this is the procedure that we taught our students.

General Pizza Making / Re: How I roll!

In two words: You bet! :)

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

Apone;

A couple of things to keep in mind are;

1) your wood peel is actually better than a metal blade peel for prepping the pizza on and peeling it into the oven. Your metal blade peel is best suited to peeling your finished/baked pizza out of the oven.

2) After opening the dough ball into a pizza skin (skin) place it onto your wood peel using parchment paper or a release agent such as fine corn meal, semolina flour, wheat bran, rice flour, etc. There is no one best release agent and if you ask ten people what the best release agent is you will get ten different answers. They all work, but you will need to experiment with any one or combination to see which one works best for you.

3) After placing the skin on the peel dress it (apply sauce and toppings) as quickly as possible and shake the peel occasionally to ensure that it is still free from the peel (not sticking), after you finish dressing the skin give the peel one final shake and immediately peel the dressed skin into the oven.

You also mention using "00" flour. Pizzas made using this type of flour should be baked in a very hot oven at or above 700F/371C for best results.

There is plenty of help here at this site to get you started making some great pizzas so don't be afraid to ask questions.

Dough Clinic / Re: Problems handling wet dough. Sticking, etc.

One thing to remember about oregano is that all oregano is not created the same. Different types of oregano have a different pungency and add to that the fact that oregano has a fairly short "actual" shelf life, by this I mean that unless properly stored (refrigeration but preferably the freezer) there is a perceptible loss/change in flavor after as little as 30-days from opening a sealed container. Some suppliers will buy large quantities of oregano and dole it out to fill orders which is not a good thing as you have no way of knowing how old the oregano actually is.

One of the last things that we worked on at AIB prior to my retirement was investigating the commonly heard complaint that cheese just doesn't have the flavor that it used to have. What we discovered was that the over use of dried oregano was literally dominating the entire pizza flavor profile and you probably couldn't have tasted the "delicate" notes of Limburger Cheese if it had been used as the sole cheese on the pizza. We began experimenting with reduced amounts of oregano and our sensory panel members began commenting on the cheese flavors coming from the pizza. We then began working with Micro-Leaf oregano and found that our sensory panel had no problem identifying differences in the cheese even though oregano was being used as a flavoring on the pizza. We confirmed our findings at several pizza shows where we prepared pizzas flavored with both fresh basil and Micro Leaf oregano and were able to effectively reduce the amount of cheese used on a 12-inch pizza (our standard show format) to as low as 3.5-ounces before we started hearing comments on the lack of cheese flavor. When we were at 4.5-ounces of cheese we had a lot of comments on how good the cheese tasted even though it was a full 2-ounces less than what we used on our standard 12-inch pizzas. To a home pizza maker this may not seem to be very important but to pizzeria operators (our audience) it represented a very tidy sum at the end of a

year. 2 X number of pizzas made during a year divided by 16 X price paid for a pound of cheese. And since they don't exactly give dried oregano away the reduced use or elimination of dried oregano significantly contributed to offsetting the cost of the Micro Leaf oregano not to mention the potential for greater consumer acceptance. As a side note, we observed that show patrons would come back by our kitchen area later in the day to comment on the fact that while they normally got heart burn when eating pizza they did not get it after eating our pizza, this we attributed to the reduced amount/lack of dried oregano.

I'm not saying that fresh oregano is better than dried oregano but I will go out on a limb and say that I personally think dried oregano is overused by a large margin and this might be impacting sales for some pizzerias. We use absolute minimum amounts of basil and oregano at AJ's New York Pizzeria and believe it or not we are locked into using Grande WM Mozzarella Cheese since a taste testing indicated that you could pick up the flavor change when we used a different cheese.

Just some interesting facts that I thought I'd share while on the topic of oregano.

New York Style / Re: Oregano Pre/Post bake

The accepted R.H. (relative humidity) for a dough fermentation room is 85 to 87% relative humidity. At this humidity level the dough will not develop a dry skin over the top. If a soft, leathery skin is acceptable you can drop the R.H. down to the 80 to 82% range.

Neapolitan Style / Re: Thoughts on Natural Leaven in commercial setting

If you're lacking in fridge space you might consider bagging the dough balls as this takes much less space and it is really the "ticket" to dealing with stored not having sufficient refrigerated storage space.

As for stacking the pre/partially opened dough skins, no, what you are proposing will not work as it does not allow for rapid cooling of the skins. When cooling on screens in a wire tree rack there is free airflow to both the top and bottom of the skins which effectively cools the skins in a rapid manner. Once the skins are cooled for 45 to 60-minutes they can then be removed from the screens and packaged/wrapped as you describe here for use later in the day. The idea is to have the dough THOROUGHLY chilled before wrapping and stacking. If they are not thoroughly chilled they will continue to ferment in the stack and you're back to square one with nothing gained.

Dough Clinic / Re: New dough ideas?

Is the IDY that you are using fresh? Just opened package? Also, exactly which IDY are you using? In Europe for example, SAF and Fermipan both sell what they refer to as their Gold Label IDY. This is different from the red label product in that it has a high sugar tolerance but very poor sodium (salt) tolerance which would certainly slow the yeast activity in view of the fact that you are using 2.4% salt in your dough formula.

If the IDY is a red label product I would still consider reducing the salt level to 2% to see if that helps with the fermentation rate to give more fermentation to the dough balls.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

The mixer is very similar to an Artofex mixer (actually the name of the manufacturing company but now used in common reference to this type of mixer) which is designed to emulate hand mixing of the dough (a very gentle action) which is very popular with pastry bakery as they don't want to over develop the gluten resulting in dough that is difficult to shape into all those nifty little shapes that our

pastries come in. Since we normally don't want to develop much of the gluten, just enough to allow the dough to be handled on the bench without being overly sticky, this mixer will probably take a bit longer to properly develop the dough but otherwise it should work just fine.

Dough Clinic / Re: twin diving arm mixers for brick oven

Dan;

From your dough absorption at 45% it appears that you are making what we refer to as thin crispy crust. The problems that you are experiencing are due both to the high yeast level and the very high finished dough temperature. Balling and traying/boxing if not cross stacked isn't helping the matter any either.

Here are my recommendations to begin with;

- 1) Reduce the IDY to 0.4% of the total flour weight.
- 2) Reduce the water temperature to 70F which should give you a finished dough temperature in the 80s.
- 3) Immediately scale and ball and wipe the top of the dough balls with salad oil after you have placed them into the dough box.
- 4) Cross-stack the dough boxes so any one box is perpendicular to the one above and below it, allow the boxes to remain cross-stacked for 2-hours then cover or nest the boxes to seal them and prevent drying.
- 5) Allow the dough to cold ferment (CF) in this manner for a minimum of 24-hours before using. The dough will remain good to use for at least 48-hours, possibly longer (to be determined).
- 6) To use the dough remove box of dough from the cooler, keeping it covered and allow the dough balls to warm AT room temperature until they reach 50 to 55F.
- 7) Remove dough ball from box using a plastic scraper, place dough ball onto a floured surface or into a bowl of flour, remove excess flour from the dough ball and using your existing dough sheeter, open the sheeting rolls to give you a finished dough piece about 2-inches smaller in diameter than what you want your finished skins to be.

Place the partially opened skin on a pizza screen and place into a wire tree rack in your cooler for about 30-minutes to chill down, then cover the rack with a suitable plastic bag to prevent drying. To use the partially opened dough remove from the cooler about 15-minutes before anticipated use to warm slightly, then lightly flour the dough once again and open by hand to the full finished diameter, or if you want, you can use the sheeter to open the dough skin to full diameter. Try both methods to see which one gives you the better finished crust.

If your pizzas are heavily dressed with vegetable toppings you might want to consider baking at a lower temperature (500 to 525F) as this will allow more time for the toppings to dry out so you don't get what I refer to as a "swamp" pizza.

Like I said, this procedure should address the issues you have been having with the dough failing towards the end of the day and it will give you dough to use on the following day(s) too.

You might plug this formula and procedure change in and let us know how it works for you, we MAY need to make further changes to the finished dough temperature and/or the dough management procedure based on your observations, but this should get you pointed in the right direction.

Dough Clinic / Re: New dough ideas?

Nick57;

I'm rowing in the same boat as you are. I was raised at a time when bromate levels were five times greater than allowed today, acrylamide wasn't even a word yet, and fruit and vegetables were just that, no decisions to be made between natural,

organic, non-GMO, pesticide free, and whatever. We either bought it or grew it ourselves, we rode bicycles without wearing a helmet and Bactine was a blessing since it didn't burn like alcohol or iodine. Here I am 73-years later still alive and kick'in and except for some self inflicted hearing loss and joint pains I'm still in great health and continue to harvest deer and turkey every year for the freezer and play the part of a coyote population control specialist in between seasons. I'm not about to get overly concerned about the food I'm eating at this stage of my life. I try to eat well, eat in moderation and hope for the best. By the way we eat just about all of our meals at home, it seems anymore just about all fast food contains too much salt, sugar or fat for our liking, and when it comes to pizza we're kinda stuck in a rut anymore as it is either home made pizza or pizza from AJ's New York Pizzeria here in Manhattan, Kansas. We have a special fondness for AJ's pizza.

Pizza News / Re: Chemicals in fast food packaging

Albert was a wise man.

Amen to that.

I coined this a number of years ago: "Fear not the man who knows little, but fear most the man who knows everything for he knows not what he does not know" Life is an adventure and learning new things makes that adventure fun and exciting.....take my new call phone.....no! Please take it!! Give me my old flip phone back! OK, sometimes learning can be a little stressful but in the end it makes us better in what we do.

Newbie Topics / Re: Do I still need warm water after proofing yeast?

My mind is wired to think in bakers%.

General Pizza Making / Re: Portioning

Peter;

As you know, there is significant consumer concern over the food safety aspects of KBRO3 by many consumers, so much so that in some states it must be declared along with a statement alluding to the fact that it may cause cancer in some individuals. It is not illegal to use but they are sure not encouraging its use. In Canada as well as all of Europe and I believe Mexico it is flat out banned, due to all of this attention most of the major box chains has stopped using bromate entirely in all of their products and ditto for ADA (azodicarbonamide) due to the recent publicity. Smaller manufacturers do not bring the issue up voluntarily (out of sight, out of mind) but once consumers get wind of what is in the food that they are eating they begin beating on their war drums and things begin to change in one way or another. The smaller and regional chains especially those in the central part of the U.S. are in a much better position than those on either coast to maintain a status quo on things like bromate and ADA (after all, remember it isn't illegal) so they continue to use it but I'll bet that each of those companies have a contingency action plan for addressing the issue when the axe is about to fall on their neck. The big chains just don't want to deal with the bad publicity as it can severely hurt their bottom line (think Jack in the Box and Chipolte as two examples of bad publicity). Shhhhhhhhhh, let's keep this a secret just between us, unless you have an axe to grind with one of the companies continuing to use bromate, in that case you can contact Dan Rather and he'll take it from there.

With all of that said, I've said this before but I'll say it again, bromate itself IS a carcinogen, but it is converted to bromide during baking (harmless) and for many years it was believed that all of the bromate was converted to bromide, this is until the Japanese refined a method for detecting bromate at levels of ppb (parts per billion) and OMG! There was still some un-converted bromate present! So everyone

jumped on the ditch bromate wagon (who wants to consume a carcinogen???) and here we are today, 40-years later, and yes, there are some good alternatives available. My own personal take on it is that one has more to fear from their drinking water than from baked products containing potassium bromate....just don't eat the raw dough.

Hope I didn't bore anyone too much.

Pizza News / Re: Chemicals in fast food packaging

You will not be able to use the different types of yeast at the "same" level as the dried yeast forms are so much more concentrated, but you should use them at the same equivalency level. There are two ways to determine this at home, 1) Contact the manufacturer and ask them to provide you with a conversion chart which will show how much of their yeast will be needed to replace different types of yeast to give the same leavening performance. 2) Use a 250-ml graduated cylinder, lightly oil the inside of it, make your dough using compressed yeast at 1%, pay special attention to the finished dough temperature as it is critical in this test (target 80F) if you can, not a problem if you miss the target by a couple of degrees. Carefully scale 75-grams (exact amount is not critical BUT consistency is), and with lightly oiled hands form the dough piece into a roll (hotdog shape) that can be dropped into the cylinder with ease, use a wood rod to lightly press the dough into the cylinder so it completely fills the bottom of the cylinder. Make a note of the height of the dough (hence the graduated cylinder) and tent the top of the cylinder with a small piece of foil. Make a note of the room temperature as this will need to be relatively constant for these tests. Read and note the height of the dough in the cylinder at 30-minute intervals for up to 3-hours +/- . Now make another dough with ADY at 0.5% and try to achieve the SAME finished dough temperature that you got with the CY dough and repeat the test. If the dough is rising faster the 0.5% conversion amount is too high, if it is rising slower it is not enough, adjust the ADY amount until you get similar rising rates from the ADY as you did with the CY. Repeat using IDY. You can put the rising data (ml height on one axis and time in 30-minute increments on the other) for ease of interpretation. When you see the graphs overlying at around 2-hours they should stay pretty close together after that to the end of the test.

To activate the ADY use 1-part yeast and 5-parts water at 100F).

For home application just use regular household 5-grain strength vinegar to adjust the acidity of the dough. You can use a low cost pH meter or you can use litmus paper strips. To use the litmus paper you will need to liquefy a 50/50 dough water (distilled and deionized) blend using a blender, pour into a clean glass container, allow to set for 3-minutes and decant the liquid from the bottom of the glass container into another smaller glass container. Dip the litmus paper strip(s) into the solution and compare the color to determine pH. You will need strips to read pH values in the 4.5 to 5.5 pH range.

This should get you started in your quest.

Keep us posted.

Dough Clinic / Re: Got lost in details on my way to a great pizza dough

Try making a pizza using ONLY tomato paste for the sauce. The pizzas do not show much sign of a gum line at all, but in one of the pics there does appear to be some sauce intrusion into the crust which might be caused by your sauce being too thin. Using paste will answer that question. The wet area that you see immediately under the sauce is normal but might be improved upon a little by addressing the sauce issue if that's what it turns out to be.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

You say "during the rush" are you a pizzeria or other volume producer? If so the jury is divided, some use commercial portioning cups while others (Domino's), (Papa John's) use scales to control topping weights. Take cheese for example, average of 75-pizzas a day and 1-ounce heave on cheese for each pizza equals 75-ounces/4.68-pounds of unaccounted for cheese every day X 7 = 32.81-pounds a week or 1,706.25-pounds a year X cheese cost at let's say \$3.50 per pound = \$5,971.88 loss per year X how many stores?

If you are just making pizzas at home the scale you are looking at will probably work just fine but speaking for myself, if I know that I've got three pizzas that I have to dress and get into an oven post haste I like to have my ingredients preassembled (weighed in separate containers, low cost paper cups work great for this) so all I have to do is grab and toss but if it's for me and the family forget the portion control on the toppings, I just use the grab and toss method of dressing my pizzas. I've never had any complaints that there was too much or too little of anything.

When I'm building a new or different pizza for the first time I place the skin on a screen which then goes onto a scale, zero the scale, add sauce or whatever the first topping ingredient will be until it looks right to me, make a note of the weight and re-zero the scale, add the next ingredient until it looks right and make a note of the weight, next ingredient, etc. This way the pizza is dressed the way I like it and I know how much of each ingredient I've used so if I need to make an adjustment in the future I can always go back and replicate the original toppings and adjust the weight of any specific topping, like the time my son said it was a great pizza BUT there were not enough green olives (his favorite topping) on the pizza, so being the loving dad that I am I went back and looked to see how much green olive I had put onto his pizza, I then doubled the amount for HIS pizzas and he is now a happy camper.

General Pizza Making / Re: Portioning

Add to that the number of people who reheat their meals in the Styrofoam containers they are sent out in (Chinese fast food) and "dogie" boxes that our left overs are brought home in, or how about bringing home burgers and fries and just plopping them into the microwave to reheat reheat without removing the burgers from the wrappers. Peter is absolutely correct about the pizza boxes too. What I find strange though is the fact that Potassium Bromate has been found to be a potential carcinogen and yet we still see home bakers clamoring for flour containing it while essentially all of the major baking companies as well as all of the fast food chains have stopped using flour containing bromate for several years now.

Pizza News / Re: Chemicals in fast food packaging

Norma;

I've never seen a case where canning something that didn't need pickling improved it, but admittedly, some things tolerate canning better than others, pasta and pizza sauce are two that seem to work out pretty well as they are already somewhat acid, Alfredo sauce on the other hand, at least for me, isn't in the same ball park compared to fresh made after it's been canned.

Most commercial contract canners will have a R&D laboratory where they can work with you to iron out any difficulties which might be encountered as a result of canning your product.

Dough Clinic / Re: Question about cold packed jarred pizza sauce

No turning back now! :)

General Pizza Making / Re: Wow! (first pizza since joining this forum)

The scale that I use is the KD-8000 (someone here put me onto it). This is a really great scale with lots of weighing capacity plus you can change modes too, anymore I use it for just about everything from making apple butter, peach preserves, jerky, various cakes, bread & butter pickles, even all of my doughs are weighed on this scale. It operates on regular flashlight batteries and I still have the original set in the scale after two years now. It cost me about \$30.00 with free shipping, one of my better investments!

If you are only going to make enough dough for a single pizza though you might want to look for something with a smaller scaling range and one that weighs down into decimals of a gram. The KD-8000 only weighs to the nearest 2-grams which is fine for me as I usually make enough dough for at least 3 of whatever I'm making.

General Pizza Making / Re: Portioning

It's hard to provide any input without knowing how the SD is being managed. Some work with it right out of the cooler while others bring it out of the cooler and allow it to begin to ferment a little at room temperature before using it. There is one person who I've been working with that prepares his SD starters in individual containers (one for each dough), he feeds it, allows it to ferment until it shows good activity and then uses it to make his doughs for use on the following day. He cold ferments the dough in bulk overnight, removes it in the morning to scale and ball and place in dough boxes, some go back into the cooler for use later in the day while some is left out of the cooler for use up until about 2:00 p.m. when the next box (es) are then ready to go online. He follows the 15% rule for incorporating any unused dough back into fresh dough. It all depends upon how your SD is presently being managed as you will want to keep a process as close to that as possible but still be able to have a ready supply of dough ready to go at any time.

Neapolitan Style / Re: Thoughts on Natural Leaven in commercial setting

I weigh all of my ingredients.

General Pizza Making / Re: Portioning

When you're dealing with a natural leavening system in a commercial setting temperature control HAS to be a prime consideration or you may find one day that you have lost something in your leaven due to a microbial shift. Doing this at home is one thing, but doing it in a pizzeria is totally different as there will be more opportunities for something to go wrong and FAILURE IS NOT AN OPTION.

I would also HIGHLY recommend that you back-up your culture in remote locations so you can re-inoculate your leaven or begin a new one if the need arises without fear of getting a different flavor from a different population of micro-flora.

Neapolitan Style / Re: Thoughts on Natural Leaven in commercial setting

Personally, I wouldn't add fresh basil to a thin crust, if you want a great flavor, brush the dough skin with olive oil and then add fresh basil leaves or rolled and cut basil leaves, then add the sauce and dress the pizza to the order. Or, just add a few fresh basil leaves or cut basil IMMEDIATELY as the pizza comes out of the oven and then give it a sprinkle of EVOO and you're good to go. Forget the dried stuff, it can't hold a candle to the fresh stuff if you're looking for something different.

Dough Clinic / Re: Basil added to dough - Does it actually add taste to the crust?

The temperature of the remainder of the water is adjusted accordingly to give you your targeted finished dough temperature. When making pizzas at home this could mean using warmer water during the winter months if your kitchen is cold/cool or colder water in the summer if your kitchen is hot/warm. Your chosen method of dough management will also play a part in determining what your optimum finished dough temperature is so you will need to adjust the water temperature to achieve that temperature. As I always say, "You cannot have effective dough management without temperature control". Everything that happens with the dough after mixing is significantly influenced by the temperature of the dough after mixing. Whatever temperature you find that works best for you is your optimum dough temperature, it is then your job to see that all of the doughs you make after that are at least close to that temperature.

Newbie Topics / Re: Do I still need warm water after proofing yeast?

That's the beauty of building your own store, you can spec in what you want for temperature controls to help manage your "natural" leavening.

This is the secret to making San Francisco sourdough bread, the bakery is built around the need to control the sourdough and produce breads made with it.

Neapolitan Style / Re: Thoughts on Natural Leaven in commercial setting

I forgot to add that I've found if you pull the bag together at the top and give the dough ball a twist (spin) it won't overly tighten the bag around the dough ball while leaving just enough room for expansion. If the bag is being pulled tightly to the dough ball it is being bagged too tightly.

Prep Equipment / Re: Dough retarding in bags(?)

Yes, the bags were twisted too tightly, I normally just give the bag 3 or 4 twists and then tuck.

Prep Equipment / Re: Dough retarding in bags(?)

As you've discovered, adding more water really isn't the answer, neither is adjusting the point at which the salt is added to the dough. As you are not making a "traditional" but only "style" of pizza here are a couple of things that might help you achieve a softer, more moist crumb structure.

- 1) Increase the oil to 4% with no other formula changes.
- 2) Add 2% sugar to the dough formula, this will result in a crust that browns faster thus reducing the overall baking time which should give a bit more moisture in the finished crust.
- 3) Add 2% dehydrated potato flakes to the dough along with 5% additional water to compensate for the hydration properties of the potato flakes. This is an old trick that bakers have used for over a century to produce softer bread.

Keep us posted on your results, any pics would probably help too.

Dough Clinic / Re: dry crumb help

The prevalence of large bubbles during baking would tend to indicate that the yeast was probably not up to "snuff" as your finished dough temperature was fine and your CF was plenty long. I just made calzones over this past weekend and the yeast that I was using was ADY, hydrated it in 100F water for 10-minutes but did not observe any bubble formation. As this was the only yeast I had on hand at the time I went ahead and used it, like they say, "any port in a storm" after three hours of fermentation (if you can call it that) at room temperature the dough had changed very little from the way it was when I put it into the bowl to ferment, I let it go another two hours and saw only slight signs of fermentation but I used it anyways

as we were all waiting for calzones. They turned out OK, but that'd about all I can say for them. It is interesting to note that the dough was unusually soft and very extensible with very little elasticity indicating that glutathione had been released from the yeast cells. Upon examining the yeast packets I saw that the expiration date was October 17, 2016. Oops, my bad! We now have a fresh supply of yeast. It happens to the best of us.

Dough Clinic / Re: Dense Crumb

Norma;

Remember, I've been away from this for a couple years now so things may have changed. The "cottage business" is/was an exclusion in the Federal labeling laws (CFR's) that allows small businesses like farmer Jones to sell his canned applesauce at the local farmer's market without jumping through all of the labeling hoops. To qualify your gross business sales could not exceed a certain amount (I think it was \$50,000.00) in a year. The exclusion is probably still in place but you will need to check on it. I just checked and it is still there. Google: (federal code of regulations cottage industry exclusion for food labeling) and if you scroll down a little you will see several references to it.

Dough Clinic / Re: Question about cold packed jarred pizza sauce

Norma;

Your SCORE program is probably the same as our KVAC program here in KS, typically a good resource for help or guidance with a small business.

If you were canning salsa you're already "sitting in the saddle" as canning your sauce will be essentially the same and you're already well versed on the importance of pH control. :)

While I no longer work at AIB, they are still a good source for reasonably priced product label development which you will probably require on any prepared product (check with your local laws). There are some exceptions to this that you might qualify under which would include "cottage business" and product being sold on premise as opposed to being sold through other channels such as a grocery store or other vendor. This is also something that the Labeling Department at AIB would be able to help you with or point you to the necessary resource to see if you might qualify. The company that would prepare your product might also be in a position to provide these services too. If you need to contact AIB the person to ask for is Elaine Meloan and their number is 800-633-5137. You can also Google them at American Institute of Baking, Manhattan, Kansas.

One final note: If you do not already have one, I'd suggest setting up something like an LLC to protect yourself and your assets.

Dough Clinic / Re: Question about cold packed jarred pizza sauce

Ulli;

What you appear to have described is my past 50-years in studying pizza in a research setting. I used to be in charge of experimental baking at the American Institute of Baking/American Institute of Baking International. The problem that you are facing is that you are looking at the whole elephant and asking yourself "How I eat that?" and the answer is one bite at a time, just like everyone else does. You must break it down into manageable tasks and address each one thoroughly until you can make the dough respond in a predictable manner (we call it steering the dough) by implementing the responses that you have identified. Until you can "steer" the dough you haven't identified the mechanism or influence that the test ingredient/subject has on the dough rheology.

Take yeast for example:

First you need to develop a thorough knowledge and understanding of yeast, then list all of the things that can/will influence the yeast such as;

Type of yeast (CY,ADY, IDY,PADY,)

Finished dough temperature

pH of the dough (like when sours are used)

These tests would be conducted using nothing but FRESH yeast samples used at a typical use level for a specific type of pizza, then using the CORRECT conversions, begin substituting one yeast type for another and record results (finished dough temperature MUST be the same for ALL doughs. Now you are getting an idea of what if any differences might be expected with the different yeast types.

Now you're ready to look at variations in finished dough temperature, using each type of yeast you will need to adjust the finished dough temperature in 2F increments from the lowest that might be used (55F) to the highest (110F) and record your findings. By the way, if you miss the target finished dough temperature that dough must be culled from the test as the results will not be valid, and any testing done over more than one day will require that a control be included against which all results will be measured. Note: The control dough MUST be repeatable and you MUST demonstrate your ability to CONSISTENTLY replicate the control dough day after day. This is critical as all results will be measured against the control, and if on any day the control does not perform within its normal parameters the days work must be considered invalid and repeated.

Now you're ready to repeat all of this again but this time you will be looking at the impact of pH on the yeast activity as well as dough feel.

With pH understood you can now move on to how the amount of yeast impacts the overall dough rheology, in this case you will probably begin to see some diverging results occurring such as amount of yeast used v/s finished dough temperature, this is where the fun begins as you will begin to see that the yeast level can be reduced with higher finished dough temperatures BUT eventually you will see that the dough begins to collapse under the weight of the ingredients in the center portion of the pizza due to insufficient leavening power coming from the reduced yeast levels.

And this isn't even all of the study on yeast, there are still all of the other dough ingredients and their interactions such as yeast with salt, yeast with sugar, then there is pH and crust color, pH and crumb structure, sugar v/s milk , sugar v/s egg, and then you begin to study the water, amount of water (dough absorption), type of water (hard water, soft water, de-mineralized water, sulphur water (within potable limits) and water pH, and water temperature and how it affects the dough....Whew! Lots to study there, it took me most of those 50-years in the controlled conditions along with all of the resources of a certified testing laboratory to address most of that. I say most because every day someone will ask a question that will cause me to say to myself "Gee, that would have been a good one to look at in our study". That's the scientific approach which gets to the soul of pizza but if you want to take a less in-depth approach you might think of just looking at time, temperature variations with each of the different yeast types on a couple of different types of pizzas. Think of it like developing an owners manual as opposed to the blue prints for making it.

Dough Clinic / Re: Got lost in details on my way to a great pizza dough

Insufficient yeast, poor yeast activity, insufficient dough absorption, finished dough temperature too cold, insufficient pan proofing time.

It could be due to any of those. Are you allowing the dough to rise to a specific height in the pan (pan proofing) before you dress and bake the pizza?

Dough Clinic / Re: Dense Crumb

Peter;

Like the approach taken by essentially all commercial producers the frozen dough manufacturers try to produce a dough sold as "pizza dough" that in the broadest terms meets the needs of the greatest number of people. In other words, it's a "do all" dough specific to no particular type of pizza. My standard pizza formula: 100% flour, 1.75% salt, 2% sugar, 2% oil, 58% water, and 0.375% IDY comes close the formula used by many frozen dough manufacturers except that they use CY at 2% (standard frozen dough procedure) and usually include some type of oxidation such as ascorbic acid or an enzyme based bromate replacement as well as a reducing agent to help with gluten development. Additionally, while we normally use a moderate protein content flour the commercial manufacturers use a high protein flour (13.5% and more) or supplement the dough formulation through the addition of vital wheat gluten. There are also some smaller frozen dough manufacturers including coated chemical leavening in their dough formulas to help with oven spring out at the end of the dough's shelf life (12 to 21-weeks).

Keep in mind too that there are custom frozen dough manufacturers like Custom Foods, De Soto, KS, Specialty Bakery, Indianapolis, IN, Drayton Foods, Fargo, SD, and others who mill make frozen dough to a customer's specifications so any kind of pizza dough (within reason) can be had just for the asking.

As for frozen shelf life, I will stick to my guns, we have seen too many doughs fail for what appears to be no reason at all when they are not BLAST FROZEN and held for more than 15-days. Yes, this does apply to a commercial, pizzeria setting where dough failure is not an option and a softer dough than normal cannot be addressed by using a little more dusting flour or handling it a little differently, or even re-balling it. Can you freeze dough and hold it in your home freezer and hold it for a year? Maybe? Will it produce the same results as a dough which was stored for 15-days or less? In one word no. If anyone has found that dough formula please let me know as we are well on our way to becoming multi millionaires! Any of the above named companies plus a bunch of others like Riches would pay a "kings ransom" effectively increase their effective frozen shelf life. There are a lot of things that we can do as home pizza makers and get away with it because we do have the ability to respond to address dough issues as they come up and take action which will allow us to still produce a great pizza but for the most part this cannot be done with commercial dough going into a commercial market. Yes, the dough does change but we are automatically taking corrective action to deal with the problem, I do it all the time when making pizzas at home, just like all of us here but that is not to say that there aren't changes taking place in the dough, failure to recognize that is a failure in the understanding of the physics and microbiology of frozen dough.

Neapolitan Style / Re: Freezing Dough

Dough that is frozen in a static freezer like a home freezer as opposed to a commercial blast freezer can be frozen for up to about 2-weeks +/- a few days and still expect to get decent dough performance. When you freeze, DO NOT freeze as a dough ball, I like to freeze the dough in a 6" diameter cake pan. Oil the pan, fit dough into the pan, freeze thoroughly, remove from pan, lightly oil, stretch wrap and place back into the freezer as QUICKLY as possible. No need to vacuum seal as there isn't any benefit. To use, just remove frozen dough from freezer, immediately unwrap and place on an oiled cookie sheet to slack-out (thaw), drape the stretch wrap that you took off over the dough to prevent drying. As soon as the dough reaches 55 to 60F remove from the sheet pan and place on a floured surface and begin opening the dough into a skin, dress and bake. It will probably take about 45

to 60-minutes for the dough to slack-out properly before you can begin opening it. The dough will freeze more efficiently and faster as a "puck" rather than as a ball and it will slack-out faster too. Yes, they sell commercially frozen dough in this same manner but it is only available through food distributors by the case. We used to get it in for our students to work with so they could experience working with frozen dough when I did our pizza seminars at AIB.

Neapolitan Style / Re: Freezing Dough

Peter;

As the big, original pizzerias branched out into franchised stores they did change over to conveyor ovens, not because they wanted to but because of the added expense of needing to purchase so many reel ovens, not to even mention the installation costs and space needed in the store for one of these ovens (about the size of a small office). Of those that I've talked to, if they had their druthers, they'd druther have the reel type ovens but it's just not possible, plus the conveyor ovens are so much easier to operate (not that a reel oven is difficult to operate) but if you can figure out which end to put the pizza in and which end it comes out from the rest is intrinsic. One word about installation costs, an air impingement oven is about as simple and easy to install as it gets while the reel ovens may need to be disassembled and reassembled on site plus they need to be hard plumbed once installed (ain't gonna be moved either) while the air impingement ovens can usually be hooked up via a flexible gas line if the oven is planted on the floor as opposed to being on wheels. Indeed, there are a lot of advantages to air impingement ovens, their only detraction is that they have all the ambiance of a shoe box.

Commercial Ovens / Re: Rotating ovens

The correct terminology for that type of oven is "reel" oven.

Baxter

Reed

Fish

Cobblestone

Middleby-Marshall

These are the ones that immediately come to mind. By the way, Cobblestone doesn't actually make ovens, they just rebuild/recondition the reel ovens made by Middleby-Marshall for resale. This is the oven of choice in Chicago for making their deep-dish pizzas.

Commercial Ovens / Re: Rotating ovens

Norma;

The key to preventing clostridium growth is pH (acidity). If you maintain the pH sufficiently low it will inhibit the growth of clostridium. There should be no problem with canning your own sauce BUT remember this, the number one complaint about tomatoes is that many consumers don't like the acidity so the growers are developing strains of tomatoes that are LOWER IN ACID, this means that you will need to be doubly sure that the pH of your sauce is within the correct range to inhibit clostridium growth, DO NOT GO BY THE TYPE OF TOMATO as it may have been changed to produce a lower acidity fruit. Many states have a program in place that is designed to assist small businesses in getting started or in developing new products, they utilize the expertise of retired and active business men and professors to provide the services needed at little or no cost. This might be an option to explore, if this is not available the next step for you to take might be to

contact the food science department of a nearby university to see if you can visit with a professor or graduate student to receive some guidance (do's and don'ts) which will go a long ways in keeping you and your customers safe. I'm glad to see that there is a home inspection program in place too, in fact that might be a better place to begin your search for guidance. In the mean time, use Google to learn as much as possible about safe canning practices (paying particular attention to pH recommendations) as this will shorten the learning curve.

Garlic oil is the most potentially dangerous one as it is hard to control clostridium as oils are not typically acidified sufficiently, and when they are it is no longer garlic infused oil, but rather salad dressing (vinegar & oil).

I might also add that the most common way that people get botulism poisoning is when a young house wife cans food in the same manner as her mother or some other family relative of the past did not knowing that the acidity of the product being canned is now less than what it was then. This is where a simple pH meter can literally be a life saving device.

Dough Clinic / Re: Question about cold packed jarred pizza sauce

Spring form pans usually work well in this application but I have not used one yet with a glass bottom (only a metal bottom). Typically we use a baking temperature of 450 to 500F with a total baking time of 30 to 40-minutes (assuming raw sausage is used). If pre-cooked sausage is used the baking time can usually be adjusted to something in the 20 to 25-minute range depending upon your oven and dough formulation used. I like to bake this type of pizza in the center rack position being sure to spin the pizza about half way through the baking cycle. If you find that you are getting too much top color place a piece of foil over the pizza to reduce top heat.

General Pizza Making / Re: Deep Dish Pan Question

Depending upon the finished dough temperature (temperature is what controls the rate of fermentation) I don't think 6 to 8-hours at room temperature is going to be enough. What is your finished dough temperature?

Dough Clinic / Re: Air bubbles after bulk ferment

The next time you make the pizza, remove a slice and invert it on your counter/table top, then using a box knife/razor knife, razor blade cut the slice in half from rim to point. Be sure to cut lightly, do not press down hard as you are cutting through the crust. This will allow the entire crust portion to be viewed without interference of the toppings. Please photograph this and sent it to me. From the present picture it appears to be oil that's causing the problem but I can't be sure until I see the above.

Dough Clinic / Re: Pizza bottom nice and brown, top side wet - why?

I've never seen any difference except in cost so I always use the "house brand. Olive oil is a WHOLE DIFFERENT STORY though.

Dough Ingredients / Re: Best brand of corn oil for deep dish?

In all but the most technical terms the use of "absorption" and "hydration" can be used interchangeably. I just use "absorption" because it is the term most widely used in the baking industry to express the amount of water used to make a specific dough or to express the amount of water absorbed by flour such as in a mill report on a flour sample where the flour is reported to have X% absorption.

Sorry for any confusion.

Sicilian Style / Re: Dough Proofing

Trossite;

Clarkth is "spot-on". When we talk about dough absorption in percentages we are saying that the amount of water added to make the dough is equal to X-percent of the total flour weight. So, if the flour weight is 500-grams and the dough absorption is 62% the amount of water added would be 62% of 500-grams (500 X 62 (press the "%" key) and read 310-grams in the display window. Now, if we want to increase the absorption to 65% the math would be the same: 500 X 65 (press the "%" key) and read 325-grams in the display window. Remember, the answer will ALWAYS be in the same weight units (pounds, ounces, grams, etc.) that the flour weight was expressed in.

Sicilian Style / Re: Dough Proofing

The next time you make dough try increasing the absorption by a couple percent. The increased dough absorption will allow the dough to rise more easily creating greater oven spring as well as proofed height, this should give you a better bake-out at the same time which will address the gum line.

Sicilian Style / Re: Dough Proofing

I like to brush the crust with olive oil as soon as it comes out of the oven then drizzle some olive oil over the entire pizza.

General Pizza Making / Re: do you brush your crust with anything?

I use instant dry yeast (IDY) and Pillsbury Bread Flour.

New Forum Members / Re: General Dough Making

That will help but where the real problem is at is with the inside of the calzone. You need to allow sufficient baking time to allow the top and bottom of the calzone to get fully baked, if not you may find that the calzone is nice on the outside but too soft or sometimes even gummy on the inside. You might try double panning your calzones to reduce the bottom heat/bake, this should allow for a longer baking time, if you find that you are not getting enough bottom color just deck the calzone for a minute or so before removing it from the oven. For the cheese that I use in my calzines (my son's favorite) I use half mozzarella and half ricotta. It makes for a smooth cheese that isn't too runny. Don't forget to cut a couple of steam vents in the top and as soon as it comes out of the oven brush with melted garlic butter and then sprinkle with grated/powdered parmesan cheese. Or you can brush with milk just before baking and then sprinkle with shredded parmesan cheese, the milk provides a nice color and the baked parmesan has a great flavor.

Dough Clinic / Re: Dough recipe calls for 00 flour, does it matter if it is "All Purpose 00 flour?"

My personal favorite olive oil to use in the dough (we have for years) is pomace oil. I even use it in the sauce. I save the EVO stuff for salads, post bake drizzle, or use as dipping oil when combined with a little balsamic vinegar.

Sauce Ingredients / Re: Recipe calls for "light" or "extra virgin" olive oil. But oven runs 550, so why

We had a very similar oven for baking specialty hearth breads when I worked at the American Institute of Baking but ours came almost fully assembled so I can't be of any direct help but you might want to see if you can identify/locate one of their installers or find a bakery that has one of their ovens. Most manufacturers will share with you who has one of their ovens for you to look at, then you can ask the

"40 questions" concerning how the oven was delivered and installed. Additionally, I Googled MIWE ovens and got a number of hits, one of which provides a link to contact the manufacturer with technical questions. You might contact them saying that you have one of their ovens (be prepared to provide model and serial number) and ask them for instructions for disassembly. It appears that each deck is an independent oven in itself so I'm guessing that once you remove the outer shell you should be able to remove each deck independently for relocation. Just be sure to video the entire process and mark each part for correct reassembly.

Good luck,

Shop Talk / Re: Deck Oven Disassembly

What is your flour weight? When I go from cold fermentation to room temperature fermentation I normally use one 1/3 of the CF yeast level and when going from RT fermentation to CF fermentation I will typically use 3X as much yeast.

Dough Ingredients / Re: Help please with IDY adjustment for Room Temperature Ferment vs Cold Ferment

You're right, that's exactly what it is in simplified form. I can't see any advantage to using it to remove a baked pizza though, a metal blade peel will just slip right under the crust, then all you need to do is to lift it out.

General Pizza Making / Re: Pizza peel has now been revolutionized

In the baking industry we use a similar principal to transfer formed pita onto the baking deck of a pita oven (700 to 800F). This is accomplished by using a Teflon belt on a retracting conveyor with a nose roller of only about 1-inch in diameter. What is being discussed here is a manually operated retracting conveyor. They work very well. In my travels I will see if I can come across a used replacement belt (no value commercially) to share.

General Pizza Making / Re: Pizza peel has now been revolutionized

My only burning question:

Waltz?

Fox Trot?

Tango?

OK, so I'm showing my age.

From a practical stand point I might buy into the concept that under certain circumstances, the vibrations (Good Vibrations) could agitate a liquid and thus affect bacterial activity....boy! I'm out on a limb on that one though!

Chitchat / Re: Music Fermentation Method ?

The only problem that I've encountered a number of times with the Marsal ovens is NOT an oven problem, but instead an installation problem. Marsal ovens already have a gas pressure regulator installed in them (please confirm before installation as this may have been changed) and when an additional (external) gas pressure regulator is installed you will experience all kinds of problems with the oven temperature and recovery time. This is covered in their installation directions which it seems goes unread too many times, or the plumber knows what the codes are and insists the external regulator is needed. Just follow the directions and you won't have any problems.

Shop Talk / Re: Double Deck Marsal M60 vs BP vs Blodgett

Any bread will stay soft longer than a pizza crust due to the difference in ratio between the crumb and crust portions of the two products. Bread has a much higher ration of crumb (white portion) to crust (brown portion) than pizza crusts. The crumb portion has approximately 45% moisture content and the outer crust only about 8% on both products immediately after baking so as the product cools the moisture equilibrates and will be lower for the pizza crust than for the white pan bread. Other reasons for the difference are that the pan bread was cooled to approximately 95F and then immediately bagged to prevent any further moisture loss. The baking of the white pan bread is carefully adjusted to give the loaf an internal temperature which ensures that the dough is properly baked but no more than necessary. Pizza crusts are baked to achieve a dry, crispy crust and to a higher internal temperature than white pan bread which further produces a firm feeling crumb structure. White pan bread is designed to have a finished total moisture content of approximately 40% while pizza crusts, typically have a moisture content of around 26% making for a firmer product. Formulas for white pan bread typically contain "emulsifiers" designed to retard the staling process giving a softer crumb structure with extended storage time (an example of this would be sodium stearyl lactylate (SSL) in conjunction with a hydrated mono-diglyceride). Emulsifiers don't work well in pizza crusts as the crusts are too low in moisture content, are baked at too high of a temperature resulting in too high of an internal temperature, and since these are "emulsifiers" which are hydrophylic/lipophylic bonding agents they grab onto water molecules like crazy, so when the emulsifiers are in the dough they will grab onto water from the sauce and toppings making for a lovely gum line that you cannot get rid of.

As for the ingredient deck shown for the bread, it is a pretty standard bread ingredient statement showing calcium propionate: A mold and rope inhibitor; emulsifier: Most likely SSL and mono-diglycerides (very effective for retention of softness in BREAD); mineral salts: (zinc oxide and electrolytic iron) these are a part of the enrichment fortification of the bread as are the vitamins.

There you have it, nothing special, just plain old white pan bread.

Dough Clinic / Re: Tough Leathery Crust - Why oh WHY

When you do that I'd suggest placing the pan in a shallow cookie sheet with a wet towel under the pan to put some moisture into the air. DO NOT PLACE THE PAN IN WATER as it will have less evaporative surface and not work in the same manner.

Sicilian Style / Re: Dough Proofing

Actually, for deep-dish you can roll it out as soon as the dough can be worked. Roll it out about an inch larger in diameter than the pan then lift the dough piece and transfer to the pan. I like to use a tooth pick inserted into the dough to determine its thickness, remember, you're looking for something right around 5/8-inch thick. If your range top heats up a little with the oven on the top of the range is a good place to proof the dough once you have it in the pan. Just remember to cover it so the dough doesn't dry out during the proofing period.

Sicilian Style / Re: Dough Proofing

The dough exhibits significantly less tendency to stick to the wood peel and there is less chance for moisture condensation to cause stickiness with the wood peel than a metal peel, add to that the wood peel has a rounded over edge/blunt which makes it a lot more difficult to get under the edge of a pizza and for good measure it is heavier than a metal/aluminum blade peel so the metal blade peel is easier to handle with a pizza on it. From strictly an ascetic view the wood peel will soon

become dirty looking if you use it to peel pizzas out of the oven while the metal blade peel can just be wiped off. Wood peels should never be washed, instead they should only be wiped down with a damp cloth and dried immediately. I like to wipe mine down with mineral oil occasionally to help keep the wood sealed which makes cleaning a snap and helps to prevent any warping at a later date. If you find that your wood peel just has to be reconditioned that's easy to do too, just lightly block sand using 600-grit sand paper (no water) and then reseal using mineral oil and you should be good for another five years of service.

Newbie Topics / Re: Modifying Aluminum Peel

Why not just use a wood peel? I use one all the time and never have a problem. I just use a little fine grind corn meal mixed with a little semolina flour for my "at home" peel dust. When working in a pizzeria I like to use equal parts of flour, semolina flour and fine corn meal blended together for my peel dust. Everyone has their own favorite peel dust so don't be afraid to experiment to see what works best for you. By the way, use your solid blade peel for removing the pizzas from the oven, never use a wood peel for this.

Newbie Topics / Re: Modifying Aluminum Peel

For baking calzones you might want to try baking on a pizza screen (be sure to season before using) as the pizza screen will allow you to give your calzones a much better bake than directly on your stone.

Dough Clinic / Re: Dough recipe calls for 00 flour, does it matter if it is "All Purpose 00 flour?"

If you are planning to use an oiled pan my advice is to pin/roll the dough out to a circle an inch or so larger in diameter than the pan and then transfer the formed dough piece into the pan. Hand forming a dough ball in an oiled pan is akin to pushing a rope up-hill. If you use shortening such as Crisco/Butter Flavored Crisco, margarine, butter, lard, etc to grease the pan you can easily press the dough by hand in the pan. Once you have the dough shaped to the pan cover it to prevent drying and allow it to rise at room temperature or in a warm (80 to 90F) location for 45 to 75-minutes which should give you a dough thickness of about 5/8-inch or so, then dress and bake at 450F.

Sicilian Style / Re: Dough Proofing

We see that a lot on crusts made using frozen dough too but I've never considered them to be sufficiently significant to contribute to any significant level of crispiness.

Dough Clinic / Re: How to achieve "micro-blistering" with cold ferment only

Mo;

Pizzas that are baked directly on the oven deck typically do not hold up as well as those baked on a screen or disk, the reason being is because they are just baked so much faster so the crust develops a thin crispy outer layer but the inner crumb portion (crust needs to be thick enough to have an inner crumb structure) never develops the dry firm structure necessary to retain the crispiness. When baking on a screen the baking time is typically somewhat longer due to the dough not being in direct contact with the hot surface of the oven deck which means that the crust will have a better chance to bake thoroughly throughout and have a better chance of retaining its crispy properties. A few years ago I was working in a pizzeria in Philadelphia where they were baking their pizzas at 900F right on the deck. The baking time was right at 90-seconds. The pizzas were nice and crisp when they came right out of the oven but by the time they got to the customer at the table

(just a few feet away) they were so soft that customers would roll the slices like a jelly roll and eat them using a knife and fork....it seemed to work well for them as it was different, and their customers wouldn't want it any other way. This restaurant was dine-in only, no DELCO.

Dough Clinic / Re: Tough Leathery Crust - Why oh WHy

PG;

I'm glad that you went on to describe the blistering that you are looking to achieve, when you mentioned "micro blistering" I thought you were referring to the tiny blisters, looking something like a heat rash, but instead it appears that you are looking for the small bubble formation in the dough that is notorious for contributing to a crispy crust. This is the same structure that makes the cracker type crusts so crispy. Your observations are correct in that fermentation is needed to develop these blisters (actually small bubbles about the size of a cherry pit). You can increase the amount of fermentation the dough receives in any given length of time by increasing the yeast level but there is a point which is different for all doughs where during oven spring when all that yeast begins producing leavening gas and that gas is expanded by oven heat that the bubbles begin to disappear and form into larger, uncontrollable bubbles. I think a better approach would be to just increase your finished dough temperature in 5F increments until you achieve the amount of fermentation necessary to give you the bubbles in your dough.

Temperature is a driver of fermentation so by increasing the temperature and keeping everything else the same you will get more fermentation within that given time without the potential oven spring issues experienced with high yeast levels.

Dough Clinic / Re: How to achieve "micro-blistering" with cold ferment only

I've never found it necessary to use any kind of finger test to determine if the dough ball is ready to open when using a sourdough unless the dough is tight/stiff enough to retain its ball shape as it is when making sourdough bread and rolls but when I make my sourdough pizza dough I like to have it more like a soft regular pizza dough, the reason being is because that's just what I'm used to working with. The "finger test" is used to assess a point in dough fermentation where the dough will not exhibit excessive memory while being opened into a skin.

Newbie Topics / Re: the finger test

As most here know, I am fond of cold fermentation for reasons of both finished crust flavor and dough management. For most home bakers a finished dough temperature of 70 to 75F should work quite well, but depending upon how you are managing the dough you might go as high as 80 to 85F. For the most part this means you will need to use water at around 65F.

Dough Clinic / Re: par bake trouble shooting

Stephano;

With a spiral mixer low speed should be just fast enough to blend the dough ingredients together without splashing anything about in the bowl. Second or medium speed should be just fast enough to begin turning the dough as it interacts with the spiral during the gluten development phase of mixing (after about 5-minutes) Like with any other mixer mixing at too high of a speed will be hard on the mixer and potentially shorten its life expectancy.

Dough Clinic / Re: Best RPM with Spiral Mixer for Neapolitan Pizza

We have always had the best results by mixing (65 to 70F target finished dough temperature), straight to scaling, balling, flattening the dough balls a little, oiling

the dough balls, and wrapping by placing into a plastic food bag pulled tightly to the dough so there is little headspace/air around the dough puck. Close the bag using a quick-tie and take directly to the freezer. To use, just remove from the freezer keeping the dough ball in the bag and place directly into the fridge for about 12-hours, then turn the dough ball out of the bag and allow to rest at room temperature for 1-hour (be sure dough ball is oiled and covered with a piece of plastic (inverted bowl works well too) as this will prevent the dough from drying. Now re-ball the dough and manage it the same way you would a dough that just came off of the mixer and had been balled.

Dough Clinic / Re: Freezing dough balls:

The pictures tell the story, I really think that your problem is two fold. 1) I think your dough is somewhat over fermented and 2) from what I see in the pictures the center section of your crust is flat. devoid of any structure and no crumb structure at all. This can be caused by over fermentation resulting in the dough collapsing under the weight of the topping ingredients, or you are forming your skins with a too thin center section (very common). Some believe that the thinner the dough is the crispier the crust will be, not correct. When the dough is too thin the moisture from the toppings quickly drains down into the crust causing it to get soft and even soggy which in turn results in a tougher than show leather eating characteristic after a few minutes out of the oven. Some things to experiment with are increasing the dough ball weight so you don't have the problems opening it into a skin (the fact that you tore a hole in it tells me you were having a problem) or maybe the dough was just so weak that it tore just trying to shape it? The other thing to try is to reduce the total dough fermentation to see if that helps. Dough temperature is what drives fermentation and from what you have described it sounds like you were having a dough temperature problem....if nothing else, reduce the finished/mixed dough temperature by 10F to see if that helps.

Dough Clinic / Re: Tough Leathery Crust - Why oh WHY

I lightly oil the dough ball and drop it into the bag, then force all of the air out so the bag is snug around the dough ball, twist the open end of the bag into a pony tail and tuck it under the dough ball as I place it in the fridge. To get it out of the bag just invert the bag letting the dough ball drop out of the bag onto a floured surface and begin working your magic on it. The bags can be reused if you wish.

Prep Equipment / Re: Dough retarding in bags(?)

PD1;

Can you tell us how the dough handled/felt when you were opening the dough ball into a skin? A picture could be worth a thousand words in this case.

Dough Clinic / Re: Dough balls

You are indeed correct. There is a huge amount of competition between the yeast companies so they MUST have yeast that is indistinguishable from that of their competition if they are to ever compete in the bakers yeast market, this is why they are essentially the same when it comes to flavor of the finished product...there is no "good" or "bad" but different is 110% unacceptable. We have looked at this many years ago and found that many of the differences in flavor were the result of incorrect substitution levels, incorrect activation (ADY or IDY) and age of the compressed yeast (CY) also played into it. When it comes to finished product flavor in a yeast leavened product yeast level, dough temperature, and fermentation time/conditions are the main driving factors in flavors associated with yeast. Finished product flavor is VERY COMPLEX and is influenced by MANY different

things, it is so complex that the flavor has never been able to be replicated or synthesized even in the best flavoring labs in the world. You can get a cracker like flavor but not a bread like flavor which is close to that of pizza (think French bread) which is made using essentially the same dough formula as pizza.

Dough Clinic / Re: idy vs ady vs fresh yeast dough flavor?

I think you have it in reverse. Malted flour will most likely give you more consistent dough performance, then you can add non-diastatic (inactive) malt to the dough for its unique flavor and crust color just like you would add any other sugar.

Dough Clinic / Re: organic vs. non-organic flour?

Hey Lucky Duck, you're a pretty smart duck too! What you have described is an age old test and it works pretty well too with most dough formulations, but like everything else there will be exceptions to the rule, sometimes depending upon flour strength, type of pizza being made and how you are opening the dough balls into skins you may need to make adjustments. An old trick that I've used over the years is to do exactly as you have indicated and open a dough ball, if the dough still exhibits too much strength/memory let the next dough ball proof additional time but be sure to note the length of time beyond your "finger test" that you end up proofing the dough ball(s). This way in the future you can express your correct dough ball proofing as passing the finger test plus X number of minutes. You can go with the total time only if you are controlling the finished dough temperature as differences in finished dough temperature will greatly influence the amount of fermentation the dough receives over time but "finger test" plus time is always pretty accurate. I forgot to add that you also need to know what your finished/mixed dough temperature was when doing this.

Newbie Topics / Re: the finger test

It allows time for the heat to penetrate into the center of the dough during baking so you get a complete and thorough bake. Too high of a temperature can/will vaporize water creating a bubble (pocket), now you know why pita is baked at high temperature. It will also flash dry the outer portion of the dough creating an insulating barrier to further heat penetration. It's a no win, no win situation trying to par-bake your crusts, especially a thick crust at high temperature. Remember, you don't want more color on the crust than you ABSOLUTELY need to have to get the crust thoroughly baked. High heat = fast crust color development. If the crust color is too dark on the par-baked crust it will get too dark during the final bake before the toppings are finished baking, or in some cases the crust color might be OK and the top of the pizza is done but the crust is only luke-warm in the center :(Once you have the crust color down pat all you need to do then is to maintain that color as closely as possible, pretty easy to do BUT requires attention on the part of the oven tender at a deck oven.

Dough Clinic / Re: par bake trouble shooting

Milled from Canadian hard red spring wheat. That puts the protein content between 12.5 and 13%. It should be just fine for making pizza. A good reference to this type of flour would be something like General Mills Superlative.

Go for it! :)

Dough Ingredients / Re: Patent Flour

If the bag said "Fancy Short Patent Flour" it is most likely a pastry type flour but if it just said "Patent Flour" it is probably a bread type flour with a protein content that could range from a low of 11% to a high of around 13.5%.

The term "Patent" is just a name given to the more highly refined types of flour and really doesn't indicate much else. A true, high quality bread flour might be described as a Long Patent Flour from Hard Wheat Varieties.

Dough Ingredients / Re: Patent Flour

Just the other day we made that same trip over to our local Verizon store, my wife and I upgraded our ancient flip phones and got a pair of Samsung Androids, the learning process now begins all over again! Sorry, but I personally am not very fond of a phone that is smarter than I am! :)

Chitchat / Re: Smartphones, Finally Had To Get One!!!! What's everyone else got??

I might also add that when mixing the dough by hand I like to use a wooden spoon or wooden scraper (like a spoon but flat) to mix my dough, it won't bend and when you think you might break the handle you know it's time to stop mixing. I have a home made pizza dough "recipe" posted in the PMQ (Pizza Marketing Quarterly) Recipe Bank at <www.pmq.com> just use "dough" for your search word.

Dough Clinic / Re: Can I make dough by hand in a plastic bowl or does it have to be glass?

For a long time or until exposed to temperatures of between 160 to 180F. Normally the powder is pretty hygroscopic so it clumps-up pretty bad if you don't keep it tightly sealed and away from humidity.

Dough Clinic / Re: par bake trouble shooting

A commercial or proven culture is almost always better than a home brewed one since all of the fine tuning and culturing for flavor has already been done for you. Just remember to keep two of them going....just in case.

Neapolitan Style / Re: How to achieve the burnt char dough taste?

Egpl;

If you are hinting at putting some cheese on the dough at the time of par-baking, don't, you will open a whole bucket of worms, so to speak. Your food safety department will then require that you refrigerate the par-baked crusts where with only the sauce there is no need to refrigerate. Why the hang-up on refrigeration? Because you will then be using a crust that is significantly colder than a room temperature stored crust and considering the insulating properties of a baked deep-dish pizza crust, it will be all but impossible to bring the crust portion up to serving temperature without over baking the top of the pizza, and if you were able to do it the baking time would need to be so long that the crust would be dried out to the point where it would have all the lovely eating characteristics of a thick piece of Styrofoam, especially as it cools. :(

Dough Clinic / Re: par bake trouble shooting

Egpl;

Just to bring you up to speed, the degree Lintner is a measure of the enzyme (amylase) activity of the malt. The amylase converts starch to sugar which is why you see more browning with a high degree Lintner malt or with high malt levels in general. It is this increase in sugar level which results in the felt stickiness. To help keep things on an even keel I would suggest reducing your present 60-degree Lintner malt to 0.5% and replace the remainder with non-diastatic (non-enzyme active) dry malt powder. This should keep the flavor of the crust pretty well where it is presently at while reducing the stickiness. Because there will not be any

topping on the dough it will rise much faster and spring quite a bit more than a fully topped pizza. This brings up a good point though, one that I have not personally tested yet on a par-baked thick crust. When making par-baked thin crusts we can get a much better bake if we apply about half of the sauce to the top of the dough immediately prior to baking (this does wonders at keeping the dough from bubbling during baking if you have done your part time and temperature wise), you might try this when you are par-baking the deep-dish crusts. When we do this we just add the other half of the sauce at the time the pizza is dressed for an order. There is no food safety issue in doing this as the par-baked crusts can just be stored right at room temperature. When you want to use the par-baked crusts just pop one into an oiled deep-dish pan, apply the other half of the sauce and the toppings called for on the order and bake as previously directed, keeping in mind that you will most likely need to experiment a little to fine tune the exact baking time and temperature....we should be able to guide you through that if you have a problem.

Please keep us posted on your progress.

Dough Clinic / Re: par bake trouble shooting

I don't even know if BB margarine is made anymore or not. BFC is awfully hard to beat as a substitute.

General Pizza Making / Re: Oil For Use in Various Styles Using Pans

Peanut oil is also quite good, but for Chicago style pizzas where Blue Bonnet margarine used to be the "gold standard" I like to use Butter Flavored Crisco.

General Pizza Making / Re: Oil For Use in Various Styles Using Pans

It's actually pretty easy to start a culture of your own, the only problem is that you don't know what to expect from your sourdough until you actually have a chance to try it. Make a 100% absorption dough by just stirring or whisking the flour into an equal weight of flour, place into a large diameter bowl and set out some place in your house (kitchen is where most of us do this in) and allow it to act as a piece of fly paper to catch and hold (that's why you want to have a large diameter bowl) any stray yeasts and bacteria in the air, then transfer to a glass jar or other suitable container and allow it to grow/ferment for 2 to 3-days. You should see some bubbling beginning to take place, then divide into two equal portions in different glass jars/containers, feed by adding a 50/50 flour water mixture to the starter to double the sourdough quantity. Allow to incubate in the fridge or at room temperature until you see bubbles forming again, the sourdough starter is now ready to use. I normally use 15 to 20% based on the flour weight, remember that it will contain 50% water, so reduce the added water by half of the weight of sourdough starter you add to the dough. For the best flavor don't add any yeast, let the sourdough starter provide all of the leavening but this is a longer, slower process. If you want to speed things up a bit you can add a small amount of yeast to your dough formulation. If you like the flavor, congratulations. If you don't you will probably want to try again and hope for a better mix of microflora which will give a different crust flavor. Why two sourdoughs? If you should lose one you will always have the other one to use to inoculate a new starter keeping the same microflora and you're back in business. I normally feed my starter once a week by removing 50% and replacing it with the 50/50 flour water mixture BUT the starter will not be ready to use for a couple of days. I have found that I get a different flavor profile between a cold stored and room temperature stored starters, regardless of how you store it the idea is to try to keep the temperature somewhat constant. This is just the way that I do it, there are probably hundreds of other methods

which work just as well or better, perhaps some of the other posters will share their methods with you. It's really pretty easy once you get the hang of it.

Neapolitan Style / Re: How to achieve the burnt char dough taste?

That is a "slug" of malt at (60L). I'm surprised that the dough isn't getting sticky.

Dough Clinic / Re: par bake trouble shooting

It sounds like you have a good starting formula to work with, I'm in agreement with jsaras that you might want to be looking at using a sourdough to provide the flavor you're looking for.

Neapolitan Style / Re: How to achieve the burnt char dough taste?

Do you know what Lintner value it is?

Dough Clinic / Re: par bake trouble shooting

One Spiral mixer that seems to have a very good track record is the one by Empire Equipment, but with that said, they're all very good. Hobart used to make a piece of equipment that was used just to drive the attachment (pelican) head.

Prep Equipment / Re: Hobart HL600-1STD 60Q Planetary Mixer Feedback

Really nice looking crumb structure!

Detroit Style / Re: My Detroit style

Actually, it looks to be somewhat over mixed.....remember, mix the dough JUST until it takes on that smooth, satiny appearance, no real need to mix it any longer unless you're making a very short time or emergency dough.

Dough Clinic / Re: smooth vs rough dough, windowpaning

The Hobart HL-600 (Legacy) is a great mixer, no complaints, but if you are looking for a dedicated dough mixer I think a spiral design mixer might be a better option. As none of the spiral mixers that I'm aware of have attachment hubs you would need to have a planetary mixer with an attachment hub for grinding/shredding and mixing sauce if these are a part of your daily routine. There have been a number of posts on spiral design mixers and it is hard to find anyone who doesn't like them as a dedicated dough mixer.

Prep Equipment / Re: Hobart HL600-1STD 60Q Planetary Mixer Feedback

Davefr:

It all has to do with fermentation. Most if not all commercially marketed pizza crusts are made with little or no fermentation since the acids formed during the fermentation of the dough severely limit the shelf life properties of the dough and add a level of inconsistency to the dough which is unacceptable from a marketing point of view. Try allowing the commercially made dough to come up to about 55F to 60F in temperature and then forming it into a ball and from that point on manage it the same way as you would your regular dough, you will most likely see some improvement. By the way, this also works well for frozen dough too.

Newbie Topics / Re: Lehmann vs Trader Joes - What's makes dough/crust so flavorful?

There are great differences, aside from the obvious, between hockey pucks and flour. The main difference is that hockey pucks are always the same while flour is in a continual state of flux (it keeps changing). Flour changes from one milling lot

to another within a brand name and flour with the same general properties from one manufacturer to another will also change, add to that differences in protein level, where the flour was stored, how long it was stored and the temperature at which it was stored can add up to some pretty significant differences in performance. This is the reason why I always suggest that when changing to a different flour start out using the same absorption, pay attention to the way the dough mixes, handles, and performs all the way through being made into a finished crust and then ask yourself if the new flour is handling the same as your old flour had, if not, a change in absorption is probably needed to bring the new flour into alignment with your dough management procedure.

General Pizza Making / Re: Switching Flour - Changes?

When mixing pizza dough by machine all you need to do is to mix the dough until it forms a smooth, satiny appearance to it, mixing beyond this point is not necessary and it also contributes to a more bread like crumb structure in the finished crust. Tony G. is absolutely correct in mixing his dough for a very short time but I have found that when this is done the dough is somewhat more difficult to handle on the bench as it is sticky/tacky, tends to pick-up more dusting flour, and is harder to form a smooth dough ball. The additional mixing that the dough receives when you mix it to a smooth, satiny appearance reduces these annoying characteristics making the dough easier and faster to process. You say that your dough is fragile and has too much memory, I find this confusing as these characteristics are nearly opposites. Dough with excessive memory tends to be very elastic and strong (too strong). The dough, when mixed to a smooth/satiny appearance will be firm but easy to handle and ball with a smooth skin on the ball. The dough ball will be rather tight and firm in both appearance and feel but don't let that scare you, if the dough is being properly managed fermentation will provide the additional needed gluten development through biochemical gluten development while still providing a desirable soft and extensible dough characteristic necessary for forming the skins and achieving the desired oven spring characteristics.

If excessive dough memory typically results from the use of an excessively strong flour for the dough management procedure being employed or more commonly, an ineffective dough management procedure commonly resulting from insufficient yeast level, incorrect finished dough temperature, or incorrect total fermentation time. At times we also see salt as a culprit as it can have a dramatic effect upon both dough strength and fermentation rate.

Dough Clinic / Re: smooth vs rough dough, windowpaning

Egpl;

In reviewing your formula and dough management procedure I offer the following:

- 1) The ADY at 0.98% is very high. A better level would be 0.5 to not more than 0.6%. / Allow the ADY to activate in just a few ounces of water (100F) for 10-minutes.
- 2) You don't mention the finished/mixed dough temperature but you should know what temperature is being targeted and strive to achieve that temperature on a consistent basis. This is especially critical in view of the fact that you are bulk fermenting prior to balling.
- 3) You don't mention anything about greasing or oiling your pans but for par-baking I've found that greasing them with something like Crisco works better than oil, especially in view of the fact that you are pressing the dough into the pans.
- 4) 650F is way too hot to bake a par-baked crust, try reducing the baking temperature to 400 to 425F and bake the crust JUST until it begins to show a little color development. Invert the crusts immediately upon removing them from the

oven and place on pizza screens or wire cooling racks to cool thoroughly before using them. This way the crusts will always be the same or nearly the same temperature when going into the oven and you will get a much more consistent as well as thorough bake of the finished pizza.

5) When making your pizzas using the par-baked crusts you can use oil in the pan at that point to achieve a crispier finished crust if you like, then place par-baked crust into the oiled pan, dress to the order and bake at 500 to 525F. 650F is too hot for a deep-dish type of pizza as it will not allow the pizza to be baked long enough to be completely heated. Be sure to place a screen under the pans when baking to help control the bottom crust color, failure to do so may result in the bottom of the pizzas getting over baked, this is especially true when using par-baked crusts. Since all ovens are different you might need to experiment with an even lower baking temperature to get the center of the crust as hot as it needs to be.

6) You mention that you allow the dough to rise in the pan for only 30-minutes prior to baking, this might not be sufficiently long for a par-baked crust so I would suggest experimenting with both 45 and 60-minutes final proofing times to see which works best for you in your oven.

On a final note: If you see what appears to be a grease spot in the par-baked crusts, this IS NOT a grease spot, instead, it is an area where the dough has collapsed after coming out of the oven. To correct this condition you will need to bake the crusts a little longer which might require a reduction in baking temperature at the same time (longer bake at a lower temperature).

Dough Clinic / Re: par bake trouble shooting

Carl/Peter;

I went back into the link provided by Peter and offered my comments.

Dough Clinic / Re: Dough ball temperature after 24 hrs in fridge

That table merely explains the relationship between yeast activity/fermentation and temperature which is absolutely correct. The thing is that for most yeast leavened baked products there is an optimum level of fermentation which provides things such as ease of forming, flavor, aroma, crumb structure, volume, etc. What we are trying to do is to manage (there's that word again) the fermentation so we can have the desired attributes achieved from fermentation at a time when we want it, such as three or more days from now. Additionally there are flavor differences due to the different balance of acids formed during fermentation at different temperatures which might also provide us reason to want to ferment the dough under specific conditions (think cold fermentation v/s room temperature fermentation). For the most part the temperature range that most bakers target for is probably between 75 and 80F, but higher temperatures might be desired (emergency dough) or colder temperatures for frozen dough.

Dough Clinic / Re: Help with my dough

What does your dough formulation look like?

What is your dough management procedure?

How long do you allow the dough to rise in the pan prior to baking?

Dough weight and pan size?

And lastly;

What kind of oven are you baking in and at what temperature?

Dough Clinic / Re: par bake trouble shooting

The warmer the dough is coming off of the mixer the longer it will take to cool it down in the fridge to a temperature where fermentation will progress at a suitably

slow rate to allow the dough to be held for several days in the cooler to develop the unique flavors of cold fermentation and develop the desired biochemical gluten development. Typically this temperature is about 40F +/- 2F. If the dough is too warm it will continue to ferment and also the heat of metabolism will enter into the picture to further increase the dough temperature at a rate of about 1F per hour so what you actually end up with is a dough which is essentially warm fermented as opposed to cold fermented. This can/will result in potentially excessive acid production by the yeast which can then degrade the flour proteins (gluten) during the refrigerated holding period resulting in anything from less than stellar dough performance, to collapse or difficulty developing the desired finished crust color due to the acidity of the dough blocking the browning reaction. If the dough is too cold coming off of the mixer the most common result is insufficient fermentation resulting in a tough dough which can exhibit excessive memory characteristics while attempting to open the dough into skins, or a lack of flavor and if your dough has sugar in it it might even develop crust color too fast resulting in a short bake time which ends up leading to a finished crust lacking body or which doesn't retain crispiness. It should be noted that I have said many times "Without temperature control you cannot have effective dough management" What this means is that while different dough management techniques will call for different finished dough temperatures, the goal should be to have consistency in that temperature whatever it might be. The correct finished dough temperature is not specific, but instead it is highly variable greatly dependent upon many different factors not the least of which are dough formulation, type of mixer and mixing time, shop/room temperature, efficiency of the fridge/cooler, amount of dough going into the fridge/cooler at any one time, type of container used to hold the dough and construction material, dough mass (bulk or individual dough balls), shape/thickness of the dough as it is placed into the cooler/fridge for cold fermentation, the list just goes on and on. Over the years I've been able to draw some rough temperature estimates for finished dough temperature: Commercial pizzeria with large walk-in cooler: 80 to 85F, with a reach-in cooler: 70 to 75F; Home made pizza dough: 70 to 75F for just a couple of dough balls or 65 to 70F if there will be more than three dough balls or the dough balls weigh 16-ounces or more. The idea is to try to get the dough temperature down to 50F in 2.5-hours for up to 3-days refrigerated storage time or 45F for up to 5 to 7-days storage time. Remember, these are just very rough numbers as some individuals are targeting very specific flavor characteristics which might only be achieved with significantly more fermentation so now all cards are off of the table, but again, what ever finished dough temperature you are targeting and whatever temperature you are looking for after 2.5-hours in the cooler/fridge, you will find it hard to replicate the finished crust unless you can replicate the conditions under which you made it and that means consistency in temperature control.

Dough Clinic / Re: Dough ball temperature after 24 hrs in fridge

For a number of years now there has been a lot of discussion on treatment of organic flour. Some will accept malted organic flour only if the barley from which the malt is derived is also organically grown, and then there is the enrichment issue where consumers don't want the organic flour to contain synthesized vitamins. Only 100% pure whole-wheat flour milled from an organic wheat is what people were looking for but the germ oil would turn rancid quickly creating marketing and storage issues. Anymore it seems that the use of "organic" flour is a pathway to being able to advertise "made with organic flour". I've used it for making a lot of different food items, including pizza, but unless there are other motives I personally wouldn't spend the extra money on it A few years ago it was so

popular in the wholesale baking industry that there was a shortage of it, now that demand seems to have waned which is one reason why we see it so widely available from so many different suppliers.....they're trying to rebuild those markets.

Dough Clinic / Re: organic vs. non-organic flour?

When I'm making pizzas at home I never use a dough mixer, I've got this thing called "biochemical gluten development" that does all the work for me.

Prep Equipment / Re: Best (or good) mixer for pizza dough

QD;

In one word, no. In some cases it may not produce as good of a pizza as non-organic flour. Organic flour is not malted nor treated in any way at the mill so it has to be handled differently when making pizza. In a general sense, one might say that organic flour needs to be handled in a similar manner to "OO" flour. And for what it's worth, it is not enriched either so there is a significant difference from non-organic flour from a nutritional stand point. Organic is a great consumer buzz word, push the "organic" button and their lights come on.

Dough Clinic / Re: organic vs. non-organic flour?

Due to the height of the pan you might have a little problem getting the top to color up as you want it (high sides trap a layer of cool air over the top of the pizza which slows the top color development) but if you set yourself up for a traditional Chicago baking time of upwards of 40-minutes I think you will be just fine.

Stones/tiles/steel, Pans & Accessories / Re: Would this pan be ok for a Chicago Deep Dish pizza?

When replacing compressed yeast/fresh yeast the conversion is as follows:

ADY/active dry yeast: Use half as much (25-grams to replace 50-grams of CY)

IDY/instant dry yeast: use 40% as much (20-grams to replace 50-grams of CY)

The problem might also stem from using water that is too hot/warm. Typically a good water temperature is about 75 to 80F/ 23.8 to 26.6C. Remember, if you are using ADY and activating it in warm water (100F/37.7C) only a small portion of the water needs to be at that temperature to activate the ADY (typically only about 4 to 5 times the weight of the ADY). If you are mixing by machine and using IDY you can add the IDY directly to the flour without pre-activation but if you are mixing by hand you also need to activate the IDY in the same manner as you would activate ADY.

Dough Clinic / Re: What have i done wrong

Renchero;

The amount of corn oil that you have in the dough formula is VERY HIGH too. I might suggest bringing it down to the 8 or 10% level while you're at it. If you feel that ya just gotta have a high fat level in the crust change over to a plastic fat such as butter, margarine, Crisco or better yet, Butter Flavored Crisco. In Chicago it is common to use margarine, Blue Bonnet margarine is what used to be the standard/norm. There is a huge difference in the way oil and plastic fat react in the dough. Oil can/will have a weakening or at least a softening effect upon the dough which is also conducive to a dense crumb structure where as a plastic fat doesn't interact with the flour in the same way so it doesn't have the weakening effect and because it is in a plastic form it doesn't soften the dough very much either as you see when oil is used.

You're right, I missed the oil. I guess I just couldn't imagine a formula adding up to

such a high percentage.

Dough Clinic / Re: Deep Dish - Why can't I get it right?

Renchero;

I just added them up and came up with 185.3%, dividing this by 100 = 1.853 so if you divide the new, desired dough weight by 1.853 you will know the weight of flour needed to make the new dough weight. From there just use bakers % to calculate the individual ingredient weights for your new dough weight.

By the way, 19.4% corn meal is a lot of corn meal and this might be responsibly, at least partially, for the dense crumb structure you're getting. I seldom ever use more than about 10% corn meal. If the corn meal is being used in an attempt to achieve that characteristic yellow color of Chicago style deep-dish pizzas, remember that that characteristic yellow color is the result of adding a yellow coloring called "Egg Shade". There are a number of suppliers of Egg Shade, just Google (Egg Shade food coloring) and you will find different sources.

Dough Clinic / Re: Deep Dish - Why can't I get it right?

The truth lies somewhere in all of the above. When you're a big chain you try to develop a pizza concept that appeals to the most people, and is somewhat different from the guy down the street, then you see if you can train a bunch of novices in making that pizza (this has been said to be similar to trying to herd long tailed cats in a room full of rocking chairs), and you pretty well hope for the best. DON'T KNOCK IT!!! It's this approach that allows the independents to maintain an identity, have a different product and successfully compete with the big chains.

Shop Talk / Re: Assembly line concepts, no love for Neapolitan?

DITTO!

The price is right too!

Shop Talk / Re: Double Deck Marsal M60 vs BP vs Blodgett

Lucas;

From your description the dry yeast that you have access to is active dry yeast. Instant dry yeast is shaped like little rods as opposed to round balls which are indicative of ADY.

Here is a pretty good starting formula:

Flour: "OO" 100%

Salt: 2.5%

Water: 60%

Compressed/fresh yeast: 0.25%

Put water in your mixing bowl and add yeast, stir to suspend the yeast. Add the flour and salt. Mix until the "dough" comes together, set aside and allow to ferment at room temperature for 2-hours, remove dough from bowl and place on floured surface and knead several minutes. Lightly oil the bowl and place dough back into the bowl to ferment for 4-hours, remove from bowl and knead again, place back into the bowl to ferment for 30-minutes, remove from bowl divide into desired size/weight pieces, form into balls, lightly oil each dough ball and place into individual plastic bags, twist the open end into a pony tail and tuck under the dough ball as you now place it into the fridge to cold ferment for 24 to 48-hours. Remove dough from fridge and allow to temper AT room temperature for about 90-minutes, then open into a pizza skin, dress as desired and bake on the deck of your oven at 700 to 800F/371 to 427C.

How to convert percent into weights:

I like to use 1,000-grams/1-Kg. of flour for a full dough, use half as much for a half size dough.

Using you calculator and 1000-grams as your flour weight,

Enter 1000 X 2.5 (press the "%" key and read 25-grams as the salt weight.

Enter 1000 X 60 (press the "%" key and read 600-grams as the water weight.

Enter 1000 X 0.25 (press the "%" key and read 2.5-grams as the yeast weight.

Between the salt and fermentation this should provide you with a good starting point from which to judge what changes might be necessary to achieve the flavor profile you're looking for.

Keep us posted on your progress.

Neapolitan Style / Re: How to achieve the burnt char dough taste?

Here's another way. If you know your total dough weight right now, decide how much less dough you want to make (1-oz., 2-oz, 3-oz, etc.) and subtract that amount from the total dough weight. You now have the new dough weight that you want to make. Divide the new dough weight by the total bakers percent divided by 100 and this will give you the correct flour weight needed to make your new dough weight, after that just apply bakers percent to calculate the weight for each of the other ingredients.

Dough Clinic / Re: How do I reduce this dough recipe?

Place a screen under the pan, and bake at 500F for about 30-minutes. In Chicago the Middleby-Marshall reel type ovens are the oven of choice for the deep-dish pizzas. This is why the wait is always a minimum of 45-minutes for a deep-dish pizza in Chicago....that is if there are no other orders stacked up in front of yours.

Chicago Style / Re: Chicago style with dual thermostat oven

Patrick;

By reducing the baking temperature and baking for a longer time you can achieve a crispier crust however by reducing the water (dough absorption) you will not achieve a crispier crust unless you drop the absorption down below 50% and then you are not making a N.Y. style of pizza anymore.

Dough Clinic / Re: new york with power flour

Flour will not contain any yeast, of any kind, and the amount of sugar has me concerned too. Are you sure you're not looking at some kind of a mix or pre-mix?

Newbie Topics / Re: Hello need some help with a fresh yeast 24/72 hour rise

The biggest problem that I've encountered when baking on a stone or on the deck of a deck oven is that the bottom of the pizza gets too dark unless I place a screen under the pan creating an air gap which pretty well eliminates the problem. Baking the pizza in the pan for a few minutes and then removing it from the pan and placing it directly onto the stone/deck to finish baking is a pretty common procedure called "decking" and it works quite well giving a nice, crispy finished crust when done properly. I've found that a good stone/deck temperature to shoot for when using this procedure is 500 to 525F.

General Pizza Making / Re: Pizza pan on a stone

As each ADY packet contains 1/4-ounce 7-grams or a little more would be the appropriate amount of ADY to use in this recipe.

General Pizza Making / Re: Hand mixing/kneading

I guess I should have opened the link to the Dutchess rounder you were referring to. I thought your reference was to the JN model dough divider-rounder. That's the one that really handles the stiffer doughs quite well. Sorry about not being more specific.

Shop Talk / Re: Dough Rounder decision help

If I remember correctly we had this discussion along with some formulas a short time ago. A search of the archives will probably turn it up.

Other Types / Re: Preferred dough recipe for Calzones?

Yes, that should be it in the home style crust.

As for flour protein, that can be a very long and drawn out answer but the short of it is if the dough is formulated and managed correctly for the strength of the flour there isn't a lot of impact upon the crumb structure characteristics, but there is a more direct correlation between the "potential" for crust crispiness and protein level with a higher protein level providing a greater potential for achieving a crispier crust.

General Pizza Making / Re: Hand mixing/kneading

I also use a procedure similar to what Steve uses but I also put the IDY into a separate cup containing a small amount of the dough water warmed to between 95 and 100F, I sprinkle the IDY on top of the water and stir in until all of the yeast is suspended using a table fork, let this hydrate for 10-minutes then pour into the dough water being sure to rinse the cup in the dough water, from that point on my procedure is essentially the same.

When hand mixing and using IDY the IDY really should be pre-hydrated in much the same manner as ADY and if using compressed yeast (CY) it should be suspended in the dough water (no need to adjust the temperature of the water with CY, just drop it in and stir/whisk until suspended, once suspended the CY is ready for addition as it does not need any hydration time.

I also have a home made pizza dough "recipe" posted on the PMQ web site <www.pmq.com> in the RECIPE BANK, just use "pizza dough" for your search word. The procedure is designed to be as easy as possible as I was using it to teach farm families all over eastern Kansas how to make and enjoy pizza without making a "pilgrimage" to the nearest Pizza Hut.

General Pizza Making / Re: Hand mixing/kneading

Yep, soybean oil, it polymerizes faster than most other oils.

Stones/tiles/steel, Pans & Accessories / Re: Pizza screens - seasoning

Andrew;

I personally think it is a waste of sourdough culture to mix it with yeast to achieve a faster fermentation rate as the yeast will dominate the flavor. I'd suggest using a biga in that application.

Nice oven!

New Forum Members / Re: Hello from New Zealand

I totally agree with Steve. About 1% compressed yeast (CY) is where you want to be so that works out to 5-grams for 500-grams of flour.

Newbie Topics / Re: Hello need some help with a fresh yeast 24/72 hour rise

Andrew;

Welcome! New Zealand, one of my favorite places. I spent a lot of time working in North's Bakery (Alan and Malcolm North) their bakery was the main supplier of McDonalds hamburger buns in Auckland/North Island.

I think if you change over to a wood peel and use a very fine corn meal as a peel dust you will find that your pizzas will be easier to peel into the oven, save your metal peel for use as an oven peel for removing the baked pizzas from the oven. I can't say anything to your oven specifically but when baking in a wood fired oven all I ever do it to rake the deck to scrape of any debris ensuring a flat deck surface and then broom the deck clean where the pizzas will be placed. I do know that in some cases the oven deck is swabed with a wet mop to put humidity into the oven just before placing bread into the oven for baking but I've not done this for pizza as it was never necessary.

New Forum Members / Re: Hello from New Zealand

I've said it before and I'll say it again.... the Dahlen ovens are among the best electric ovens I've ever seen. You certainly don't run across them very often, maybe \$\$\$\$? But they are good. Even their large (and I do mean LARGE) industrial ovens are highly thought of in the industry.

Dough Clinic / Re: Gas vs Electric Oven for NY style pizza

Not quite.

0.013 X 1000 (press the "%" key) and read 0.13-gram yeast required.

May I ask why such a small amount?

A normal level of IDY is 0.375% or 0.375 X 1000 (press the "%" key) 3.75-grams.

For a room temperature fermented dough a third of this amount should work OK, or 0.375 divided by 3 = 0.125% so 0.125 X 1000 (press the "%" key) and read 1.25-grams in the display window.

Neapolitan Style / Re: yeast weight when using percentages

Due to the increased moisture in the air with a gas oven as opposed to an electric oven the gas oven is preferred as it will provide for a better bake.

Dough Clinic / Re: Gas vs Electric Oven for NY style pizza

It is about as close to hand balled as you can get with a stiff dough.

Shop Talk / Re: Dough Rounder decision help

If we are talking about a low absorption dough 52% or lower, the Dutchess divider rounder will probably be your best bet since it is designed specifically to handle a wider range of dough absorption but where it really excels is with the lower absorption doughs.

Shop Talk / Re: Dough Rounder decision help

I believe that these are a belt drive system as are the larger commercial versions, replacement parts are readily available and the company has been around for a long time. I don't have any experience with this specific mixer but their large mixers are pretty decent. These do have a reverse spiral dough arm for mixing dough and the dough capacity is around 2-Kg. so it might be a good investment (you won't go broke buying it for \$200.00) for someone who needs a mechanical mixer. Just make sure it comes with the dough arm as opposed to a flat beater or wire whip attachment or you will need to add the cost of the dough arm to the cost of the mixer.

Prep Equipment / Re: Varimixer Teddy W5A

I have a hard time believing that the faster application time from using PAM would off set the increased cost over just a common vegetable oil that is easily and quickly wiped on using a clean towel soaked/dipped in vegetable oil. Something else to keep in mind is that commercial spray products are typically made using types of oil which have a lower polymerizing value than say, soybean oil. This is to prevent the oil from polymerizing on that which it is applied to, which is contrary to what we want it to do. We want the oil to polymerize on the screens to give us the seasoned finish that we are seeking.

Stones/tiles/steel, Pans & Accessories / Re: Pizza screens - seasoning

There has been a bit of discussion here on pizza trailers here too which may provide some additional insight. If you will be crossing state lines your vehicle will need to be licensed and DOT approved as a commercial vehicle, and don't forget about all of the licensing and insurance that will be required (city, county, state) and if you will be doing business across state lines know what will be required of you in the other state too.

Shop Talk / Re: To buy or Lease Pizza truck?

In mixing a bread dough where we are trying to develop the gluten there is a decided advantage to adding the salt later in the mixing stage, but we are mixing pizza dough where we do not want to develop the gluten to the same extent so it is easier and more convenient to add it right up front (also less chance to forget adding it). When you add the salt to the dough water there is no need to mix it into the water...no benefit to be gained except for just another mixing step. Remember in a pizzeria U want things as SIMPLE as possible.

If ya feel that ya just gotta double ferment the dough just pull the dough balls out of the fridge (cooler) 4 to 8-hours before u anticipate using them (u will need to experiment to find the exact time that works best in ur shop conditions BUT since the dough balls will be fully fermented they will need to be used within a fairly short period of time once they are ready to go, so be prepared to use them for pizzas or something else as you will not be able to save them. The procedure I provided eliminates this problem and essentially eliminates the need to discard any dough which can be an important aspect in a pizzeria which is dealing with large quantities of dough on a daily basis.

A fork type mixer is fine for pizza dough as it is designed to impart minimal gluten development, but because of this u might need to cope with a slightly stickier dough on the bench than u would if using a planetary or spiral type of mixer. As for a wine cooler, the temperature in most wine coolers (5C/41F) is the absolute minimum temperature that u would need to effectively manage the dough at, additionally when fully loaded with dough it is questionable if a wine cooler would have the capacity to consistently cool and maintain the dough for extended storage. I think u would be much better served with a commercial reach-in cooler at the very least. With whatever mixer type u decide to go with u will still need to adjust the dough water temperature to give you the desired/targeted finished dough temperature on a consistent basis.

Dough Clinic / Re: dough management

Your room temperature fermented dough balls are receiving significantly more fermentation than the cold fermented dough balls. This means that there is more dough softening/weakening (due to fermentation) with the room temperature fermented dough. The increase in amount of total dough fermentation also explains why you note a difference in crust flavor between the CF and RT fermented dough as the RT dough will have a more pronounced fermentation flavor. With a RT dough

the finished dough temperature will have a very significant role in determining the amount of fermentation the dough balls receive as the yeast will ferment faster with higher finished dough temperatures. Also keep in mind that a RT dough will increase in temperature at the rate of approximately 1F per hour (up to about 10F) due to heat of metabolism so the dough keeps fermenting faster and faster while the CF dough will gain some temperature but it will eventually stabilize in temperature as the dough reaches 45 to 50F in the cooler, at this temperature the dough will continue to ferment but at a much slower and more controlled rate.

Dough Clinic / Re: Shaping CF Dough vs. RF Dough

Please e-mail me at <thedoughdoctor@hotmail.com> and request a copy of my Dough Management Procedure and I'll be glad to send you a copy. This dough management procedure that is designed specifically for what you are wanting to do on a commercial (pizzeria) basis. It will provide you with the dough consistency needed at both 24 and 48-hours with a maximum of 72-hours. What you are proposing will work fine on a small scale or in a home baking situation but in a commercial setting it will not provide the consistency in dough quality that is needed to operate a business on, especially out at 48-hours, remember, when you have a pizzeria dough failure is not an option, and it's not good for business either.

Dough Clinic / Re: dough management

Agreed, your results were more than likely due to your specific dough formulation or dough management procedure that is probably not optimized for AT flour. Remember, if you just substituted AT for another flour your formula was probably low in absorption as with its higher protein content AT flour will require a higher dough absorption, then too your yeast level might not be where it needs to be with AT and your specific dough management procedure, this could result in a stiffer dough or one that does not expand as readily, hence the more dense crumb structure that would be characterized with a tougher/more chewy eating characteristic.

Dough Ingredients / Re: All Trumps High Gluten Flour-Why I won't Buy It Again

We have found that if you par-bake the pizza after adding the THIN mid-layer crust you don't end up with the dough turning to steamed dough (aka pasta). Which isn't necessarily bad as some tend to associate it with the cheese, but if you par-bake in this manner you get a more distinct separation. After par-baking remove from the oven and immediately finish dressing and place back into the oven to finish baking. Just thought I'd pass that on to you.

Chicago Style / Re: Stuffed Giordanos style

I'm guessing that Domino's, PH and PJs are probably bringing in a dough mix with a 12% protein flour, but the locally available flour in Egypt comes in at around 11% protein content and it should work well for you in pizza production if you keep the CF time down in the 24 to 36-hour bracket, you might be able to eek out 48-hours with close attention to the finished dough temperature. We have made some very good pizzas using flour with protein content in the 10% range. Another option that you would have is to add vital wheat gluten to the dough as an added ingredient, using VWG you can increase the protein content of just about any flour to where ever you want it.

Are you planning to attend Pizza Expo 2017? It is a great opportunity to see all the latest and greatest and develop a contact list for things you might need, and you can also stop by at one of my presentations and ask questions too, or attend one of

the many other seminars.

Resources / Re: High Gluten Flour

Keltobgy;

For whatever it's worth, as anyone who has ever attended any of our pizza seminars will attest to, as part of our instruction in demonstrating biochemical gluten development we would take a 12-ounce dough ball with 24-hours cold fermentation time and open it up to approximately 36 inches in diameter. The dough was thin enough to plainly see skin details on your hands through. In fact one year we even had Tony G. do some of his magic on the same dough. One student asked Tony how high he could toss the dough.....he hung a dough skin over one of the ceiling trusses 20-feet above us! This was all done with a dough made with a 12.2% protein content flour using our standard dough formula and dough management procedure.

Resources / Re: High Gluten Flour

Keltobgy;

When it comes to fermentation and its impact upon the nutritional properties of the finished crust the impact of fermentation by itself is minimal (some reduction in sugar level) and between cold fermenting and warm/room temperature fermenting there is no difference.

Resources / Re: High Gluten Flour

Nish;

Normally about 48-hours cold fermentation is sufficient for making a pretty decent pizza crust.

Dough Clinic / Re: Dough Becoming Very Brown

Are you wanting to make a soft bread stick?

Neapolitan Style / Re: Can I make breadsticks in my WFO with my Neapolitan dough?

I stand shoulder to shoulder with Craig. My "go to" flour for making pizza comes in to around 12.2% protein content. Unless there is a specific reason for using flour in the 14% protein content range I always use something in the 12 to 12.8% range and on occasion I'll go up to 13.2% protein. These protein contents should be easily covered by most Canadian HRS bread type flours.

Resources / Re: High Gluten Flour

Nish;

No, the reason why the skin snaps back is because the dough has not been sufficiently fermented.

Dough Clinic / Re: Dough Becoming Very Brown

We raised a number of different breeds of chickens over the years and none were actually afraid of dogs, cats, coyotes, foxes, or even raccoons unless they were being physically chased by them, BUT if you made got between them and the sun and made a shadow that would cast over them there would be a mad rush to get into the coop, no questions asked! I think most birds are wired to be alert to predators from above rather than on the ground.

Off-Topic Foods / Re: High \$\$\$ vs. Lower \$\$, Organic vs. Non-Organic Poultry

Craig;

It takes them just a little under 20-minutes to completely process a dough (from mixer to die cutting) in the case of a sheet and die cut process. The scrap web is processed in either of two ways, it can be fed back to the sheeting rolls where it is incorporated back into the dough as it is being sheeted to thickness prior to die cutting. The scrap is added in such a manner so as to orient the scrap dough at the bottom (underside) of the dough sheet. This is done to reduce the magnitude of snap back caused by the scrap dough. The other way the scrap dough is managed is to convey it directly back to the mixing station(s) where it is incorporated directly into the next dough. This is actually a better method of handling the scrap dough as it has less impact upon the dough as it is being sheeted or upon snap back after die cutting. In both cases the dough is being incorporated back into fresh dough, in one way or another, within 20-minutes, or soon after, coming out of the mixer. When the dough is just being processed into dough balls for refrigerated storage and distributed to stores it is common to add any unusable dough balls directly back to the divider hopper (these might be dough balls that are too heavy or too light or that have not rounded up properly for whatever reason. In a case where there are a lot of rejected dough balls the rejects are added back to the next dough being mixed.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Norma;

Yes, that is one type of dough pump, there are other type too but that is a good representation. When watching the video the next thing you see is a rotary extrusion divider (think of it as dough going through a meat grinder and being cut to length as it comes out), then there is a rounding table, these are more commonly used for rounding hamburger and hot dog bun dough but they are also used to round pizza dough in some applications (external cone rounders are much more commonly used for pizza dough than rounding tables, next is the indexer for the overhead proofer (allows time for the dough ball to relax prior to forming, or in some cases the dough is divided, rounded, relaxed in the overhead proofer and then re-rounded in preparation for refrigerated storage/cold fermentation. In the other video you see the dough that has been die cut and the resulting scrap web of dough left after die cutting. The web scrap is automatically collected and fed back into the mixer for incorporation into the next dough.

It's hard to fully appreciate a full size production commissary until you have actually been in one. If you get a chance to visit one ask yourself this question: "What if the dough didn't perform to standard or what would happen if it started to stick to everything?" Then envision the chaos and you will fully understand why we never take anything for granted in a production situation. Failure is not an option.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Renchero;

Add up the total bakers percent of your dough formula and move the decimal point 1-place to the left. Then divide your new desired dough weight by that number and this will give you the flour weight needed for a dough of that size. From there just use your regular bakers percent calculations to get the individual ingredient weights.

Dough Clinic / Re: Deep Dish - Why can't I get it right?

I think you see pretty much the same with most types of meat. Range fed beef is significantly more lean with a lot less marbling in the meat so it is not as flavorful or as tender. We also see a lot of this same thing in wild hogs as compared to pen

raised hogs, and when we were raising chickens your observations are in line with what we we also observed (our chickens were what we would today refer to as "free range", and I do mean "free range" not ranging in a confined area as today's "free range" birds are. Our freezers are once again filled with venison which is the epitome of "free range" and the buck was as lean as he could be (due to rutting activity) while the does were nice and fat due to being corn and bean fed from local agricultural fields but the meat is still very lean with little marbling so you have to take care in cooking it or you will end up with something more like shoe leather rather than a delicious steak.

My take on it: free range has less fat so it is a healthier meat but you give up some tenderness and flavor which you get from the cage/feed lot critters.

Off-Topic Foods / Re: High \$\$\$ vs. Lower \$\$, Organic vs. Non-Organic Poultry

Pretty normal under mixed dough, from the mixer the dough is discharged into a dough pump located in front of the mixer to facilitate conveying it to the divider. If a dough pump isn't used the dough must be discharged (kicked out) into a dough trough, wheeled to a trough hoist where it is raised to allow the dough to be fed into the divider. As you can see, a lot more equipment, space, investment plus an element of danger so the dough pump is almost universally used as it even allows for precise control of the amount of dough going to the divider. While one dough is being pumped to the divider another dough is being mixed resulting in a continuous flow of dough.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Norma;

That's because the dough is being pumped as a continuous ribbon directly from the mixer. Remember, pizza dough is under mixed so it really isn't very hard to pump the dough.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

The lighter crust color that you are seeing after 24-hours is due to the yeast consuming more of the sugar as well as producing acids which inhibit the crust color development. Since you are getting crust color that is too dark prior to this I would say that you have too much sugar in your dough formula, maybe consider deleting the sugar entirely to see what response you get in the crust color. Can you provide us with any better idea of how much flour you're using besides scoops? Even cup measures would be better as we can convert them to rough weight measures and look at your dough formula in bakers percent.

For a mixing procedure, put the water in the bowl first, then add the salt, then the flour and lastly the IDY (are you using IDY or another form of yeast?)

Then mix just until the flour is hydrated and add the oil and mix for 1-minute in low speed then 8-minutes in medium/high speed. You are looking for a finished dough temperature of 70 to 75F/21 to 24C.

You might also try using a lighter dough weight. Try using a dough weight of 500-grams as opposed to your present dough weight of 615-grams.

Dough Clinic / Re: Dough Becoming Very Brown

Don't overlook the dough. The dough is one of the most critical aspects of a pizza. Just think, how many people say you just gotta go there because the sauce is soooo good? Few. How many say you just gotta go there because the cheese is soooo good? Maybe a few? Now, how many people say you just gotta go there because the crust is so (pick an adjective)? We have found over the years that more people

comment on the crust characteristic than on any other part of the pizza. Can you share your dough formula as well as the dough management procedure that you are using?

Shop Talk / Re: need help ordinary pizza to elite pizza

Zip-Lock bags are not recommended for two reasons, 1) They create a head space condition in the bag which contributes to dehydration (freezer burn) of the dough during frozen storage. 2) The gas pressure created by the fermenting yeast can/will burst the seal open on the bag allowing the dough to dry out. This is why it is better to use "food bags", oil the dough ball, drop into a food bag, twist the open end into a pony tail and tuck it under the dough ball as you place it into the cooler or freezer. This eliminates any head space in the bag and it also allows for some dough ball expansion without fear of bursting the bag open.

Dough Clinic / Re: Makin my first pie and yeast amount question

It's easier than you might think, just replace up to 25% of the flour with semolina flour. Make a soaker out of the semolina flour and then add it to the mixing bowl as you would any other ingredient.

To make a soaker: First you need to know how much water YOUR semolina flour will carry. Do this by placing several ounces of semolina flour in a bowl, add 70% absorption, stir and allow to hydrate for 60-minutes, check the consistency (you want to see something that looks like very thick oatmeal) add more water if necessary and stir in then wait another 60-minutes, repeat as necessary. Once you achieve the finished texture divide the weight of water added by the weight of the flour and multiply by 100 then subtract 5 from this number and that is the absorption of the semolina flour.

To find the absorption of your dough:

Calculate the absorption of the regular flour in the dough as you normally would BUT DO NOT include the semolina flour in the total flour weight, then calculate the amount of water needed for the semolina flour using bakers percent and the absorption number you arrived at in the above test. You now have the correct dough absorption and you're ready to make the dough.

Begin by mixing the semolina flour with the correct amount of water and allowing it to hydrate for 60-minutes, add the dough water to the mixing bowl (calculated only on the regular flour, add the flour, soaker, and remainder of ingredients except for the oil, mix for about 2-minutes or until you don't see any dry flour in the mixing bowl, add the oil and mix 2-more minutes at low speed then finish mixing the dough at medium speed. Can you add more than 25% semolina flour? Yes you can BUT semolina flour will also contribute to toughness in the finished crust so proceed cautiously.

Dough Clinic / Re: Using both poolish and biga in dough

Norma;

On the tour you can see a lot more of the production facility from the glassed in cat walk from where the photographs were taken. I don't want to go into detail due to non-disclosure which is still in place but the photo of the production area, shows the large horizontal bar type mixer with the flour weigh and feed hopper above it (cone shaped), then there is the dough divider which mechanically divides the dough into specific weight pieces on a continual basis and the last piece shown is the external cone type dough rounder which forms the irregular shaped divided dough pieces into uniform round balls.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Norma;

It looks to be just vegetable oil and lecithin to keep it in place on vertical surfaces.

General Pizza Making / Re: GOOP - No more dough sticking to pan!

Are you sure they were proofers (operating at 90 to 95F with 75 to 80% relative humidity) or were they reach-in coolers? A lot will depend upon the dough management procedure being used too, if the dough is to be cold fermented for 24-hours or more and dough boxes are used to store the dough balls in the dough balls should be lightly oiled on top to prevent excessive drying and possible crusting during the cross-stack period (usually 2 or more hours) prior to sealing the dough balls in the boxes for the cold fermentation period. At one time some pizzerias would simply mix the dough and give it a bulk fermentation period at room temperature then scale and ball the dough and place them onto sheet pans or into dough boxes (fiberglass boxes were the first ones used after the wood boxes were eliminated) the dough balls were then lightly dusted with flour and used within a short period of time.

How you plan on managing your dough will determine whether you use oil or flour.

Neapolitan Style / Re: sprinkle flour vs. oiling the bowl/proofing box?

Yep, picture shows what we call a dense crumb structure resulting from too much dough weight. Look at it this way: You had "X" amount of dough and you proofed it for say 60-minutes to a specific height and got a dense crumb structure, now if you use less dough and proof it the same way to the same height the crumb structure will be more open (larger holes) and more of what you are looking for.

Dough Clinic / Re: Deep Dish - Why can't I get it right?

Mitch;

The function of the flour is to provide a thin layer/coating of flour between the dough or batter and the pan which improves the release properties. If you get too much flour in the blend you will end up frying some of that flour which results in an unwanted bitter taste. The lecithin is there to provide "cling", especially to the vertical sides of the pan. It prevents the release agent from flowing/sliding off to the bottom of the pan. The lecithin really isn't necessary unless the release blend is "flowable" (high in oil or total oil). There is one exception though where lecithin is used even when all shortening is used for the fat and that is when the release agent will be applied to the pan after heating to a semi liquid consistency, this is done to facilitate a more rapid application of the release agent or to allow it to be applied by mechanical means on a high speed production line.

General Pizza Making / Re: GOOP - No more dough sticking to pan!

Their corporate headquarters are in Lexington, KY (quite a campus I might add) and they have a fully functioning commissary there too where they give tours. I don't know all of what the tour entails but I do know that the tours are given the chance to see the commissary production lines and the robotic dough pickers that are used to automatically place the dough balls into the plastic dough storage boxes....now that's a sight worth seeing!

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Rather than just randomly using ice cold water, adjust the water temperature to give you a finished (mixed) dough between 70 and 75F. This means your water temperature will probably be between 70 and 75F too. The amount of ADY should be about 0.3% of the total flour weight if you get your temperatures right. While you're at it, check the temperature of your "fridge" to see exactly where you're at

regarding temperature. You can do this using an IR thermometer or if you don't have one just put a glass of water in the fridge overnight and put a thermometer in it in the morning to see what the temperature is.

Dough Clinic / Re: Makin my first pie and yeast amount question

If the crust is too big use less dough weight.

How does it look on the inside? How did it eat?

Dough Clinic / Re: Deep Dish - Why can't I get it right?

In the retail baking industry it is common to make a pan release using 4-parts shortening and 1 to 1.5-parts flour mixed together and brushed into the pan. You can also do the same thing using equal parts of shortening and oil to replace the shortening but when this is done it is customary to add 3% lecithin (based on the total weight) to allow the release agent to better cling to the sides of the pan as opposed to running off and collecting in the bottom of the pan. While more flour can be used in the blend it is not recommended as the flour (especially when used with bread type doughs) will fry in the pan creating a bitter aftertaste. This is not a problem when it is used in conjunction with cake batters.

General Pizza Making / Re: GOOP - No more dough sticking to pan!

Norma;

PJs gives tours of their commissary facilities.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Hey Norma;

When you read this you will see the name Chris Zelch mentioned. Chris is the son of my good friend Ron Zelch, we worked together at AIB for a good many years until he left AIB and took a position with what was at that time Caravan Ingredients (now Corbion) in Kansas City. The last time I saw Chris was a few years ago when the three of us were having dinner at the Marriott Hotel while attending the ASB (American Society of Baking) annual convention. It is indeed a very small world.

Chitchat / Re: diary of a pizza fanboy: DiGiorno's HQ

Fishyguy;

No, things don't quite work that way. First, yeast really doesn't multiply during dough fermentation, it just feeds and produces carbon dioxide, alcohol and acids, this means that the amount (weight) of yeast needs to be adjusted for the size of the dough, this is where bakers percent comes into play as it allows you to effectively change the size of your dough while keeping all of the ingredients in correct balance. Since you are just starting out, I'd suggest getting a good electronic scale that will weight in units of grams (ideally less). These are not expensive and are available on the internet for \$30.00 U.S. or less. In another post we just recently covered how to convert from a "recipe" to a "formula" based on bakers percent and we covered how to determine the weight of the ingredients as you have portioned them so the portions can be converted to weights and changed into bakers percent.

What is freezer level #4? I assume it is related to a temperature but you really need to determine what that temperature is, remember that you don't want to expose the dough to freezing conditions, you just want to chill it rapidly. You didn't mention much about how you plan to manage your dough but if you will send me an e-mail at <thedoughdoctor@hotmail.com> and request a copy of my dough management procedure I will be glad to send it to you.

Dough Clinic / Re: Makin my first pie and yeast amount question

Dev;

Welcome. I'm sure you will find all the help you need here.

What can you tell us about your flour? Your dough mixer, or will you be hand kneading the dough? What type of yeast will you be using (active dry yeast, instant dry yeast or compressed yeast)? Tell us about your oven and its maximum baking temperature. Do you have any kind of pizza stone available to bake the pizzas on? Do you have a fridge to store the dough in for a cold fermentation period?

The more you can tell us the faster and more efficiently we can get you on the track to success.

New Forum Members / Re: NY Pizza inquire

Just to clarify once again, when we are talking about damage to the yeast due to freezing we are talking about its use in a dough, not in the dry form. CY as it contains water cannot be frozen without significant damage. We have successfully kept IDY, in the original, unopened package, for as long as two years in the freezer without more than a 25% loss of fermenting power/activity. While this would certainly be important in a commercial setting, in a home use application you might say that there is no significant impact upon the quality of the IDY.

General Pizza Making / Re: Old dough - why not make it ahead and freeze

Your baking times will most likely be a little shorter too using gas as opposed to electric.

Dough Clinic / Re: Gas vs Electric Oven for NY style pizza

Noroscia;

Unless WA is short for Wasilla, Alaska I doubt that anything in your garage will be cold enough to not damage the yeast during the freezing process. To freeze dough and achieve a sufficiently small ice crystal size so as not to damage the yeast cells the absolute highest temperature that the dough can be frozen at is -20F with -25 to -35F the ideal range. This is actual temperature, not wind chill. To this temperature it is also necessary to add 600 to 800 linear feet per minute of airflow. Above this temperature it really doesn't make any difference if you freeze the dough at +10F or -15F, the damage to the yeast cell is the same. The damage to the yeast cells is inconsistent and it doesn't always show up right away, we do know though that dough which is frozen in a static freezer (like a chest freezer or reach-in freezer) generally demonstrates acceptable performance for the first 10 to 15-days after freezing, after that, due to freezer temperature fluctuations quality/performance can drop off dramatically.

TIP: If you can live with a 15-day frozen shelf life and you want to get the most consistent performance from your dough use an older style freezer without the energy saving automatic defrost feature. The freezing process damages the yeast but the constant use of a defrost cycle is what really does the number on it.

General Pizza Making / Re: Old dough - why not make it ahead and freeze

Norm;

Yeast cells do don't multiply in a dough, the buds on the cells grow/develop into daughter cells and that's as far as it goes. Because the buds are already present (not developed during dough fermentation as we know it) there is actually no further increase in the number of yeast cells present.

What you have alluded to is indeed potentially "doable". Look at it this way, you have 10-pounds of flour in the dough, you add 2-million yeast cells and half of them are damaged during the freezing process so glutathione is released from 1-million

yeast cells. This amount of glutathione will have an affect upon the flour proteins/gluten forming proteins in the dough, now if we were to add only 1-million yeast cells and half of them were similarly lost due to the freezing process we would only be releasing glutathione from 500-thousand yeast cells so the impact of the glutathione would theoretically be reduced by 50%. That is all based on the premise that the impact of the glutathione at both levels does not render a dough that is too soft to work with. In that case the old question of "Is a mouse any more dead if you hit it with a 12-pound sledge hammer than if you were to hit it with an 8-pound sledge hammer?" comes up as both levels have significant deleterious effects making any distinction difficult.

General Pizza Making / Re: Old dough - why not make it ahead and freeze

The way pizza used to be made back in the 50's by a lot of pizzerias called for bulk fermenting the dough for the better part of the day and then tearing off a piece and running it through a dough sheeter a couple of times, then draping the dough over a screen of the desired size and trimming off any dough hanging off of the screen, it was then transferred to a wood prep peel for dressing.

Newbie Topics / Re: tips for more uniformly round pizza?

Two things I might add to the discussion;

1) Freezing fermented dough can be highly deleterious to the yeast contained in that dough which will allow glutathione to leach out from the yeast cells producing a softening/weakening effect upon the dough into which it is incorporated, think of it something like adding an unknown quantity of PZ-44 to the dough.

2) It is not a good idea to work the old dough in the dough water as this will effectively separate the starch from the gluten in the old dough which will make it hard to thoroughly incorporate the old dough. Instead, as indicated by noriscia it is much better to just cut the dough up into small pieces and add it to the dough as soon as possible in the mixing process (just make sure the dough is completely thawed if you are using it from the freezer).

General Pizza Making / Re: Old dough - why not make it ahead and freeze

To comment based on the pictures of the dough and pizza I'd venture to say that your dough is dry (needs more water/higher absorption). Try increasing the dough absorption in 5% increments and I bet you will find the dough much easier to open and it will retain its round shape better too.

Newbie Topics / Re: tips for more uniformly round pizza?

If you go to www.portionpeels.com you will find exactly what you have proposed. The circles etched into the peels provides a ready reference for making a round skin, BUT do keep in mind that some distortion will take place as you peel the dressed skin into the oven. If you want to have a "truly" round finished pizza you will need to use a screen, pan or disk. Myself, I've never found a slightly distorted shape to be objectionable, in fact there is a type of pizza that is becoming more popular called a "free form" pizza which is any shape but round, and then there are the rectangular shaped pizzas which even the big box chains and commercial frozen pizza manufacturers are emulating.

Newbie Topics / Re: tips for more uniformly round pizza?

Peter;

The pizza formula is right out of my "play book" word for word. It was developed during our earlier research on chemical leavening in pizza crust formulations. :)

Dough Ingredients / Re: Arm & Hammer Article on Chemical Leavening

Systems

Peter;

If you see this can you work some of your magic in directing Renchero to the posts he has requested?

Dough Clinic / Re: Deep Dish - Why can't I get it right?

Nish87;

Let us know how the pizzas come out at the new time and temperature. If you find that you need more color or bake just increase the bake time and not the temperature.

Dough Clinic / Re: Dough Becoming Very Brown

LMJ;

I can certainly help you, I've done all of the research on frozen dough that the commercial plants use to develop their dough formulas, design their facilities and guide their production. Additionally I taught the frozen dough classes while I was employed by AIB.

Please give me a call at 785-537-1037 and I'll be glad to discuss this with you.

Dough Clinic / Re: physics and chemistry of frozen doughs

Actually, ADY will ferment at the same rate as IDY when used at the correct substitution levels. If IDY is used at the same level as ADY the dough will ferment faster because there is more active yeast. The correct substitution of IDY for ADY is to use 20% less IDY than ADY.

If you are making a deep-dish pizza you still need to allow the dough to proof/rise in the pan for 45 to 70-minutes. This is especially true when you are using a dough with 61% absorption AND nearly 20% corn meal. If the corn meal wasn't present a pretty typical deep-dish dough absorption would be around 58% but with the corn meal present it is probably giving you an effective absorption of only around 50%.

Dough Clinic / Re: Deep Dish - Why can't I get it right?

John;

It allows for complete hydration of the semolina flour (so would a soaker or autolyse), it may also contribute a little to the flavor profile of the crust due to the 2-hours of fermentation time. That's about all I can see it doing.

Dough Clinic / Re: Using both poolish and biga in dough

The only thing you really need to watch for if you decide to force warm the dough is to try to get the internal temperature up into the 50's without over heating the outer portion of the dough. We have been able to accomplish this commercially by using a stainless steel shelf that is heated to 160F, the shelf is lightly oiled and the dough balls are flattened to about 1" in thickness by pressing down on them by hand, they are then placed onto the shelf for about 45-seconds and turned as you would if making pancakes. This is repeated one or two times and the dough is usually ready to go. You might be able to improvise something like this to accomplish the same outcome.

General Pizza Making / Re: Opening dough right out of the fridge

Try reducing your oven temperature to 450F. This is the temperature that many deep-dish pizzas are baked at, especially those made using a par-baked crust. Any pizza made using a par-baked crust will exhibit more sensitivity to baking

temperature than those made using raw dough. Even the amount of par-bake needs to be controlled pretty carefully if consistent results are to be achieved.

Sicilian Style / Re: Thick crust and even cooking at home

There you go!

I can take my head out of the oven now! :)

When made in that manner the very stiff dough still wants to overly expand and develop bubbles but the very stiff dough effectively resists expansion at least long enough for the starch to begin to set-up at which point the dough is "set". The docking helps to control any bubbling too.

General Pizza Making / Re: Opening dough right out of the fridge

If you want to confirm the actual temperature of your air impingement oven the best way to do it is to run an empty pan (NOT A SCREEN) through the oven and use an I.R. thermometer to measure the temperature just before the leading edge of the pan reaches the end of the oven cavity.

Dough Clinic / Re: Dough Becoming Very Brown

In addition to the deck temperature being different and giving a different bake, I'm guessing that "B" was over fermented to the point where the dough might have collapsed to some extent making for a very tough eating finished crust due to significantly less bake-out during the short bake time. As for "C", remember that the dough will not really begin to rise appreciable after slacking out until the dough once again reaches an INTERNAL temperature in the 70 to 80F range, additionally, the spread as well as soft, easy opening characteristics of the dough has all of the earmarks of the presence of glutathione which has been released from the yeast due to freezing in a static freezer (freezing at above -20F). Glutathione has an effect on dough much like that of L-cysteine/PZ-44 which has been discussed in other recent postings.

Neapolitan Style / Re: Dough fermentation and tender crust

I didn't see anything where you said that you proofed the dough in the pan for 45 to 70-minutes prior to dressing and baking.

Please give us the weight of dough as well as your specific dough recipe/formula and dough management procedure.

Dough Clinic / Re: Deep Dish - Why can't I get it right?

Joe;

I've not heard of Cal's either, but when you say "Good Old Days" for me that means in the 1950's, what time period does it mean for you? I ask this because like other things pizza has changed in the way it is made and if we know your time reference we might be able to provide you with a typical pizzeria dough management procedure common to the time period.

New Forum Members / Re: Old Pizza Recipes

Have you been able to open a super low absorption (38 to 45%) cracker crust dough right out of the fridge???? My experience is that it is like trying to roll out a tennis ball, and if you feed the dough to a dough sheeter it just chews it up into ragged pieces.

General Pizza Making / Re: Opening dough right out of the fridge

When it comes to dough absorption don't fret changes that are less than 2% of the flour weight as the normal variations in flour itself will give 2% variations. If you

want to adjust dough absorption sufficiently to see a change in the dough I always suggest moving the dough absorption in 5% increments.

Dough Clinic / Re: how are small weight/hydration differences manifested in dough?

It can be done with some types of dough, specifically soft, high absorption dough. When the dough absorption is under 65% the dough rapidly becomes firmer/harder and more difficult to open. Additionally if you dress a cold dough and go straight to the oven bubbling of the crust during baking will be more problematic.

General Pizza Making / Re: Opening dough right out of the fridge

Blisters, ranging from about 1/4 to 3/4-inch in diameter are also common to under fermented dough. We did a study on this a number of years ago where we made one large dough and subdivided it into 250-gram dough pieces which were balled and lightly oiled, they were placed on sheet pans and allowed to ferment at 70F, room temperature (finished dough temperature was 80F) for up to 5-hours. Dough balls were removed from the pan(s) at 15-minute intervals, opened into skins, dressed as a cheese pizza and baked in both a deck oven and an air impingement oven. As would be expected the bubbling and blistering were worse with less fermentation time and as the fermentation time increased it diminished significantly. At 2.5-hours there was very little bubbling or blistering.

Dough Clinic / Re: A question about the color of under fermented pizza.

Blistering and bubbling are common issues with under fermented dough. These blisters and bubbles brown faster and more than the rest of the crust, this is probably what you are seeing.

Dough Clinic / Re: A question about the color of under fermented pizza.

In the Lincoln air impingement ovens such as you have deep-dish pizzas are typically baked at around 7-minutes at 240C/460F. I would suggest getting a scale to weigh your ingredients so you can begin making formula changes while knowing to what extent you are making a change. If you change over to granulated sugar it will also cost you less than icing/powdered sugar. I think a reduction in sugar along with a slight reduction in baking temperature will give you the results you're looking for.

Dough Clinic / Re: Dough Becoming Very Brown

Dough isn't much of a problem in the home drain but in a pizzeria like Walter has it will clog the grease trap in short time resulting in an unscheduled cleaning which ain't fun! Hot soapy water is the best thing for cleaning any residual dough from home drains but if you have a pizzeria dropping a couple dissolved protease enzyme tablets down the drain every few days will work wonders to keep the grease trap flowing.

Dough Clinic / Re: Dough and Drains

The most common forms of yeast encountered in Scandinavia and a good deal of Europe is going to be either compressed yeast (CY) or instant dry yeast (IDY), so I'm betting that the yeast you're using is IDY.

Newbie Topics / Re: Very hard crust, moist cheeze

In order to achieve a level of residual sugar in the dough which will provide a sweet taste to the finished crust you will need to get the residual sugar level up to around 4%. Flour contains about 73% starch with the rest being protein, water, fat

and minerals. Of that 73% starch only the damaged starch can be hydrolyzed into sugar by the amylase enzyme found in diastatic malt and yeast. In the U.S. flour is typically milled to have about 6 to 8% of the starch as damaged starch. This is not nearly enough damaged starch to accomplish what you are looking for. It is all but impossible to further damage the starch in your flour and if you were able to do so the damaged starch would exhibit a high affinity for water meaning that your dough absorption would rise significantly, that's the good news, the bad news is that when the damaged starch is hydrolyzed into sugar it is no longer capable of holding all that water so your dough turns to soup very quickly. We have discussed damaged starch here in other posts. So, what to do? You can take a couple slices of bread and put them into a blender with your dough water and a source of amylase enzyme such as diastatic malt, make a "milk shake" out of it, and set it aside for the amylase to do its thing. In about 3-hours you will have hydrolyzed enough damaged starch (baked bread is mostly gelatinized/damaged starch), now you can add this as your dough water to achieve a sweeter tasting crust. We do this commercially with great success, I even wrote an AIB Technical Bulletin on the process a number of years ago. But keep in mind, now that you have all that sugar in the dough it is not going to tolerate being baked at high temperatures. Or you can just skip all of the starch conversion/hydrolysis and add sugar to the dough, that's what it all boils down to.

If you want to see what a sweet tasting crust tastes like for comparison, buy a Papa Murphy's take and bake pizza, you're looking at 5% added sugar to the dough. It is seldom that I encounter sweet tasting crusts but more frequently it is the sauce that is decidedly sweet, are you sure you're not picking up the sweetness from the sauce?

Dough Clinic / Re: Cold Ferment and More Flavor in Dough

Thank you for providing the additional information. From your comments I'm thinking that your finished dough temperature might be the culprit. You mentioned that you thought higher oil made the dough ferment too fast in the summer. Oil does not affect the rate of fermentation so it was the affect of something else that you were seeing and I'm guessing it was the temperature of the dough which is the main driver for the rate of fermentation. The warmer the dough, the faster it will ferment. To compound matters you are using a reach in cooler. Your technique is good but when using a reach in cooler the finished dough temperature should be in the 65 to 70F range to compensate for the less than ideal cooling rate achieved in a reach in cooler. Some of the newer, high efficiency reach-ins employ some air movement to enhance cooling and with these coolers you can go with a finished dough temperature of 70 to 75F, but not more than that. I also see that you are off-setting the dough trays for only 1-hour, I doubt that this is sufficiently long for your reach-in so I would suggest increasing the time to at least 2-hours, or possibly 2.5-hours. If you are not already doing so, it is advised that you lightly oil the tops of the dough balls in the boxes to prevent any drying of the dough during the initial cross-stack/off-set cooling time. This should bring your fermentation back under control and it may also improve the bottom bake of your pizzas, if it doesn't we will need to discuss how you are baking your pizzas.

Please keep us posted on your results.

Dough Clinic / Re: Tweaking dough formula to last longer

Yes, you can use dry milk powder, just make the conversion from liquid whole milk to dry milk powder, but since we have no way of knowing if the powdered milk is bakery grade/high heat treatment I would advise that you still scald the milk before adding it to the dough. On the off chance that it is heat treated for bakery use, in

that case you can just add the dry milk powder directly to the flour.

Note: Many dairies convert all of their liquid fresh milk into dry milk powder as it is easier to store. They then sell it as dry milk powder or they will also use it for making cheese, this is why so often the dry milk powder isn't high heat treated as the heat treatment destroys the ability of the dry milk to be used in cheese manufacturing.

Tom Lehmann/TDD

General Pizza Making / Re: Using Milk in Dough

When I was a student at AIB (J-63) one of our lab tests was washing gluten. I stand to be corrected on this but I think the flour weight was 200-grams. The weight really doesn't matter since if you want to get an idea of protein (gluten forming only) content of the flour you will be dividing gluten weight by flour weight. The greater flour weight decreases the significance of error, remember that this is a hand washing procedure. Be prepared for COLD HANDS as the entire procedure is done with very cold water (ice water).

Dough Clinic / Re: How can one estimate flour protein levels or suitability?

Dave;

Sure, not a problem. My number is 785-537-1037.

Dough Clinic / Re: Crispyness of dough after pizza gets cold

PizzaGarage;

Amen to that brother! :)

Dough Clinic / Re: Crispyness of dough after pizza gets cold

Hand washing gluten is good for comparing the amount of gluten forming protein in different flours. I do not like to compare the results against any other except for generalization purposes. The reason for this is "operator" inconsistency which is inherent in the testing procedure (this is why the Glutomatic is so popular today, it takes the operator error out of the procedure. For this reason I like to use the hand washing procedure for comparing the gluten derived from different flours only when they are all washed by the same person (this minimizes the error factor), and only then it is acceptable for finding that one flour is capable of producing more or less gluten than another flour. There are some charts that you can compare your wet gluten weight against to get a rough idea of the protein content. The ideal situation is to get your hands on some known good quality flour, wash the gluten from it and use that as your bench mark for comparing other flours. Keep in mind however that all gluten forming proteins are not created equal, depending upon characteristics of the wheat from which the flour is milled some gluten may be soft and extensible, others tight and elastic, some may not carry much water (low dough absorption) and some may not exhibit as much resistance to fermentation. None of these will show up in the gluten washing test, but I think the gluten washing test will help you sort out different flours pretty quickly.

Dough Clinic / Re: How can one estimate flour protein levels or suitability?

What is your dough formula?

How are you presently managing the dough?

Please provide times and temperature (especially the finished dough temperature).

Dough Clinic / Re: Tweaking dough formula to last longer

When the flour wants/needs water give it water. Look for the soft, pliable dough consistency regardless of how much water it takes. Flour is milled to different

specifications in different parts of the world which can have a significant impact upon the dough absorption, and if you want to dive deeper into the pot even the wheat variety that the flour is milled from will impact the dough absorption, and to a lesser degree the type of packaging the flour is put in for sale.

Newbie Topics / Re: Very hard crust, moist cheeze

We really can't tell much about the bake since as you said, the oven wasn't ready yet when the pizza went in, but from the looks of your dough I agree with you that it looks significantly under absorbed. I would go up a full 5% for starters.

Newbie Topics / Re: Very hard crust, moist cheeze

It should be OK if you are not planning to cold ferment the dough for more than 48-hours and your finished dough temperature is in the 70 to 75F range. With that said though a lot will still depend upon how you plan to manage the dough. I think it might be a bit more tolerant to variations in dough management if the IDY were reduced to 0.4%.

Dough Clinic / Re: Recipe question

Werty20;

If the crust color is too dark for you I'd suggest eliminating the added sugar.

General Pizza Making / Re: Using Milk in Dough

Parallei;

Your first step needs to be to define "stringiness" and then what you hope to show in your experiment, followed by an experimental plan/design.

We could have used you when we were doing our research! :)

General Pizza Making / Re: Salt and yeast mix

Just remember to scald the milk prior to use as this will denature specific whey proteins which can result in inconsistency in your dough in the form of softer and stickier dough than expected. There is a lot to be said about the directions that we see to scald the milk prior to using it in making yeast leavened dough. Also remember that the milk will contribute to crust color development due to both the lactose and the protein content, so you may not be able to bake the pizzas at high temperatures.

General Pizza Making / Re: Using Milk in Dough

Gotcha. :)

That being the case you probably had sufficient water to prevent leaching but still got the sodium suppression on the yeast activity. This is the same effect as you would see if you used too much salt in a dough formulation.

General Pizza Making / Re: Salt and yeast mix

Those are the results we would expect from those doughs. The looser dough "B" was most likely looser due to leaching of glutathione out of the yeast and that yeast from which the glutathione is leached out does not exhibit very good fermentation properties which would explain the lower height.

I'd say that was a good test. :)

General Pizza Making / Re: Salt and yeast mix

It's used in all of the Chicago pizzas (thick crust, stuffed pizza and thin crust). As for use in "other" styles, outside of Chicago area it doesn't seem to be too common.

Chicago Style / Re: What's makes Jakes Pizzas around Chicago so

special.....I miss it!

I wrote and made a presentation on sodium reduced pizza a few years ago. A couple of things that we found when doing the research for the presentation:

- 1) Dough/crust is not the main contributor of sodium to a pizza, it's the cheese.
- 2) You can reduce the salt to 1.5% in the dough and still achieve decent flavor and dough performance.
- 3) Use your own precooked meat toppings since the commercial meat toppings are usually loaded with sodium.
- 4) Do not add any salt to the sauce, it isn't needed.

How to make a decent sodium reduced pizza:

Delete the salt from the dough and replace it with 2% Salt for Life (available at Walmart) this will provide full flavor but it gives you a 70% reduction in sodium content so actual sodium contribution is about the same as a little over 0.5% salt. Do not use any salt in the sauce since it really isn't necessary.

Reduce the cheese to 3.5 to not more than 4-ounces for a 12" pizza. This can still provide a great flavor IF you use a flavorful cheese blend (Grande whole milk Mozzarella at 3-ounces and shredded Parmesan at 1-ounce is what we used and people loved it).

Change over from dried herbs to fresh herbs as it will contribute to a better overall flavor and it will also allow the cheese flavor to come through (dried herbs mask the cheese flavor).

Favor vegetable toppings but when meat toppings are called for use those that you have precooked yourself without any added salt/sodium.

Look closely at the label when using any prepared tomato product as many contain added salt/sodium, sometimes in different forms. If in doubt use fresh tomato slices in place of a traditional sauce.

Note:

Try not to use any canned ingredients of any kind, if it came out of a can it most likely contains some form of sodium.

General Pizza Making / Re: how to get tangy flavor in dough

Have you tried experimenting with anise? That is a very predominant flavor in all of the Chicago pizzas. It was used as part of the flavoring blend in their sausage but really carried through all of the pizza.

Chicago Style / Re: What's makes Jakes Pizzas around Chicago so special.....I miss it!

Get the heaviest weight pan (14-ga. for aluminum or 22-ga. for tin plate steel) you can find from a commercial source. All pans will tend to warp a bit but light weight pans warp a lot more than the heavier weight pans. Warped pans are not a problem in IR or air impingement ovens but when used in deck ovens the air gap under the raised portion of the pan (where it is not contacting the deck) can create problems with the bake, and the higher the baking temperature the worse the problems are.

Stones/tiles/steel, Pans & Accessories / Re: my pans aren't flat

Many years ago we did a lot of research along these lines. If you mix compressed yeast with salt and/or sugar you can literally watch the plasma being drawn out of the CY (not a good thing for the yeast). But if you mix the same salt and/or sugar with ADY or IDY absolutely nothing happens, in fact the salt/sugar actually help to protect the yeast as it is more gyroscopic than the yeast thus serving to keep moisture away from the yeast. The problem though is that ADY doesn't hydrate

well by itself without warm (100F) water so if it is used in a dry mix inconsistent results are the order of the day, however when IDY is used in the dry mix and the dry mix is then added directly to the flour this actually becomes an acceptable way of adding IDY (mixed into the flour) so all is good for the yeast and excellent dough performance and consistency are achieved. The dry mix manufacturer Richardson & Holland used SAF Red Label IDY in their dry mixes for years, in fact at one time they were the largest consumers of IDY in the U.S. There are some types of IDY that are more sugar tolerant than others but it is interesting to note that those that are more sugar tolerant (Gold Label) are at the same time more sensitive and less salt tolerant, there are actually strains which were developed for use in Europe where when high sugar levels are used (10% and above) the salt levels are reduced to 1% or less. When we did our testing with both the RED LABEL and GOLD LABEL products in bread and pizza doughs we didn't see any significant difference in performance at 1% salt level (remember the sugar level was varied from 2 to 6%) but when we increased the salt to more common (U.S.) levels of 2.0 and 2.5% the GOLD LABEL product showed significant loss in fermentation performance as compared to the RED LABEL product.

I might also add that for many years (prior to the introduction of IDY into the U.S. in the late 1960's) a type of ADY was manufactured for use in dry mixes, this was called protected active dry yeast (PADY). You could always identify this form of ADY by its round "BB" like shape. This yeast had a special coating on it which protected it from moisture present in the flour which allowed it to be used in SOME dry mixes with some success. Without the PADY the regular ADY would absorb moisture from the flour resulting in a shorter than desired mix shelf life or less than ideal performance from the dry mix. In any case, it wasn't ideal, but it was the best we had at the time, and as soon as IDY found its way to the U.S. it didn't take us long to discover its virtues in a dry mix. I did all of the early and original application research on IDY in dry mixes back in the early 70's and it didn't take long for the dry mix industry to embrace it. I was so enamored with the consistency of IDY that I directed all of our baking research at AIB to be done using only IDY unless stated otherwise in the research protocol. When we made the switch our standard deviation in proof times went from +/- 3-minutes to +/- 1-minute, and the standard deviation for our control loaves went from +/- 100-ml to +/- 50-ml. (I actually think it was closer to 35-ml). We ran our labs using IDY (Red Label) as our regular yeast for many years and the performance of the IDY never varied, that's a lot more than we could say for CY.

General Pizza Making / Re: Salt and yeast mix

I'm inclined to go with the oven with six elements per deck and bank on the faster recovery time to maintain the deck temperature. It also sounds like it might offer more uniform heating of the deck too. Is there any way you can get them to allow you to use the six element oven first and then if you are not happy with it exchange it for the other oven with the "S" shaped heating rods? It sounds like you really don't have much option except for one or the other. It would sure be nice if they can direct you to someone who has one of these ovens, even if it is not being used for baking pizzas, possibly you could bring some dough with you to bake pizzas in rapid succession allowing you to see how it works. If you can do this be sure to monitor the baking time as this will be the indicator as to how well the oven is keeping up with the heat/baking demands.

As an aside thought, you might be able to experiment with placing some un-glazed floor tiles in one of the decks, allowing it to heat up for at least two hours and then baking several pizzas to see how well the deck is able to maintain heat.

Lastly, are you sure this is the only oven option available to you? There are a

number of posters with pizzerias in China at the PMQ web site <www.pmq.com> go to the think tank to make a post on ovens available to you in China, one of them might be able to provide more insight into what's available to you. Maybe someone else has an idea that they can share too?

Commercial Ovens / Re: Deck oven advice

In large commercial bakeries white mineral oil (food grade) is the sole lubricant for dough dividers and rounders, in fact, it the trade it is known as "divider" or "rounder" oil. If you ever had a McDonalds hamburger the bun was made using an AMF screw type divider aka SPD (superior bun divider) which requires the use of mineral as its lubricant and then the rounding bars on the dough rounding table are also lubricated with white mineral oil. This is important to the operation of the equipment as it is producing hamburger buns at the rate of 360 to 800 buns per minute. Even in large pizza commissaries like Domino's mineral oil is the only oil used with their dividers and rounders.

Keep in mind that you won't see anything special coming out of your wood box for quite some time as it will take some time for the bacteria to be able to build up in the wood (especially considering wood is pretty resistant to bacteria). The main places for the bacteria to collect are in the scratches and pores of the wood, but one you have it the flavor profile of the finished crust will change. This is how crackers used to be made, I say used to because when the cracker industry changed to steel dough troughs from their wood troughs the whole flavor profile of the crackers changed, the ultimate solution was to identify the bacteria responsible for the flavor, culture it and add it back to the dough as one would a concentrated sourdough culture. That's how crackers are made today.

Neapolitan Style / Re: Thoughts about fermenting/proofing style

Pat;

R&P (ratio and proportion) is the other way that we were taught to do it but my experience is that most people anymore don't understand R&P but they do understand a calculator and if one can calculate a meal tip using a calculator they can work a formula in bakers percent. Just substitute flour for "meal cost" and ingredient weight for the amount of tip you want to leave and you're good to go.

Tom Lehmann/The Dough Dough Doctor

Dough Clinic / Re: convert recipe using 5 lbs of flour

Use white mineral oil (available at any pharmacy) to seal the wood. Linseed oil will polymerize (into varnish) over time making a real mess out of the box as the dough will stick to it with a death grip. White mineral oil is also used to treat/seal wood cutting boards and wood counter tops.

Now, you can't say that you haven't been warned by more than one person here. :)

Neapolitan Style / Re: Thoughts about fermenting/proofing style

Got Rocks;

I quote "with one exception" Speaking only for myself, any oven made by Dhalen, which also includes the Pizza Master ovens (made by Dhalen) is the exception. I have personally never seen a better electric oven than the ovens made by Dhalen and this also includes their very large industrial tunnel ovens. When you don't have gas to work with it's amazing what those engineers can do with electricity when they set their minds to it.

Shop Talk / Re: pizzeria opportunity

bmac;

Or is it 350 ml.? That is the question. :-D

Dough Clinic / Re: convert recipe using 5 lbs of flour

Oh no! Aside from oils and fats in general, there is dough absorption (probably has the greatest influence on oven spring), flour strength, amount of yeast, amount of dough fermentation (dough management) and baking conditions, and to some extent you might even add the amount of salt used in the dough formulation.

Dough Clinic / Re: Oil and oven spring

I'm in the same boat. My personal favorite is 75% mozzarella and 25% parmesan and if I want to kick it up a little I'll go with 75% mozzarella + 20% Parmesan + 5% romano.

Pizza Cheese / Re: Ideal Ratio for 4 cheese blend?

Billy;

My "safe" approach has always been to use the blending cheese at no more than 25% of the mozzarella or mozzarella - provolone blend with any other cheeses making up the remaining 25%. In your case I think I would favor the Swiss for the majority of the blend (15 to 20%).

Pizza Cheese / Re: Ideal Ratio for 4 cheese blend?

You indicated that he said that he has typical stuff like refrigerators, to me this sounds like working with reach in units.....strike one! Tread very carefully.

Shop Talk / Re: pizzeria opportunity

While electric ovens can and are used for baking pizzas in pizzerias, with one exception it would not be my first choice. What is the equipment package like? Anticipated sales? What does the 3 or 5-year plan look like? What will your responsibilities be, what's in it for you? Benefits?

Shop Talk / Re: pizzeria opportunity

In one word: Yes. For the very reasons cited, better gas retention and a lubricated dough for improved expansion properties.

Dough Clinic / Re: Oil and oven spring

The recommended water temperature for pre-hydrating dry yeast are as follows:

ADY: 100 to 110F

IDY: 95F (IDY exhibits a relatively poor tolerance to activation in water on either side of 95F)

The biggest problem resulting from hydrating IDY in cold water stems from the "I" in its name (instant) which means that the yeast is much faster "instant" to hydrate than ADY. This is the feature in IDY that allows it to be added directly to the dough without pre-activation/hydration. However, if the IDY is exposed to water under 95F it will hydrate but the water will both enter and exit the yeast cells without getting the desired swelling of the cells which seals the water in the cells thus preventing the amino acid glutathione from being released into the dough where it results in dough softening and the yeast cells which were affected in this manner exhibit significantly poorer fermentation properties. This is the reason why the recommended method for adding IDY is to first develop the dough to a point of full flour hydration and then add the IDY on top of the dough, this controls the rate at which the yeast can hydrate so there is essentially no damage to the yeast. The only problem with this method of addition is that more often than not the dough is

mixed and 24-hours later it is discovered that the dough isn't rising/fermenting.....Oops, for got to add the yeast! Can't happen? I just happened to a client of mine, he came into his shop in the morning only to find that the dough didn't rise one bit during the night. He had to put the dough back into the mixer (we used 50% more IDY) and mixed the dough just enough to incorporate the IDY (5-minutes) making a form of emergency dough that he was able to limp by on. By adding the IDY to the flour (also a recommended procedure) there is less of a chance to forget adding the IDY. In this case there is sufficient competition for the water from the flour to slow/control the rate of IDY hydration so this procedure for adding IDY has become the most popular and accepted method for adding IDY to the dough. Because of its sensitivity to water temperature (yeast + water mixture only) pre-hydrating IDY is usually not recommended unless absolutely necessary such as when mixing the dough in a VCM or hand mixing procedures.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

Simon;

Your dough formula contains 16.6% oil which is a lot of oil, it's about the maximum amount of oil used in pizza doughs. The "normal" amount of oil is usually around the 2% mark.

Oil/fat/shortening provides a tenderizing effect on the finished crust, some might say that it makes the crust eat more like a biscuit, especially at the higher levels. It also provides a flavor to the crust, for example, lard, butter, olive oil all have their distinct flavor, oil also traps/holds aromas and flavors released during baking to provide for a more flavorful finished crust. The oil will help to seal the cell walls in the dough making them better able to retain gas which is formed and expanded during the baking process and in the same vein it also lubricates the dough for improved expansion/oven spring properties. It helps to create a moisture resistant barrier between the sauce and the dough/crust thus limiting moisture migration from the sauce and toppings into the dough where it can be responsible for the formation of a gum line or into the crust where it can be responsible for making a soggy crust. The oil, especially at higher levels can/will impact the crust color allowing for darker crust color development than dough without oil or oil at a low level. Lastly, everybody has what we refer to as a "fat loving gene" in their DNA, this means that people are attracted to things that are high in fat.

Neapolitan Style / Re: First time dough maker!

You might also want to think about establishing an LLC to protect yourself. Also, if you have not already done so go back a bit and look at the previous discussions here on the trailer itself.

Shop Talk / Re: The small things...

The flat beater aka paddle is used primarily for blending things like cake batter, cookie dough, etc.

Newbie Topics / Re: Help with KitchenAid

Is you mixer one of the older ones with a plain "J" hook that is bare aluminum? If it is that answers both of your questions, the "J" hook is really quite poor as a dough mixing attachment since the dough ingredients do not incorporate very well, and when they do the dough grabs onto the hook resulting in very poor mixing action and the necessity to frequently stop the mixer to pull the dough off of the hook. If the hook is plain aluminum it is most likely scrubbing against the bowl at some point resulting in abrading of the aluminum off of the hook which is responsible for

the gray color of the dough. If your mixer is one of the newer ones with a spiral type dough arm that is coated with a tough polymer (white in color) it might just be that you are not mixing the dough long enough. TIP: for better incorporation of ingredients when making a dough be sure to add the water to the bowl first, then add the salt and sugar (if used) into the water (no need to stir) add the flour and the yeast and mix just until you don't see any dry flour in the bowl then slowly pour in the oil and mix for 1-minute after the last of the oil is added, after that you can increase the speed to mix/develop the dough.

Newbie Topics / Re: Help with KitchenAid

If the dough handles OK for you and it gives you the desired finished pizza characteristics the yeast level is OK as is your dough management procedure.

Dough Clinic / Re: Yeast %

Billy;

The dough likes to be warm for pressing. While we normally advocate allowing the dough to warm to 50F before opening, when using a hot press it is better to allow it to warm to a minimum of 60F before pressing. The use of a lower protein flour will make the crust less chewy as will the addition of fat/oil up to about 5%. If you are looking for crispy/firm, the only option you have with your press is to par-bake the crusts, then store at room temperature for use. Upon an order just pull a crust from the stack, dress and bake to the order. This will also make a much crispier DELCO crust/pizza too. As for your regular crust in a DELCO situation it WILL soften and get more chewy.....that's the nature of the beast.

My advice is to take the par-baked crust concept for a test drive and do a little consumer testing with it to see how it is received. If it works for you it will be very easy to work the concept into your work flow.

Dough Clinic / Re: Here's my recipe. Why is it not crispy?

Peter is correct, the type of disks shown do not provide as much heat to the bottom of the pizza as a pizza screen does which can/will make a difference especially when baking at marginal temperatures to begin with. If one was trying to bake the top of the pizza more while not over baking the bottom this might be an option. There are many different hole patterns incorporating different size holes and patterns to achieve specific baking characteristics. For example, Lloyd Pans <www.lloydpan.com> makes what they call a "Hearth Bake Disk" it works great for imparting a true hearth baked crust characteristic using dough without any added sugar, eggs or milk, BUT the disk is designed to work ONLY in air impingement ovens operating at 500F and above.

Stones/tiles/steel, Pans & Accessories / Re: Perf disk

Ernie;

You reference apple pie and mixing the butter into the flour. This is roughly how pie crusts are made but the approach is a little different. You will need to use at least 15% butter but you can double that amount too but better have a good baking platform under the dough. Chill the butter and the flour, cut the butter into chunks and add to the flour, using a pastry cutter chop/work the butter into small, pea size, pieces. Suspend all of the other ingredients in not more than 50% cold water (make sure you are handling the yeast correctly for the type you are using) and add to the flour-butter mixture, mix just until the dough comes together, turn out onto a floured surface and scale to desired weight, form into pucks (like hockey pucks), lightly oil and place onto a floured sheet pan or cookie sheet, cover with a piece of

plastic to prevent drying, cold ferment for 48-hours, and open using a rolling pin or pie/pastry pin. Something to experiment with if you want to go in that direction.

New Forum Members / Re: Dough with butter?

Mitch;

You are absolutely correct. I was thinking about that as I was typing my response but I never thought to go back and correct it. Because water is never a constant in any dough formula we typically just use 8# for a gallon of water but when down sizing a dough formula as I was it would have been more correct to use the accepted weight of 8.34-pounds per gallon.

Good catch!

Dough Clinic / Re: convert recipe using 5 lbs of flour

Just be sure to seal the surface of the wood box that will come into contact with the dough by saturating it several times with mineral oil prior to the first use, otherwise the dough and the box will become as one. Also be sure to use a flexible hand held scraper to free the dough from the sides of the box. You don't want to use a metal one as it will result in wood splinters in your dough.

Neapolitan Style / Re: Thoughts about fermenting/proofing style

bmac;

"The ingredient weight will always be given in the same weight unit as the flour is shown in", since we are showing the flour weight in ounces the ingredient weight (water in this case) will also be shown in ounces. Since we weighed the flour to 80-ounces it would be correct to weigh the water to 38/38.4-ounces rather than using a volumetric measure for liquid/fluid measures which would not be as precise. However it is good to note though that when making dough in a pizzeria where the flour weight is typically between 40 and 50-pounds it is a common practice to volumetrically portion the water (fill a 5-gallon bucket with the exact amount of water needed, determined by weighing, and then mark a line on the bucket to which it will be filled when making doughs on a regular basis. While this method again is not as accurate as actually weighing the water each time the percent of inaccuracy is lessened with the greater flour amount so it is usually considered as an acceptable practice. My advice is to always weigh the water for any doughs made with less than 25-pounds of flour.

Dough Clinic / Re: convert recipe using 5 lbs of flour

Zaroh;

Regarding that "other" IDY that you referenced (the brick), all IDY is dry yeast and in larger quantities usually 450-grams, it is sold in a vacuum pack. It looks like a somewhat rectangular shaped brick and is just about as hard. Once the packaging is compromised it becomes soft and the IDY can be easily poured out of the bag. This is how all of the pizzerias buy their IDY. Be aware though that much to my dismay, most of the yeast manufacturers are now putting their ADY up into the exact same packaging. A few years ago only IDY came in this type of packaging but now that both yeast types are packaged exactly the same there have been numerous cases where they have been confused/mixed up.....the problem is that they cannot be used interchangeably in the same manner.....moral of the story: Always read the label.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

Agreed, try working with a starter or sourdough. You might even try using a

sponge-dough procedure to develop the flavor profile you're looking for, any of these will shorten your process significantly....not taking into account the time needed to mature a sour or starter. You could use a sponge-dough procedure using 75% sponge that is fermented overnight to develop the flavor, this would cut your procedure down to 24-hours or so.

General Pizza Making / Re: how to get tangy flavor in dough

There are SOOOOO many things that can/will affect the way a ferments/proofs /rises that it is literally impossible to follow any one specific procedure and hope to get the same results. For example, placing the dough on the bench top to proof uncovered for a period of time may work fine in Miami, Florida but it may not work as well in Cree, Colorado as the dough will exhibit more than a propensity to develop a dry crust. How do the big guys do it? They control as many of the variables in their dough management procedure as possible, keeping in mind that time and temperature control are the key to effective dough management. If you go into the archives at PMQ or Pizza Today and dig up some of my past articles (In Lehmann's Terms/PMQ) and The Dough Doctor/Pizza Today) you will find articles/discussion on dough management as it pertains to pizzerias.

So how do you know the correct way to ferment or manage a dough? I think the easiest way is to look at it this way:

What is the finished/mixed dough temperature?

Is the dough cold fermented or fermented at room temperature?

Is it fermented as a portioned ball or is it bulk fermented?

Does the dough sit out prior to cold fermentation/for how long? Or does it go straight into the fridge?

How long is the dough fermented?

Once you know these details you can try to incorporate them into a dough management procedure that works best for you.

By the way, those wooden dough boxes, over time they become impregnated with bacteria, different strains of lactobacillus (lactic acid forming bacteria which are responsible for certain unique flavors in bread type doughs) in this manner they act something like the addition of a sourdough starter to the dough.....in SOME cases the wooden dough box might have an important part to play in the finished crust flavor BUT, and this is a big BUT, it doesn't just happen overnight, it might take months or years of use to develop the bacteria so just putting the dough into a wooden box to ferment probably won't have the desired effect if it's flavor that you're looking for.

Neapolitan Style / Re: Thoughts about fermenting/proofing style

First convert the formula to bakers percent with flour as 100% and then divide the weight of each ingredient by the weight of the flour and multiply by 100 to find the % (bakers %) of each ingredient. Then all you need to do is to write down 5-pounds or better yet 80-ounces next to the flour as this will be your new flour weight upon which the formula will be based. Then, using your calculator, enter the flour weight (80) X ingredient percent you want the new weight for, then press the "%" key. The ingredient weight will be in the display. The ingredient weight will always be given in the same weight units that the flour weight is shown in (pounds, ounces, grams, kilograms, etc.).

Here is an example:

50 Lbs. = 100%

3-Gal. water = 24-Lbs. / 24 divided by 50 X 100 = 48%

7-Oz. salt = 7 divided by 800 (ounces in 50#) X 100 = 0.875%

7-Oz. sugar = 7 divided by 800 X 100 = 0.875%
1/2-Oz. ADY = 0.5 divided by 800 X 100 = 0.0625%
7- Oz. oil = 7 divided by 800 X 100 = 0.875%

New formula based on 5# of flour weight.

Flour: 5-pounds/80-ounces

Water: 80 X 48 (press the "%" key and read the answer....38.4-ounces.

Salt/Sugar/Oil: 80 X 0.875 (press the "%" key).....0.7-ounce.....0.7 X 28.4 = 19.88-grams.

ADY: 80 X 0.0625 (press the "%" key).....0.05-ounce.....0.05 X 28.4 = 1.42-grams

Dough Clinic / Re: convert recipe using 5 lbs of flour

To properly season a pan just wipe with an oiled paper towel, there should not be any oil "swimming" in the pan to be poured off. Seasoning is really nothing more than an oil finish (think varnish) if you put too much on all at once it will never dry/cure properly and remain soft and sticky. I think your problem was too much oil in the pan.

Chitchat / Re: Trying to learn stainless steel cookware

If you are looking to wrap the dough ball in Saran wrap be sure to lightly oil the dough ball first, if you don't, there is a high probability that you will need to scrape the dough off of the Saran wrap. To properly oil a dough ball you should place a little oil on your hands, rub them together and then run your hands over the dough ball. All of the research that we did on oil application to both dough and pans showed that you can apply a thinner application of oil by wiping than by spraying, remember, if you can see an oil sheen on the dough you have enough oil on the dough. If you're oiling a pan and want minimal oil application just apply a little oil to a paper towel and wipe the inside of the pan.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

The biggest challenge to using raw meats and eggs in any food establishment is the potential for cross contamination. Considering the skill level that is present in many pizzerias the use of precooked meat toppings is a very realistic consideration. At home, not a problem, but in a commercial establishment there is an awful lot on the line. The classic example is the case with Jack In The Box many years ago, it still serves as an example of what can go wrong and the ramifications when it does, and there have been some much more current, high profile cases of food caused illness that we have all read about or seen in the news, it's not something you want to be exposed to as a business, I can't say "don't do it" but if you do opt to handle raw meats and eggs in a pizzeria make doubly sure you and your employees have the proper training, follow that training and know what they are doing.

Shop Talk / Re: Toppings - pre cooking in house vs. pre cooked

Joe;

Your assumption is "spot-on". Many pizzerias have dough management procedures that work, to a greater or lesser degree, for them but the underlying fact is that it does work. When I developed the model dough management procedure we incorporated everything that would allow for the most effective dough management possible. While many pizzerias cannot implement the model system (many have now done so as have a number of pizza commissaries) we still encourage them to

try to incorporate as many of the aspects of the model system as possible, keeping in mind the fact that without time and temperature controls you cannot have an effective dough management program.

Dough Clinic / Re: Tried lots of recipes but not getting the flavor. Please help!

Norma;

Yes, we sheet the dough out to about 1/4-inch in thickness and form it into a rectangular shape, then wet one edge (top or bottom) with water, add pepperoni slices, or wet the entire surface and add ground pepperoni, then begin rolling the dough (jelly roll fashion) towards the wet edge (the wet edge will help to seal the seam). After the dough is rolled I like to allow it to rest (with the seam on the bottom) for a couple of minutes, then using a sharp French/chef's knife begin cutting it into desired lengths. I like to finish by placing on a baking pan with a silicone liner, spraying the top of each piece with water and sprinkling with shredded Parmesan cheese. The pepperoni on the cut edge will get lightly toasted for added flavor, if you don't want this you can manually work the dough on the cut edge to cover the pepperoni for a fully enveloped pepperoni roll. When making the pepperoni rolls by making the pocket in the dough ball I have also been known to add a little cheese to the pepperoni too. I learned this procedure when I was teaching a class in Taiwan a number of years ago where I saw them making a roll filled in this manner using steamed vegetables or red bean paste (red bean paste rolls), the rolls were brushed with egg wash and baked, I figured the procedure would work well in making pepperoni rolls too.

Other Types / Re: Re: Bo Pizza

John;

I'm from Tinley Park, IL. My favorite pizza place was/is Ed and Joe's. I am not familiar with Little Joe's, where is it located in Tinley Park?

New Forum Members / Re: thin crust pizza

Fast as possible = the highest speed setting that your mixer will mix the dough without fear of it going into a self destruct mode.

Off-Topic Foods / Re: Hamburger, Hotdog Buns

Josh;

Need to know what kind(s) of pizza you plan to make, how you plan to open the dough and the type of oven you have, add to that the type of refrigeration (walk-in or reach-in. Do you have dough boxes? Room for dough boxes in the cooler?

I'll be glad to help you. If you wish, you may also give me a call at 785-537-1037 to discuss which may save you some time.

Shop Talk / Re: Opening a pizzeria in January.

Norma;

I make my pepperoni rolls two different ways, one is to roll the pepperoni into the dough like rolling a pepperoni jelly roll and then cutting it to length (they look a lot like what you have pictured. The other method is to chop or grind the pepperoni into small pieces, I use my hamburger bun dough and instead of rolling the dough balls out just before panning, I hold the dough ball in one hand and make a pocket in the dough ball, then I add the pepperoni and close the filled pocket and place the dough ball back down on the counter/bench top to proof/rise for an additional 30-minutes, I then roll the filled dough ball out to fit into the pan cups and set the filled pans aside to final proof/rise for 45 to 60-minutes, then spritz with water and

bake at 400F. A variation of this method is to just blend ground pepperoni into the dough (20% based on the total dough weight) and mix it in during the normal mixing process, like a pepperoni infused dough. These are then formed into rolls and baked. I sounds like what you are proposing is very similar to the first method shown.

Other Types / Re: Re: Bo Pizza

Zaroh;

As you get better one thing is for sure, those volunteers will not be CANDID! The mere mention of a pizza party will have them anxiously looking for their invitations.

:-D

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

Mash996;

You really need to know the age of the starter to answer your question. If the starter is only 12-hours old or less you will need to take into account the flour in the starter but if it is more than this, as most are, the flour is pretty well expended as far as gluten development is concerned so it is not taken into account but the water is.

Peter has a chart which I believe gives the conversion from starter to yeast or yeast to starter.

Which gives the best fermentation, starter or cake yeast? Fresh cake yeast will always provide the most uniform and consistent rate of fermentation, but a properly managed starter will provide the best flavor.

Starters/Sponges / Re: Starter question

Zaroh;

You might also consider experimenting with the salt level too. One function of the salt is to control the rate of fermentation, the less salt used the faster the yeast will ferment and the more salt used the slower it will ferment. At the same time the salt provides for a more consistent/predictable rate of fermentation. If you are using only 1.5% salt right now there might be a benefit to increasing it to as much as 2.5%.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

Jerkywad;

I have a whole bunch of pertinent questions to ask regarding your concept and I would like to discuss these with you over the phone. Please give me a call at 785-537-1037 so that we may discuss. We're in the same time zone as I'm located in Manhattan, KS about 85-miles south of Lincoln.

Dough Clinic / Re: Type of Pizza for new Pizza shop questions

Here is the formula that I use for both hot dog and hamburger buns.

Sponge:

Flour (Pillsbury Bread Flour) 75%

IDY: 1%

Water (80F): 55% of the weight of the sponge flour weight (above).

Mix together just until well mixed, cover and set aside to ferment for 4-hours.

Dough:

Flour (Pillsbury Bread Flour) 25%

Water (cold) 65% of the total flour weight (sponge and dough) minus the WEIGHT of water in the sponge.

Salt 2%

IDY 0.5%

Sugar (table sugar) 13%

Butter (non-salted and softened) 5%

Procedure:

Place fermented sponge in mixing bowl, add water, flour and remainder of ingredients.

Mix at low speed for 2 to 3-minutes then mix at the highest speed possible for 8 to 10-minutes. The dough should have a very smooth, silky appearance.

Immediately take dough to a floured work surface and divide into 75-gram pieces, forming each piece into a ball.

Set dough balls aside, sprinkle lightly with flour and cover with a sheet of plastic to rest for about 15-minutes.

Using a rolling pin or pastry/pie pin flatten each dough ball out to approximately 1/4-inch in thickness.

Place flattened dough pieces onto a lightly oiled baking pan (sheet pan/cookie sheet).

Cover again with a sheet of plastic and allow to proof/rise for about 1-hour.

Lightly spritz with water and bake at 400F until golden brown (about 12-minutes).

Brush with melted butter immediately upon removal from the oven if desired.

Note: If you want to make a seeded bun apply sesame, poppy, or sunflower seeds immediately after spritzing with water.

Remove from baking pan and place on a screen/rack to cool.

I've made them like this for years, and they have a great flavor too.

Off-Topic Foods / Re: Hamburger, Hotdog Buns

And the ADY is not a problem either, just use it correctly and you're good to go. The lack of pepperoni stumps me too???

Do you not like salami on your pizza? ^^^

Next time you're at a store where you can buy it put in a good supply and freeze it for future use, remember you can make some really great pizzas without pepperoni too.

General Pizza Making / Re: Costco Ingredients Pizza Making Challenge

I've only been exposed to it one time and I wasn't impressed. The "hook" if you can call it that, in my personal opinion, is useless, and the roller mixing attachment looks like it wants to provide spiral mixer type of mixing action but it just doesn't seem to work the dough very well or uniformly. If that machine had a rotating spiral design hook it would work a whole lot more like a spiral mixer and probably work quite well.

Prep Equipment / Re: Anyone using a Ankarsrum mixer?

Thank you for the update, looks like they are going to a new website. Having the company name in the website address makes a lot more sense than what they previously had.

By the way, "www.wenrich.com" was short for W= Wright / ENRICH = Enrichment (Wright Enrichment). Their main product to the food industry is vitamin and mineral enrichment. When you see the word "enriched" on a package of bread, pasta, cookies, etc. they were the ones almost always providing the enrichment blend for that product, but now that they are expanding out of just enrichment I'm

guessing that www.wenrich.com just didn't cut it anymore.

Dough Clinic / Re: dough roller tears up dough

Which mixing attachment are you using?

Tom Lehmann/The Dough Doctor

Prep Equipment / Re: Anyone using a Ankarsrum mixer?

Hermit;

Yes, that's the spiral dough arm that I was referencing in my response to Alvin.

Dough Clinic / Re: Dough ball not smooth or silky

Alvin;

Your dough is under mixed, it needs to be mixed for a longer time. If your mixer has a reverse spiral type dough arm this should be easy to accomplish, but if it has the older type "J" hook it might be a bit more problematic as the dough will continually just grab onto the hook and spin around in the bowl without getting any significant mixing action. If this is the case you have two options, 1) Make a larger size dough so the dough remains in constant contact with the sides of the bowl and cannot grab onto the hook. 2) Stop the mixer as soon as the dough balls up on the hook, pull the dough off of the hook, turn it upside down and place it back into the bowl and resume mixing.....repeat, repeat, repeat, repeat. A third "possible" solution exists, see if you can get a reverse spiral dough arm for your specific mixer. These dough arms are designed to keep forcing the dough down into the bottom of the bowl, eliminating the problem. Availability of the reverse spiral dough arm will depend upon the age of your mixer.

A couple of questions too:

What is the finished/mixed dough temperature?

What do you put the dough ball(s) in for the cold fermentation period?

Dough Clinic / Re: Dough ball not smooth or silky

Just mix/knead the dough until it looks smooth, (no need to mix/knead any longer) biochemical gluten development will take care of the rest of the gluten development for you.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

The high velocity airflow will scorch the onions if they are not covered, place in a pan with a little oil and cover with a piece of foil. As baking temperature, time and finger profile differs with different air impingement ovens you may need to experiment with the exact baking procedure, full pass, partial pass, etc. One other thing, a bright colored pan might work better than a traditional dark colored pan.

Off-Topic Foods / Re: Caramelize Onions in Conveyor Oven?

Zaroh;

Yes, you are correct. Then once you have the dough at 68% absorption look at it and ask yourself if you think more water will make it better or worse, if the answer is "more water" the next time you make dough increase the absorption to 70% ($68\% + 2\% = 70\%$) or if you think the absorption is a little high reduce it by 2% on the next dough ($68\% - 2\% = 66\%$). Keep making the absorption adjustments that way until you think you are close to where you need to be, then go in 1% increments if you want to "fine tune", but keep in mind that dough absorption is NEVER a "fixed" entity, it can, does, will change more often than you might think it does, but once you find the "sweet spot" for your specific flour and dough

management procedure you should always be close enough to consistently make good pizzas.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

And I thought that egg on my face was left over from breakfast. :-D

Newbie Topics / Re: 13-14 inch ny pizza?

It sounds like you are incorporating the oil into the flour which will coat the flour making it all but impossible to form gluten from the oil soaked flour and that portion of the flour will not hydrate well at all. It also sounds like your dough is very under absorbed too. You might want to begin adding more water to the dough. Remember, the amount of water specified for any dough is variable as different flours have different absorption levels. From the sound of what you are experiencing I would suggest increasing the dough absorption by 5% to see if that gives any improvement and then adjust as necessary in 2% increments until you achieve a more cohesive and smooth textured dough.

Newbie Topics / Re: First try at Tom Lehmann's New York Style Pizza Recipe, looking for advice

Ovenray;

Corrugated cardboard is probably one of the best things to serve your pizza on. It allows the pizza to breathe a little from the bottom, it absorbs any oil or moisture released from the pizza, and it's totally disposable. Metal plates cause condensation to form on the bottom of the pizza, and because they don't "breathe" the condensation is forced back into the pizza (anyone care for another soggy slice?). There are two easily addressed issues to using cardboard, 1) It doesn't look very nice. 2) It is not "food safe" and it can transfer unwanted flavors from the cardboard to the pizza. Both of these issues are very easily addressed by placing a piece of heavy weight food contact approved paper over the cardboard. You can buy this in sheets from most restaurant supply stores or you can make your own as I do, just buy a disposable table cloth (they come in different patterns) and cut into squares to fit over your pieces of cardboard. I just lay mine over the cardboard but I suppose if you wanted to get fancy you could cut the pieces a bit larger than your cardboard and fold it over the cardboard and tape it to the bottom. If you don't mind having something to store you could also cut a piece of plywood to desired size and then size the cut pieces to fit and you would have something more durable and permanent. Not satisfied yet?? How about buying or making a simple wood peel of the desired size, placing the cut piece of paper on the peel and serving it that way. If you go this route be sure to pre-treat the peel by wiping it liberally with mineral oil several times to seal the surface. This will make it easier to wipe down. NOTE: NEVER wash a wood peel, just wipe it down with a damp cloth and wipe dry immediately to prevent it from warping.

General Pizza Making / Re: How do you serve your 14 inch and bigger pizza?

Tia;

You're making a New York STYLE pizza in your home oven so you can make it any size you want or any size your oven will accommodate, it's the visual, textural and flavor properties that you are after, not the size. Sure, for AUTHENTIC New York pizza (whatever that might be/there are sooooo many pizzerias in New York City) you might want to go to a larger format, (I think that is what Scott might have been referencing) but to enjoy a "taste of New York" make any size you're comfortable

making, once you have mastered the formulation and technique it will be just as good. Just for the record, at home I make all of my pizzas on either a 12" or 14" format.

Newbie Topics / Re: 13-14 inch ny pizza?

Fermentation is the key to getting a flavorful pizza crust, or bread for that matter, no doubt about it. Your dough formulation looks good and should perform well for you IF the dough is managed correctly. I think most participants will agree that 12-hours cold fermentation time marginal for dough performance and certainly not sufficient to develop the flavors that you are looking for. I would suggest following the suggestions by Got Rocks and JSARAS to get a stronger, better suited flour and ferment it longer (48-hours would be a good starting point). I think you will find that this will give you something more like what you are looking for.

Dough Clinic / Re: Tried lots of recipes but not getting the flavor. Please help!

Rolo;

You might want to consider increasing the salt level to 1.75 to 2% as this will provide for an improved flavor in the finished pizza. To move your pizza closer to a thin crispy type you might also want to reduce the dough absorption in 2% increments. Keep in mind that when doing this the dough will become increasingly tougher but you don't need to mix it as much as you presently mix your dough, all you will need to do is to mix the dough until it is well incorporated, then scale, ball, oil the dough balls, place into plastic dough boxes, cross-stack for 2-hours, then down-stack and allow to cold ferment for at least 24-hours (48-hours is better), then remove dough from the cooler, allow to warm at room temperature until the dough balls reach 50F/10C then begin sheeting the dough out to size, dock, sauce, dress and bake.

Dough Clinic / Re: Crispyness of dough after pizza gets cold

Rolo;

If your dough bakes up crispy but the finished pizza gets soft 10-minutes out of the oven, this is pretty normal for pizza. not knowing how soft your pizza is actually getting I cannot give any specific direction but here are some things to do that might help a bit.

- 1) Brush the pizza skin very lightly with oil prior to application of the sauce.
- 2) minimize the amount of sauce and toppings used on the pizza.
- 3) Bake the pizza as long as possible, sometimes deleting any sugar, eggs or milk from the dough formula will allow you to bake the pizza longer without developing excessive crust color.
- 4) Place the finished pizza on a screen or rack to allow for airflow under the pizza as soon as you remove it from the oven.
- 5) Change the type of pizza that you are making to a thin crispy or cracker type crust. The doughs used to make these types of pizzas will typically be made with around 45% absorption. They retain their texture quite well which explains why they are commonly served at pizza buffets.

If you would please provide us with your dough formula, mixing technique/procedure, dough management procedure and baking procedure I'm sure we can provide more additional information.

Dough Clinic / Re: Crispyness of dough after pizza gets cold

If a pre-ferment is used you have to take into account the amount of yeast that you added to the pre-ferment just like you do with the water content.

Dough Ingredients / Re: Mixing Yeasts

Can you share with us the exact dough "recipe" that you are using?

Dough Clinic / Re: Tried lots of recipes but not getting the flavor. Please help!

JVP;

Excellent question. put the water in the bowl first then add the salt and sugar (if used) to the water, no need to stir, then add the flour and the IDY right on top of it. Remember, this is for machine mixing only. The other recommended way to add the IDY is to hold it back for about 90-seconds of the low speed mixing cycle and then just pour it over the "dough" and go on with life as normal. I personally don't like this second addition method because even in a commercial setting (pizzeria) the dough will be fully mixed and then the container of IDY is discovered still sitting on the bench...Oops! Or worse yet, it is not discovered until the following day. I just responded to an emergency call on this situation not two weeks ago. The solution: Make an emergency dough for immediate use, allow the dough balls to warm to 65-70F and put them back into the mixer, add the IDY and mix for 5-minutes at low speed, start over again as you would with a new dough. It doesn't do anything for your immediate dough needs (that's what the emergency dough is for) but at least you don't lose the dough that you've already made.

Dough Ingredients / Re: Mixing Yeasts

Peter;

That's really strange to hear. The amount of vinegar is very small, only enough to replace 2 or 3% of the dough water and then acetic acid is one of the acids formed during fermentation. Vinegar = dilute acetic acid.

You're probably right, buy our stuff.

Dough Clinic / Re: Yeast + Baking powder

Norma;

6.6 is a very high dough pH caused most likely by the soda portion of the CL (chemical leavening). The crumb structure as well as the crust are very typical for what we found too. It is very similar to the old quick breads that you find mentioned in some of the older books on home baking. You can also handle the dough as you would a sweet dough to make pastries. We used to get something like that when we were kids, form into small (golf ball size) balls, then flatten to about 1/4-inch thickness, using a spoon dipped in melted butter form a depression/pocket in the center, egg wash, sprinkle with sugar, apply a dab of jam to the depression and bake. As kids we could eat them as fast as they came out of the oven. :)

Dough Clinic / Re: Yeast + Baking powder

Peter;

When calculating a formula in this manner you are actually working in "true" percent (true %) which always gives a total of 100% when you add up all of the percentages it also always gives you the same dough weight too. This is why this method is so commonly used by dry mix formulators (I can't think of any using any other method), but the down side is that when you change any one ingredient you automatically change all of the other ingredients at the same time necessitating reformulation. It can also make assessing the impact of an ingredient on the formula more difficult as the amount of the ingredient is based on the total dough weight as opposed to the flour weight upon which the structure of the dough is built. Neither method is right or wrong, it all depends upon what you are trying to

accomplish. If keeping the dough weight constant then working in true % is the way to go but if developing a formula or assessing the impact of an ingredient on the dough is the goal bakers % is a better approach.

Dough Clinic / Re: A Question On Yeast Reduction In a Formula.

Brewer;

To stay true to the recipe (formulation) do all of your calculations using compressed yeast, then decide which form of yeast you want to use, IDY or ADY, adjust the level for equivalent fermentation performance to the compressed yeast (1/3 as much for IDY or 1/2 as much for ADY) and you are good to go. No other formula changes are needed as you are only changing the "form" in which the yeast is added in. If you want to be absolutely correct in the conversion you will also want to add the difference in weight between the compressed yeast amount and the amount of IDY or ADY as additional water to the dough formula to compensate for the drying effect of the dried yeast product you have elected to use.

I hope this has answered your question.

Dough Clinic / Re: A Question On Yeast Reduction In a Formula.

Norma;

There is a possibility that the non-encapsulated soda might be neutralizing the acids formed by the yeast. This would greatly suppress yeast activity as yeast is an acid loving organism and does not do well at all in anything that comes close to being alkaline.

Dough Clinic / Re: Yeast + Baking powder

JVP;

Sure. IDY has many cracks and fissures over its entire surface to allow for instant/rapid hydration (that's where the "instant" part comes from) and when you put IDY into cold water the water enters into the individual cells but doesn't cause the cell to swell, which would effectively trap the water in the cell, so what you get is something of a flushing action where the water enters the cell and then leaks out again BUT in doing so it also takes with it some of the plasma material from within the cell (think of it as eviscerating the cell). This may or may not kill the cell(s) but in any case it does reduce the ability of the yeast to participate in the fermentation process. Keep in mind too that contained in that plasma material is the amino acid glutathione which can also result in softening or weakening of the dough much like the addition of PZ-44.

the1mu;

Yep, even if it's ice water. The reason for this is because the yeast in this form is already hydrated and there is no damage as described above, and ice water will not temperature shock the yeast at all, in fact it tolerates ice water temperature quite well. Think of it, what temperature do we store compressed yeast at? The only reason why it is not recommended to store it below 36F is to reduce the risk of having it frozen.

Dough Ingredients / Re: Mixing Yeasts

Husker;

Actually, that formula was developed to use a 12.5 to 12.8% protein flour much like the KA Bread Flour #110 @12.7% protein content. While the dough was completely satisfactory after 24-hours cold fermentation time we always felt that it was in its prime at 48-hours. When we used General Mills All Trumps at 14.2% average protein content we felt that the dough was not fully matured until after 48-hours of cold fermentation with its prime at around 72-hours. So, if you are going from a

14% flour to a more typical 12.7% flour my advice is to plan to use the dough after between 24 and 48-hours of cold fermentation time. Much beyond that the dough seems to be beyond its prime. Of course this all depends greatly upon how the dough is being managed.

New York Style / Re: Help with using KA Bread flour instead of Sir Lancelot in dough recipe

Yep, not a problem. They are all of the same strain, *Saccheromyces Cerevisae*, with the only real difference being the way they are processed to adjust the moisture content for the form that it is sold in, cream yeast, compressed yeast, active dry yeast and instant dry yeast. Just remember the conversions for each type: To replace compressed yeast/cake yeast, fresh yeast with IDY use only 40% as much IDY. To replace using ADY use 50% as much. Feel free to blend them if you wish, just remember if machine mixing the IDY should be added to the flour in it's dry form, or it can be hydrated in a small amount of 95F water before addition. The ADY must be hydrated in a small amount of water at 100 to 105F prior to addition. Compressed yeast can be added just as it is to the dough or it can be suspended in the dough water (no special attention to the temperature of the water is needed). If you are mixing your dough by hand it is best to pre-hydrate both dry yeasts and suspend the compressed yeast as per directions above.

Dough Ingredients / Re: Mixing Yeasts

Norma;
Got it. :)

The actual amount of soda used in a baking powder will depend upon the neutralizing value of the food/leavening acid used

Dough Clinic / Re: Yeast + Baking powder

Wolf;

Don't forget to season your screen(s) well before their first use.

Stones/tiles/steel, Pans & Accessories / Re: New pizza screen has bulge

The only problem when you allow the dough to "swim" in oil as P.H. used to do is that the oil is absorbed only into the outer portion of the dough, not much more than possibly 3/16-inch, then after baking the pizza has a very oily feel to the bottom of the crust. The old P.H. pans were steel with a horizontal line stamped into the side of the pan indicating the correct height to which the dough was to be allowed to proof/rise to.

General Pizza Making / Re: Incorporating oil into dough

Norma;

Please tell me that 30 - 35% is a typo. Most cake systems only contain 5 to 7% baking powder with the exception of traditional angel food cake which is normally in the 1.5 to 3% range due to the aeration of the egg albumen providing most of the leavening.

Dough Clinic / Re: Yeast + Baking powder

Jeff;

Yes, there is a difference if you add the oil to the water. Do you autolyse all of the flour? If so, just add the oil at the time you put the autolyse in the mixing bowl before even starting the mixer because all of the flour is already hydrated you don't need to mix to get flour hydration, after that just use the high speed technique to get the oil started into the dough.

General Pizza Making / Re: Incorporating oil into dough

The problem stems from adding the oil too late in the mixing process. You should add the oil as soon as the dry flour on the bottom of the mixing bowl disappears. When the oil lubricates the dough ball causing it to just slide around in the bowl you are adding the oil too late. Try adding the oil a little sooner and the problem will disappear. By the way, the best way to address the problem is to just put the mixer in the next higher speed for a few seconds until the oil is worked into the dough and then return to your normal mixing speed. This does not affect the total dough/gluten development at all.

General Pizza Making / Re: Incorporating oil into dough

Roy;

You might try looking at the book Baking Science and Technology by E.J. Pyler, it might have a chapter on it in the book.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Actually, at higher mixing speeds you are developing and breaking down the gluten faster than you are oxidizing it. The stiffer/firmer dough does indeed get more mixing action at low speed than a softer dough but it is still all but impossible to mix a dough, even with low absorption to a point where you actually begin to break down the gluten matrix.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Harry;

Agreed, sometimes I find it beneficial to put the mixer into a higher speed just to help get the oil incorporated, and then drop back down to my normal mixing speed to finish mixing.

Dough Clinic / Re: Unique crumb

Roy;

You don't really get the same level of gluten development when mixing at low speed as you do when mixing at "high" speed, many in the baking industry will say that it is essentially impossible to over mix a dough at low speed. The reason for this is due to the fact that you are allowing the gluten to oxidize as it is being mixed at low speed which strengthens the gluten (reference "fatigue dough" mixing process) but when mixed at high speed the gluten develops faster than it can be oxidized so development can easily progress to a point of break-down. In making pizza dough there is a point in gluten development which can be reached by either high speed or low speed mixing BUT this point of gluten development is a point where the gluten is just beginning to form sheets which is why we see this as the point where the dough in the mixer begins to look smooth. So, can you mix a pizza dough at high speed? Sure you can, we do it all the time using a VCM (vertical cutter mixer) where the mixing speed is 1,750 r.p.m. and the mixing time is about 65 to 70-seconds. Can you do it in a planetary mixer? Yes you can, just mix the dough at low speed for the first couple of minutes so you won't need to scrape the contents of the bowl off of the walls and then go straight to high or a higher speed, but don't forget to stop as soon as the dough begins to take on a smooth appearance. So why don't we do this all the time? It is too hard on the equipment in most cases, but in a lot of pizzerias where we have a sufficiently sized/strong mixer it is common to mix at low speed until the oil is added and then go to a higher speed to bring the dough to the level of gluten development that we are looking for. Total dough mixing time in this case is about 8 to 10-minutes maximum.

If mixed only at low speed the mixing time is closer to a total of 20-minutes or more.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Harry;

In almost every case you will find that things begin to start going down hill after about 20% oil addition, a lot will depend upon the strength of the flour that you are using so you might be able to push it closer to 25% on a good day. As you know, the oil will interfere with the gluten development so it becomes especially important to make sure the flour is hydrated before all of that oil is added. I've found that I can sometimes get better results by adding half of the oil in the normal delayed oil addition method and then gradually adding the rest of the oil over the next few minutes of mixing.

Dough Clinic / Re: Unique crumb

Roy;

Yes, BUT at any given point of gluten development between mechanical mixing and biochemical gluten development there will be a significant difference in the way the gluten reacts. When developed mechanically the gluten is very tough and elastic but when developed biochemically it is much more extensible. You can easily see this if you develop a dough to full gluten development and then try to form it into a skin, now take the same dough and allow the gluten to develop biochemically (about 24-hours cold fermentation) then turn the dough out of its container and begin opening it into a skin.

Aside from a lot more wear and tear on your mixer you will find it easier to open the dough that was biochemically developed.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Harry;

Adjust the dough absorption to about 55% and add 12% oil (delayed oil addition mixing method for sure). Mix the dough to develop a smooth, and slightly extensible dough (this is a little more mixing than what we normally give a pizza dough), target for a finished dough temperature of not more than 75F (70 to 75F range), immediately scale and ball, cold ferment for 24-hours, allow to temper AT room temperature until dough temperature reaches 50F, using a rolling or pastry/pie pin open to a diameter slightly larger than the pan, place into the pan and allow the dough to final proof for about 70-minutes, dress and bake.

Suggested scaling weight range: 14 to 16-ounces for a 12" pan style pizza.

Baking temperature: +/- 450F

Bench mark from this and let us know what you get.

Dough Clinic / Re: Unique crumb

Matt;

As I've said so many times before, don't worry about the mixing time in YOUR specific mixer, just work to get that smooth skin in the mixer. I believe a lot of the posters here have gone over to the reverse spiral dough arm for their mixer to address the problem of the dough climbing up the hook, and I think all of the new mixers come with it as a standard feature. This is probably why you are seeing shorter mixing times being posted. That said, try to keep your dough sized sufficiently large to keep the dough in constant contact with both the hook and the sides of the bowl and be sure to pull the dough off of the hook occasionally turning it over as you place it back into the bowl. This will help improve the mixing action of your mixer.

Dough Clinic / Re: Reducing Large Bubbles in NY-Style Crust

Cassio;

Jsaras is spot-on. If you are looking for the unique flavor afforded by your starter why not just use your natural starter to provide all of the fermentation and flavor? The only reason why commercial yeast is ever used in conjunction with a natural starter is to achieve a faster rate of fermentation specifically when making breads and rolls where the dough goes through a final proofing stage just prior to baking. Depending upon the strength and composition of the natural starter this can take upwards of 6 to 12-hours in some cases so commercial yeast is added to provide for a faster final proof (shorter proofing time). That's the good news, the bad news is that for this to happen the commercial yeast must be added at such a level so as to make it the dominant yeast in the dough. This is why for many years it was always said that San Francisco sourdough bread could only be made in San Francisco (must be something in the air or water?) but this has been shown not to be true, instead, bakeries producing the unique flavored San Francisco sourdough flavor bread and rolls were built to accommodate the long final proofing times while other bakeries just tried to fit it into their regular processes using the addition of commercial yeast to speed things up, which as I said, it did but the unique flavor of the bread was pretty well lost. Today we have bakeries that are specifically built for the production of sourdough breads and rolls so we now have the unique flavored sourdough breads and rolls available throughout the U.S. When it comes to pizza dough production, unless we're making a thick crust or deep-dish pizza the dough is seldom ever given a final proofing, instead it is allowed to ferment for a day or days, then opened into a pizza skin, dressed and baked which pretty well eliminates any need to use a commercial yeast.

Dough Clinic / Re: Natural yeast WITH or WITHOUT commercial yeast

The temperature is OK but close to the top end of where you want to be so I'd suggest using water that is 5F colder than what you have been using. Your dough balls appear to be somewhat under mixed too, but since you are already mixing 10 to 15-minutes? (the time shouldn't change more than a minute or two from dough to dough). Tell me about your mixer, capacity, number of speeds and what kind of dough agitator you have. If there is a lot of variation in the mixing time I always suspect one of two things, 1) the dough is too small for the bowl capacity so the mixing action is poor (dough clings to the agitator) or 2) you are mixing the dough using a conventional "J" hook as opposed to a reverse spiral dough arm which drives the dough back down into the bowl for superior mixing action with both full size and smaller size doughs. In any case you might want to increase the dough mixing time by 3 to 5-minutes to achieve a smooth, satiny appearance. The photographs show a rough, dough with an almost web like appearance nwhich is an indicator of an under mixed dough.

Dough Clinic / Re: Reducing Large Bubbles in NY-Style Crust

Matt;

I might suggest a couple of changes.

- 1) No need to stir the salt and sugar unless you have nothing else to do.
- 2) Add the IDY in the dry form right on top of the flour, no need to stir into the flour either since as you begin mixing it will be incorporated into the flour.
- 3) You say to "pour" the dough out. That word scares me when referencing pizza dough, would the word "turn" or scrape the dough out be better suited? :)
- 4) Lightly oil the dough ball before dropping it into the bag to make removal easier later on.

5) 12-hours is not sufficient cold fermentation time, 24-hours is about the minimum, 48-hours seems to be the "sweet spot" but you could go longer.
6) I'd like to ask you to re-check your dough temperature the next time you make dough (be sure the thermometer is accurate) as the large bubbles you are seeing might be caused by a dough that is too hot. You are looking for a finished dough temperature of 80F but never more than 85F. This is why I normally recommend 75 to 80F as it leaves some room for error.
Please keep us posted on your progress.

Dough Clinic / Re: Reducing Large Bubbles in NY-Style Crust

What are your mixing and dough management procedures?

Dough Clinic / Re: Reducing Large Bubbles in NY-Style Crust

Werty20;

The type of yeast use would not pose an issue BUT if ADY was originally called for and you substituted IDY at the same level/amount then in essence you would be adding an excessive amount of yeast since the use level for IDY when replacing ADY would be less (about 20% less IDY than ADY).

Newbie Topics / Re: help modify this recipe

Brad;

Excellent point to back it up, I've mentioned doing this a number of time in previous posts because, in its own way, each starter is different/special and if you should lose it it's a roll of the dice if you will ever be able to replicate it, but id you have some saved (ideally in a different location) you can always use that the seed/inoculate a new starter and get back to where you were. Great idea about drying it too, sure makes storing a sample a lot easier too.

Dough Clinic / Re: starter storage..

I'm in agreement, suspend the IDY in a small amount of water at 95F (add the IDY to the water) and stir until suspended, then allow it to hydrate for an additional 5-minutes, stir once again and pour into the dough water and you should be good to go.

General Pizza Making / Re: Mixing IDY with RTF dough

Tell us something about the type of pizza you want to or are making. How are you baking them? How do you mix the dough? Your dough formula and anything you can share about your ingredients. What are the pizza characteristics that you hunger for?

You came to the right place.

By the way, where at in South Korea? I've worked on and off there for a number of years with the private sector, KBS (Korean Baking School) and the military through AAFES.

New Forum Members / Re: Hello from korea

Trying to position the dough in an oily pan, it slides around a lot on a floured wooden peel. I'm not sure what this means. When you put dough into an oiled pan it is about as slick as you can get and darn near impossible to stretch. If you are putting your dough into an oiled pan it needs to be fully opened into a skin a bit larger than the pan and then transferred to the pan where it will pull back to the diameter of the pan. You will need to adjust the size you are opening the skin to so when the dough snaps back on the oiled pan it will be at or close to the diameter of the pan. If you are trying to open the dough in an oiled pan I can feel your

frustration. If dough memory/snap-back is a problem you need to reassess your dough formulation or dough management procedure. If you want the dough to stay put in a pan a little better use shortening to grease the pan rather than using oil, you will see a HUGE difference between oil and shortening.

Newbie Topics / Re: Practice dough

Sounds like you are not working the edges of the dough at all so only the center section is getting stretched, this usually results in a wrinkled skin too as you place it on a flat surface. I have some videos posted on my web site

<www.doughdoctor.com> that might help you with your technique there is also a plethora of videos at the PMQ web site too. I'm assuming this is for your regular, fully baked pizzas as opposed to your t & b offering. Here is a method that I developed to help our students learn how to open the dough balls into skins. Make sure the dough balls have been allowed to warm to 50 to 55F before opening. Flatten the dough ball by hand slightly to about 3/4 to 1-inch in thickness, adjust the roll gap on your sheeter to about 1/2-inch and pass the dough through the sheeter once, reduce the gap to whatever is needed to bring the skin out to about 2-inches LESS than your desired finished diameter (be sure to turn the dough 90-degrees), now you can easily hand toss the dough to finished diameter without the problem of those thin spots in the center. We can teach someone who is "toss challenged" to toss the dough quite acceptably well in less than 30-minutes. Once you have mastered this you will soon be opening the dough with minimal or no use of the sheeter. Don't worry about the sheeter degassing the dough, if you follow this procedure it will not degas the dough. If you will send me an e-mail at <thedoughdoctor@hotmail.com> I will be glad to send you a video of this procedure being used in a local Pizzeria (AJ's New York Pizza, Manhattan, Kansas). When viewing this video keep in mind that the person you are watching has only been doing this for about 6-weeks.

Newbie Topics / Re: Practice dough

If you go to the RECIPE BANK at the PMQ web site <www.pmq.com> and search "pizza dough" you will find several of my take and bake dough formulations which were formulated to give finished pizzas similar to P.M. In addition to the traditional dough there are also a couple of very popular variations posted too. The "magic ingredient" that you will need to use is called WRISE. This is a fat encapsulated chemical leavening system designed specifically for this application. It's available from The Wright Group at <www.wenrich.com> or Tel: 337-783-3096.

Dough Clinic / Re: dough roller tears up dough

Essentially what you will be able to do is to add the reducing agent to the dough formula, mix the dough until it becomes smooth, soft and somewhat extensible, immediately scale and ball, place on a floured surface to rest for 15 to 30-minutes and you'll be ready to begin playing. If you need something to sharpen your skills at tossing the dough there is a product called "Through Dough" that is a silicone based pizza skin designed specifically for that application.

Newbie Topics / Re: Practice dough

Yes there is, you would use your normal dough formulation but you will be able to forego the fermentation step or at least all but about 30-minutes of it. You can accomplish this by incorporating a reducing agent into the dough such as PZ-44 or "dead yeast" aka Relax RS-190, you can Google both of these ingredients to learn more about them as well as sourcing a sample of them. Both of these ingredients will be added to the dough at a level between 1 and 2% depending upon how soft

and extensible you want the dough to be so you may need to experiment with the amount used to find the level that works best in your specific application. For additional reading there has been some discussion here on these ingredients pretty recently. You might try using the search words "reducing agents", "dead yeast" or "PZ-44". Most of the members here are familiar with these ingredients so they may be able to provide you with additional information on securing samples to work with.

Newbie Topics / Re: Practice dough

Norma;

I forgot about the outhouse. Ours was a two hole model. After we got indoor plumbing it was used to store the screens for the house in during the winter and the storm windows during the summer. The wood pile and the cob pile and coal bin were located about half way between the house and the outhouse, that way you always followed the code: Go out with a load, come back in with a load.

Oil will help with gas retention and also in achieving a finer, more cake like crumb structure, so at the risk of losing product identity you can go up to around 10% oil. I can't say anything about absorption because I don't know what your flour will carry, but you do want to maximize it. One other thing, we used a flat beater rather than a dough hook to mix the doughs. When you're making the dough, think Irish soda bread.

Dough Clinic / Re: Yeast + Baking powder

Norma;

Our house was 100% heated with wood, coal or corn cob. Due to the cost of the coal it was only used at night, after that, depending upon the time of year, it was either wood or corn cobs. Then came that fateful day when we made the giant leap to natural gas. It was great for heating the house as there were no more cold mornings in the winter, BUT nothing ever came out of the oven the same way after that. :(.

When we did the work we used pretty typical formulas for the different types of pizzas but since the leavening curve is much steeper with chemical leavening than it is with yeast we found that we had to increase the dough absorption to get decent results. In most cases our better doughs were so soft that they could not be machine formed into skins, they could only be formed by hand or careful use of a rolling pin and dusting flour. Our pan pizza doughs looked more like a biscuit dough than what we normally think of a pizza dough as being like. Something else to keep in mind is that different leavening systems will impact the crumb structure in different ways so sometimes it pays to experiment with different leavening systems when you're trying to achieve certain crumb structure characteristics.

Dough Clinic / Re: Yeast + Baking powder

Norma;

Your pictures of the crust brought back my memories of the old Chef Boyardee pizza crusts which I haven't seen since we did the chemically leavened and combination leavened crust work back in the early 1980's. Don't get me wrong, I'm not missing it....it just brings up flash backs from my childhood. By the way, we baked those "wonderful" Chef Boyardee pizzas in a wood burning oven, no not a pizza oven, a wood burning oven, like everyone around us had in the kitchen.....a wood burning kitchen stove, now that brings back memories!!!! :)

Dough Clinic / Re: Yeast + Baking powder

Don't try to compare apples to oranges, the dough that P.M. uses is waayy different

from the dough that you posted the formula for. If you work with your dough formula and dough management procedure enough you should be able to come up with a dough that will give you a reasonably round skin after just two passes, now, if that dough will produce the type of pizza you are envisioning is a totally different matter.

I wouldn't sweat it too much. How many skins are we talking about opening at any one time?

Dough Clinic / Re: dough roller tears up dough

We used them for MANY years when I was working for the AIB and I don't remember ever having any complaints about them.

Stones/tiles/steel, Pans & Accessories / Re: What do you think about this Aluminum Peel?

They like to be fed on a consistent basis so I would recommend probably recommend once a week or so and you can skip the feeding for the week that you use it if you replenish it at the time of use. I've left mine go as long as two weeks when we were on vacation and never had a problem but when I've forgotten about it and not fed it I have to work harder and it takes longer to get it "cooking" again. I like to have mine ready to go within 24 to 48-hours, but everyone is different.

Dough Clinic / Re: starter storage..

If my calculations are correct, 875-grams for a 20-inch round skin works out to 0.098-ounces per square inch of surface area or about the same as a 12-inch diameter skin made with 11-ounces of dough weight (0.097-ounces per square inch of surface area). While the 20-inch format will be more difficult to open without getting thin spots in the dough I would consider it to be about the minimum reasonable dough weight unless your dough is really extensible and you're proficient at opening large diameter skins. Otherwise, a greater dough weight, possibly as much as 39-ounces/1108-grams might be easier to work with.

New York Style / Re: Two weeks of progress, but lots of questions...

You are correct.

No more confusion :)

Dough Clinic / Re: Need help making dough more extensible

Peter/Norma;

The flavor of the pizza made using SALP as the leavening acid should be much more neutral as Peter said. If you partake in the occasional consumption of baking powder biscuits you might be able to detect something of what our sensory panel participants identified as a "biscuit like" flavor in the crust. No phosphate coating on the back of your teeth either. SALP + soda is primarily a pyro (heat activated) leavening system with only about 18 to 20% of the carbon dioxide released early.

Dough Clinic / Re: Yeast + Baking powder

What it sounds like you have there is a single pass dough sheeter. With a single pass sheeter what you are doing is about par for the course. You might be able to use a rolling pin to flatten and elongate the dough ball prior to sheeting as this will reduce the number of roll adjustments needed and you might be able to experiment using different roll settings (gaps) to reduce the number of passes needed. Using a single pass sheeter I normally pre-flatten the dough ball with a pin to about 1/2-inch in thickness (just roll in one direction, no need to cross roll), then I pass the dough through the rolls on the first pass turned 90-degrees to the way that I hand

rolled it, then close the gap, turn the dough 90-degrees again and pass through twice with a 90-degree turn between each pass. This usually gives me a dough skin that is very close to the size that I want so just a little hand stretching (as you are doing) easily brings it to size. I might also add that I normally dock the skins made in this manner.

Dough Clinic / Re: dough roller tears up dough

Pfhlad0;

When working in bakers percent, when you remove an ingredient from the formula you only need to adjust for that one ingredient so by eliminating the VWG from the formula the only formula adjustment that you will need to make is to the dough absorption which will be a reduction of about 2X the weight of the VWG that was eliminated from the formula. No other formula changes should be needed.

Dough Clinic / Re: Need help making dough more extensible

Norma;

Do you have any comments on the flavor of the crust? Did you pick up any of the characteristic phosphate coating on the back of your teeth after eating a piece of the crust? (If you run your tongue across the back of your teeth you might feel some roughness, this is very characteristic of SAPP)

Dough Clinic / Re: Yeast + Baking powder

Continue storing it just as you have. If you change the storage conditions you will upset the entire micro-flora balance and lose the characteristics you have come to expect from it.

Dough Clinic / Re: starter storage..

The "kill step" aka raising the internal temperature to 160F (actually 165F) is used to guarantee that 160F has been reached will make the product(s) safe to consume. I've worked with pasta before but I do not remember any of the processing specs anymore so I have to defer that question to someone more knowledgeable in pasta production than I am.

Dough Clinic / Re: Dough & Food Safety

Peter;

I've not actually tried that but theoretically the cold temperature will certainly suppress the pyro phase and possibly "some" of the faster acting phase too. The thing to remember is that a non encapsulated system has all of the soda freely available to react with any acid, including acids formed during fermentation, then, without any soda to react with there can be no pyro phase to the chemical leavening system and to make matters worse, the residual SAPP will give the resulting crust an interesting flavor reminiscent of that of a cake donut. Most people don't realize that the predominant flavor of a cake donut is that of SAPP, not cinnamon, nutmeg, vanilla that you might expect.

Dough Clinic / Re: Yeast + Baking powder

Peter;

He is most likely referencing sodium acid pyrophosphate (SAPP). For those who are not familiar with the numbers attached to SAPP (16, 18, 22, 24, 26, 28, 36, 38, 40, 42 are the main ones. Reason for the "two" differences is due to different manufacturers....go figure! The number is used to designate the percent of total potential carbon dioxide release in a fully neutralized system during the first two minutes after contact with water or some will say during the first two minutes of

mixing. in this case the remaining 72% will be a late acting (pyro)fire/heat activated leavening. A low number SAPP makes perfect sense as the leavening will be quite stable until the dough or batter is exposed to heat.

Dough Clinic / Re: Yeast + Baking powder

Rolls;

I get notifications all the time regarding illness caused by people eating such things as raw cookie dough, in fact it wasn't all too long ago that (I believe it was Ben & Jerry's) that had some issues regarding their cookie dough ice cream made with raw cookie dough. Many packages of refrigerated cookie dough now carry a caution about eating raw cookie dough. Yeast leavened doughs containing raw eggs can also pose a problem but not as frequently as cookie dough does because raw bread dough isn't as tasty as raw cookie dough or raw cake batter. Remember, this is with commercial products which are made under a high level of food safety. When these products are made at home the risk is much higher and the incidence of sickness is much more common but we never hear about it because there wasn't a 5-state or national recall notice issued or 20-people were not sickened by it. There is little doubt in the minds of microbiologists when it comes to food safety that man kind would have not survived to where it is today if it were not for the discovery of fire and the invention of the oven to bake/heat food and create a "kill step" in the food preparation chain. Look at what just recently happened to General Mills.....moral of the story, don't eat raw flour either. I've been admonishing this for years and people just looked at me like I was crazy. When we are making doughs containing milk, eggs and flour as the culprit ingredients a couple of things come into play. 1) It is called the 4-hour food safety rule. In essence a sensitive food may be allowed to remain at a temperature which will support microbial growth for an accumulated period of not more than 4-hours. 2) The yeast, being a micro organism itself, can/will become the dominant micro organism which can suppress the growth of other microbes. 3) Ditto for Lacto-bacillus Bacteria in a sourdough culture. 4) The acids formed during fermentation (acetic, lactic and propionic) can suppress/inhibit the growth of certain microbes. This is why dill pickles seem to last forever (vinegar/dilute acetic acid).

Dough Clinic / Re: Dough & Food Safety

Norm;

I believe that you will find it behind the "apron" shown as #7 on page 6 of the materials that I sent to you. Reference #19 on page 4 too.

Prep Equipment / Re: Found this Hobart C100 at an estate sale

Mine is a Sontax brand from Menard's, they look to be almost identical, the price is where it should be at too. It will work for both the oven and measuring finished dough temperature, the only thing it will not work for is measuring the dough temperature at the time of opening the dough balls into skins because in that case we're measuring internal dough temperature, not the surface temperature. If you look on the internet you can find a very inexpensive dial type thermometer aka stem type thermometer with about a 1" diameter dial for around \$7.00. With a stem type thermometer try to get one with a hex nut under the dial head. That hex nut is for adjusting the calibration of the thermometer. Grasp the head and turn the hex nut to calibrate. Calibration procedure: Use a glass or sufficiently deep cup of water (adjust the water temperature to 80 or 85F using your infrared thermometer) insert the stem thermometer into the water and turn the adjusting nut so the pointer indicates the same temperature as indicated by your infrared thermometer. This is much better than using ice water to calibrate as you are

calibrating the thermometer closer to the actual temperatures that you will be measuring so accuracy is improved.

Newbie Topics / Re: equipment list, getting started recipe?

Norm;

I posted you last night but it didn't seem to go up for whatever reason. I was asking if you had found a hook for your C-100 mixer yet? If not go to <www.alfaco.com> they have the Hobart hook for your mixer for only \$51.00 that's the good news, the bad news is that it is a common "J" hook and it appears that no other type of hook is available for the C-100 mixer, and it is not interchangeable with any of the other Hobart mixers. But at least you can get a hook. Just plan to keep the bowl at near full capacity to get the best action from the "J" hook, otherwise you will be mixing, stopping, pulling dough down off of the hook, mixing, repeat, repeat, repeat, etc. When you get a hook set the clearance between the bottom of the hook and the bowl following this procedure. Install the new hook, adjust the bowl height until you begin to hear a slight "tink, tink, tink" as the hook contacts the bowl while running at LOW speed, then, using a nickel as a gauge, set the gap between the bottom of the hook and the bowl and you're good to go.

NOTE: When setting the "0" clearance prior to gapping, with the mixer running in LOW speed slowly raise the bowl to its full up position then adjust the bowl height as necessary until you hear the slight tinkling sound with the bowl in the full up position, now you're ready to set the operating gap.

Prep Equipment / Re: Found this Hobart C100 at an estate sale

An infrared thermometer will be hard to beat for keeping track of the temperature of the oven deck. Check out Harbor Freight and Menard's, I bought one at Harbor Freight and my son liked it so much I gave it to him, then I went to Menard's and picked up another one. In both cases they were on sale for roughly \$12.00. The temperature range is up to 716F.

Newbie Topics / Re: equipment list, getting started recipe?

Have you located a dough hook for it yet? It looks like they only make a straight "J" hook for it for about \$50.00 <www.alfaco.com>

Prep Equipment / Re: Found this Hobart C100 at an estate sale

Yes it would, as long as you can handle and work the dough you actually have enough gluten development. The problem that is most often experienced when the dough is not developed sufficiently is that more dusting flour is incorporated into the dough or it is just plain sticky an inconvenience), otherwise you are correct. When we did the work on biochemical gluten development we were able to achieve a very nicely developed gluten film through biochemical gluten development so long as we had mixed the dough long enough to get through that knotty, lumpy appearance. Even when we had that appearance to begin with we still got the biochemical gluten development but the gluten film was not as uniform and the dough was more prone to tearing when being opened into a skin due to the rough nature of the gluten film.

Dough Clinic / Re: Kneading dough problem

Wangji;

You want to mix/knead the dough just until it begins to take on a smooth, satiny appearance. The picture of the dough ball that you attached is not yet sufficiently developed as can be seen by the somewhat rough appearance of the skin. Keep in mind that the main reason for developing gluten during the mixing/kneading stage

is to allow for improved handling of the dough (reduced stickiness) and to prevent the dough from tearing as it is formed into a ball. Once you have accomplished that level of development no further mixing/kneading is required.

Dough Clinic / Re: Kneading dough problem

Yes, my "dip stick" for N.Y. style has always been Patsy's (now Grimaldi's) at the Brooklyn Bridge. I'm sure you can find plenty of pizzas made using full coverage but to me Patsy's is the "one".

New York Style / Re: wangji's NY pizza with Tom Lehmann's NY Pizza Recipe

Domino's tries to emulate the New York style pizza, but if you really want to get away from the Domino's appearance you will need to use pieces of Mozzarella cheese placed on top of the pizza rather than going for complete and uniform coverage which is what you presently have.

Tom Lehmann/ The Dough Doctor

New York Style / Re: wangji's NY pizza with Tom Lehmann's NY Pizza Recipe

For wood peels look at Mr. Peel <www.mrpeel.com> or Portion Padl <www.portionpadl.com>

Lately I have been seeing nice aluminum peels with a short handle being sold at ACE HARDWARE, if you have one near you check them out. In with wood, out with metal.

Stones/tiles/steel, Pans & Accessories / Re: Help choosing a peel(s)

Mike;

Yes, quite a few of them. What you are looking at is a "hedonic" taste test. Panel participants are presented a sample and asked to rate it as an over all pizza experience from 1 to 10 with ten being the most liked, then allow a space on the bottom for each participant to offer a comment. Then give them a second sheet and ask them to rate the crust from 1 to 10 but this time ask them what they liked or disliked the most about the crust. No need to do the sauce or cheese as very few people use them as a measure of how much they like a specific pizza. It's always the pizza as a whole or they comment on some aspect of the crust either positive or negative.

Dough Clinic / Re: Test pizzas taste "home made"

Killer pizza!

The extra baking time just made the crust that much crispier, nothing to complain about, I'm guessing that you didn't get any either. :)

Dough Clinic / Re: New guy looking for recipe correction for different pan size

Just as a cautionary note, being vent less doesn't mean a thing if you are putting a vent less oven into a commercial establishment as many municipalities have codes that require ALL ovens, vent less or not, be located under a hood, some even dictate the type of hood, so be SURE to check with your codes department before jumping on the "vent less" wagon.

But it's vent less! The manufacturer says that it doesn't need a hood! So why do you say that it has to be located under a hood? Because the CODE says all ovens must be located under a hood. Lotsa luck winning that argument. Been there, done that, the only time we ever came close to winning that argument is when the codes

were changed and we were able to be grandfathered in as the oven had been in use for some time under a Type-II hood but codes changed to requiring a fire suppressant hood.....Thank God we got out of that one.

Commercial Ovens / Re: Turbochef Fire Pizza Oven

That's some pretty decent looking pizza! A little bit like a Domino's but with a firmer crust.

New York Style / Re: wangji's NY pizza with Tom Lehmann's NY Pizza Recipe

Jeff;

You're right about the "C" or "J" hook as it is also referred to as. The only time when they even come close to performing decently is when the mixer is operating at full bowl capacity and even then if you watch carefully you will see that the dough is not getting turned (top to bottom) very efficiently where as newer design agitators handle smaller size doughs much more efficiently and effectively turn the dough top to bottom much better too. When we were testing new agitator designs we used to put blue food dye on the dough after it was fully hydrated and then mixed the dough for specific periods of time and compared the distribution of the dye throughout the dough mass. The better the distribution the better the mixing action. To look at the inside of the dough we used a French knife/chef's knife to cut it. Many times the outside of the dough looked good but the inside told a different story. This might be a good test for anyone to try with their mixer just to see how good the mixing action really is.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Mike;

Remember too that it is all but impossible to assess the flavor profile of any pizza until you are using the "final" ingredients. To give you an example, we tried moving away from Grande cheese but the flavor changed in a direction we did not like with other brands of Mozzarella cheese. The same can be said for the tomato product you will be using to make the sauce. Lastly, remember, what you personally think doesn't carry water in this case.....it's what your customers think of the crust or more correctly the entire pizza presentation. My advice to you for right now is to get the physical characteristics that YOUR customers want (it varies in different locations) and then work on final flavor profile after you have your kitchen up and running. Most suppliers will gladly provide you with a free case of different tomato and cheese products for testing just to get your business. I might add that the research that we did on pizza a few years ago indicated that it wasn't so much the taste that attracted people to a specific pizza but instead it was the fact that it was DIFFERENT, not in a strange way but like using fresh tomato slices or Stanislaus 74/40 Tomato Filets rather than a smooth sauce, using fresh herbs as opposed to dried herbs, putting a little char on the crust where none existed previously. This shift has led to the great and growing popularity of the artisan style pizzas that we hear people commenting on so much, even the large wholesale pizza manufacturers have gotten into the act as you can see in your supermarket frozen pizza section. Remember, if it looks like everybody else's pizza, it is, and surprisingly to your customers it will taste like it too. My motto when it comes to making a successful pizza is "dare to be different". You will see in the posts here that we are always trying new and different things, and with good success I might add, so don't get overly critical of your pizzas just yet, let your customers guide you.

Dough Clinic / Re: Test pizzas taste "home made"

Jeff;

I'm guessing that your problem is due to at least one of the following:

- 1) Dough temperature is too high (75 to 85F is in the ideal range).
- 2) Dough absorption is too high (58 to 62% of the flour weight is pretty common).
- 3) Your dough is being fermented too long (do you use a room temperature or cold fermentation?)
- 4) The yeast level is too high (what type of yeast do you use?)
- 5) You have included onion and or garlic in your dough formula.

The more information that you can share with us regarding your dough formula/recipe and dough management procedure (everything you do to the dough from mixer to forming the pizza skin(s)) will help us to better help you.

General Pizza Making / Re: dough stretching

Werty20;

Additionally, can you take the temperature of the dough immediately after mixing and tell us what the dough temperature is at that time.

Newbie Topics / Re: no rise

Actually, you only need to mix the dough to a point of gluten development to where it doesn't tear when you form it into a ball. Any more development than that is unnecessary as biochemical gluten development will fully develop the gluten for you while giving you a dough that is soft, extensible and easy to open into a skin. Full gluten development is only used when making commercially made frozen pizza dough as well as in bread production as the fermentation time will be much shorter even though it will be at or near room temperature +/- 80F.

Dough Clinic / Re: Help with dough! Too sticky too elastic

Alvin;

Absolutely! The finished dough temperature is the main factor which controls the rate of fermentation even when using a spiral mixer, or any other type of mixer and room temperature or cold fermentation. The other steps in the dough management procedure such as cross-stacking procedure and time as well as down-stacking are used to prevent moisture build up in the dough boxes and to allow for a much more consistent rate of cooling.

So yep, even though you're using a spiral mixer, those steps are still vitally important to an effective dough management program.

Dough Clinic / Re: Spiral mixer and Tom's Dough Management Procedure

Norma;

I know a quick test that might provide some insight as to whether it is encapsulated or not.

- 1) Get a glass test tube and a balloon.
- 2) Set a timer so you can measure the elapsed time from mixing to covering the balloon.
- 3) Place 50-grams of your version of self rising flour in the test tube and then add 50-grams of a 50/50 vinegar mix.
- 4) Place your thumb over the open end of the test tube and shake vigorously for any measured length of time (15-seconds?)
- 5) Immediately place the balloon over the end of the test tube and note the elapsed time from adding the liquid to covering with the balloon.
- 6) Note the rate of balloon inflation (it will not blow up very much so when

necessary remove it and replace immediately and measure the number of times you had to do this over a 10-minute period of time.

7) Repeat the above using the GM self rising flour.

If your's inflates the balloon much faster and with fewer inflation's during the 10-minute test period it is an indication that the GM self rising flour is most likely encapsulated. If they are about the same it means the GM self rising flour is probably made with a non-encapsulated leavening system.

What we are doing here is using the vinegar to react the soda portion of the CL. If it has been encapsulated it will be slower to react and produce leavening gas for a longer period of time but if it is not encapsulated the reaction will be very fast and short lived. (you can see just how fast it will be by placing a small amount of soda in a glass and adding a little vinegar.

If you do your flour first you can then place the test tube with the GM flour in a cup of hot water. If you see a surge in leavening gas production again this is pretty good evidence of an encapsulated leavening system because the heat of the hot water will melt the encapsulation from any remaining un reacted soda allowing for the production of more leavening gas.

By the way, try to add the vinegar, shake and cover the test tube for both test samples in roughly the same time for more accurate results.

Dough Clinic / Re: Yeast + Baking powder

Roy;

No offense taken. I just want to make sure I'm answering your questions and all others to the best of my ability. Sometimes we get off track a little but that's only normal. The one thing to remember is that there is no specific right way and no specific wrong way to make pizza, there are only different ways but sometimes we can see potential problems or short cuts, do they always work out as expected, nope, but it does make for food for thought and direction for some in-home research. Learning more about pizza is what it's all about, I just try to shorten the learning curve while stimulating thought.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Norma;

Remember those old Chef Boyardee pizza kits with those "marvelous" just add water and stir crusts? Those were the first completely chemically leavened pizza crusts that I can recall.

Dough Clinic / Re: Yeast + Baking powder

To elaborate on AP flours, as I've mentioned previously, all AP flours are not the same. Some are made from hard wheat varieties, some from soft wheat varieties and some might be made from a blend of the two, we found it to be all over the board. All purpose flour is actually intended for home use so there is not much, if any, standardization from one manufacturer to another as there is with bread, cake and pastry designated flours. You're right, AP flours can be made to make great thick crust/deep-dish type of pizzas, light, tender, flaky (biscuit like), just be careful about the amount of fermentation you give the dough as this type of flour typically doesn't show really good fermentation tolerance as a higher protein content, bread type, flour would. General Mills is a bit of a maverick when it comes to flour milling, they tend to use hard wheat varieties for a number of different types of flour, for example, while most milling companies use a soft wheat flour to make

their high ratio cake flour, GM uses turbo milled hard wheat varieties so it wouldn't surprise me in the least bit if their AP flour was produced in the same manner using a hard wheat variety, it would certainly account for the higher protein content as compared to other AP flours.

As for the CL used in making their self rising flour it also would not surprise me if they were using a coated leavening system much like the WRISE product, but at the very least I'm pretty sure it will be a SALP based system due to the stability offered by the SALP.

Dough Clinic / Re: Yeast + Baking powder

Lets look at your dough in bakers percent:

Flour 100%

Water 63%

Salt 0.33% (there's a major problem, it should be closer to 2% or in your case 6-grams)

Sugar 0.33%

Olive oil 1.33%

Maple syrup 0.66%

With exception to the salt level presently being used the formula is OK, but you neglected to include the yeast type and amount which might also have an impact upon the lack of flavor that you are experiencing. Salt is a major contributor to flavor so I would highly recommend increasing it.

Your fermentation time is PK but it could be improved upon if you go to 24 to 48-hours of cold fermentation in the fridge, then allow the dough to warm to 50F after the cold fermentation and turning it out onto a floured surface and immediately opening the fermented dough into a skin for your pizza.

New York Style / Re: Good browning, limited dough flavour

Steve;

That's what low speed mixing does. The way we were taught was to think of the proteins as a coil (like a coiled spring), mixing uncoils the proteins into strands/sheets and allows them to be stretched (extensibility) when the dough is mixed to full development or over mixed the coils are relaxed, then when continued to be mixed at low speed (like a kneading action) oxygen is introduced into the dough which causes the coils to strengthen and re-coil once again taking on all of the appearances and properties of an under mixed dough. It should be noted that the mixer used in the study referenced was a GRL Mixer. This type of mixer is also known as a pin type mixer with two fixed vertical pins in the bottom of the bowl and two forks each with two vertical pins rotating around each of the pins which results in a lot of pulling and stretching of the dough during mixing (designed to emulate what happens in a commercial horizontal bar type mixer).

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

GLP;

Yes, DO NOT re-ball the dough after the fermentation process, just turn it out of the bowl onto a floured surface, make sure the dough ball is well floured and begin opening it into a skin. Most people will use olive oil in the dough as well as use it to coat the dough ball and the inside of the bowl (to help prevent the dough ball from sticking in the bowl). Don't worry about its heat resistance it is not a problem. As for the sauce, most prefer no to pre-cook their sauce as it detracts from the final flavor of the sauce on the pizza. You know how good the sauce smells when you're cooking it? Those aromas are lost forever as is a part of the overall flavor profile,

keep them in the sauce by not pre-cooking it and allow them to become a part of the aroma and flavor of your pizza.

Dough Clinic / Re: Beginner Pizza experience - Questions with Pictures

Members here have done a lot of reverse engineering of different types of pizzas, when you say "restaurant quality pizzas" do you have any restaurant. restaurant chain or type of pizza in mind?

New Forum Members / Re: Pizza Recipe

Steve;

Absolutely! What a lot of people don't understand about mixing is why we do it in the first place...allow me to explain.

We mix a dough to develop the desired gluten structure for both support and gas retention. We can develop all of the gluten through mechanical mixing as we do in commercial bread production where short fermentation times are employed so there is not as much of an opportunity for biochemical gluten development....the gluten development has to come from somewhere, so in this case we get it at the mixer. In bread production a fine, close knit crumb structure is desirable so optimum gluten development is important. So why don't we just mix a pizza dough more? For several reasons, 1) It is hard on the mixer. 2) It doesn't allow for the lengthy controlled fermentation employed in pizza production which we use to develop flavor in the finished crust. Artisan breads are also made in a similar manner to pizza. Is dough mixing as critical in making pizza as it is in making breads? No, because the gluten structure doesn't need to support as much mass as a bread dough and it is not expanded as much either, plus if a dough is under mixed we get a more open, porous crumb structure (not desirable in commercial bread but very desirable in pizza crust) so there is more fear of over mixing a pizza dough if these are the desired crumb structure characteristics (note that you can only over mix a dough using a mixer with a sufficiently high mixing speed). Can you over develop the gluten using biochemical gluten development? No, but why? Because when the gluten is developed biochemically it will reach a point of full development but if allowed to ferment longer the effects of fermentation will take their toll on the proteins by degrading them (acids and protease enzymes) so after full gluten development the proteins themselves are destroyed. In mechanical mixing the proteins are not "destroyed" with over mixing, they are disassociated to some extent but the addition of oxidation (remember the fatigue dough mixing method discussed in an earlier post?) or an oxidizing ingredient such as ascorbic acid, ADA, or bromate will bring the protein chains back together again strengthening the dough. In the research cited you will notice that their doughs contained both ascorbic acid and potassium bromate (both oxidants) so when the dough is over mixed they will contribute greatly to the oxygen from the incorporated air in repairing those broken gluten bonds making the dough look and perform more like an under mixed dough. This cannot happen with an over fermented dough since the gluten forming proteins (gliadin and glutenin) have been denatured (no longer exist as protein) and cannot be recovered or strengthened. This is why I am not an advocate of using proteolytic enzymes to reduce mixing time, they hydrolize/destroy the protein so if dough temps get out of hand, or fermentation time is too long the dough can turn to soup and there is nothing that can be done to salvage it or any part of it.

Now, we have all heard the advice given, if your dough balls are over fermented and collapse you might be able to recover the dough by re-rounding it. This is absolutely true but only if the dough is just a little over fermented. The re-rounding process is something like a kneading process (slow speed mixing), it also

incorporates air into the dough all of which will help to strengthen any remaining undamaged protein allowing the dough to be salvaged.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Roy;

Based on my years of research and testing pizza doughs I have long ago come to the conclusion that when machine mixing a dough the best indicator of sufficient mixing is when the dough makes the transformation in the bowl from a rough, ragged, curdled appearance to a smooth, satiny appearance. I always qualify this by stating that you want to mix the dough until the dough just develops these visual characteristics. More mixing generally leads to the development of a more bread like crumb structure in the finished crust. The reason for this is due to an overall weaker gluten structure after the fermentation period.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Roy;

Actually "gluten development" has very little, if anything to do with the tenderness or toughness of the way the pizza crust eats. It does affect it but only in an indirect manner. Gluten development helps to retain gas which makes for a lighter crust with greater porosity which in turn bakes out better which in turn makes for a crispier finished crust. The problem is in the way the gluten is developed, when developed through machine mixing the gluten is very tough and elastic making the dough difficult to open into a skin but when the gluten is developed biochemically the same gluten is very soft and extensible allowing for much easier opening of the dough into skins. You can readily see this if you try to open your dough after mixing, or at least take a piece of it and try to open it in your fingers (window test) and then take a piece of the same dough ball after 24-hours cold fermentation and being allowed to temper back to 50F, now you will find that the dough has great gluten development and is very extensible, that's why if you turn your dough balls out of the container onto a floured surface you can immediately begin to open the dough ball into a skin with little resistance due to elasticity. In our pizza class we used to demonstrate this by challenging the students to open a dough ball soon after mixing....it was impossible. Then on the following day we tempered the same dough balls back to 50F and had them open it into skins....what a difference! To show how strong the gluten was I had three or four volunteers form a circle, then I partially opened a dough ball and gave it to the volunteers to work out between themselves, each pulling and stretching the dough simultaneously to see how big they could get it before it tore. They could usually open a 12-ounce dough ball up to 30 or more inches without any problem....kinda reminded me of the old German strudel makers at work.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Jsaras;

You're "spot-on"! That's why we have herb infused oils rather than herb infused water. The water just doesn't retain the aromas. When I was a kid we were always admonished to "KEEP THE BUTTER DISH COVERED" Yes, there really were such things. The reason being that back in those days we didn't have all the compartments in the refrigerator (prior to that we had an "ice box") ditto, so if the butter wasn't covered it would pick up any other flavors in the fridge....not what Mom wanted her butter to taste like.

Sauce Ingredients / Re: Simple Pizza Sauce

Roy;

Your procedure has a lot of merit to it but I really think it is exceedingly long and complex in view of the mixer that you have. My first suggestion is, can you get a reverse spiral dough arm for it? This will make life a lot easier for you as the dough doesn't climb up on a reverse spiral dough arm.

With #5, you can whisk/whip it for hours and the distribution of the oil in the water will not change....in my opinion this is just a waste of time and an extra procedure.

On #6 you mention adding the salt to the mixing bowl but you also show it being added in step #5.

In step #8 you should be able to put the yeast suspension right into the bowl in step #6. While we don't normally recommend allowing the yeast and salt/sugar to come into direct contact with each other with all of the dough water in the bowl to dilute things it will not pose a problem if you don't forget about the dough and let it set for 30-minutes or more. Also, by incorporating the yeast in this manner you will get better/more thorough distribution of the yeast throughout the dough.

Your approach to allowing the dough to rest and hydrate is a sound one for what you are trying to accomplish.

The #3 speed mixing in #13 is actually doing the bulk of the gluten development for you, this is why you see improved dough strength after mixing for the 2-minutes in speed #3. At this point the dough probably has a smoother, more satiny appearance too?

Steps #16 and #17 are really not giving you much gluten development, I think what is happening is that the dough is getting more of a kneading than a mixing. This is a very gentle development of the gluten and because of the stretching action in the bowl the dough is exposed to more air (oxygen) which has a strengthening effect upon the gluten. This is why it is impossible to mix a dough to breakdown stage by kneading or low speed mixing. A lot of pizzerias do all of their mixing at low speed (even with 60 and 80-quart mixers), this is OK but mixers are a lot like light bulbs, they have a projected usable life, and when that life comes to an end the pizzeria is without a mixer and a \$1,000.00 repair bill is considered pretty cheap. For this reason we encourage them to use #2 speed which accomplishes the desired level of gluten development in less than half of the time it would take in #1 speed.

In #19 I would not call that kneading, it is just pulling the dough together into a ball shape (aka balling or rounding the dough). Some pizzerias actually do it that way. It'll kill ya when you need to do 80 or 90 dough balls so we encourage table rounding of the dough balls in the pizzerias.

Steps #23 and #24 are great, if you don't already do it, I'd suggest lightly oiling the containers as well as the dough ball(s).

Overall, what you are doing is just fine (recommendations might make it a bit easier), the process allows for complete hydration of the flour and you are giving your mixer a rest periodically during the mixing process which allows it to cool off a bit BUT on the other hand, all that starting and stopping isn't good for the mixer either so it's probably a toss up on that one, and you are giving the dough just the right amount of gluten development to hold its shape and retain gas while allowing biochemical gluten development to do the rest for you....that's what dough mixing is all about.

I might also add that using an autolyse consisting of around 75% of the flour might accomplish a lot of the same thing. It brings up an interesting question/experiment, what would happen if you made a 75% autolyse (75% of the flour and all of the water, no other ingredients) allow this to hydrate for maybe 30-minutes, then add the salt, sugar, yeast suspension, and remainder of the flour, mix for 2-minutes at low speed or until the flour is well incorporated, then add the oil and mix at low speed for 2-minutes then at 3rd. speed for 5-minutes (adjust accordingly to what

you see with the egg test), when the dough doesn't tear it's done mixing. It would be interesting to see how this compares to your regular procedure.

I know, more pizza to eat...what a drag! :)

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Roy;

Let's start with a total step by step review of your mixing procedure as well as your entire dough management process.

Dough Clinic / Re: Gluten: Strength - Development - Arrangement

Your dough appears to be significantly under absorbed (it is in dire need of more water), so the first thing I would do is to increase the dough absorption from 50% to 60%. 250 X 60 (press the "%" key) and read 150-grams of water. The second thing I would suggest is adding 2% oil to the dough. The third thing I would suggest is kneading the dough for not more than maybe 5-minutes. You just want to knead it until the dough begins to look smooth, you DO NOT WANT TO TRY TO DEVELOP THE GLUTEN as biochemical gluten development will take care of that chore for you during the 24 to 48-hour cold fermentation period. You are absolutely correct about the difference in flavor in the crust between a same day dough and a 24-hour cold fermented dough. The 24-hour cold fermented dough will always produce a better flavored crust and as an added bonus the dough should open into a skin more easily. I mentioned 48-hours cold fermentation time above as you should also look at allowing the dough to cold ferment for 48-hours in addition to the 24-hours that you are presently using. I think you might be pleased with what you find after 48-hours of cold fermentation time.

As for opening the dough, you are correct in allowing the dough to warm slightly after the cold fermentation period. You only need to allow the dough to warm to 50F/10C before opening it into a skin. BUT you SHOULD NOT form the dough back into a ball after the cold fermentation period, instead, just turn the dough out of the oiled container allowing it to drop onto a floured surface or a bowl of flour, then begin the opening/forming procedure. If you want to have a flat profile to the finished crust I suggest using a rolling pin or pie/pastry pin to pin the dough out to size. Done correctly you will only partially degas the dough (remember to NEVER allow the pin to roll off of the edge of the dough) once the dough is pinned out to size you can pick it up and transfer it to your baking platform, dress it and transfer it into the oven for baking.

You also asked about adding oil to the dough formula. I think oil has some great advantages, it helps to improve the flavor of the finished crust, it lubricates the dough for improved expansion properties (oven spring) as well as improving the ability of the dough to retain gas for leavening. Many will also say that it improves the tenderness of the crust as well as the overall acceptance of the crust (people like things that contain fat).

I hope this has answered your questions.

Dough Clinic / Re: Beginner Pizza experience - Questions with Pictures

220V single phase 60 amp means you will need to have a dedicated line running to the oven like you would have running to an electric stove/range. Just be sure you know if you have the capacity in your circuit breaker box and the cost to run the line to where you want it.

Commercial Ovens / Re: counter top oven

All Trumps is also a very good flour for making different type of breads, French, Vienna, Rye, and wheat. If you don't already make bread give it a try, it's actually

easier to make than pizza. Think of your pizza dough scaled and balled, allow it to rise for about 90-minutes at room temperature, cut a cross-hatch "#" pattern on the top of the ball and bake at 400 to 425F for roughly 20 to 25-minutes.

Flour: 100%

Salt: 2%

Butter/Margarine: 2%

Sugar: 4%

IDY: 0.75%

Water: 60% (variable)

Brush with melted butter as soon as it comes out of the oven, place on a rack to cool and cover with a towel to prevent the crust from cracking.

Enjoy!

Dough Ingredients / Re: GM All Trumps - other uses?

U.L. approved?

Commercial Ovens / Re: counter top oven

Additionally, from the looks of the top of the pizza it doesn't look like it is getting sufficient top heat for a decent bake. The bottom of the pizza looks OK but the top is really light. You are also baking your pizza on a screen which is not highly conducive to getting a firm bottom crust plus the screen is bright colored as opposed to being well seasoned which is another strike against the bottom crust.

New York Style / Re: Two weeks of progress, but lots of questions...

Shoot me down for being too technical but regular white flour, bread flour, pizza flour with baking powder added to it is not the same as "self rising flour". Self rising flour is a horse of a different color. It is commercially made using a soft wheat derived pastry type flour as opposed to flours made from hard wheat varieties so there is a significant difference in the amount of gluten forming protein as well as a difference in the way those proteins function. The designed intended purpose of self rising flour is for some types of sweet breads (more like sweet dough then bread), biscuits and pastries to include cake and cookies. I say this so we don't lead anyone astray when we might add baking powder to a different type of flour and call it self rising flour and then someone goes out and buys a bag of the "real McCoy" self rising flour and gets different results.

Dough Clinic / Re: Yeast + Baking powder

Norma;

Try to find out what the brand and type of baking powder used was as there are different types on the market. For example, Calumet brand, if I remember correctly, is a single acting (slow acting) baking powder based on soda and SALP (sodium aluminum phosphate). While others are double acting and usually based on soda plus SAPP (sodium acid pyro-phosphate) and MCP (mono-calcium phosphate). The Calumet type would have some functionality in a pizza type dough while the double acting type would have little to no function as most of the reaction occurs too fast (like in the mixing bowl during the first two minutes).

Dough Clinic / Re: Yeast + Baking powder

Ryan;

Yes, it does increase the propensity for surface bubbles.

Dough Clinic / Re: Yeast + Baking powder

Cool! Where there's a will, there's a way! :)

General Pizza Making / Re: How i get always the perfect Temperature for my dough

Your 8 X 10 pan has 80-square inches of surface area. The dough weight is 340.21-grams so, 340.21 divided by 80 = 4.25-grams of dough per square inch. Your new pan size is 12 X 18 or 216-square inches. Now multiply 4.25 X 216 = 918-grams. Yep, that's how it's done. You're on the path to success. All things equal, your baking time should remain essentially unchanged. Calculate your sauce and cheese amounts in the same way too.

Dough Clinic / Re: New guy looking for recipe correction for different pan size

Baking powder will contribute to oven spring and thickness of the dough but it does not contribute to the development of bubbles/holes in the crust or crumb structure. That part is a function the yeast. We have made crusts with increasing amounts of B.P. with no impact upon the crumb structure and when you get to 100% chemically leavened the crumb structure is biscuit like at very best but more often it is almost cake like. We have experimented with all different types of chemical leavening as well as types (single acting and double acting) as well as speed of reaction such as using SAPP 16 through a SAPP 42, we even tried straight MCP and soda all to no avail. It works in batter systems but not in dough systems. It might work to improve the crust porosity in some of the very soft doughs, like those made with absorption in the 70% range and above, we did not test it in doughs above 65% when we did the work. Note: We did test different chemical leavening systems in dough that was developed specifically for hot pressing and we found that you had to CAREFULLY balance press temperature, dwell time and type of chemical leavening. The heat of the heated press head will trigger the chemical leavening during the time the dough is under the press head (dwell time) which leads to a LOUD popping and shredding of the dough, Oops!

Dough Clinic / Re: Yeast + Baking powder

Sounds like too much bottom heat too soon in the baking cycle.

Detroit Style / Re: Detroit Style pizza problems...

John;

I'm in total agreement with the approach you have proposed, it is the exact same method used by most of the wholesale pizza manufacturers using a sheet and die cut line. The only issue I have with this process is that you have the scrap (web) to contend with. While it can be re-incorporated back into the dough it does represent self imposed variability into the dough. The way I like to explain it is as follows: Dough #1 is a virgin dough (no scrap); Dough #2 contains let's say 25% of dough #1; Dough #3 contains 25% of dough #2 (which is comprised of dough #1 also. This continues throughout the day. In a wholesale situation the variability introduced by this method is difficult to deal with it a retail pizzeria setting it might be annoying. This is the reason why so many high volume production lines have gone to working with individual dough balls as opposed to dealing with the inconsistencies introduced by using a sheet and die cut method of forming.

Shop Talk / Re: Reversible Sheeter / Doughball Divider/Rounder

If your sauce is too thin you might be using the wrong tomato products in your sauce, maybe try incorporating a higher solids content tomato produce like a small amount of paste or better yet, I am assuming that you are using canned tomato products so you might try using whole tomatoes (drained well) and then tear them

apart and lay on an adsorbent towel to remove additional juice, then puree this and use it in your sauce. Or, put some finely chopped onion and/or garlic in the sauce and refrigerate overnight before use. The enzymes in the onion/garlic will catalyze the pectins in the tomato causing the sauce to thicken.

Sauce Ingredients / Re: Simple Pizza Sauce

Jiraya;

You sure can use fresh garlic or onion instead of the powdered form. My recommendation for the fresh is to chop it very fine for addition to the sauce, this will allow for maximum surface area exposure of the onion/garlic to the tomato portion of your sauce.

Chicago Style / Re: Deep dish in WFO?

You missed providing the most important/critical, piece of information: How much dough are you presently using in your 8X 10" pan?

Dough Clinic / Re: New guy looking for recipe correction for different pan size

Ron;

Use a wood peel. Use peel dust. I make mine from equal parts of regular flour, semolina flour and fine corn meal, but is you ask what 20 different people use for peel dust you will get 20 different answers so this is something again that you might want to experiment with. Lastly don't leave the skin on the peel any longer than absolutely necessary and be sure to shake the peel occasionally to make sure the skin isn't adhering to the peel, shaking also helps to keep the skin from adhering too.

Newbie Topics / Re: NEED SAUCE FLOUR AND YEAST HELP!

Norma;

What you're looking at there is a S.O.P. bake to rise/oven rising type of pizza.

Dough Clinic / Re: Yeast + Baking powder

We are just now cleaning up the last remnants of our summer garden. Last Monday we harvested the last of our basil and made it into pesto, there are still some cherry and chocolate tomatoes hanging on due to our continued warm weather (they make a nice snack) and there are still a couple of small bell peppers which we will allow to remain on the plants until threat of frost (whenever that might be???). I've got a watermelon that is ready to harvest (the last one). Butternut squash is in the basement, carrots and beets are all in, with the beets all making their way into the pickling jars (we love pickled beets). This was a fantastic year for cucumbers, everybody had a bumper crop and we couldn't give them away so we made a BUNCH of bread & butter pickles...really love those things! We're still waiting for some cooler temps before harvesting the late potato crop as well as the sweet potatoes, and as soon as we get a good killing frost we will begin making our annual supply of horse radish. Freezers are almost full, just enough room to fit in a few deer and we're good to go through the winter.

Chitchat / Re: Garden 2016.

Plum tomatoes are a type of tomato that is firm and meaty and usually has a pretty good flavor if vine ripened so they are one of my favorites when going after fresh tomatoes to slice and use as a "sauce". This year we had an excellent tomato crop in our home garden and we discovered a variety "Amelia" that grows to baseball size and is as meaty as any plum tomato and best of all it has a superb flavor when

fully vine ripened. Needless to say that a good number of these found their way onto my pizzas during the summer. Everyone has different tastes, try different type of tomato to see what you like. I once had a fellow working for me as a technician who thought ketchup, of all things, was a pretty decent pizza sauce.....go figure!! :(

Newbie Topics / Re: NEED SAUCE FLOUR AND YEAST HELP!

Brewer;

Because there are differences in the way different people portion the ingredients here is how I like to do it.

Into individual containers portion out each ingredient 3 times. When you have done this for all of the ingredients begin weighing the ingredients on a grams scale (0.1-gram accuracy recommended), then subtract the tare weight of the container from each ingredient, now divide that weight by 3. This will give you the average weight of a single portion for each ingredient. Still with me? Now to convert into bakers percent divide the weight of each ingredient by the weight of the flour and multiply by 100. Flour will ALWAYS be 100%. Congratulations, you now have your dough in a formulation form based on bakers percent. Peter has a program in which you can just add any new flour weight and the rest of the ingredients will be shown at the correct weight for that new flour weight. Or you can do it manually using your calculator: Enter the new flour weight X ingredient percent (press the "%" key) and read the ingredient weight in the display window. NOTE: The ingredient weights will be in the same weight measures that the flour weight was shown in (grams, kilograms, ounces, pounds, tons, etc.).

Dough Clinic / Re: Converting a dough recipe to bakers percentages

Darticus;

When it comes to cheese, Mozzarella is the "gold standard" but keep in mind that Mozzarella cheese is pretty bland in flavor so if you want a flavorful cheese look at using a cheese blend such as 75% Mozzarella and 25% Parmesan cheese. There are any number of different cheese types that you can blend with the Mozzarella to develop a unique or more flavorful cheese topping. There has recently been some discussion here on cheese blends that you might want to go back and review as there were some very good ideas offered.

As for my own personal favorite Mozzarella cheese: Grande Whole Milk Mozzarella Cheese is my favorite for both texture and flavor BUT you may find it difficult to obtain so in that case just look around and try some of the cheese that is available to you locally to see what you like the most.

The main ways to get cheese are diced, shredded, and block. Fresh Mozzarella is available in a brine pack in round balls, usually either 1-ounce or 4-ounces in weight. I have a disdain for diced cheese as it has what I think is a poor appearance on the finished pizza so I prefer not to use it. Shredded cheese is the standard go to form of cheese and is very popular, plus it has a good appearance on the baked pizza. If you add Parmesan cheese as a blending cheese my suggestion is to buy it already shredded or shred it yourself. If you buy the cheese in block form you can shred it your self or simply do it New York style and cut it into slices, tear the slices into pieces and place over the top of the pizza (gives a great appearance). If you use the fresh Mozzarella in brine pack be sure to drain the cheese balls and dry with a clean towel then peel them like an orange placing the pieces over the pie in a random fashion. Lots of things to experiment with to see what YOU like the best.

Dough Clinic / Re: Newbie needs all the good ingredience

Darticus;

The "plum" tomato description is just a generic type of whole plum type tomato, if you are looking at using San Marzano tomatoes by all means use them, or at least try them as they are typically more flavorful and consistent than the generic "plum" tomatoes.

Dough Clinic / Re: Newbie needs all the good ingredience

Peter/Ron;

For starters I would suggest using 12-ounces for a 12" diameter pizza crust. This should make opening the dough into a skin easier and then as you gain expertise in opening the dough into a skin you can begin reducing the dough weight as an experiment to see if you like the crusts made from the lighter dough balls more. When you're doing this reduce the dough ball weight in 1-ounce increments.

Dough Clinic / Re: Newbie needs all the good ingredience

My approach has always been to use garden fresh tomatoes or canned stewed whole tomatoes. Thin slice the fresh tomatoes and place on a clean towel to absorb any moisture. If using the canned variety drain well and tear apart into chunks. Lightly oil the surface of the skin with EVOO, add crushed or sliced garlic, fresh (green leaf) basil and or oregano if you are so inclined, but I just use basil, and then add the tomato. Don't try to get full coverage, just something that looks good, then add the cheese and dress as desired. It don't get no simpler than that :)

Tom Lehmann/ The Dough Doctor

Sauce Ingredients / Re: Simple Pizza Sauce

Yes, MCP is also a leavening acid, it is pretty fast acting too. As for self rising flours all of those that I've seen are chemically leavened. But it would be possible to make a "self rising" flour I suppose using P-ADY (protected active dry yeast) which would be incorporated directly into the flour, or you could also use a fat encapsulated IDY for the same effect BUT in that case I might have reservations as to how well it would perform if not mixed by machine.

Encapsulation is the act of coating the particles of leavening material both acid and soda with a type of fat that will remain a solid at room and somewhat elevated temperature but have a very sharp "slip point" meaning that it will melt off very fast when the temperature is high enough to melt the fat (normally around 120F). You are correct in that the soda can be balanced against both the added acid (leavening acid) and the acids formed during fermentation to have a fully or nearly fully neutralized system by the time the internal temperature reaches 140 to 145F. This is a bit of a challenge though as anything which will impact the rate of fermentation can/will impact the amount of acid produced by the yeast (dough temperature, fermentation time, fermentation temperature) would be the main ones to be controlled.

Regarding chemically leavened pizza crusts when I was a kid we had Chef Boyardee home made pizzas. The CL flour was supplied so all you had to do was to add water, the sauce and cheese were also supplied. At the time I guess it was pretty good. The DiGiorno pizzas are all what we refer to as combination leavened (both yeast and chemical leavening), and if you have ever had any of those refrigerated "tube" dough products, such as biscuits, rolled up pizza dough, croissants, etc. they are all 100% chemically leavened and that leavening system is highly tuned to give enough initial dough expansion for the dough to completely fill the tube but not blow out of the tube and then have sufficient slow acting (pyro) type leavening to give the desired product leavening in the oven.

Dough Clinic / Re: Yeast + Baking powder

Ron;

What kind/type of pizza do you want to make?

How do you plan to mix the dough?

A popular type of yeast is instant dry yeast (IDY). It is added dry to the flour, no need to activate it.

A good flour to get started with is Pillsbury Bread Flour, available at just about any supermarket.

For oil just use olive oil, forget the high priced stuff, the cheap stuff works fine in the dough.

Store bought frozen dough will work OK for you to practice with but eventually you will want to make your own dough.

Forget the spaghetti sauce, save it for the pasta, a simple pizza sauce can be made by simply draining a can of plum tomatoes and tearing them apart by hand and applying to the skin. If you want to have a smooth sauce get a can of good quality tomato sauce or crushed tomato and add some chopped fresh basil leaves, that's it....do not cook it as it will be cooked on the pizza. As you progress you can experiment with building a sauce specific to your tastes.

If you are looking to make a basic thin crust pizza here is a typical dough formula:

Flour 100%

Salt 1.75%

Sugar 1%

Olive oil 2%

IDY 0.375%

Water 62% (variable)

I believe Peter has the conversion table for changing from percent to actual weights (buy an electronic scale, about \$35.00 off of Amazon), Peter may also have my dough management procedure that covers everything you need to do with the dough between mixing and baking.

Be patient, experiment, ask questions, and enjoy your own hand crafted pizzas.

Dough Clinic / Re: Newbie needs all the good ingredience

Jt77;

Have you looked at the Dutchess Bakery Equipment Company or Dough X Press dough divider and rounder? Wonderfully simple to operate, accurate and works well with most doughs.

Shop Talk / Re: Reversible Sheeter / Doughball Divider/Rounder

Harry;

Baking SODA and Baking Powder are two very different things. Baking soda is just bicarbonate of soda/sodium bicarbonate, an alkali, it must have an acid to react with in order to produce carbon dioxide. Baking powder, on the other hand is a balanced blend of a food grade acid aka leavening acid and sufficient soda to fully neutralize the acid being used. If you want to see a good example of just soda look no further than soda crackers. The flavor is different from that of fermentation in that a portion of the acids formed during fermentation have been neutralized by the soda, but since the reaction is very fast whet you end up with is a bubbly/blistered appearing surface.

Depending upon a number of things, such as the type of leavening acid used, the particle size of both the acid and the soda and if it is encapsulated or not are all tools used by formulators to regulate the speed of the leavening reaction from very

fast to very slow and also when the release of leavening gas will occur during the baking process, and like I said previously, the specific leavening acid used can also impact the finished flavor of the product in which it's used, for example, sodium aluminum phosphate = biscuit like; sodium acid pyrophosphate = cake donut like; glutano delta lactone (GDL) = a sweet taste. It is easy to see why someone might say that the pizza crusts made by Norma containing both yeast and chemical leavening had a "pancake" like taste. Pancakes are chemically leavened and if Norma was using a baking powder containing the same leavening acid as the pancakes that the person was used to eating they would immediately pick up on the similarity in flavor. I might also add that baking powders are classified into two types, single action containing soda and a single leavening acid as well as double acting which is made with soda and typically two different leavening acids (mono calcium phosphate (MCP) and sodium acid pyro phosphate (SAPP) are commonly used in double acting baking powders (MCP is very fast acting where as SAPP, depending upon it number can be anything from pretty fast to quite slow. The most common form of SAPP used in making baking powder is SAPP #36 aka donut or BP pyro.

Dough Clinic / Re: Yeast + Baking powder

Peter;

It has been said that if it wasn't for the invention of the oven and fire, bakers would have poisoned the worlds population hundreds of years ago.

If you research the grain supply line from the field to the flour mill you will be absolutely amazed that the problem isn't bigger than it is. Add to that the fact that wheat is tempered prior to milling and you will be doubly amazed. Yes, wheat goes through a cleaning process (to remove rocks, wood, chaff, nails, pieces of wire, etc.) but that's the end of it.

The fact that we don't have more problems than we do is testimony to the care taken by the flour millers.

Dough Ingredients / Re: General Mills Gold Medal Flour Recall