Darren;
Slow or static freezing of just about any type of dough is possible if you can live with a shelf life of 10 to 15-days, and in your case it looks like you will be well within the shelf life expectancy of your dough. Just formulate and process the dough in your normal manner, then form into pizza skins and place on screens or some other flat surface and freeze until solidly frozen. I like to allow for at least 90-minutes for this. Once frozen, the skins can be packaged with pieces of parchment paper separating the individual skins and placed into a plastic bag and then into a corrugated box for deliver to the place where you will be making the pizzas. For added insurance toss in a piece of dry ice before you seal up the case and drive over. When you get to your destination you can either separate the skins and place them on pans with a little peel dust and allow them to thaw overnight in the fridge, or you can keep them forzen until shortly before (about 1.5-hours) before you anticipate using them. Remove a frozen skin form the case and place it onto a surface with some peel dust or in an oiled baking pan if you intend to use one. then brush lightly with olive oil, tent with a piece of plastic and store at room temperature. The skins should be ready to go in about 90-minutes.
Tom Lehmann/the Dough Doctor
Re: Freezing Sheeted Dough
6001

Mark;
With such a short bake time I would open two skins at a time; open, dress and bake two skins, then repeat. The other thing you can do is to fully open the first two skins for immediate dressing and baking but only partially open the other two skins, say to about 3/4 of the desired diameter, then all you will need to do is to quickly finish opening the other two for a quick repeat performance. The last working of the dough to bring the last two pieces out to full diameter will do a lot toward evening out any changes that might have occurred as a result of the dough sitting out proofing for the additional time.
Tom Lehmann/The Dough Doctor
Re: How to hold multiple skins?
6002

Doing things one step at a time, I would begin with increasing the oven temperature to at least 500F or as hot as you can get it, and allow at least an hour for the stone to heat up. How thick is your stone? Where is it located in your oven?
Tom Lehmann/the Dough Doctor
Re: how to make puffy crust??
6003

Mark;
Rather than opening all four skins at the same time, why not just open them as you need them? As one pizza is baking you could be opening the next skin and beginning to dress it, providing you can bake multiple pizzas back to back in your oven, if you need to allow for some recovery time just don't open another skin until you're ready to bake. You won't see as big of a difference this way as you would if you opened all four at the same time and let them set and proof while the other pizzas are being baked.
Tom Lehmann/The Dough Doctor
Re: How to hold multiple skins?

6004

Usually the problem can be traced to insufficient dough absorption (you want to have a soft dough), but since there are so many other factors that can be involved, baking temperature, what you are baking on, dough formulation/recipe, dough management, and how you are actually opening the dough into a pizza skin it would really help if we could see these important aspects of how you are making your pizzas.
Tom Lehmann/The Dough Doctor
Re: how to make puffy crust??
6005

Peter;
For all practical purposes, protein breakdown is somewhat similar if achieved by mechanical mixing or fermentation. Due to the effect of protease enzymes hydrolyzing proteins where as mixing only breaks the protein chain (without destroying the integrity of the protein) at specific bonding points (which can be repaired through the addition of an oxidizer such as ascorbic acid) to the dough protein that is exposed to fermentation is actually weaker than that exposed to mixing. With that said, we commonly ferment a large portion of the flour (sponge) and add it back to the mixing bowl along with a smaller portion (25 to 40%) of flour and mix the dough to a desired level of development for bread, roll, sweet goods, and pizza production, Hence, there is no reason why if you had a dough that was mechanically overmixed you couldn't do just as you have proposed. The old ITT Continental Baking Company back in the 1970's and early 80's had a bread making process called the fatigue dough process that was very similar to this, but in addition to adding a small portion of flour back to the dough they also incorporated oxygen into the dough (remember oxidation mentioned above) by continuing to mix the dough at low speed in their horizontal mixers with the mixing bowl slightly open which caused the dough to sheet out over the agitator bars thus exposing the dough to air/oxygen, and the damage to the protein chain was repaired allowing the dough to be handled by their equipment without any problems. The reason for using this process is due to the fact that when you over mix a dough mechanically in this manner the protein can accept more water than it can when normally mixed to peak development, and this extra water is retained in the dough and finished product (bread in their case) so they got better yields in terms of loaves of bread from every 100-pounds of flour. $$$$ is a great motivator.
Tom Lehmann/The Dough Doctor
Re: How do I know when Gluten Developement for pizza dough has occured?
6006

Mark;
You can't undo an over mixed dough, but worry not as it is essentially impossible to do by hand mixing. It is the under mixing of the dough that contributes toward that sought after open, porous internal crumb structure that is also important in achieving the crispiest crust possible. Using a mechanical mixer, if one mixes the dough to full development or even a little beyond full development, the greatest fault you are likely to encounter along your journey to making finished pizza is a bread like internal crumb structure. You can see this type of crumb structure in many of the frozen pizzas sold at your local supermarket. This is because most of the manufacturers mix the dough and are dressing the skins in an hour or less so all of the development must come from mechanical dough development aided occasionally by the addition of L-cysteine or glutathione (dead yeast). If you were

to dramatically over mix the dough using a planetary mixer, or any other type of mixer for that matter, the dough would take on a glassy appearance due to water being released from the broken down protein structure, it would be stringy, sticky and not at all pleasant to work with. As the dough would ferment the proteins will be further broken down and a portion of the starch would be hydrolyzed into sugar by the enzymes present in both the yeast and the flour. The resulting fermented dough would be even softer and stickier than it was at the mixer. In the baking industry the bakers have an expressing for this, they call it "elephant snot" because when viewed from their perspective in a large (1,000 to 2,500-pound capacity horizontal mixer) the dough (if you want to call it that) is hanging off of the mixing agitator and the top of the bowl in long sticky threads, hence their name for it.
From a home making pizza perspective I guess you could possibly over mix the dough if you were to use something like PZ-44 which is the reducing agent L-cysteine in a whey carrier at a level beyond the recommended dosage. In this case the L-cysteine would chemically cleave the protein chain to give you the same effect as a grossly over mixed dough in a matter of minutes, regardless of how the dough is mixed. If you feel adventuresome and want to see some of this yourself, you might try adding some instant meat tenderizer to the dough. The meat tenderizer should show papain as an ingredient and papain is very effective at breaking down protein, hence its use as a meat tenderizer. I did work using papain as a reducing agent in bread dough back in the 70's and I well remember ending up with doughs that could literally be poured out of the mixing bowl until I got the dosage correct.
Tom Lehmann/The Dough Doctor
Re: How do I know when Gluten Developement for pizza dough has occured?
6007

Mark;
In most cases when describing kneading of the dough one is instructed to knead the dough until it have a smooth, somewhat velvety appearance, and while this is not indicative of the same level of gluten development, it works quite well as a visual indicator. With hand kneading, another method that works well for me is to just knead the dough until it all comes together in an elastic ball, divide or scale the ball into the desired size/weight pieces, and allow to cold ferment for 24-hours, then remove from the cooler/fridge and allow the dough to warm at room temperature until it reaches 50 to 55F (about 2-hours) then knead each dough ball until it has a smooth appearance, place back into the fridge until about 2-hours before you want to use the dough to make your pizza skins. Remove from fridge, allow to warm to 50 to 55F, open into pizza skins by your perferred method, dress and bake. I've found that this procedure works really well for people without the arm strength needed to thoroughly knead the dough. I teach it to a lot of the rural farm families in my area where they also use the process to make bread too.
Tom Lehmann/The Dough Doctor
Re: How do I know when Gluten Developement for pizza dough has occured?
6008

Mark;
There are two basic ways to tell when pizza dough is properly mixed when the dough will be managed through a cold fermentation period of at least 24-hours in the cooler/fridge.
The first, and easiest to describe is to watch the dough as it mixes, at first you will see a dark colored dough with a rough appearance. As the dough continues to mix/develop the color will change to a brighter, yellowish color and the dough will

begin to take on a smoother appearance in the mixer. This is an indication that you are getting close to correct development. Continue mixing just until the dough develops a smooth skin in the mixing bowl, at this time the dough is best described as having a smooth, satiny appearance. You're now done mixing.
The other method is to take a piece of dough, about the size of a large hen's egg, and loosely form it into a ball, bring your hands together with your finger tips curled inward. Your finger tips should now be touching, position the dough ball on your fingertips and bring your thumbs down onto the dough ball, locking it in place on your fingertips, now roll your hands apart as if trying to bring the second joint of each finger into contact with one another, the dough will stretch between your locked thumbs, check the dough to see if it tears, if it tears the dough will require additional mixing time, but if it stretches without tearing the dough is properly developed. Like I said, this is not the easiest procedure to describe, but it works well as does the first method described above.
Tom Lehmann/The Dough Doctor
Re: How do I know when Gluten Developement for pizza dough has occured?
6009

I checked off 36 out of 80 and was rated as "Pizza Champion".
Tom Lehmann/The Dough Doctor
Re: How Extreme Is Your Devotion To Pizza?
6010

I just recently bought a new slicer to replace my old cheapie slicer. I found one that was rated as "commercial" whatever that means at Cabela's. The list price was around $300.00 but with their instore sale I got a $50.00 discount on that price. The slicer appears to be well built and has a 9-inch blade. So far the only thing I've been cutting with it is partially frozen venison for making jerky, and I've only had it a few months so I can't say how well it will hold up to that kind of abuse over the long haul. My old cheapie model, also from Cabela's cost me about $100.00 seven years ago and the gears finally gave up, and the cost to replace them was nearly the price that I paid for the slicer to begin with. Until those gears gave in, the old slicer worked just great slicing many pounds of partially frozen venison every year. With that said, slicing bread, cheese, and refrigerated meat should be a snap.
Tom Lehmann/The Dough Doctor
Re: home use slicer - Any suggestions?
6011

We had a project many years ago where we looked at ways to make the coating crispier on fried chicken. We used a pressure fryer for all of our testing so I don't know it the results hold true for a regular open fryer or not. We found an almost linear relationship between the protein content of the flour used in the coating and the crispiness of the finished chicken pieces. The lower the protein content, the softer the crispy coating became. When we used a very high protein content flour, around 14% the finished coating went into the range where it was no longer rated as crispy but rather hard and vitreous, so hard that you had to grind the coating on your molars in order to eat it.
Tom Lehmann/The Dough Doctor
Re: The mysteries of Fried Chicken
6012

Chaze;
If he will swap you straight up that is a sweet deal. You won't be disappointed.

Tom Lehmann/The Dough Doctor
Re: Dough climbing the dough hook
6013

The "J" hook is probably the poorest hook design one could come up with, with a smaller size dough the the dough would just grab onto the hook and go for a free ride without getting mixed, with a full size (large) dough the dough would get more mixing on the outer position of the hook and a lot less on the inner and top portions, plus the aggravating need to cut the dough off of the hook periodically to get a uniformly mixed dough mass. The reverse spiral mixing arm is a real sweetheart. Small size doughs are easily mixed without the dough climbing up on the hook to get a free ride, and when mixing large size doughs there is no longer any need to stop the mixer to either turn the dough over or cut it off of the hook, what a blessing!!!
The K-5-A as well as the N-50 (industrial version of the K-5-A) were originally equipped with a plain, and rather straight "J" arm type of hook which was a real bummer, but you can buy replacement reverse spiral mixing arms for these mixers too, but due to their rather smallish diameter they do not perform as well as a spiral mixing arm on any of the larger size mixers.
Tom Lehmann/The Dough Doctor
Re: Dough climbing the dough hook
6014

Darren;
Great "fish mouthing", those are those large football shaped holes so characteristic with a cracker type crust.
Well done!
Tom Lehmann/The Dough Doctor
Re: 1st attempt at Cracker style crust
6015

When I'm opening the dough to make the skin I try not to touch the edge portion unless I need to address some unwanted bubble(s), then when I'm dressing the skin I like to keep the sauce 1/4 to 1/2-inch away from the edge of the skin, this allows the dough to rise more in that portion, creating a nice raised edge on my finished pizza. You can control the size of the raised edge by adjusting how much of the edge of the skin you leave untouched, and by how close to the edge you apply the sauce. As for application of toppings I always load the skin more out toward the edges and lighter in the center section. This is for two reasons, one, the toppings will flow toward the center as the edge of the crust raises during baking and two, the lighter center loading allows the center of the pizza to get a better bake resulting in an averall crispier bottom to the pizza (helps to eliminate the droopy center or point of the slice). This puts me right in the center of the pack with the rest of the responses
Tom Lehmann/The Dough Doctor
Re: Basic rim forming question
6016

Chaze;
Cold fermenting gives you a different flavor profile in the finished crust than warm/room temperature fermentation does. This is why so many pizzas are made with a cold fermented dough. Warm fermentation seems to produce a greater amount of alcohol and gives a flavor that is more associated with white bread than

artisan breads or pizza crust. Plus, warm fermented doughs are a lot more difficult to manage properly than cold fermented doughs.
Tom Lehmann/The Dough Doctor
Re: Experimented with Full Strength dough in wfo this weekend.
6017

Walter;
Have you looked at using a splash cover? They are not perfect, but they do reduce a lot of the splash out and to some extent they also control some of the annoying dusting that comes when making bread and pizza doughs.
There are also some little tricks that I've picked up on over the years to reduce dusting too, for example, if you make a sponge dough, rather than putting the sponge in first, and the dry ingredients on top of it, add the water first, then add the dough side ingredients and mix at low speed for a few seconds, then add the sponge and mix as normal. For pizza doughs add the water first, then add the flour and other dry ingredients, a few seconds of stir or jogging will significantly reduce dusting, especially whit a splash cover.
Tom Lehmann/The Dough Doctor
Re: Dough climbing the dough hook
6018

Scott seemed to hit the nail on the head. The word "style" is to mean in the way of, not specifically copying or emulating. This point was driven home a number of years ago when large commercial pizza manufacturers, making the kind pizzas you buy in the supermarket, got into a labeling issue when they identified their pizzas as stone baked when there were no stones in the oven while others referred to their pizzas as stone baked style or hearth baked style. What came out of this legal wrestling match was that if the word style was used in the name designation (stone baked or hearth baked style) the pizzas could be baked in any type of oven, but if the name designation said (stone baked or hearth baked) the oven in which the pizzas were baked had to have a stone hearth. That word "style" is indeed a mighty word. So, now for my question, would someone please tell me there the following are made: Moon Pies, Mars Bars, French Fries, French Bread, Danish Pastry, French Crullers, English Toffee, etc.
Tom Lehmann/The Dough Doctor
Re: New York Style Pizza Not New York Pizza? Why???
6019

Chaze;
There are three versions of the 20-quart Hobart bench top mixer, the A-200, the AS-200 and the AS-200-T The only difference is that the "S" designation is for "stir". and the "T" designation stands for "timed" as this mixer has a timer. The "S" designation mixers have a very slow (half speed) stirring speed that might be useful when making a bowl of cake batter to prevent splash out, or to prevent dusting such as is commonly encountered when a fermented sponge is placed in the bowl followed by the remainder of the flour and dry ingredients. However, Now, I don't know if this is sanctioned by Hobart, but when I'm faced with these issues and all I've got is an A-200 I just quickly flip the switch between on and off, like switching a light switch for a few revolutions and then mix in low (#1) speed until I can go to a higher speed without dusting everything within a 5-foot radius of the mixer. Don't worry about looking for an AS-200, you already have a gem of a mixer. By the way, a slightly smaller, but equally as good of a mixer is the Hobart A-120/AS-120 mixer. This mixer is just a slightly smaller version of the A-200

having a 12-quart bowl capacity. Reverse spiral hooks are available for this mixer too as are a wide assortment of other mixing agitators, and if your mixer has the optional attachment head, you can buy a "pelican head" attachment for cutting, slicing, etc. Due to the great number of attachments available for these mixers, I have been known to refer to them as the grown man's, or woman's Barbie Doll.
Tom Lehmann/The Dough Doctor
Re: Dough climbing the dough hook
6020

CMWR;
In addition to what is shown in my bio, I also have a very good friend here in Manhattan, Kansas. His name is Adam Peyton, Adam is the owner of AJ's New York Pizza (3rd and Poyntz Ave.). AJ's is a slice store that is based on one of my articles titled: A New Approach to Pizza by The Slice. It is a slice different from any slice you might have ever had before. I developed the process a number of years ago after sampling slices across the country and coming away totally unimpressed. I developed the process to incorporate everything most of us like in a pizza, crispy, fresh, hot, assortment of fresh toppings, and still meeting the common denominator of a slice store, relatively fast. Adam now has a total of three stores and is doing very well. He was voted best pizza in Manhattan a couple of years ago, how many slice places would qualify for that honor? And yes, as a college town, we do have a lot of pizzerias both chains and Indies (independents), but keep in mind that this competition wasn't open just to the pizzerias, it was an open competition so it included even home prepared pizzas!
If you make it here to Manhattan, Kansas be sure to look me up, my home e-mail address is <thedoughdoctor@hotmail.com> and I'll treat you to some of Adams pizza.
Tom Lehmann/The Dough Doctor
Re: How do you get the pizzas to slide off onto the grill?
6021

We have used up to 10% liquid egg white in formulas for hard rolls, which is very similar to a basic pizza dough formula, but we have never seen any differences in dough rheology, but the finished rolls do have an improved crust color and sheen along with a uniquely crispy outer crust. If you want a dough to open easier you can add L-cysteine (PZ-44), glutathione (dead yeast), onion and/or garlic powder, and to some extent plain milk will soften the dough too making it easier to open. This is why so many references call for the milk to be scalded/boiled before using it in baking. You could also experiment with instant meat tenderizer which typically contains papain.
Tom Lehmann/The Dough Doctor
Re: Egg white in pizza dough
6022

When I bake my pizzas on the grill I like to start out using a well seasoned pizza screen until the crust begins to set, about 90-seconds, then slide the dressed pizza skin onto the grill to finish baking. I've found that this also helps to control the dough from sagging between the grill grates.
Tom Lehmann/The Dough Doctor
Re: How do you get the pizzas to slide off onto the grill?
6023

Chaze;

You're using an A-200 or AS-200/20-quart mixer. Congratulations for having a great mixer!
The problem you are experiencing stems from the fact that you are using a regular "J" hook instead of a reverse spiral dough mixing arm. The reverse spiral will completely eliminate the problem.
Tom Lehmann/The Dough Doctor
Re: Dough climbing the dough hook
6024

M;
Grandma Lasagna (another story) used to make what she called tomato pie for sharing (actually trading) with other Italian neighbors where she lived (Roseland, Illinois a south suburb of Chicago). Her pie was a lot like what you have described. She made a very plain dough formulated as follows: Ceresota Flour (any bread type flour will also work) 100%, Salt: 3%, Olive oil 5%, ADY 1% (I know it's high, but that's what I calculated from her recipe), and 65% warm (100F) water. She would put the ADY into the water to hydrate for about 10-minutes, then add all of the other ingredients and begin mixing (actually stirring) with a wood spoon. When the dough was too thick to continue stirring she would scrape the dough out of the bowl onto a floured counter top and begin kneading the dough until it became somewhat elastic, about 10-minutes. She would form the dough into balls, dust with a little flour and cover with a towel to rest until when she poked a finger into the dough the impression would remain in the dough. The dough would then be rolled out to fit into an oiled (olive oil) rectangular shaped pan about 1.5-inches deep and dark in color. The dough was then fit into the bottom of the pan. The pans of dough were set aside to proof for about 45-minutes and she would press and stretch the dough to fully fit the bottom of the pan. The pans of dough were once again set aside to rise, this time until the dough was about half way up the side of the pan (45 to 60-minutes), the dough was then sauced using nothing but tomato sauce (She used Contadina, what can I say?) and lightly sprinkled with just a kiss of dried basil and baked in her home oven at 425F, first in a higher rack, then after about 15-minutes in a lower rack position until the crust was a beautiful golden brown and crispy and very light. Occasionally, she would change the game by adding a few pieces of sausage or a few shavings of Parmesan cheese to it just before baking, and as she always did, she gave it a sprinkling of EVO as it came out of the oven.
I can still taste that light crispy crust with a little tartness from the tomato sauce. When I make it at home for my family today I always make the version with a few shavings of Parmesan cheese.
I'm sure other readers will have other versions, but this is what I got when I was dating my wife and we went to visit her grandparents.
Tom Lehmann/The Dough Doctor
Re: Ligura Bakery Focaccia
6025

Mitch;
Since you are mixing your dough by hand it is suggested that you pre-hydrate the IDY in a small amount of 95 to 100F (measured temperature) water and allow it to activate for 10 to 15-minutes prior to addition. I like to add the pre-hydrated yeast suspension to the regular dough water when I'm mixing the dough, but in your case you can split it up as you have been. For example, if you hydrate the yeast in 10-ounces of water, and then weigh out 1-ounce you will have the 1/10 of an ounce of yeast you are looking for.

Tom Lehmann/The Dough Doctor
Re: Ingredients
6026

Mitch;
To answer your question, let's look at each ingredient one at a time.
Flour: Provides structure in the form of gluten that is developed biochemically (through fermentation) as opposed to mechanically as with the use of a mixer or extensive kneading. In general, the higher the protein content of the flour, the stronger and more elastic the finished dough will be, all things equal.
Water: Hydrates the proteins (Glutenin and Gliadin) in the flour to form gluten. It also allows for hydration and dissolving of other ingredients in the dough. Water provides extensibility to the dough allowing it to be stretched and pulled into a defined shape. Water also adds fluidity to the dough allowing it to rise both during fermentation and also during the first minute or so in the oven (oven spring) which provides the desired open, porous structure so often sought after in rustic breads and pizza crust. The water also provides for part of the leavening process in the form of steam vapor.
Salt: Provides for flavor in the finished crust. A finished product that is too low in salt will have a somewhat "starchy" taste. Salt also strengthens the gluten network allowing the dough to be stretched and pulled without tearing (doughs made with insufficient or no salt are somewhat sticky and tend to tear easily, this is why exhibition doughs are high in salt). Salt also helps to regulate the rate of fermentation, too little or no salt caused the dough to ferment too fast or at an inconsistent rate while excessive salt will cause the dough to ferment slower that normal or desired.
Oil/Fat: The fat content in the dough provides a level of lubricity to the dough allowing it to be more easily stretched and stretched further without tearing. It also improves the flavor of the finished crust due to the fact that the fat will hold some of those great flavors released from the pizza while it is baking. Fat can also impact the mouthfeel of the finished crust, making it softer and richer tasting. In certain applications fat can also impact the way the crust reacts with saliva during mastication. In this case the fat will retard the absorption of moisture creating a finished product impression that the product is less dry. Without any fat the crumb portion readily absorbs moisture from the mouth creating a dry eating impression. Fat is also an enriching ingredient, meaning that when fat is present the consumer perceives that the product provides a richer, more desirable eating characteristic than the same product made without fat. Lastly, fat helps to provide for a more tender eating characteristic. There is also some theory that both fat and sugar are craved by the body due to an inherited (from our cave dwelling ancestors, not uncle Guido) survival instinct. We like to simply call it the "fat gene". Now you know why all those fat free products are now either low fat or gone from the market entirely.
Sugar: Sugar is a source of nutrient for the yeast to feed upon. The yeast contains enzymes (amylase) which help to convert starch (present in flour) to sugars that can be readily metabolized by the yeast, but this can be a slow process so the flour is sometimes "malted" to provide additional amylase, or we may add the malt in the form of "diastatic malt", in any case we are just helping the yeast to convert starch to sugar. We can also add sugar directly to the dough too. With exception to lactose, most common sugars that we work with are able to be broken down into sugars that can be metabolized by the yeast. Any non-metabolized (surplus) sugar present in the dough will contribute to both crust color and flavor of the finished crust. Some forms of sugar, such as honey, molasses, or non-diastatic malt can also

provide a unique or distinctive flavor to the finished crust.
So, why all of the differences? Well, it all depends upon what you want from your pizza crust. Remember, the true definition of a pizza crust is that of a relatively flat, leavened or unleavened bread to which various toppings are applied prior to baking. That's a pretty wide description and there is an equally wide variance in formulations to cover all those bases.
Tom Lehmann/the Dough Doctor
Re: Ingredients
6027

Now for the bad news, they're too pretty to use! LOL :-D
Those might be the prettiest peels I've ever seen. They would make a great gift for any pizza lover.
Have you given any thought to selling them over the internet?
Tom Lehmann/The Dough Doctor
Re: My New Peels
6028

Minn;
In addition to what Peter has said, PMQ <www.pmq.com> also has contacts in China as they do a pizza show there annually so they might be able to provide some additional input based on their contacts in China. I would suggest that you contact Steve Green directly at <SG@pmq.com> Steve is the publisher of PMQ Magazine so he should be able to direct you to their Chinese contact person.
Tom Lehmann/The Dough Doctor
Re: open a pizzeria in Shanghai either
6029

Gig;
No, using our smaller bench top mixers and out larger 80-quart mixers we don't see any difference in mixing time with only 1% difference in protein level. This is not to say that there isn't a difference in mixing time to achieve full gluten development, but since pizza dough is seldom, if ever, mixed to full gluten development we just don't see any differences in those undermixed pizza doughs. Bread dough, on the other hand, is normally mixed to either full development or a little past full development depending upon the type of bread being made so in that case we sometimes even see differences between two different flours of the same protein content.
Tom Lehmann/The Dough Doctor
Re: Can I use pizza flour to bake bread?
6030

Leonard;
If I remember correctly, I think P.H. uses a reman (re-manufactured) tomato product in their sauce. A characteristic of a reman product is the very deep, dark color and a somewhat sweeter taste. I believe that Contadina brand is a reman product so you might try developing your sauce around their tomato sauce or paste.
Tom Lehmann/The Dough Doctor
Re: Leonard's Attempt at Chain-Style Pizza (Split Topic)
6031

For over a hundred years now, bakers have used potato as a basis for their SD

starters. If you Google "potato starters in bread production" you will find several options for using potato flakes as the basis for a S.D. starter.
Tom Lehmann/The Dough Doctor
Re: Sourdough Starter
6032

On a weight basis, use 5-parts water to one part dry yeast.
Tom Lehmann/The Dough Doctor
Re: Np recipe using ADY yeast?
6033

WNORN;
Do you have any idea of what the protein content of the two flours are? Typically, but not always, flour that is sold as "pizza" flour is higher in protein content than a typical bread type flour. High gluten/pizza flours can run from 12 to 14.5% protein content and bread flours can run from 10.5 to about 12.7%. Without knowing the protein content of the two flours, I would begin by just replacing the bread flour with my pizza flour and see how the dough and finished product compares to what you have been getting when using bread flour to make your bread. If the difference is significant enough to warrent making a change to the dough formulation or process we will then know what chatacteristics need to be addressed and also have some idea as to what magnitude.
Tom Lehmann/The Dough Doctor
Re: Can I use pizza flour to bake bread?
6034

Sure, not a problem using ADY. Just make sure you rehydrate it in a small amount of 100 to 105F water for about 10-minutes before you add it to the dough. As to the amount that you will need to use, I would start at about 0.25% of the total flour weight. Regarding the use of a bread making machine, keep in mind that pizza dough is not mixed the same as bread dough is. It is mixed only about 50% of what a typical bread dough is. The under mixing of the dough is one of the factors that contributes to the desired open, porous structure of the baked crust. After mixing, get a temperature on the finished dough, you will be looking for something around 85F. I like to divide the dough into individual balls for each pizza. About 9-ounces for a 12-inch pizza is about right. Then lightly oil the dough balls and place into individual plastic bags (bread bags work well) twist the open end to close and tuck the pony tail under the dough ball as you place it into the fridge. Allow the dough to cold ferment for at least 3-days, then remove the dough from the fridge and allow the dough to rest at room temperature for a couple of hours before opening the dough balls into pizza skins. For this type of crust it is recommended that you open the dough balls by hand rather than using a rolling pin.
Re: Np recipe using ADY yeast?
6035

Also, be sure to let us know how you are shaping the dough into pizza skins. Do you hand stretch it or do you use a rolling pin to open the dough. When it comes to trouble shooting a pizza problem there is no such thing as TMI.
Tom Lehmann/The Dough Doctor
Re: Dense dough - any tips to make it light and fluffy?
6036

Depending upon its construction, that bamboo peel might actually be better than

the other more traditional wood peels which exhibit a tendency to split and/or warp over time. Do not wash it, just wipe it down. I normally don't like to oil that type of peel as it can make it more difficult to peel the pizza into the oven, instead, I like to burnish the peel with a fine grind corn meal from time to time. Don't worry about stains on your peel either, they just give it more character. If you like it, and it works well for you apply the rest of your money toward buying a metal blade peel for removing the pizzas from the oven.
Tom Lehmann/The Dough Doctor
Re: Need a first peel, fast.
6037

Walter;
When using any kind of bulk fermentation keep in mind that temperature control of the dough is absolutely critical to getting consistent dough quality. This is probably why you find that the dough is too tough to ball at times. The room temperature will have an influence on the actual finished dough temperature but it really won't have much influence on the way the bulk dough ferments. Since you are using a straight dough process the formula for desired water temperature is 3 X desired water temperature minus the sum of the flour temperature, room temperature and friction factor. You will need to find the friction factor for YOUR dough in YOUR mixer. To do this, mix a dough using your coldest tap water (record the temperature of the water). Then mix the dough in your normal manner and record the finished dough temperature. The formula for friction factor is 3 X the actual dough temperature minus the sum of the room temperature, flour temperature and the water temperature. The resulting number is the friction factor that you will need to plug into the above desired water temperature calculation. This calculation works great and it will consistently get you to within 1F of your targeted temperature. Remember, the flour and room temperatures will probably change and will be used in your calculation for desired water temperature but the friction factor will not change, it will remain a constant so you can just plug your number into the equation each time. keep in mind that if you make a significant change to the mixing time of size of the dough the friction factor may need to be recalculated.
Tom Lehmann/The Dough Doctor
Re: Bulk Cold Fermenting Experiment
6038

There is the NAPICS Show in Columbus , Ohio every year around the end of January or mid-February. I used to participate in this show and I can say that it is a very good show to attend. Typically around 2,000 attendees, lots of vendors, as well as seminars and hands on instruction. The show is a lot cheaper than P.E. as are the seminar sessions.
To get more information on the NAPICS Show (North American Pizza and Ice Cream Show) contact the Ohio Restaurant Association for next years dates and details.
Tom Lehmann/The Dough Doctor
Re: pizza expo
6039

Norma;
No I didn't. I just caught the one that is posted above. With my very heavy and tight travel schedule right now (will continue through the entire first quarter) I don't have time to go back and read all of the earlier posts all the time. You are absolutely correct, it is a big thing to go from home pizza making to making pizza

in a store. Anymore, I don't even encourage anyone to practice making pizzas at home in preparation for their store because so many things will ultimately change unless they have a taste for home made pizza. What a lot of people don't realize is that you can get away with a lot more in your home kitchen than you can in your store where you will be forced to crank out pizzas faster than leaves falling off of a tree in the fall, plus you are tasked with managing a lot more dough than just a few dough balls, and the end pizzas all have to be of consistent quality if you expect to get a good price for your pizzas. Right now I'm working with a company that is expanding from just a couple of stores to over 50 and now they have discovered that what they were doing previously in those two stores cannot be effectively managed across the number of stores they already have much less 50 stores.
Tom Lehmann/TheDough Doctor
Re: Thin and flexible dough
6040

Shari23;
You might try this:
Change your flour to a stronger, bread type flour such as Pillsbury "Bread Flour" available at most supermarkets. This flour has about 12% protein content. To the flour, add 1-tablespoon of wheat gluten (also available at most supermarkets). If you can't get the gluten, don't sweat it.
Adjust the water temperature to 105F.
Put the active dry yeast into the water and stir well, then set aside for about 10-minutes, or until you see bubbles forming in the yeast suspension.
Stir the yest suspension and pour into mixing bowl.
Add flour and remaining ingredients and begin mixing the dough in your normal manner.
Immediately after mixing, form the dough into a ball, lightly oil it and place it into a bread bag. Twist the open end into a pony tail to close it and tuck the pony tail under the dough ball as you place it into the refrigerator. Allow the dough to cold ferment overnight. The dough can be used over 24 to 48-hours. To use, remove the dough from the fridge, and allow to temper AT room temperature for about 2-hours, then turn the dough out of the bag into a bowl of dusting flour and open into pizza skin(s) for dressing and baking. Bake on a preheated stone in a HOT oven. You may need to experiment with the position in the oven.
Tom Lehmann/The Dough Doctor
Re: Thin and flexible dough
6041

Claudebo;
It sounds like you put the dough into the containers, sealed them closed and then went to the refrigerator. This would create a dead air space around the dough thus insulating it from the cooling air and allowing the dough to continue rising. Due to the heat of metabolism the dough will actually continue to gain heat, thus further speeding up the fermentation process.
Tom Lehmann/The Dough Doctor
Re: what should I do pls
6042

Chet;
Look on the bag, it should show the nutritional composition of the flour. What you are looking for is protein. If it shows 9-grams protein per 100-gram serving the protein content is 9%. If it shows something like 4-grams per serving and the

serving is defined as 50-grams you would have 8% protein content.
If it doesn't have any information on nutritionals you will need to either Google the product/manufacturer or contact the manufacturer/distributor directly.
Tom Lehmann/The Dough Doctor
Re: Katy's Kitchen all purpose flour
6043

Jon;
Actually, the moisture in your fat is desirable as it provides for enhanced pocket formation within the crumb structure resulting from the vaporizing of the water in the fat. This is how puff pastry is made. In fact, the hard fat flakes that Norma is working with used to be available in three different forms, plain (100% fat); hydrated (with water) and nitrogen infused.
Norma, if you are reading this, please resend me your mailing address as I have some more material on hard fat flakes to send to you.
Tom Lehmann/The Dough Doctor
Re: The Fat Flake Pizza Dough
6044

Bob;
I'd like to say that I have a good low carb alternative for a pizza crust, but I don't so I can't. I never bought into the low carb thing of years past. Some things are just intended to be made with carbohydrates and I believe pizza is one of them. When people used to ask me about a low carb alternative to their existing crust my stock answer was to find a decent low carb crust and buy it (I had to really lower my bar to buy one and then I still didn't like it). My other answer was to simply make the thinnest pizza skin possible, that way it will still taste like a pizza crust but contribute fewer carbohydrates. One of the things I experimented with along these lines was a yeast free crust. What it boils down to is to make your favorite dough without and yeast. You will probably need to adjust the water/absorption to achieve a dough consistency that will allow you to pin the dough out. After mixing, scale and ball the dough, and set aside to rest for about 15-minutes, then pin the dough out very thin and trim to desired size. Place the skin on your perferred baking surface and parbake (the crust will bake out firm) immediately dress as desired and place back into the oven to finish baking. Sorta like pizza on a cracker, but still better than the other "twig and leaf" renditions that I found being touted as so great.
If all of this sounds familiar it is because it's only half a bubble off of making a pizza on a tortilla skin, maybe a little thinner.
Tom Lehmann/The Dough Doctor
Re: My Pizza Calories,... kind of explored
6045

If your dough has any oil it don't forget to include the calories (9-calories per gram) from it too. If you want to get into "healthy" pizza you can blend your existing cheese 50/50 with a tofu based cheese product ("0" cholesterol) to get a 50% reduction in cholesterol from the cheese component, then you can explore poultry sausage (actually pretty good). If you're going to Pizza Expo you should be able to find to find some there to sample. In some supermarkets you can find cholesterol free cheese product from Galaxy Nutritional Foods which can be blended with your regular cheese. Or for toppings just stay with the veggies, or if meat is on the menu use skinless chicken or fish/seafood. It sure beats eating only a single slice! :)
Tom Lehmann/The Dough Doctor

Re: My Pizza Calories,... kind of explored
6046

A steel grate doesn't have much capacity for storing latent heat, instead it allows the pizza to bake by allowing the heat to pass right through it to the dough. A solid stone or heave steel deck can store latent heat and quickly transfer that heat to the pizza that has been placed on it so you actually end up getting a better bake if done right. Another way to look at it is like this;
You can put your hand inside of a 600F oven without getting burned...I do it all the time, just don't touch anything while you're in there.
Using that same oven and temperature, put a solid stone deck in it and allow it to fully heat to oven temperature, now if you were to touch that stone you would instantly get a burn. This is rate of heat transfer. Air is a poor transfer medium while steel, stone, water or oil are all much better and a lot more efficient. A couple of things that need to be considered with a solid deck, it must be sufficiently heavy to be able to store sufficient latent heat to provide heat to the bottom of the pizza during the entire baking cycle, and you must allow sufficient preheat time to allow the surface to absorb as much heat as it can (this could take the better part of an hour).
Tom Lehmann/The Dough Doctor
Re: How is Stone Better than Steel Grate?
6047

Morten;
I like to set my fridge to operate at 36 to 38F (2.2 to 3.3C)
Tom Lehmann/The Dough Doctor
Re: refrigerator temprature
6048

How much does your dough rise during the cold fermentation period?
Tom Lehmann/The Dough Doctor
Re: Newbie - dough too thick
6049

Gluten quality is influenced by temperature: At temperatures above 90F the protein/gluten begins to weaken.
As fermentation progresses the byproducts of fermentation exhibit a pronounced weakening effect on the protein/gluten: The main byproducts of fermentation are acids (acetic, lactic and propionic), alcohol, and carbondioxide. Of these, the acids have the most pronounced impact (weakening) on the gluten. Additionally, enzymes present in the yeast (amylase and protease) will impact the gluten structure. The amylase hydrolyzes starch releasing water into the dough that makes the dough feel softer, and possibly less elastic, while the protease enzymes hydrolyze the proteins resulting in a significantly weaker gluten structure.
Time is also an important element too, especially when it comes to fermentation. The longer a dough is fermented the more impact the fermentation will have upon gluten strength. Since temperature is also an element of fermentation, a dough that is fermented at a higher temperature, even though for a shorter time, can have a similar degrading effect upon the gluten due to the increased speed at which fermentation is progressing at the elevated temperature.
Mixing, especially high speed mixing can impact gluten strength by over extending the protein to the point where the bonding points between the proteins begin to break (if you mix dough in a food processor long enough you can see this).

Fortunately, these bonding points can be repaired by oxidation, such as adding ascorbic acid to the dough, or even by just allowing the dough to mix at low speed for a few minutes followed by a short rest period.
So, just how long will the gluten remain in tact in the dough structure? Technically that cannot be answered unless you know what the variables above are, but from a realistic approach in home made pizza dough, 4 to 6-hours would be a good guess, after that, you will probably see the dough collapse. At that point you can simply rework the dough back into a ball to restrengthen the gluten and have another go at it, but this time it will take less time than the first, probably something on the short side of 3-hours. As you continue this process you will reach a point where the acid content and the effect of enzymes on the gluten will either destroy the gluten, or weaken it to the point where it is more like a wet dish rag than a pizza dough. This is why we refrigerate or cold ferment the dough and we limit the amount of flour used in the preferment be it a sponge, poolish or sour as the raw flour added provides sufficient gluten strength to the dough to allow us to make whatever products we are making.
I tried to keep this in very general terms to keep it easy to understand, hopefully I haven't added to any confusion.
Tom Lehmann/The Dough Doctor
Re: duration of gluten build and hold?
6050

Norma;
Hard fat flakes are (I'm going to use a bad word her, so look away in you will be offended) heavily "HYDROGENATED" fats that due to the hydrogenation process are now very hard, much like soap flakes in both size and appearance (do you remember American Family soap flakes?) I'm dating myself here and anyone else who admits to remember them. These hard fat flakes are added to the dough in much the same manner as raisins are added to a raisin bread dough. The result is a mixture of fat flakes and dough which imparts the appearance of a laminated dough. The BLITZ method of making pastry calls for taking butter and cutting it up into small pieces, about the size of a cherry pit on the small end and about the size of the cherry on the large end. The butter is then refrigerated to completely harden it, the dough is mixed in the normal manner and about 5-minutes before the mixing is complete the frozen butter is added and mixed just to distribute the butter pieces throughout the dough mass. The amount of butter added to the dough in this case is the same as the amount of roll-in that would typically be used in making Danish, about 20 to 25% of the dough weight before addition of the butter. The dough is then given one or two foldings for lamination and the process is complete. This eliminates the need to roll the dough, add the roll-in fat, fold the dough, rest the dough, roll it again, give it a laminating fold (3-fold or 4-fold), resting the dough, rolling it again, give it another laminating fold, rest the dough, and then take it to the bench for forming into pastries. As you can see, this is a lot of work as others here have already alluded to. I'm sure you can Google the process for more details. If anyone is looking for the hard fat flakes I think Bungee (Kankakee, Illinois) is still a supplier as is ConAgra Foods.
Tom Lehmann/The Dough Doctor
Re: Special technique for this pizza crust?
6051

Just to add a little fuel to the fire, a number of years ago a number of wholesale pizza manufacturers were offering pizzas made on what they called either a croissant or Italian pastry type of crust. I've got slides of it in my old pizza

presentation materials. When we replicated the crusts we were able to do so in a manner already described, that is by sheeting the dough thin, brushing it with a very light coating of oil and then folding the dough to get the laminations. This was repeated a number of times until the finished crusts had a similar appearance, much like the pictures provided. We were also able to replicate the crust characteristics using what is called a dry laminating procedure which is how saltine crackers are made. The dough is sheeted very thin, allowed to dry/skin over (with the help of IR heaters and fans) and then folded/laminated to achieve the desired internal structure. The last method we used was to incorporate hard fat flakes into the dough which also worked very well. By this method the dough is made a little softer than normal and hard fat flakes are added to the dough during the last few minutes of mixing, the dough can be used as it is, but best results were had when the dough was given a single lamination. If anyone ever spent time working in a retail bakery you might recognize that method as the "blitz" method on making pastry dough.
One of these methods was so successful at replicating the target product so as to earn me a visit by two corporate attorneys representing the company producing the target crust. No, they did not have a case and I was not sued for giving away their trade secrets, but in view of the attention I drew from them, I must have been awfully close to what they were actually doing.
Tom Lehmann/The Dough Doctor
Re: Special technique for this pizza crust?
6052

I'll be there too as I'm on the program. My presentations are titled Time With The Dough Doctor, Tuesday, March 25 at 4:00 p.m. until ??? Then again on Wednesday, March 26 at 4:00 p.m. until ??? These are sometimes marathon sessions so we never know what time we might be asked to leave the room.
Pizza Expo is a great opportunity for anyone thinking about opening a pizza store in the future, or looking for reasons not to. You can easily get both perspectives from the many attendees and participants. And then there is all of the equipment and ingredients, just mind boggling! Be sure to bring along an extra bag to carry back all of the literature you will pick up on the show floor. I know many of you are interested in different flours, all of the flour suppliers (even Caputo) will be there to talk to you and give you literature on their many different types of flour available. Also, if you get a chance, try to sit in on some of the pizza competitions, and don't miss the Beer & Bull Session, this is an excellent opportunity to grab a couple beers and casually visit with owners and operators or pose some questions to the moderator.
If you don't enjoy the show it's only because you didn't attend.
Tom Lehmann/The Dough Doctor
By the way, the NAPICS Show (Columbus, Ohio) is also a great show to attend too, it is a smaller show than Pizza Expo, but it is less costly too for both getting into the show and attending the learning sessions, so if you're in the neighborhood, and can't make Pizza Expo, don't pass up the NAPICS Show.
Tom Lehmann/TDD
Re: pizza expo
6053

Julian;
To substitute ADY for the IDY you are presently using increase the amount of ADY to 1.25-teaspoons, but be sure to put it into a small amount of warm (100F) water to hydrate for about 10-minutes before using it. You should not add it dry as you do

IDY. Since pizza dough is best undermixed, mixing is really not an issue. I normally mix my home made pizza dough by hand just until the dough comes together, then place it into a lightly oiled bowl and allow it to ferment a couple hours, or more. Then turn the dough out of the bowl and knead for a minute or so, divide the dough into individual pieces for each crust you want to make, place each of these into a small, lightly oiled bowl and allow to ferment for 1 to 2-hours at room temperature. Turn the dough out of the bowl into some dusting flour and open into pizza skins. As for using bread flour, it works great. I like to use Pillsbury "BREAD" flour available from most supermarkets (it is intended for use in making bread with a bread machine).
I'll be in Overland Park next week at my son's home making my traditional pizza and calzones by this method.
Tom Lehmann/The Dough Doctor
Re: A Couple of Questions
6054

PY;
Looks like a pretty decent rendition of a Chicago style thin crust! :)
Did you use raw sausage like they do in Chicago too?
Tom Lehmann/The Dough Doctor
Re: After many failed attempts I finally got a decent thin crust
6055

You also mentioned to use 25-grams of "flour" to stretch and fold the dough, is this the "Gluuteny" flour or some other flour like rice flour?
Tom Lehmann/The Dough Doctor
Re: gluten free NY style. yes. GF NY.
6056

I have several excellent bake to rise dough formulas in the RECIPE BANK at the PMQ web site, www.pmq.com (click on the RECIPE BANK option), or if you wish, you can send me a message and I'll be glad to send them to you.
Tom Lehmann/The Dough Doctor
Re: Advice needed for "Rising crust" frozen pizza dough recipe please.
6057

If you are making deep-dish pizzas, are you allowing the dough to rise in the pan prior to dressing the dough? If you're making a thin crust, where you roll the dough out, place it into the pan and then directly into the oven, a small amount of oil in the pan may improve the way the dough bakes by improving the heat transfer from the pan to the dough. Something else that strikes me as strange, your bake time and temperature for an air impingement oven are long and high. Typically, we see baking times in the area of 6 to 7-minutes at 440 to 460F. This leads me to believe that you might not have the best finger arrangement/configuration for baking YOUR pizzas.
Tom Lehmann/The Dough Doctor
Re: Dough recipe questions
6058

Maybe I missed it, but what is the diameter of the pizza?
Tom Lehmann/The Dough Doctor
Re: Dough recipe questions
6059

TZ;
Most are using flour with about 12 to 12.5% protein content, similar to Pillsbury Bread Flour available at most supermarkets.
If there is a "secret" to their dough management procedures it is in allowing the dough balls to cold ferment for three or more days before opening the dough balls into pizza skins. They also spend considerable time in training their operators how to open the dough balls into pizza skins too.
Tom Lehmann/The Dough Doctor
Re: Pizza dough
6060

G.L.;
Converting your dough formula to bakers percent it looks like this:
Flour 100%
Water 61.8%
Salt 1.66%
Oil 0.97%
Sugar 0.97%

Based on this I would decrease the IDY to 0.375% (2.7-grams), and increase the salt to 2% (14.4-grams). Optionally, you could delete the sugar from the dough formula if the flour you are using is malted (it will tell you on the bag if it is malted).
Tom Lehmann/The Dough Doctor
Re: Need some advice regarding this dough
6061

Hey Ryan;
I bought some "dirt" this past summer from Walmart for $2.00 for a 40# bag ($0.05 per pound), come to think about it, I think they were referring to it as "top soil". :)
Tom Lehmann/The Dough Doctor
Re: Crunchy dough
6062

Ryan;
At 52% absorption, your dough might have been too dry to fully hydrate the semolina flour. If you are trying to get that characteristic yellow color of the Chicago deep-dish pizzas, remember that they get that color through the addition of a yellow food coloring called "Egg Shade" you can Google it and it comes up.
Tom Lehmann/the Dough Doctor
Re: Why add semolina to pizza dough?
6063

Runeli;
Don't worry, your English is just fine.
If you don't already have one, try to pick up a stem or dial type thermometer, like you see the chef's running around with in their pocket. These are usually pretty low cost and they will work great for measuring the dough temperature. If you use some type of a closed box to store your dough in you might also consider leaving the top off of the container for the first two or three hours in the fridge/cooler to allow the dough to cool down more uniformly, then cover the containers until you're ready to use the dough.

Tom Lehmann/The Dough Doctor
Re: What happends??
6064

Dana;
Something to keep in mind is that pizza dough is not all that different from French bread dough, Vienna bread dough, Italian bread dough, and depending upon the type of pizza you want to make, bread dough may not be too far off base. So keep your options open and be sure to look at other types of frozen dough, one of them just might be exactly what you're looking for.
Tom Lehmann/The Dough Doctor
Re: Frozen pizza dough
6065

The addition of semolina flour (the same flour that pasta is made from) should not impart a grittiness to the finished crust unless the dough is extremely dry as are used for making some of the cracker type crusts. The semolina flour adds toughness/chew to the finished crust as well as a slightly different finished crust flavor profile. All of our work has indicated that you can go up to about 25% substitution of semolina flour for your regular flour with good results, beyond that toughness in the finished crust (especially as it cools) can begin to pose a problem. Semolina flour has a larger particle size than your regular flour (this is why it also works well as a peel dust) so it hydrates at a slower rate, due to this it is common to add just enough water to the dough to give you the desired consistency, but then the semolina flour begins to hydrate, and the dough tightens up, making handling/opening the dough difficult. To correct for this I always adjust the absorption on any doughs made with around 25% semolina flour so they are softer than normal and even somewhat sticky as these characteristics will disappear as the semolina flour hydrates over the next 30-minutes or so.
Tom Lehmann/The Dough Doctor
Re: Why add semolina to pizza dough?
6066

Dana;
I hate to have to answer your question like this but there is no other correct way to answer it.
The best frozen dough will be the one that performs best for you in YOUR kitchen/store giving the finished crust characteristics that you desire. The best thing to do is to shop around and try dough from different manufacturers. The same advice holds true for par-baked crusts and gluten-free crusts.
Tom Lehmann/The Dough Doctor
Re: Frozen pizza dough
6067

A couple of things stand out about your formula;
The oil level is rather high for this type of pizza. I would suggest reducing it to around 2%.
The salt level is a bit on the low side so I would suggest increasing it to 1.75 to 2%.
Your yeast level is probably a bit low for ADY, you could go as high as 0.5%.
All of this said, I doubt that the problem is with the dough formula, but rather with either the protein content of the flour (protein content might be too low) or even more likely, your finished dough temperature (the temperature of the dough immediately after mixing) is/was too high. This would cause the dough to over

ferment during the overnight period, resulting in what many describe as a "rotten" dough. I would think that, under your conditions, a finished dough temperature of 70 to 75F/21 to 24C might work pretty well for you. Additionally, it would also help if you could tell us how you manage your dough after mixing. This is everything you do with the dough from the time it is removed from the mixer until you use it on the following day.
Tom Lehmann/The Dough Doctor
Re: What happends??
6068

I agree, with today's economy and uncertainty, a 5-year plan is pretty optimistic. I use a 3-plan to keep me pointed in the right direction.
Tom Lehmann/The Dough Doctor
Re: 5 Year Plan
6069

WRM;
Within reason, the more oil used in the pan, the greater the fried effect will be upon the finished crust. The biggest drawback to using this much oil though is in getting an oily finished crust...but they are soooo good.
Tom Lehmann/The Dough Doctor
Re: Crispy fried crust
6070

David;
Others may have had a different experience, but when I have tried to bake my pizzas in my son's oven with the convection mode turned on, the top of the pizza colors up too fast and I can not get the bottom bake I'm looking for.
Tom Lehmann/The Dough Doctor
Re: Crust not cooking all the way
6071

David;
Your problem might also result from rolling the pizza skin too thin. This can result in a degassed dough which allows the latent heat in the stone to pass right on through the dough into the sauce where the heat is dissipated in the form of steam. A good test for this would be to allow your opened pizza skin to rest/proof for about 30-minutes prior to dressing and baking. If the bottom now bakes better and develops more color this is probably where the problem is, if not, possibly moving the stone closer to the source of heat might help.
Tom Lehmann/The Dough Doctor
Re: Crust not cooking all the way
6072

At about 0.5-pound for about a 12-inch pizza you are on the light side for dough weight, depending upon the type of pizza you are attempting to make. With the limited fermentation time that your dough is subjected to it can be rather difficult to open the dough without developing thin spots in it, and baking the pizza in a pan may be a detriment to getting the dough to rise in the oven as it would if you were baking on a stone. What you might do is to add additional water to the dough and also allow the dough to ferment longer, overnight in the fridge or at least 2-hours at room temperature before opening the dough into a pizza skin for topping and baking. Add sufficient additional water to just get a soft, pliable dough after the

fermentation period. You might then try one of my tricks to open the dough ball into a pizza skin, that is to use a pie pin or rolling pin to open the dough ball to about 2/3 of the finished diameter, then finish opening the dough by hand. This method of opening the dough aids greatly in achieving a more uniform thickness across the diameter of the pizza skin.
Tom Lehmann/The Dough Doctor
Re: Crunchy dough
6073

What was your formula/recipe?
How did you manage/handle the dough after mixing.
How did you open the dough into a pizza skin?
What can you tell us about how you baked the pizza?
Tom Lehmann/The Dough Doctor
Re: Crunchy dough
6074

WRM;
What you experienced is common for any type of hard or plastic fat as opposed to using oil in the pan. The use of shortening, butter, margarine, etc will give a dry, almost bread like crust surface while the use of oil in the pan will result in a fried texture and appearance.
Tom Lehmann/The Dough Doctor
Re: Crispy fried crust
6075

SP;
Your number are pretty close to what we have found in our research here at AIB. We have found that the "magic" number/temperature is 50F. If you try opening the dough ball much below this the dough can be a bit problematic to get opened, and then it can give you fits with bubbles. At 50F the dough opens well and bubbles are minimized. The upper end of the temperature scale is around 60F. At this temperature the dough opens very well but depending upon the dough formulation, if you have a number of dough balls to open things can start to get out of control pretty quickly.
Tom Lehmann/The Dough Doctor
Re: Preferred temp of Dough Ball to push out and get best Oven-spring
6076

JV;
Adding a release agent to the pan, such as oil or shortening is the only option you have. Also, be aware that the bright shiny pans will bake much differently from a dark colored pan. To correct this condition you will need to season the bright colored pans by wiping them with salad oil and placing them into the oven at 425F for about 20-minutes. Repeat this at least twice and the pans should be ready to begin baking in. DO NOT allow the seasoned pans to ever soak in water as this will cause the seasoning to peel off necessitating that the pans be completely stripped of their seasoning and be reasoned.
Tom Lehmann/The Dough Doctor
Re: Help!!!
6077

I'm assuming you mean to freeze the dough for future use? The best way to freeze

the dough in a home application is to open the dough into pizza skins, and place onto a lightly oiled flat surface that can be placed into the freezer for freezing. I would allow the dough to freeze for at least an hour, then wrap it in stretch/cling wrap and place into a plastic bag and immediately back into the freezer. You can store dough frozen this way for up to 3-weeks. To use it, just place onto a lightly floured surface, cover to prevent drying, and allow to slack-out (thaw) until the dough is again soft, which normally takes about an hour total time. My own twist to this is to open the dough up to only about 2/3 of the desired finished diameter, then allow to slack-out as described above, but then proceed to bench stretch the dough to full diameter before dressing and baking. By doing it this way you don't need to wait as long for the dough to slack-out as the dough can be worked on the bench as soon as it is soft enough to be handled and by the time you are through opening the dough it has warmed sufficiently to allow you to proceed with building the pizza.
Tom Lehmann/The Dough Doctor
Re: Freezing dough for future use?
6078

Dan;
A good compromise ADY level for both cold and room temperature fermentation would be 0.25% ADY. As for finished dough temperature I would suggest shooting for something in the 70 to 75F range. My own personal preference is to place the room temperature ferment dough in the cooler of the two locations mentioned.
Tom Lehmann/The Dough Doctor
Re: 1 Dough, 2 Ferments?
6079

KDAQ;
You say you are using ADY but your formula shows IDY. There is a significant difference between the way the two different types of yeast are handled. ADY must be hydrated in 100F water prior to addition to the dough or you will get lumps/spots of yeast throughout the dough. IDY can be added as you have indicated BUT the dough must be mixed for more than 4-minutes. It does not appear that you are mixing the dough this long so again, the problem has a high probability of being due to yeast agglomerates (pieces of yeast) not suspended throughout the dough. We have a similar problem in pizzerias when a VCM (vertical cutter mixer) is used and the mixing times are very short (about 70 to 90-seconds). The solution to the problem, if this is the root of the problem, is to suspend the yeast prior to addition to the dough. This is easily accomplished by putting the IDY into 95F water or ADY into 100F water and allowing it to hydrate for 10-minutes, then stir well and add along with the rest of the dough water. Note: The yeast should only go into a small portion of the total water. The remainder of the water should be at whatever temperature your dough management process calls for (typically around 85F).
Tom Lehmann/The Dough Doctor
Re: Spotty dough, how can I make it smooth?
6080

Ryan;
Peter nailed it. My references for Gold Medal flours shows that all of the winter wheat based all purpose flours are malted, but when you go to the soft wheat flours such as Helmet, Golden Shield and Cameo these are not malted. All purpose flours typically have a lower protein content than bread type flours and since the proteins are a functional part of the browning equation the higher protein flours will

contribute to a better color on the finished crust. Just for comparison, bread flours average from 11.1 to 12.6% protein content, All Purpose flours run from 8 to 10.5% protein content, and strong bread/pizza flours run from 13 to 14.2% protein content and semolina flour comes in around 12% protein but it is not malted. One thing to keep in mind is that while a pizzeria can easily get away using 100% of an all purpose flour with good crust color due to his commercial oven, when we try to replicate the same thing in our home ovens we don't have the same baking properties so it can present a challenge to get enough heat to brown the crust to the color we're looking for, so in some cases we may need to cheat a little by adding things like sugar, whey solids, or nonfat dry milk solids. Even the addition of vital wheat gluten to the formula will increase the protein content to the point where we see an improvement in crust color.
Tom Lehmann/The Dough Doctor
Re: Doh! Brown my crust - tips plz
6081

I can toss out a couple thing that you might want to experiment with. I also bake as you do but I also move the pizza to a higher rack position for the last couple minutes of baking.
You might try brushing some olive oil on the dough edge just before you put it into the oven for baking, this will give an improvement in crust color.
I am in agreement with Ryan in that you might be pushing the semolina flour a bit too high. I seldom ever use more than 25% of the total flour as semolina. I have also had problems getting crusts made with AP flour to color up as well as I like so I always use a bread flour. My "go to" flour is the Pillsbury Bread Flour available from just about any supermarket. Like Ryan said, go to 100% regular flour and then begin introducing the semolina flour at increasing levels to see what you get, it will also be a good excuse for making pizzas, just be sure to log your results, and remember, even bad pizza tastes pretty good!
Tom Lehmann/The Dough Doctor
Re: Doh! Brown my crust - tips plz
6082

I have several of what are probably the least expensive dough rollers/sheeters ever made. The more expensive one have handles to hold onto that connects to a central axle around which a wood or metal barrel rotates. This one is called a "rolling pin" the other is nothing more than a 2" diameter piece of round hardwood 14" long. This one is commonly referred to as a pie pin. Both work great on pizza dough, croissant dough, sweet dough, donut dough, biscuit and yes, even "pie" dough. :)
Tom Lehmann/The Dough Doctor
Re: Has anyone tracked down a manual dough sheeter for home use?
6083

Mike;
The Lloyd Pans item that you are looking for is available in both 2" and 3" depth and 3" to 16" in diameter.
Their product number is PCC-12-2-DK for the 12" pan that is 2" deep. if you just change the 12 to the diameter you want and the 2 to either 2 or 3 depending upon the depth that you want, you should find what you are looking for. DK is their designation for their Dura Kote (black, non-stick) finish.
Tom Lehmann/The Dough Doctor
Re: Springform Cake Pan? Can't get my deep dish out of the dish!
6084

I use a deep-dish pan gripper and a cake decorating spatula with a narrow bendable blade. I first grab the pan with the gripper, then run the spatula blade around the pan to make sure the crust is fully released from the pan, then slide the spatula blade down the side of the crust and with a slight flip of the wrist I slide the spatula blade under the pizza to help guide it out of the pan onto a cooling rack. American Metalcraft www.amnow.com has the heavy weight aluminum removeable bottom pans (3" deep X 8, 9 or 10" diameter). You may need to season these pans though. Or you can get the same type of pan with a black, non-stick coating from Lloyd Pans <www.lloydpans.com>
Tom Lehmann/The Dough Doctor
Re: Springform Cake Pan? Can't get my deep dish out of the dish!
6085

If your pizza skin is too thin, or doesn't exhibit any/sufficient oven spring characteristics during the early stages of baking the heat that is applied to the bottom of the dough is conducted right on through the dough into the toppings where it is dissipated as steam during baking, leaving the bottom of the dough/crust without sufficient heat to develop the desired color. Reasons for this can be forming the pizza skin too thin, or insufficient dough absorption which inhibits expansion of the dough during baking resulting in a thin, leathery finished crust. The best sugar to add to get browning without flavor (sweetness) is lactose. Lactose is a reducing sugar so it will readily participate in the browning reaction and it also has the lowest sweetness value of all the sugars, only about 10% of that of sucrose. Dairy whey is about 73% lactose so the addition of whey to the dough formula can be a good way to achieve pronounced browning without the unwanted sweet taste.
Tom Lehmann/The Dough Doctor
Re: Really need help with bottom crust issues
6086

MO;
You are not locked into using any specific absorption so I might suggest just a further increase in dough absorption. This will provide a softer dough that will rise more readily (oven spring) during baking to provide for a lighter textured crust.
Tom Lehmann/The Dough Doctor
Re: Great Recipe and Fantastic Taste - just need it to be more fluffy + light
6087

Wes;
Your local SBA should be able to provide you with all the information you need. Many times they can point you to retired business execs that that volunteer for them and are more than happy to assist you.
Tom Lehmann/The Dough Doctor
Re: 5 Year Plan
6088

While on the topic of K5-A mixers, keep an eye out for the Hobart industrial version of this mixer, model designation N-50. This is a three speed mixer that was developed fir industrial applications.
Tom Lehmann/The Dough Doctor
Re: Spiral Hook for KitchenAid K5SS
6089

As I've said so many time, temperature control is the key to effective dough management. This is extremelt important, especially in a store setting where pizza quality can make or break your business. Be sure you are correctly hydrating the ADY in a small portion of 100 to 105F water for about 10-minutes. The dough temperature should be 80 to 85F after mixing. If you are using large dough boxes, be sure to cross stack them after you put then for the first 2-hours after you put them into the cooler, then cover or nest the boxes to prevent drying and the dough will be ready to use in about 18-hours. To use the dough (this is CRITICAL for what you are doing) bring the dough balls out of the cooler and allow them to temper AT room temperature for 2.5 to 3-hours, then begin opening the dough balls into pizza skins for immediate use. Once you begin using the dough it will remain good to use for the next three hours, just remember to keep those dough boxes covered.
Let me know if you see any improvement from this.
Tom Lehmann/The Dough Doctor
Re: dough won't fully cook through
6090

I can't speak to the K-5A mixer specifically, but when Hobart first came out with the new spiral hook design back in the late 1960's it was retrofittable to all of their mixers at the time.
Tom Lehmann/The Dough Doctor
Re: Spiral Hook for KitchenAid K5SS
6091

I just lightly oil my dough balls and put them into reclaimed bread bags, twist the open end to close and tuck the pony tail under the dough ball as I place it into the fridge. Works great, and the cost is free if you eat packaged bread or know someone who does.
Tom Lehmann/The Dough Doctor
Re: poofing boxes
6092

MPO;
How long are we talking about holding these toppings before they're used? If we're in the 3 to 5-day range, perhaps a little longer you can dehydrate just about any vegetable toppings you wish and rehydrate them at the time of use. Use a meat topping that is packaged and sold at room temperature, or make your own jerky to rehydrate. As for the dough, simple, put together an emergency dough using IDY and shortening as opposed to oil. Put it all together in a durable plastic bag (I use a 1-gallon Zip-Lok bag) force out as much air as possible for ease of packing and secure with a couple rubber bands. When pizza day arrives, add a prescribed amount of water directly to the bag and knead the mixture to make a sticky sough. Set aside to ferment for an hour or a little more, then remove the dough from the bag by inverting the bag, and using some dusting flour or oil on your hands, knead the dough for a minute or so, then form onto a piece of oiled heavy duty aluminum foil. Set aside to proof/rise for 10 to 60-minutes while you're dressing the dough, then carefully transfer to a bed of hot coals to bake until the bottom begins to brown, using another piece of lighter weight foil, tent the top of the pizza to get some top heat and bake until it is reasonably done. Remember, this is a backwoods pizza, anyone not inclined to like it is free to go to Pizza Hut, or order one from Domino's! LOL.
I've made pizza like this a number of times with the scouts.

Tom Lehmann/The Dough Doctor
Re: Camping Pizza Making with no cooler
6093

A lot of it will depend upon the flavor you're looking for in the finished crust. My personal preference is to take the dough directly from the mixer to scaling and balling and then directly into the fridge where I leave if cold ferment for 48 to 72-hours before using it. To use the dough balls that have been cold fermented I like to allow them to temper at room temperature for about 2 to 3-hours depending upon ambient temperature, then open the dough balls into pizza skins ready for dressing and baking. Allowing the dough to ferment partially or totally at room temperature will impart a different flavor to the finished crust. I'd experiment to see where your flavor preferences lie and to see what management procedure works best for you.
Tom Lehmann/The Dough Doctor
Re: Why bulk ferment?
6094

MO;
Two options come to mind, you have room to increase the IDY slightly. You can take it up to 0.375% and still be within the normal yeast range. This will provide additional leavening to the dough for a lighter, less dense finished crust. If your dough management procedure allows, you could also increase the finished dough temperature by a few degrees to speed up the rate of fermentation, thus providing for a lighter finished crust texture, or you could just allow the dough skin to proof/rise (maybe 10 or 15-minutes) between shaping and dressing/baking. This is how we impart the characteristic lightness to bread and rolls.
Tom Lehmann/The Dough Doctor
Re: Great Recipe and Fantastic Taste - just need it to be more fluffy + light
6095

Chuck;
Your problem is one of two. Either you are underfermenting the dough or you are using the wrong type of flour (excessively high in protein content) for the dough management procedure you're using. Not knowing anything about the type of pizza you're making, the formula/recipe, or your dough management procedure, the best I can offer at this time is to say that fermentation reduces the elasticity of the dough. If you are using a refrigerated method of dough management it is common to allow the dough to cold ferment for 2 to 5-days. and if you are using the dough the same day to make your pizzas and fermenting the dough at room temperature a minimum of 6-hours of fermentation time should be used. If you want to attack the problem through the use of an additive, I'd suggest using something like PZ-44 (a blend consisting of L-cysteine (an amino acid) and dairy whey), or "dead yeast" which is rich in glutathione (also an amino acid). The dead yeast product is available from just about any yeast manufacturer while PZ-44 is available from Agropure (formerly Foremost Farms USA). You might Google either of these to see if you can fins a source selling in quantities of less than 50-pounds. Since both of these are used at a range of 2 to 4% of the total flour weight you will find that a little goes a long ways. One other thing you could also add to the dough to help reduce the elasticity is onion and/or garlic powder. Used individually or in combination at around 0.25% of the total flour weight this can help reduce some of the elasticity in your dough.
Tom Lehmann/The Dough Doctor

Re: Overly elastic dough
6096

I'm a fan of sliced toppings as opposed to diced. To my eyes, the sliced makes for a much better looking pizza, not as "commercial" but more "rustic" if not gourmet for whatever that means. I also like to retain some of the texture in the vegetable toppings so I tend to lean towards a slighter thicker slice. I also really like the flavor that I get from the sliced toppings as it gives some variety as you eat through the pizza. As you might imagine from this, my greatest dislike of a pizza comes when all of the toppings are diced uniformly fine so the second bite is just like the first bite, and the last bite is just like the first bite too. I even go so far as to make sure I have a nonuniform distribution of toppings on the pizza to give an additional depth to the layering of flavors as I eat through the pizza.
Tom Lehmann/The Dough Doctor
Re: Toppings.....Sliced vs Diced
6097

Sonny;
The bake issues that you are presently having are a result of your oven not having any top heat control. When you go commercial you can opt for an oven with both top and bottom heat control to address those problems. Covering the top of the pizza with a piece of foil is a common way to balance the bake of a deep-dish pizza in a home oven or any oven that does not have top and bottom heat control. One neat trick that I've seen used with ovens like yours is to bake the pizza on the deck with a piece of foil covering the top of the pizza until you have the bottom color you are looking for, then place an inverted pan into the oven and place the pizza on top of the inverted pan without the foil covering. This insulates the bottom from the heat of the deck while moving the top of the pizza closer to the top of the oven where you will get better/faster color development to the top of the pizza. This is similar to what many people do in their home ovens where they bake the pizza on a lower rack position to get the bottom crust color/bake and then move it to a higher rack position to get the top color and finish baking.
Tom Lehmann/The Dough Doctor
Re: cooking on lloyds pans
6098

Dustin;
50% absorption seems to be rather low for the type of flour that you're using. This might be restricting the oven spring of the dough during baking thus making a more dense dough which is more difficult to get to brown during baking than a lighter, better risen dough. I would suggest increasing the dough absorption to 63% (15.12-ounces) call it 15.5-ounces. The dough will most likely take longer to pull off of the sides of the mixing bowl but that is normal with the higher absorption. When you remove the partially baked pizza from the pan, try placing the pizza onto a rack in the highest or second to highest rack position as this will provide more top heat to the pizza for better top color development. The softer dough consistence should exhibit better oven spring during baking which will improve both the color and crispiness of the finished crust.
Tom Lehmann/The Dough Doctor
Re: My dough is too soft, why?
6099

Chase;

What is your starter comprised of? What are the amounts that go into making the 98-grams?
Tom Lehmann/The Dough Doctor
Re: how can I improve my dough?
6100

I've also been a knife collector for more years than I can now remember (over 50) and during the winter months I build hunting knives (drop-point design) and make all of my own knife sheaths and pistol holsters, but that's a whole different story. I use nothing but a series of diamond sharpeners from coarse grit to ultra fine for polishing the finished edge, I then strop the blade to remove the wire edge. Even though I include a warning with each knife, I still get e-mails from purchasers telling me that they were just checking the edge by running their thumb over it and ended up with a split thumb. We also have a number of ceramic knives in the kitchen and they work great so long as you don't try to pry with them, and by all means don't put them into the dishwasher. With time even the ceramic blades need to be sharpened and I find that my diamond sharpeners are up to that task too. The biggest challenge to using my type of diamond sharpener is learning how to hold the knife to get a 20 - 22-degree angle along the entire blade length. Once you have that part mastered, sharpening knives and maintaining the edge the old fashion way is fun and easy.
Tom Lehmann/The Dough Doctor
Re: Edge Pro Knife Sharpener.....
6101

I think Vince is pretty close. PH does use a LOT of oil in their pan pizzas as does Old Chicago too resulting in more of a fried than baked pizza. I normally use peanut oil in the pan in this application.
Tom Lehmann/The Dough Doctor
Re: The secret of pizza hut shiny crust ?
6102

DSW;
Ohhhh.....Very nice bottom crust color. It looks like all you need is a bit more top heat to get the sugar free dough to color up (in my opinion).
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Recipe "Weighed not Measured"
6103

PF;
Here is what I would suggest;
1) Use only about 1/2 cup of warm water (100 to 105F) to hydrate the yeast in.
2) Add only a pinch of sugar to the yeast suspension and stir for about 15-seconds. Allow to hydrate/activate for 10-minutes.
3) Have the remainder of your water at a temperature of about 75F.
4) Add the yeast suspension and the 75F water to the mixing bowl. Note: You might want to consider increasing the water to 60% absorption (720-grams total).
5) Add the remainder of the sugar and the salt on top of the flour.
6) Mix as you normally do.
7) Portion into doughs ball as you are presently doing.
8) Place dough balls into your oiled containers, and place into the fridge uncovered for 2-hours.
(9) Place lids on the containers and allow the dough to cold ferment overnight in

the fridge. This dough should keep for at least 2 to 3-days (possibly longer) if kept in the fridge.
10) Remove the number of containers from the fridge that you need to make your "pizza fix", and allow to set at room temperature for about 2-hours.
11) Turn the dough out of the container(s) onto a flour dusted surface, flour both sides of the dough ball and begin opening the dough ball into a pizza skin. An easy way to do this is to use a rolling pin to open the dough to about 2/3 of the finished diameter, then set the dough piece aside to rest for 5-minutes, now you are ready to begin opening the dough by hand to the full desired diameter.
12) Place the pizza skin onto a seasoned screen, lightly brush with olive oil, dress as you wish.
Tom Lehmann/The Dough Doctor
Re: HELP! I keep adjusting my percentages.... BUTT!
6104

DSW;
My "partner in crime" here at AIB is Jeff Zeak, with about 25-years pizza experience loves to make free from pizzas such as yours. His comment when he saw your photo was "cool". The dough looks good as do the toppings, but if I was to make a change it would be to work towards more top crust color on the pizza. How was the bottom color? From the looks of the top, I might assume it to be on the light side. If you can't get improved crust color by manipulating the position of the pizza in your grill, or through the temperature try adding some sugar to t6he dough formula to increase crust color development under your baking conditions. Nice job!
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Recipe "Weighed not Measured"
6105

And don't forget to add fermentation to the mix. Remember that fermentation rate is influenced by yeast level, salt level, sugar level, finished dough temperature, and we could probably toss pH into the bag too (but that probably won't influence the issue at hand). With that said, if you employ a long fermentation time or high fermentation rate it could weaken a lower protein bread flour while not weakening the high protein flour this would give a significantly higher finished volume/height to the finished crust made with the high protein flour. The converse is also true. What does all this boil down to? The flour characteristics must be matched to the type of pizza being made as well as the dough formulation and dough management procedure used to manage your dough, and then it must be weighed against what characteristics you are looking for in the finished crust. This is why we see so many different types of flour being used by so many different people to make the same or different pizzas. Of course this is where the fun now actually begins, looking for the flour or flour blend that works best for your specific pizza. Remember, your mistakes ARE edible. :)
Tom Lehmann/The Dough Doctor
Re: Bread Flour vs. High Gluten Flour
6106

PAJ;
You will probably be best off by just adding the ADY to the warm water with just a pinch of sucrose (regular table sugar) to help get it started. There is no need to add any flour or anything else.
If you have too much yeast for the length of time you are fermenting the dough the

dough can become over fermented, thus weakening the dough to the extent that it can't support the weight of the toppings, so it now collapses, and readily allows heat to pass through the dough/crust into the toppings where the heat is dissipated in the form of steam, hence the dough never becomes baked to the point of being very crispy or firm. If you see both of these in your pizza, the dough might be over fermented. If you just see the gum line you might also be stretching the dough too thin, or if you are making your own sauce, you might be adding too much water to it, or an excessive amount of toppings. To test for this, try brushing on a VERY THIN layer of oil on the skin, then add thin slices of blotted, fresh tomato (one average tomato is about right for a 12-inch pizza), now apply your cheese and see if the problem has been addressed. If it has, this is an indication that you just need to work on dressing the skin. In some cases the gum line can also result if the pizza isn't baked long enough. To test for this, reduce the baking temperature by 50F and bake to color. If this addresses the problem you may need to make an adjustment to your baking time and temperature.
Tom Lehmann/The Dough Doctor
Re: OK WTH am I doing wrong?
6107

Walter;
No telling for sure, but I'm willing to bet that the practice goes back to some of the very first pizzas made. If you are referring to the modern cold ferment process as we use it today in our pizzerias, it can be dated to about 1958 and it was in pretty common use just a few short years later. The use of the process follows the development of the pizza chains as we know them today.
Tom Lehmann/The Dough Doctor
Re: Tom: When did pizzerias start cold fermenting dough?
6108

Walter;
I don't know when that school started doing it but I worked as an adviser to a very similar one all the way back in the early 1970's when we were still up in Chicago. When my wife was still teaching elementary school I organized several student run fund raising dinners at her grade school. With help from the ladies in their kitchen to prepare the food (pizza dinners and sometimes pasta dinners) the kids would sell tickets, meet and escort diners to their table, bring the food to the tables, bus and reset the tables for the next dinner guests. This was a great learning experience for the kids, and it was always one of their best fund raisers too, so I can fully appreciate all the benefits something like this brings to the students.
Tom Lehmann/The Dough Doctor
Re: Tom: When did pizzerias start cold fermenting dough?
6109

TLK;
Actually, when made correctly, whole-wheat crusts are not all that bad. The biggest problems that I see are two fold, first, they really should be made from a hard, whole white wheat. This will eliminate some of the bitterness often associated with whole wheat crusts. Second, you need to have enough water in the dough to fully hydrate the whole wheat flour. This generally means a dough absorption of around 70%. The dough will feel soft and sticky at first, but if you allow the dough to rest/ferment/hydrate for about an hour, you should see a significant improvement in the dough as the whole-wheat flour hydrates. Once the dough has hydrated you can ball it and put it into the fridge for some overnight cold fermentation to

develop some flavor. With regard to formulation, I personally like to formulate my whole-wheat doughs with higher sugar levels, like up around 5% to achieve a sweeter tasting finished crust. After that, I don't use it for anything but the thinner crust types because I think the flavor and texture might be too much in a thick crust format. Aside from the vegetable toppings, and traditional sauce, or my favorite, slices of fresh tomato to replace the sauce, use a vegan cheese and you should be good to go.
Tom Lehmann/The Dough Doctor
Re: Whole Wheat/Vegan Pizza?
6110

Airruiz;
I have a good friend here in Manhattan, KS with three pizza stores and he has had some very good luck finding used XLT's as well as used Marsall deck ovens on the internet. Another very good resource on ovens of all kinds is George Mills. George is a regular at the PMQ Think Tank. Just make a posting in the Think Tank directed to George Mills and he'll be sure to respond to any questions you might have on ovens, hoods, or just about any other store equipment or design.
Tom Lehmann/The Dough Doctor
Re: Conveyor pizza oven
6111

B2D;
What many slice vendors do is to fully bake the pizzas, place them onto aluminum serving/display trays and store them in the heated (145F) cabinet with approximately 70 to 75% R.H. (relative humidity). Under these conditions the pizza will hold up well for about 2-hours, but the cheese will begin to look something like a melted blob of plastic (ain't much that can be done about that). Then. when a slice is ordered, the slice is removed from the cabinet and placed into an oven for warming/re freshening. The type of oven that seems to work the best is a small counter top conveyor oven, but I've seen deck ovens used to great success too as well as toaster ovens for use at bars where time is not a great issue. The reheating process brings the cheese back to a level of life, but if you give the slice a very light sprinkle of additional cheese as you put it into the warming oven it restores the slice to that fresh baked appearance again.
Tom Lehmann/The Dough Doctor
Re: Keeping Pizza by the slice fresher.
6112

Mary Ann;
Canola oil should work just fine…why waste perfectly good olive oil? LOL
As you continue to bake in your seasoned pan/pans they will continue to darken to an almost black color. Cherish those pans when they get to that color since that's when they will bake the best.
Tom Lehmann/The Dough Doctor
Re: Rusty Sicilian Pizza Pan
6113

Sonny;
When he was in Buffalo he was using an 80% absorption rate. We might assume that Buffalo (N.Y.) is significantly more humid than Las Vegas, NV. As we are talking about the use of bagged flour of undetermined age, but can assume that it was stored/inventoried in a proximity close to to each city, there is a distinct

possibility/probability that the flour used at the Buffalo location had a higher moisture content. When he moved to the drier, Las Vegas location the flour could have been lower in moisture content due to the desert environment, hence, if he were to add the same 80% absorption, the resulting dough would be somewhat drier/stiffer and potentially lack the oven spring properties of the dough he was making in Buffalo, so, my reasoning was that the addition of some additional water to the dough might restore the rheological properties to the dough (as they were in Buffalo) resulting in more oven spring and a resulting improved bake-out. It looks as if the additional 1/4-cup was too much, but a lesser amount might give the desired results. Like I said, this is the easiest thing (and somewhat logical in my twisted mind) to do first. If additional water/absorption doesn't work we will need to dig deeper.
Tom Lehmann/The Dough Doctor
Re: pizza dough and making pizza
6114

According to the SAF conversion chart you will need to replace your 2-ounces of IDY with 6-ounces of compressed yeast.
Tom Lehmann/The Dough Doctor
Re: Instant Dry Yeast to Fresh Yeast Cake weight conversion help?
6115

Jerry;
Let's start with the easy things first. It sounds as if the dough isn't getting baked properly. With the much drier climate in Las Vegas it could be that your flour is somewhat drier, thus needing more water in the dough would help the dough to better expand (oven spring) during baking, resulting in a better, more thorough bake and an overall crispier finished crust. I would suggest adding at least 1/4-cup additional water to see if that helps move you in the right direction.
Tom Lehmann/The Dough Doctor
Re: pizza dough and making pizza
6116

B2D;
Does your slice warmer have both temperature and humidity control?
Tom Lehmann/The Dough Doctor
Re: Keeping Pizza by the slice fresher.
6117

XLT is a great oven, and they have superb back up assistance to boot, even if you did not buy the ovens from them, they will still totally support any ovens with their name on it. Keep in mind that when buying ANY oven that it may not be what it appears to be. While any XLT, Edge, Middleby-Marshall, Lincoln, or Avantec oven might appear to be a pizza oven, this does not mean that it was profiled as a pizza oven when it left the factory or was used in a different application. For example, a number of years ago there was a young fellow who had just bought a used Lincoln air impingement conveyor oven, but try as he did, he could not get it to bake a decent pizza. When I asked my friend at Lincoln to run the serial number for me we discovered that the oven was origionally bought by a major seafood restaurant chain, and it left the factory with a proprietary finger profile designed specifically to bake.....you guessed it, seafood, not pizza. He had to spend another $700.00 to get the right finger profile to use the oven to bake pizzas. Moral of the story, know what you are buying before plunking your change down on the counter. If you do

an "In Lehmann's Terms" archive search at www.pmq.com you should find my article covering all aspects of buying a used air impingement oven. My bottom line advice is to know what the power source is (electric in your case) and also the model number which is also the size designation, such as 32-55 (32-inches wide by 55-inches long) and then call XLT <www.xltovens.com> or 888-443-2751 and ask to speak to someone about the recommended top and bottom finger configuration for that particular oven when used for baking pizzas. You will then need to pull the fingers to confirm what you have or will need to make that particular oven work for you.
I hope this helps,
Tom Lehmann/The Dough Doctor
Re: Conveyor pizza oven
6118

GFG;
I'm guessing that the culprit is the soda. Soda is an alkali which raises the pH of the batter allowing it to brown faster and better. Just the opposite is also true in that an acid lowers the pH thus slowing/blocking the browning reaction to give a much lighter crust color. This is why sourdough breads have such a light crust color. You could probably encourage your new batter formula/recipe to brown better by adding some baking soda to it.
Tom Lehmann/The Dough doctor
Re: sweet and sour chicken didn't turn brown
6119

We have looked at both and with our testing we haven't seen any real advantage of one over the other. They both provide an improvement over just placing the pizza right onto a cardboard circle and then inserting it into a box. Which brings up one other cause for soggy boxed pizzas, make sure your boxes have steam vents, and make sure they're punched open.
Tom Lehmann/The Dough Doctor
Re: WF Pizza great in house, gets spongy in box if taken home.... help?
6120

I see this as a common problem with many pizzas that are baked at a high temperature for a short time. Sometimes just reducing the temperature a bit and extending the baking time a little can have a great impact upon the quality of a DELCO pizza. You also want to make sure you are using something like a ripple board or pizza crisp sheets/mats under the pizza in the box.
Tom Lehmann/The Dough Doctor
Re: WF Pizza great in house, gets spongy in box if taken home.... help?
6121

I was raised on a small dairy farm and as a kid one of my chores was to make butter each day. Go to the milk house, skim off the cream from a milk can (you can substitute whipping cream if you don't live on a dairy farm), fill a quart size mason jar about 3/4-full, add a couple good pinches of salt, place lid on jar and begin shaking as you walk back to the house. Continue shaking until the cream begins to curdle/thicken, strain through a cheese cloth and squeeze out excess water. Serve fresh or refrigerate.
Tom Lehmann/The Dough Doctor
Re: Anyone make their own butter?
6122

Mary Ann;
If it isn't too late, pull that rusty pan out of the trash, you can salvage it without any problem. Thoroughly scrub all rust out of the pan, then coat the inside (and outside) of the pan with salad oil and place into a 400F oven for about 30-minutes, be prepared for some smoke. Remove and allow to cool to the touch, then repeat. Your pan has now been seasoned. DO NOT soak the pan in water...ever. To wash, simply rinse in warm soapy water, rinse, wipe dry and place into the oven while it is still warm from baking your pizza(s) to thoroughly dry. Properly cared for, a seasoned pan will last for a very long time.
As for the dark colored pans, they are fine at temperatures all the way up to about 600F with dough in the pan, keep in mind that the pan will never reach that temperature as your pizza inside of the pan will hold the temperature down. Your baked pizza will only reach temperatures in the 200 to 210F range.
Tom Lehmann/The Dough Doctor
Re: Rusty Sicilian Pizza Pan
6123

Mary Ann;
While "high gluten" is synonymous with pizza, it is not the only flour that can be used to make pizza because there are so many different styles of pizza. My personal favorite flour to use for pan style and thick crust pizzas is a flour that comes in at between 11% protein on the low side to about 12.5% on the high side. My experience has been when I use a higher protein flour with my dough management process I get a finished crust that is too chewy for my likes. It should also be noted that the term "high gluten" isn't a whole lot of help when determining the protein content of the flour since there is no standard for high protein flour we have seen the words high gluten used on flour bags containing flour with anything from 12 to nearly 14% protein. Check on the flour bag for the protein content, usually expressed as grams of protein per 100-grams of flour. When expressed in this manner the grams of protein will be the protein content. For example, 12-grams of protein per 100-gram serving = 12% protein content. You can also go to the web site of the manufacturer to find the protein content of the flour in question.
Tom Lehmann/The Dough Doctor
Re: Bread Flour vs. High Gluten Flour
6124

C;
By "commercial pizza dough" I assume that this is dough that you are making in your store (you referenced staff). I will also assume that you are talking about a bake to rise concept pizza which is a raw dough skin that is topped and frozen to be baked from frozen at a later time/date. I will also assume that you are going to be baking the pizzas in a commercial pizza oven as opposed to a home oven which most T&B pizzas are ultimately baked in.
I would suggest the following:
1) Use fresh mixed dough formulated with 50% more yeast if possible, if not possible disregard and use your normal dough.
2) Scale, and ball as normal, wipe dough balls with oil and set aside to proof until the dough can be opened into pizza skins by your normal manner.
3) Open the dough balls into pizza skins, very lightly brush with oil, sauce and dress. NOTE: Do NOT dress too heavily with vegetable toppings as these will breakdown as a result of slow/static freezing and water out, leading to the development of a beautiful dreaded gum line.

4) Freeze the pizzas unwrapped until solidly frozen (about an hour).
5) Stretch wrap/shrink wrap the pizzas on a pizza circle with a piece of baker's parchment paper between the circle and the pizza.
6) Immediately place back into the freezer. They should keep for up to 2-weeks.
7) To bake these pizzas you will need to use a lower oven temperature. Depending upon your dough formulation something around 400 to 425 should work.
8) Bake the pizzas (possibly on a screen) until you achieve decent color top and bottom.
9) Adjust your expectations as you will not get the same pizza as you would if you were to bake it fresh (not frozen).
Thinner crust pizzas are better suited for this application than thick/thicker crust pizza types.
Tom Lehmann/The Dough Doctor
Re: Freezer ready pizza using commercial premade pizza dough - How to?
6125

Cindy;
You might increase the sugar level to 3% to see if that helps, otherwise you might need to do what I do in my electric oven, and that is to start the pizza out closer to the bottom to get a jump on crust color development and then move the pizza to a higher rack position to achieve top color. Also, can you share information on your stone with us. There is a possibility that it isn't holding sufficient latent heat to bake the bottom crust....i.e.; you may need to use a thicker/heavier stone.
Tom Lehmann/The Dough Doctor
Re: Oven Rack Placement - top or bottom of oven
6126

Since you have confirmed yeast activity, we can probably safely take that off of the table for now, so the next most likely caused are either stretching the dough skin too thin, or incorrect baking.
Another thing to look at is use of an excessive amount of sauce, pre-saucing the dough skins, or excessive amount of toppings. These are pretty easy to test by just barely using sauce, sauce only when you are ready to dress and bake the skins, and reduce the amount of toppings used.
Stretching the dough skin too thin is a very common cause of a gum line. To test this, leave the dough thicker for one pizza and see if things improve any. As for baking, you can test that by reducing the oven temperature by about 25F and baking for a slightly longer time.
Keep us posted on your progress.
Tom Lehmann/The Dough Doctor
Re: OK WTH am I doing wrong?
6127

Manhattan, Kansas, home to Kansas State university (Wild Cats) and Fort Riley (Big Red-1 /Seventh Calvary) about 100-miles west of Kansas City, Missouri or Kansas take your pick. Our local motto is "go west young man, go west, anyplace west of Kansas is fine".
Tom Lehmann/The Dough Doctor
Re: So where does everyone live?
6128

Please keep in mind that Wondra is an "instantized" flour, which accounts for its granular texture, As an instantized flour it is designed to hydrate very rapidly,

faster than any regular flour will. When used as a peel dust, if you leave the prepped skin on the peel too long, of if the dough is slightly wet, the Wondra flour will hydrate in a heart beat, turning into what we used to call school paste, only now strategically located between your peel and what you are hoping will become a great tasting pizza, that is if you can get it off of the peel without destroying it. Just a cautionary note.
Tom Lehmann/The Dough Doctor
Re: Burnt crust
6129

PAJ;
If you are putting the yeast into water that is uncomfortably warm the water is wwaayy too hot. Think of it like this, ideal yeast hydration temperature is 100 to 105F, body temperature is 98.6F, the water temperature in which you hydrate your yeast should feel only very slightly warm (only about 7F warmer than your finger). You are right, you might be cooking your yeast rather than hydrating it. Do you see any activation foam forming in the yeast water after about 10-minutes?
Tom Lehmann/The Dough Doctor
Re: OK WTH am I doing wrong?
6130

Sonny;
Convection ovens are not pizza ovens as they provide little bottom heat that is required to properly bake a pizza. In a home setting you can make them work by using a heat sink under the pizza, but in a commercial application this will not work. Like Walter said, leave that oven to what it was designed for, baking cakes, cookies and some breads.
Tom Lehmann/The Dough Doctor
Re: Bakers pride convection oven
6131

PAJ;
What you have is what we like to call the "dreaded gum line" which appears directly under the sauce as a gray colored, raw dough textured area. The first thing to do is to confirm that you really do have a gum line. This is done by cutting the pizza into slices, then turning a slice over and using an Exacto knife or box knife with a new blade, carefully cut the bottom crust from heel to point, then separate the two pieces, look to see if you can see a gum line about 1/8-inch thick you have confirmed your suspicions. Another quick test is to tear a slice apart, again from the heel to the point observing the way the crust separates. If it cleaves cleanly, you don't have a gum line, but if it feathers as you pull it apart (forms a film) congratulations, you have a gum line. In home baking, the most common causes are 1) Forming the pizza skin too thin. 2) Baking the pizza at an excessively high temperature. Occasionally, we find that the cause can also be due to an excessively low yeast level. If you can share your dough formula and dough management through forming technique I might be able to better ascertain just what the causative factor is.
Tom Lehmann/The Dough Doctor
Re: OK WTH am I doing wrong?
6132

Rather than "thickness factor" we like to call it "dough density". This is a value referencing the weight of dough per square inch of pizza surface area. One very

important aspect of using this is that you can make any size pizza you want having the same thickness here is an example of how it works:
Lets say you make a 12-inch pizza using 10-ounces of dough. The 12-inch pizza has 113 square inches of surface area so we divide the weight of dough by the surface area (113) and we get 0.0884 (you might call it 0.09 if you wish. Said another way, each square inch of this pizza contains 0.0884-ounces of dough weight. Now, lets say you want to make a 14-inch pizza. How much dough will you need to make the same pizza but only to a larger size? Use Pi X R squared to find the surface area of the new pizza size. Pi = 3.14; R = 7; R squared = 49 so, 3.14 X 49 = 153.86 (call it 154) square inches. Now, multiply the new pizza diameter by the dough density value of 0.09 that we had for the 12-inch pizza and we come up with 154 X 0.09 = 13.86-ounces of dough will be needed to make the same crust that you made as a 12-inch only now as a 14-inch pizza. You can easily do this for any size pizza. You can also use this method for calculating the sauce and cheese weights too. In this application you will need to replace the dough weight with the sauce or cheese weight to arrive at a sauce density or cheese density value.
Tom Lehmann/The Dough Doctor
Re: I Have Questions about "Thickness Factor"
6133

Walter;
The yellowish color that you note is due to the flour being unbleached. The brighter white color of the flour is an indication that it has been bleached. This is just a color thing and does not impact the performance of the flour in any way. Fact is, when making pizza crust it is all but impossible to distinguish if a bleached or unbleached flour was used when looking at the finished crust. With bread you can tell, but not with pizza crust, it's just too thin.
Tom Lehmann/The Dough Doctor
Re: All trumps VS harvest king both from general mills
6134

Rosie;
Here is what your dough formula looks like in bakers %:
Flour 100%
ADY 0.375%
Sugar 2%
Salt 1%
Oil 3%
Water 47.75%

Comments: For what you are doing, I think 0.375% ADY might be a little low, I'd suggest increasing it to 0.5% (4-ounces).
The salt is also on the low side at only 1% which might be hurting the flavor of the finished crust. My recommendation would be to increase the salt to 1.75% (14-ounces). Your water seems rather low for All Trumps flour. I would suggest increasing it to something in the 60 to 65% range (480 to 520-ounces).
You indicate that most of the water is hot (105F). A better temperature for the most part of your water would be 75 to 80F, with only about 16-ounces of the water reserved and heated to 105F for use in hydrating the ADY. This should give you a finished dough temperature in the 80 to 85F range. Take the dough balls directly to the cooler. To use the dough balls, remove them from the cooler and allow to temper AT room temperature for about 2-hours, then sheet the dough to only 2/3 of the finished diameter and finish opening the tough up to full diameter by hand. You

should then be able to immediately dress and bake the skin without the need to allow it to proof on the screen as you presently do. If you will send me your e-mail address and I'll send you a copy of my Dough Management Procedure.
Tom Lehmann/The Dough Doctor
Re: High Gluten Flour !!
6135

Polo;
That is one of the varieties I'm growing this year. While not as flowery as regular sweet basil, the purple basil has a more spicy, complex flavor profile that while slightly different, seems to work very well in pizza and pasta applications. Keep in mind that I only use fresh basil, rather than dry my surplus, I puree it with a little olive oil for use during the winter months.
Tom Lehmann/The Dough Doctor
Re: Is there anything better than fresh ingredients from your garden?
6136

Rosie;
Can you share your dough formula/recipe along with how you bake your pizzas with me?
If you are not cold fermenting the dough at least 24-hours this might also be a cause for the excessive dough bubbling. After mixing I like to form the dough into individual balls, and take them immediately to the fridge where they are allowed to ferment under refrigeration for at least 24-hours, but 48-hours is better in my opinion. Then remove the dough from the fridge, allow it to temper AT room temperature for 2 to 3-hours, then open the dough ball(s) into pizza skins, dress and bake. This generally produces a minimum of bubbling from a dough management standpoint, but the underlying cause might be something different possibly related to formulation of baking.
Tom Lehmann/The Dough Doctor
Re: High Gluten Flour !!
6137

Sonny;
If you will send me a message requesting my Dough Management procedure I'll be glad to send you a copy. This is the complete procedure that is typically followed to make pizza dough at the pizzeria (but it also works at home too) from mixing to final use of the dough. Keep in mind that this is just the base procedure, there can be any number of modifications or changes made to the procedure as necessary to give you the finished pizza under your existing shop/kitchen conditions.
Tom Lehmann/The Dough Doctor
Re: % IDY
6138

Biz;
Over the years we have noticed that we seem to get more calls regarding off flavors or performance issues with starters during the warmer months of the year in states where they have a seasonal change. We have attributed this to one of two things: Forgetting to put the starter back into the fridge in a timely manner (if it is a refrigerated starter), during the times when the room/kitchen is warmer can result in a shift in the microflora or contamination through exposure to unwanted wild yeast or mold spores which are more prevalent during the warmer seasons of the year. If you are in a location where snow cover is common during the winter,

mold counts are really down during the winter, but as soon as the snow melts, mold spores in the air can really spike. When I was young, and living on the farm we used a starter to make all of our breads. It was stored in a glass jar at room temperature with cover consisting of a piece of paper secured with a rubber band. The cover was removed, the jar was "swished" around a little and an appropriate amount was poured out where upon the lid was immediately replaced on the jar. The doughs were always prepared in the evening and allowed to develop overnight for use on the following day. We only made fresh bread twice a week but when we went into town (about every two weeks) we brought back "store bought bread" as a treat for the women so they wouldn't need to make bread for a couple of days as the commercial bread remained soft and fresh for several days, even back then.
Tom Lehmann/The Dough Doctor
Re: Starter is eating itself
6139

Cindy;
I don't think you will have much luck finding a bromated flour in California as one of the many propositions all but bans its use in any food item. If you know someone outside of CA you might be able to get them to pick some up for you and UPS it to you. In CA when a food item contains bromate it must be labeled in a similar way to that which is seen on a pack of cigarettes or a bottle of wine. In short, it says that this stuff might give you cancer....With that thought, give me two more bags of that bromated flour. LOL
Re: Help with Oven Spring
6140

Biz;
It certainly appears that you have "lost" your starter. This can and does happen from time to time to even the best of us.
There are some fungals that can form in a starter that will induce the exact thing you have described. These fungals (molds) could have been introduced with the flour used to feed the starter, or just through contact with the air , or they might have even been on a spoon or whisk used to stir in the flour. Hopefully you had a second reserve starter going in the fridge as a back up? But from the sounds of things possibly not. In that case your only recourse is to begin the task of making a new starter and hopefully you can achieve a similar microflora to give you a similar flavor and performance. Remember to always back up your starter/sour in at least one different location so if you lose one, you can use the other easily grow/culture a new one having the same microflora.
Tom Lehmann/The Dough Doctor
Re: Starter is eating itself
6141

Norma;
Here is my "secret" recipe for Alfredo sauce. Very lightly saute several cloves of sliced fresh garlic in olive oil (just to pop the flavor), not to brown it. Set aside. In a sauce pan or deep side fry pan add some heavy whipping cream, heat until you just begin to see bubbles around the edges, then add the garlic and whisk in, then add Parmesan cheese until the sauce is thickened to the desired consistency, add a good dose of freshly ground white pepper and whisk in, here's the wrinkle; I then add about a dozen fresh basil leaves that have been rolled and cut into small pieces and stir in with a spoon. Have your pasta plated and immediately serve over the pasta. The amount that I normally make is based on about 1/2 carton (1-cup) of

heavy whipping cream and it serves two. During the summer months I puree all of my surplus basil in olive oil and freeze. Then, during the winter months if I don't have enough fresh basil growing in the sunroom I can simply add a spoon or two of the pureed basil to my Alfredo sauce. Right now I already have four pints of pureed basil from this years crop in the freezer along with I don't know how many baggies of dried tomatoes....it's going to be a good winter. By the way, some time back I posted that I have never had any luck growing bell peppers, well, it appears that I've had a change in luck this year. While I only have one bell pepper plant (due to my previous failures) this year it is doing great! It is loaded with developing peppers that are already bigger than I've ever had before. I'm guessing that we'll soon be eating stuffed bell peppers along with our stuffed tomatoes. Life is good when the garden is great.
Tom Lehmann/The Dough Doctor
Re: Is there anything better than fresh ingredients from your garden?
6142

Bert;
From your post it sounds like your finished whole wheat or wheat crust is quite dry. This is a common problem when whole wheat or multi-grain flours are used and the total dough absorption is not properly adjusted to compensate for their absorption properties (which is somewhat higher than regular white flour). If you are making a dough in the traditional manner (all ingredients in the bowl and mix) the amount of water needed will initially produce a soft, wet, sticky dough mass, but upon standing the whole wheat or multi-grain flour will hydrate resulting in a more normal handling dough. Since all whole wheat flours and multi-grain blends exhibit different total absorption properties you will need to experiment a bit to find the correct amount of water to add to your dough, but once you have it you can make some pretty decent pizza crusts with your whole wheat flour or multi-grain blend.
Tom Lehmann/The Dough Doctor
Re: Who here has tried King Arthur Whole Wheat White Flour
6143

Deets;
You've exposed my secret, that's exactly where I got my cake recipe from. I was in scouting for a number of years and really learned a lot form it, including camp cooking, map reading and how to pick a camp location least likely to flood in the event of a thunderstorm, and where insects will present a minimum of harassment.
Tom Lehmann/The Dough Doctor
Re: Pizza while camping?
6144

Mal;
I like to use 14-ounces of dough for my 12-inch deep-dish pizzas (for a dough density of 0.124-ounces per square inch of pan surface area). All of my pans are dark colored so I don't need to bake them on a stone, but I do need to move them around in the oven. I start out with the pizza on a lower rack position to get the bottom started (about 2/3 of the total baking time) and then move the pizza to a higher rack position to achieve the top bake that I'm looking for. When I've used a stone I always end up with a darker bottom color/bake than what I like. My oven is an electric oven with only a bottom element in the oven chamber and I bake at 425F. Total baking time typically runs about 20-minutes, maybe a little longer. I normally don't bake to time, but instead prefer to bake to color and doneness. I look for the nice, golden brown top color and then use a cake decorating spatula to

pick the pizza up out of the pan to get a peek at the bottom. If the color is nicely browned, it's done.
Tom Lehmann/The Dough Doctor
Re: Simple Pan Pizza questions
6145

Our home garden is just booming this year. We have cherry tomatoes as well as a couple of different table varieties (Comet, Big Boy, and Better Boy) as well as a heritage variety that I got from my son. We use all of them on our pizzas made at home. As many of you might know, I am not a big fan of sauce, so my favorite is to simply brush the pizza skin with a little olive oil, spread on a couple cloves of our home grown garlic (minced), followed by several leaves of our home grown basil and oregano, then the thin sliced fresh tomato (I like to place them onto a paper towel to absorb some of the excess liquid from the tomato slices). I like to just barely cover the surface with the tomato slices, then add the cheese and toppings, and finish with a hand full of shredded Parmesan cheese. We have a sun room on the back of the house where I grow basil during the winter months here in Kansas. Once you start using fresh green leaf basil, it's hard to go back to using the bitter dried stuff.
We also grow a lot of squash that we use as a pizza topping too, but our favorite dish using squash is to grate a couple medium size zucchini and a yellow squash or two, put this into a frying pan and heat thoroughly, tossing often. Then add about 1/2 cup of heavy cream, three garlic cloves thin sliced, about a dozen basil leaves, and the zest from 1/2 of a lemon, continue heating and then add 3 to 4-ounces of Parmesan cheese, stirring in until melted, serve immediately over your favorite pasta. For variety we will occasionally add pieces of fresh tomato, or use our own dried tomato (great way to use all of those prolific cherry tomatoes), or onion, and even some sweet banana pepper slices. Any way you cut it, it's good stuff!
Tom Lehmann/The Dough Doctor
Re: Is there anything better than fresh ingredients from your garden?
6146

Just as an FYI.
When it comes to whole wheat flour there is whole wheat flour from hard red winter wheat and also from hard red spring wheat. This is the type of whole wheat flour that normally comes to one's mind when thinking about whole wheat flour, then there is whole wheat flour made from hard white wheat. This is the newest kid on the block. In commercial circles it is known as Nutri-Grain Flour. This is what many of the commercial bread bakeries are using to make their whole wheat breads from. It is also very popular in schools as the bread doesn't have that typical bitterness associated with whole wheat bread made with flour from red wheat varieties, also the finished bread color is somewhat lighter in color so the bread is more appetizing to the kids. Lastly, there is whole wheat flour made from soft wheat varieties, this is also known as "graham flour". Remember those graham crackers you ate as a kid? I bet you didn't know that they were made from a whole wheat flour? Hence the name, graham crackers. Soft white wheat varieties are typically used in making pastry and cake flours and have a lower protein content producing a weaker gluten than the hard wheat varieties.
Tom Lehmann/The Dough Doctor
Re: Who here has tried King Arthur Whole Wheat White Flour
6147

Leo;

To add to Tin Roof's comments, Harvest King flour has about 12% protein content while All Trumps has 14+ % protein content. I've used both very successfully to make thin crust pizzas of all kinds, but when it comes to making thick crust/pan style pizzas my preference turns to Harvest King as it does not give the excessively tough and chewy characteristic that I get from All Trumps in this application. For me one big factor in using one over the other is availability, as Tin Roof said, the Harvest King flour can be purchased from most supermarkets as Bread Flour (intended for use with bread making machines) while All Trumps can be a bit more difficult to come by and is also more pricey. Like a friend of mine used to say "You pays yer money and takes yer pick".
Tom Lehmann/The Dough Doctor
Re: All trumps VS harvest king both from general mills
6148

It all depends upon the oven type and the pizza you're making as well as your formulation and the pan color in the case of deep-dish or pan pizzas.
With thin crust and deck ovens, while many like the attributes of a pizza baked directly on the deck, others do not, and some don't like the mess they get from all of the peel dust going into the oven so they opt to bake on screens. Remember, unless manufactured with some type of release agent, all screens will need to be seasoned if you plan to bake on them or you will experience problems with the pizzas sticking to the screens. When an air impingement oven is used with an open wire link conveyor the pizzas are not supported well on the conveyor so some type of baking platform must be used under the pizzas while conveying them through the oven.
Tom Lehmann/The Dough Doctor
Re: Prepping
6149

When you're using a screen and your dough exhibits a decided propensity to flow into the screen openings it usually means that your dough is over absorbed and too soft for use on the screen. The new Hex Disks from Lloyd Pans have a smaller opening than the usual metal screens so they offer better resistance to this problem. The fact that you are also having a problem using a wood peel also give insight that you might have too much water in the dough. Always be sure to use some "peel dust" under the skin when you place it onto a wood peel for dressing. While there are many different ideas as to what constitutes a good peel dust, my personal favorite is equal parts regular pizza flour, semolina flour and fine cornmeal.
Tom Lehmann/The Dough Doctor
Re: screens
6150

Jako;
Due to the insulating properties of wood it is not a good substitute for a pizza screen in this application. You might check around to see if you can find a metal fabricator who can provide you with squares or rounds made from a fairly light weight aluminum and then have them perforated. These will work similarly to a screen in allowing you to efficiently cool the skins. I'm guessing that you probably won't need more than a dozen pieces as once the skins are thoroughly cooled you can stack them for use later in the day, thus freeing up the perforated sheets for use in cooling more skins. Another thought just occurred to me. Look around for some type of cheap, light weight aluminum tray/pan that is already being used in

the restaurant trade locally, then all you will need to do is to perforate them (you can do this yourself using a drill and a 3/8-inch/9.3 mm drill bit. Examples of what I'm referring to can be found in the Allied Metal Catalog <www.alliedmetalusa.com> page 57 of their 2011-2012 catalog. Keep in mind that you don't need to perforate to the extent that these commercial pans are perforated, any perforations that you can add to a solid pan will help improve the cooling efficiency of your skins. If you look through their on line catalog in the section for "pizza supplies" you might be able to get some additional ideas.
Tom Lehmann/The Dough Doctor
Re: Prepping
6151

Deets;
As an ardent deer hunter I find myself out in the boonies more often not, and with my background in food, you can guess who ends up being the camp cook. I've made decent pizza (considering the circumstances) any number of times using nothing but my steel frying pan. Dough from scratch, butter or margarine in the pan, press the dough into the pan (after 18-hours cold fermentation), then apply sauce of slices of fresh tomato, followed by cheese, pepperoni, sausage, onion, and green peppers. Top heat is provided by the lid set to allow for moisture to escape during baking. The rest of the guys all identify it as "pizza" so it hasn't lost identity, and to date I've never had any complaints, except occasionally they complain that there wasn't enough, so it really isn't all that bad. It's also a great way to use up camp left overs too. By the way, that same frying pan is also used to bake dessert. Cake from a box mix, mixed with water, an extra egg, and pieces of canned fruit. The cake bakes while we're eating dinner and putting camp in order, by then the cake is finished baking and has cooled tolerably for serving. Again, no complaints.
Tom Lehmann/The Dough Doctor
Re: Pizza while camping?
6152

While in Mexico some time ago we made the stuffed crust pizzas using a domestic white cheese commonly referred to only as queso blanco. This is the same cheese that is used when preparing fried cheese plates as an appetizer. The color and texture of this cheese is reminiscent of Mozzarella cheese. Maybe you have something similar in Bolivia? Very soft cheese is difficult to use in making a stuffed crust as it doesn't hold shape well at all, and as it melts it has a propensity to boil/melt out.
Tom Lehmann/The Dough Doctor
Re: Help with stuffed crust
6153

Jaco;
In a word, no. The foil only serves to slow down the rate of cooling. The screens allow for a rapid cooling of the skins while allowing them to breathe to some extent, thus preventing development of condenstation between the skin and the foil. Packaging the skins, especially in a vacuum package is not recommended, at least until the dough skins are all thoroughly cooled to the temperature of your retarder.
If you have room in your freezer, and have a supply of sheet pans or flat pizza disks you might try putting the pans/disks in the freezer for an hour, and them placing the skin onto a frozen disk/pan, turn over after about 20 minutes and allow to thoroughly cool/chill for another 20-minutes, then you might be able to stack them

with a piece of parchment paper between each skin and store under constant refrigeration (2 to 4C) in a plastic bag (only after they have been thoroughly cooled). To use these refrigerated skins, remove from the plastic storage bag, place onto a lightly floured surface to warm for about 20 to 30-minutes, then straighten the skins out to full, desired diameter, place onto whatever your prep surface is and prep for the oven. I might also recommend docking these skins too and having a bubble popper near at hand while they're baking.
Tom Lehmann/The Dough Doctor
Re: Prepping
6154

Jako;
Probably the most commonly used method is to place the opened skins onto pizza screens (the type some operators bake on), then store them on a wire tree rack in the cooler. I like to store them uncovered for about 30-minutes, and then slip a suitable plastic bag over the rack to prevent excessive drying. To use the skins, remove from the cooler about 20 to 30-minutes prior to anticipated use, remove the skin from the screen, and place onto a baking platform (screen, disk, etc.) touch up the skin bringing it out to full diameter, dress and bake. If you bake right on the hearth, place the skin onto a wood prep peel with a little peel dust. If you bake on a screen DO NOT dress and bake the skin on the screen that it was stored on unless you remove it first. Failure to do this can result in the crust becoming stuck to the screen as the dough expands down through the screen openings, expanding as it does and effectively locking the baked crust/pizza to the screen...BUMMER.
Tom Lehmann/The Dough Doctor
Re: Prepping
6155

Cindy;
I agree totally with Peter. Additionally, I just wanted to confirm that you are opening the dough into pizza skins by hand and not using a rolling pin. The use of a rolling pin can significantly degas the dough and restrict oven spring. When opening the dough I like to pretty well keep my fingers away from the edge/rim portion.
Tom Lehmann/The Dough Doctor
Re: Help with Oven Spring
6156

Ed and Joe's!!!!
They have been in business there for over 50-years and still going strong. They used to be located just a block north of the train tracks on Oak Park Avenue on the west side of the street behind what used to be Funks Tavern. My sister and brother still live in Tinley Park and every year when I go up there to visit them we order out an Ed and Joe's Pizza (still the same from when I was a kid in the 50's). Beggar's in Oak Forest is also a pretty good bet (north of the train depot on Cicero (about 3-blocks on the west side of the road). Another good one in Oak Forest is Ken and Dicks at 15801 Central Avenue, (708-535-1212). The only excuse I've ever been able to come up with for not wanting to leave Illinois is the Chicago pizza.
Tom Lehmann/The Dough Doctor
Re: Need South Chicago Suggestions
6157

Michael;

A good quality anodized, black colored pan or baking disk will probably serve you just fine. Optional, and recommended, is a nonstick finish. You can see pans of this type at Lloyd Pans <www.lloydpans.com>. Some of their pans and disks are to some extent product specific, meaning that they were designed to provide a superior bake to a specific type of pizza. For example, their cloud pattern, Hearth Bake Disks are designed specifically for use with the newer air impingement ovens operating at temperatures of 475F and higher using dough formulas devoid of any browning agents, such as sugar, milk or eggs. The Hex Disk is well suited to making a Domino's type of pizza as well as use in reheating certain types of pizza slices. This company also has a bunch of neat gadgets specific to the pizza industry. Take a look at their offerings. The Lloyd pans and disks are about as close to "bullet proof" as one can get.
Tom Lehmann/The Dough Doctor
Re: Commercial Pizza Oven (thin based)
6158

I'm not familiar with the product that you mention, but a good many pizzerias do produce what they like to call pepperoni rolls or pepperoni sticks. These are really nothing more than regular pizza dough to which they add chopped or ground pepperoni at the rate of about 25% of the dough weight, so for 1-pound of dough they would add about 4-ounces of pepperoni.
Tom Lehmann/The Dough Doctor
Re: pepperoni bread
6159

Peter;
In 2009 I wrote an article that was published in my column (In Lehmann's Terms) titled "Important Considerations When Considering an Oven For Your Pizzeria". This is a good read for anyone just getting into the pizza business and trying to figure out what oven is the best choice for their store concept. I was provoked into writing this article after seeing all too many start ups struggling with the wrong oven for their pizza type or store concept, and then needing to back away from their present oven only to go out and purchase yet another oven. The pizza that broke the camel's back was a pizzeria in Nebraska that I was called to to address a soggy pizza problem that was driving business away. Turns out their concept was one of "more toppings makes for a better pizza". Agree or disagree, that was their concept. The ovens they were using were conventional deck ovens (no significant airflow) so there was no way to remove all of the moisture being released from the vegetable toppings as they were cooked. I called in Middleby Marshall with their traveling display ovens (tractor-trailer with various ovens used for on-site demonstrations) and with their air impingement oven of the time they were able to drive enough water from the pizza during baking that the pizza was no longer soggy and the store was able to retain their original concept. The kicker: The individual owning the store had to abandon his three exhisting deck ovens and purchase a double stack wide body air impingement oven, effectively doubling his oven cost within his first year of operation. Bummer!
Tom Lehmann/The Dough Doctor
Re: Commercial Pizza Oven (thin based)
6160

When available, I will always go with vine ripened, fresh sliced tomato. That's the best part of summer here in Kansas as I grow plenty of my own tomatoes. When fresh tomatoes are no longer available, I like to use use the Stanislaus 74/40

Tomato Filets (well drained and applied just as they are). The flavor and texture is fantastic in my opinion.
Tom Lehmann/The Dough Doctor
Re: Do you prefer using canned or fresh tomatoes?
6161

TD;
That certainly looks like scorched flour to me too. It's OK to use dusting flour on the bench to help form the pizza skins but the trick is to remember to get most of it back off again. When I'm in the shop I simply give the skin a toss or two and all of the surplus dusting flour is gone, but this really doesn't fly well at home so I'm forced to use a bench brush to lightly dust off the skin just prior to transferring to the prep peel. You typically don't need much flour on the peel to get good release, but if you do, try using a blend of fine cornmeal and semolina flour for your peel dust and try to dress the skin as quickly as possible, remembering to give it a shake to confirm that the dough is free from the peel before taking it to the oven. The rest of your crust, where there isn't any scorched flour looks like it is beginning to develop some pretty good coloring.
Tom Lehmann/The Dough Doctor
Re: Burnt crust
6162

V;
I agree with Jeffery. Your flour might have been exposed to less than ideal storage conditions at some time after milling and bagging. Try sifting the flour to remove and clumped flour for now. You might even put some of the clumps into a plastic vile and send them to the distributor so they can take appropriate action. Remember, if they don't know about it, they can't do anything about it.
Tom Lehmann/The Dough Doctor
Re: Small clumps in caputo blue label!! help
6163

Michael;
I've written a lot about pizza ovens and how to choose the one best suited to your specific needs for Pizza Marketing Quarterly <www.pmq.com>. You should be able to find it in the archived articles I've written. A lot goes into selecting the correct pizza oven: type of pizza(s), volume needed, speed of bake desired/needed, closed/open kitchen, store concept, space available are to name but a few. These are all addressed in my most recent article on choosing the right pizza oven.
Tom Lehmann/The Dough Doctor
Re: Commercial Pizza Oven (thin based)
6164

A.D.;
While pizza dough certainly can be made without salt, the flavor might leave a little to be desired, but you could easily drop down to a level of 1% salt based on the total weight of the flour. I also have a very special (brand new product) coming in next week that is designed specifically for individually on a low sodium diet. The product will soon be available at Walmart, but if you will send me a name and mailing address I'll be glad to send you a bottle along with the data sheet on it. I'll be out of the office all of next week but I can send it to you on the following week (July 15th). If you use fresh tomato, either sliced, diced, torn or pureed you can control the salt in the sauce (none is needed) so now you're down to the cheese

(which is naturally high in salt). But you can address that too by going to a reduced sodium cheese. I would suggest contacting Boar's Head (800-352-6277) to get information and availability on their reduced sodium provalone and meats. B.H. has taken quite an imitative in developing reduced sodium products for the consumer market.
Remember to send me a mailing address and name, and I'll send the reduced sodium sample to you free of charge.
Tom Lehmann/The Dough Doctor
Re: Low sodium flavorful dough?
6165

Scott;
You're not alone, I don't see any significant difference in the flavor of products (breads and pizza crust) when made with either compressed or IDY. Compressed yeast has three recognized aromas 1) Kind of a musty, old, damp newspaper like aroma. This is the normal aroma for compressed yeast and it is indicative of good quality yeast. 2) Compressed yeast can also have an ammonia smell to it. This is also a normal aroma as the ammonia is simply left over from the culturing process. 3) Then there is a somewhat sharp, offensive odor which is common to yeast that is beginning to die-off. In addition to aroma, look at the color of the yeast, it should be a light tan/buff in color with some streaking, but if the yeast is turning a dark color (muddy gray to brown) this is an indication that the yeast is getting too long in the tooth. Because compressed yeast is highly perishable, and as it dies off, it releases glutathione (an amino acid contained within the yeast cell) which actually enhances dough mixing, in many home baking situations it may appear to actually perform better. This is NOT the case in a bakery or retail setting though. Glutathione is a dough relaxer (commercially sold as "dead yeast") and as such, it works exactly the same as L-cysteine aka PZ-44 giving a softer, more extensible dough with somewhat improved expansion properties during baking which often result in a drier crumb structure, and a crispier outer crust, which can also be said to give improved flavor to the baked product.
Tom Lehmann/The Dough Doctor
Re: The unique crumb chacteristics of Cake Yeast
6166

Air;
The salt level will typically come in at between 1.75 and 2.5% of the total flour weight. Without knowing what type of pizza you are making I cannot comment on the sugar level. Nor can I give you any specific amounts without knowing the amount of flour used in your dough formula/recipe.
Tom Lehmann/The Dough Doctor
Re: sugar and salt rate?
6167

It is normal for a pizza crust to become soggy with time after baking, but there are some things that will hasten the transition from crispy to soggy.
1) Pizzas that are baked at a very high temperature may only develop a very thin crusty layer on the bottom of the pizza. This can quickly go from crispy to soggy. Parbaked pizzas seldom ever experience this problem.
2) Dough weight is incorrect for the size/type of pizza you're making. Typically a pizza skin that is stretched too thin, especially across the center section will crisp during baking but loses that crisp very quickly. This is normally accompanied by a gum line.

3) Excessive use of sauce and/or toppings, or sauce watering out.
4) Failure to place the pizza on a screen so it can steam off immediately after baking without the steam being driven back into the pizza as it would if placed onto a serving tray or other solid tray immediately after baking.
5) If the problem is due to excessive oil, look at the cheese and/or pepperoni, as either of these have a reputation for potential to oil out. Some cheeses and pepperoni exhibit much greater resistance to oiling out than others.
There are probably a few more that aren't coming to mind right now, but these are what I think might be the most common causes.
Tom Lehmann/The Dough Doctor
Re: Why is my crust soggy??!!
6168

G.R.;
A number of years ago we developed a process to help newbies open the dough into pizza skins with a much more consistent cross section thickness. We have demonstrated that we can train a total novice (someone who has never opened a dough ball into a pizza skin) in about 15-minutes in the "art" of opening dough into pizza skins. The procedure is simple, but as you have noted, it does require the use of a sheeter/dough roller. Using the sheeter, set the rolls to open the dough to about 2/3 of the desired finished diameter, then finish opening the dough by hand to the final size. Works like a charm! At A.J's here in Manhattan, Kansas we are constantly training K-State students to work at the dough bench so we are always training someone. That 15-minute time might even be a little on the long side. We typically run the dough twice through the sheeter to get a round shape of the correct diameter, we pre-sheet about 6 dough pieces and stack them up next to the sheeter, then we start bench stretching to finished size. For appearances, we finish with a hand toss.
If you want to learn more about pizza production we have our annual Practical Production Technology and Innovation course coming up October 28 - November 1, 2013. To get information on this course please send an e-mail to Jeff Zeak at <jzeak@aibonline.org> .
Tom Lehmann/The Dough Doctor
Re: Dough consistency problems, I need help.....
6169

We allow the bread to cool at least 30-minutes before cutting it. If it will be sliced, we go with 45 to 60-minutes.
Tom Lehmann/The Dough Doctor
Re: Bread is undercooked?
6170

JD;
I'm not a microbiologist, but I am betting that there is more than just one or two different strains of lactic acid forming bacteria. Each of the different types creates a different flavor. Even in a natural sour, there are different flavors due to the different bacteria that have been cultured. I've seen some cultures selling for as much as $20,000.00, all because of the unique flavor resulting from that particular microflora. In a natural sour, it is possible to lose the sour all to easily. The easiest way is to let the temperature get out of control (forget to put it back into the fridge?), what happens then is that a different bacteria becomes the dominant strain, thus producing a different flavor in the end product, hence the sour was "lost". This is why we always advise if you have a really good sour, store it in

separate containers is different places for management, that way if the sour is lost at one location, you can always use one of the others to seed a new culture, thus preserving the strain/balance of microflora that is responsible for the flavor you are looking for.
Tom Lehmann/The Dough Doctor
Re: Who is a bacteria expert?
6171

Mil;
The key to effective dough management is the temperature of the dough after mixing. In a home setting there are so many variables involved that it is impossible to give a hard and fast temperature. As a rule, 70 to 75F temperature immediately after mixing should work well for you BUT in the end, you will need to experiment to find the temperature that works best for you using your own specific dough management procedure and fridge as well as dough containers, etc. The temperature of the dough ball(s) after 24-hours in the fridge only reflects the temperature of your fridge, and 40F is right at about where I would expect it to be. When using a refrigerated dough management procedure, I think it is best to keep the dough at a temperature slightly below 45F, but do not allow it to drop to freezing (32F). The main thing is to be consistent in always having the same dough temperature off of the mixer, and then using the same management times and placing the dough into the fridge in the same location. Like in real estate, location counts in dough management too.
Tom Lehmann/The Dough Doctor
Re: Dough ball temperature after 24 hrs in fridge
6172

JD;
How about just using plain yogurt containing an active culture to start a sour, then propagate the sour for several days and use from that to flavor your doughs?
Tom Lehmann/The Dough Doctor
Re: Who is a bacteria expert?
6173

Cam;
It appears that your baking temperature is too high for the type of bread that you are making.
I'm assuming that you allowed the shaped dough to proof for an hour, or more between forming and baking. This will provide for improved lightness in the crumb structure and a more thorough bake. If you are not already doing this, I would suggest it as a starting point. If that still doesn't work, you might need to reduce the baking temperature to 450F or a little less. When I make those cannon ball breads I am normally looking at a total baking time of around 25 to 30-minutes. Really great when served with honey butter.
BTW: Your "pizza" flour should be just fine, but if you find the bread to be a little too chewy, just add about 3% fat to the dough formula.
Tom Lehmann/The Dough Doctor
Re: Bread is undercooked?
6174

Jeff is "spot on". One trick that I occasionally use is to place the tomatoes on a few pieces of paper towel to blot up some of the excess moisture/juice from the tomatoes. Also, make sure you're not overloading the pizza with tomatoes and/or

fresh vegetable toppings. This can be especially problematic in a commercial deck oven or home type ovens with limited airflow characteristics. The air impingement ovens that are all the rage to day with the big box chains actually do an excellent job of managing all that moisture, but same cannot be said for deck, woodburning, or home type ovens. One thing that you might try is to very lightly paint the pizza skin with oil before you dress it. The oil will help to create a barrier to the penetration of moisture into the dough, thus allowing more of the moisture to evaporate without soaking into the dough during baking.
Tom Lehmann/The Dough Doctor
Re: Pizza dough is gluey and sticky under fresh ingredients.
6175

Is it possible to make a New York "style" pizza using a pizza disk or screen? You betcha! You could probably make it on a block of wood too. The operative word being "STYLE". To a purist, the answer is emphatically NO! but we are not talking "New York" pizza (authentic), we are talking New York style. Just what is a New York style pizza??? There in lies the issue. The word style is open to interpretation. Just a couple of meanings are: In the manner of, or in the appearance/likeness of. Even these definitions leave a lot to the imagination. A number of years ago I served as an expert witness in a high profile legal case where this exact issue was highly debated and I can tell you first hand that there were literally thousands of exhibits showing things made in the "style" of which really didn't look a whole lot like the item it was made in the "style" of. For example, with a pizza, if the crust is soft and chewy like a N.Y. pizza, that would qualify it to be said to be a New York "style" pizza, never mind all of the other features of the pizza.
Just bringing another view point to the table.
Tom Lehmann/The Dough Doctor
Re: Is is possible to bake NY-style-ish on a pizza disc?
6176

Pdog;;
I ride motorcycles during my free time and I liken pizza research/experimentation to a motorcycle trip where the journey is as much, or more, fun that the destination. You might be surprised to learn that a couple of noteable food items we have today actually started out as a mistake while making something else; Schlotsky's sandwich bun was the result of the baker incorrectly scaling the water (too much) to make the bun. We all know how that turned out.
The pretzel is said to have been created when a baker was making a roll, as he was peeling the rolls into the oven one of the rolls fell off of the peel and landed in the container in front of the oven that held the water used to swab the wood ashes off of the oven deck. Wood ash is an alkali, so the water was presumably pretty alkaline. Since flour and dough were too hard to come by, he plucked the roll from the bucket, wiped it off (or so it is said) and proceeded to place it into the oven. Upon removal from the oven the roll looked different from all of the others (bright shiny appearance) and it tasted different too (like a pretzel rather than a roll), hence the pretzel was born.
Today's mistake, tomorrow's new food/pizza concept. :)
Tom Lehmann/The Dough Doctor
Re: Flour for shaping the skin
6177

The biggest problem I had with my steel plate was rusting, especially if I didn't use it for a week or so, until my wife suggested that I season it like her cast iron frying

pan. When the steel rusted, even after I scrubbed it well to remove all traces of the rust I still got something of a metallic taste imparted to the crust with the first pizza I baked on it, all was good after that. I even use mine for baking bread on (round loaves/cannon balls) and it even works well in that application.
BTW: Your steel plate will become naturally seasoned over time due to the natural oils in the materials (flour, corn meal, etc.) coming into contact with it, but I didn't want to wait a couple years for that to happen, besides the rust issue was killing me.
Tom Lehmann/The Dough Doctor
Re: Help with my first pizza!
6178

Like a good cast iron pan I would suggest seasoning it first.
Tom Lehmann/The Dough Doctor
Re: Help with my first pizza!
6179

To the best of my knowledge, a different strain is used for the dry yeast products. It is still S.C. but just a species that is better suited to the drying process, hence improved yeast survival after drying. Since there are literally millions of different strains of yeast available to choose from, this does not surprise me in the least. There are also some select strains that have a thicker cell wall and as a result demonstrate improved survival/performance in a frozen dough application. Remember, it's the ice crystal that forms inside of the yeast cell which with slow freezing, can grow to such a size as to puncture the yeast cell wall thus reducing its survival and/or performance after the dough is thawed. The thicker cell wall is better capable of resisting the damaging effects of the ice crystals.
ADY is a good product, but it does have some shortcomings, it does not exhibit the consistency in performance needed in commercial applications, but in home applications these differences just can't be seen, not that they aren't there, but who at home ever complains the the dough took an extra 5-minutes to rise to a certain height than it did a week ago? That CANNOT happen in a commercial setting since it would upset the entire timing of the bakery. IDY, on the other hand was actually developed for the commercial baking industry, not here in the U.S., but in Europe, hence more attention has been focused on achieving a consistency level of performance, which it does demonstrate. We have done numerous real world tests on the different brands of IDY and all of them are so incredibly consistent that over a three year testing period control doughs ALL and ALWAYS gave final proofing times within two minutes of the fixed target time (60-minutes). That is a plus or minus of only one minute for doughs that were made by the 70/30 sponge-dough process, given 3.5-hours of sponge fermentation, mixed to full development, given 15-minutes floor time (rest) then divided, given 10-minutes intermediate proof (rest), molded, panned, and given a final proof (rising) at 100F/85% R.H. with a targeted time of 60-minutes. The consistency with the IDY was significantly more consistent than we ever got when using compressed yeast (which in reality is rather variable) giving a variation in the plus or minus range of 3F. ADY was in the range of plus or minus 6-minutes. In a home setting where dough absorption is not controlled, dough temperature is not really controlled in most cases, and room temperature varies considerably, not to mention scaling accuracy, not just with the yeast, but with the other ingredients too, is it any wonder why we don't see these differences? But with that said, those differences still do exist.
Tom Lehmann/The Dough Doctor
Re: Explanation of Yeast Options/Approaches for Neapolitan Pizza

6180

Dhorst;
Actually, Wondra flour is an "instantized" flour, meaning that it has been modified to absorb water very quickly. If this happens to the flour when used as a peel dust it can go from flour to a paste and help to glue the pizza skin to the peel if you are not fast to make the transfer from peel to oven. Another interesting peel dust is the use of Japanese bread crumbs. There is a commercial product available called "Crispit" and another called "Pizza Crisp" that are based on this aspect of the fine ground bread crumbs. With all of the interest in healthy eating these days we are also seeing greater use of different types of fiber materials used as a peel dust too. Fiber is actually a very good peel dust since it is so slow to absorb water/moisture, and when it does, it has a tremendous capacity to do so.
Tom Lehmann/The Dough Doctor
Re: Flour for shaping the skin
6181

I'll weigh in on the yeast thing too.
All yeast exhibits some type of a "lag" time from the time it is added to the dough until it begins to actively ferment. For compressed yeast this lag time is typically in the 15 to 20-minute range. This is why large bakeries have a hard and fast rule that the dough must not be allowed to receive more than 20-minutes floor time (rest between end of mixing and dividing/portioning the dough). If the yeast begins actively fermenting before the dough hits the divider the density of the dough begins to change rapidly, making accurate scaling extremely difficult (by law their weights have to be accurate). The fourth type of yeast that most of us don't hear very much about is liquid/fluid, or as it is correctly called, cream yeast. Cream yeast contains about 80% water as opposed to about 70% water for cake/compressed yeast. Cream yeast is the exact same as compressed yeast with the exception for the difference in water content. It is intended for use only by the largest bakeries with suitable refrigerated storage tanks for holding it. The main benefit to cream yeast over other types of yeast is cost (it's cheaper to buy). For a large wholesale bread bakery the difference in cost of $0.01 (one penny) per pound in yeast cost can amount to something close to $10,000.00 a year.
If anyone wants to learn more about yeast, a good reference is Baking Science and Technology by E.J. Pyler. This is the hand book of the baking industry. Many libraries will have this book availably and it may also be available on line. We also have them available for sale too.
Tom Lehmann/The Dough Doctor
Re: Explanation of Yeast Options/Approaches for Neapolitan Pizza
6182

Steve;
From the looks of your dough ball it should be just fine out at 3 to 4-days. If it begins looking a bit too over fermented, you can always re-round the dough ball(s), then wait a few hours for them to loosen up before opening them into pizza skins. If you can, get yourself a wood prep peel and a metal blade oven peel. If you research back through the archives here you will find some excellent posts on home made wood peels.
Tom Lehmann/The Dough Doctor
Re: Help with my first pizza!
6183

Steve;
Don't forget when you turn the dough ball out of the bowl to allow it to drop into a container of dusting flour, which can also serve as a peel dust to facilitate transferring the dressed pizza skin from the peel to the oven for baking. While there are as many different opinions as to what constitutes a good dusting flour/peel dust as there are people making pizzas, my own personal favorite is made from equal parts/volumes of flour, semolina flour, and fine grind corn meal, placed into a bread bag and shaken (never stirred), and used as needed. I like to open the dough most of the way on the bench/counter top and then pick it up and transfer it to the peel (with some dusting flour/peel dust) where I finish bringing the pizza skin out to finished diameter. Be sure to give the peel a shake occasionally to make sure it remains free from the peel. Once you get a feel for it you won't need to shake it as often. Better to shake it once too many times than once not enough. As for "round" who ever said that pizza had to be round? We make what we call free form pizzas all the time. The irregular shape give it a more rustic look, and it tastes just as good. As for getting the dough skin stretched into a round circle, with practice it will come much easier. Until then, enjoy your pizza making experiences.
Tom Lehmann/The Dough Doctor
Re: Help with my first pizza!
6184

Without seeing a copy of the dough formula and dough management procedure employed, along with baking conditions it is difficult to say what the problem is, but if the dough formula doesn't contain any fat, that might be a contributing factor to a hard crust. Since fat is a tenderizer in the world of dough formulation you might try adding fat (oil or shortening) at the rate of 3% of the flour weight to see if that resolves the problem. Also, keep in mind that a dough made with a low absorption rate (50% or less) might also produce a hard finished crust characteristic.
Tom Lehmann/The Dough Doctor
Re: My pizza came out too hard....
6185

Jamie;
As I always say, "Temperature control is the key to effective dough management". I'm betting that variations in finished dough temperature are creating greater differences in your dough than differences in kneading/mixing. A thermometer is cheap and it is easy to control finished dough temperature through minor adjustments in the temperature of the water that is added to make the dough. Depending upon how you are handling the dough after mixing, a difference of only a few degrees in finished dough temperature over 50+ hours can have a rather dramatic impact upon the finished dough at the time of use. If you are not already doing so, I would suggest getting a note book (baker's journal) to keep track of your experiments over time. This will allow you to get a better feel for your dough, and develop a history of what works and what doesn't work in your specific application. Be careful though, as you might end up like Norma, with the curiosity of a cat and never ending desire to improve upon your dough. Norma, please take that as the compliment that it's intended to be.
Tom Lehmann/The Dough Doctor
Re: The dark horse that is gluten development
6186

Susan;
Fermentation plays a big part in the flavor equation. You might try making a dough and rather than taking the dough directly to the bench for balling, start by taking only one dough ball from the bulk dough, allowing the rest of the dough to ferment at room temperature for 30-minutes, then take another dough ball, keep repeating this in 30-minute increments until you are out of dough. Be sure to tag each dough ball so you will know how long it was allowed to bulk ferment for. This will provide for significantly more fermentation to the dough, which should help to provide the finished crust with a more pronounced fermentation flavor. You might need to do this a couple of times to find the time that works best for you and gives the finished flavor you're looking for. While I don't normally do it, it is perfectly OK to re ball the dough after allowing it to temper. My only argument with doing it is that it adds another couple of hours to my scheduling. I'd rather just pull the dough from the fridge, allow it to temper AT room temperature for 90-minutes and then begin making pizza.. You've just got to find what works best for you. The best part about experimenting with pizza is that even the mistakes taste good.
Tom Lehmann/The Dough Doctor
Re: Improving Dough's Flavor
6187

Susan;

That makes perfect sense with the SAF Gold.
Do you know what the dough temperature is immediately after mixing?
Do you take the dough directly from the mixer to the bench/counter for cutting and balling, or do you allow the dough to bulk ferment for a period of time before cutting and balling it?
Tom Lehmann/The Dough Doctor
Re: Improving Dough's Flavor
6188

Susan;
According to my calculations at 6-grams per teaspoon and approximately 1-pound of flour that you are using, your salt level is only about 1.3% which is a bit low for optimum flavor. I would suggest increasing the salt level to about 1.5-teaspoons for about a 2.2% salt level.
If the top of the pizza is getting done too fast you might also try moving to a slightly lower rack position for your baking as this will increase the bottom heat while decreasing the top heat.
To achieve a more open crumb structure and possibly better crust browning you might also consider increasing the amount of water that you are adding to the dough by about 1-ounce (again, assuming you are using about 1-pound of flour. I also noticed that you are using the SAF Gold Label yeast, is there a reason for this? The Gold Label yeast is actually intended for use with high sugar doughs such as sweet dough and Danish while the Red Label is intended more for typical U.S. bread and pizza dough formulations.
Tom Lehmann/The Dough Doctor
Re: Improving Dough's Flavor
6189

Susan;
If we had a copy of your dough formula that would greatly help determine what might be necessary to achieve the flavor profile you're looking for. Two things come

to mind:
1) Check your salt level, it should be around 2% of the total flour weight to promote the best finished crust flavor. Crusts that are deficient in salt generally have a flavor that is best described as being flat or even starchy.
2) You said something about not getting enough crust color. Proper baking and development of the crust color are vital in flavor development in the finished crust. I wouldn't recommend using more sugar to improve the crust color as this will also make the crust sweeter tasting, which may not be the flavor profile you're looking for, so at this time I might suggest seeing if you can bake at a higher temperature or for a slightly longer time.
Tom Lehmann/The Dough Doctor
Re: Improving Dough's Flavor
6190

Wes;
Here is what I would suggest:
1) Delete the NFDM to reduce the crust burning on the edges.
2) Continue managing the dough as you are, but after you sheet the dough the first time , before giving it the first 3-fold, brush some melted Crisco over 2/3 of the dough surface, then fold the dry side over onto 1/2 of the side with Crisco, then fold the final 1/3 over on top so you will now have layers of dough and fat. Let the dough rest long enough to sheet it out again and repeat with another 3-fold and Crisco addition. Allow the dough to rest again until the dough can again be sheeted. This time give the dough a 3-fold but without and fat addition, then put into the fridge to rest overnight. On the following day, remove dough from fridge, allow to temper at room temperature until the dough can be easily formed to fit your pan. Use a greased or oiled pan, allow the dough to rise in the pan for about 45-minutes (you may need to experiment to find the best time to give you exactly what you are looking for), then dress and bake.
Note: Each time the dough is sheeted it should be sheeted 90 degrees from the direction is was previously sheeted.
If the dough is sized for just a single pizza, some people like to fold the dough that last time so it just fits into the pan. Be sure to place the dough into the pan so any overlapping dough edges are placed down.
Let me know how if this gets you closed to where you want to be.
Tom Lehmann/The Dough Doctor
Re: Advice On Dough Processing
6191

Ron;
When you used the regular vegetable oil exactly how did you use it?
Tom Lehmann/The Dough Doctor
Re: The secret of pizza hut shiny crust ?
6192

I am working on a concept right now that calls for holding the finished pizzas in a temperature/humidity controlled cabinet, probably like Norma has (The one we are working with is made by Hatco). The pizzas are held at 145F and when an order is placed, the slice is removed from the cabinet, placed in a small counter top conveyor oven (Blodgett) and timed so by the time the money transaction has taken place the pizza is out of the oven. The idea is not to bake the pizza in the small oven, but rather just to heat it up a little bit more and to help crisp it a bit too.
Tom Lehmann/The Dough Doctor

Re: keep slices warm in the bar..
6193

Norma;
As you may already know, all of the existing flour quality assessment/measuring methods are somewhat time consuming, and to some extent accuracy of results contingent upon operator technique. The use of IR addresses both of these issues, but that isn't the driving force behind our work, as our world population grows, producing food will become ever more problematic and critical. The conceptual vision of a bakery in the future (we're only talking at most, 50-years) is one that is essentially fully automated. The variability of flour has presented the greatest challenge to developing this bakery. Our work is targeted toward using IR to measure (in real time) the absorption and mixing time characteristics of the flour, and then to make automatic changes as needed to produce doughs that are consistently the same (remember GIGO). We also use IR to look for specific ingredients in the dough to ensure the automated ingredient delivery systens are functioning properly. The level of confidence here needs to be high enough to allow for automated correction of any ingredient(s) during the dough mixing cycle, all without human intervention. The rest of the processing line is pretty straight forward and pretty well automated to a hands-off level already today. A good example of this is in the Rheon Bakery in Orange, California. The Rheon Company operates a bakery there making croissants to the tune of several thousand pounds per hour with only two people operating the entire line, and most of the time those two people are pushing brooms doing light cleanup work. If anyone is ever out in this area, check to see about getting a tour of the bakery...it's pretty amazing.
Tom Lehmann/The Dough Doctor
Re: General Mills Neapolitan Hearth Style Pizza Flour?
6194

Z;
Actually, you can put the dough balls into the freezer to help cool them down more efficiently, but I don't recommend using a Zip-Lok bag for this purpose for two reasons. 1) It is difficult to exclude all of the air from the bag so it's easy to end up with an insulating layer of dead air space around a portion of the dough ball which is counter productive when trying the freeze the dough ball. 2) in the event that some fermentation should take place (actually a probability) the Zip-Lok bad can burst, thus allowing the dough to dry out. A much better solution is to use either new or recycled bread bags. Just oil the dough ball and drop it into the bread bag, twist the open end to form a pony tail and tuck it under the dough ball as you place it into the freezer and then into the fridge. This approach will allow the bag to better handle any pressure developed when/if fermentation takes place without compromising the integrity of the bag, plus it is a lot easier to pull the bread bag down tight against the dough which improved the heat transfer properties, thus giving more efficient and consistent cooling of the dough. One home grown pizza maker brought it to my attention some time ago that they even save and reuse their bread bags by placing them into a plastic container for storage in the fridge. I've been pretty successful folding the used bags (these are the bags previously used for my refrigerated dough balls) and placing them into a Zip-Lok bag (see, there is a good use for those bags) for storage. Storing them in this manner keeps them cleaner and reduces any possibility of developing rancidity in the oil clinging to the inside of the bags.
Tom Lehmann/The Dough Doctor
Re: Using the freezer to cool dough balls after mixing

6195

Scott;
It's not that it doesn't work, it just doesn't provide consistently accurate results with our hard wheat flours. Our research has now moved past the common laboratory testing methods (Alveograph, Farinograph, Mixograph, Extensograph) for determining flour quality as we are now exploring Infrared as a rapid quality assessment tool. We can now give you protein content, dough absorption, and mixing time date in less than a minute using IR. We are presently working on finished loaf volume (a true test for flour quality) using IR correlation too.
These are interesting and changing times that we live in.
Tom Lehmann/The Dough Doctor
Re: General Mills Neapolitan Hearth Style Pizza Flour?
6196

Like Tom N. said, Butter Flavored Crisco works well. I'm especially fond of using it in my wheat or multi-grain type crust formulas. If you want to get a pronounced dairy note without adding butter, see if you can get some dry buttermilk solids. When used at about 5% of the total flour weight it provides a great buttery flavor to the finished product. If you want to try it, but can't find it send me a message and I'll see what I can do for you. One of the problems with using lard today is that it is so highly refined so as to be essentially flavorless as compared to the way lard used to be. If you have a store that caters to the Latino taste you might be able to find some imported lard (good stuff). Or save your bacon drippings from your frying pan, it also gives a great flavor.
BTW: Liquid butter milk that you can buy at the supermarket doesn't provide the same level of flavor as the dried buttermilk solids (the drying process intensifies the flavor).
Tom Lehmann/The Dough Doctor
Re: do you put butter in pizza or bread doughs?
6197

Norma;
The "W" factor for flours is arrived at through the use of the Alveograph which is basically a machine that blows a bubble and measures the volume of the dough bubble. It was designed for use with soft wheat varieties as well as European wheat varieties but it is not well suited to use with the stronger U.S. and Canadian hard wheat varieties as results are not consistent. This is why you don't see much reference to it in our wheat flour specifications.
Tom Lehmann/The Dough Doctor
Re: General Mills Neapolitan Hearth Style Pizza Flour?
6198

The thing about ash content of flour is that it imparts a dull, or some might say a grayish cast to the crumb structure. It used to be important that bread had a very brilliant, white crumb, but in today's world the average consumer doesn't really look for that anymore, infact, a yellowish/creamy crumb color is more typical today due to unbleached flour. In pizza crusts there is such a small portion of crumb in the crust that crumb color is a moot issue, additionally, with all of the toppings being dragged down over the crumb no one ever really sees the crumb color anyhow. The other thing about the ash content is that while some wheat will typically produce flour with a higher ash content, more commonly, the higher ash content is introduced into the flour through a longer extraction rate (amount of

flour milled from a given amount of wheat). Hence a 76% extraction rate would mean that 76-pounds of flour were extracted from 100-pounds of wheat. Typically, the higher the extraction rate, the higher the ash content of the finished flour. This is due to milling the wheat closer to the bran (fiber) portion of the wheat berry. The flour that is extracted this close to the bran contains protein, but not a high quality, gluten forming protein, hence the resulting, high ash content flour will contain a higher protein content than the same wheat milled to a lower extraction rate. This is why we sometimes see higher protein content for flour made from white wheat varieties which don't perform quite the same as a slightly lower protein content flour produced from a hard red wheat variety. Due to the lighter color of the bran in white wheat is is more common for the miller to mill to a slightly higher extraction, to get a better yield while still retaining an acceptably white color. Red wheats, having a darker colored bran, on the other hand are milled to a slightly lower extraction to retain an acceptably white color, hence the protein is more of the high quality, gluten forming protein.
There is still a whole lot more to bran, but this covers most of what is important to us here.
Tom Lehmann/The Dough Doctor
Re: Shipping Flour to Australia
6199

Cam;
In addition to what Peter has said, I would also wrap the dough balls individually to enhance their cooling. My favorite way to wrap individual dough balls is to lightly oil each dough ball and drop it into a plastic bread bag, twist the open end into a pony tail and tuck it under the dough ball as you place it into the fridge. This will allow for some expansion of the dough ball without fear of blowing out the bag. To use the dough, just remove from the fridge and allow to temper AT room temperature for about an hour, then turn the dough out of the bag into a bowl of dusting flour and begin opening the dough up into a pizza skin. Also, what was your finished dough temperature? The finished dough temperature is probably the single most important aspect of dough management.
Tom Lehmann/The Dough Doctor
Re: Too much rise??
6200

Brad;
Your pizzas look GREAT!!
Look! It's a bird! It's a plane! No, it's just Brad's pizza dough! Must be time to eat!
Nice toss!
Tom Lehmann/The Dough Doctor
Re: Need help planning dough handling for company picnic
6201

I've not seen a glazed pizza stone, but I have seen glazed floor tiles used in that application. I don't recommend it though as they are more prone to breaking/cracking and any little pieces of the glazed part that got ingested would be like eating ground glass.
Tom Lehmann/The Dough Doctor
Re: Glazed pizza stone
6202

And if I remember correctly, in Australia the flour is milled to a slightly

greater/higher extraction rate due to the white wheat being milled, and this would account for the slightly higher ash content of Australian flours. To my way of thinking, ash content is more important in flour that will be used for white bread production than in pizza production (taking into account only the impact on crumb color). From a more technical aspect, ash content can be indicative of other flour characteristics too.
Tom Lehmann/The Dough Doctor
Re: Shipping Flour to Australia
6203

If you can get the domestic, organic, Australian hard white wheat milled with no additives (comes with the "organic" territory) that might also be a pretty good alternative for a lower cost Caputo-00 flour. The protein range is even similar. But I don't know anything about the availability of domestic organic flour there. Just a thought.
Tom Lehmann/The Dough Doctor
Re: Shipping Flour to Australia
6204

I've got a chest freezer in my basement where I store my bags of flour in. Under these conditions the flour will easily last a full year and more. To use the cold flour I weigh out what I need and allow it to warm up for about an hour before I begin making my dough. If I plan on making dough early in the morning I will weigh out the flour the night before, cover the bowl with a sheet of plastic and allow it to warm overnight then use it as needed on the following day. I've tried keeping it in a sealed container at room temperature but I've encountered problems with flour beetles too many times. Yes, flour suppliers will tell you that their flour can be stored in a cool, dry place for up to a year and that is true IF the flour is not compromised between the time it is milled/packaged and you buy it from the store shelf. There was a reason why Grandma used to sift all of her flour before using it. I just find the freezer approach more appetizing than the sifting approach, but that's just me.
Tom Lehmann/The Dough Doctor
Re: flour storage?
6205

Yep, that's why we have prep peels. Lightly topped skins can be transferred to a peel if the dough isn't too soft or warm, but when you start loading it up with some weight things begin getting a little dicey. If I were you, I'd just begin dressing all of my skins on a wood prep peel that way all of your pizzas will still be made the same way regardless of topping selection.
Tom Lehmann/The Dough Doctor
Re: large pizzas sticking to bench
6206

Kirk;
The absorption properties absolutely does change. There are three things responsible for this.
1) As the flour ages in the bag it can/will dry out thus requiring more water.
2) As the flour ages in the bag it oxidizes (becomes stronger) this can result in a tighter feeling dough that is thought to be too low in absorption. Note: #1 and #2 above can combine to give you a double whammy.
3) Every lot of flour is made from a different grain grist (blend). No two lots of flour

are made from the same grist so it is always changing. This is why commissaries and bakeries always request Farinograph data to provide them with the absorption and mixing properties of the current lot of flour. Note: The Farinograph is a laboratory instrument used to measure absorption and mixing properties of wheat based flours.
While the flour mill does everything within its power to provide a similar product in the bag each and every time, there will be differences in the wheat used in making up the grist that cannot be accounted for. This is sometimes called crop year variation and it becomes more evident as we near the harvest time for the type of wheat used to make the flour. Winter wheat is harvested during June and July while higher protein content spring wheat is harvested in late August into September in the U.S. and Canada.
Tom Lehmann/The Dough Doctor
Re: Can a Flour's Absorption rate change?
6207

G.R.;
Bouncer flour is only in the 11.5 to 12% protein content range so it just barely qualifies as a "high protein" flour (whatever that is). Since you are using a bagged flour there is a possibility that the flour has dried out to some extent, thus increasing the absorption characteristics of the flour. For starters, this is what I would do:
1) Increase the total dough absorption to 62% of the total flour weight.
2) Put the water (65F) in the mixing bowl first, then add the salt and sugar, followed by the flour and IDY.
3) Mix the dough for 2-minutes at low speed, then pour in the oil.
4) Switch the mixer speed to medium and continue mixing just until the dough takes on a smooth, satiny appearance. The window test is not needed for pizza doughs since they are undermixed.
5) Immediately after mixing, measure the dough temperature. You are looking for something in the 80 to 85F range.
6) Immediately after mixing, scale and ball the dough and place into dough boxes. Wipe the top of each dough ball with salad oil.
7) Place dough boxes as they are filled into the cooler and cross stack. Allow the boxes to remain cross stacked for 2.5-hours, then down stack and nest/cover the boxes.
8) The dough will be ready to use after 18-hours in the cooler, and will keep for up to 72-hours or more.
9) To use the dough, remove a quantity from the cooler and allow to temper AT room temperature for 2-hours before opening into pizza skins.
10) The dough balls will remain good to use for about 3-hours after you begin opening them.
11) Any unused dough balls that are at 3-hours (at room temperature) can be opened and placed onto a pizza screen and stored in the cooler on a wire tree rack for use later in the day.
12) To use the pre-opened dough balls just remove from the cooler and allow to temper AT room temperature for 30-minutes, then remove from the screen and touch up to desired diameter, then dress and bake in your normal manner.
NOTE: If you are not letting the dough temper at room temperature the dough balls will be difficult to impossible to open in a pizzeria setting.
Tom Lehmann/The Dough Doctor
Re: Dough consistency problems, I need help.....
6208

Cam;
If we are talking about just opening a #10 can of sauce or tomato product and pouring it into Mason jars, then capping and storing at room temperature I would say "NO WAY" as the probability of contamination is just too great. Now, if we are talking about sterilizing the jars and heating the sauce/tomato product to above 160F and then "canning" in an accepted manner, that's a whole different story and very doable.
Tom Lehmann/The Dough Doctor
Re: Can sauce be stored in mason jars?
6209

Derrick;
I've found that I get better resultswith bagged dough balls then with boxed dough balls in a scenario like this. It is also easier to keep the dough balls clean, and even if they do over ferment a little you don't have to worry about them all growing together in the box, plus when you consider the time needed to scrape a dough ball out of a dough box (granted it doesn't take long) the time needed to turn a dough ball out of a bread bag might be faster and certainly easier too. I use a plastic food tub (with a snap on lid) to put the dusting flour in and a clean 5-gallon plastic bucket for the used bags. Considering the cost of the dough boxes and the need to wash and sanitize them regularly as you will be required to do as you have taken them out of your immediate kitchen area, the plastic bags might also prove to be cheaper too. You can buy plastic bread bags by the case from anyone selling to the retain baking industry (your corner bakery). If this is something that you will do on a limited basis, you might be able to buy a "wicket" of bags from a local bakery. This might save you the expense of buying a whole case of the bags.
Tom Lehmann/The Dough Doctor
Re: Soupy dough?!
6210

Derrick;
I don't mean to toss out the old and bring in the new, but for comparison, here is a dough management procedure that works well in a scenario as you have described. Possibly you might be able to glean something from it.
1) Mix do normally, but adjust the finished temperature to 80 to 85F.
2) Immediately scale and ball the dough.
3) Oil each dough ball and drop into a plastic bread bag. Twist open end to close and tuck under the dough ball as you place it into the fridge.
4) Dough will keep well in the fridge for at least two days.
5) After the dough has been in the fridge a minimum of 16-hours, they can be transported in an insulated chest with a few chemical ice packs.
6) The dough balls will be ready to use in about 2-hours after placing them into the insulated chest and they will remain good to use for up to 4-hours, possibly a little more.
Tip: If you need to have more than a 4-hour supply of dough on hand, pack in a few more ice packets, even a little dry ice can be used. Then, when you get to the point of sale, remove about a 3-hour supply of dough balls from the insulated chest and allow to begin tempering in another box without the ice packets. These dough balls will be ready to use in about 2-hours and will keep for an additional 3-hours in the nonrefrigerated box/chest. As you feel you need more dough balls transfer more from the cold chest to the nonrefrigerated chest for use a couple of hours later. Like I said, maybe you can glean something from this.

Tom Lehmann/The Dough Doctor
Re: Soupy dough?!
6211

What was the finished/mixed dough temperature? If it was too high (above 80F) this might be the cause. Also, high absorption doughs do not hold up especially well as a dough ball as they tend to flow out excessively. A quick fix when using a higher dough absorption is to ball the dough, oil it, then drop it into a plastic bread bag (please not a Zip-Lok) I like to use bread bags. Twist the open end to form a pony tail and tuck it under the dough ball as you place it into the fridge. When you remove the dough ball from the fridge, allow it to temper at room temperature for an hour or more, then turn the dough ball out of the bag into a bowl of dusting flour, then proceed to open the dough ball into a pizza skin in your normal manner. This method pretty well negates any stickiness issues.
Tom Lehmann/The Dough Doctor
Re: Transporting dough for off site pizzas
6212

ADY does have a limited shelf life. Retail bakeries and most pizzerias will discard it if it has been opened for more than just a few weeks (30-days max.) This is one reason for the development of PADY (protected active dry yeast) as it is designed to have a better shelf life after opening/exposing to air. PADY typically has a shelf life after opening of 4 to 6-months. IDY, on the other hand, works well for up to about 3 to 6-months after opening (the shelf life will depend greatly upon how you handle the yeast after opening). After that you're on your own. Several times I have tried to use IDY that was fresh opened and partially used and stored in the fridge for 11-months only to be disappointed by poor leavening power. As for proving (as the British like to call it) or hydrating and activating the yeast as we like to call it, all ADY must be prehydrated, while prehydration/activation is optional when IDY is used. Actually, I always use IDY and I always add it directly to the flour and then mix the dough as normal and I never experience any problems, but we don't all use the same mixing procedure at home so some see better performance if the IDY is prehydrated. Experimentation will show what works best for you.
BTW: Once you open a bottle of yeast you cannot exclude the air in the bottle, so oxidation takes place regardless. We have found that moisture is probably the biggest enemy to dried yeast performance/shelf life. The fridge is a good place to store it, and I would suggest that you remove it only long enough to weigh out the amount you want to use, then recap the bottle and immediately place it back into the fridge. Our main concern here is the condensation that can form on the yeast in the bottle. It only takes a couple of seconds for it to form. The individual packages are a great way to go if you live in a humid climate, or don't use the yeast very fast. The individual packets are MAP (modified atmosphere packaging) flushed to exclude most of the oxygen, providing for extended unopened shelf life, and since they are essentially a single use packet, condensation is never a problem. I buy my IDY in 500-gram packages (bags). To use it I cut a small opening in the top of the bag and pour out only what I need (extra is tossed in the trash, never returned to the bag due to the possibility of condensation. As soon as the yeast is poured from the bag, I fold the bag back down upon itself to exclude as much air/headspace as possible, secure the bag with a rubber band, and store it in the fridge. I normally get about 6-months of acceptable home performance from the yeast when handled in this manner.
Tom Lehmann/The Dough Doctor
Re: My bottled yeast is dead. Why?

6213

P;
I don't think you will have any problems with what you are proposing. I would not transport the dough in the trunk of my car, but instead, put them into the air conditioned passenger compartment where you can regulate the temperature. Then, an hour or less at whatever the warehouse temperature is shouldn't cause any significant issues.
Tom Lehmann/The Dough Doctor
Re: Transporting dough for off site pizzas
6214

PLEASE DO NOT hold any home made garlic oil over from one day to the next. Garlic can, and has been known to bring clostridium to the party as a guest (since clostridium is found in the soil is it any wonder why it is associated with garlic?). While we don't normally think of garlic and clostridium together, it is only because clostridium is an anaerobe (will only grow without oxygen) and the oil provides that environment, hence the clostridium can grow to produce the aflatoxin botulinum resulting in botulism poisoning. As an aflatoxin, it is not destroyed by heating...and it is very deadly. It will not grow all the time, but when it does, well..... As Dirty Harry so aptly put it "Do ya feel lucky?"
Tom Lehmann/The Dough Doctor
Re: garlic oil
6215

Arnol;
When used correctly, I don't see any difference in bake between steel, aluminum or cast iron. The operative word here is "correctly", as each type of material bakes a little differently you must make baking adjustments to accommodate those differences.
Tom Lehmann/The Dough Doctor
Re: Best Deep Dish Pizza Pan Material?
6216

Jack;
What is your total flour weight?
Tom Lehmann/The Dough Doctor
Re: Crunchy pizza dough
6217

Derrick;
My professional opinion is that once you achieve a certain level of flavor in a pizza crust it becomes almost impossible to distinguish subtile differences because of all the extraneous flavors associated with pizza from the sauce, cheese and toppings. This is not to say that one cannot distinguish differences between different fermentation processes, such as a sourdough process and a normal yeast fermentation process, but when consumed in context, the flavor of a pizza typically is not greatly affected by a crust that was made from a cold ferment process or a warm ferment process (assuming neither were significantly over or under fermented). Studies that we have done with pizza consumers showed that very seldom did they comment on the flavor of the crust but what they were mainly focusing on was the texture (crispiness or toughness) of the crust. Most home pizza bakers become "pizza connoisseurs" in their own right, so they are much more

focused on the individual component flavors and textures of the finished pizza so for this reason we can see differences in flavor and or texture resulting from seemingly slight differences in dough fermentation. I guess what it might boil down to is are you a pizza lover or a pizza connoisseur?
Tom Lehmann/The Dough Doctor
Re: Bulk fermentaion and kneading?
6218

Ajay;
In commercial conveyor (air impingement) ovens gas is the most efficient way to go. It produces a crispier pizza with significantly less bake time and at a lower temperature too. As for the power failure issue, if you lose electric you are "dead in the water" with both types of ovens since electric motors are used to drive the conveyor in both oven types (gas and electric) so I think that will be a moot question.
If you are really concerned over potential power failures, a gas deck oven might be a better choice since they typically don't require any electrical supply, so as long as you have gas you would be good to go.
Tom Lehmann/The Dough Doctor
Re: Gas vs Electric Conveyor oven
6219

M;
In bulk fermentation the dough can ferment more efficiently due to heat of metabolism. As the yeast metabolizes nutrient it generated heat at about 1F per hour, this heating of the dough is conducive to faster, more efficient fermentation. When the dough is fermented in smaller size balls in the cooler/fridge, the smaller mass of the dough ball allows for faster, more efficient cooling of the dough. This is beneficial if the intent is to have the dough last for several days as opposed to just a single day as can be the case in bulk fermentation. There are also different flavors developed due to the differences in acids produced during warm (bulk) fermentation and cold (dough balls in the fridge) fermentation. In all cases, the fermentation period also sets the stage for enzymes and bacteria contained within the yeast to begin doing their work. Protease enzymes work on the flour proteins to give a softer, more extensible dough after fermentation; amylase enzymes convert a portion of the starch in the flour to sugars that can be metabolized by the yeast and the bacteria (Lactobacillus) is responsible for developing the unique flavors that we associate with fermented bread flavor. Additionally, the effects of the protease enzyme, and acids formed during fermentation work to reduce/weaken the flour proteins for improved dough extensibility and flavor. A major component of flavor as we know it is a result of protein denaturization during the baking process. The proteins that are exposed to the protease and acids are more readily denatured during baking, and hence impact the finished flavor of the baked crust. These same effects take place when a cold fermentation process is used, but they take place at a much slower rate allowing the dough to be used over a several day period of time. This is just a very brief sketch of the differences in fermentation, there have been whole books written on the topic that you can check out from a local library if you really want to learn the nitty-gritty of yeast fermentation.
Tom Lehmann/The Dough Doctor
Re: Bulk fermentaion and kneading?
6220

Fran;

Please excuse me for not getting back to you sooner. I have no excuse except to say that your post fell off of my radar. In reviewing your dough formula, converting it into bakers percent it looks like this:
Flour 100% Water 51.6%
Salt 0.4%
Sugar 0.8%
Yeast 3.22%
Oil 1.41%
Comments: The salt level is much too low and that is severely impacting the flavor of the finished crust. I would suggest increasing it to a minimum of 1.75% (4.34-ounces/Call it 4.5-ounces and you'll be good)
The yeast level is quite high at 3.22% (hopefully this is compressed yeast). If my assumption is correct that you are using compressed yeast I would recommend reducing the yeast level to not more than 1.5% (3.72-ounces/Round it to 3.75-ounces). My personal preference is to have the yeast level at 1% compressed yeast (2.48-ounces/Call it 2.5-ounces). As for dough management, here is a very efficient dough management procedure for pizzerias:
1) Add water (75F) to the mixing bowl
2) Add salt and sugar to the water (no need to stir)
3) Add flour, and yeast (in that order)
4) Mix for about 2-minutes or until you don't see any dry flour in the bowl
5) Add the oil and mix 1-minute at low speed, then complete mixing the dough in your normal manner.
6) Finished dough temperature should be between 80 and 85F.
7) Take dough directly from the mixer to the bench for immediate scaling and balling.
8) Place the dough balls into plastic dough boxes, wipe the top of the dough balls with salad oil and immediately take to the cooler.
9) Cross stack the dough boxes in the cooler for 2.5-hours, then down stack and nest or cover the dough boxes to prevent the dough from drying.
10) The dough will be ready to use after about 18-hours and will remain good in the cooler for up to 72-hours.
11) To use the dough, remove about a 3-hour supply of dough balls from the cooler and allow to temper AT room temperature for 2-hours, then begin using the dough balls to make pizza skins as needed. The dough balls will be fine at room temperature for up to 3-hours AFTER you begin opening them into pizza skins.
12) Any unused dough balls can be opened into skins and placed onto screens and placed in a wire tree rack in the cooler for use later in the day. When placed in the cooler, allow the skins to cool uncovered for 30 to 45-minutes, then cover the rack with a plastic bag to prevent drying.
13) To use the preopened skins, remove from the cooler and allow to temper at room temperature for 30-minutes, then restretch to size, dress and bake in your normal manner. If you bake on a screen, NEVER EVER dress the preopoend skin without first removing it from the screen, failure to do this will result in the dough locking into the screen openings, making removal from the screen impossible.
You may need to experiment a little with your tempering times to find what works best in YOUR shop, but this should get you pretty close. Try this and let me know if it gives you an improvement, we can always make further adjustments to fine tune the formula and/or dough management procedure.
Tom Lehmann/The Dough Doctor
Re: Convoluted Mess
6221

My hat's in the ring too!
Tom Lehmann/The Dough Doctor
Re: An Idea
6222

Arnol;
Dark colored, heavy weight aluminum pans will provide you with MANY years of great service. Cheap aluminum pans are just that, cheap. They will be easily damaged and the coating is not very durable either. Many of the big box chains have gone to the Lloyd Pans product due to their durability. These box stores probably cycle their pans more times in a week then most of us would do so in a full year. Added to that, the person handling the pans is only concerned about getting his/her next pay check, so the pans are typically handled with tender loving sledge hammer care. I've got one of those cast iron pizza pans (deepsided cast iron frying pan) and it works great, it has been in the family for over 75-years now and it still looks as good as it ever did, but it does take a little longer to heat up. Rusting??? The only way it will rust is if you wash it, and in my house that is a short cut to a world of pain. Cast iron gets wiped out with a clean paper towel, but it doesn't ever go near water.
Tom Lehmann/the Dough Doctor
Re: Best Deep Dish Pizza Pan Material?
6223

Pete;
Allow me to weigh in on this one. We have done a lot of auditing for companies big and small over the years, including some of the bigger pizza chains. When we audit a store we NEVER announce who we are, or why we are there. Instead, we just order prescribed pizza and proceed to evaluate it, along with a shopping list of other store attributes. The reason for this is because a store's product is only as good as the worst product it sends out to the customer. A great store's or chains reputation isn't built on only one pizza, but instead it is built upon the sum of all of their pizzas. I like to rank stores/chains as follows: Consistently good; Consistently bad; Inconsistently good and bad. If I've got to beg or ask for a decent pizza from a store, there is something inherently wrong there. Just my opinion.
Tom Lehmann/The Dough Doctor
Re: How to ensure the pizza you order is top quality?
6224

Arnol;
When it comes to making Chicago style deep-dish pizza one must consider several things when selecting a pan. Steel pans work well, but they must be seasoned to give good release properties as well as improved baking properties. While this next one won't impact you at home, it will have an impact on a store's pan selection. If the pizza is sent out to the table in the pan it is baked in, the food safety laws will dictate that the pan be washed before it can be reused. Steel pans are prone to rusting, but the biggest problem is with the seasoning, if the pans are soaked in hot soapy water for any significant length of time, the seasoning will begin to peel off like a bad sunburn, the consequences of which are to raise the concern of the health department as they ponder where the material went, did it go with the pizza? Did the customer eat it? Not good. Hardcoat, anodized aluminum pans (good ones are made from heavy weight aluminum stock). The dark color of these pans will not lift off even if soaked for an extended time in hot soapy water. The finish on some manufacturers pans is very durable (can't be scratched or abraded with the

edge of a coin), but just like a seasoned steel pan, the anodized coating can be damaged by cutting the pizza in the pan. This is why we commonly see the pizza removed from the pan for cutting and then placed back into the pan for serving. Pizza Hut used to do this at one time with their deep-dish pizzas, maybe they still do, but can't tell you the last time I was at a P.H., but the time would be measured in years. The better pans/coatings are also resistant to scratching when the pizza is dug/guided out of the pan using a cake decorating spatula.
Tom Lehmann/The Dough Doctor
Re: Best Deep Dish Pizza Pan Material?
6225

Pete;
I like to check the bottom, then the top edge, and the cheese color along with the toppings. Each of us has a crust color or baked characteristic that we are looking for so you really can't apply any specifics, but like Walter said, it soon becomes pretty intuitive and a good oven tender can pretty well nail it "spot on" every time. Then you have the shops using the most popular type of ovens, the air impingement oven. With these ovens you place the dresses dough skin on one end of the conveyor, and a fully baked pizza emerges from the other end. Since the human element has been removed these ovens depend upon consistency to provide a decent bake, by this I mean that you must have a consistent product going into the oven to have a consistent pizza coming out of it. Dough temperature is critical, as is the temperature of the toppings, dough thickness also plays into the equation, and it goes without saying that all like pizzas must be baked on a like platform (pan, screen, etc.). These ovens are set up to bake pizzas for a specific shop, once set up they pretty well run themselves, as long as the operator continually provides a uniform and consistent product to the oven. If that doesn't happen, things go to heck in a hand basket pretty fast.
Tom Lehmann/The Dough Doctor
Re: Techniques for ensuring optimum bake time
6226

Peter;
You are absolutely correct in everything you state, however, without knowing how long the dough was allowed to further ferment after the re-balling took place, there is always a possibility that the dough might not be allowed to rest for a sufficient time for the dough to relax after the re-balling process, hence my questioning. It is also good to note that a dough that has been over fermented, often times can be brought back to an acceptable level of performance by re-balling it and allowing it to rest until it can be easily opened. This is also an old trick for working with frozen dough that even in its prime is not the best dough, and in a heart beat can go beyond its optimum shelf life/performance, and reworking it saves the day.
As for using a re-balling procedure in a commercial pizzeria setting, I think it would be extremely difficult to keep track of the time the dough was re-balled and kept separated from dough that is ready to use. Add to this the scarcity of refrigerated storage space, and you can see the dilemma that re-balling the dough presents. Aside from this, most pizzerias are in something of a struggle just to have enough dough ready to use throughout the course of the day, and in many cases, the store owner is also chief cook and bottle washer too (help in a pizzeria is hard to find), so in many shops they are short handed to say the least and they are always looking for labor saving steps that can be implemented in their store operation. It's a whole different dimension to pizza making when we are making a minimum of 150 pizzas (minimum) a day, plus doing all of the other things

demanded in the shop. Been there, done that, just like Big Dave (Ostrander) that's why we're consultants today and have little if any desire to get back into owning our own shop again, but find great rewards in helping others fulfill their goals and dreams.
Tom Lehmann/The Dough Doctor
Re: How do I make dough this elastic?
6227

We love stuffed peppers! For years we have tried to grow our own bell peppers for stuffing but we have never had any real success at it since the largest we have been able to get are no larger than a hen's egg. This year we started plants from seed and grew them in the garage until they were well established and then planted them into large barrel planters along our drive way with a full southern exposure to see if we can get a crop this year. If they fail again, I guess we just were not meant to grow our own bell peppers. Other pepper varieties do excellent in those planters so this will be our last shot at growing bells for us.
Tom Lehmann/The Dough Doctor
Re: Stuffed Peppers
6228

Spring time has finally arrived here in Manhattan, Kansas. Hard to think that just 3-weeks ago we had nearly 2-inches of snow on the ground! Due to the late spring this year I grew my plants in a protected area (garage) and moved them outside as soon as the temperature got above freezing. Basil will be ready for the first harvest this weekend (we make LOTS of pesto), tomato plants are growing well. We have over a dozen different varieties of tomatoes this year, some of them are heirloom varieties with a record of developing great flavor in our climate. Some of the pepper plants (nothing special, just bells, sweet banana, Peter, and Jalapeno) are budding already. Oregano is doing quite well and we have already been picking leaves from it. Apple and pear trees are in great shape this year, but that last snow (frost) looks like it got the peach blossoms so I doubt that we will get any peaches this year.
Tom Lehmann/The Dough Doctor
Re: Garden 2013
6229

M;
Did I read that you "reshape" your dough balls during the refrigerated storage period? If you subject the dough balls to let's say 24-hours cold fermentation, and then reshape it you just tighten the dough back up again, so it will need even more fermentation time to become soft and elastic. This is what we refer to as a "bucky" dough condition. In your experiments, you might want to look at corralling your dough balls in individual plastic bread bags. Oil each dough ball and place into individual bread bags, twist the open end to close, forming a pony tail. Tuck the pony tail under the dough ball as you place it in the fridge. To use the dough, remove from fridge and allow to temper at room temperature for about 1.5 to 2-hours, then turn the dough ball out of the bag into a bowl of dusting flour and immediately begin opening the dough into a pizza skin. Just a thought.
Tom Lehmann/The Dough Doctor
Re: How do I make dough this elastic?
6230

PMP;

The yeast should never be allowed to come into direct contact with the salt, and when you have combined the salt and sugar, even in a slurry, you are leaving the door open to inconsistent yeast performance. Compressed yeast can be added directly to the flour without the need to suspend it first. I would still go to a fixed mixing time, if for no other reason, for consistency. Adjust the water temperature if necessary to achieve your targeted finished dough temperature. I would also suggest mixing the dough for about 2-minutes, or just until you don't see anymore dry flour in the bottom of the bowl and then add the oil and continue mixing as normal. This will give you a much more consistently hydrated dough. As for cutting, balling, and getting the dough into the cooler, you should strive to accomplish this within 20-minutes of completion of mixing. Consistency in times and temperatures will make your dough management much more effective. Remember that old adage regarding quality: GIGO, or in this case, inconsistency in, inconsistency out. I wrote an article in my In Lehmann's Terms column in PMQ Magazine on Effective Dough Management that addresses all the steps needed to be taken to develop an effective dough management program leading to consistent/predictable dough performance and improved consistency with regard to finished pizza quality attributes. If you would like some help on this, please feel free to give me a call at 800-633-5137 (ext. 165) and I'll be glad to discuss it whit you.
Tom Lehmann/The Dough Doctor
Re: inconsistant
6231

All;
Just to clarify a few things, IDY is best added directly to the flour, but when it does need to be prehydrated it should be prehydrated in a small quantity of water at 95F (manufacturer's recommendations) we confirmed this using instrumentation in our laboratory. If the temperature of the water is as little as 5F on either side of the 95F recommendation some gassing power of the yeast will be lost. Cold water is a real bummer with IDY since it will extract glutathione from the yeast for a double whammy, loss of yeast activity and a softer dough (glutathione is an amino acid contained within the yeast cell that when extracted has the same effect upon the dough as L-cysteine (think PZ-44). This is actually sold as "dead yeast" where it is used as a dough relaxer to reduce the elasticity of the dough. When the dough is only allowed to cold ferment you can go too low on the yeast level, this is due to the fact that all of the yeast is typically not working for you in a cold ferment situation unless you allow the dough to fully warm after removal from the cooler, which is counter productive in a pizzeria where you need to have the dough last for several hours after it is removed from the cooler. When you make your dough as "fresh" dough it is not refrigerates, hence all of the yeast is working to leaven the dough so there is less chance of developing the "dreaded gum line". What is a gum line? A gum line is defined as a gummy, somewhat under baked portion of the dough located directly under the sauce. It can range from 1/16 to 1/8-inch thick, and it looks something like a layer of pasta directly under the sauce. There are two ways to ascertain if you have a gum line. 1) Cut a slice from the pie and tear it down the middle from heel (rim/edge) to the point observing the way the dough cleaves as you pull it apart. If the dough stretches and pulls rather than tearing cleanly, congratulations, you have a gum line. The way I like to use is to turn a slice upside down and carefully cut it using a sharp knife (Exacto Knife or a box cutter) and light strokes to cut through the bottom crust. Once you have cut the slice in half (heel to point) pick up one half and carefully look at the area just under the sauce. A paper thin layer of discolored dough (about the thickness of a business card) is

perfectly normal, if it is any thicker you are looking at a gum line. Why do we call it the "dreaded gum line? Because there are so many different things that can cause it (I've written several good articles on the topic in PMQ/In Lehmann's Terms) and until you find the right cause, you can't get rid of it. Why all the fuss? A gum line detracts from the eating characteristics of the pizza, and in a DELCO situation it contributes to unacceptably tough, chewy eating characteristics that won't go away. If you are going to eat the pizza while still fresh and hot out of the oven you might not even notice the gum line, thinking it is just a tougher, more chewy pizza. There are a whole raft of things that can cause the gum line development and these are all discussed in my articles.
Tom Lehmann/The Dough Doctor
Re: Is there a risk when using tiny amounts of IDY?
6232

M;
Can you provide us with the formula/recipe and procedure your wife used and also tell us something about the flour she used.
Tom Lehmann/The Dough Doctor
Re: Help with Pizza dough
6233

Brad;
The reason for running the dough balls through the freezer for only 2-hours before transporting them is to super cool them, not to thoroughly freeze them. I've done this many times with good success in places where we transport refrigerated dough balls. The dough balls will begin warming as soon as you remove them from the freezer. I do not recommend leaving the dough balls in the freezer any longer than 2-hours at the most unless you want to have frozen dough balls. The type of freezer that works well in this application is a chest freezer, if you have a reach in or walk in freezer, which operates much more efficiently, the time in the freezer will only be about an hour. Remember, we are only super cooling the dough balls, they might be slightly frozen on the outer edge but not more than that.
With the suggested dough management procedure you will not need to re ball the dough.
Tom Lehmann/The Dough Doctor
Re: Need help planning dough handling for company picnic
6234

Lets take a look at a couple of things, Why would the crust be tough and rubbery? Ans: Either too much protein in the flour you are using or insufficient fermentation for the type of flour that you're using. For your process I would say that a flour with not more than 12% protein content should be sufficient. You might even be able to drop down into the 11% protein range. Examples of this type of flour are; 12% protein: General Mills Washburn's, Full Strength or Superlative. 11% protein: H&R Bread & Pizza, King Wheat, Doughbuilder, and GM-44. By using one of these lower protein content flours your should be able to use your short fermentation time without creating a tough, chewy finished crust. As for the failure of the crust to rise during baking, this can be partially related to an overly strong dough that resists expansion/oven spring during baking, again, going to a lower protein flour should help. The fact that you are blending the salt and sugar together might also impair the yeasts ability to function in a normal manner, so I would suggest adding the yeast separately. If it is IDY or compressed yeast it does NOT need to be suspended in water before addition. For your operation I think a better dough management

process would be to mix the dough to a fixed time (say 15-minutes in low speed) as it is not recommended that you mix a dough to temperature as you will never know what the level of dough development is. Adjust the water temperature to give you the finished dough temperature you are targeting (*I'm thinking 70F water should be about right), then after scaling and balling, allow the dough balls to set out at room temperature for 30-minutes before taking them to the cooler. For a dough of your size, it should not take more than about 15 to 20-minutes to completely scale and ball. For a one day dough such as you are using times and temperatures are more critical than they are with a dough that will reside in the cooler for 24-hours or more.
Tom Lehmann/The Dough Doctor
Re: inconsistant
6235

Fran;
Here is where I would begin: Add the water to the mixing bowl (70F) into that water add the salt and sugar (no need to mix together) then add the flour followed by the IDY (it does NOT need to be prehydrated), mix the dough for 2-minutes at low speed, add the oil, then mix for 1 more minute at low speed, followed by about 8-minutes at medium speed. If your mixer won't handle the dough at medium speed mix for 15-minutes at low speed, then manage your dough in your normal manner. I'd suggest leaving the dough warm at room temperature for about 90-minutes before you use it on the following day(s). Note: Dough that is formed totally with a sheeter will have all of the unique raised edge characteristics of a poker chip. To get a more pronounced edge, use the sheeter to only open the dough ball up to about 2/3 of the desired finished diameter, then finish opening the dough by hand to the full diameter. Let us know how this works for you.
P.S. Anything that you can share regarding your formula amounts will also help.
Tom Lehmann/The Dough Doctor
Re: Convoluted Mess
6236

Brad;
I think you might be over complicating things a bit. How about something like this: Prepare, bag, refrigerate you dough in your normal manner, Then, about 2-hours before you transport the dough balls place them into a freezer to super cool them, even if they start to freeze it really won't hurt them as you will be using them soon. Do not re ball the dough when you get to the site, instead, plan to have the dough balls out of the insulated box about 90-minutes before you plan to begin opening the dough balls into pizza skins. Be sure to oil the dough balls before you drop them into the bags so they will just drop out when ready to use. Drop the dough ball out of the bag into a container of 50% flour and 50% cornmeal, and begin opening the dough ball into a pizza skin. TIP: Drop and flour several dough balls before you begin opening them into skins as this will speed things up quite a bit. Those bags should work well. After dropping the oiled dough ball into the bag, twist the open end to close it, forming a pony tail, then tuck the pony tail under the dough ball as you place it into the cooler, this will allow for some expansion without tearing the bag(s). As you transfer the bags to the freezer, close each bag using a twist tie. Sounds like a fun day!
If you will send me your mailing address today or tomorrow I will be glad to send you a handfull of bread bags and twist ties at not cost.
Tom Lehmann/The Dough Doctor
Re: Need help planning dough handling for company picnic

6237

M;
With reference to gluten development at the time of mixing, in our annual pizza course we use a planetary type of mixer to develop the dough just to the point of having a smooth skin. At this point in of development it is impossible to stretch the dough to form much of a gluten film (window pane), however, by the next morning I have a group of 4 or 5 students gather around in a circle and we stretch the dough using the backs of our hands to form a dough skin that any strudel maker would be proud of. The resulting gluten film is thin enough to clearly see skin details of your hands through it. This is the result of what is called biochemical gluten development. This is also the way dough was made prior to Mr. Hobart's creative invention. Back in the early 80's I visited a bakery in Romania that had a total of 60 dough mixing stations, each mixing station was a large bowl into which flour, water, yeast, salt, a little sugar and some oil were added. The dough was then manually stirred by two men with slightly flattened mixing sticks (think baseball bat with a flattened end something like an oar.) The dough was mixed until it looked like wet oatmeal, and then covered and allowed to ferment for several hours, it was then transferred to a work table where it was given a couple folds, cut into pieces (never mind scaling), placed into beehive baskets, proofed, turned out of the baskets onto sheet pans and transferred to the oven for baking.
As for high gluten flour, technically it doesn't exist as was correctly indicated. Flour contains seven different proteins including glutenin, and gliadin which, when agitated in the presence of water combine together to make the adhesive mass that we call "gluten". As a general rule, the higher the protein content of a flour, the more gluten can be formed from it, but this isn't always the case, and to add confusion to this we then encounter differences in gluten properties which basically put, means that some gluten is strong, and some is weak, some is tight, some is more elastic, and this has been the subject of VERY EXTENSIVE research world wide for over 35-years now, and we still don't know why these differences exist or how to test for them aside from an actual mixing or bake test. Flour is not so easy to fully understand, it is a very complex ingredient.
Tom Lehmann/The Dough Doctor
Re: How do I make dough this elastic?
6238

Peter;
I forgot to add, that this is most likely the reason why the pizzas are baked on a screen as these issues would be mitigated or alteast greatly reduced in severity. When I did the work many years ago we were trying to achieve a fried characteristic on a hearth baked pizza.
Tom Lehmann/TDD
Re: Brushing crust and bottom with EVOO?
6239

Peter;
If the pizza skin is opened on an oiled table and baked directly on the hearth two things will happen. One is lots of smoke and the second is that with time (not very much of it either) the deck will become very well seasoned and literally carboned over effectively reducing its heat transfer properties, then it's time to break out the can of Carbon-Off, a few sheets of coarse sand paper, and a good deck scraper to undo the damage. Like you, I learned the hard way.
Tom Lehmann/The Dough Doctor

Re: Brushing crust and bottom with EVOO?
6240

C;
Since it was baked on a screen, I'm guessing that the oil might have been from the dough ball itself. Pressed dough balls are literally dripping in oil, and I've seen even hand tossed dough balls dripping in oil.I would seriously doubt that anyone would go to the trouble, at the pizzeria level to apply oil to the bottom of the crust. To the inside bottom of the crust yes, since when used this way it helps to reduce moisture migration from the toppings into the crust (especially helpful during DELCO conditions). Some pizzerias do brush the outer edge/rim of the baked pizza with olive oil to improve the appearance and flavor of the crust (especially the edge).
Did you happen to get a look at the screens the pizzas were baked on? If they were extremely dark/black in color and appeared to be carboned up, there is a possibility that they were oiling the screens to compensate for gunked up screens, which do not exhibit the best release properties, some of that oil would be transferred to the bottom of the pizza skin as it is placed onto the screen.
Tom Lehmann/The Dough Doctor
Re: Brushing crust and bottom with EVOO?
6241

P.S.
There are some absolutely great nonstick pans available, but not at discount house prices. The best (most durable and nonstick) is made by Lloyd Pans <www.lloydpans.com>. With these pans you just lightly oil the pan the first time and then just wipe them out with a clean towel. It's still a good idea though to very lightly oil the pans again if you wash them/it. Oil is not such a bad thing in a pan. It improves the heat transfer from the pan to the dough, and it can contribute to something of a fried crust characteristic (think P.H. deep-dish) which is crispier than a baked crust, which is what you get in a dry pan. The biggest advantage that I see to a nonstick pan is that any toppings that might spill over will not stick to the pan, making clean up much easier and faster.
Tom Lehmann/The Dough Doctor
Re: how good are non stick pizza pans?
6242

M;
Without seeing your dough formula/recipe and dough management procedure I cannot say for sure what the problem might be, but fermentation is a big key to it. Once you have your dough developed just until it has a smooth skin on it, form it into a ball and wipe it with oil then place it into a plastic bag (not a Zip-Lok bag). A bread bag works great. Twist the open end of the bag to form a pony tail, then tuck the pony tail under the bag as you place it into the fridge. This allows for some expansion without tearing the bag. After 24 to 48-hours in the fridge remove the dough ball and allow it to temper AT room temperature for about 2-hours, then turn the dough ball out of the bag and with MINIMAL handling, drop the dough ball into mixture of flour and cornmeal (I like to use a 50/50 blend) now you are ready to begin opening the dough as shown in the video. You might need to make some adjustments to the refrigerated fermentation time and the tempering time depending upon your specific dough formulation, but this should get you started.
Tom Lehmann/The Dough Doctor
Re: How do I make dough this elastic?

6243

In your Method #1 it appears that all of the water is at 100F. In most applications this results in a finished dough temperature that is way too hot to allow for decent dough management. It might work OK for an emergency dough that will be used in a very short time, but if the dough will be managed through the fridge, it probably won't cool off sufficiently fast to retard the yeast activity (this can be worsened if you put the dough into a covered container from the "get go"). This results in a dough that is what we refer to as "blown" or over fermented. The resulting dough can be so weakened by the excessive fermentation that it cannot rise, or rises insufficiently during baking, making for a flat pizza. To see if this might be your problem, try making a dough using 65 or 70F water, and leaving the dough uncovered for about 90-minutes in the fridge, then covering it to protect it from drying. If this is successful in preventing the dough from blowing, you can experiment with different finished dough temperatures to see what works best for your specific application.
Tom Lehmann/The Dough Doctor
Re: Dough turning into large flat blob
6244

H;
To put sugar into the mix I would suggest reformulating as follows:
Salt: 15-grams
IDY: 7-grams
Baking Powder: 15-grams
Milk Powder: 4-grams
DATEM: 3-grams
Sugar: 11-grams

I wouldn't be too concerned about the dry milk level as it is the least functional ingredient in this formulation. If you wanted to, you could easily delete the milk powder and increase the sugar by 4-grams.
Tom Lehmann/The Dough Doctor
Re: Pre mix for dough
6245

Kiran;
Based on the formula you provided (600-grams/0.600Ltrs, not 600 Ltrs of water) for each Kg. of flour weight to get 65-grams of PREMIX I think you will need something that looks like this:
Salt: 20-grams
Instant Dry Yeast: 7-grams
Baking Powder: 25-grams
Milk Powder: 4-grams
DATEM (improver): 4-grams
I think this will come pretty close to replicating the PREMIX based on the function of ingredients.
Tom Lehmann/The Dough Doctor
Re: Pre mix for dough
6246

DJ;
Is your aluminum tray well seasoned? If not seasoned, or one of the non-stick, dark

colored finishes there is a high probability that the pizza will stick to the tray during baking unless the tray has been oiled.
Tom Lehmann/The Dough Doctor
Re: Stuck dough
6247

Tony;
Your dough formula doesn't show any fat, and since fat is a tenderizer in baked products it will contribute to a more tender, less chewy eating characteristic. You can graphically see this if you compare the eating characteristics of regular and fat free tortillas. The fat free tortillas eat like a piece of shoe leather. Also, you really are not giving your dough enough fermentation time to develop a tender eating characteristic. I think your crust would be a lot more tended eating if you allowed the dough to ferment in the fridge for 24 to 48-hours before using it. Lastly, I think your flour is WAAYY to strong for what you are doing with it. I suggest changing over to a flour with a lower protein content, something in the 11% range should work better than your present 13%+ protein content flour. Lastly, if you use a generous amount of oil in the pan rather than shortening you will achieve a fried bottom on your pizzas which significantly improves the crispiness, but does not address the excessively chewy issue. If you use oil as opposed to shortening/plastic fat in the pan you should open the dough up to a size slightly larger than your pan size on your bench top, then carefully transfer the formed pizza skin to the oiled pan for final proofing.
P.S. If you opt to go with an overnight or longer fermentation time in the fridge, you will need to delete the Reddi-Sponge from the dough formula.
Tom Lehmann/The Dough Doctor
Re: What are the differences between reddi-sponge and pz44?
6248

PE101:
I think what you are making reference to is called "open crumb structure" aka "open grain". The best way that I know to get this characteristic is through a combination of high dough absorption and high baking temperature when combined with sufficient fermentation time (usually 2 to 3-days in the fridge).
Tom Lehmann/The Dough Doctor
Re: Spider Web Effect In Rim of Crust - How To Achieve?
6249

Tony;
For all practical purposes there is not difference. Reddi-Sponge is the oldest of the two products (it has been around forever) and it is marketed to the bread making industry to reduce dough mixing time and give a dough with softer, more relaxed machining properties, these properties are critical in high speed bread production. PZ-44, on the other hand, is marketed primarily to the pizza industry to achieve the very same effects, only in this case we say that it reduces dough memory characteristics (also known as "snap-back") and this is the main reason for using it. Yes, it does still reduce the dough mixing time but in pizza production the doughs are significantly undermixed so reduction of mixing time is not as important as it is in bread production.
Tom Lehmann/The Dough Doctor
Re: What are the differences between reddi-sponge and pz44?
6250

PB;
The traditional flour used in N.Y. is General Mills All Trumps flour. This flour has approximately 13.5% protein or a little more. For home baking, any good, high protein flour should work well.
Tom Lehmann/The Dough Doctor
Re: What flour for New Yorker Pizza?
6251

Jordan;
For a wood fired oven dough there is a lot of sugar being added. This might explain the burning of the edges. The salt is also extremely high at 4.4%, I would be much happier to see it down at 2% or a little on either side of that. Your gum line issue has been discussed in a number of my published articles in PMQ Magazine (In Lehmann's Terms), but for now, I would say that it is resulting from 1)The sugar is so high so as to not allow the pizza to be baked sufficiently without charring (think underbaked pizza). 2) The pizza skin is being stretched so thin that the heat from the deck is passing right through the dough and being dissipated as steam when it is absorbed by the sauce and toppings on the pie which are essentially 90% water. When this happens the dough never gets hot enough to fully bake. To test this to see if it is the cause of the gum line, prepare a pizza skin in the normal manner, then cover with a sheet of plastic and allow the skin to proof at room temperature for 30-minutes, then dress and bake in the normal manner. If the gum line disappears you will have good direction as to what is causing it. If it doesn't, make adjustments to the salt level and delete the sugar and bake again to see if the gum line disappears. Since there are so many different things responsible for the formation of a gum line we may need to do a little more experimenting to find the root cause. Please keep us posted on your progress.
Tom Lehmann/The Dough Doctor
Re: not really sure which direction to go.
6252

I'm guessing that the stone is getting heated during the preheating of the oven, but then when the pizza is placed on the stone the latent heat is drawn out of the stone and with the positioning of the burner/flame sufficient heat cannot be put into the stone to maintain a temperature which will induce browning of the bottom crust. I would also bet that the heat is just going right up the back wall of the oven. Think of it like this: If a frying pan was placed with only a small portion of it over the heat, how would that pan bake/fry? With that burner position, I'm not sure what would work except to try baking on a screen and putting some sugar or dairy whey in the dough formula to assist in color development.
Tom Lehmann/The Dough Doctor
Re: Charring the Base
6253

Jeep;
Don't rock the Spoodle, just hold it flat. :)
I've got a set from American Metalcraft covering just about any weight sauce I might want to use. They're cheap and work great.
Tom Lehmann/The Dough Doctor
Re: Flat bottom ladles ?
6254

Gnatto;

A couple of things come to mind that might cause the problem you're experiencing (no/insufficient color to the bottom of the pizza). 1) is the oven burner shutting of because the oven is up to temperature? This would allow the pizza to suck a good deal of heat from the stone, cooling it to the point where it is not hot enough to properly bake/color the bottom of the pizza. If the burner stays on it would be putting heat into the stone continually resulting in more bottom heat and a better bottom bake.
2) A thicker stone will hold more latent heat to better bake the bottom of the pizza. This is how the wood fired pizza ovens work. They have very thick stones for the hearth and they store a lot of heat, so when a pizza is placed onto the hearth it bakes fast and thoroughly without any appreciable cooling of the hearth surface.
Tom Lehmann/The Dough Doctor
Re: Charring the Base
6255

JR;
To make a 90-pound dough you would use 50 to 55-pounds of flour depending upon the dough formulation. Adding 1.5-cups of sugar to the dough formulation would be equal to about 10.5-ounces of sugar or 1.3% based on 50-pounds of flour. This amount of sugar will not significantly impact the finished crust flavor, especially when presented as a completed pizza, but it will impact the browning of the dough/crust during baking. It will brown faster, potentially resulting in a shorter baking time which can mean a slightly less crispy crust, or one that will not hold its crisp quite as long as a crust made without sugar in its formulation.
Tom Lehmann/The Dough Doctor
Re: so far so .. well
6256

J;
Were you using the dough formula with sugar? As dark as the crust appears to be it looks like you have sugar in it. When using that dough formula in a deck oven the sugar becomes an optional ingredient as the deck normally provides all the color one might want.
Tom Lehmann/The Dough Doctor
Re: so far so .. well
6257

Scag;
Here's a little trick that we use in the lab when we need to weigh an ingredient that is outside of the calibrated limit of the scale. For example, say your scale only weights in 2-gram increments but you need only 1-gram for your dough. Weigh the two grams and put it into, say two cups of water (could be tablespoons, teaspoons, etc.) now just divide the water equally into two containers, each container will contain half of the amount you weighed. VWG is another ingredient that can be problematic, in this case just delete 50-grams of flour from your dough. Now scale 100-grams of flour and place it into container that can be lidded, scale twice the amount of VWG that you need to add and place it into the flour, apply the lid and shake well to get a uniform mixture, now all you need to do is to divide the flour/VWG mixture in half and you have added the correct amount of VWG and also replenished the 50-grams of flour that you deleted from the formula. Keep the other half of the flour/VWG mixture for the next time you make pizza.
Tom Lehmann/The Dough Doctor
Re: Dough sticking to pizza screen

6258

Scag;
You mention that you put three pizzas into the oven all at the same time. Is this normal practice for you? I mention this because the center of the pizza is the last part to get baked. If you overloaded the oven, and slowed the bake (possible to probable in a home oven) the longer bake at a now lower temperature might allow the dough to be forced down and into the screen openings, hence when the dough finally expands and bakes it is effectively locked onto the screen. You might be able to get a feel for this if you look at the center section where each pizza stuck to the screen. Was the dough inside of the screen openings, or was it merely sticking to the top surface of the screen? Also, look at the bottom of the pizzas, if they exhibited a tendency to flow into the screen, the bottom of the pizzas will have a somewhat nubby appearance.
Tom Lehmann/The Dough Doctor
Re: Dough sticking to pizza screen
6259

Yakfish;
Never mind the salt, you're at 3.2% already. I would think the crust might be tasting slightly salty.
Is there a possibility that all that salt is inhibiting fermentation to the point of impacting flavor?
Tom Lehmann/The Dough Doctor
Re: Does anybody add seasoning to their dough?
6260

Yakfish;
You might want to check the salt level in your dough since salt is a major flavor contributor to the finished crust. We normally look for the salt level to be a minimum of 1.5% of the total flour weight. I personally like to use 1.75 or 2%. Fermentation is also responsible for a good chunk of the finished crust flavor too. Can you share with us how you are managing your dough? By this I mean, what you do with the dough from the time it is mixed until you actually use it. Substitution of the olive oil with butter will add a dairy note to the finished crust. Some other options are to brush the finished crust with olive oil or butter to impart some additional flavor.
Tom Lehmann/The Dough Doctor
Re: Does anybody add seasoning to their dough?
6261

Craig;
A number of researchers that I've discussed this with have also alluded to the alliianase reaction due to the limited reducing effect on the protein chain. Both L-cysteine and Glutathione work to break the bonds at the S-H bonding points on the protein chain (of which there are many), hence the ability of these products to literally liquefy a dough. I did the original application work on papain in wheat based doughs back in the late 60's. In addition to being an excellent meat tenderizer, it is also an excellent dough reducing agent, but extreme care must be exercised when using it due to the fact that it works very fast, and like the Everready Bunny, just keeps on working, and working, and working, and to add insult to injury, to the best of my knowledge, the action cannot be reversed by simply oxidizing the S-H bonds on the protein chain so the effect is more like that

of a proteolytic enzyme. Bromelain, on the other hand, has been tamed and is, or at least was, available as a commercial product for softening wheat doughs at one time.
Tom Lehmann/The Dough Doctor
Re: Dough "relaxer" question.
6262

Flavor is the combination of aroma and taste. An herb flavored crust is just the opposite of a saltless soup cracker. It is loaded with flavor from the herbs that are added even if the dough itself doesn't contain and salt, the herbs can still carry the flavor of the finished crust. This is how the salt substitute "Mrs. Dash" works, at least from a flavor stand point.
Tom Lehmann/The Dough Doctor
Re: Does anybody add seasoning to their dough?
6263

Yak;
A number of years ago all of the big box chains were offering an herb crust, then there was the "dirty" crust with the herbs tacked on to the outside of the dough. We have made herb dough by using the packaged Italian seasoning mix and just blending it into the dough and we have also made it by making our own herb blend consisting of dried basil, oregano, garlic, onion, sundried tomato, dried red and green pepper and a little ground white pepper. Depending upon how much onion and garlic that you use the dough might be a little softer than normal, but if you do any hand kneading you can just knead in a little additional flour to compensate for the softening effect of the onion/garlic. Aside form that, no real surprises.
Tom Lehmann/The Dough Doctor
Re: Does anybody add seasoning to their dough?
6264

Grathan;
Also, what you were seeing is completely normal for two such different flours. The All Trumps flour is a very strong, high protein flour that is capable of producing a very strong and elastic dough (this is why it appeared so tough and hard.firm, and kept wanting to climb up the dough hook. Additional water would have helped soften the dough making it more manageable but it would still have been more elastic than one made with an AP flour. The high protein flours typically require more water and fermentation.
Tom Lehmann/The Dough Doctor
Re: Mixing all purpose vs high gluten
6265

Your dough formula in bakers percent looks like this:
Flour: 100%
Water: 62.5
ADY: 0.82
Oil: 1.028
Salt: 1.028
Sugar: 1.44

For an American style thin crust these percentages look to be pretty normal, so the formula is probably OK, if that's the type of pizza you are targeting.
Heating all of the water to 100F is going to give you a very warm finished dough

temperature. Since you are using ADY the water used to hydrate the ADY should be at 100 to 105F, with the remainder of the water some what cooler, to give you a finished dough temperature in the 80 to 85F range. Warmer dough temperatures are OK if you can handle it, but often the dough tends to over ferment and gives a finished crust with varying degrees of flavor both from excessive yeast fermentation and from potentially unwanted bacteria growth (lactobacillus) which can result in a vast array of different flavor development.
For mixing the dough just add the remainder of the water, followed by the salt, sugar and flour, then add the yeast suspension on top of the flour and begin mixing. As soon as the flour is hydrated in the mixing bowl (you don't see any white flour) add the oil and continue mixing in your normal manner. After mixing, divide the dough into pieces, oil and place into individual containers or plastic bags, then place in the fridge for two to three days or more as you desire. Remove the dough pieces from the fridge about 3-hours before you plan to open them up into pizza skins and proceed with making your pizzas. This modified procedure should result in greater uniformity of the dough pieces, resulting in greater uniformity of your pizzas each time you make them. By this procedure you could also make a number of dough balls one day and hold them in the fridge for several days, using them as needed and getting pretty decent uniformity from day to day.
Tom Lehmann/The Dough Doctor
Re: Critique my dough please
6266

Peter;
Yes, we used to buy generic garlic and onion powder from the supermarket and it performed similarly to the commercial stuff we now get from our supplier. The thing is that the mechanism of these products in breaking the gluten structure is different from L-cysteine or glutathione in that it breaks the protein chain at a different point (which I still don't fully understand) as a result the reducing effect is limited (not limited with L-cysteine, glutathione, or enzymes) to providing not much more than about a 25% reduction in dough mixing time. This makes it a pretty gentle and easy to use relaxer. Easy to use in that you just can't over dose a dough with it. When used in a home pizza making setting the natural thing to do is to slightly adjust the water (absorption) in the dough to compensate for this softening effect, or even add a little additional flour. I can't speak for others, but when I make my pizzas at home if the dough seems a little slack/soft I just use a little more dusting flour during the kneading of the dough to correct it. I'm guessing that this is what others are doing at home when they use onion or garlic powder in their doughs. Since the dough making process is much more regimented in a pizzeria setting they don't see the softening effect until after the dough has been mixed, and since they don't hand knead there is no way to correct for the softening until they make another dough, at which time they normally just reduce the dough absorption several percent to correct the dough consistency and handling properties.
Tom Lehmann/The Dough Doctor
Re: Dough "relaxer" question.
6267

Jeff;
All of our research has shown that about 0.25% of either garlic powder, onion powder, or a combined blend of the two will give the desired reducing effect. This is the reason why we suggest keeping the combined onion/garlic level to not more than 0.15% of the total flour weight when you don't want to experience the

reducing effect.
Tom Lehmann/The Dough Doctor
Re: Dough "relaxer" question.
6268

Hi Jeff;
Norma is right, with the correct formulation and the right dough management procedure there shouldn't be any need for a dough relaxer, but for those times when we just can't make our pizzas without them we have a number of them to select from.
Garlic and onion (powder or flakes) is a pretty decent dough relaxer especially well suited for those times when the dough just needs a little encouragement to open into a pizza skin.
For those time when more encouragement is needed, especially when we're making no-time or short time doughs something with a little more "oomph" is needed, this is where we get into L-cysteine (commercially available as PZ-44) or glutathione (dead yeast). You have to be careful with these last two since they can/will liquefy a dough if used at excessive levels. In the pure form this translated to about 90-parts per million based on the flour weight, but thankfully, there products are commercially blended to make scaling much easier so we're looking at 1 or 2% of the flour weight when used in a commercial ingredient blend. When used within the recommended use levels, you will never know it is there in the finished crust, but if used at excessively high levels, assuming you can handle the dough, which is now very soft and sticky, the finished crust can impart a slight stinging or tingling sensation to the lips as the crust is eaten. This closely mimics the effect of thirst on the lips (yes, you will be licking your lips), but that's about the extent of it. If you are holding the dough over in the fridge for several days, you might end up with an overly soft, unmanageable dough that has been so weakened by the reducing agent that the finished crust takes on a flat, poker chip appearance with a knife edge. Plus, if the dough cannot support the weight of the toppings, it will collapse in the center section resulting in a beautiful gum line. How do there things work? The work by breaking the protein molecules at their bonding points (sorta like taking a bicycle chain apart by removing the master link(s). This can be reversed to a great degree by using an oxidizing agent such as ascorbic acid, or potassium bromate, just to name a couple. Enzymes (protease enzymes) can also be used to achieve the same end result but unlike L-cysteine and glutathione (both are amino acids/protein building blocks) the enzymes hydrolyze the proteins so they are no longer proteins, hence the dough softening resulting when protease enzymes are used cannot be reversed, plus, the enzymes have a nasty habit of continually working to hydrolyze the proteins, so they just don't stop working in most cases. This can make long term management of the dough in the cooler much more tricky, and management of scrap dough is all but impossible. Excessive use levels will easily turn a dough into a bucket of slime way before you Will ever have enough to impact the finished flavor of the crust. Think of it like this, when we imbibe in a little relaxer it can be good for us, but too much can result in unwanted problems, the same can be said for relaxers and dough.
Have a great day, and use those relaxers in moderation.
Tom Lehmann/The Dough Doctor
Re: Dough "relaxer" question.
6269

Sammy;
Rather than going with gas, can you go with a wood fired oven? There are some

excellent plans available for building your own, so with some local contractor assistance I'm thinking you might be able to get a first class pizza oven at a fraction of the cost of a commercial one. Just a thought.
Tom Lehmann/The Dough Doctor
Re: When cooking - dough will not rise
6270

Cam;
No, it is probably even more important under those conditions. If the dough is too cold when it goes into the fridge you may not get enough fermentation on the dough during the time in the fridge, and if it is too warm/hot you might get more fermentation than desired and find that the dough blows while in the fridge. Where temperature is more important is when you are going to use the dough soon after mixing it. By soon, I mean within the same day or even a few hours. This is where a warmer dough comes into its own. The warmer dough ferments faster so the dough receives sufficient fermentation within the time allocation and we are rewarded with a better finished quality pizza. If you need to source a good, low cast thermometer, try your local drug store/pharmacy, an oral thermometer or one of the newer infrared thermometers are designed to give readings pretty well within the temperature range that most of our doughs will be coming off of the mixer at. A trip to your local auto parts store and $7.00 will get you a dial/stem type thermometer that is used for checking your car's air conditioning unit. This thermometer works well for measuring colder temperatures such as water temperature.
Tom Lehmann/The Dough Doctor
Re: Why warm water??
6271

Cam;
The temperature of the water is the controlling mechanism for the finished dough temperature. Depending upon how the dough will be managed, different finished dough temperatures will be targeted. For example, I like to cold age (ferment) my dough for several days before I actually use it, so my preference is for a colder dough, such as 80F. It is not right or wrong, it's just what works best for me. Others like to use a warmer finished dough temperature, again, it's what works best for them considering the type of dough they are making, and how they have elected t manage it. For the most part, doughs that are made at home are somewhat warmer than the doughs that are made for use in a pizzeria. If your dough temperature is too warm you will find that the dough exhibits a pronounced tendency to blow (over ferment). Of course, it might also have too much yeast for the temperature you're using too, but that's a whole different story. Experimenting with making pizza at home is half of the fun, the other half is eating it, and for the most part, our failures taste almost as good as our successes.
Tom Lehmann/The Dough Doctor
Re: Why warm water??
6272

Rick;
I'm in agreement with Jeff V.
I would take the dough directly to the fridge right after the final kneading, then cut into dough balls, lightly oil the dough balls and place back into the fridge for an onernight cold ferment, then out a few hours on the following day before you open them into pizza skins.

Tom Lehmann/The Dough Doctor
Re: Air Bubbles and rising
6273

Sammy;
Also keep in mind that whole-wheat flour does not rise as well as regular white flour does. Think of it like this, whole-wheat flour is actually a blend of 80% white flour and 20% wheat bran (fiber), since only the white flour portion can develop gluten it is the portion that rises, the bran portion is just carried along for the ride. Also, the bran particles have a cutting effect upon the gluten structure resulting in a dough that is somewhat less capable of holding gas resulting in a lower rise than what you would normally get with a regular white flour dough.
If you can, open the dough up by hand rather than using a rolling pin, and then allow the dough to rise for at least 30-minutes between fitting the dough to the pan and dressing/baking it. This should help get you on track to a thicker crust.
Tom Lehmann/The Dough Doctor
Re: When cooking - dough will not rise
6274

Ed and Joe's Pizza was a family favorite after we moved into town (Tinley Park) from the farm. I was 10-years old at the time and everytime I go back to Chicago to visit family we always get a thin crust pizza from Ed and Joe's. Yup, they are still in business after over 55-years, and the best part is that for all practical purposes, their pizza hasn't changer one bit! Only the very edges of the 4 corner pieces (party cut) have a little crisp to them, that's why they're always the first to go. The rest of the slices are akin to a piece of wet pasta, but a lot better tasting. Beggar's Pizza, a south side chain does a pretty decent job on this type of pizza too.
Tom Lehmann/the Dough Doctor
Re: South Side Thin Crust..
6275

Maybe I'm missing something, but why not use a 20 degree-L dry malt powder? A one pound bag is about the same size as a bag of IDY and you can get it from any bakery ingredient supplier. Just be sure to keep it tightly closed so it doesn't absorb moisture from the air and lump up. In almost all cases, all you ever need of the dry malt powder is about 0.25% based on the flour weight.
Tom Lehmann/The Dough Doctor
Re: Going organic and getting a bit more rise
6276

SB;
Here's your formula in bakers percent:
Flour 100%
Active dry yeast .57%
Water 65%
Salt 1.71%
Brown sugar .71%

Ingredient weight divided by the flour weight X 100 = bakers percent.
A couple of suggestions:
Yeast: Hydrate the ADY in 100 to 105F water without the sugar and salt for improved yeast performance. At the same time allow the yeast to hydrate for about 10-minutes before adding it to the mixing bowl.

Dough Temperature: Get yourself a cheap thermometer to measure and record your dough temperature. This will help you to control the rate of fermentation as you continue to experiment with your dough. Decide what temperature is presently working best for you and then strive to maintain that temperature with future doughs.
The addition of some olive oil or butter would add another dimension of flavor to the finished crust. I would add about 2% or (700-grams flour X 2 (press the "%" key and read 14-grams in the display window) You can always experiment with this level to see what you like best.
Without knowing your actual finished dough temperature I cannot say how long your dough can be refrigerated for, but with the small size pieces you are making, I would guess that the dough should be good for 2 to 3-days in the fridge, possibly more.
As for the type, I would say from the formulation you have an American style thin crust that is leaning slightly toward Neapolitan (due to the higher absorption).
Have fun and some good eating while experimenting!
Tom Lehmann/The Dough Doctor
Re: Input on my Dough Recipe Please!
6277

Len;
Yes, I think that would be a reasonable expectation for a "normal" dough. Keep in mind though that at the lower yeast level, the dough may not be sufficiently conditioned/fermented after, say, 24-hours to provide optimum performance, but on the other hand, it should perform well several days out. As a rule we say that when you formulate or manage for a long refrigerated shelf life you give up on the short shelf life side of the equation and when you formulate or manage for the short time you will give up some of the long term storage days.
Tom Lehmann/The Dough Doctor
Re: Reducing IDY
6278

Tom;
Letting the dough sit out and ferment for a period of time is a part of his dough management procedure. It gives him the end product he is looking for when used with his formula and dough making process. Large scale, pizzeria operations are not especially fond of the process as it can be difficult to ensure that the recommended times will always be adhered to resulting in potential dough handling issues, or product quality issues, especially after several days in the cooler. With that said, we do see this done at a lot of the independent pizzerias where they have better control over how the dough is managed in their shop. It might have been in PMQ that I wrote an article on dough management techniques where I discussed the pro's and con's of different dough management procedures as they pertain to the pizzeria.
Tom Lehmann/The Dough Doctor
Re: Let the dough set out before putting into the fridge???
6279

One of my personal favorites is to use slices of fresh tomato in place of sauce on my pizzas, but when ripe, fresh tomato is not available I like to use whole pealed tomato that is first drained well, and then cut or torn into pieces and allowed to drain once again. I don't add anything to the tomatoes, but rather put a very light application of olive oil on the pizza skin, then add sliced or diced garlic followed by

several leaves of fresh basil torn into pieces, a little white pepper, and then I add the tomato pieces, followed by the cheese and desired toppings. I think the large pieces of tomato add a lot to the flavor and texture of the pizza as well as providing something of a rustic appearance. I don't add salt to as I believe the cheese provides all the salt needed.
Tom Lehmann/The Dough Doctor
Re: If I gave you a can of Peeled Tomatoes? How would you make pizza sauce?
6280

DD;
At home I slice my pizzas on a large metal serving tray and then bring it to the table on the same tray. In a store/pizzeria setting some operators do the same thing, others will cut their pizzas on cutting board made of UHMW (hard plastic), or any of those man made hard counter tops work well too. My favorite is a wood cutting board or even a cutting peel, but some health departments may push back on them so be sure to discuss your intention with them first. The reason why I like to cut my pizzas on a wood peel is because the wood is easier on my cutting tools (doesn't dull the edge) and it allows me to easily transfer the cut pizza to nicer serving tray.
One man's opinion.
Tom Lehmann/The Dough Doctor
Re: Serving pizza for dine-in
6281

Sly & Peter;
Within the range that your yeast was used at there would not be an issue, but if you were at 1% IDY or more and doubled it, you might have brought a different crust flavor to the table. The flavor wouldn't be bad, but just different from the "norm", some might describe the flavor with high yeast levels as "yeasty", at least for me, this is not the normal flavor that I associate with a great tasting pizza crust. Peter brings up a good point with the temperature of the home fridge, typically being warmer than desired, not through a fault of the fridge, but rather because we're always opening and closing the door during the normal course of the day. Then too, our home fridge has a big temperature difference between the top and bottom, so much so that when we are gone for a few days the things in the lower vegetable drawers end up getting frosted. I can't begin to count the amount of lettuce we have had to toss-out because it got frozen while we were gone. I guess opening and closing the door frequently may not be all that bad afterall. Because of this, I really think it is better to make an adjustment in the water temperature to achieve a higher finished dough temperature rather than to increase the yeast level. It is actually pretty easy to get a dough that is about 10F warmer than normal by just using warmer water when making the dough. How much warmer? My experience with making pizzas at home has shown that an increase of 10 to 15F in the temperature of the water added to the dough should do the trick. Don't have a thermometer? You can get an inexpensive one from Walmart in the automotive department for $7.00. They read up to 125F and are used to check the temperature of a car's airconditioning. I've also used a cheap oral thermometer that I had left over from when the kids were young. The exact finished dough temperature is a goal but not a prerequisite in making an emergency dough, just getting it warmer than normal will almost always do the trick, but in order to have repeatability, you never know when company will unexpectedly drop in, nothing beats working with actual temperatures whenever you can.
Tom Lehmann/The Dough Doctor

Re: Let the dough set out before putting into the fridge???
6282

Sly;
You could have also just increased the dough temperature by 10F and accomplished the same thing without changing your dough formula/recipe. This is how we normally make no-time/emergency doughs.
The down side to increasing the yeast level is that should you want to hold the dough for additional time in the fridge, you would stand a good chance of the dough "blowing" or becoming over fermented, plus depending upon how much yeast we're talking about, you can also change the flavor of the finished crust with an excessively high yeast level.
Tom Lehmann/The Dough Doctor
Re: Let the dough set out before putting into the fridge???
6283

Tom;
Letting the dough sit out at room temperature is not recommended when the dough is to be frozen as it allows the yeast cells to swell in size, thus rendering them more prone to ice crystal damage during the freezing process, this in turn allows glutathione (first cousin to L-cysteine, think PZ-44) to leak out into the dough creating an undesirably soft and sticky dough condition when the dough is finally slacked out/thawed for use. As to allowing the dough to set out prior to going into the cooler, this allows the yeast to begin leavening the dough, thus effectively making it less dense and more difficult to cool in a repeatable, and efficient manner. A lot of stores that still follow this practice are doing it because they have always done it that way, or that was the way they were taught to do it by a previous owner. We have found that there is significantly improved cooling efficiency when the dough is divided/scaled, balled, boxed or bagged, and taken to the cooler all within 20-minutes of coming off of the mixer. This also results in improved consistency of dough performance when the dough is to be held for several days in the cooler and we are striving to get the same pizza on day 1 as we will get on day 3. When making pizzas at home these issues still remain, but the ramifications are not so great as we can easily accommodate changes in the way the dough handles (try explaining/showing that to the average highschool or college student working in a pizzeria) and if the pizza needs an adjustment in baking time, so be it, but with the use of an air impingement or other conveyor oven those changes cannot really be made from pizza to pizza unless a deck oven is being used. For the most part, pizzerias work on the old adage of GIGO when it comes to dough.
Tom Lehmann/The Dough Doctor
Re: Let the dough set out before putting into the fridge???
6284

B2D;
What you are experiencing is common for a pan style pizza store. First, there is no need to toss any dough out. Just remove any unused or over proofed dough from the pan and store it in the cooler until you make your next dough then incorporate into the new dough at a level not to exceed 15% of the total dough weight. This is also a good dough to convert to breadsticks or garlic knots. But that doesn't address your question; what I would propose is to manage your proofed dough (in the pan) directly from the cooler. Remove the proofed dough from the cooler, and place onto a heated shelf at 160 to 180F (anything close to this will work), think

heated shelf for holding pizzas on for delivery or pickup. PVI used to make such a shelf but have discontinued it. Shucks! You could make your own with a piece of stainless steel and a couple of heat lamps under it. The idea is to allow the cold dough to set on the heated surface for about 2-minutes, then dress it and bake. As the overall dough temperature will be colder, you may need to experiment with baking using a screen under each pan to control bottom bake. There are several regional chains that use a similar process with good success. As a last resort, you can always par-bake your crusts too. This really works well for the deep-dish style pizzas. Par-bake the crusts using about 1/2 of the normal amount of sauce on the dough to control bubbling, depan, place on rack to cool, then store at room temperature until needed (should not be an issue with health department) to finish the pizza, place back into a pan, apply remainder of sauce, and dress to the order, bake with a screen under the pan to prevent over baking the bottom of the pizza. Can you say "crispy"?
Tom Lehmann/The Dough Doctor
Re: Warm up time on racks
6285

Walter;
The bromated flours are not illegal in California, but they are so frowned upon that you might have a problem finding a supplier that carries it, hence the reference to the non-bromated version of All Trumps. The bromate has essentially no impact upon the flour when it comes to making pizza, so you shouldn't see and difference between bromated or non-bromated All Trumps except for availability.
Tom Lehmann/The Dough Doctor
Re: Yes, I DO bake pies. All Trumps 1st
6286

I'm glad you got to see that huge pizza. While Jeff was developing it I had the dubious honor of cutting one of those babies into 3-inch square party slices. That's the first time slicing a pizza was ever work for me! Jeff always tries to do something a little different every year, we can only guess at what he might be thinking about for the next Pizza Expo.
Did anyone have a chance to sample some of the other things he was baking in the air impingement ovens? Breads, rolls, ribs, wings, shrimp, fish, brownies, muffins, dessert pizzas, breakfast pizzas, the list of things he makes with those ovens just goes on and on, not to mention all of the different types of pizzas he makes. Jeff has become the master of the air impingement oven in my opinion.
Tom Lehmann/The Dough Doctor
Re: Report and pics from Pizza Expo, Las Vegas 2013
6287

I had a number of PM individuals come up to me during both of my presentations at Pizza Expo. My presentation on Tuesday (room 260-N) went from 4:00 p.m. until right at 10:00 p.m. we had a great group with lots of great questions.
Did anyone get over to the XLT Oven booth? My partner, Jeff Zeak was working in their booth making some fantastic pizzas (one was a 64-inch diameter monster!) as well as a lot of other tasty items using the XLT ovens.
Tom Lehmann/The Dough Doctor
Re: Report and pics from Pizza Expo, Las Vegas 2013
6288

Absolutely GREAT looking pie! I agree, just cut the peppers a little smaller and

they should bake just fine.
Great color, great edge, great balance between toppings and edge dimension too, just an all around great looking pizza. :) :) :)
Tom Lehmann/The Dough Doctor
Re: Soggy in the middle
6289

You can get All Trumps flour un-bromated by requesting product code #50143. This one is malted and enriched only.
Tom Lehmann/The Dough Doctor
Re: Yes, I DO bake pies. All Trumps 1st
6290

G;
Probably the single most commonly used flour by N.Y. pizzerias, to make New York style pizza is General Mills All Trumps, coming in at 14 to 14.2% protein content. But from a realistic point of view any patent or straight grade flour with 12 to 14% protein content will also work. Very few pizzerias use a blend of flours to make their pizzas unless it is a specialty type of pizza dough such as wheat or multi-grain.
Tom Lehmann/The Dough Doctor
Re: flour combinations
6291

I totally agree with Peter. One possible cause of the problem is due to hand kneading the dough as opposed to machine mixing the dough. During hand mixing we fold and push the dough so there is a distinct possibility of developing an air pocket in the dough during kneading, as the dough ferments, gas, created by the yeast moves into this pocket and expands it to create the bubble which you have observed. Just pop the bubble and continue in your normal manner.
Tom Lehmann/The Dough Doctor
Re: air bubble on top of dough ball
6292

I don't like to use plastic wrap as it does not allow for any expansion of the dough, insread, I like to put oil the dough piece and put it into a plastic bread bag, twist the open end into a pony tail and tuck it under the dough ball as you place it into the fridge. It still comes out nice and round but this method allows for some expansion of the dough ball. To use the dough ball, remove from the fridge about 90-minutes before you want to open it into a pizza skin, then strip the bag away from the dough ball, allowing the dough ball to fall onto/into some dusting flour and begin opening the dough in your normal manner. Note: DO NOT use a zip-lok bag as the seal can open allowing the dough to dry and crust over.
Tom Lehmann/The Dough Doctor
Re: Best way to refrigerate dough?
6293

C.G.;
A couple of things are probably happening here. The bright pan color is reflecting heat away from the pan, making it nearly impossible to bake the most difficult part of the pizza, the middle section. If you got just a little color development around the bottom edge, the dough might be pulling up slightly off of the bottom of the pan, thus creating an air gap between the pan and the dough, under this condition,

it is all but impossible to get and bottom color at all. I think if you had been baking on a stone you would have had better luck with the bottom color. As for flavor, most of the crust flavor is developed as a result of baking, so if the dough is not properly baked, you do not develop any of the flavors that are characteristic to a baked pizza crust. You can see this if you take an English muffin and eat one half of it without toasting, then toast the other half and you will see a significant improvement in flavor.
Tom Lehmann/The Dough Doctor
Re: First attempt at Sicilian didn't turn out great....why?
6294

Varun;
I can't say for sure that you will succeed with your oven, but it is worth a try. Here is how I would start:
Pan: Deep-dish (1.5 to 2-inches deep having a dark color (anodized or seasoned to a dark color)
Dough: 100% flour; Salt: 1.75%; Shortening/Butter: 4%; IDY: 1%; Sugar: 2%; Water: 55%
Procedure: Add water (65F) to the mixing bowl, add flour and the remainder of ingredients, mix at low speed for 3-minutes, then mix at medium speed for 8-minutes, or do all of the mixing at low speed for 15-minutes. Targeted finished dough temperature is 80 to 85F. Immediately after mixing, scale the dough into 400-gram weight pieces and form into balls, wipe dough balls with vegetable oil after placing into plastic dough boxes. Cross stack in the cooler for 18 to 36-hours. Remove dough from cooler and allow to temper AT room temperature for 2.5-hours, then either open the dough balls with a pin, and place into a lightly oiled baking pan. Cover and set aside to proof/rise for 45 to 70-minutes, take to the oven for baking. I think you will be able to bake right on the deck. Baking time will be about 4-minutes. NOTE: If you see a spot on the par-baked crust that appears to be an oil spot, it isn't. What you are looking at is an area of collapse. To correct the problem you will need to bake the crust a little longer, possibly at a lower temperature. Remove the baked crust from the pan immediately as you remove it from the oven and place onto a wire grid or shelf to cool. Let me know if you have any questions or problems.
Tom Lehmann/The Dough Doctor
Re: Unique oven config, need dough advice
6295

L.A.
There are a whole bunch of other options that you may not be as sensitive to:
Sunflower oil
Peanut oil
Blue Bonnet Margarine (ya gotta try it)
Straight olive oil
Are you sure the canola oil you tested wasn't rancid?
Tom Lehmann/The Dough Doctor
Re: Chicago Deep Dish without Corn Oil
6296

American Metalcraft shows an 8-inch round peel (20-inches long) item # 17080. <www.amnow.com> 800-333-9133.
Tom Lehmann/The Dough Doctor
Re: Small diameter turning peels

6297

Mozzarella is really a pretty bland tasting cheese, even when blended with a higher butterfat Provalone cheese, the flavor is still on the bland and non-exciting side of great. To compound this, there seems to be a tendency to use too much dried oregano and basil these days and that pungent flavor completely over powers any flavor from the cheese. We have been working on this for some time now and we have found if we replace the dried basil and oregano with fresh, green leaf basil and oregano (my personal preference is to use just fresh basil and forgo the oregano completely) the cheese flavor comes through much better. Additionally, the addition of about an ounce (a good pinch) of shredded Parmesan cheese to replace an equal portion of Mozzarella does a lot to bring out the cheese flavor of the pizza.
Tom Lehmann/The Dough Doctor
Re: Really disappointed in Grande 50/50 blend
6298

MC;
A sponge is different from a sourdough. A sponge might also be called a preferment. A portion of the flour (with yeast and a portion of the water) is blended together and allowed to ferment for 1 to 24-hours to develop flavor. This is then combined with the remainder of the flour and other ingredients to make the dough. A sour would be allowed to ferment for several days or more to develop an acidic flavor and also provide leavening. Only a part of this is used in making the dough. The remainder is replenished (fed) and used to make mo0re dough at a later date. A sour that you made years ago might still be with you today if you have managed it properly so as to maintain the same microflora, hence it will always function the same and produce a like flavor profile. If the sour is mismanaged, either by allowing it to become contaminated or by allowing it to be subjected to incorrect temperatures for the microflora you are cultivating the performance of the sour can change drastically, as can the flavor, normally when this happens it is said that the sour was "lost". TIP: If you work with a sour, store it in multiple containers in different storage facilities (locations), this way if the sour is lost at one location, for whatever reason, you can still use one of the others to inoculate a new sour, thus preserving the performance and flavor imparted by the sour.
Tom Lehmann/The Dough Doctor
Re: Homemade yeast
6299

Adding a small amount of baking soda to your tomato product is an effective way to reduce their acidity. Without actually running a TTA (titratable acidity) to measure the amount of acid present it is impossible to predict just how much soda would need to be added. For most of us, when we have excessively acid tomatoes we just want to take the edge off of them, so a lesser amount of soda is probably the best way to go. While on the topic of pH and tomatoes, please remember that it is the acidity of the tomatoes that inhibits microbial growth with long term storage (think canned). A few years ago a young housewife poisoned her entire family when she canned low acid, yellow tomatoes following the same procedure that she normally used when canning regular tomatoes and used it to make a pasta sauce. The microorganism that grew in her canned, low acid tomatoes was clostridium, and the outcome was not good.
One last thing about pH and tomatoes, it is the acidity of the tomatoes that helps to prevent them from scorching during the baking of the pizza. We did some work on this a number of years ago and we found that the addition of 1-ounce of grated

Parmesan cheese per gallon of tomato product did a pretty decent job of taking the edge off of the tartness of the tomatoes. You won't see/taste the difference though until you cook the sauce either by itself or on a pizza.
Tom Lehmann/The Dough Doctor
Re: Baking Soda To Reduce Sweetness
6300

With reference to blowing under the dressed pizza skin to help release it from the peal, it has more to do with perception than food safety. How would you feel if you were at a restaurant where some snotty nosed kid was blowing, or coughing on your pizza? Don't worry, it will be sterilized in the oven. You might have a hard time selling that to your customers whose only comment might be "GROSS!". Then too, there might be a hard sell to your health department inspector. One old trick that I've used with very soft doughs is to open the dough into a pizza skin and place it onto a pizza screen for dressing, I then put the dressed skin (still on the screen) in the oven to bake for a couple minutes, then slip a peal under the now forming crust, remove the screen and continue baking on the stone. This is similar to a procedure called "decking" the pizza, but when decking the pizza, it is typically removed from the screen and placed on the stone/deck during the last couple minutes of baking to achieve a crispier crust than can be had by baking only on the screen.
Tom Lehmann/The Dough Doctor
Re: Using a Pizza Peel with your dough???
6301

I'm not sure I'm correctly following the last reply, but industry standard is to crumble the compressed/fresh/cake yeast into the flour and then begin mixing. There is no need to suspend it in the water unless you are mixing the dough by hand. If you are mixing the dough by hand you can put the cake yeast right into the cold water, or warm water, whatever you're using and stir it to suspend the yeast and you're good to go. Active dry yeast (ADY) should always be pre-hydrated in warm water (100 to 105F) for about 10-minutes before it is added to the dough. Once hydrated, it can either be added to the water in the mixing bowl, or it can be added to the flour just before you begin mixing. Instant dry yeast (IDY) is the one that can be added directly to the flour just as it is, but again, if you are mixing the dough by hand, you will need to pre-hydrate the IDY. To hydrate IDY put it into a small quantity of warm water (95F) and allow it to hydrate for 10-minutes, then you can add it either to the water or to the dry flour just as you would the hydrated ADY.
Regardless of which form of yeast that you're using, it is not a good idea to allow the yeast to come into direct contact with either the salt and/or sugar while you're assembling the dough, BUT IDY when used without pre-hydrating, can be put into direct contact with salt and/or sugar without any problems. This is commonly done by pizzerias when they make "goodie bags" containing salt, sugar (if used), IDY and a little flour.
Tom Lehmann/The Dough Doctor
Re: Kneading times and finished dough temp
6302

To find the ingredient amounts in bakers percent divide the weight of the ingredient by the weight of the flour and multiply by 100. This will give you the bakers percent for each ingredient. To work your formula in bakers percent do the following:

1) Decide how much flour (by weight) you want to use.
2) Using your calculator, enter the ingredient percent you want to find the weight for, then press "X" and now enter the flour weight and press the "%" key and read the weight for that ingredient in the display window.
Also, please keep in mind that the absorption of any flour can/will change to some extent from bag to bag, so don't be too hesitant about making slight absorption adjustments to your dough as this is entirely normal. Normally these variations in absorption are in the magnitude of about 2% of the total flour weight.
Tom Lehmann/The Dough Doctor
Re: Dry dough
6303

Steve;
Spot on!
Just think of all the places where food coloring is used.
Just to name a few:
Chicago deep-dish pizzas (Egg-Shade coloring is what gives it the characteristic yellow color)
Peppermint; Red and green aren't the natural colors for this popular flavoring.
Whole-wheat bread uses caramel color to mask the typical muddy color of whole grain/wheat bread crumb.
Kool-Aid; You didn't really think all those colore were natural, did you?
M&M Candies are in the same boat as Kool-Aid.
Chuckles Candy (now that's an old one) suffers the same fate as the Kool-Aid too.
As you can see, the list could just go on and on, and if the colorings were all banned, eating might not be as much fun or appetizing as it presently is. Please don't share this with Mr. Nanny as he might see it as a solution to obesity in New York City.
Oh, one last one...Red Velvet Cake! Please don't take that one away!!
Tom Lehmann/The Dough Doctor
Re: Nestle sued for "poisoning" pizza
6304

Wow!
If alcohol is a poison (which it is) then beer, wine and distilled spirits should be taken of of the market. Wait! We've already tried that, and how did that turn out?
Why not bacon too? No trans fats, but lots of cholesterol (and that's bad for you too).
Personally, I think these people need to find a hobby! How about making pizzas at home? Then they can have them any way they want them!
I like to live a little out on the edge, so please put some sausage on mine.
Tom Lehmann/the Dough Doctor
Re: Nestle sued for "poisoning" pizza
6305

What ever happened to the old fashion rolling pin? Pie pin? Hand tossing? Table stretching?
My favorite when making pizza at home is to use a pin to open the dough up to about 2/3 of the finished diameter (pretty easy to do) then table stretch or hand toss to final size. Note: I have gravitated to table stretching at home due to the fact that hand tossing creates a bit of a mess with getting flour all over the place. Table stretching is a lot less messy when you're making pizza at a friends home too.
Tom Lehmann/The Dough Doctor

Re: Has anyone tracked down a manual dough sheeter for home use?
6306

When I'm baking my Chicago style pizzas on a stone I always place a pizza screen under the pan to create a heat break which helps to prevent the bottom from getting overly done, heck, without it the bottom of the pizza burns in my oven.
Tom Lehmann/The Dough Doctor
Re: Baking a Chicago style on a stone?
6307

Bacon grease, aka lard can also be used to make unique flavored breads and pizza crust. If you buy commercially rendered lard it can be used to make some of the best pie crusts you have ever had too. When I was a kid growing up on the farm we used to have a lard can on the kitchen stove that we poured any leftover frying grease into, and we used from that can to fry things too, so it really developed a lot of flavor. One of our favorites was to spread it onto rye bread like butter, salt it and eat it as is. It doesn't work though when you begin adding vegetable fat into the mix as the mouth feel is all wrong.
Tom Lehmann/The Dough Doctor
Re: Bacon Grease
6308

You might look into any "organic" flour as these will not typically be malted. General Mills has a very good one "Sperry Organic Flour" that comes in at around 12% protein. You might be able to pick up a bag from your local restaurant supply. We use this one quite often without any problems, as was mentioned, if you have a problem with supporting long fermentation times with this or this type of flour just add some sugar to your formula. About 2% sugar should be all that you will ever need.
Tom Lehmann/The Dough Doctor
Re: Barley free pizza
6309

I do not recommend trying to mail fresh yeast. We are in Manhattan, Kansas and we have difficulties getting several cases of it to us each week from Kansas City. Instead, consider buying a supply of IDY instant dry yeast. Unopened it has a shelf life of a year or more and you should be able to get it from any restaurant supply. You might even be able to talk a local baker into putting in an order for a few extra pounds when they place their yeast order. If you want just small quantities, you local supermarket probably carries the small packets of IDY.
Tom Lehmann/The Dough Doctor
Re: Where to buy yeast?
6310

Chaze;
Pretty easy to do with some limitations. Think DiGiorno (supermarket) pizza. Here we have a pizza made on a raw dough that is leavened with both yeast and fat encapsulated chemical leavening (you can get the fat encapsulated leavening from the Wright Group <tonyo@wenrich.com> the product is called "Wrise". It is used at 2 to 3% along with about 1% IDY. Another option is to go the Freschetta (another supermarket pizza) route. In this case you pre-proof the pizza skin before you dress it. For a thin crust allow the pizza skin to proof (rise) for about 20-minutes, then apply a very light coating of oil to the dough, sauce and dress as

desired. For a thick crust, like the Freschetta product, allow the dough to proof for about 45-minutes, then dress as described above. Here are the limitations: Figure on no more than 10 to 15-day frozen shelf life when frozen in anything but a commercial blast freezer at -30F. It is best to use either canned or lightly sauteed vegetables because fresh vegetable toppings will break down during the freezing process only to release scads of water onto the pizza when it is finish baked. The commercial pizzas get around this in two ways, one by using moisture controlled vegetable toppings, and by blast freezing which is not as injurious to the vegetable toppings.
Tom Lehmann/The Dough Doctor
Re: Has anyone prepped a pie and then froze it to be baked at a later time?
6311

Gig;
Just like in baking pizzas from scratch, latent heat is the name of the game in reheating pizza slices. If the steel plate is too thin, it won't hold much latent heat, so it will cool more rapidly than a thicker steel plate or thicker stone deck. You also need to make sure the deck has been thoroughly heated, which might take an hour or more before reheating the slices on it. If you are reheating your slices in a home oven, try using a low rack position in the oven rather than a high(er) rack position. This will bring the deck closer to the heat source thus improving the bottom heat while reducing the top heat to the slice to help prevent melting of the cheese.
Tom Lehmann/The Dough Doctor
Re: Slice Reheating, steel vs. stone
6312

Todd;
I can't remember working with an 1100 series Blodgett oven, but I have worked with enough 1048 series ovens to say that they are, in my opinion, a great pizza oven.
Tom Lehmann/The Dough Doctor
Re: Seeking Blodgett Oven Advice.
6313

C;
You bet! We use it regularly to make N.Y. style pizza. The absorption is a little lower than what we use for domestic flour, but on the other hand, the dough is a bit softer and handles (opens) nicely.
Tom Lehmann/The Dough Doctor
Re: Help with caputo 00 pizzeria flour
6314

Todd;
Make sure you have a sufficient gas supply to operate those ovens (line diameter and pressure are critical). You may need to get an external gas pressure regulator for the ovens too. Be sure to contact Blodgett to obtain a set of installation instructions for the oven(s) too. Since those ovens put out a lot of heat you will need to consider some type of ventilation for your garage too, not just for the heat, but also for the combustion gasses and the fumes given off from the baking process. Be advised that this might need to be hooded ventilation ($$$$$). You might also contact your utility/gas company with the burner specifications to get an idea of the operating cost of those ovens. Ours take nearly 90-minutes to come up to full operating temperature, then you might spend another hour baking pizzas so

figure on at least 2.5 full hours of operating time to use the oven to bake your pizzas.
Tom Lehmann/The Dough Doctor
Re: Seeking Blodgett Oven Advice.
6315

Beau;
One other thing, I don't know it it applies in this case or not is the thickness of the deck material and burned BTU's. Commercial pizzas ovens tend to have thicker decks, capable of holding more latent heat than the thinner deck of a home or noncommercial application oven. Additionally, the commercial ovens have massive burners putting out a lot more BTU's than any home oven can. Of course they are significantly more expensive to operate too. With the greater capacity burners the commercial ovens will have a faster recovery time than a home type oven, and here again, some of the newer deck ovens exhibit almost no variation due to heat loss from the deck when multiple pizzas are baked in the same spot on the deck for a period of time. This might explain why many home pizza makers use a higher baking temperature than many pizzerias do while still getting the same end results.
Tom Lehmann/The Dough Doctor
Re: Oven Temp
6316

Beau;
I'm not quite sure that I fully understand your question, but I'll have a go at it. Commercial pizza ovens are calibrated in such a way so that the set temperature on the thermostat corresponds to the temperature of the deck, regardless of whether it's stone, composite or steel in the place where the thermostat heat sensor is located. They try to locate the sensor in a spot that provides a representative actual temperature of the oven deck. Depending upon the oven design, you can, and usually do have hot spots on the deck, hence the need to rotate and move the pizzas around in the oven during baking. Some oven companies have been pretty successful at designing their ovens to have a more uniform temperature across the entire deck surface, and infact, their literature and demonstrations promote the fact that the pizzas don't need to be rotated/moved during baking in their ovens. I have found these claims to be correct in principal, and work well when baking only a few pizzas at a time, but when you are trying to bake 6 or 8 pizzas at a time, and you are constantly opening and closing the oven door, those pizzas in the back of the oven get a different bake from those near the door opening, so it's back to rotating and moving the pizzas around again.
Tom Lehmann/The Dough Doctor
Re: Oven Temp
6317

Craig;
You're right, the heating/toasting of the flour will most likely denature the protein, rendering it incapable of developing "gluten".
Tom Lehmann/The Dough Doctor
Re: toasting flour
6318

Boyd;
The "big" thing that All Trumps flour has going for it is that it is one of the highest protein flours commonly available. It's great for making any kind of pizza where a

chewy crust texture is desired. It is not the only flour that will impart this characteristic, but since it is one of the highest protein flours, it is presumed to do this the best. In actuality, any flour with about 12% protein content, give or take 0.5%, will make great pizza.
Tom Lehmann/The Dough Doctor
Re: All Trumps
6319

JJ;
The DiGiorno Pizza was developed using a combination leavened crust technology that I developed about 27-years ago. Made a small fortune showing all the other companies how to make it once it was commercialized with the DiGiorno pizza by Kraft.
If you want to see some good working formulas for making your own version, please go to the PMQ web site at <www.pmq.com> and go to the RECIPE BANK. I've got three different bake to rise dough formulas posted there.
Tom Lehmann/The Dough Doctor
Re: Baking Powder Crutch for Quick Dough
6320

I one had a mobile unit that I used for visiting local fairs, sporting events, etc. Just be aware that you will be licensed for your county and state. You may need to get additional licensing to operate in a different county, and if you are located near a state line as I was, you will need to be licensed in that state too. Plus, depending upon your concept, your trailer may need to be licensed in the "other" state too. Just a whole lotta things to be aware of.
Tom Lehmann/The Dough Doctor
Re: Dealing with Health Department for mobile business
6321

J;
I neglected to add, if you want to make a truly chemical leavened crust the best solution is to use a fat encapsulated chemical leavening system. This is the type of leavening system that is used in conjunction with yeast in making the DiGiorno bake to rise pizzas sold at your local supermarket. To buy the fat encapsulated chemical leavening contact The Wright Group, Tony Oszlanyi at <tonyo@wenrich.com> They make the leavening material available in small quantities for use in single unit pizzerias or they will sell it to you by the truck load too.
Tom Lehmann/The Dough Doctor
Re: Baking Powder Crutch for Quick Dough
6322

J;
No two ways about it, fermentation does develop flavor in the finished crust, but to some the flavor has been said to be "beer like" as I said, fermentation, but they find it not so desirable as others do, so what's the solution? Chemically leavened crust. When I was a kid, soon after moving into town from the farm, I discovered Chef Boyardee (don't know about the spelling) pizza in a box. The crust was a dry mix to which you only added some water and stirred the mass together. It came out much like a biscuit dough. I pressed it onto a baking sheet, topped it with the supplied sauce and added our toppings. As I remember, I wasn't too excited about it back then, but hey....it was still pizza. I have gone so far as to make a totally unleavened

pizza crust. This is easy to do, just make a dough as you would any other dough, except delete the yeast. Allow the dough to hydrate about an hour, then roll it out to fit a baking sheet. Dock the crust well, and parbake it. As soon as you remove it from the oven, dress the parbaked crust as desired and place back into the oven to complete baking. Very cracker like. We have used baking powder, but we find that it imparts a biscuit like flavor to the finished crust. This is due to the acid component in the baking powder (sodium aluminum phosphate) but we also found that when this acid was changed to sodium aluminum phosphate) so did the flavor, now it tasted something like a cake donut. Different brands of baking powder have different compositions, so just be aware and be sure to read the label. We have had our best luck using this type of dough when we made it as an herb flavored crust.
Tom Lehmann/The Dough Doctor
Re: Baking Powder Crutch for Quick Dough
6323

Boyd;
All Trumps is a General Mills brand of flour. The next time you get ready to place an order for flour from Restaurant Depot give them a call to see if they carry, or can get the General Mills Organic High Gluten Flour. It comes in at about 12.5% protein content so it should work fine for all but the most die-hard New York pizza makers. We use it all the time so I can say that it would work very well in your application.
Tom Lehmann/The Dough Doctor
Re: NY Style Pizza-All Trumps High Gluten Flour-Guilty Pleasure
6324

We have a saying here at AIB International: The only bad question is the question that goes unasked. I like to tell my students that while it took me 45+ years to gain my knowledge of pizza, by asking the right questions you can gain that knowledge in just a few minutes. I think I can speak for everyone here in saying that this also applies to everyone here too. Questions = the shortest route to knowledge and understanding.
Tom Lehmann/The Dough Doctor
Re: Is this truly a New York pizza sauce recipe?
6325

Barry;
Yes, I would recommend increasing the water temperature slightly to give you a warmed finished dough. For use in a home setting where refrigeration is not so great, I would suggest a finished dough temperature of about 75F.
Tom Lehmann/The Dough Doctor
Re: Adjust finished dough temperature before cold fermentation?
6326

It is impossible to say just how long they will last without knowing more about the dough.
Formulation
Finished dough temperature
Your dough management procedure (what do you do with the dough from the time it comes off of the mixer until it is placed in the cooler for storage)
What kind of container do you use to store the dough in?

With all of these questions answered we should be able to give you a realistic

expectation. Otherwise, I like to say that with the right formulation and dough management procedure you should be able to store the dough for a minimum of 2-days. With the correct formulation and dough management practices, you might be able to store it for 5-days or more. It all depends....
Tom Lehmann/The Dough Doctor
Re: How long will dough last
6327

If your flour is malted, and you manage the dough through the refrigerator for up to two days, you can normally get away without the need for any added sugar. If the flour is not malted, then you're going to need to either add some sugar, or create it through the addition of DIASTATIC malt.
Tom Lehmann/The Dough Doctor
Re: Sugar? Why?
6328

John K.;
This past weekend I was at our local thrift store/bargain store, junk store, whatever you want to call it. I found three 1.5-inch deep, dark colored pans (7, 10 and 12-inch diameter) for just $5.00. What a deal! If you have anything similar to one of these near you check it out. It sure beats paying retail, even at Walmart.
Ours is a pretty good size store with a lot of "stuff" so you never know what you're going to find, looking through it all is half of the fun. Over the years I've picked up an assortment of stainless steel mixing bowls, deep-dish pizza pan grippers, and several plastic containers for ingredient storage. If you or anyone ever attends the NAPICS show, in Columbus, Ohio, be sure to stop at the Restaurant Equippers booth, they have a lot of really neat stuff there too, and their prices are great to boot!
Tom Lehmann/The Dough Doctor
Re: First successful Deep Dish
6329

C. Bob;
About the only thing it doesn't do is talk to you....probably a good thing.
That scale has great capacity (8000-grams), and weighs in both lbs/oz as well as metric.
I gotta get me one of those!
Thanks for sharing,
Tom Lehmann/The Dough Doctor
Re: Just bought a 100.00g scale from Amazon for $7.80
6330

I've seen a lot of the Hamelton Beach and Waring commercial duty mixers in service. You might check out E-Bay to see if you can find a deal there on one.
Tom Lehmann/The Dough Doctor
Re: Malt Blender
6331

Sugar in the dough can provide additional food for the yeast to feed upon, this is especially true if you are planning to give the dough a very long fermentation time. It also contributes to the crust color development in the oven. This can be a double edged dagger though. While the sugar can help the dough color up in the oven, it can also lead to excessive charring/burning of the crust, especially if you are

baking at high temperatures. The shorter baking time brought about by the faster crust color development with sugar present, can reduce the crispiness of the finished pizza, and lastly, depending upon the type of sugar used, it may contribute to the finished flavor profile of the baked crust (think sweet, or malty as when nondiastatic malt syrup is used).
Tom Lehmann/The Dough Doctor
Re: Sugar? Why?
6332

For the price, the 1000-gram capacity scale looks like an excellent companion scale for weighing the larger things like flour and water.
Tom Lehmann/The Dough Doctor :)
Re: Just bought a 100.00g scale from Amazon for $7.80
6333

Wes;
It's pretty easy, but you do need to make a couple of changes.
The whole wheat flour will carry more water than your regular white flour. You will need to experiment to find the exact amount of extra water to add, but for starters, I'd recommend adding 8 to 10% more water. Since the whole wheat flour is slower to hydrate than white flour I suggest using a "soaker". To do this, put the whole wheat flour in a suitably sized container, and add the full amount of water to the flour, stir until the consistency of wet oatmeal (it should look sloppy). Set aside and allow to hydrate for at least 1-hour. More time won't hurt it. I have even put it in the fridge to hydrate overnight for use on the following day. Transfer the soaker to your mixing bowl and add the remainder of ingredients and mix just until the dough comes smooth and springy to the touch. From that point on, you should be able to manage the dough in your normal manner. Keep in mind that whole wheat doughs do not hold up very well for more than about a day in the fridge after it has been mixed as a dough. Some ideas for consideration:
1) Use butter as your source of fat.
2) Use 3% NONDIASTATIC malt syrup to replace any sugar in the dough recipe/formula.
3) After opening the dough into a pizza skin, wet the edge of the dough with a little water and sprinkle the edge only with some sesame seeds. The flavor compliments the whole wheat.
4) If you can find whole white wheat flour give it a try since the flavor is better than the flavor of whole wheat flour made from a dark red wheat variety.
Tom Lehmann/The Dough Doctor
Re: Whole Wheat Flour
6334

PB;
Our research has shown that pizza dough is best mixed to a point of under development. The best way to describe it is to say that the dough should be mixed just until it begins to take on a smooth, satiny appearance. Anymore mixing than this will over develop the gluten for the characteristics that we're looking for in a pizza crust, namely an open, porous crumb structure. Over mixing of the dough typically results in a more "bread like" sound familiar? finished crumb structure. I'm used to seeing mixing times in the 4 to 6-minute range, but it is difficult to say if that is correct for your flour and mixer load. In any case, you might want to look at a series of doughs with progressively less mixing time to see if that helps.
Good luck with your new mixer, once you get it sorted out you'll love it.

Tom Lehmann/The Dough Doctor
Re: Just switched to Bosch, dough doesn't seem to turn out right -advice?
6335

I can't comment on the authenticity, but further cooking of tomato paste? They got the tomato concentrated down into a paste by heating and removing a good deal of the water, so I would be hard pressed to see anything good happening flavor wise by again heating the sauce, prior to application, and then finally putting it on a pizza where it will again be cooked. Seems like a lot of cooking to me. Most N.Y. style sauce recipes/formulas that I've seen use either crushed tomato or San Marzano tomatoes that have been torn apart for use as part of the sauce, some with the other part sometimes consisting of a much lesser amount of tomato paste used for thickening the otherwise thin sauce. I don't percook mine either as it will get all the cooking it needs on the pizza, and I always like to include a small amount of olive oil to give added dimension to the flavor profile.
Tom Lehmann/The Dough Doctor
Re: Is this truly a New York pizza sauce recipe?
6336

Norma;
After 45+ years of eating, sleeping, breathing, researching, and consulting on pizza, a little has to eventually rub off.
My job has always been fairly easy since I've got all the tools and toys one could wish for at my disposal for making, developing, and researching pizza. You and all of the other folks here are the truly innovative and creative individuals as you are all researching the different aspects of pizza, developing different styles of pizza, reverse engineering pizzas, and just plain making great pizzas all without the big and expensive toys that we work with. Now, that's a challenge. It is also interesting to note that there is a strong interest displayed here to make what we like to call "artisan" pizzas, be it in a home oven, or a wood fired oven out in the back yard. For what it's worth, this closely mimics some of the direction that pizza industry is now going in as we are beginning to see more artisan type pizza offerings in the frozen food cases, and pizzerias, in general, are asking more questions about how to make them. So the knowledge that I'm gaining here helps to shorten my learning curve too.
Tom Lehmann/The Dough Doctor
Re: Cooked vs Uncooked pizza sauce....
6337

Here are a couple things that I learned about sauce.
1) You know how good the kitchen smells when you're cooking a sauce? Those aromatics are being driven off from your sauce, never to be smelled again. Moral of the story, don't cook the sauce since it will be cooked all it needs to be on the pie during the normal baking of the pizza, and it will actually provide a better flavor. From a commercial perspective cooking the sauce presents some problems too. There is the 4-hour food safety rule which basically states that a product cannot be allowed to be at a temperature that will support microbial growth (lower than 140F and greater than 40F)) for an accumulated time not to exceed 4-hours. When cooking a sauce it MUST be heated to a temperature of 160F or more, then it must be cooled, and the time it spends in that critical temperature range (40F to 140F) erodes the 4-hour rule time period.
2) Oil of any kind in the sauce helps to entrap the flavors released during baking of the pizza, potentially resulting in a better flavor profile. Have you ever eaten a

piece of cake taken home from a party where there were smokers? On the following day the cake and icing would have a very decided smoke flavor. This is why the butter container in the fridge always has a cover on it. It it isn't covered the butter will pick up and aroma in the fridge. No, sauce doesn't need the added oil, but if your sauce is too oily I'm betting that you have added too much oil. Many sauce formulas contain at lease some oil for the reason cited above, but in my experience the amount of oil seldom exceeds 2 to 3% of the total sauce weight.
3) For use on pasta, always precook the sauce since it won't get cooked upon application to the pasta, unless you're making lasagna, then at least for me, I'm back to using uncooked sauce.
Tom Lehmann/The Dough Doctor
Re: Cooked vs Uncooked pizza sauce....
6338

Peter;
Yes it is, actually I sent it to her under separate cover right after I wrote my response.
Tom Lehmann/TDD
Re: Favorite "quick" dough? I need something with an 8 hour or less rise
6339

Pete;
In the right hands the tapered rolling pins will work, but the tendency is to just attack the dough with the pin which results in getting an uneven thickness, whereas the straight pin (I like to round the ends over to help prevent snagging the dough) will automatically give you a flat dough surface with uniform thickness after very little practice.
Tom Lehmann/The Dough Doctor
Re: Pizza Shoppe-style?
6340

Heather;
I'm sending you a copy of my Home Made Pizza Dough Recipe. Not knowing anything about your flour, the best I can offer is to say to adjust the water as necessary to give you a moderately soft dough consistency after about 3 or 4-hours fermentation. Allow the dough to ferment in the bowl for about 3-hours, then turn it out and knead a few times, if the dough feels a bit stiff, add a little water to the dough and work in in, then place back into the bowl to continue fermenting for another 30-minutes, turn it out again and check the consistency of the dough. If it needs more water repeat the above, if it feels OK just place the dough back into the bowl to continue fermenting until about 90-minutes before you want to begin opening the dough into pizza skins. Turn the dough out of the bowl and divide into desired size/weight pieces (I suggest that you make a 3 X recipe and divide the dough into five or six pieces for 12-inch diameter pizzas) round each piece into a round ball (don't try to make it too tight, just a lose ball will work fine) set the dough balls aside on a floured area, lightly dust the top of the dough balls with a little flour and cover with a piece of plastic to prevent drying. Allow the dough balls to ferment until you are ready to begin making your pizzas (about 90-minutes). Open each dough ball into a 12-inch pizza skin, dress and bake. Note: This recipe works best using a higher protein content flour such as a bread type flour. I normally use Pillsbury Bread Flour available at most supermarkets.
If you will be baking your pizzas on a stone, try shaping the dough skins into heart shape for something a little special.

Tom Lehmann/The Dough Doctor
Re: Favorite "quick" dough? I need something with an 8 hour or less rise
6341

IE;
I know the feeling. I one had one but I sold it to a new upstart pizza shop that was struggling to get up and running on its very limited funds. A workable solution is to use a "pie pin" these are better than a rolling pin to roll out stiff doughs. With a rolling pin you will most likely ruin it by bending the handles (called dog earing it) but with a pie pin you can put a lot more force onto the dough without damaging anything. A pie pin is nothing more than a wood rod about 18-inches long and a minimum of 2-inches in diameter. If you know anyone with a wood turning lathe you might be able to talk them into making you one in exchange for a pizza. Dirt simple: wood cylinder 16 to 18-inches long X 2 to 3-inches in diameter. After you make it, be sure to wipe it down periodically with a little white mineral oil. This will both seal the wood and keep it from splintering or warping.
Note: I've tried to use just the barrel from a small wood rolling pin (with the rod and handles removed) but it was too short for ease of handling in my case, but if you've got an extra one in the drawer you might give it a try to see if it works better for you.
Tom Lehmann/The Dough Doctor
Re: Pizza Shoppe-style?
6342

Pete;
That's one fine looking 2 X 4!
Tom Lehmann/The Dough Doctor
Re: Pizza Peels
6343

Some time ago I had indicated that I would look into this formula and procedure, I haven't forgotten that promise, as I've been doing just that. My son lives within walking distance from the Olathe store so we were able to visit there several times over the Holidays. Here is my best effort to date:
Flour: 100%
Salt: 2.5%
Sugar: 1%
Olive oil: 1%
Yeast:(IDY) 0.2%
Water: 45% (variable)

Procedure:
Put water (75F) in mixing bowl followed by the salt and sugar, then add the flour and the IDY. Mix until thoroughly whetted, add the oil and mix until the oil is just incorporated. (this dough is too stiff for my K5-A) cover the bowl and allow the dough to ferment for at least 4-hours, turn the dough out of the bowl and knead for about 2-minutes, lightly oil the bowl and put the dough back into the bowl to ferment for 1-hour, turn the dough out of the bowl and cut into desired size pieces (16-ounces) place into plastic bags and refrigerate for 24-hours, remove dough from the refrigerator and allow to warm at room temperature for 3-hours, turn the dough out of the bag and pin the dough out to approximately 1/8-inch thickness,dock the dough sheet and drape it over a lightly oiled cutter pan and roll over the top of the pan with a rolling pin to cut the dough into the pan, set aside for

20-minutes before dressing and baking. They bake in a deck oven at (as close as I can see) 500F. Their process closely follows one of the older dough making procedures used back in the 1950's except back then the dough was stored in a bulk contained and a piece of dough was grabbed and pulled off of the bulk piece, it was then taken to the sheeter where the dough was sheeted to thickness and then cut to size.
Tom Lehmann/The Dough Doctor
Re: Pizza Shoppe-style?
6344

Peter;
The way the oil is typically added is as follows: Dry ingredients are first added to the mixing bowl, then the water is added and the mixing cycle started, as the mixing cycle starts the oil is pumped into the mixing bowl and the dough is mixed in their usual manner. This prevents large clumps of oil soaked flour.
Tom Lehmann/The Dough Doctor
Re: What do they use>?
6345

Peter;
I helped them to make the transition from store to wholesale, and I also helped them to set up their pressing parameters. The dough that they use is unique in some perspectives but pretty normal in others, here's what I mean. UNIQUE: They do mix the oil into the flour to achieve a weaker, more tender eating dough characteristic. They can get away with it to an extent due to the high speed mixing that they employ. PRETTY NORMAL: The dough is then divided and processed (pressed) without any human hands touching the dough. Any stickiness the dough might have is negated by the addition of oil.
If you look at the nutritional facts panel on commercially made frozen pizzas more often than not you will see high calorie counts from fat as well as high salt levels. This is pretty normal for this type of pizza, but to the credit of the industry, some manufacturers are beginning to address this by reducing fat and salt (sodium) levels in their pizzas as consumers demand healthier foods.
Tom Lehmann/The Dough Doctor
Re: What do they use>?
6346

Peter;
What you end up with is a bunch of gray colored oil that is oil soaked. Because gluten is formed when two of the wheat proteins, (glutenin and gliadin) are agitated in the presence of water, and the water, in this case will not displace the oil that has soaked into the flour, a good portion of the flour is incapable of providing to the gluten matrix, as a result the doughs are wet and somewhat sticky not to mention lumpy if mixing is not vigorous enough to break up those lumps of oil soaked flour. The shortening or solid fat, as it is called, works because it does not soak into the flour, instead, it only coats the outside of it which still allows for the flour to be hydrated to form gluten. Going one step above the Blitz method as I described, commercial producers use hard fat flakes (kinda look like those old soap flakes),and they mix these into the dough just about 4-minutes prior to the end of the mixing time. They can get away using the fat flakes in this manner because those flakes are so hard that they are almost impossible to work into the dough as can happen with shortening if it is mixed too much. Those hard fat flakes then melt during baking and the fat is absorbed into the surrounding dough. The holes

remaining serve the same purpose as the chunks of shortening, to give a pastry like appearance and to some extent mouthfeel/eating characteristic.
Tom Lehmann/The Dough Doctor
Re: What do they use>?
6347

Absolutely right, all oils impact the dough, or should I say the "flour" in this manner. Shortening is a whole different matter as the crystalline nature of the shortening prevents it from being absorbed by the flour, unless it is melted, and in that case it now acts like an oil.
Tom Lehmann/The Dough Doctor
Re: What do they use>?
6348

Peter;
We continue to use pomace oil as our main "go to" olive oil in our annual pizza seminar. The question was also raised if the oil had any influence on the browning properties of the crust or the way the dough absorbs water. While there may be slight differences in color attributable to the source of oil, the color variance is well within the normal for color variation with normal baking properties, so for all practical purposes, the type of oil has no real impact upon crust color characteristics. However, we do know for sure that oil can/will impact the way the flour absorbs water. We have all heard stories of how the humidity affects the dough absorption, just an old wives tale. But, if you put the oil and water together in the bowl, and then add the flour, the oil floats to the top of the water where it contacts the flour and promptly proceeds to soak into it, rendering the proteins responsibly for forming gluten ineffective in that important role. Remember how/why you make a rue when making gravy? Same thing happens here. When this happens, the doughs take on a different feel due to the difference in gluten development. To correct for this condition, I developed a mixing procedure (called the delayed oil addition method) where the oil is not added to the dough until the flour has had a chance to hydrate on the water, which is typically about 2-minutes into the mixing cycle for 60 and 80-quart size mixers, the oil is then added and incorporated into the dough without any problems due to interference with gluten development.
Tom Lehmann/The Dough Doctor
Re: What do they use>?
6349

An excessive amount of cornmeal on the peel will create problems as described as will an excessive amount of any kind of dusting flour. It might have something to do with the way you are opening/handling the dough. I always use plenty of flour when opening the dough into a pizza skin, but then I pick it up and give it a toss or two, if you elect not to toss it, try brushing the excess flour off of one side then flip the dough piece over and brush off the other side, with that done, immediately place the pizza skin onto a lightly dusted peel (my personal favorite peel dust is made from equal parts of semolina flour, regular flour and fine cornmeal. Once you have the skin on the peel, give it a few shakes to ensure it is free from the peel, now dress the skin and take it directly to the oven, in some cases I've been known to give the peel a couple shakes while I'm dressing the skin just to make sure it is not adhering to the peel. I have both wood and metal peels and of all my peels, the wood ones work best as a prep peel. The solid aluminum peels are best relegated to use an an oven peel. A good wood prep peel is, in my opinion, worth its weight in

gold. There have been a number of excellent discussions on the use and making of wood peel here.
Tom Lehmann/The Dough Doctor
Re: Burning Cornmeal Help
6350

SG;
If you are asking what do most pizzerias use for fat, that will get you a mixed bag of answers. Some pizzerias use nothing but pure olive oil, for others that is too expensive, or doesn't provide the flavor profile their customers are looking for so they will use any of the following: canola oil, corn oil, and common "vegetable" oil. Others who want the flavor of oil but not the associated cost will use a blended oil typically consisting of about 20% olive oil and 80% canola oil. The blended oil is probably the one most commonly encountered. In a few places butter, margarine or lard are used, but these are by far the exceptions.
Tom Lehmann/The Dough Doctor
Re: What do they use>?
6351

A couple of other things come to mind. Try eliminating the sugar entirely from the dough formula. This will force you to bake the pizza a little longer to get the bottom crust to color up resulting in a more robust bottom crust characteristic. Also, you might be stretching the dough skin a little too thin across the center section. This can give you a condition where the crust is initially crispy, but very quickly turns soft and soggy.
Tom Lehmann/The Dough Doctor
Re: Soggy in the middle
6352

Is there a possibility that the stone might be too thin and not storing sufficient latent heat to bake the bottom of the pizza? Remember we're only looking at a baking temperature of roughly 465F. Once you suck the heat out of the stone it won't recover much during the baking time of a pizza.
Tom Lehmann/The Dough Doctor
Re: Cooking underneath of pizza
6353

Gene;
Most health departments take less than a positive view on wood and food coming into contact with each other. We have seen this in the bagel industry where wood bagel boards were used since the first bagel was made, but now they are relegated to relics that are hung on the wall. Bakers used to use wood troughs (the bacteria in the wood would inoculate the dough to retain specific flavors similar to using a starter) but alas, these are gone too. Now they are looking at wood table/bench tops and it looks like they are on their way out too. I realize that the wood dough boxes are great, and for the most part they are as safe as anything, but as you know, you can't argue, or reason with your local health department. Been there, done that, never won one yet!
Here is a classic: We're making creme filled bismarks, you see them all the time. Health inspector says we need to refrigerate them, I ask why? He says "Because they contain CREAM. I say "no, that's wrong, they are only called CREME filled, as in the fact that they use a CREME filling". He says "Doesn't matter, they are CREAM filled" I pull out the bucket of prepared CREME filling that plainly states

"Does not require refrigeration after opening" and then I show him the label, it reads basically, water, emulsifier, stabilizers, food gums,citric acid, artificial color, artificial flavor. He points to the label and says "Right here it says Bavarian CREME Filling". Sometimes you just can't argue with intelligence at that level and expect to win. So be it with wood.
In the home, it is an entirely different matter, as at this time we can still pretty well do what we want to.

Tom Lehmann/The Dough Doctor
Re: Poor Man's Proofing Boxes
6354

Gene;
These are OK to use for home use, but be aware that in a commercial setting, such as in a pizzeria, most, if not all health departments will require that they be made of a plastic that is approved for food contact. Also, it cannot be made of a hard plastic. A common health department violation is one where we go to Walmart and buy a roll of plastic trash bags for use in covering sheet pans of dough balls. Since the bags are not stated as being approved for food contact, it becomes an issue. It's this way with a lot of the cleaning supplies too where you can't use it if you don't have a MSDS on it. Life is truly interesting at the store level, but a lot more fun and less stressful at home.
Tom Lehmann/The Dough Doctor
Re: Poor Man's Proofing Boxes
6355

Dave;
I'm very familiar with the problem that you are having. Pressed pizza doughs require a VERY relaxed dough in order to press out without the dough snapping back excessively. Our normal approach is to add a reducing agent to the dough to weaken it, thus reducing the snap back. Reducing agents that are commonly used are L-cysteine at 20 to 60 parts per million (based on total flour weight), PZ-44 <www.foremostfarmsusa.com> which is a blend of dairy whey and L-cysteine, and because it is diluted into the whey the use level is typically given at 1 to 2% of the total flour weight, and then there is "dead yeast" this is a commercial product made up of dead yeast which contains the amino acid glutathione, a substance very similar to L-cysteine. Many yeast manufacturers offer this product. The normal use level is about 2% of the total flour weight. While sulfites and protease enzymes can also be used as reducing agents we don't normally recommend their use in this application. The sulfites also impact yeast activity by slowing it down and the enzyme approach can't be turned off, so the dough just keeps getting softer and softer until it is finally baked. Other options that could be explored are the use of milk to replace the water. Do not scald the milk prior to use. The unscalded milk contains specific proteins which can also impact the dough by making it softer and weaker, and that's what we're looking for. But be aware that the milk may cause the crust to bake out to a darker than desired color. Possibly the least offensive action that you can take would be to maximize the dough absorption (use as much water as you can while still being able to handle the dough, and then rounding the dough into balls , coating the dough balls with salad oil and placing into individual plastic bags, like bread bags. Twist the open end of the bag to close and tuck the pony tail under the dough ball as you place it into the cooler to cold ferment at least overnight. On the following day, remove the dough balls from the cooler and allow them to temper AT room temperature for about 2-hours, then turn the dough

ball out onto the press platten and press the dough ball out into a pizza skin. As you pick up the pizza skin from the platten and transfer it to a screen, disk or peel you can adjust the final shape and size of the skin pretty easily. The key here is to make sure the dough has been well fermented and receives a minimum amount of handling after the fermentation period, this is why the bag method works better in this application than the dough box procedure since you run the risk of over handling and tightening the dough ball as you work it out of the plastic dough boxand transfer it to the press platten.
Tom Lehmann/The Dough Doctor
Re: Dough won't stay stretched.
6356

PB;
Yes, that would be the black Dura Coat finish. Doing the math, your 12 X17 pan is 204-square inches (L X W)
and the 13 X 18 is 234-square inches, a difference of 30-square inches (larger) so, dividing 30 by 204 we get a 14.7 (call it 15%) increase in pan size, so if you're making one dough for one pan, you will need to increase your dough size by 15%. If you have dough left over after filling the pan, then you will need to go with using the "dough factor" method for calculating the weight of dough needed for the new pan size. In this case you would divide the dough weight used with the 12 X 17-inch pan and divide that number by 204 (the surface area) to get your dough loading factor aka dough weight per square inch of pan surface area. Now all you need to do is to multiply the dough factor by the square inches in your new pan size (234) and you will get the dough weight needed for your new pan. Here's a neat trick, put your dough formula into bakers percent and add up all of the percentages (you'll probably get something around 164), move the decimal point two places to the left so now you would see 1.64 and divide the total dough weight by this number, the result will be the flour weight needed to make your new dough size, once you have the flour weight the rest is easy to calculate the amounts of each ingredient. Or, you can just use the conversion tables.
Tom Lehmann/The Dough Doctor
Re: Steel Pan Woes... Suggestions?
6357

I'm not familiar with "pizza Yeast" but I am very familiar with IDY. Most forms of IDY contain some ascorbic acid to counter the softening effect of the glutathione present in all forms of dried yeast (less in IDY than any of the other forms), but there is also one, I want to say it is SAF Green Label IDY that does not contain the ascorbic acid, so it will exhibit a slight softening effect upon the dough, possibly making it a little easier to open into a pizza skin.
Tom Lehmann/The Dough Doctor
Re: Fleishmann's Pizza Yeast
6358

Just as an FYI, both onion and garlic contain a compound that will catalyze the pectin in the tomato causing it to gel/thicken to the point where it takes on the appearance of tomato jelly rather than pizza sauce. Yes, it does the same thing to pasta sauce too but because we typically cook a pasta sauce we add enough water to compensate for the thickening and evaporation so we don't usually recognize it as a problem. To correct the problem in pizza sauce, or any tomato based sauce all you need to do is to "nuke" the onion and/or garlic in a little water until it comes to a boil (you're actually looking for a temperature of about 180F) but 212F, or close

to that won't hurt anything, assuming you're at or reasonably close to sea level. Once the onion/garlic is heated to this point it can be added to the sauce without visions of it turning into tomato jelly.
I am also an advocate of using fresh onion and garlic, but if I must use a dried form, I really think the onion flakes provide a better overall flavor than the onion powder.
Tom Lehmann/The Dough Doctor
Re: Onion Powder vs. real onions
6359

I made a couple of pizzas a number of years ago using a similar formula. It went from concept (LET'S MAKE PIZZA) to a finished product (PIZZA) in well under an hour, if I remember correctly we had those pizzas on the serving table in something like 38-minutes (included scaling, mixing, rest period, if you want to call it that, forming, dressing and baking). OK, it was pizza, but don't ask me about the flavor of the crust. Thank goodness the sauce, cheese and toppings had, and provided, some flavor.
Tom Lehmann/The Dough Doctor
Re: Pizza in an hour
6360

We have made the PH type of deep-dish pizzas many times and we have found that with our dough formulation, using a dough temperature of about 55F (our dough was cold fermented for 24-hours, then removed from the cooler and allowed to temper at room temperature for 2.5-hours before being rolled and panned) requires a final proof time of 70-minutes for optimum results. Our old PH pans even have a line stamped into the side of the pan indicating the height the dough should be allowed to proof to before dressing and baking. Keep in mind that proof times will vary with dough absorption, dough temperature, and yeast level so some experimenting will be needed to find the proof time that works best with your dough formulation and procedure.
Tom Lehmann/The Dough Doctor
Re: Dough Prep Question
6361

Mark;
You are absolutely correct in stating that "launching" the pizza can in effect, rearrange the toppings on a pizza. A good oven man will know how to both launch and shake a pizza skin off of the peel. Shaking is used when you either don't have the needed room to launch (one motion into the oven and a reverse motion pulling the peel out of the oven, hopefully leaving the dressed pizza skin behind in a recognizable shape or form) while shaking the dressed pizza skin off of the peel is just a rapid series of short, back and forth strokes that result in walking the dressed skin off of the peel. We use this method commercially when we are putting that last dressed skin into the oven. and the only space for it is surrounded by other pizzas being baked. I normally begin the peel motion outside of the oven and continue it until the dressed skin has safely left the peel. One thing to note is that successful launching should actually begin with the more gently shaking of the dressed skin on the peel outside of the oven, the only real difference in in the last stroke (launch) or strokes (shaking).
Tom Lehmann/The Dough Doctor
Re: Do toppings migrate towards the middle of the pie during baking?
6362

The last time I saw Naan being made it was when I was in Yemen. A lady would dip her arm into a tub of water, wipe her hands, and then lightly oil them, she would then pick up a dough ball (if you want to call it that) and press the dough against the inside wall of the oven, which by the way was heated by burning cardboard. To remove the baked bread she used two long sticks, like drum sticks, or fryer sticks and holding them much like chopsticks, she deftly removed them from the oven and placed the hot bread into a wicker basket. The reason for putting her arm into the water was to prevent getting burned as she was reaching elbow deep into the oven, but using cardboard to fire the oven wasn't exactly the best thing to do to my liking as all of the Naan had a rather distinctive cardboard like taste, but then her daughter was selling it as fast as her mother could fish it out of the oven. Your oven looks a whole lot more practical. Nice looking Naan!
Tom Lehmann/The Dough Doctor
Re: Naan in a Home Tandoor
6363

Gene;
Yes on both counts, yes they are expensive, and yes they are worth it. You can safely soak them in hot soapy water, then scrub them out using a plastic bristle brush, rinse, and sanitize, then wipe dry and if you want, give them a quick pass through the oven to thoroughly dry and be ready to reuse the pans. You can't soak the seasoned pans as this will result in the seasoning peeling off like a bad sunburn (been there, done that, pictures available upon request). I would suggest getting one or two pans to experiment with, and let the pans sell themselves. Be sure to request the black anodized, non-stick finish. In our annual pizza seminar we do a simple test with these pans where we forcefully scrub the edge of a quarter across the pan (back and forth numerous times). The only damage that occurs is to the quarter where a flat spot has been created on the edge of the quarter. I can only account for these pans lasting close to 20-years as that is how old some of ours are, and they are still in great shape. As for baking quality, they bake as good as the best seasoned and blued steel pans, and better from the "get-go" since you don't need to wait for the seasoning to cure. With the Lloyd pans you just wash them when you get them, dry thoroughly, oil lightly with the first use, and then either don't use oil for a baked appearance/texture, or use oil in the pans for that fried texture and appearance.
Tom Lehmann/The Dough Doctor
Re: Steel Pan Woes... Suggestions?
6364

Welcome Jim, I'm only 140-miles or so west of you in Manhattan.
Tom Lehmann/The Dough Doctor
Re: Jim from KC
6365

Gene;
I believe it is NY, MA, and CA where they are really keen on carbon in food. Seasoning on a pan = polymerized and carbonized oil. At one time MA did not allow the use of seasoned pans for that very reason. I don't know the current state regs at this time. This is why anodized pans became so popular. Some of the anodized pans are also non-stick, such as those supplied by Lloyd Pans <www.lloydpans.com> with these types of pans you can still use the oil in the pan to achieve the fried effect, but unlike seasoned pans, you can also soak them in hot

soapy water to clean without destroying the pan finish. Unlike other non-stick coatings the anodized coatings do not wear off. We have a good number of them in our inventory that have been in use for over 15-years without and deterioration of the non-stick coating. BTW: Steel wool is not a good thing to use on any seasoned pan as it will scrub off the seasoning, resulting in the pizza sticking to those surfaces. That sticky feel that you mentioned is perfectly normal on a spun steel pan. As you continue to use the pan (just a couple bakes are needed) the seasoning will continue to harden into a brown/black finish that we see on so many of the old, well used bakery pans in use in many of the retail bakeries.
Tom Lehmann/The Dough Doctor
Re: Steel Pan Woes... Suggestions?
6366

When using steel pans we typically season them with canola oil, and after several bakes when the pans have turned to a darker color (both inside and out) we will always add a small amount of oil to the pan to help the dough/crust release, additionally, this also allows the pan to continue seasoning, developing an ever darker color (some of our pans are essentially black in color both inside and out). Our experience is that you will always get a better bake if you add at least some oil to the pan for each bake. This is because the oil improves the heat transfer between the pan and the dough. Additionally, a number of years ago we looked at shortening (like Crisco) v/s oil in the pan. We found that in all cases the oil provided for a firmer, crispier bottom crust than did the shortening. A lot of people have commented on the crispiness of the Pizza Hut deep-dish pizzas. This is accomplished through the addition of oil to the pan prior to baking, making the finished crust closer to fried than baked
Tom Lehmann/The Dough Doctor
Re: Steel Pan Woes... Suggestions?
6367

My own personal experience has been that when I bake two pizzas at a time I usually end up with an atypically long baking time. I attribute this to the fact that I'm baking on two oven shelves (two different heights in the oven) so they end up baking differently, this necessitates the need to open the oven door more frequently, thus losing heat from the oven (especially top heat). I also find that I need to turn/rotate the pizzas more frequently with two pies in the oven. It just seems to be more of a balancing act when I bake two pizzas at a time than when baking only one pizza.
Tom Lehmann/The Dough Doctor
Re: Oven Adjustments
6368

Peter;
You are correct in the order of dominance for the ingredients, with a single caveat, the 2% rule. This states that once an ingredients is at or below the 2% level it no longer need to be shown in the order of predominance. With a lot of baked items you can use salt as a marker, that is; salt is typically used at about the 2% level, so for any ingredients listed before the salt, it's a good bet that it will be used above the 2% level. In pizza though, salt is rarely used at that high of a level due to all of the other salt contributions, so my feeling is that oil might be a better indicator for the 2% level.
Tom Lehmann/The Dough Doctor
Re: pizza hut thin crust???

6369

Yep, I'm familiar with that pizza, affectionately known as "quick stop pizza". A good formula for making it is as follows:
Flour: Superlative or equivalent (12.5% protein content) 100%
Salt: 1.75%
Sugar: 2%
IDY: 0.4% or ADY: 0.5% or CY: 1%
Blended oil (20% olive oil + 80% canola oil) 3%
Water: (65F) 60%

Place water in mixing bowl, add salt, sugar then the flour, add yeast on top of the flour and mix for about 2-minutes at low speed or just until you don't see any dry flour in the bottom of the bowl, then add the oil and mix for 1 more minute at low speed. Finish by mixing for 8-minutes at medium speed, or if you can't mix the dough at medium speed, go for 12-minutes at low speed. Target finished dough temperature is 80F. Immediately take the dough to the bench and scale 13-ounces for a 12" crust (dough weight factor of 0.1150442) or 0.1150442-ounces of dough per square inch of surface area). Form the cut dough into balls, place into plastic dough boxes, wipe each dough ball with salad oil, cross stack in the cooler for 2-hours, then nest/cover and allow to cold ferment for 24 to 72-hours. To use the dough, remove some from the cooler, keeping it covered, and allow to temper AT room temperature for 2.5-hours, then pass through a sheeter.dough roller to open the dough to 66 to 75% of the desired diameter, finish opening the dough up by hand to full diameter, or if you're good at it, you can open the dough up entirely by hand. Place the opened pizza skin onto a well seasoned wire screen, dress the skin as desired, and bake at 450 to 475F until golden brown, remove the pizza from the screen and "deck" it. This is where the pizza is removed from the screen and allowed to finish baking for the last minute right on the oven deck.
This should come pretty close to what you are looking for.
Tom Lehmann/The Dough Doctor
Re: Looking for Better Pizza Dough Recipe
6370

Morgan;
There is a distinct possibility that the "00" flour that you are using isn't treated with malted barley flour (malted), if you still have the original bag you bought it in check the label to see if it says anything about malting/malt. If not, you may want to add some sugar or diastatic (enzyme active) malt to the dough formula. Most diastatic malt preparations are rated at 20 degrees L. so in this case the proper amount to add would be between 0.25 and 0.35% of the total flour weight. Keep in mind that as you increase the durum flour content the finished crust may become more chewy, especially after 10 or 15-minutes out of the oven. We have found this to be somewhat of a problem in doughs containing over 25% durum flour, but otherwise, the durum flour will also contribute to added crispiness of the baked crust when fresh out of the oven.
There is a current thread here on organic flour that addresses this same potential issue.
Tom Lehmann/The Dough Doctor
Re: Mixing durum&Tipo-00
6371

Tom;

I've been using a very similar (almost identical) method for making pizza and bread doughs ever since I studied bread making practices in Romania almost 40-years ago. It works like a charm, and the 60 to 65% dough absorption is about right. We refer to the process as "biochemical gluten development". The only thing kneading or use of a mixer really accomplishes is faster gluten development, however faster gluten development goes bring some baggage in the form of a tighter, more springy dough that has to be addressed before the dough can be given its final shaping. I spent a good part of the Holidays this year at our son's home in Kansas City and during that time I made breakfast rolls, dinner breads, pizza and calzones all using this dough making process because it required so little of my time.
Tom Lehmann/The Dough Doctor
Re: No Kneading Pan Pizza Dough???
6372

In addition to the lack of malt in the flour, there might also be a difference in flour/dough absorption properties between the two flours which could also contribute to the difference in oven spring properties as well as the bottom crisp. The best way to determine this would be to make doughs with 3% more and 3% less water/absorption and see if there is any apparent difference or improvement.
Tom Lehmann/The Dough Doctor
Re: Going organic and getting a bit more rise
6373

I've worked on wood, marble and stainless steel, and my preference is for stainless steel. It is a snap to clean, and the dough really handles well on it for my way of opening the dough into pizza skins. I like to push the dough out to size on the table top and finish with a toss or two. The dough slides well on the stainless steel top but exhibits too much cling to the wood top. The marble top is also great, but more expensive.
If you opt for a wood top, the perferred oil to treat the top with is white mineral oil. The oil is applied after the top is scraped and damp wiped, then apply the oil liberally and allow it to soak in (overnight) then wipe off any excess and you're good to go again.
Tom Lehmann/The Dough Doctor
Re: Dough Stretching Prep surface
6374

JD;
We raised two boys, both are young men now and very successful. I always made it a point to make sure I would spend as much time with them as I possibly could when they were young. Fishing, boating, hiking, nature studies (walking nature trails), and then as they grew older more fishing and outdoor things and we attended every sporting, school and church activity they were involved in. I always made it a point to emphasize that there were winners and losers, and that there was nothing wrong with being either one (that's one of life's realities that we don't teach our kids anymore), along the same lines I always said that there were leaders and followers, the leaders get to take a lot of the credit, but they are also burdened by a lot of the blame when things don't work out just right, while followers are pretty well exempt from both, again there is nothing wrong with either, they just need to make the decision as to what they want out of life. My work requires a lot of travel, but until the boys were out of college, I never allowed my travel schedule to exceed 25%. Above all else, remember, you and your wife are going to set the examples they will grow up and live by. Have fun and enjoy every moment it.

Congrats!!
Tom Lehmann/The Dough Doctor
Re: Soon to be new Dad: Looking for wisdom
6375

Bruno;
When baking in my conventional home oven I use my pizza stone. Thin crust pizzas are baked at approximately 550F in a center rack position, while deep-dish pizzas are baked at 450F using an aluminum screen between the stone and the pan. If I try to bake the pizza entirely on the stone I always end up with too much color on the bottom crust. Typical baking time for my pan style pizzas run about 18 to 20-minutes.
Tom Lehmann/The Dough Doctor
Re: help me dough dr.!!!
6376

If your scale has the tare capacity I like to put some of the flour in the scale pan, then weigh the starter directly onto the flour, then add directly to the mixing bowl...no loss of anything.
Tom Lehmann/The Dough Doctor
Re: Weighing preferment starter - technique?????
6377

We have looked at delivery bags from time to time and while there is some difference between bags of different manufacturers, the biggest difference that we found was due to the number of pizzas in the bag. Using 140F as the cut-off temperature, we found that a single pizza in a bag sized to hold a single pizza was good for about 30-minutes at most, while two pizzas in a bag sized for two pizzas was good for about 45-minutes. When we did three pizzas we got something close to an hour. Keep in mind that this was for conventional bags. If you use one of the high-tech bags with the heated ceramic disk I'm betting that you can best these numbers. You will need to do the work to find out what those times are though as we have not done any studies using any of these bags.
Tom Lehmann/The Dough Doctor
Re: delivery bag question
6378

Chaz;
I think another way of looking at it might be as follows;
Levain as shown is made with 250-grams of total flour weight and 50-grams of mature active levain or 20% of the flour weight in the levain is mature active levain. Then on the dough side we have 900-grams of total flour weight and 180-grams of the levain or 180 divided by 900 X 100 = 20%, so in this case we are using levain at 20% of the total flour weight in at the dough side.
Tom Lehmann/The Dough Doctor
Re: Using a starter instead of ADY
6379

To get the full benefit from the starter you should use the starter to provide all of the leavening for your dough. If you use both starter and yeast, there is a high probability that the yeast will become the dominant microflora in the dough, resulting in more of a yeast leavened flavor in the finished product rather than the unique flavor provided from the starter which is developed through both yeast

(wild yeast) and bacterial ferment (some form of lactic acid forming bacteria). You will need to experiment with the amount of your starter to determine how much will be needed to provide both flavor and leavening leavening to the dough. Some starters are quite active so only a relatively small amount is needed (5 to 15%) while others are less active so more (20 to 30%) is needed. These percentages are based on the total flour weight.
Tom Lehmann/The Dough Doctor
Re: Using a starter instead of ADY
6380

Pizza Expo is a great show to attend and also a great pizza experience. True, it is focused on the owner/operator rather than the home pizza baker, but the science behind both forms of pizza making are essentially the same. There is also a wealth of information on suppliers of both ingredients and equipment, and the reference materials that you will pick up on the show floor will be an asset to you for years to come.
I would highly encourage anyone to attend. Additionally, if you are located east of the Mississippi River, take a look at the NAPICS (North American Pizza and Ice Cream Show). It is held in Columbus, Ohio around the end of February. It is a very low cost show to attend, with a lot of suppliers to the pizza industry (bring some pocket change too as you can buy some equipment right off of the show floor at this show). They also have seminars at a very low cost just like Pizza Expo. We used to do a Test Kitchen there but this year we will not be attending, but still a great show to keep on your radar. For information on this show contact the Ohio Restaurant Association at their website.
Tom Lehmann/The Dough Doctor
Re: Anyone attended the Pizza EXPO in Las Vegas???
6381

We do it all the time when we are testing dough ingredients or different dough experimentals. We go through the entire process of making the dough and then when we are ready to dress the pizza skin we use only tomato sauce but we do use the cheese that we plan on using with the finished pizza. This way we can determine what the optimum bake time and temperature is (reasonably close).
Tom Lehmann/The Dough Doctor
Re: Can you make the dough and bake it without making a pizza
6382

What is your finished dough temperature? Too high of a finished dough temperature can result in excessive acid formation in the dough. Typically, we see temperatures of 65 to 70F used where long cold ferment periods are employed. That said, if you still want to reduce the acidity of the dough you might include a buffer in the dough as an ingredient. Calcium is an excellent buffer, so you might look at using calcium sulfate, or even something as basic as milk or yogurt which are good sources of calcium. The calcium will buffer the acid formation, making for a less acid dough in the long run. This is why antacids such as Tums contain calcium.
Tom Lehmann/The Dough Doctor
Re: cold rise acidic control
6383

It all depends upon the size of dough that you are making. In a commercial setting we are making upwards of 80-pounds of dough at a time. It is all but impossible to

uniformly cool this dough as a single piece, but when subdivided into individual dough balls, it can be uniformly cooled without much problem, what this means is that all of the dough balls will be the same with regard to dough performance and finished crust quality. In a home setting, some refrigerators can cool a 3 to 4-pound dough ball without much problem, while others will struggle, so in this case dividing the dough into individual balls prior to placing it into the refrigerator will result in more consistent cooling of the dough. What this means to you is that when you make the dough again and manage it in the same manner, it will perform very similarly to the way it did previously. It is done in the name of consistency. I have also found that when I make my dough balls right after mixing and place them into individual plastic bread bags, I can turn the dough ball out of the bag into a bowl of dusting flour and open it into a pizza skin more easily than I can an irregularly shaped piece of dough. Yes, I could form those irregularly shaped dough pieces into balls and set them aside to rise again, but that takes additional time which I don't always have.
Tom Lehmann/The Dough Doctor
Re: Cutting into dough balls after kneading
6384

Deactivated or dead yeast is used both as a flavoring agent (no, it does NOT provide a yeasty flavor), and as a reducing agent, similar to L-cysteine (PZ-44) to both shorten the mixing time of the dough and provide greater extensibility in the dough for easier forming, especially under commercial (large scale) production/processing parameters.
Tom Lehmann/The Dough Doctor
Re: deactivated yeast
6385

There is no problem in cutting the dough into balls immediately after kneading/mixing. This is how it is commercially done. Yes, the elasticity is affected by the length of time the dough is fermented. The longer the dough is allowed to ferment, to a degree, the softer and more extensible it becomes, then at a certain point, the dough becomes what is referred to as "bucky" or tight, lacking extensibility.
Tom Lehmann/The Dough Doctor
Re: Cutting into dough balls after kneading
6386

From a food safety stand point there should not be any issues with a yeast leavened dough in the cooler, but as the dough ages, even under refrigeration, it continues to develop the byproducts of fermentation (acids, alcohol, and carbon dioxide) and all of these will slowly take their toll on the dough, specifically the protein content. If you can mix the dough cold, and then get it into a cold refrigerator (34 to 36F) two to three weeks is not uncommon. It all depends upon how well you are able to manage the dough temperature as well as the temperature at which the dough is being held. Remember, even just plain yeast has a maximum refrigerated shelf life of 30-days, though significant deterioration will normally take place inside of two weeks refrigerated storage. Since a good deal of the flavor results from a denaturing of protein during the baking process, as a dough continues to age in the cooler, more of the proteins in the flour are damaged and denatured during baking to provide a "different" or changing flavor, which can be a good thing, or it can be a bad thing depending upon your perspective and your likes.
Tom Lehmann/The Dough Doctor

Re: Cold Rise Expiration Dates?
6387

From what we have seen, the answer to this question is yes and no. Yes, the hydration level can impact yeast performance, but once you reach a plateau on absorption, generally speaking about 56 to 58% the effect of additional water in minimal, but what you see is a softer, more fluid dough that responds to the byproducts of fermentation (alcohol, carbon dioxide, and acids) to a much greater magnitude than it would at a lower absorption. IE, the softer dough expands more readily, gets bigger faster and appears to show the effects of greater fermentation, but it's just the softer dough that you're seeing, not more or faster fermentation. It is really pretty complex and would take a small book to do it justice, so this is just a very general summation of what is happening.
Tom Lehmann/The Dough Doctor
Re: Hydration and yeast amounts
6388

I can't sat too much about it but it is a ready made (pre-sheeted) frozen crust that is received from their commissary then slacked out at the store and used as a fresh dough would be.
Tom Lehmann/The Dough Doctor
Re: Donato's
6389

Benji:
Those pizzas look GREAT! Especially the last one.
Tom Lehmann/The Dough Doctor
Re: What type of cheese(s)? And how do my pies look?
6390

Seasoned pans are nothing more than pans coated with oil and baked multiple times until the oil polymerizes, turning into a type of "varnish" and then turning dark/black with continued use. The thing to remember about seasoned pans is that they need to be washed in a special manner. Here's how we recommend washing a seasoned pan: Hold pan in one hand and soft plastic bristly scrub brush in the other hand, dip pan in soapy water and scrub gently, immediately followed by a rinse dip, immediately followed by a sanitizing dip, set the scrubbing brush aside and pick up a clean towel and thoroughly dry the pan (NOTE: The pan has NEVER left your hand up to this point) Now place the pan in an oven to force dry for a couple minutes. Failure to follow this procedure may result in the seasoning peeling off of the pan like a bad sunburn, allowing you the honor of stripping all the remaining finish from the pan and starting all over again...Ugh!
The dark colored anodized finish pans, on the other hand can be soaked in hot soapy water for a few minutes to help soften any debris adhering on the pan, but the truth id the matter is that this is seldom an issue as in most cases you can just wipe off and adhering matter. Why wash in the first place? 1) All pans should be washed to remove any residual oil before being put into extended storage. This is for sanitation purposes, and it will also prevent the pans from going rancid due to the residual oil in the pan. 2) Some place require that all pans used in a commercial food establishment be washed daily, in this case the non-stick, pre-seasoned pans are a no-brainer. 3) If you serve a pizza while in the pan, the pan MUST be washed and sanitized before it can be reused (restaurant application). Lastly, have you seen those commercials for non-stick cookware where the guy

fries cheese in a frying pan, then just lifts it out? The commercial non-stick finish on some of the pizza pans is just that good.
Tom Lehmann/The Dough Doctor
Re: Blackened DD pans
6391

P.A.
I have a Dough Management Procedure that I can send to you. This is a management procedure that is common to a good many pizzerias. You might be able to take a look at it and possibly modify it to meet your specific needs. To get a copy of it just send me a private message I'll be glad to send it to you.
Tom Lehmann/The Dough Doctor
Re: Chilled dough balls
6392

Hi Mark;
Remember, we're all just rendering our opinions. In many cases my opinions are based on over 47-years of experience in pizza, bread, and fermentation research, but in the end, it's still just an opinion just like everyone else's, and that is what makes these web sites so informative, you can get opinions, and guidance based on collectively over 100-combined years of experience on some postings. While it has taken some of us (speaking for myself) over 45-years to learn what I know, a simple question can get you diverse answers from many knowledgeable individuals with highly diverse backgrounds, to just about any question on pizza making you might have, allowing you to educate yourself while getting direction or an answers to your questions, and it's my opinion that everyone has something to add and something to learn here. When I stop learning is when my pulse drops to zero, and being able to contribute is the carrot in front of me to keep me learning, as it should be with everyone here. Knowledge is a terrible thing to waste, so jump right on in any time you are so inclined.
Tom Lehmann/The Dough Doctor
Re: Protocol in replying to the Dough Doctor Forum?
6393

With the fermentation that you are giving the dough I don't believe your kneading is at fault. We have just barely incorporated ingredients into something that more closely resembled oatmeal that a pizza dough, but after 24-hours in the cooler it exhibited very good gluten development due to biochemical gluten development.
Tom Lehmann/The Dough Doctor
Re: Springless Dough
6394

Tyler;
Tow things come to mind. 1) The Durham flour might be slow to hydrate, as such the dough will feel just fine, but then with time it will begin to hydrate and the dough will stiffen up, but since you didn't mention anything about that I'll assume that's not the problem here. 2) You did mention rolling the dough out. Is there a possibility that you are rolling/sheeting the dough too thin? How thin is too thin? 1/8-inch or less might be too thin for a rolled dough. To test this, try hand forming the dough ball into a pizza skin and let's see it the resulting crust looks better. A dough that is rolled too thin will readily allow heat to pass through it where the heat is dissipated as steam from the moisture in the sauce and vegetables (all of which are about 90% water). Sorta like trying to solder a water pipe which still has

water in it. One other thing comes to mind too, 450F seems a might cool unless you're baking for an extended time. Can you bake at a higher temperature?
Tom Lehmann/The Dough Doctor
Re: Springless Dough
6395

LM;
No difference in flavor is attributed to the brand of yeast. This is by design of the yeast manufacturers allowing bakeries to have multiple suppliers.
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Recipe
6396

La Sera;
All purpose flour can run from a low of 9% protein to a high of about 10.5/11.0% protein content. While all purpose flour works well, research that we have done here at AIB International has shown that the higher the protein content, the crispier the fried coating becomes. Without knowing what your customers are looking for in regard to crispiness of the fried coating, I would suggest that you fry up several chicken pieces coated with each of your different flours and choose the one that you like most. Do keep in mind though that there is a limit to the crispiness that can be imparted by the flour. If you go too much above 12.5% protein content in the flour you might run into what we refer to as a "flinty" fried coating. This is where the fried coating becomes so hard that it must be chewed/ground on ones molars, akin to trying to eat a china plate.
Tom Lehmann/The Dough Doctor
Re: Flour question for The Dough Doctor...
6397

Not so long as there is dough in it.
Most pizzas baked in a pan will be best baked at temperatures of 400 to 475F for the most part. Sure, you can put them into a 1000F oven but all you will get is a pizza that is possibly done on the top and raw on the bottom. Since the pan is a heat sink you must be able to heat the pan first, then the dough inside the pan all the while the top of the pizza is baking, hence the typically lower baking temperatures employed when pans are used.
Tom Lehmann/The Dough Doctor
Re: What depth pans do I need?
6398

LM;
Snap-back, or excessive dough memory is what you are experiencing. It can result from insufficient water, yeast, or dough temperature, just to name a few things. Your yeast level looks good, but ADY must be hydrated in warm (100 to 105F) water (just a small portion of the total water is all that's needed to do this), then add the yeast to the cold water in the mixing bowl, no need to stir. Add the flour, salt and sugar to the flour, and begin mixing just until the flour is hydrated (wet), then add the oil. This will provide optimum yeast performance. Check your finished dough temperature, it should be in the 85 to 90F range for most home made pizzas, unless you plan to hold the dough more than 2-days in the fridge, in that case go for a finished dough temperature closer to 80F. After at least 24-hours in the fridge, bring the dough out, keeping it covered, and allow it to temper AT room temperature for about 3-hours, then turn the dough out of its container into a bowl

of dusting flour and you're ready to begin opening the dough up into a pizza skin.
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Recipe
6399

Also, you won't know what kind of flavor the starter will impart until you actually bake something with it. This is because it is anybody's guess what kind of microflora is being cultured. If you like the flavor imparted by the SD be sure to split it up into multiple containers in DIFFERENT locations and regularly feed each one on the same schedule. This way if you loose one batch of starter you can always use another as an inoculate to start another SD with the same microflora.
Tom Lehmann/The Dough Doctor
Re: help with a grape starter
6400

GC;
Your total dough absorption figures out something close to 66%, as you are trying to duplicate a commercial (pizzeria) type of pizza, I would add that very few pizzerias use an absorption much above 58 to 60%. They do this for ease of handling. Based on this, you might begin by reducing the amount of water you use to about 60%, or 10.5 to 11-ounces. This will give a less wet and sticky dough which should handle better and possibly come closer to giving the product you are looking for. Also look at your baking time and temperature as a longer bake at a lower temperature typically results in a crust that is both crispier and one that holds its crisp for a longer time after baking.
Keep us posted on your progress.
Tom Lehmann/The Dough Doctor
Re: help me dough dr.!!!
6401

Huuuuuh??
Somebody please tell me this is just a spoof!
In Chicago a party slice (squares) is the norm for thin crust pizza from the indies and regional chains. If he wants a wedge (pie) cut all he needs to do is to go to one of the box chains. There is a reason why they use the party cut in Chicago for the Chicago thin crust pizza, it is so soft that it would be almost impossible to pick up and eat in any other shape. Fact is, when eating a Chicago thin crust it is perfectly acceptable, and in good manners, to fold the square in half, kinda New York style as this allows one to pick up the pizza slice (square) without dumping the toppings.
Tom Lehmann/The Dough Doctor
Re: Retired engineer-- perfect way to slice a pizza
6402

Cool!
Waaaaay Cool!!!
Tom Lehmann/The Dough Doctor
Re: Ev's Neapolitan Camper
6403

Woody;
Which burb?
I'm a "South Sider" from Tinley Park.
Tom Lehmann/The Dough Doctor

Re: New member in the Chicago burbs
6404

Letterpress Man;
Keep in mind that there is no standard for "Hi-Gluten" when it comes to flour. We have tested some HG flours and found them at between 10 and 11% protein content, while others are at 12 to as high as 14%, especially for the commercial flours such as All Trumps, Remarkable, Big Spring, Power, Regal, Gigantic, Hi-Rise, and Dominator, to name just a few. I agree with Norma, and I'll go so far as to say that regardless of what it says on the bag, if the flour works for you, it's the right flour for you. By all means shop around and evaluate different flours, experimenting is half of the fun of making pizza, the other half is eating your creations, and as I've been known to say, "don't worry about making mistakes, they'll taste good too".
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Recipe
6405

Jim;
I think what you are looking for is Stanislaus Full-Red Extra Heavy Tomato Puree.
Tom Lehmann/The Dough Doctor
Re: Looking for a place to order Full Red pizza sauce
6406

Why Norma, you're just a youngster!
I've got ya beat by 3-years.
That don't make us "old" by any stretch of the imagination though, it just, on our resumes we can put "has vast experience".
It must be something about pizza that keeps us so young!
Tom Lehmann/The Dough Doctor
Re: dough
6407

Mark;
Hydration percent should always be based on the actual weight measures.
Tom Lehmann/The Dough Doctor
Re: volume vs weight %
6408

That big wood mixing bowl looks a whole lot like one we have in our baking museum, the only difference is that ours is a lot older. It served the same function though. The neat thing about wood mixing bowls and wood dough troughs (commonly used here in the U.S. until the 50's especially in cracker production) was that they would hold bacteria (lactic acid forming bacteria/lacotbacillis) and inoculate the dough that was placed into them much like we would use a sourdough starter today. When the cracker industry moved away from the wood troughs they had to identify the specific bacteria, culture it, and add it to the dough to get the same finished flavor profile that they had with the wood troughs.
As for mixing the dough without power, there is a pizzeria in the Pittsburgh area where the owner has a long stainless steel trough, he measures out his water in a pail, adds it to the trough, adds flour, salt and sugar, then wets his hands and arms and spreads cake yeast over them as one might use soap, he then proceeds to hand mix the dough just until it comes together, after that he allows biochemical

fermentation to do the rest of the work for him. It is quite a store, people come in just to watch him make his dough.
Tom Lehmann/The Dough Doctor
Re: Dough Trough size?
6409

I agree with Tom N. that lack of sufficient fermentation is probably responsible for the finished crust tasting too much like bread.
Also, look at the amount of fat and sugar used in the dough formula/recipe. If the fat level is too high, (above 2%) the finished crust flavor can be compared to that of bread, be sure the fat you're using is olive oil to give the crust a different flavor, too much sugar can also be a cause. Try making the dough without any added sugar and cold ferment for 24 to 48-hours to see if that addresses the problem. Lastly, insufficient salt in the dough can have an impact upon flavor of the crust. We typically look for salt levels of around 1.75 to 2% of the total flour weight.
Tom Lehmann/The Dough Doctor
Re: dough tastes like bread
6410

My own personal comments:
From the look of the picture (white colored crust with highly contrasting char, actually beyond char. My gut feel is that the dough may well have been over fermented to the point where the acidity formed as a result of fermentation is inhibiting the browning reaction, hence the only place where the crust can actually develop any color is at the site of the bubbles/blisters, where the surface of the crust gets exceptionally hot, while the remainder of the crust doesn't actually get hot enough within the allowed bake time to develop color (remember the acidity), hence the strong contrasting of colors. As for the bottom bake, I would guess that it might have been rather spotty and inconsistent.
Tom Lehmann/The Dough Doctor
Re: Super long fermentation
6411

Dr. Pepper, interesting....since it is based on plum juice it might add a pleasant fruity flavor note to the dough.
Tom Lehmann/The Dough Doctor
Re: New Dough-Barqs Rootbeer
6412

While on the topic of woods, check around for neighbors with apple, cherry or pear trees, they need to trimmed periodically resulting in a lot of useful smoker wood. Also, after a storm, such as a wind storm or especially an ice storm (fruit trees are typically the most commonly damaged trees) look for damaged trees or tree limbs. As a result of an ice storm here in Kansas a few years ago we had two large pear trees, a cherry tree, a peach tree, and several large limbs from an apple tree available to anyone who wanted them. What was left ended up as firewood in our furnace. It really gave a great aroma in the house!
BTW: Check out the local dumping ground for tree limbs. At ours the city encourages us to help ourselves to all the free wood we want. We can easily get an abundant supply of oak, ash, and fruit tree woods from there too, and if you're into cottonwood, elm and cedar there is a lot of that too, but it's best reserved for the chipper unless you're completely out of firewood.
Tom Lehmann/The Dough Doctor

Re: Wrong place to ask about tropical woods
6413

I'll do some experimenting along these lines on my next foray out into the pizza lab. I'm also wanting to look into using unflavored Greek yogurt as a possible sauce replacement for a white pizza. When I get some news I'll report back on our findings.
In the mean time, if anyone else has done any of this, or wants to do their own research, please feel free to post your findings/results.
Tom Lehmann/The Dough Doctor
Re: New Dough-Barqs Rootbeer
6414

I have heard a lot about using soda (root beer, 7-Up, and gingerale) are mentioned quite frequently, but I have not done a lot of work along those lines. It would be interesting to see the differences between regular (sweetened with real sugar) and diet versions of the same sodas. Sweetness might change as the artificial sweeteners used in the diet versions are typically not heat stable, but the flavor should remain. Hummm, an interesting project.
Tom Lehmann/The Dough Doctor
Re: New Dough-Barqs Rootbeer
6415

Beck;
Yes you can do as you propose.
Increase the temperature of the finished dough to around 90F by using warm water to make the dough with. All other ingredients should remain as they presently are for right now. Immediately after mixing, form the dough into dough balls of desired weight, lightly oil and set aside (covered with a piece of plastic) to rise for at least 30-minutes (45 to 60 is better). Prepare the pan by greasing with shortening (Crisco) or margarine, place the dough ball into the pan and using your fingers, press the dough out to fit the pan. If you have difficulty, cover the pan and set it aside to rest for about 20-minutes, then finish pressing the dough into the pan. Once the dough is pressed into the pan, cover it and allow the panned dough to rise for 20 to 30-minutes, uncover the pan and place it into the fridge. After about 90-minutes in the fridge, cover the pan with a piece of foil crimped over the top rim of the pan. Allow the dough to remain in the fridge until the following day, then remove from the fridge about 60-minutes before you plan to dress it. From that point on dress and bake the dough as you would any other deep-dish pizza. Be aware though that you won't get the same flavor profile as you would from a dough that was given 24 to 48-hours of cold fermentation prior to panning the dough.
Tom Lehmann/The Dough Doctor
Re: Batches of dough, sized and rolled straight onto pan?
6416

John;
Pretty soon those friends will be dragging in friends of theirs and you might find yourself working in front of an oven in your pizzeria! More than one pizzeria got started that very way.
Welcome!
Tom Lehmann/The Dough Doctor
Re: Newbie - Imabadman
6417

Hi Norma;
There aren't many of us that either go back that far, or can remember back that far, much less partook in such a gourmet delight!
You probably remember TV Time Popcorn too.
Tom Lehmann/TDD
Re: dough
6418

Wow!
I'm honored!
Here at the American Institute of Baking/AIB International we are very research oriented, but even more importantly we are educators in that we disseminate the findings of our research to the general public (unless it's gained through private contracted research) through publications, our seminars/classes, and participation in other programs such as the NAPICS Show, PMQ Pizza Show, and Pizza Expo. I have also traveled quite extensively on the International circuit teaching and demonstrating all aspects of making pizza (science, technology, function and interaction of ingredients, processes, etc.) all to spread the good word. The things that I cannot do as you have correctly stated is make people listen, follow known successful practices, and to take our advice. This is even in light of the fact that there are some amazingly large companies out there making and selling pizza on a scale that most of us can only dream of, that don't have a technical staff knowledgeable in the science and technologies of pizza formulation or processing. It is a lot like complimenting the pilot of a Boeing 747 on a great, smooth landing under adverse conditions, and having the pilot respond back to you "thank you, after I get my pilot's license I should be able to do even better".
As for the quality of commercial pizzas, well, lets just chalk it up to pride (we have made and sold the same pizza for X-years), fear of rocking the boat (it took us 20-years to get to where we're at and we ain't going to change anything), and economics (we provide a product that a certain segment of the population finds to be acceptable (mind you I said acceptable, not great) at a price point that they are willing to, or can afford to buy it at). There are a bunch of other reasons, but I see these as the major ones, with my job being to help then achieve their goals, whatever they might be.

Tom Lehmann/The Dough Doctor
Re: Gotta give it up to Mr. Lehmann
6419

Flour millers typically offer their stronger flours as bromated or non-bromated, such as General Mills Full Strength (12.6% protein) and Remarkable (13.6% protein) as I am sure other flour millers do. If you live in California, it may be difficult to find a bromater flour because, as a potential carcinogen, all products containing KBRO3 and sold in California must have a warning label similar to that which is found on a pack of cigarettes or a bottle of wine. In Canada it is not approved for use in food, but anyplace else you should be able to find it. If you can't locate it at a local store, or buy it directly from a distributor, you might be able to talk to a local retail baker to see if he will sell you a partial or full bag, or maybe you can place an order for a 50# bag of bromated flour with his next flour order.
FYI: Full Strength W/bromate (#53391 or #53381); Remarkable W/bromate (#57140 or #57122).
Tom Lehmann/The Dough Doctor

Re: Retail Bromated Flour
6420

Norma;
Pizza on a biscuit dough.....this reminds me of the old (dating myself here) Chef Boyardee (SP) pizza mix. As a kid I thought it was great, just add water to the dough portion of the mix and stir, then turn out onto a floured surface and form to about the size of your pan, place the dough into your greased pan and finish by pushing the dough into the corners and sides of the pan, then pull the dough slightly up the sides of the pan. Open the sauce pouch and apply to the dough surface, then apply the supplied cheese. Anybody else remember those days? Probably not the best pizza in town, but it worked in the moment at the time.
Tom Lehmann/The Dough Doctor
Re: dough
6421

Weemis;
When mixing dough by hand, some of the things which we have found to be beneficial are as follows:
Always suspend compressed yeast in the dough water. If using either ADY or IDY pre-hydrate it in a small portion of the water warmed to between 95 and 100F, then add it to the dough water.
Put all or the greatest portion of the dough water in the mixing bowl first
Add the suspended/hydrated yeast to the water in the mixing bowl
Add salt, and or sugar to the yeast water in the mixing bowl, then give it a quick stir and add the flour.
As you mix the dough during the first couple minutes, add the oil or shortening. If shortening is used (Crisco, margarine, butter, etc.) heat it to just melting temperature before adding it to the dough. This will help to disperse the fat throughout the dough mass.
Tom Lehmann/The Dough Doctor
Re: Order of ingredients in Dough?
6422

Stud;
What was the color of the pan? Bright silver inside and out? Bright silver outside and dark on the inside, or dark both inside and out?
Also, can you share how the pizza was baked? This additional information will be helpful in determining why your pizza wasn't properly baked.
Tom Lehmann/The Dough Doctor
Re: aluminum pie pan for pizza making?
6423

Chicago Bob;
PJ's uses air impingement ovens to bake their pizzas. I agree, I think their pizzas are underbaked too, but that is not my call. Would their pizza quality be improved with a longer bake time? For my tastes I would have to say yes, but they are in the delivery business and evidentally they are making money at what they are doing so who am I to criticize them, except to say "it ain't my piece of pie", and to each his/her own.
Tom Lehmann/the Dough Doctor
Re: My PJ clone...
6424

I agree totally with Don, what you are using is not designed, or intended to bake anything close to pizza. They do a good job of baking cakes, but that's about as close as it gets. If you want to do square deep-dish pizzas on the cheap, look for some used square cake pans (normally in 7-inch format). The best ones are made of steel and have a dark green coloring to them. You can also buy square pizza pans from American Metalcraft <www.amnow.com>. These will be made of aluminum, and can be had in a dark anodized finish.
If you get a pan(s) with a bright finish, they should be well seasoned for best baking properties.
Tom Lehmann/The Dough Doctor
Re: silicone square cake pan cooked pizza is wet in the middle section?
6425

You say you're using a square silicone cake pan, is this one of the newer flexible ones, or are you referring to a square cake pan that has been silicone coated aka glazed? What is the color of the pan? What is your baking temperature?
Tom Lehmann/The Dough Doctor
Re: silicone square cake pan cooked pizza is wet in the middle section?
6426

What is your business concept?
Tom Lehmann/The Dough Doctor
Re: How important is an open kitchen.
6427

If you can get it, General Mills All Trumps flour at 14+% protein content is the pack leader, but the Pillsbury Bread Flour available at many supermarkets comes in at about 12.2% protein content, plenty strong to hand toss. Check the bag labels for different flours at the supermarket, you want to look for a label indicating 12 to 13, or more grams of protein for 100-grams of flour weight.
Tom Lehmann/The Dough Doctor
Re: Frustration with Dough Tearing
6428

BD;
Your problem is not unique, infact it is really quite common. A good method to use in opening the dough, so it opens without the excessively thick and thin areas across the center is to first pre-flatten the dough ball, in your case using a rolling pin. Open the dough ball to about 2/3 of the desired finished diameter using only just a couple passes with the rolling pin as too many passes will only serve to tighten the dough making further opening more difficult. Once you have the dough pre-flattened, set the dough piece aside to rest for a couple minutes, then begin opening the dough by hand in your normal manner. We just finished with our annual pizza seminar last week and I showed this procedure to a good number of our first time students, without exception, all were opening the dough really well within just a few minutes. This is also the way I open my dough when I make pizza at home.
Tom Lehmann/The Dough Doctor
Re: Frustration with Dough Tearing
6429

Bisquick is a chemically leavened mix for making biscuits. The leavening system

typically used is made from a blend of sodium aluminum phosphate and baking soda, and this is where that flavor you mention comes from. If you want to replicate this flavor try adding a baking powder based on these two ingredients. I stand to be corrected, but if I remember correctly, Calumet brand baking powder is based on SALP and soda, check the labels when you're at the supermarket and you should find it. The amount to use will be about 3% of the total flour weight, and be sure to thoroughly blend it into a little Crisco to encapsulate it before adding it to the dough. Remember, biscuit doughs are just barely stirred together, they are not mixed like a typical pizza dough, and for making pizza, they are best portioned, placed into a plastic bag and refrigerated overnight, then allowed to temper AT room temperature for a couple hours before rolling/sheeting into a pizza skin.
Tom Lehmann/The Dough Doctor
Re: dough
6430

Roberto;
What we do is to get an exact weight for each of the ingredients used, then divide the weight of each ingredient by the weight of the flour and multiply by 100. This will give the the bakers percent for each ingredient (flour is always 100%. Once you have your dough recipe in bakers percent you can now manipulate the formula into any size you wish and it will always be in balance. To do this, first decide how much flour you wish to use. Enter this weight into your calculator then enter the ingredient percent you want the weight for, now press the "%" key and read the ingredient weight in the display window. When you have done this with each ingredient you will have your new batch sized and ready to go.
Tom Lehmann/The Dough Doctor
Re: You've probably had this question before about hydration
6431

Roberto;
You can't do bakers percent using a mix of weight and volumetric measures. Everything must be in the same weight units such as grams, kilograms, pounds or ounces. While we could use approximate weights for the volumetric portions (bread flour: unsifted 4.75-ounces or 4.25-ounces sifted once) it is always best to portion it and then weigh the portion to get an accurate weight of the portion since there can be differences depending upon the technique of the person doing the portioning. Once you have the weight of the flour you can then divide the weight of the water by the weight of the flour and multiply by 100 to get the percent flour absorption used.
Tom Lehmann/The Dough Doctor
Re: You've probably had this question before about hydration
6432

Ryan;
My favorite N.Y. Pizzeria is Patsy's (Brooklyn) or is it now Grimaldi's? Whatever, if it was good enough for Frank Sinatra it is plenty good for me. Truthfully, it's my favorite pizza place in New York.
Tom Lehmann
Re: Pizza Dough Recipe
6433

Norma;
It was off of my radar.

Tom Lehmann/TDD
Re: freekehlicious flour for testing
6434

Norma;
Being "roasted", my concerns would be with gluten quality. Wheat flour/protein is easily denatured with heat, hence my concern about the gluten quality.
Tom Lehmann/The Dough Doctor
Re: freekehlicious flour for testing
6435

Cindy;
For overall dough consistency, we don't recommend allowing the dough to ferment at room temperature before putting it into the fridge. The change in dough density makes the dough too difficult to cool uniformly. Instead, immediately after mixing, take the dough to the bench (counter top) cut and form the dough into balls, wipe them lightly with oil and place into individual plastic bags (bread bags work well), DO SEAL, but instead, twist the open end into a pony tail, and tuck the pony tail under the dough ball as you place it into the fridge. By doing this you don't need to use a dough box, and there is no fear of the dough balls drying out. To use the dough, remove from the fridge and allow to temper AT room temperature for 1.5 to 2-hours, then turn the dough out of the bag into a bowl of dusting flour, then open into pizza skins using your perferred method. The purpose of cross stacking the dough boxes (applicable to pizzerias) is to allow for uniform coolong of the dough without the development of unwanted sweating due to condensation forming on the dough during the cooling process. The use of the plastic bags makes the need for dough boxes unnecessary, and it is more compatible with a home refrigerator with its space limitations.
Tom Lehmann/The Dough Doctor
Re: Cross Stacking
6436

Ryan;
Your observations are the same as ours here at AIB. When it comes to making pizza, less mixing is almost always better than more mixing. Actually, if you open the dough up and "window pane" it after two days in the cooler you will be able to see first hand what biochemical gluten development is all about. Our annual pizza seminar begins today and that is one of the things that we show our students. Under mixing the dough promotes a more open crumb structure, less snap back, and is a lot easier on your mixer, or arms to boot.
Tom Lehmann/The Dough Doctor
Re: Looking for Guidance - NY Style
6437

I frequently get asked where and when I've had my best pizza. To answer this question honestly, I have to reply that it was the last time I made it at home. The reason being not that the pizza was by far the crispiest or most flavorful pizza ever created, but it met all of MY expectations for a truly great pizza, and if it didn't I knew who to blame. This came after more than 40-years of practice making pizza at every scale imaginable, and teaching it to literally hundreds of students, if not more. Like everyone else, I had my successes as well as my failures, and for the most part the failures tasted almost as good as the successes, but once I got the pizza that I liked nailed, I make it a habit of preparing it for family get togethers

every opportunity I get, or put another way, the family has come to expect it from me. Is it their most favorite pizza? Probably not, but they eat it like a hungry wolf anyways. The up side is being able to enjoy eating MY very best pizza.
Tom Lehmann/The Dough Doctor
Re: Walmarts Dough ball $1.19 each!!!!!
6438

L.M.;
You struck a note when you said "flavorless". Salt has a significant role in the flavor of the finished pizza crust, and many other foods for that matter. Maybe your dough formula is lacking in salt as compared to your target dough/crust. Maybe as a first step I would suggest that you make a couple doughs with increasing salt levels from where you're presently at. While we normally recommend salt levels in the neighborhood of 1.75% of the total flour weight, I've seen it as high as 3% too. If you go much beyond 3% the finished crust will begin to take on a bit of a salty taste.
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Recipe
6439

Also, keep in mind that all deck ovens are not the same. Some have substantially thicker decks and a different burner configuration below the deck, typically deck ovens with these attributes are not as prone to having hot spots (pies don't need to be rotated or moved during the baking process) while others have a thinner deck, or a deck made from a different material, and usually have a different burner configuration beneath the deck all of which can result in the need to turn and move pizzas during the baking process to achieve a uniform bake to each pizza in the oven. Have you baked any of your pizzas using a screen under the pan for a portion of the baking process?
Tom Lehman/The Dough Doctor
Re: New Pizza Shop
6440

Scott 123;
You have not been to any of the PMQ Pizza Shows. A few years back Dave Smith took first place with a pizza baked in an air impingement oven. I'm not going to get into any type of contest here but I will add that "world class pizza", whatever that might mean, may not be the pizza that everyone wants or needs. I personally like a pizza baked in a wood fired oven at high temperatures, but then again, that is not everyones cup of tea. So, once again, the oven that works best for YOU is YOUR best oven. We should remember that quality, like beauty is really nothing more than a perception.
Tom Lehmann/The Dough Doctor
Re: "Good pizzas are 90% oven" "conveyor ovens are not great" Oven primer for newb
6441

Nick;
You have to define what constitutes a great pizza oven first. For some it is an oven that operates at a very high temperature, and gives up a pizza every 2 to 3-minutes, but it requires a lot of valuable floor space, needs to be manually operated (in/out/rotating), requires free space in front of the oven for the oven operator to work (again a valuable commodity), is relatively expensive when sized

for the volume needed, will not be allowed in some locations, may be expensive to operate, lacks portability, gee... the list just goes on and on. Now, lets look at an air impingement oven (conveyor oven). It has a relatively low purchase cost, economical to operate, has high volume capacity, requires a minimum of floor space, minimum to no operator expertise needed, can bake just about any type of pizza along with a plethora of side dishes, can bake both thin and thick crust pizzas side by side, the airflow helps to provide a consistently dry pizza, again the list goes on and on. It just so happens that from a commercial point of view there are a lot of advantages to the air impingement ovens that other oven types just don't have. Deck ovens as well as wood fired ovens are great for small stores (independents) and even small chains, but when you start looking at 25 or more stores, not to even mention thousands of stores for some of the larger chains, you want things to be as simple as possible and as economical as possible from both a purchase price v/s pizzas per hour, as well as space allocation in the store (space is a very costly commodity). So, what is a great pizza oven? It's the one that works best in your specific application. Air impingement ovens can also be set up to replicate most types of pizzas too. The word versatile comes to mind.
Tom Lehmann/The Dough Doctor
Re: "Good pizzas are 90% oven" "conveyor ovens are not great" Oven primer for newb
6442

Are you talking home or pizzeria? Unmodded gas oven would suggest home use, but just checking.
Tom Lehmann/The Dough Doctor
Re: Dough type for NY style in gas oven
6443

Please not that all of that work was done on bread doughs, using pan bread, not pizza dough using pizzas as the end product. There is a huge difference in how a dough responds when being pushed to a height of 4 to 5-inches as opposed to a maximum height of maybe 1.5 or 2-inches as is the case with a pizza crust. When making pan pizzas we have seen a slight improvement in proofing time when a solid fat is used over oil, but I sure wouldn't think that in a home setting 5-minutes in proof time would make a big difference, especially when we typically see greater differences than that due to differences in finished dough temperature, gluten development, and scaling accuracy of the ingredients. What I'm saying is I wouldn't sweat it. If you want to add a solid fat/plastic fat, just heat it slightly to soften it, then work it in right behind the water. I make dough by hand all the time at home and I find it pretty easy to work it in as I stir and knead the dough.
Tom Lehmann/The Dough Doctor
Re: Solid Fat
6444

Brendan;
No changes to the yeast level are needed when adjusting the dough absorption up or down within reason. Even though the total dough weight will change, the amount of water present, or the change in water content will have minimal impact upon the yeast fermentation properties. This does not mean that you will not see a difference between doughs with differing absorption, it just means that the difference you see will be the result of a softer, more hydrated dough, which will probably expand more easily, or exhibit more/different flow than a lower absorption dough, rather than the effects of fermentation. Keeping this in mind, when we

make a very soft dough with a high absorption, it is common to reduce the yeast level to some extent, not because of the difference in fermentation rate, but because the softer dough ball as well as shaped dough may exhibit excessive flow properties and flatten out too much with a higher yeast level.
Tom Lehmann/The Dough Doctor
Re: Question about adjusting yeast % to compensate for hydration.
6445

Nick;
I'm thinking that your fermentation is too long for your conditions and flour at hand. You might try this:
Begin with less water, say 65% and make further adjustments as necessary. Suspend the yeast in the water, are you using Engadura yeast or a locally produced fresh yeast? In either case, do suspend it in the water. Then add the flour, salt and sugar if used. Stir the ingredients together until thoroughly whetted, add the oil of shortening and continue stirring for a few more minutes. Cover and set aside to rise for 2-hours, then punch the dough down in the bowl and turn it over. Allow to rise for 30-minutes more, then turn the dough out onto a bench for cutting/scaling and forming into dough balls. Set the dough balls aside, sprinkle with flour and cover with a sheet of plastic to prevent drying. Allow the dough balls to rest/ferment for 30 to 60-minutes, or until they can be easily opened into pizza skins, then dress the skins and bake in your normal manner. I've used this procedure in a number of developing countries and remote areas with very good success.
Tom Lehmann/The Dough Doctor
Re: Need a variation on a 24hr room temp no knead fermentation with more strength
6446

You're on the right track.
The old bakers used the word Arkady in reference to the mineral yeast food that they commonly added to their doughs. Mineral yeast food (MYF) is a mixture of calcium salts, ammonium salts, and back then potassium bromate. It was typically added at a level of 0.25 to 0.5% of the total flour weight. Today, most bakers don't use MYF, instead, they use calcium sulfate instead.
Tom Lehmann/The Dough Doctor
Re: Arkady. trying to figure out what this is.
6447

We make seafood pizzas all the time, every chance we get. In fact, I just got back from working with a pizzeria in Detroit where I demonstrated the making of seafood pizzas....they were great!!
Use your regular pizza dough and open into a dough skin for a thin crust. Lightly brush with olive oil and add just a hint of garlic (I like to use diced garlic), then spread on just enough Alfredo sauce to cover the surface of the dough, leaving a slight exposed rim. Give this a good sprinkling of dried dill weed, then add pieces of shrimp (baby shrimp works well), cod cut into 1/4 to 1/2-inch cubes, and pieces of crab meat, squid, clams, etc., finish by adding some sliced red onion and fresh tomato pieces, for cheese, add only 3 to 4-ounces of Mozzarella cheese for a 12-inch pizza, and about an ounce of shredded Parmesan cheese. Please don't go heavy on the cheese as it will detract from both the appearance and flavor of the pizza. Bake the pizza as you would any regular thin crust pizza.
Enjoy!

Tom Lehmann/The Dough Doctor
Re: pizza with sea food?
6448

A couple of things to keep in mind;
When hand kneading the IDY should always be prehydrated in a small amount of 95F water for about 10-minutes, then add it to the dough water, and follow by then adding the remainder of the dough ingredients.
Also, the dough will not rise as much in the fridge as it will at room temperature, and this is just what we are looking for as it allows the yeast to do its job and develop a wonderful flavor in the dough while also contributing to further gluten development. Personally, I like to lightly oil the dough ball, place it into a bread bag, twist the open end into a pony tail and tuck it under the dough ball as I place it in the fridge. For best performance I like to hold the dough in the fridge for at least 2-days. As for the size of the dough balls, I normally look for about 25% expansion after 24-hours and something closer to 50% after 48-hours in the fridge, assuming a finished/mixed dough temperature in the 75 to 80F range and normal yeast levels (IDY: 0.375%) your IDY level is higher so you might experience a bit more expansion in the size of the dough balls. To use the dough after refrigeration, remove it from the fridge, keeping it in the bag, and allow it to temper AT room temperature for 60 to 90-minutes, then turn the dough ball out of the bag into a bowl of dusting flour and proceed to open the dough ball up into a pizza skin. I like to LIGHTLY brush the opened pizza skin with olive oil prior to dressing as this both improves flavor and helps to prevent migration of moisture from the sauce and toppings into the dough where it can end up creating an undesirable gum line under the sauce.
Tom Lehmann/The Dough Doctor
Re: Cold Ferment / Overnight Fridge Rise HELP !!!
6449

Chicago is home to great tasting pizza that is unique in its own special limp crust. When I was a kid, growing up on the south side we used to get pizza from Ed and Joe's (yes, they are still there) and when we went to the store to pick it up it had some attribute that might be constrewed as crispy, but by the time it got to our home (3-blocks away) with exception to the four edges/corners of the party cut pizza crispiness was just a memory, but it still tasted Oooooh soooo gooood!
Tom Lehmann
The Dough Doctor
Re: quarry tile versus cordierite versus Fibrament...
6450

P.N.
Great idea! I'm going to have to try that the next time I have to freeze my Mozzarella cheese.
Thanks for the tip!
Tom Lehmann/The Dough Doctor
Re: How will a grande mozzarella loaf last me in the fridge?
6451

PY;
If the loaf is unopened, DO NOT FREEZE it as the quality will be decreased. Instead, store it at refrigerated temperature (38 to 45F). The cheese should last for about 40-days. Once opened, it is suggested that you use it within a week. OK, if

you freeze it the cheese won't melt down into a toxic puddle, but it will be impacted in terms of flavor, texture, and melt when you use it on a pizza, thus negating the fine quality characteristics of Grande Mozzarella cheese. I've frozen it, and if you're not overly fussy, it will work OK for you, it won't win you any competitions, but it will satisfy your taste for a pizza now and then over the next 3-months.
Tom Lehmann/The Dough Doctor
Re: How will a grande mozzarella loaf last me in the fridge?
6452

Cosgro;
Your approach to pizza reminds me of what we always tell our students...."Don't be afraid to experiment and try different things, your failures will taste almost as good as your successes".
Tom Lehmann/TDD
Re: Using beer in your pizza dough
6453

F.C.
Let me say that again...Wow! That is quite an oven! Have you fired it up yet? How much stone is in the hearth? How long does it take to heat before you can bake in it?
Tom Lehmann/TDD
Re: new member
6454

The significance of the total percentage comes in with more advanced use of bakers percent/bakers math. For example, lets say your formula has a total percentage of 171%, if you have calculated that you need 10-pounds of dough to make something all you need to do is to divide the dough weight by the total percent. Move the decimal point two places to the left and divide: 10-pounds divided by 1.72 = 5.84-pounds of flour will be needed to make 10-pounds of dough by your dough formula. Another way to use it is to calculate how much dough you can make from a known quantity of flour. Again, our total formula percent is 171%. We have 6-pounds of flour, how much dough can I make? 1.71 X 6-pounds = 10.26-pounds of dough can be made from my 6-pounds of flour by my formula.
Here is another one, if I know your formula in bakers percent, and I add the percentages and get 162%, and I know that you made 7-pounds of dough, I can calculate how much flour you used, then I can make the very same size dough. 7-pounds divided by 1.62 = 4.32-pounds of flour were used in making the dough. Now I can calculate the amounts of each of the other ingredients to make the dough (this is just like the first example above).
Tom Lehmann/The Dough Doctor
Re: Bakers Percentage
6455

F.C.
Welcome to the forum. Built your own wood fired oven...Wow!
We'd be disappointed if you didn't share with us. I know that a lot of other people here have an interest in building their own wood fired ovens. Please tell us something about your wood fired oven project. Do you have any pictures to share?
Tom Lehmann/The Dough Doctor
Re: new member
6456

Anthony;
Welcome to the forum. New perspectives are always a welcome addition here. This is definitely the place to learn and share.
Tom Lehmann/The Dough Doctor
Re: Introducing....the New Guy!
6457

Just a word of caution here. If you make your own garlic infused olive oil (I'm sure most of us do), remember that it is not a good idea to save it from one day to the next due to the possibility of growing clostridium in the anaerobic environment created by the oil. Clostridium is soil borne, so the garlic can be potentially contaminated with it. Clostridium can result in botulism poisoning. Botulism is too deadly, and olive oil is too cheap to take any chances. Our advice is to play it safe and dispose of any unused home made garlic infused oil at the end of each day. Commercially produced garlic infused oil is perfectly safe to hold from one day to the next.
Tom Lehmann/The Dough Doctor
Re: Brush Oil on the Crust?
6458

Some very good points have been brought up about dried tomatoes and apples. Allow me to share a short story about how good tasting those dried apples are (with the skin).
Several years ago I brought several large zip-lok plastic bags of dried apples with me on a deer hunt. I gave each of the other hunters a quart size bag of them to snack on. At the end of the day, when we were all back in camp, "Camp Momma", that's me, asked the guys what sounded good for dinner that night. Amongst the moans and groans I heard that not much sounded good to them. Why? I asked. Well, it seems that they had all consumed their entire bag of dried apples during the afternoon hunt. Did I mention that there were nearly a dozen apples in each of those bags? Well....the apples were now expanding, but the best part of the story came later that night (try eating a dozen large apples and you will see what I mean). End of story.
But they are oooohhh soooo gooood! Almost addictive.
Tom Lehmann/The Dough Doctor
Re: Partially-dried tomatoes
6459

That's only on my likeness on the back of my business card, thanks to the graphic artist at Lloyd Pans.
Tom Lehmann/TDD
Re: What is your real name?
6460

Actually, the lab coat came to the scene by accident. I used to travel with an apron or two in my baggage, but then an employee here at AIB left. I was his size so I had the opportunity to inherit his lab coats (Gary was a chemist), so I started packing the coats rather than the aprons just to use them. With time they became part of The Dough Doctor persona, so when it was time to get new aprons, I ditched the aprons and ordered new lab coats, but this time the inscription "The Dough Doctor" and the transformation was complete.
Tom Lehmann/TDD

Re: What is your real name?
6461

The greatest impact that variations in finished dough temperature will have is on the rate of fermentation, with warmer dough temperatures promoting faster fermentation. This can lead to problems if you are holding the dough for several days in the refrigerator as many of us do. I've seen doughs fail to rise properly after two to three days in the fridge when the yeast level was high (relative) and the dough temperature was also high (for the yeast level used). For greatest consistency in dough performance, along with predictable flavor and crust color characteristics it is adviseable to control the finished dough temperature as closely as possible. Here is a simple method for doing this. It is from Red Star/Lesaffre Yeast Corporation.
Subtract the flour temperature from 145 to find the correct water temperature to give you a finished dough temperature of approximately 80F. Note: Since there are so many different dough mixing methods employed by visitors to this web site, I suggest that you experiment a little with that 145 number. For example, if your flour is 65F it will suggest a water temperature of 80F to give you a finished dough temperature of 80F. If the actual dough temperature is higher use a number LOWER than 145 or if the actual dough temperature is lower than 80F, use a higher number. This would also hold true if you want a finished dough temperature higher or lower than 80F. Once you find your number you should be able to lock it in and get consistent finished dough temps.
Tom Lehmann/The Dough Doctor
Re: What water temp do you think gives ny pizza dough a better flavor?
6462

Tom Lehmann "The Dough Doctor"
I got that title hung on me back in the 1970's when I was working in Mexico (traveling for U.S. Wheat Associates) visiting bakeries fixing their problems and showing them different types of products that can be made using flour made from U.S. wheat. When I started writing for Pizza Today Magazine, Jerry Durnell (editor) asked me for a title for my column, after some discussion, I told him that I was known as "The Dough Doctor" in Mexico, and much of Latin America. It took him about two nano seconds to agree to the name of the column as "The Dough Doctor". Actually, I wanted to it to be named "In Lehmann's Terms", a play off of my last name. A few years later when Steve Green started Pizza Marketing Quarterly Magazine (PMQ) he asked me to write a column for him too, this time I got my wish, so the name of my column for PMQ is "In Lehmann's Terms" both by "The Dough Doctor", so now I am known as The Dough Doctor, or Dough Doc, or just Doc. It is more than just a name to me, it is an honor given to me by the pizza industry.
Re: What is your real name?
6463

We like to thin slice it and grill it with some onions and serve it with warmed tortillas and a few sides for the tortillas. We also prepare deer heart the same way. When we are hunting from a tent camp we also like to fry it up in a mix of olive oil and beer along with sliced onions and a few peppers.
Tom Lehmann/The Dough Doctor
Re: Beef Heart
6464

You will also be able to bake it until it's done, not "fast baked" like the original.
Tom Lehmann/The Dough Doctor
Re: My PJ clone...
6465

Pete;
As mentioned, we use them in making our own tomato pesto (substitute dried tomato for basil), then we also toss them into just about anything that will go into the crock pot. Soups and stews are really great with them. I also soak them in olive oil for a few hours and use them as a pizza topping too. That's about the extent of our use of dried tomatoes at home.
Last night we started drying apples. A five gallon bucket is enough to fill all ten trays of our dehydrator. We wash, core, and slice then arrange on the trays for drying. We will keep at this every night that we can until we can't stand it anymore.
Tom Lehmann/The Dough Doctor
Re: Garden Harvest - Process and Preservation Ideas
6466

I will also need to know what kind of shelf life you are looking for with your frozen dough balls. The main questions are:
1) How many dough balls do you want to make per 8-hour production day.
2) How many dough balls do you project yourself as needing in 3 to 5-years (this should be in your 5-year plan).
3) What kind of shelf life (days, weeks, months) do you want to have?

Keep in mind that there can be a big difference in equipment cost between 10 to 12-days and 3-months.
Tom Lehmann/The Dough Doctor
Re: Frozen Dough Balls
6467

In addition to freezing, we also like to dry some of our tomatoes, especially the cherry tomatoes. We just cut them in half and run then through a food dehydrator until soft and slightly leathery, vacuum package and freeze, then use later as you would any sun dried tomato. We also have an abundant basil crop each year so we process the leaves through a food processor with just enough olive oil to make a puree, then place in plastic tubs and freeze. This can be used as is after thawing for a great pasta sauce base, or on pizzas, but our favorite is to add ground walnuts and Parmesan cheese to make Pesto, then we use the pesto on everything from steaks and chops to chicken and pasta. We tried making the pesto right up front and freezing it but the nuts turned rancid over time and ruined the flavor. We will also occasionally make a dried tomato pesto too, just rehydrate the dried tomatoes in olive oil, then begin making your pesto with either pine nuts or walnuts. In addition to our garden, we also have an abundant supply of apples from our trees. In addition to frozen apple slices (be sure to use Fruit Fresh or lemon juice to prevent browning) we make a lot of dried apple slices. Our kids and grandkids just love them, especially when we add a little cinnamon to the apple slices just before we put them in the dehydrator. Any apple slices left over from the previous year ends up being used as a deer attractant on my deer stand which allows me to convert them to some great tasting, corn fed wild venison which, by the way, goes great with either of the home made pestos.

Tom Lehmann/the Dough Doctor

Re: Garden Harvest - Process and Preservation Ideas
6468

From the looks of the dough, it appears that the absorption is around 65%, maybe just a little less.
Tom Lehmann/The Dough Doctor
Re: Una Pizza Napoletana Dough
6469

We like to quarter a head of cabbage and boil it until tender, then serve it with a sprinkling of vinegar. We also boil the large outer leaves and roll it up with a savory meat filling (usually ground pork), then place these side by side in a rectangular glass baking dish, add some pizza sauce to the top and place in a 350F oven for about 45-minutes, or until the meat filling is completely cooked. Served hot, they are great. (Think "pigs in a blanket").
Tom Lehmann/The Dough Doctor
Re: Boiled Cabbage
6470

Garvey hit the nail on the head.
While many of us here, at this web site don't let the pizza skin set around for any length of time between dressing and baking, that isn't always the case in a commercial pizzeria establishment. In order to cope with getting "slammed" at say, 7:00 p.m. of Friday nights (for example) it is a common practice to pre-sauce the pizza skins and hold them in the cooler until needed. When they get slammed, all they need to do is to pull a pre-sauced skin and add the toppings. This helps to keep the delivery time between an order being place, and the pizza being delivered to the customer's table more reasonable. Oiling the pizza skin prior to sauce application helps by creating a moisture barrier, thus preventing/reducing moisture migration into the dough prior to baking. When using fresh tomato slices instead of a sauce, the oil application again reduces the moisture migration into the dough as the fresh tomato slices begin to release their moisture during the baking process. If blended with garlic or other herbs, it will also add another dimension of flavor to the finished pizza. Just don't get carried away with the oil, if you can see a reflection (shine) on the dough from the oil, you have added all that is necessary, if you add too much, you can create a situation where the toppings just slide off of the slice with the first bite. Take and bake pizzas also benefit from the oil addition too as it may be hours, or even days between dressing the pizza skin and baking it. If you want to see what we are working against here, just put a spoon full of your sauce on a china plate, and cover it to prevent evaporation, then come back to it in 30-minutes, or so and you will typically see a ring of water around the sauce, this is the water that can soak into the dough resulting is the dreaded gum line just beneath the sauce layer.
Tom Lehmann/The Dough Doctor
Re: Brush Oil on the Crust?
6471

Just about any slow absorbing material can be used as a decent peel dust. Bran also works very well. Flour is the least desirable since it hydrates quite fast, and once it begins to hydrate the dough will stick to the peel.
I am least fond of blowing under the pizza skin to free it from the peel. Why you ask? Well, I am trying to drink my coffee, but it is too hot, would you mind coming over here and blowing on it to cool it off so I can drink it? See my point? I really

don't have an issue with it since the next stop is the oven and a "kill step", but it still just doesn't come across to your customers, or guests very well.
Tom Lehmann/The Dough Doctor
Re: Pizza Peels
6472

Dig;
To answer your question as to what to put on the bottom of the pan to prevent the crust from sticking, you should season any bright aluminum pan before using it. This is done by setting your oven temperature at 425F, then brushing the pan, inside and out, with salad oil, place the pan in the oven to bake for about 20-minutes. Be sure to place a piece of foil below the pan to catch any oil that might drip off, and be prepared to handle the smoke created by the seasoning process. I like to do this at least twice, the pan should now have a light gold tint to it which will continue to darken to almost black with continued use. DO NOT allow a seasoned pan to soak in water, to do so will make the seasoning peel off like a bad sunburn, you will then need to strip all of the seasoning off of the pan and start all over again. Remember the admonishment about the cast iron skillet? Never wash it! Just wipe it out. This should also apply to a seasoned pizza pan. The darker it gets, the better it bakes. One other thing, you will always need to put just a very thin coating of oil in the pan to allow the baked crust to release properly.
I'm betting the cracker like crust you made was baked in the bright pan. The bright surface reflected heat away from the pizza so you had to bake it longer to get color on the crust, this resulted in extreme drying of the crust, hence the cracker like characteristics.
Tom Lehmann/The Dough Doctor
Re: What to put on the bottom of pan to prevent sticking
6473

Chaz;
Yes, the coal fired ovens can/do get hotter, additionally, wood can, at times be difficult to get or expensive to get, especially when you lock yourself into one specific type of wood. Anywhere along the entire east coast coal/anthracite should not be difficult in getting, but from a commercial stand point, be sure to check the laws governing these types of ovens, and if the oven is located indoors, be sure to check with your insurance agent at the same time.
Tom Lehmann/The Dough Doctor
Re: Coal fired ovens vs wood fired ovens
6474

PDP;
I was AJ's last night and picked up a pizza to take home for dinner (I live about 12-miles from the store), when I got home withthe pizza we dived right into it. It is interesting to note that even after all that time in the box you could still eat the pizza with one hand, N.Y. style by slightly folding the crust (and I do mean only slightly). You have to keep in mind that this pizza is made using a very different process from what everyone thinks of when baking pizzas. To begin, we make a par-baked crust (hand tossed) with only a portion of the sauce on it. These are inventoried until needed. To make a slice, the crust is divided into equal size slices using an Equalizer from Lloyd pans, and a slice is removed, then dressed to the customer's order (this includes more sauce, any toppings desired, and cheese), the cheese is put on last to hold the slice together, this is baked on a non-stick Hex Disk (Lloyd Pans), but this is where it gets interesting, the pizza is now baked from

the top down using a special top and bottom bake profile in an air impingement oven. This gives us a total bake time of just over 3-minutes for either a slice or whole pizza. I developed this procedure for them in response to the soft, soggy pizza slices that I was getting in New York a few years ago. It has everything everyone here in Manhattan wants, a New York presentation, and a crispy crust. You can read more about AJ's at <www.ajsnypizza.com>. That's the good news, the bad news is that we haven't yet been able to replicate this type of pizza using anything but a commercial air impingement oven. For a super crispy crust characteristic you might experiment using a par baked crust.
Tom Lehmann/The Dough Doctor
Re: Charring and the Marketplace
6475

Bill;
Our basil and oregano have been going great guns too this summer so we puree the excess in a blender with just enough of a 50/50 blend of canola and olive oil to make a puree (looks like a green milkshake), we then pour this into margarine tubs and freeze. Later we use as you would fresh basil or oregano, or we add Parmesan cheese and pine nuts, or walnuts to make a great winter pesto. We tried putting the nuts in right up front, but we ran into problems with rancidity developing before we used all of the pesto. The "pesto base" that we now make holds up extremely well for the better part of a year in the freezer.
Tom Lehmann/The Dough Doctor
Re: Partially-dried tomatoes
6476

Bill;
We are faced with the same dilemma at home too with more tomatoes coming in than we can use, so we are doing the exact same thing that you are doing, except that after partial dehydration we put them into vacuum bags, pull a vacuum and seal, then store in the freezer. They appear to hold up quite well this way, so when the snow flies (if we get snow this winter) we can still enjoy the fruits (literally) of our garden. We have also been putting up sweet and jalapeno peppers this way too.
Tom Lehmann/The Dough Doctor
Re: Partially-dried tomatoes
6477

Craig;
They look fabulous!
The only thing missing was my dinner invitation.
I must have been distracted when it came. LOL
Tom Lehmann/The Dough Doctor
Re: Hamburger buns and old school burgers
6478

Weemis;
Not a problem, you deserve to know who you're communicating with. One of our mission statements is to communicate information to the industry, you and everyone else here and at the other forums are part of that industry.
Tom Lehmann/The Dough Doctor
Re: Disappointing pies tonight
6479

Weemis;
To clear up any confusion, Peter is absolutely correct. "WE" is Tom Lehmann and Jeff Zeak, here at The American Institute of Baking/AIB International. Jeff has been my right hand man, and associate in most of the pizza work that has been done here at AIB since he came on board about 25-years ago. Prior to that, I did all of the work by myself. My research on pizza dates back to around 1967 and continues to this day with the full support of AIB, a multi-million dollar research and education facility, located in Manhattan, Kansas dedicated to serving the food industry world wide. When Jeff and I discover or develop something new or of interest to the pizza industry, WE work together to disseminate that information to the industry through seminar participation at Pizza Expo and the NAPICS (North American Pizza and Ice Cream Show), authoring pizza related articles for trade publications, as well as providing educational and technical, hands on assistance to all aspects of the pizza industry (pizzerias, box chains, as well as the largest frozen pizza manufacturers. We also provide technical support to the allied pizza industries (oven manufacturers, pan and utensil manufacturers, and ingredient suppliers). Whew! That was a mouthfull! Hopefully I've answered your question as to who "WE" is.
BTW: I am seriously considering retirement sometime within the next 2 or 3-years, but I will continue to assist the pizza and baking industries after retirement, so Jeff will be left to fend on his own until he can find someone to work with him and become a "WE" as I have.
Tom Lehmann/The Dough Doctor
Re: Disappointing pies tonight
6480

Peter;
Most of the char that I see on N.Y. style pizzas is on the raised edge as a result of blister/bubble formation. Like wise, there might be a few on the bottom, but not a fully or even heavily charred bottom. At AJ's here in Manhattan (Kansas) they serve a N.Y. style slice (its' a slice operation) that has a very good, solid bake with good browning, but no real char across the entire bottom and outer edge. The result is a large slice that can be picked up and eaten using only two fingers, and has a decided crunch when eaten. I might add that AJ's was voted best pizza in Manhattan two years ago. I should also add that it was open competition, meaning that anyone/everyone could get in on the action, chains, independents, and home pizza bakers. How good is it you ask? Adam Peyton, the owner, has been in business now going on his fifth year, and he is presently opening his third location. That is success in anybody's book.
BTW: I do not consider N.Y. style pizza to be crispy by any stretch of the imagination. We developed Adam's pizza to be extraordinarily crispy because that is what his customers want and expect with their pizzas.
Tom Lehmann/The Dough Doctor
Re: Charring and the Marketplace
6481

I don't see it so much as N.Y. style pizza v/s whatever, but what is both regionally accepted and customer accepted. You can have a blond colored N.Y. style pizza, that is a given fact, no, you cannot have an authentic N.Y. style pizza without the char. In this case we're catering to customer demands/preferences, not what's authentic or not. This is what separated home pizza bakers from retail establishments, especially the box stores. At home we can make whatever we want, however we want it....if you don't like it, tough! But at the store you can't do

business that way, so like it or not, we've got to prepare and serve the pizza the way the customer wants it, it may not be to our liking, but then again, we're not paying for it either, we're just paid to make it their way. This is frequently a serious road block to "newbies" just getting into the pizzeria business. One of the things that I always tell someone interested in opening a store (pizzeria) is that you must be like an honest politician (whatever that is), you don't have a vote in the matter, but instead your job is to represent the desires of your constituents (by giving them the pizza that they want).
Tom Lehmann/The Dough Doctor
Re: Charring and the Marketplace
6482

If you really want to go out on a limb, go to the web site for Exotic Meats USA, they have a wide assortment of just about anything that moves, or moved, and might be considered edible (and it's all legally farmed). Caution: Just two weeks ago a restaurant in Wichita, Kansas was planning to offer lion meat on the menu for a special dinner treat, but the idea was shot down by a bunch of animal lovers. I love animals to.....medium well please!
Tom Lehmann/The Dough Doctor
Re: Has anyone tried exotic meats??
6483

I well remember when wood burning pizza ovens made their first debut in Chicago. We were not accustomed to seeing a pizza with char, so it was a common place thing to hear people complaining that their pizza was burned, over done, etc. With time and education people were educated to a different type of pizza, and today Chicagoans are much more accepting of char on their pizza. There is also a group of people who won't consume pizza, or any other food with char as this results in the development of carcinogenic (cancer causing) compounds. Pick your poison, I'll have mine with extra cheese!
Tom Lehmann/The Dough Doctor
Re: Charring and the Marketplace
6484

To add even more confusion, the common sense approach says to add any uncooked meats to the pizza last, so they have greatest exposure to the oven heat and are assured of being thoroughly cooked on the pizza, with that said, when making a Chicago style deep-dish pizza, the raw sausage goes on the bottom of the pizza, but it is thoroughly cooked due to the extraordinarily long baking time of these pizzas (about 50-minutes). The Chicago thin crust pizzas are also dressed differently with the cheese being put on last. Like Peter said, this results in a very soggy finished pizza as the melting cheese traps all that moisture under it, but again, this pizza is given a long baking time too, normally around 30-minutes. Most, if not all of the big box chains follow food safety practices of using nothing but pre-cooked meat toppings (due to the possibility of cross contamination, and the fact that they just need to be heated to above 160F to be safely served), and they like to keep the meat close to the top of the pizza to ensure thorough reheating/cooking.
Tom Lehmann/The Dough Doctor
Re: Best order to put on toppings??? Help?!?
6485

JB;

Your present dough formula is at 64.9% absorption (water weight divided by flour weight times 100). To find your absorption at 60% just use your calculator and enter the flour weight (567) X 60 (press the "%" key) and read the answer in the display window. 567 X 60 (%) 340.2 g./ml of water should be added to provide 60% dough absorption.
Tom Lehmann/The Dough Doctor
Re: Cold Ferment?
6486

Atom;
Mixing the oil into the dough immediately after it comes together is not a problem when using a mixer, but is nearly impossible if mixing by hand. It normally takes about 4 to 5-minutes of machine mixing to achieve uniform distribution of ingredients throughout the dough. When making pastry, such as sweet dough, where the fat level is really up there, at 18% to 25% of the total flour weight you just can't develop the dough with that much fat if you were to mix it in right from the beginning, so it is normally added during the last 5-minutes, or so, of the mixing time with excellent results. If you want to see how your dough mixes in your mixer, just add a little yellow food coloring to the dough at various stages of mixing and see how long it actually takes t get a uniform dispersion of the coloring as indicated by the color of the dough. Unless your dough is just going for a free ride on the dough hook, you will be surprised at how well the mixer incorporates the ingredients.
Tom Lehmann/The Dough Doctor
Re: Order of ingredients, dry first or water+idy ?
6487

A couple of things come to mind. What was your finished (mixed) dough temperature? We normally like to see something in the 80 to 85F range. Did you cover the container when you put the dough into the fridge? If you did, that might have contributed to the problem as this does not allow the dough to cool very efficiently, you might try wiping the top of the dough ball lightly with oil after you put it into the plastic bowl, then leave the lid off for about 2-hours (allowing the dough to cool more efficiently) before lidding the bowl.
Tom Lehmann/The Dough Doctor
Re: Disappointing pies tonight
6488

Lenny;
Testing that we have done over the years has shown that adding the water to the mixing bowl first will significantly shorten the total dough mixing time while making life a lot easier for your mixer at the same time. Also, you mention adding IDY to the water. This is probably not the best idea for optimum yeast performance as IDY is actually designed to be added dry, with the flour, or an alternative method for adding IDY is to first mix the ingredients until they come together and start forming a dough, then add the IDY to the dough mass and continue mixing for at least 5-minutes.
More recently we have looked at the claims that the outside weather influences the absorption properties of the dough. What we found was that when the oil was added to the water in the mixing bowl, it would float on top of the water, then when the flour was added, the flour would absorb some of the oil as opposed to water. Since flour does not contain any gluten, but only proteins, which when agitated in the presence of water forms "gluten", when these same proteins are agitated in the

presence of oil, gluten is not formed (think of making a rue to thicken gravy). When we separated the oil from the water, buy adding the oil immediately after the dough had started to form, we got better hydration of the flour, complete gluten formation and much improved uniformity in dough performance when several doughs were made. Based on this, we now recommend that the oil be added to the dough after about 2-minutes of mixing, or as soon as you don't see any dry flour in the mixing bowl. If you use a plastic fat, such as butter or shortening, you can add it right along with the flour as this only applies to the use of oil in the dough.
Tom Lehmann/The Dough Doctor
Re: Order of ingredients, dry first or water+idy ?
6489

Craig;
Great looking bison!!
There are a few companies now offering alternatives to regular pizza toppings. At Pizza Expo I had a chance to sample bison pepperoni, turkey pepperoni, as well as a turkey sausage. All were great tasting with a claim to be lower in fat than the "real" stuff. We tried the bison pepperoni and found it to perform very well on pizza. It didn't oil out or cup like regular pepperoni does (that can be either a good thing or a bad thing depending upon your perspective).
Tom Lehmann/The Dough Doctor
Re: Bison!
6490

Pan food for thought:
Deep-Dish: Black (dark colored) either 1.5 or 2-inches deep.
All other thin crust types of pizza: Coupe style pans or tapered cutting pans (40 degree shoulder 1/2-inch deep) again in a dark anodized finish.
Tom Lehmann/The Dough Doctor
Re: What depth pans do I need?
6491

Mostly N.Y. style, but I also use them on extensively on my Margarita pizzas as they really stand out when using pieces of torn Mozzarella and garnished with fresh basil leaves.
Tom Lehmann/The Dough Doctor
Re: Stanislaus 74/40 Tomato Filets
6492

Craig;
I'm right in there with you! Until you have had a really great pizza (for your specific likes) all pizzas are OK to good, but after that taste of pure delight, all others are lacking. The best part of making your own pizza is that with time, you will end up making pizzas that meet YOUR specific taste, if it doesn't, you know who to blame! The problem with the big box chains is that they have to make a pizza that appeals to a much broader spectrum of individual tastes, there is nothing wrong with that, it's just the nature of the beast that they have to contend with.
Tom Lehmann/the Dough Doctor
Re: Change of Taste or Has Commercial Pizza Gone Bad?
6493

We use the Stanislaus 74/40 Tomato Filets all the time, but not directly from the can, we first drain them very well and then add them directly to the pizza skin in

place of a prepared sauce. The order of addition is as follows: brush the pizza skin with garlic infused olive oil, add sliced or diced garlic, then add several basil leaves, over that apply the 74/40 Tomato Filets, and then the cheese and other desired toppings, finish with a sprinkling of shredded Parmesan cheese. The tomato filets provide a great flavor and texture, and more importantly, my pizzas don't look commercial.
Tom Lehmann/The Dough Doctor
Re: Stanislaus 74/40 Tomato Filets
6494

New York pizzas are commonly made with All Trumps flour (14% protein content), but any other high protein content (13 to 14%) should work well in this application. If you cannot get a higher protein content flour, buy some vital wheat gluten (available at most supermarkets in the baking ingredients aisle) and use that to bump up the protein content. Starting with a 12% protein flour, you will need to add between 3 and 4% (based on the weight of the flour) vital wheat gluten (VWG) to bring it up to 14%. Be sure to dry blend the VWG into your regular flour, and remember to increase the dough absorption by 1.5% (based on the total flour weight) for each percent VWG that you add. This will help to impart that chewy characteristic common to N.Y. style pizzas.
Tom Lehmann/The Dough Doctor
Re: Bakers from Montreal (and Canada): help me gather the best ingredients
6495

When we mix dough in a large planetary Hobart mixer (80-quart) using 50-pounds of flour, we typically need to use water at 60 to 65F to achieve a targeted finished dough temperature of 80 to 85F after about 10-minutes of mixing. The cold water is needed to compensate for the temperature gain of the dough during mixing as a result of friction between the dough and the bowl. This is pretty common in pizzerias across the country, but when making pizza at home, with much smaller mixers, the temperature gain is not all that great, plus our expectations of the dough are different between store made and home made dough, as a result, we normally see warmer water being used in a home made dough than we would in a store made dough. The thing to remember is finished dough temperature is what we are striving for. This is what sets the stage for fermentation and ultimately flavor development and handling properties.
Tom Lehmann/The Dough Doctor
Re: cold water technique--worked
6496

I'm with Craig too, except I typically use 60 to 65F water temperature for my method of dough management.
Tom Lehmann/The Dough Doctor
Re: What water temp do you think gives ny pizza dough a better flavor?
6497

H;
You might give this one a shot to see if it comes close to what you are looking for.
Flour:(high gluten/protein) Think General Mills All Trumps. 100% (500-grams)
Salt: 2% (10-grams)
Sugar: 2% (10-grams)
Olive oil: 1% (5-grams)
Yeast (active dry yeast): 0.5% (2.5-grams)

Water: 56% (280-grams)
Note: Take about 50-grams/ml of the water and warm it to 100F, put the ADY into the warm water to hydrate it (about 10-minutes) then add this to the remainder of the water (70F) and pour into the mixing bowl, add the flour, then the salt and sugar and begin stirring with a wood spoon, when the dough gets too stiff to continue stirring, remove the spoon, add the olive oil and continue mixing by hand for about 2-minutes. Place the dough into a lightly oiled bowl, cover to prevent drying and set aside to ferment for 2-hours. Turn the dough out of the bowl onto a lightly floured counter top and knead just a few times until the dough feels elastic. Place back into the oiled bowl and allow to ferment for another hour. Turn the dough out of the bowl and cut into two pieces. Lightly form each piece into a ball and set aside to proof until the dough balls can be easily opened into pizza skins (about an hour), or lightly oil the dough balls and place into individual plastic bags, twist the open end to close, forming a pony tail, tuck the pony tail under the dough ball as you place it into the fridge. The dough will be ready to use on the following day. To use, just remove the dough from the fridge, and allow it to temper AT room temperature for about an hour, then turn it out of the bag into a bowl of dusting flour, and begin opening the dough into pizza skins.
Note: If you cannot get a suitably high protein content flour, like All Trumps (14%), use the best flour you can get, and add wheat gluten to it (available at most supermarkets). The amount of gluten to add will be 5% of the flour weight. Just be sure to dry blend the gluten into the flour before adding it.
Tom Lehmann/The Dough Doctor
Re: Looking for a chewy base recipe (Pizza Hut stuffed crust style)
6498

I'm a pretty basic guy too. My personal favorite is nothing more than brushing the pizza skin very lightly with olive oil, then adding diced garlic, fresh basil leaves, topped with slices of ripe tomato or Stanislaus 74/40 Tomato Filets (well drained). Then comes the cheese and desired toppings. Simple, but with a great flavor and texture, best of all, it doesn't mimic what everyone else is doing. Dare to be different and creative.
Tom Lehmann/The Dough Doctor
Re: Pizza Sauce
6499

TWILD:
Your dough temperature might be a little on the high side too for your home fridge. When using plastic containers like the one shown, be sure to leave the lid off for at least the first 2-hours in the fridge. If you don't do this you will trap in the heat of the dough ball thus allowing fermentation to continue at a faster rate than desired, this is especially true when shooting for a 3 to 4-day hold time in the fridge.
Tom Lehmann/The Dough Doctor
Re: Flat Dough Balls
6500

It would also help us if you could provide us with your dough management procedure. This is everything you do with/to the dough from the mixer to the time it is used. Be sure to include temperatures too as it can have an impact upon fermentation, which can impact crispiness. What we typically look for is something like this:Mix the dough just until it takes on a smooth, satiny appearance; finished dough temperature is usually in the 80 to 85F range; take the dough directly to the bench for scaling and balling; wipe dough balls with salad oil and place into dough

boxes; take dough boxes directly to the cooler and cross stack; allow dough boxes to remain cross stacked for 2.5-hours, then down stack and nest or lid the boxes; on the following day, remove a 2 to 3-hour supply of dough from the cooler, leaving it in the closed boxes; allow the dough to temper AT room temperature for about 3-hours, or until the dough temperature reaches 50 to 55F; take the dough to the bench for shaping into pizza skins as needed (Note: use of a sheeter/roller is not conducive to making the crispiest crust unless you allow the dough to set for 20 to 30-minutes after forming). One trick that I have used is to use the sheeter to open the dough only to about 2/3 of the finished diameter, then finish opening it by hand to the finished diameter. This provides for a very crisp crust characteristic without the need to allow the dough to rise after forming. If you bake the pizza on a screen in a deck oven you can improve the crispiness if you "deck" the pizza for about 60-seconds before you remove it from the oven. This is where you remove the pizza from the screen and allow it to bake right on the hearth for the final 60-seconds. As for your conveyor oven, assuming it is an air impingement oven, do you know what the top and bottom finger profile is?
Tom Lehmann/The Dough Doctor
Re: Help please,,I am having dough issues!!
6501

This sounds a lot like the old blitz method of making pastry (Danish) dough. You cut the cold fat into small, walnut size pieces and mix them with the flour until they are about the size of Lima beans, then add the water and other dry ingredients and mix just enough to incorporate. Immediately scale and ball the dough and place it in the cooler for about 24-hours, then sheet (roll) to about 1/4-inch thickness, and fold several times (left to center, right to center, top to center, and bottom to center) place back into the cooler to rest (about 8-hours) and then roll to form your pizza skin. The amount of fat to use will be between 20 and 25% of the total flour weight. A number of years ago Schwan's (Tony's) made a type of pizza on a crust that they called Italian Pastry Crust. This was made in a similar manner except that they used commercial hard fat flakes instead of cutting the fat themselves. The resulting crust was tender eating, and had a decided pastry looking appearance.
Tom Lehmann/The Dough Doctor
Re: flaky pie crust techniques applicable to deep dish?
6502

A slightly over fermented dough may exhibit bucky characteristics during forming. In this case bucky means that the dough will be overly elastic and resist stretching. Severely over fermented dough will stretch easily, even to the point of tearing easily. It will feel "dead" like pushing out a wet towel, and it won't exhibit good rise characteristics during baking, often seen as a pizza with a very low (thin) center section with poor bake out properties. Due to consumption of most of the sugar and acidification of the dough, it will not exhibit good baking or browning characteristics in the oven. As a finished crust, the presence of a gum line just under the sauce is common, especially with a thin/low center section, a light or mottled appearance is common, and the flavor might be a little on the sharp side of desirable due to the excessive acid formation.
Tom Lehmann/The Dough Doctor
Re: Over fermented dough
6503

Norma;
You're lucky to have such a bountiful garden this year. With the ongoing drought

we have lost one garden (beans, carrots, turnips, etc.) due to lack of subsoil moisture. You just can't water enough to compensaye for lack of rain, a VERY dry winter last year, and then add to that over a month of 100F+ temperatures! Our other garden with squash and watermelon is a raised bed garden and is doing just OK, but the excessive heat is taking its toll. I hedged my bets this spring and did another "potted" garden, using salvaged calf feed containers (about the size of a bushel basket) and literally lined our drive way with them. They are are easy to really pour the water to, and retain the water much better than our raised beds. Aside from the heat slowing down the setting of the tomatoes and peppers in these pots they have done quite well for us. One variety of tomato that I used in these pots is called Healthy Girl. It looks something like a Roma, but is more egg shaped, it also has a tough skin like a Roma but is more dense and solid than any Roma I've seen. It is a fantastic tomato to use as either a topping or my favorite is to use it in place of sauce, in my humble opinion, nothing is more natural tasting than real, fresh tomato on a pizza. Lets hope this silly drought comes to an end soon!
Tom Lehmann/The Dough Doctor
Re: Gardening tomatoes, herbs, and some veggies for 2012
6504

You have two options to making a less chewy/tough pizza upon standing. 1: Change to a lower protein content flour if you can. For example, if your present flour has 13% protein content, going to a 12% protein content flour will help to reduce some of the toughness. 2: Continue using your existing flour and increase the fat content. Right off the bat, I'd take it up to at least 5% of the total flour weight and bench mark from there. Maximum tenderness is achieves at around 8% total fat content. You can go higher, but you begin to compromise other characteristics. If you really want to see how the fat level influences toughness, just buy two packages of tortillas (not too terribly different from pizza skins), make one a "feature" package, while the other should be a "normal", full fat tortilla, you don't need to fill and roll, just heat and eat and you'll immediately see the difference.
Tom Lehmann/The Dough Doctor
Re: New Pizza Shop
6505

We have not had good success with pre-fermenting the dough prior to scaling, balling and taking it to the cooler/refrigerator when we are holding it for more than about 24-hours. This is due mostly to the dough over fermenting while in the refrigerator, if you simply begin reducing the yeast to a point where it won't over ferment (blow) you probably won't have enough leavening when the dough goes into the oven to support the weight of the toppings, so you can end up with a nice edge, but a flat center portion that in all too many instances is characterized with a gum line just beneath the sauce layer. We find it much better to take the dough directly from the mixer (80 to 85F) cut and round it, oil the dough ball(s) and drop into a plastic bread bag, twist the end closed and tuck it under the dough ball as you place it into the fridge. This is important as it allows for some expansion of the dough ball. The dough will be ready to begin using after about 24-hours, but is at its best after 32-hours, and it will hold in the fridge for a total of about 48-hours, or a little more. To use the dough, remove from the fridge about 2-hours before you anticipate opening the dough ball into a pizza skin, then turn the dough out of the bag, dropping it into a bowl of dusting flour, place the dough onto the counter top and open into a pizza skin in your normal manner. We do this all the time and it works really well for us.
Tom Lehmann/The Dough Doctor

Re: Cold Ferment?
6506

The air impingement ovens used by many of the big box pizza stores deliver a lot of intense heat to the top of the pizza and really create an almost toasted pepperoni characteristic which goes a long ways toward intensifying the flavor. We have made pizzas for customers where the pepperoni was so toasted that it was getting crispy , like a piece of bacon (admittedly, a little more than I personally like) and the flavor was sharper than with a lesser baked pepperoni.
Tom Lehmann/The Dough Doctor
Re: Pepperoni Frustration
6507

Peter;
That's it.
Thank you,
Tom
Re: New Pizza Shop
6508

Jamie;
The use of just a small amount of sugar will help to "jump start" the browning reaction. You are correct in that too much sugar will result in the development of an unwanted uniformly brown colored crust, but with just a small amount of sugar, about 1 to 1.5%, you should be able to get the browning reaction started without excessive color development.
Tom Lehmann/The Dough Doctor
Re: Ratio for top and bottom oven temperatures
6509

Remember, this dough should rise very slowly in the cooler. It typically takes 18 to 24-hours in the cooler for the dough to rise sufficiently (receive enough fermentation) to open easily and produce a finished crust that doesn't exhibit excessive bubbling during baking, and has a very good fermentation flavor. How many hours do you leave the dough in the cooler before you are using it? Do you bring the dough out of the cooler and allow it to temper AT room temperature for 2 to 3-hours prior to opening the dough balls into pizza skins?
If you will send me a private message I will be glad to send you a copy of my Dough Management Procedure that you can use for developing a dough management procedure for your specific shop conditions.
Tom Lehmann/The Dough Doctor
Re: New Pizza Shop
6510

The dough formula looks to be in reasonable balance, IDY is a little high at 0.395% (we normally recommend 0.375%) but this should not pose a problem. The sugar is only 1% so that is not a problem either. The oil calculates out to 4%, which is again a little high but not unusually so. Your cooler at 4C/40F is operating at about the highest we like to see it at, and with traffic in and out it during the day, it might actually be operating at a higher temperature but that remains to be seen. From your comment about the dough balls not rising when you take them directly to the cooler after mixing/balling, I would be suspecting that your finished dough temperature might be too low/cold. We normally like to see the finished dough

temperature in the 80 to 85F/26 to 29C range. If you can provide us with your complete dough management procedure it would help us to determine where the issue is at, and suggest corrective action.
Tom Lehmann/The Dough Doctor
Re: New Pizza Shop
6511

Actually, we're not letting it warm to room temperature, but rather temper AT room temperature for about 2-hours. The actual dough temperature after tempering at room temperature for 3 to 3-hours is in the 50 to 60F range. Unless your yeast levels are very low, when you take the dough directly from fridge to oven the dough typically exhibits a propensity to bubble/blister much more than it does if it is allowed to temper first. In many cases where this is a practice, we have found that there is a tendency for the dough to develop a gum line upon baking when the yeast level is reduced too low. This is due to the inability of the dough to support the weight of the toppings with an excessively low yeast level. In short, it becomes a bit of a balancing act between yeast level, and gum line if the dough is not allowed time to temper at room temperature for a period of time after being removed from the fridge. It's not a big deal for the home pizza maker, but at the pizzeria level it can be a real problem, especially when the pizzas are being baked in an air impingement oven. In this case, when the pizza tries to transition into a pita, all of the cheese and toppings are forced into the top fingers of the oven making for a super neat mess that might also take out the next two or more pizzas following it (not a good situation).
One other thing, the tempered dough will typically be somewhat easier to form into a pizza skin than cold dough straight out of the fridge.
Tom Lehmann/The Dough Doctor
Re: What happens if you don't have time to let the dough warm to room temp?
6512

Gianni;
When you bulk ferment, especially with large quantities of dough, you get much more fermentation taking place than when you divide and ball the dough prior to fermentation. Even though the dough is in the cooler, that large piece of dough doesn't cool down, infact, it actually increases in temperature (about 1F per hour at room temperature and about half of that in the cooler). This is due to heat of metabolism (fermentation). With that large piece of dough, as it ferments, it becomes less dense and better insulates the center/core portion from cooling, so it just keeps on happily fermenting away, this is why you are getting that sour taste (over fermentation). With the much smaller dough balls, they are more efficiently cooled, and fermentation is much better controlled as a result. The fact that the dough balls are not being over fermented is the reason why they handle better and produce a crust with a flavor more to your liking.
Tom Lehmann/The Dough Doctor
Re: Bulk rise vs balling
6513

Jamie;
I think I know what your problem is. Your flour is milled to a very high level of starch damage. You will note that the ingredients shown on the flour bag indicate that the flour is enriched, but has no other treatment, including malting, which if present, would be indicated by the presence of malted barley flour. Also, when flour is milled to a high level of starch damage it exhibits a very high absorption, as you

have indicated. The reason why malt is added to the flour is to convert starch to sugars for yeast to feed upon, and to provide some residual sugar for crust color development. With your long fermentation time your yeast is probably struggling due to lack of nutrients to feed upon. If you were to add malt or any form of amylase enzyme to the dough it would literally turn into a liquid after a few hours of fermentation as all of the damaged starch would be hydrolyzed to sugar. My recommendation is to add some sugar to the dough, this will provide both nutrient for the yeast and residual sugar for crust color development. You will need to experiment to find the right amount of sugar to add, but I would begin with an addition of 3% based on the total flour weight.
Tom Lehmann/The Dough Doctor
Re: Ratio for top and bottom oven temperatures
6514

I.N.;
If you are using only corn meal for your dusting flour you might want to add some semolina flour to it to help dry the dough surface. Everybody has their own favorite blend for a dusting/peel flour. Mine is equal parts of corn meal, semolina flour and my regular pizza flour. Drop your dough ball into a bowl of your dusting flour, then place on the counter top with more of the dusting flour and proceed to open the dough ball into a pizza skin, then transfer the opened skin to your peel which has been lightly dusted with either corn meal of your blended dusting flour (works well as a peel dust too), then be sure to shake to make sure it is not sticking to the peel, as you dress the dough skin give it an occasional shake. With time and experience you will soon learn how often YOUR dough needs to be shaken on the peel.
Tom Lehmann/The Dough Doctor
Re: working dough & peel related questions
6515

Try this once;
Flour 100%
Salt 1.75%
Sugar 2%
Olive oil 2%
Water 58%
50/50 blend of garlic and onion powder 0.5%
Note: All percentages are baker's percent (based on the total flour weight).

Add water (100F) to the mixing bowl, add the flour and dry ingredients, mix for 2-minutes, then add the oil and mix as usual for your mixer. No, there is no yeast in this formula.
Scale and form the dough into balls, and set aside to rest for 20-minutes (cover to prevent drying).
Roll the dough balls out to make a thin crust, place on baking stone and lightly par-bake. Immediately dress as desired and place back into the oven to finish baking (about 5-minutes). This usually produces a very thin, crispy, crackery crust. Note: It must be par-baked.
Tom Lehmann/The Dough Doctor
Re: Pizza Shoppe-style?
6516

That bacon fat pizza sounds mighty good. Crispy bacon pieces are one of my favorite toppings.

Tom Lehmann/The Dough Doctor
Re: Solid Fat
6517

DM;
Just be very careful when adding honey, or any kind of sugar to your sauce as you will increase the potential for it to scorch around the edge of the pizza during baking, thus ruining the flavor of the pizza. One way we have found to address the acidity issue is to add powdered Parmesan and Romano cheese to the sauce to mellow the flavor out.
Tom Lehmann/The Dough Doctor
Re: Honey in Sauce
6518

Take and bake style pizza was developed in response to what many consumers said they wanted in pizza to be consumed at home. Fresh tasting, hot and crispy (jury is still out on the crispy part). Then along came the DiGiorno pizzas and the move to baking pizzas at home was in full motion. DiGiorno pizzas were positioned to compete with DELCO (delivery/carry out) pizzas and they did it very well. As the old adage goes, you "fight fire with fire" so a lot of the independent operators started offering T&B pizza in addition to their regular pizzas. Most consumers surveys indicate that consumers have a preference for T&B over DELCO in many parts of the country. It is hard to argue with the success of Figaro's and Papa Murphy's. To see some typical commercial T&B dough formulas please go to the RECIPE Bank at <www.pmq.com>
Tom Lehmann/The Dough Doctor
Re: Hot and Ready VS Take and Bake
6519

A number of years ago I worked with a fellow making several different kinds of gourmet cakes that were shipped around the country. He used a special shipping service provided by the delivery carrier (It might have been UPS, I don't remember anymore) but they provided special custom packaging, and with I believe 4-ounces of dry ice, it could be shipped anywhere in the U.S. for one money. If I remember correctly, the cost of the packaging and shipping came to around $15.00 at that time. Kinda expensive, but it seems people were more than willing to pay up to $50.00 for a gourmet carrot cake, chocolate decadence cake, or cheese cake. It might be a little hard to get people to pay $15.00, or more, shipping charges for a piece of pizza dough. Point is, those Styrofoam containers with a little dry ice really do the trick when it comes to keeping something frozen/cold.
Tom Lehmann/The Dough Doctor
Re: Shipping frozen dough in the mail
6520

My oldest son lives just a short distance from the Pizza Shoppe on Hwy-7 (Olathe), I am familiar with their pizza as my son usually picks one up when I'm at his house, but the next time I'm there I'll make it a point to go to the store to observe how they make their pizzas. I do know they they bake their pizzas in a cutter pan as is indicated by the 40-degree shoulder on the crust edge, and they do use deck ovens, and it is a thin cracker type crust. I'll try to get more details on it the next time I'm there.
Tom Lehmann/The Dough Doctor
Re: Pizza Shoppe-style?

6521

Charbo;
The inclusion of fat into a dough formulation (up to a point) improves volume response through better gas retention and lubrication of the dough structure. You can read about this in S. Matz book or E.J. Pyler's Baking Science and Technology. When the fat content goes much above 6% of the flour weight it actually begins to reduce bread volume. More current research has shown that just adding oil or melted shortening to the dough can, under certain circumstances, lead to inconsistencies in the dough (we think this is where the impressing that the outside weather influences dough absorption properties), this is why we developed the delayed oil addition method of dough mixing. By this method the oil is not added until the flour has had an opportunity to hydrate, the oil is then added and the dough mixed in the normal manner. The reason for this is due to the fact that oil will soak into the flour thus reducing the amount of gluten that can be formed, resulting in variations in dough consistency. Since solid fats do cannot soak into the flour they can be added right up front with the other ingredients. In a nutshell, that's the story of oil and solid fat in a dough system.
Tom Lehmann/The Dough Doctor
Re: Solid Fat
6522

By;
Also, keep in mind that as you ferment the dough at different temperatures you will get different finished flavor profiles. IE: The flavor profile of a cold fermented dough is not the same as that of a warm fermented dough. If it were me in that pickle, I'd mix a dough with a targeted finished temperature of about 85F, scale, ball, oil, refrigerate maybe every 4-hours during the day, or as I deemed necessary to maintain my dough supply. Do you have a reach-in cooler? If so, try this, Make your dough at night, scale, oil and place into individual plastic bags, refrigerate, early the next morning, place the bags of dough into a box (reduces storage space) and make another batch the same way. The first batch will be ready to go when you are, and the second batch should be ready to go later in the afternoon, mix a third batch after the noon hour trade for the dinner/evening time, this one should be ready to go around 6:00 p.m., do this as necessary to maintain a constant dough supply without over running your ability to inventory dough. The key here is to use individual bags for your dough. Once cooled (about 3-hours) they can be grouped more tightly together for better utilization of limited cooler space. Any major ingredient or restaurant supply should be able to provide you with low cost plastic bread bags. You might need to dock the dough pretty good to control bubbling, but this should allow you to limp through until you can add more cooler space.

Tom Lehmann/The Dough Doctor
Re: New Pizza Shop
6523

Aeb;
I've never identified a strong alcohol aroma when opening the oven door during baking. I've detected a strong fermentation aroma (a mix of alcohol, carbon dioxide, and acids) but never specifically alcohol. Weird!
That's what makes life so interesting...new things happening all the time.
Tom Lehmann/The Dough Doctor
Re: Oven fire due to alcohol from yeast fermentation

6524

One oven company that comes to mind when we think of wood burning is Woodstone <www.woodstone-corp.com> They have everything from gas, to wood, to coal and combinations of both gas and wood or coal. I'm partial to the combination with gas, that way you can close the shop down for a day or two without the need to "feed" the oven.
Tom Lehmann/The Dough Doctor
Re: How do I decide how big of an oven to get?
6525

Scott;
Nope, that's not just the case here in Manhattan, Kansas, but rather an across the board average baking temperature for deck ovens. There are places that bake as low as 400 to 450F on the low side to as high as 600F to 650F on the high side (they would go higher if the ovens would permit). so I still stand by my guns at 500 to 550F (525F) as an average temperature range. If the request had asked for a temperature to bake a specific type of pizza, let's say a New York thin crust, or a Chicago deep-dish, that would have been a different story.
Tom Lehmann/The Dough Doctor
Re: Oven Temp
6526

We make some "killer" pizzas using nothing but ripe, garden fresh sliced tomatoes. We put down a few fresh basil leaves and sliced or diced garlic, then add the tomato slices followed by the cheese. Clean, simple, great flavor, texture, and appearance. As a plus, it doesn't look anything like a box store pizza, instead, it has much more of a "gourmet" presentation.
Tom Lehmann/The Dough Doctor
Re: What to use for Pizza Sauce with no crushed tomatoes on hand?
6527

Most commercial deck ovens, such as the Y-600 are set to bake at 500 to 550F. We typically set our deck ovens to bake pizza at 525F, unless the dough formulation or some other unique feature of the pizza dictates a different temperature.
Tom Lehmann/The Dough Doctor
Re: Oven Temp
6528

I thought it was nearly impossible to see an alcohol flame. I remember this from watching dragsters running on alcohol.
I've never heard of this either, when you get a bubble to form on the dough it will contain some alcohol, but it will also contain a good portion of vaporized water too. I've seen this happen when someone didn't set their oven to a temperature below the flash point of oil (about 435F) when seasoning pans, what happens then is the oven fills with smoke, lots of it, and when the door is opened, POOF! Your share of excitement for the week all in just a second or two. Before the days of fail safe pilot light gas valves, I once had an oven go out on me, I opened the door to vent the gas and hit the ignition switch, The oven was not fully ventilated, the spark ignited the gas, and the following explosion, resulting in a large yellow fire ball, blew the door off of the oven and removed my eyebrows as well as ignited the paper cap I was wearing. Shortly after that the oven was fitted with the latest gas safety devices.
Tom Lehmann/The Dough Doctor

Re: Oven fire due to alcohol from yeast fermentation
6529

G;
Top not browning at all, but the bottom is, and the cheese burns before the top of the pizza browns.
*) Bake if a higher rack position in the oven
*) Increase the sugar content of the dough to 2% and bake on an elevated platform such as a screen
*) Is the flour malted? If not, you might add 0.25% diastatic malt, or see "sugar" above.
*) Brush the entire top of the pizza skin with oil (olive oil) before dressing
*) Make sure the cheese is cold, right out of the fridge when you use it
*) Try different brands of Mozzarella cheese
*) In most cases where there are issues in getting the top of the pizza to color up the cause is low oven/baking temperature.
Tom Lehmann/The Dough Doctor
Re: bottom not fully browning, crust not at all
6530

G;
Your finished pH of the crust is about right. Have you tried making the dough skin a little thicker? In going back and looking at your photos, it appears that you might be using a rolling pin to shape the dough as indicated by the knife edge on the round pizza (this happens when the pin is allowed to roll off of the dough, thus creating a tapered edge that is overly thin). The combination of a rolling pin or sheeter and a light dough weight, creating a very thin dough skin can result in a dressed dough that can be difficult to get the bottom to brown properly. Another option to look at is to form the dough skin, and allow it to proof/rise for about 20-minutes before you dress and bake it. By doing this you will allow the dough to gas up a little, becoming less dense, and creating a better heat break, so the bottom heat is not as easily conducted through the dough/crust where it is absorbed and dissipated as steam by the liquids on top of the pizza, with an effective heat break the bottom of the dough can reach a sufficiently high surface temperature to begin the browning reaction.
Tom Lehmann/The Dough Doctor
Re: bottom not fully browning, crust not at all
6531

Bill;
I'm going to guess that what you are seeing is a short or no-time dough. This is a dough made with little fermentation, thus it has little, or no/poor flavor. I'm betting that the "dead yeast" he is talking about is the dead yeast additive (actually glutathione) available from many yeast suppliers, that is used in the same manner as L-cysteine is, that is to impart the soft, extensible handling properties that fermentation imparts to the dough when the fermentation time is short or nonexistent. We typically use this in what are referred to as "emergency doughs". These are doughs that are designed to be ready for use in a very SHORT period of time after mixing, typically, in under an hour. They are used in pizzerias only under extenuating circumstances, such as when they run out of dough, or they come into the store in the morning only to find that the cooler has been down during the night and all of their dough has been lost, so they make emergency doughs during the day to limp by on until they can get back into using their regular dough again.

Like you said, it ain't the greatest pizza in town.
Tom Lehmann/The Dough Doctor
Re: Local Pizza
6532

Barry;
Galaxy Nutritional Foods, Orlando, Florida has a cholesterol free cheese product (tofu based) that is engineered to replace Mozzarella cheese. It works pretty well by itself, but where it really shines is in making a 50% reduced cholesterol cheese topping. We blend it 50/50 with a part skim Mozzarella cheese and most people don't even realize what they are eating. The Galaxy cheese products are sold at many supermarkets, or you might contact them directly to find out where it is sold in your area. I don't know if they sell direct to the public or not, but if you can find a store selling their products, you might be able to get them to special order some for you, freeze it and use as needed.
Tom Lehmann/The Dough Doctor
Re: I know this is heresy, but I'm looking for the best part-skim mozz
6533

We use wood prep peels all the time, and never really experience any problems with the dough sticking. The secret is in using a good peel dust. My own personal favorite is equal parts of flour, fine cornmeal, and semolina flour. I don't like straight flour because if it gets damp it will cause the dough skin to stick like glue. Both the corn meal and semolina flour act like little ball bearings under the dough skin to help it slide off of the peel. If you're into it, try using wheat bran as a peel dust too. It works great since it doesn't absorb moisture well at all and is just the ticket if you're going to be letting the dressed pizza sit around for any length of time on the prep peel.
Tom Lehmann/The Dough Doctor
Re: Pizza Peels
6534

I'm with Norma on this one. The temptation is to use low absorption since the dough handles so well with lower absorption, it is the higher dough absorption that softens the dough allowing it to more easily, and fully expand (oven spring) during those first few seconds in the oven.
Tom Lehmann/The Dough Doctor
Re: Dense crust... I don't want dense crust...
6535

Benji;
All things being equal, in the U.S. it is the protein content of the flour that will have the greatest influence on the absorption properties of the flour. The higher the protein content, the higher the dough absorption (in most cases). When it comes to an International flour, of flour in other countries, damaged starch content is typically higher than it is here in the U.S., so in that case, the damaged starch content will have, by far, the greatest impact upon the flour/dough absorption properties.
Tom Lehmann/The Dough Doctor
Re: Hydration with AP Flour vs KABF
6536

You might have been using too much. We also see this problem with commercial

pizza ovens (deck types). During baking the veggies release water and you end up with a "swamp pizza". The air impingement ovens commonly used in many pizzerias direct a large volume of air onto the top of the pizza and in doing so exhibit excellent moisture management characteristics (sort of like passing a hair dryer over the pizza during baking). When you don't have much airflow over the top of the pizza it is difficult to manage this moisture. you might try finishing the pizza in a higher rack position so the pizza is exposed to more top heat to better evaporate the excess moisture. Blanching the veggies also helps, but destroys a lot of the texture at the same time. You might also look at how you are slicing the veggies too. Larger pieces are not as prone to moisture loss during baking as smaller pieces are.
Tom Lehmann/The Dough Doctor
Re: fresh veggies and wet pizza
6537

G;
If you get your water from a municipal water supply it might be a little on the alkali side which would both slow fermentation (yeast is an acid loving organism) and induce crust color development (technically speaking), so I would doubt that your water is the issue. If you get your water from your own well, all bets are off, but even then, most issues revolve around alkalinity, so again, I would not be overly suspect of the water. There is a possibility that you are stretching the dough skin too thin. This would allow the heat from the stone to pass right on through the dough to be dissipated by the moisture in the toppings. Have you ever tried to solder a copper pipe with even a trace of water in it? Can't be done with a propane torch. The same thing can happen with your dough if you stretch it too thin. Try leaving the dough a little thicker. For a test, try to leave the dough about 3/16-inch thick, thencover it and let it rest for 15-minutes before you proceed with dressing the dough and baking it. The thicker dough and the rest time will make for a more porous crumb structure in the dough which will create a better heat break, allowing the dough to get hot enough to brown during baking if this is the problem.
Tom Lehmann/The Dough Doctor
Re: bottom not fully browning, crust not at all
6538

Maybe its time to begin looking at the dough itself? The way the dough is made can/will have an influence on the way it bakes and more specifically, browns. Remember, acid (low pH) inhibits the browning reaction. Fermentation produces acids as a byproduct, so as the dough ferments, it becomes more acid. Have you ever noticed how white a sourdough bread or roll is? Acidity. Is there a possibility that you have over fermented your dough? A good way to find out is to look at your dough management procedure (everything that happens to the dough between mixing and baking) but will also include the use of a sponge, poolish, starter or sour). High dough temperature will also greatly increase the rate of fermentation (80F is a good starting point for dough temperature). If you want to measure the pH of your dough as it is ready for the oven, go to the drug store and buy some litmus paper for use in the 4 to 5 pH range. Then take a couple ounces of your dough and put it into a blender with a cup, or s, of distilled water. Puree well, pour off into a clean glass and allow to stand for 3 to 5-minutes, decant off some of the cloudy water from beneath the sludge floating on top into a shot glass, dip the litmus paper into the liquid in the shot glass and compare the color to the color guide provided with the litmus paper and this will provide you with the pH of your dough. You should be looking for something not any lower than 4.2. If the pH is

lower than 4.2 you are in the realm of a sourdough and will need much higher temperatures to bake the dough to the color you want. A good pH to shoot for is around 4.5 to 5.0 for your application.
Tom Lehmann/The Dough Doctor
Re: bottom not fully browning, crust not at all
6539

C4;
I did a quick Google search and came up with Harvic Mfg. Corp. 760 St. Anns Ave. New York 56, N.Y. (if did not provide a postal zip code). It looks like they also sell their ovens under a ETCO Brand name.
Tom Lehmann/The Dough Doctor
Re: Help with older oven
6540

Tory;
You might check with Hobart to see if they have a replacement reverse spiral design dough hook for your mixer. We have the Hobart N-50 (5-quart) mixers which are essentially an industrial version of your mixer and they have the reverse spiral dough hook option available for that mixer, but I don't know if the agitator shaft is the same diameter of not. Something to look into if you're interested.
Tom Lehmann/The Dough Doctor
Re: caputo 00 flour resulted in more of a 'bready' crust
6541

Tory;
When the dough just grabs onto the hook and goes for a free ride around the bowl this is an indication of poor hook design (what we call a "J" hook). The newer hook designs are what are referred to as a reverse spiral design. This hook design pushes the dough off of the hook and into the bottom of the bowl for much better mixing action. In some cases you can improve the mixing action of a "J" hook by increasing the dough size, or increasing the mixing speed. Just be careful so as not to over load your mixer. With the hook issue I doubt that you are over mixing the dough, so I would look at increasing the total dough absorption to achieve a softer dough which, should open up better during baking to achieve the open crumb structure you're looking for.
Tom Lehmann/The Dough Doctor
Re: caputo 00 flour resulted in more of a 'bready' crust
6542

Mike;
To season your pan(s) turn upside down on a cookie sheet or piece of foil in the oven to catch any drips. Lightly coat the OUTSIDE of the pan with plain salad oil, and place in a preheated oven at 425F for about 30-minutes. DO NOT season your pans at temperatures above 435F as this is about the flash point of most oils, and you increase the risk of an oven fire (really exciting when you open the oven door and the whole thing goes "POOF" in a bright orange ball). You might repeat the process a couple times and as you continue to use the pans they will continue to darken, this is a good thing. No need to season the inside of the pan, but you will need to apply some oil or shortening to the pan to facilitate release of the baked crust. Lastly, treat your seasoned pan just like a seasoned cast iron skillet.....DO NOT wash it, instead, just wipe it out after each use. If you ever soak it in water you can expect the seasoning to begin peeling off like a bad sun burn, then you will

need to strip all the seasoning off of the pan and start all over again. Almost forgot, season your pans when you can open a window if at all possible as the process can get a bit smoky.
Tom Lehmann/The Dough Doctor
Re: My First Pizza - in progress - LOTS of Newbie Questions...
6543

For homemade crust the yeast level is quite high. I use 1-packet of IDY to 3.5-cups of flour. Excessive yeast can result in the dough burning out (over fermenting), the result is a dough that fails to rise properly, is overly tender (tears easily) and doesn't color up well during baking due to the excessive acids formed during fermentation and sugar consumed by the yeast in making those acids. Watch your dough temperature too, you will probably want it to be in the high 70's to low 80's for the way you are handling the dough.
Tom Lehmann/The Dough Doctor
Re: Looking for dough advice
6544

I'm guessing that your dough may not have had a sufficiently high absorption. The use of high dough absorption promotes good oven spring and a very light/open crumb structure. If you used a mixer to mix your dough, you might have also over mixed the dough. For best results you should only mix the sough until it takes on a smooth appearance. Save the full gluten development for the bread doughs.
Tom Lehmann/The Dough Doctor
Re: caputo 00 flour resulted in more of a 'bready' crust
6545

GU;
I don't have it as a recipe but I do have it as a formula given in bakers percent.
Flour: Very strong/high gluten 100%
Salt: 2%
Sugar: 4%
Instant dry yeast: 1%
Oil/shortening: 5%
Water: (70F) 56%

Mix the dough just until it takes on a smooth appearance, then divide into desired weight pieces (about 16-ounces for a 12-inch pizza), form into a ball, wipe with oil and place into a bread bag, twist the open end into a pony tail to close and tuck the pony tail under the dough ball as you place it into the fridge. Allow the dough to remain in the fridge for 24-hours, then remove and allow the dough to rest at room temperature for 2.5-hours, carefully open the dough ball using your hands or a rolling pin to just fit the pan. Put about 1-ounce of salad or peanut oil in a dark colored, deep-dish pizza pan, then place the dough into the pan. Set aside and allow to rest at room temperature (covered) for about an hour, using your fingers in the pan, reform the dough to fit the pan bottom diameter, set aside again to rise a second time and form again. The dough should stay at the full pan diameter after you stretch it this time. Allow the dough to rest for 30-minutes and take it to the fridge for storage for at least 4-hours or overnight. Dress the dough with sauce and desired toppings, and bake at 450F. I normally start the pizza out in a lower rack in the oven for the first 10-minutes of baking, then move it to middle or higher rack position to finish baking. The total baking time will be around 20-minutes. The resulting crust is very light, has a very open crumb structure and is as tender

eating as cotton candy.
Tom Lehmann/The Dough Doctor
Re: jets pizza
6546

Diza;
The dough docker is used to help control bubbling and blistering of the crust during baking. A correct dough docker should have blunt pins (looking something like a cowboy's spurs). The way it works is to pinch the dough together, not perforate it. If you look at a saltine cracker, or club cracker you can easily see the results of using a dough docker (note that the holes are closed by a thin membrane of dough on one side).
Tom Lehmann/The Dough Doctor
Re: The Spikey Roller thingamajigger?
6547

K;
Yes, the dough does increase in temperature to the extent of approximately 1F per hour due to heat of metabolism, BUT as the heat moves to the outer portion of the dough it is dissipated to a great extent. That's how the cooler works. Your IR thermometer is only measuring the outside temperature of the dough, if you measure the inside core of the dough you will find a higher temperature, how high will depend upon a number of factors, such as efficiency of the cooler, and dough weight/shape. Keep in mind that your dough will continue to ferment until the actual core dough temperature drops to about 43F, actually, it even continues to ferment, but very slowly at that temperature, but it is considered to be relatively stable for holding purposes. You can see the effect of heat of metabolism by making two doughs, one with yeast, and the other without yeast. Mix them both to the same finished temperature, and scale to the same weight, form into equal size dough balls and place into the cooler next to each other. Measure the internal temperature after 24 or more hours. The dough without the yeast will not be subjected to heating due to yeast metabolism and hence should show a colder temperature than the dough made with yeast. The larger the dough piece, the poorer the heat transfer properties from core to outer edge, hence it looses less heat and continues to ferment at a more rapid pace.
Tom Lehmann/The Dough Doctor
Re: Major Problems.....
6548

Keep in mind that working with small batches of dough are a whole different story than working with large batches. Smaller doughs will cool down nicely, and they can be controlled with good efficiency, but larger batches have a mind of their own, or so it sometimes seems. The one thing that is commonly overlooked is the heat of metabolism. Yes, as the dough ferments due to yeast metabolism of nutrients it generates heat to the amount of about 1F per hour. In smaller doughs this heat can be controlled, but with larger doughs it cannot be controlled. This is why pizzerias subdivide their 70 and 80-pound doughs into smaller, 12 to 24-ounce pieces before placing it into the cooler for storage.
Tom Lehmann/The Dough Doctor
Re: Major Problems.....
6549

Muaath;

If you are using my cracker dough formula, it calls for adding the yeast to the water in the mixing bowl. While this is usually not a recommended practice, the in this application it is absolutely necessary due to the VERY SHORT mixing time. Also, in this application I suggest adding the yeast and salt, then stirring just enough to suspend the yeast in the water IMMEDIATELY followed by adding the flour and beginning the very short mixing phase. This is the only way to get a decent dispersion of the yeast and salt in view of the short mixing time.
Tom Lehmann/The Dough Doctor
Re: hydration rates and cracker doughs
6550

Tony;
The fermentation process doesn't stop when you ball the dough, it will continue to ferment for quite some time. You will get different end product flavors depending upon the temperature at which the dough is fermented, and the time it is allowed to ferment, so if you ferment the dough at room temperature (warm) you will get one flavor, and if you allow the dough to ferment in the fridge you will get a different flavor. The longer you allow the dough to ferment, the more intense/stronger the fermentation flavor will be. Excessive fermentation can result in an acidic or sour taste, but remember, some people like this flavor, so it isn't wrong, it's just different. Experiment to see which you personally like. My preference is to not ferment the dough prior to cold fermenting as the decreased density of the dough can make it more difficult to manage in the fridge as it is more difficult to cool down uniformly, so if I am cold fermenting, I just go directly from the mixer to the dough ball and then straight to the fridge, but this is just me, again, experiment to see what works best for you and what you like. Remember, you can eat your mistakes, so in this case, the trip can be as much fun as the destination. Experiment and learn, but most of all, remember to have fun doing it!
Tom Lehmann/The Dough Doctor
Re: Humidity
6551

Heman;
Your best bet will be to contact the manufacturer and get their directions for removing both the top and bottom finger panels. The outer sleeve is the one that you can see when you look inside of the oven and the actual finger profile is established by the sleeve that fits inside of that panel. You're going to have to pull them off periodically anyways to clean them, so you might just as well begin on that leg of the journey now. DO NOT get the position of the panels or insert sleeves mixed up. They must go back into the same position that they were removed from. A good idea is to lay the panels and sleeves out on the floor or bench top and photograph them with a sign to identify as top or bottom. This way if they should ever get mixed up you can refer back to the photograph for correct installation.
Tom Lehmann/The Dough Doctor
Re: How to get a cracker-crust!!
6552

Heman;
We need to know a couple of things:
1) Are you using a cracker type dough?
2) How are you opening the dough into pizza skins?
3) How is your oven setup? (top finger profile, bottom finger profile, temperature, bake time)

Tom Lehmann/The Dough Doctor
Re: How to get a cracker-crust!!
6553

We make it a habit of keeping our sauce no more than 5-days. Because the sauce is made in an environment where yeast is present, yeast contamination is going to be the most common issue and is evidenced by a slight bubbling of the sauce. The natural acidity of the sauce will help to keep things pretty well in check for up to 5-days, but after that you're on your own.
Tom Lehmann/The Dough Doctor
Re: Uncooked tomato sauce life
6554

Hi Norma;
As always, I'm gardening for pizza again this year. Last year I had a couple of planters along our south facing drive way and the tomato and pepper plants did just fantastic, so this year I put out much larger planters (calf feed containers) and again went with tomatoes and peppers. They are doing fantastic! The tomatoes have all set with ping pong ball size fruit, and we will be picking the first peppers this weekend. Basil went in from seed so it is just now beginning to come up, but added two more wash tub planters of it, so we should be in for another great crop.
Tom Lehmann/The Dough Doctor
Re: Gardening tomatoes, herbs, and some veggies for 2012
6555

J;
Actually, when you use IDY you are correct that the water temperature should be at 95F, and if using ADY the water temperature should be at 100F, but this is ONLY the temperature of the water in which the yeast is activated in, which is only a small portion of the total water used in the dough. The amount of water used to activate the yeast is typically around 5-times the weight of the yeast, the rest of the water should be tempered to give you the targeted finished dough temperature that you are looking for (typically around 80 to 85F).
Tom Lehmann/The Dough Doctor
Re: Making small dough batches - importance of dividing the dough
6556

DM;
To get the char on your dough think along the lines of increasing the dough absorption to higher levels, and also probably increasing your baking temperature to something at 600F or higher preferably.
Tom Lehmann/The Dough Doctor
Re: Antimo Caputo Italian Superfine "00" Farina Flour
6557

CLG;
The thin (incredibly thin) center section of your dough skin was the reason why it didn't bake properly or develop the char that you were looking for. It was so thin that the heat was passing right through the dough and being dissipated in the sauce and toppings on top of it. If you leave the center section a little thicker it will not allow the heat to pass on through, hence it will get sufficiently hot to bake properly and develop the char that you are looking for.
Tom Lehmann/The Dough Doctor

Re: GLUTEN NEVER DEVELOPS
6558

CLG;
Remember when your dough got so stiff that you couldn't do anything with it? That was due to gluten development. You might try just adding more water to the dough to soften it to the point where it can be kneaded more easily, or you can do as I do and let the microbes do all the work for you. Just put the dough into a suitably sized container, lightly cover it with a piece of plastic to prevent drying, and allow the dough to ferment for 5 or 6-hours, after which you should find the dough much more manageable. Or you can also put the dough up in smaller pieces, say 12-ounce pieces, lightly oil and place into individual plastic bags (do not seal tightly, but instead, twist the open end to form a pony tail and tuck the tail under the dough ball as you place it into the fridge), allow the dough to slowly ferment in the fridge (cold ferment) for 18 to 24-hours, then turn out onto a floured bench or counter top and begin shaping. This is called biochemical gluten development.
Tom Lehmann/The Dough Doctor
Re: GLUTEN NEVER DEVELOPS
6559

A lot of people like the shredded over diced because of the appearance of the melted cheese. The diced seems more often than not to just melt as a blob, where as the shredded form has some appearance to it and covers the pie better, but for a true artisan appearance, you will probably want to go with torn or peeled cheese since the inconsistency of the pieces provide part of the artisan appearance. Provalone is higher in butter fat than Mozzarella so it Will have a richer flavor. Even the best Mozzarella is somewhat bland in flavor, this is why I personally like to add a little Parmesan and Romano to the Mozzarella.
The big differences in Mozzarella are in terms of melt, browning, and oiling out. The best ones don't brown very much, they exhibit good melt properties, and they resist oiling out during baking.
Tom Lehmann/The Dough Doctor
Re: Grande:Not Blown Away Just Yet
6560

Or, how about just looking for a used "off brand" mixer like a Thunderbird? Thunderbird mixers are very good mixers, but because they are an "off" brand (everyone looks for Hobart) they can be had a lot cheaper. A couple of years ago I saw a brand new 80-quart Thunderbird mixer, still bolted to the delivery pallet, with hook, flat beater, and 80-quart bowl sell for $2,200.00. There are some 120 volt 40-quart mixers out there too, and I would advise you to stay away from them unless all you plan on mixing is pizza sauce. These mixers will require either 208 or 220 volts. And don't forget about the Hobart VCM (vertical cutter mixer). This is also an excellent mixer that is well suited to mixing dough but is typically off the radar screen so prices can be pretty reasonable when you find one.
Tom Lehmann/The Dough Doctor
Re: Need ideas for cheap commercial-scale mixer
6561

Remember, every starter, depending upon the microflora present in the starter has a specific temperature that it wants to be started at for correct initial bacteria propagation. Always follow the manufacturer's recommendations for the best results.

Tom Lehmann/The Dough Doctor
Re: Newb starter question - keeping starter warm
6562

Moose;
When I use dough pans like that I lightly oil the pan, then drop in the dough ball, and lightly oil the top of the dough ball. I place them in the fridge uncovered for about 90-minutes to allow the dough to cool uniformly. This prevents the formation of condensation inside of the pan. Then cover and kiss it good night. When you're ready to use the dough just remove it from the fridge, leaving it covered, and let it set at room temperature for about 90-minutes (some experimenting will be necessary to find out what works best for you), then turn the dough out of the pan into a bowl of flour and begin opening the dough ball into a pizza skin for dressing. Plain old plastic bread bags are a good alternative to the metal dough cans. The only down side to then is that they don't stack well.
Tom Lehmann/The Dough Doctor
Re: Metal proofing pans?
6563

I make apple pies every year during the Holidays. Since apples are loaded with pectin, you really don't need to put any starch into the filling. My filling consists only of sliced apples, sugar, about an inch off of a stick of butter, cinnamon and a little nutmeg then a cap of Real Lemon poured over the top of the filling. Be sure to mound the filling well above the top of the rim as the apples will cook down, and if you really want flavor, don't peel the apples. I then top it off with a streusel topping and bake at 375F until golden brown, cool and serve. For a variation I make raisin apple pie too. I just put a good handfull of raisins in a small bowl, rinse with cold water, then pour off all of the excess water, add two capfulls of vanilla flavor and stir in. Cover and let hydrate for several hours or over night, add to the apples as you are filling the pie shell.
Tom Lehmann/The Dough Doctor
Re: Apple Pie
6564

Khen;
In a nut shell, here is how it works. First off, everything must be WEIGHED, it doesn't work with volumetric portions. Remember, flour is ALWAYS equal to 100%.
To find ingredient weights:
Using your calculator, enter the weight of flour you want to use. Remember that the weight of the ingredients will be shown in the same weight units as the flour weight is expressed in (pounds, ounces, grams, kilograms, etc.)
then press X and enter the percent given for the ingredient weight you want, now press the "%" key and read the answer in the display window.
Example: flour weight selected: 32-ounces. Ingredient percent: 1.75%
32 X 1.75 (press the "%" key) and read 0.56-ounce in the display window. Do this for each ingredient and you have the weights for each ingredient.
To convert an existing formula to bakers percent:
Divide the WEIGHT of each ingredient by the weight of the flour and multiply by 100. This will put each ingredient into bakers percent.
Note: A recipe is based on volumetric portions (cups, teaspoons, etc.) and a formula is based on weight measures.
To convert a recipe to a formula, portion out each ingredient three times and then weigh each of the portions, add then up and divide by 3, this will give you the

average ingredient weight for each individual ingredient in your recipe, now just divide the weight of each individual ingredient by the weight of the flour and multiply by 100 to put the weights into bakers percent.
Welcome!
Have fun exploring the wonderful world of PIZZA!
Tom Lehmann/The Dough Doctor
Re: Understanding formulas
6565

On that fancy mixer in question, it looked like a spiral hook in one of their pictures. With a hook of this type the dough will not climb up the hook, instead, it will be constantly be pushed down toward the bottom of the bowl. As for mixing the dough, a pizza dough only needs to be mixed to a point where it has a smooth, satiny appearance. Mixing beyond this is not necessary or desirable unless you're looking for a crumb structure that more closely resembles bread than pizza.
Tom Lehmann/The Dough Doctor
Re: Mixers
6566

While the Grande cheese is noted for its flavor, its biggest asset is the fact that it resists oiling out so well. This is well recognized in the industry, and because they have not patented their "secret" process for making their Mozzarella, it has not been well replicated by other manufacturers.
Tom Lehmann/The Dough Doctor
Re: Grande:Not Blown Away Just Yet
6567

Go to your local home improvement store and pick up a bottle of granite cleaner. You put this stuff on to draw out grease and stains from granite, and it just might work on your stone too.
Alcohol can also be used to remove oil, but it will take quite some time to draw it all out.
Tom Lehmann/The Dough Doctor
Re: Wife put cookies on pizza stone to cool now stone is smoke bomb
6568

One trick that we use to "season" the stones in a new oven is to apply a light coating of corn meal to the deck/stone surface and then allow this to "bake" until the corn meal begins to brown, then broom the corn meal out of the oven and you're set to go. This is even recommended by some of the commercial deck oven manufacturers. You do NOT want to apply oil to the stone like you would if seasoning a pan.
Tom Lehmann/The Dough Doctor
Re: we need s sticky for stones!
6569

Looks like a pretty neat mixer, but note the power requirements at 230V., also you should know the Hz cycle to make sure it is compatible with U.S. power. Another option is the Hobart A-200 series mixers (110 V.). They are expensive new, but they are easily found at sales and auctions.
Tom Lehmann/The Dough Doctor
Re: Mixers
6570

Paperboy;
Those metal bench scrapers can be very hard on the plastic dough boxes, better to use the plastic scrapers. You can get rigid ones from WRH or you can get the cheap flexible ones from just about any flour distributor as they give them away with their name on them. Be kind to your dough boxes and they will last forever.
Tom Lehmann/The Dough Doctor
Re: Pizza dough boxes
6571

Crowbar:
Convection ovens are possibly the poorest type of oven for baking pizzas in. The main problem has to do with the bottom not getting done and the top getting over done. If you don't mind the extra work, you could tent the top of the pizzas with a piece of foil for a good portion of the baking time, until the bottom has a chance to bake, then uncover the top and finish baking. You will need to experiment to find out just how long to tent. Another option is to put some stones into the oven, but keep in mind that this disrupts the convection airflow so the baking of other items will most likely be affected. The stones would allow you to get a better/faster bottom bake. You could also make par-baked crusts, then dress and bake to the order. In a convection oven, by the time the top is finished baking, the bottom will be sufficiently reheated for serving. Experiment with this one to see if you like it first, not everyone does, but remember you options are few.
Can you install a small counter top air impingement or infrared oven? These are good if you won't have high volume pizza sales, and they don't take up much space at all (think Blodgette, Middleby Marshall, and possibly Lincoln for one of these).
Tom Lehmann/The Dough Doctor
Re: Imperial Convection oven
6572

POO;
With those dough boxes;
1) for any dough weight over 15-ounces, go with a 4 X 5 placement pattern; 14-ounce piece you can go with a 4 X 5 placement pattern and with a 5-ounce dough piece you can go with a 6 X 8 placement pattern.
2) Lightly oil the top of the dough balls after you place them into the box.
3) Immediately take the dough box to the cooler and cross stack them (90 degrees to each other) this allows for uniform cooling of the dough and prevents the condensation you are seeing. As the dough cool more efficiently, it also keeps the dough from growing together. Allow the dough boxes to remain cross stacked for 2.5-hours, then down stack and nest the boxes. And kiss them good night. The dough can be held in the cooler in this manner for up to three days.
4) To use the dough, remove a box of dough, leaving it covered, and allow it to temper AT room temperature for 2-hours, then begin opening the dough balls into pizza skins as needed. The dough will keep at room temperature for up to 3-hours.
This is a pretty standard method of dough management in the retail pizza industry. Just about everyone used some variation of it.
Tom Lehmann/The Dough Doctor
Re: Pizza dough boxes
6573

JB;
The reason why you don't see electric ovens designed to operate at temperatures

above 700F is because if they do they cannot be U.L. Listed. Gas ovens don't have that problem.
Tom Lehmann/The Dough Doctor
Re: Highest Temp Electric Oven? (USA)
6574

P.D.;
My reference shows the Power brand flour at 13.5% protein and Mondako at 12% protein content. It is hard to specifically say what the ideal dough absorption will be as this will be somewhat dependant upon the amount of fermentation the dough receives, but for starters, for a New York style crust I like to use the following:
Mondako Flour: 60 to 62% absorption
Power Flour: 64 to 65% absorption
This should at least get you in the ball park (Fenway?)
Tom Lehmann/The Dough Doctor
Re: Suggested hydration rate for Mondako and Power Hi-G
6575

For a really low cost "stone hearth" for your home oven try using unglazed floor tile. They run between 1/4 and 1/2-inch thick and they work great for getting started. Be sure to allow about 20 to 30-minutes for the tile to come up to temperature before putting a dressed pizza skin on it.
Tom Lehmann/The Dough Doctor
Re: How do I make better pizza with what I have?
6576

I just bag it all up with things such as tripe, chitlins (chitterlings), black pudding and fig paste.
Tom Lehmann/The Dough Doctor
Re: 6 Ingredients You May Not Want In Your Food
6577

Absolutely right, the yellow coloring makes the finished pizza look more appealing, and the yellow color infers richness, both desirable characteristics. Large wholesale manufacturers have stipulations governing the use of yellow coloring. For the most part, if the product contains eggs they cannot use the coloring, but if it does not contain eggs, they can use it. The reasoning? One egg in 2,000-pounds of dough and 1-gallon of egg shade coloring and it looks like the dough is made with buku whole egg. But if the formula doesn't contain any eggs, then eggs are not on the label, and they are free to use it. Truth of the matter is that it is all but impossible to get the color of egg shade in a dough through the use of whole eggs, whole eggs just don't contribute that much color to the dough.
Tom Lehmann/The Dough Doctor
Re: First Deep Dish Attempt, Third Pie Ever
6578

You bet!
Next time don't dress the pizza skin on the counter top/bench, instead, get yourself a short handle wood prep peel and place your opened dough skin onto the peel (pre dusted with a little peel dust or corn meal. My favorite peel dust is made from equal parts of regular white flour, corn meal and semolina flour. Everyone seems to have a favorite e for peel dust so don't be afraid to experiment with different materials or blends. Once you have the dough skin dressed on the peel, it is a

relatively simple matter to just slide the dressed skin into the oven for baking. You could also try putting the dough skin onto a seasoned pizza screen and baking the pizza about 1/2 way through on the screen, then transferring the pizza off of the screen onto the baking stone to finish baking, this eliminates the mess in the oven of the peel dust.
Tom Lehmann/The Dough Doctor
Re: Loving pizza making... but ...
6579

One of the problems that you can encounter using a blender to mix the sauce is shearing of the tomato, this results in excessive weeping (watering out) of the tomato portion of the sauce and in general, this is not a good thing. For this reason, a more gentle blending action is desirable when making a sauce. Some may use a planetary mixer with a flat beater, some use just their hands, others use a hand whisk, and still others use nothing but a large spoon. Remember, the idea is to blend, not puree the sauce.
Tom Lehmann/The Dough Doctor
Re: sauce blending
6580

Perry;
That sounds very interesting. I'm going to try it on a dessert pizza skin. First brush a regular pizza skin with melted butter, then sprinkle with sugar and cinnamon for flavor, apply the goat milk yogurt, and pieces of fresh fruit. Bake as you would your regular pizzas. We're always looking for lighter options to the cream cheese/Ricotta base that we normally use on dessert pizzas.
Tom Lehmann/The Dough Doctor
Re: Goat Milk Yogurt "Sauce"
6581

Don;
That rest period for the dough to begin fermenting before putting it in the fridge might also be hurting you.
Tom Lehmann/The Dough Doctor
Re: Best way to warm dough balls quickly
6582

Norma;
All Trumps is my "go to" flour for New York style pizza.
Tom Lehmann/The Dough Doctor
Re: the progress of the regular Lehmann dough for market
6583

Peter;
Due to the significantly larger particle size for the semolina flour, its rate of hydration is a lot slower than that of the more finely milled durum flour. Semolina flour acts a lot more like whole-wheat flour in that it requires a longer time to fully hydrate. Failure to fully hydrate the dough will result in a very tight, elastic dough that can be difficult to work with.
Tom Lehmann/The Dough Doctor
Re: the progress of the regular Lehmann dough for market
6584

Don;
I agree with Peter, I also think the dough temperature is too high. Look for a finished, mixed, dough temperature of 75 to 80F, and be sure to take the dough directly from mixer to the counter top for portioning, and then directly to the fridge. If you drop the yeast level too far you run the risk of the dough not rising sufficiently during baking, especially under the center portion of the pizza, the result can be a gum line just below the sauce.
Tom Lehmann/The Dough Doctor
Re: Best way to warm dough balls quickly
6585

Tim;
Try "decking" the pizza. This is where the pizza is removed from the screen during the last minute or so of baking and finished right on the deck. It helps immensely to improve the bottom bake.
Tom Lehmann/The Dough Doctor
Re: Need help with Tom Lehman's NY style pizza
6586

Lookin' good!!!!
Tom Lehmann/The Dough Doctor
Re: 10 hour dough
6587

All of the above, plus, remember that allowing the dough to rise for even an hour before putting it in the cooler dramatically reduces the ability of the fridge to cool the dough (dough is less dense, making it a better insulator and more difficult to effectively cool), plus if you put the dough in a covered bowl in the fridge, you were again insulating the dough from the cold of the fridge and again reducing the ability of the fridge to cool the dough. Try leaving the lid off of the bowl for about 90-minutes after you put the dough into the fridge, then cover it and kiss it good night. To use the dough on the following day, remove the dough from the fridge, leaving it in the covered bowl, allow to temper AT room temperature for about 2-hours, then turn out onto a floured surface and begin opening the dough into a pizza skin.
Tom Lehmann/The Dough Doctor
Re: deflated dough?
6588

BY;
If you're having a problem getting the dough to cool down due to the use of a reach in cooler, or an under performing cooler (insufficient capacity), adjust the temperature of the water that you add to the dough to give you a finished (mixed) dough temperature in the 75 to 80F range, probably favoring the 75F side. You might need to lower the water temperature by as much as 10F to accomplish this. Just make sure your cooler is operating at 38F or lower, but not lower than 34F to stay on the good side of your local health department.
Tom Lehmann/The Dough Doctor
Re: New Pizza Shop
6589

Dan;
What you have is what we call a composit peel. These are better than a metal peel,

but not as good as a real wood peel when it comes to dough release properties. American Metalcraft www.amnow.com> has some very good wood peels at a reasonable price. They show a 12 X 13" blade X 22" long @$22.60 each (Item # 2212). Take a look at this and then check out a local restaurant supply house or kitchen store to see if you can pick one up locally. The peel dust that I use is made from equal parts of regular flour, fine grind corn meal, and semolina flour. Combined with the wood peel, it works like a champ.
Tom Lehmann/The Dough Doctor
Re: Pizza Peels
6590

Norma;
Both durum and semolina flours are typically, but not always milled from durum wheat. Their main application is in the production of pasta. Durum flour is indeed of a finer consistency than semolina flour which is milled differently than durum flour and has a coarser texture (larger particle size). The gluten from durum wheat is somewhat different from the gluten of regular hard red spring and winter wheat varieties in that it is much more elastic/tight. If you buy pasta made using a durum wheat flour and one made from a hard wheat flour you will readily see the difference as the pasta made from the hard wheat flour has a softer, slightly gummy texture, while that made from the durum wheat has a firm texture. By the way, you can readily tell the two apart at the supermarket without even needing to read the label, the durum wheat pasta will be a light creamy, almost yellow color, while that made from a hard red wheat flour will have a dark, almost dirty/dingy color. It typically sells for a lower price too.
It looks like you have access to General Mills Flours. Here are some typical protein numbers that might be of interest to you for the GM flours.
Rex Royal: 12.4%; Washburn's: 12.6%; Full Strength: 12.6%; Superlative: 12.6%; Hi Power: 13%; Remarkable: 13.6%; All Trumps: 14.2%; WINTER WHEAT FLOURS: King Wheat: 11.1%; Doughbuilder: 11.1%;GM-44: 11.1%; Pollyanna (Untreated) 10.5%; Harvest King: 12%; Ben Hur (Unbleached) 12%; Semolina #1 (Enriched): 12.2%; Extra Fancy Durum: 12.2%

Tom Lehmann/The Dough Doctor
Re: the progress of the regular Lehmann dough for market
6591

To measure the pH (acidity) of a sour all you need is some Litmus Paper available from your local drug store and a bottle of distilled water. I use a small plastic glass (6-ounce capacity) and put a couple tablespoons of sour into the glass, then I put an equal amount of distilled water into the cup and stir well, let it stand for a minute, then carefully decant (pour) off some of the liquid below into a shot glass, dip the Litmus Paper into the liquid and compare the color to that on the chart provided with the roll of paper to determine the pH. You will want to get paper that will read in the 3.4 to 4.8 pH range.
Tom Lehmann/The Dough Doctor
Re: Flour bag says Don't Eat Raw Dough or Batter - Why not?
6592

Sourdough starters, like fermented sponges or fermented straight doughs are relatively safe due to their low pH (high acidity). The only cautionary word about starters, especially when developing a new one, is that you really don't know what you have growing in it. Typically, it will be some strain of lactobacillus, but there

are no guarantees. While the acidity will protect a mature starter, it is entirely possible to develop aflatoxins from an unwanted fungus, or spore forming bacteria (clostridium) and this is where the potential for problems arises. While this would exist for any bread making process, not just a sourdough. In a sourdough, it is possible for clostridium to produce aflatoxins before the starter becomes sufficiently acidified to control it. Why would you want to taste a raw sour? The proof of the sour is in the flavor it imparts to the baked product.
Tom Lehmann/The Dough Doctor
Re: Flour bag says Don't Eat Raw Dough or Batter - Why not?
6593

Peter;
Spot on.
There is no reasonable way to eliminate possible pathogens from the flour without affecting the protein quality. When used in baby foods, and other sensitive foods, the flour is heat treated which affects the protein's gluten forming quality, but still allows the starch to function as a binder. Most flour is perfectly safe, but there is no kill step taken so it cannot be guaranteed to be safe. This is much like the way we should treat shell eggs. Like we always say, better to be safe than sorry, or dead. Somebody one said that if it wasn't for the oven bakers would have poisoned mankind thousands of years ago.
Tom Lehmann/The Dough Doctor
Re: Flour bag says Don't Eat Raw Dough or Batter - Why not?
6594

RC;
Been there, done that. What I now do is to use a regular pizza crust, if I am going to par-bake it I dock it well prior to baking. Melt some unsalted butter, then brush a light coating of the melted butter onto the dough skin, sprinkle on a coating of granulated sugar (experiment to see how sweet you want the base crust to be) followed by a sprinkling of fresh cinnamon, now you can either par-bake or add a mixture of 8-ounces of sour cream, 8-ounces of Ricotta cheese, 2-ounces of sugar, and 1-large whole egg. Blend until smooth and spread onto the unbaked dough skin about 1/8 to 3/16-inch thick, leaving a slight uncovered edge. Apply fresh fruit (apple slices, kiwi, orange, mango, strawberry, blue berry, grapes (sliced in half), or whatever strikes your fancy, and bake as you would your regular pizzas. When still warm, but not hot, apply a drizzle of powdered sugar icing (powdered sugar and water mixed to a thick, slightly creamy consistency), and serve. This dessert pizza can be served warm, cold, or ala mode. We make it at all of the pizza shows where we have a test kitchen to work from.
Tom Lehmann/The Dough Doctor
Re: Dessert Pizza Failure
6595

Norma;
We did a study on the use of semolina flour in pizza dough a number of years ago. We found that for all practical purposes, 25% substitution was the maximum we could go before the finished crust became excessively tough and chewy. We thought 15% was a good working level. Because the semolina flour has a much larger particle size it is slower to hydrate than regular flour, so care must be taken to ensure the dough is properly hydrated. At first the dough will appear to be wet and sticky, but just like with a whole-grain dough, it will improve as the semolina hydrates. We did not detect an appreciable change in flavor when the semolina

flour was used. As to using semolina flour either in part, or in total as a peel dust, because of its slow hydration it works great. I use a blend of equal parts regular flour, semolina flour, and fine corn meal as my "go to" peel dust, and I've never had any problems with the dough skin sticking to the peel if I did my part.
Tom Lehmann/The Dough Doctor
Re: the progress of the regular Lehmann dough for market
6596

When tempering refrigerated dough it is only necessary to bring the dough up to 50F. This is only about a 15F increase in temperature before the dough is ready to be opened into a pizza skin. Our labs typically run between 68 and 70F and this takes about 2 to 2.5-hours for dough balls weighing in at 12-ounces or less, and about 3.5-hours for those weighing in at 13 to 22-ounces. A quick check with the thermometer inserted into one of the dough balls will confirm the actual temperature of the dough ball. In addition to being warmed from an external heat source, the dough is also being warmed through heat of metabolism by the yeast at the rate of about 1F per hour.
Tom Lehmann/The Dough Doctor
Re: How long out of refrigerator before cooking?
6597

Osipov;
At the temperature you're baking at the specific brand of cheese that you are using in browning excessively, so when you bake the pizza right on the stone you are getting the bottom done faster than you would if using a screen. This means that the top and bottom of the pizza are being baked more closely together. With the screen, the baking time will be longer, but the cheese can't be subjected to a longer bake or it will burn. Increasing the baking temperature will only result in the cheese burning faster, so the solution is, when baking on a screen you must actually reduce the baking temperature to something in the 500F/260C range and bake the pizza for a longer time. If you find that the cheese still gets too dark, you might need to change to a different cheese manufacturer.
Tom Lehmann/The Dough Doctor
Re: Need help with Tom Lehman's NY style pizza
6598

Ronchonou;
For a shop operation I would suggest the following dough formulation:
Flour: 12 to 13% protein content (General Mills Harvest Kin or Superlative) 100%
Salt: 1.75%
Compressed Yeast: 1%
Oil: 1%
Water: (65F) 60%
Procedure: Put water in mixing bowl, add salt, then flour and yeast. Mix 2-minutes at low speed, add the oil and mix 1 more minute at low speed. Finish mixing at medium speed for about 8-minutes, or first speed for 12-minutes. Target finished dough temperature is 80 to 85F. Take dough directly to the bench for scaling and balling. Place dough balls into plastic dough boxes and wipe the top of the dough balls with salad oil. Cross stack in the cooler for 2-hours, then down stack and nest the dough boxes. The dough will be ready to begin using after about 18-hours in the cooler. The unused dough can be held in the cooler for up to 3-days, but is at it's best on the second day. To use the dough, remove a quantity from the cooler and allow to temper AT room temperature for 2 to 2.5-hours, then begin opening

the dough balls into skins for immediate use. The dough will remain good to use for 3-hours after you begin open the balls into skins. Any unused dough balls can be opened and placed onto screens and placed on a wire tree rack in the cooler (uncovered for 30-minutes) then cover with a rack cover or plastic bag. Use these pre-opened dough skins as soon as possible. To use the pre-opened skins, bring the rack out of the cooler and allow to temper AT room temperature for 30-minutes, remove the skin from the screen and resize, place onto peel with a little peel dust and dress to the order, then bake as normal Using this method you should never need to toss out any dough balls, and you will have a consistent product over the life of the dough balls.
The amount of compressed yeast to use for 25Kg. of flour is 1% in this application, that calculates out to 250-grams.
Tom Lehmann/The Dough Doctor
Re: Question about Fresh Yeast
6599

For a New York style pizza you're going to want to use a very high protein content flour. Look for something in the 13 to 14% protein range. For N.Y style pizzas I normally use a dough factor of 0.10619 which is to say that I use 0.10619-ounces of dough per square inch of surface area. This translates out to 16.35-ounces for a 14-inch pizza (154 X 0.10619 = 16.35-ounces) so you might want to consider increasing the dough weight by a couple ounces. The additional dough may help you achieve the porosity you want while the high protein content of the flour should provide the chewiness. Be careful when mixing the dough, all you want is to have the dough mixed until it comes smooth, mixing beyond this will only contribute more of a bread like crumb structure to the finished crust. My rule when mixing pizza dough is to always err on the side of under mixing the dough.
Tom Lehmann/The Dough Doctor
Re: First attempt - Good except too soft, not enough chew
6600

Peter;
Beggar's Pizza is another Chicago chain that uses Egg Shade in their dough, as do a number of independents. You need to watch with the amount of "yellow coloring" used as they are not all alike. If a dough formula calls for X amount of Egg Shade (a commercial product) a different coloring material might require a different amount to achieve the same color impact upon the dough. You can Google "Egg Shade coloring" to get more information on it.
Tom Lehmann/The Dough Doctor
Re: First Deep Dish Attempt, Third Pie Ever
6601

RcBaughn;
Did you use raw sausage on your deep-dish pizza? In Chicago the sausage is buried down under the sauce and it is applied as raw sausage. This gives the finished pizza a very unique flavor that you just can't get using pre-cooked sausage. Going this route, you may want to bake the pizza a little longer, about 45-minutes total baking time. If necessary, use a screen or something under the pan to prevent burning the bottom with the longer baking time. Also, try adding some "egg shade" a type of yellow food coloring to your dough. This is what they do in Chicago to give the dough the unique yellow color.
Tom Lehmann/The Dough Doctor
Re: First Deep Dish Attempt, Third Pie Ever

6602

Cheese first then sauce is also practiced in Chicago. One of the downsides to this assembly method is that if the cheese is applied very last, it covers everything, good for holding everything together, but if you tend to be a little heavy handed with the vegetable toppings, the cheese will trap a lot of the moisture under it, thus making for a softer finshed crust. This isn't too bad with a deep-dish type of pizza, but it can be a real bummer on a thin crust unless you are in Chicago where no one expects a thin crust pizza to have a crispy bottom anyways.
Tom Lehmann/The Dough Doctor
Re: Sauce first or cheese first
6603

TomN;
One of my personal favorites is to use the 74/40 tomato filets from Stanislaus. Just drain them and apply just as they are. Prior to application of the tomato filets I like to add a very light application of garlic infused olive oil, then add a smattering of diced garlic, followed by several fresh basil leaves, after that, the tomato filets. I don't go for complete coverage, but rather something closer to 60%, then add your favorite cheese or cheese blend (mine id Mozzarella and Parmesan), then finish by dressing to the order. This provides a great natural, fresh tomato taste along with some texture that sauce doesn't provide.
My other personal favorite is to use slices of fresh, whole ripe tomato to replace the tomato filets. Leave the skin on the tomato for the extra flavor they bring to the pizza. No dried herbs please. Either of these makes a truly outstanding "sauce" if you like fresh tomato flavor and texture.
Tom Lehmann/The Dough Doctor
Re: Pizzaiolo Pizza Sauce
6604

Matthew;
Don't worry about the slightly slower mixing speed. Spiral mixers have an entirely different mixing action than that of a planetary mixer. Spiral mixers are notorious for being able to efficiently mix doughs of different sized much better than a planetary mixer can. Without knowing how efficiently your old mixer was mixing the dough (did the dough climb up on the hook, did the dough ball just go for a ride on the dough hook, did the dough ball just seem to get batted around by the dough hook rather than driving through it?) these are all indications of less than desirable mixing action. You shouldn't see any of these issues with the spiral mixer. When you mix your first dough, just mix it until it takes on a smooth, satiny appearance, that's all the mixing a pizza dough needs. Bread doughs, on the other hand, should be mixed to full gluten development to achieve the desired fine, close internal cell structure.
Tom Lehmann/The Dough Doctor
Re: Spiral Mixer
6605

Not to worry about food safety issues, but, depending upon the actual dough formulation, there is a possibility that it might be so acid that the finished crust will have a bit of an acid bite, or the acidity might also inhibit browning of the crust during baking. In some cases this can work to your advantage in that it will force you to bake the pizza longer, thus developing a thicker, heavier, and crispier bottom crust characteristic so long as you can avoid over baking the top of the pizza.

Depending upon the protein content of the flour, the dough might become overly soft and difficult to handle or form into a pizza skin due to the effects of yeast fermentation on the flour proteins. You might hedge your bets a little by brushing the exposed edge of the skins with a little olive oil just before you place them into the oven as this will help them to develop a nice golden crust color during baking. One final note, try not to degas the dough during the forming procedure. A good way to do this is to open the dough into pizza skins by hand stretching (do not use a rolling pin), as this will retain most of the leavening gas in the dough allowing for a better rise in the oven if the yeast has been damaged or if it has exhausted all of it's food supply during the fermentation period.
Tom Lehmann/The Dough Doctor
Re: Dough Rising Overnight at Room Temp
6606

I think the newer reverse spiral dough hook is the real solution. We have had the same problems with the dough climbing up on the hook with all of our Hobart mixers from the K5-A to the M-802. The problem is due to hook design not the mixer design. We have replaced all of the straight "dough arms" AKA "J" arm with the reverse spiral design hooks and the problem has ceased. I don't know if Hobart has a reverse spiral design dough arm for all of their smaller consumer mixers or not, but it would be worth an e-mail to find out. If not, the advice from Jackie Tran is spot on.
Tom Lehmann/The Dough Doctor
Re: Kneading Issues - Kitchenaide w/ Dough Hook
6607

Norma;
Welcome to the wonderful world of scary, sounding, as well as misread ingredients. All are not what some might like us to believe what they are.
Wood pulp, also known as micro crystalline alpha cellulose: Truth is, cellulose is cellulose, if it comes from bran (anyone objecting to eating whole-wheat/whole-grain cereals? Didn't think so. The cellulose in the bran portion of grains (that's where most of the nutrients are stored) is the same as that in wood pulp, is the same as that in grass clippings, like I said, cellulose is cellulose, it don't make no matter where it comes from.
Propylene Glycol does not have a comma after it in this application, it is Propylene glycol monoesters (PGMS), and it is an ester emulsifier in cake batter and whipped toppings, can also be used in bread products as an emulsifier.
TBHQ (Tertiary Butylhydroquinone) is not the same as butane; It is used as an anti oxidant to prevent the development of rancidity in fats and oils.
Maybe that raspberry flavoring made from the anal gland of a beaver isn't the most visually sounding flavor out there, but then you have such things as blood sausage/blood pudding AKA black pudding (ask any Brit about it), or how about chitlin's? (fried intestine), then to you can always Google Dihydrogen Monoxide (DHMO) this nasty stuff is present in most of the foods that we eat, and believe me, it is a real killer, responsible for hundreds if not thousands of deaths every year! I almost died from it when I was a youth of 17.
My advice, don't sweat the little stuff, beware of the sprouts, raw milk, raw eggs, and anything else with the potential to do serious harm to you through unwanted microbial contamination.
Tom Lehmann/The Dough Doctor
Re: 6 Ingredients You May Not Want In Your Food
6608

Thezaman;
After seeing those pictures, I've got a hankerin' to come by your place for a short visit and a few slices of your pizza!
They look great!
Tom Lehmann/The Dough Doctor
Re: 10 hour dough
6609

Scott;
Think about it for a minute....how much moisture is in the wood that is being burned? Probably double didgit, and it can/will vary from lot to lot, if not piece to piece. Now switch over to coal, how much moisture in that lump of coal. For every pound of coal burned you get more BTU's of heat energy than you get from the same weight of wood, but without putting the moisture into the oven. We see a similar response when comparing gas heat (moist) to electric heat (dry). This might explain what you are seeing.
Tom Lehmann/The Dough Doctor
Re: Baking the best pies of my life in a coal oven. Why is it different than wood?
6610

Phytonic;
What kind/type of yeast are you using? From the photo that you provided, it appears that the spots are all about the same size. If flour or fat were the culprit, I would expect to see a more random size pattern formed, but because of the uniformity maybe we need to be looking at the yeast, especially if it is ADY or IDY, and how it is added.
We make a VERY undermixed Chicago cracker type crust that resembles a pie dough rather than a pizza dough (just 45 to 60-seconds of mixing time) In this dough we see a lot of flour lumps but they have a very randon size distribution and they are hard when squeezed, and when broken, you can identify the flour, this is why I am leaning away from the flour in this case. However, it might be dried dough pieces from a surface that the dough was scraped off of at some point, just a thought.
Tom Lehmann/The Dough Doctor
Re: Weird white spots on my deep dish doughball?
6611

LaSera;
Not to worry. You did good.
Just think, a few short years ago bakers percent was like a foreign language to most pizzeria operators and home pizza makers.
Tom Lehmann/The Dough Doctor
Re: New Pizza Shop
6612

It sounds like pizza made on a protein enriched crust. Still the same number of calories, if not more, with protein added for "redeeming social value". I too would be interested in seeing the nutritional profile of that pizza. With the new menu nutritional labeling regulations coming down the pike, we may not have to wait very long to see them as they may be mandatory depending upon city/state/Federal regulations.
Tom Lehmann/The Dough Doctor

Re: Power Pizzeria; Healthier Pizza or Hype?
6613

Can you tell us what your dough formulation/recipe was and how you made it? This might provide some insight into what the problem is.
Tom Lehmann/The Dough Doctor
Re: Weird white spots on my deep dish doughball?
6614

Mozzarella cheese really doesn't have a very spectacular flavor by itself, the main quality attributes are the way it strings, melts, and lack of oiling out during baking. If you want flavor, you're going to need to blend it with a more flavorful cheese. My own personal favorite is to blend 2-ounces of Parmesan (shredded) with 14-ounces of Grande whole milk Mozzarella (shredded) to make a pound of topping cheese. If you want even more flavor, blend in some Romano into the blend. Now we're talkin' !
Tom Lehmann/The Dough Doctor
Re: Grande:Not Blown Away Just Yet
6615

You could serve the pizza on a heated stone, much like Pizza Hut toyed with many years ago. This is very effective, just remember the old admonishment "Be careful, this is very hot!".
Tom Lehmann/The Dough Doctor
Re: eating pizza from wooden dishes?
6616

I would keep the sugar where it presently is if you like the result from that sugar level. The salt and sugar levels are independent from each other. Yes, the 58% is the water absorption level based on the total flour weight. Since you are doing all of your mixing at low speed, it becomes a matter of staging the ingredients in the mixing bowl (order of addition) rather than a change in the dough mixing process. Your total mixing time will remain unchanged. As you are using individual dough containers, You should NOT cover the containers until after they have been in the cooler for at least 2-hours uncovered. This will allow for more even cooling of the dough without the undesirable sweating which you mentioned seeing.
Tom Lehmann/TDD
Re: New Pizza Shop
6617

Lindsey;
You will need to check with both state and local health departments to find out what regulations they have in place regarding pizza/pizza by the slice. As a general rule, you will need to hold the pizzas at a minimum of 140F, but if it is allowed to drop below 140F, you may be required to reheat it to a minimum of 160F (this actually means 165F) before serving. In some places the delivery time for pizza is limited to that in which the pizza can be maintained at a minimum of 140F (which actually means 145F). In some places they recognize what is called the 4-hour rule (product may be allowed to remain at a temperature which will support bacterial growth for a total accumulated time not to exceed 4-hours. Unless each pizza has a tag on it, this can be difficult to document, hence the reason why some places don't follow this rule. I believe the 4-hour rule is why New York pizzerias (slice shops) can get away with allowing the slices to sit in a display case without heat while

waiting to be sold. Again, be sure to check with state and local health departments for the rules governing your location.
Tom Lehmann/The Dough Doctor
Re: leaving pizza out/bacteria
6618

I can certainly help you.
Based on what you have provided, here are the changes I suggest.
Reduce the salt level to 1.75% (385-grams)
Increase the dough absorption to 58% (12.76-Kg/Lts.)
Adjust the water temperature to 65F.
Add all of the water to the mixing bowl, then add the flour and other dry ingredients, mix for about 2-minutes at low speed, or just until all of the flour is wet, then add the oil and mix for one more minute at low speed. Finish mixing in your normal manner.
Target finished dough temperature after mixing is 75 to 80F.
Take the dough to the bench for scaling and balling immediately after mixing.
Place dough balls into plastic dough boxes and wipe the top of the dough balls with salad oil.
Immediately take to the cooler and cross stack for 2-hours, then down stack and nest the boxes to prevent drying. The dough will be ready to begin using after 16-hours.
To use the dough, remove a quantity from the cooler, leaving them sealed in the boxes and allow to temper AT room temperature for 2-hours, then begin opening the dough balls into pizza skins for immediate use.
Any dough balls that will not be used within a 3-hour window of time after you begin opening them should be opened and placed onto a baking screen and then stored in a wire tree rack in the cooler (cover with plastic to prevent drying). These will be good to use later in the day. To use, just remove from the cooler and allow to temper AT room temperature for about 30-minutes, then remove from the screen and restretch if necessary to size, then dress to the order and bake. The dough balls left in the cooler will keep for up to 72-hours.
Tell me something about your oven and baking conditions.
Tom Lehmann/The Dough Doctor

Re: New Pizza Shop
6619

C.K.;
I like to use sockeye salmon, grouper, sea bass, halibut, or orange roughy. I don't care to use use the more oily types of fish like king salmon, mackrel, or tuna. That's just my own personal preference though.
Tom Lehmann/The Dough Doctor
Re: Anchovy pizza
6620

Also, let us know how long you're fermenting the dough after mixing, and what the temperature of the dough is at the conclusion of mixing.
Tom Lehmann/The Dough Doctor
Re: Dough: Hard and rubbery or floppy. No sweet spot!
6621

While I am not a fond lover of anchovy pizza, I do enjoy a good seafood pizza. We

make them at the NAPICS Show every year and everyone really seems to like them. I begin with a regular dough skin for a thin crust pizza, then apply Alfredo sauce and sprinkle with dried dill weed, red onion slices come next, followed by some fresh tomato slices (I like to cut them in half) then add some fresh fish (raw), I either cut it into pieces about 1/4-inch thick, or tear it into pieces for application, depending upon what appearance I'm liiking for, then apply a very light application of Mozzarella cheese, followed by about 2-ounces of shredded Parmesan cheese (for a 12-inch pizza), bake as you would any other pizza. These are light and crispy and don't have that "fishy" flavor associated with anchovy. I've also made this pizza using popcorn shrimp, or a medley of seafood (fresh fish, clams, shrimp, and scallops). Makes me hungry just thinking about it!
Tom Lehmann/The Dough Doctor
Re: Anchovy pizza
6622

As beauty is in the eye of the beholder, taste is in the palate of the diner. I always remember the story about a U.S. air base that was closed down in Turkey many years ago. In the emergency shelter they had tons of survival biscuits (high calorie biscuits loaded with fat). As these were at out of date by the time of base closing it was decided to bury the biscuits in a trench. This was done and all was good until the base was turned over to the locals, who, upon gaining access to the base, were curious as to what was buried in that trench so they dug it up and found what they perceived to be a treasure trove of a local delicacy, rancid fat. The local delicacy was essentially rancid yak butter, and evidentally those survival biscuits, however rancid they were, became a delicacy to the local palate, and all was good. Not exactly my cup of tea, but who am I to argue?
On a side note: I was living in Chicago when the first woodfired pizzas were introduced there. What a fiasco that was! You see, the locals were not used to that type of pizza so it was perceived to be burnt, and they were sent back to the kitchen with the admonishment "this pizza is burnt!" Then the word went out that "you don't want to eat at a pizzeria that has one of those wood burning ovens, because they burn the pizzas". That really slowed down woodfired pizzas in the Windy City. It's all good now because they are used to it, and know what to expect, but it sure didn't begin that way.
Tom Lehmann/The Dough Doctor
Re: Anyone know any pizzerias which are popular but serving bad pizza?
6623

Warrax;
You described the type of pizzas that I was referring to in my response. The cracking that you mention is why you will need to experiment a little with your baking stone. The bake to rise type of pizzas are designed specifically to go from freezer to oven. If you experience cracking with your type of frozen pizzas, I would suggest that you experiment with different thawing times. Begin with 15-minutes, and then progress longer in 15-minute increments until the problem no longer exists. When using a pre-made refrigerated dough skin it is usually beneficial to allow the dough skin some time to temper AT room temperature before baking. In this case you can either go by time, typically about 60 to 90-minutes at room temperature, or you can go by temperature. Look for a dough temperature of about 50F/10C before placing it into the oven.
Tom Lehmann/The Dough Doctor
Re: Frozen pizza on hot stone?
6624

The only raw dough frozen pizzas that I'm aware of at the supermarket is the bake to rise type. These pizzas are leavened using both yeast and chemical leavening and for the most part they are designed to go directly from freezer to the oven. The package directions for baking should confirm this. As for a refrigerated pizza, there is a deli pizza from the supermarket, typically sold by the pound. These are made on a refrigerated, yeast leavened dough skin. This type of pizza can benefit from being allowed to temper at room temperature for up to about an hour before going into the oven. The other refrigerated pizza is the take and bake type of pizza, like you might get from Papa Murphy's. The dough that these are made from seems to be all over the board. Some are formulated with both yeast and chemical leavening, like the bake to rise pizza mentioned above, while others are made from a dough that is leavened only with yeast. This means that you might need to experiment with the brand of your choosing to see how it bakes the best. If it is from one of the big box pizza chains it can probably go straight from the fridge to the oven, but if it is from an independent pizzeria it might perform better if allowed to temper AT room temperature for a while prior to baking. Also, be sure to watch the bottom of the crust with any of these pizzas as they tend to be formulated with fairly high sugar levels to improve the baking properties in a conventional home oven without a pizza stone. If you get too much browning or burning, you may need to reduce the oven temperature when using your stone.
Tom Lehmann/The Dough Doctor
Re: Frozen pizza on hot stone?
6625

Norma;
There are two aspects to using a par-baked crust and getting what you are looking for. The first is to par-bake and then IMMEDIATELY dress the crust and place it back into the oven. The second, and equally as important is not to overbake the crust during the par-baking stage. Some will say that the par-baked crust shouldn't have any color on it at all, while I'm a little more generous and say that it can be tinged with a little light brown, especially on the bottom.
Good luck,
Tom Lehmann/The Dough Doctor
Re: Trying a different Sicilian pie tomorrow
6626

Norma;
We make one where we par-bake the dough until it is just set, then remove it from the oven and dress the crust, then put it back into the oven to finish baking. It is an extra step, but it does result in a finished crust that is essentially as flat as a board across the entire diameter. As a side benefit, it seems to dry the crust out a little more than baking it all at one time, resulting in a crispier finished pizza. If nothing else works for you , you might give this a try.
Tom Lehmann/The Dough Doctor
Re: Trying a different Sicilian pie tomorrow
6627

Norma;
It is normal for the crust volume/height to be slightly suppressed where you have sauce. This is an old trick that we use when making par-baked crusts to prevent bubbling. Just lightly sauce the dough skin prior to baking and you can reduce the bubbling issue significantly. This is even greater when you have a heavy sauce

application as your pictures suggest. Aside from par-baking the crust to some extent prior to dressing it, or using less sauce, what you are getting looks to be pretty normal. I've never seen a deep-dish pizza that was even across the entire diameter, there is always at least some loss of volume/height just under the sauce. This is one reason why a lot of the big box pizza stores use such a light application of sauce on their deep-dish pizzas. My expression for this is to say that those pizzas were blessed by the Italian sauce man.
Good lookin' pizza!
Tom Lehmann/The Dough Doctor
Re: Trying a different Sicilian pie tomorrow
6628

As a kid growing up in Chicago I had an Aunt and Uncle living up in Minocqua, Wisconsin. They owned a resort up there. As soon as school would let out I'd be on a but up to Tomahawk, WI where they would pick me up and bring me to the resort. I'd fish for walleye, northerns, muskie, and yellow perch for the next 30-days, then back home to pick up the airline ticket that my grandparents would send me each year to come down to Clearwater, Florida where I would stay with them and use my grandfather's boat to fish Clearwater Bay for about a month. We also owned two party boats and a charter boat, so when they were not booked full I could always be found on one them fishing for grouper. In the bay I would fish for sand sharks, sea trout, pompano, and lady fish, and always did very well. Today, I fish local lakes here in Kansas as well as the Keni River in Alaska, and Boot Lake in northern Minnesota, plus just about any other body of water where I can get a line into. When I'm not fishing, I'm deer hunting or predator hunting, thinking about it or planning a trip, and when I'm not doing that, I'm trying to look like I'm a productive member of society by holding a regular job here at the American Institute of Baking in Manhattan, Kansas. Life is tough, but someone has to do it!
Tom Lehmann/The Dough Doctor
Re: who likes to fish?
6629

Kinda reminds me of the old, Show Biz Pizza. Great fun and entertainment but fifth rate pizza at best. When our kids were younger they wanted to go there all the time, not for the pizza but for the fun and games. Even with bad pizza the place was always packed.
Tom Lehmann/The Dough Doctor
Re: Anyone know any pizzerias which are popular but serving bad pizza?
6630

Norma;
On your formula sheet it shows the malt as being DIASTATIC. This is an active, (enzyme active) malt that should only be used with a non-malted flour, and even then, the recommended use level is only 0.25% of the total flour weight, not 2% as your formula shows. If the malt was non-diastatic you could use it at the 2% level without any problem. High malt levels will always result in a gummy, wet crumb structure, and in some cases it may also inhibit oven spring. My advice is to totally eliminate the diastatic malt form your dough formula.
Tom Lehmann/The Dough Doctor
Re: Trying a different Sicilian pie tomorrow
6631

For one, I would use some of the pesto as a sauce and top with some precooked

pieces of chicken breast, slices of onion, maybe some fresh tomato, garlic, and mushrooms, then finish with some of the fresh Mozzarella, torn or sliced not shredded, then sprinkle on a little shredded or shaved Parmesan...that's making me hungry already.
Tom Lehmann/The Dough Doctor
Re: Time sensitive: choosing toppings for three pizzas with these ingredients
6632

Norma;
I like the flavor of the crust as well as the chewiness, and we can't overlook the fresh basil.
I do a lot of work for a baking company, Damascus Bakery just down the street from there on Gold Street.
Enjoy looking at the pictures of their famous customers on the wall while you're there.
Then, you will be able to fully appreciate the fact that you are eating a piece of New York history. There is a pretty nice restaurant over in Battery Park too. I consider New York City the Mecca of both pizza and restaurants. It's just a great food city, I hope you enjoy your visit!
Tom Lehmann/The Dough Doctor
Re: ï¿½A slice of Brooklyn' on the Travel Channel on Wednesday March 7th
6633

Norma;
Grimaldi's aka Patsy's is my all time favorite pizza. Gotta set me recorder to record it so I can see it when I get home (I'm traveling for the next two weeks).
Tom Lehmann/The Dough Doctor
Re: ï¿½A slice of Brooklyn' on the Travel Channel on Wednesday March 7th
6634

Garvey;
Flavor development is a function of fermentation and its byproducts combined with the heat of the oven. You can get some very good flavors using a preferment, but if they are not fermented under refrigeration as your refrigerated dough management procedure calls for, the resulting flavor may be different due to the differences in acids formed (room temperature v/s refrigerated). You will probably want to include as much flour as possible, if not all of the flour in the preferment to retain the protein degradation for digestability. I think you could work out a refrigerated preferment that would meet your needs with just a little experimentation. There is a possibility that you could develop a "running" ferment, aka, Madre De La Masa (mother dough). This would be like a preferment that you could use from on a regular basis, and replenish (refreshen) as you go to retain its vitality (something like a sour). Remember, the journey is as much fun as the destination.
Tom Lehmann/The Dough Doctor
Re: Preferment in place of a long, cold straight ferment?
6635

Because of the greatly abbreviated mixing process, this is one case where I have found it necessary to put the salt as well as the oil into the water, but I am always careful to begin my "dough mixing" process as quickly as possible.
Tom Lehmann/The Dough Doctor
Re: The Dough Doctor's cracker!!

6636

Peter;
Big Spring is shown on their data sheet as being appropriate for use in making French and Italian breads, as such it should work well in a home, or pizzeria setting for making a New York style pizza dough/crust. It is interesting to note that PFM shows only their whole wheat, Morbread (12% protein), Mondako (12% protein), and Blendako (11.5% protein) as recommended for thin to medium pizza crust production, and the Big Spring (14.5% protein) for thick pan pizza crust production. All of our research that we have done over the years shows that thick crust and pan pizzas are best made with a flour having from 11.5% protein at the low end to 12%+ at the high end. When a super high protein content flour is used to make thick crust and pan style pizzas there is a potential for the finished crust to become overly tough and chewy if it is not given sufficient fermentation. This was true of Pizza Hut's first departure from thin crust pizzas. Back in the late 60's they introduced a type of pizza appropriately called their Thick and Chewy, and that it was, on both counts!
Tom Lehmann/The Dough Doctor
Re: Hello from Hesperia, California
6637

Scott;
Please remember that this formula and procedure are for a bio-chemically developed dough, one that has already had a lot of fermentation time. With a bio-chemically developed dough you have a very soft and extensible gluten structure as opposed to a tighter gluten structure that is common with machine mixed doughs. As for the flour, I should has said my selections would be Kyrol or Mondako (the Mondako is the one that is not as high in protein content, but still works well in a home setting). As for putting fresh basil on a pizza (pre-bake) we do it all the time, just make sure it is at the bottom of the pie where it is protected from the oven heat and the aroma can infuse the entire pizza during baking. I don't see the Mozzarella cheese being sold in bricks very often at the supermarket, but I do see fresh Mozzarella sold there quite frequently, so like the sailor says "any port in a storm", it sure beats using the stuff out of a bag. The lower oven temperature by the way works very well with the fresh Mozzarella. If he had indicated that he was in a pizzeria, my advice would have been entirely different, and more true to form, but that was not the case. I did forget to add that a few fresh basil leaves should be applied to the top of the pizza immediately upon removal from the oven.
Tom Lehmann/The Dough Doctor
Re: Hello from Hesperia, California
6638

Doug;
To get you started, New York style pizza crusts are made with a high protein flour. With the selections you show, I would go with Kyrol or Mondako. They are not quite as high as is typically used in New York, but they should work well for you at home. As for the yeast, go with the SAF red label. The gold label is intended for use in high sugar/low salt applications, and the truth be known, it will work just fine in your cinnamon roll dough too, so you really don't need to have two different bags sitting around. I would experiment a bit with hand mixing. Put the water (75F) in the bowl first, then add the SAF red label which has been pre-hydrated in a couple ounces of warm water (95F) for 10-minutes, followed by the flour and salt. You probably won't need to add any sugar. Using a wood spoon, begin stirring the mix

together for a couple minutes, as you gradually add the oil. When the "dough" looks something like wet oatmeal, stop mixing, and cover the bowl with a piece of plastic. Allow the dough to ferment at room temperature for about 2-hours, then turn out onto a floured counter top, and knead just for a minute. Oil the mixing bowl, form the kneaded dough into a ball and place into the mixing bowl. Lightly oil the top of the dough and cover again with the plastic. Allow to rise for 1 to 3-hours more. I like to schedule this with the meal time so meal time is about 45-minutes after the fermentation time. Turn the fermented dough out of the bowl and cut into the desired number of pieces (I normally figure on 2 dough balls for each 3-cups of flour in the recipe). Using minimal handling, roughly form each dough piece into a loose ball and set aside to rest for about 30-minutes (cover if necessary to prevent drying). Hand stretch or roll each dough ball into a pizza skin about 12-inches in diameter. Brush with olive oil, add some diced garlic and fresh pieces of basil, then add fresh tomato slices (about 1-tomato per pizza) or use drained tomato strips or drained diced tomato for your sauce. Finish with torn pieces of fresh Mozzarella cheese, or your favorite cheese, then finish with an ounce of grated Parmesan cheese and bake on a pizza stone in the center of your oven at 450F until the bottom begins to brown, then move the pizza to a higher rack position without the stone to finish the top of the pizza. Keep in mind that you will probably need to experiment with the baking as all ovens are different. This should get you started.
Tom Lehmann/The Dough Doctor
Re: Hello from Hesperia, California
6639

Peter;
You are absolutely correct. The gross under mixing of the dough that I outlined produces a finished crust that actually shatters as you bite into it, yes, it is that tender and flaky, and if that isn't enough to satisfy ones crispy tooth, try par-baking the docked dough skin, then dressing it and finishing in the normal manner, it is like having a giant saltine cracker under those toppings (I've been known to boast just a little), but it does produce a pleasantly crispy and tender eating finished crust. The key is not to over mix the dough, it must look something like either a long flake pie dough or a good home made baking powder biscuit dough (that biscuit dough might be just a little over mixed as an example for this application).
Tom Lehmann/The Dough Doctor
Re: hydration rates and cracker doughs
6640

John;
Actually, we have found that absorption values of 45 to 50% work better in cracker type doughs than the very low absorptions in the 30 to 40% range. The reason for the low absorption values is to prevent full hydration of the flour, however, we have found that if you make the dough in much the same manner as you would a pie dough you can achieve the same results while having an easier to work with dough. This is what we have found to work best for us;
Put water into the mixing bowl (45 to 50% of the total flour weight), then add the yeast (be sure to suspend the yeast in the water), add salt and sugar (we don't recommend using sugar but do so if you must), now add the oil and immediately add the flour. Mix at low speed for about 90-seconds (I know, it doesn't look like a dough, but trust me). Take the "shaggy" dough to the bench and scale to desired weight (be sure to scale about 2 to 3-ounces heavier than what you want as there will be scrap dough), roughly form the "dough" into pucks as you would for a pie dough, or better yet, place into individual plastic bags, then place into the fridge to

ferment overnight. If you made pucks, place them onto a pan and cover with plastic before placing it the fridge. On the following day, remove the dough from the fridge and allow to temper AT room temperature for 2-hours, then turn the dough out of the bag, and place onto a dusted surface, using a rolling pin, sheet the dough out to about the thickness of a quarter. Trim the dough to the desired diameter, dock well, sauce and dress as desired. Pizzas made on these dough skins should be baked on a hearth surface at 500F.
Tom Lehmann/The Dough Doctor
Re: hydration rates and cracker doughs
6641

Mark;
If you can find it give it a try. Just remove the individual dough pieces and place then together in a pan, press them together, then flatten to make something that looks like a pizza skin, then top, dress and bake. That's how I've seen it done and it seems to work pretty well for what it is.
Tom Lehmann/The Dough Doctor
Re: Mark's -Stir 'n' Roll pizza dough - NO Yeast
6642

Mark;
Your chemically leavened (baking powder) dough reminds me a lot of the first pizzas I ever made using the Chef Boyardee (not sure of the spelling) pizza mix. Yep, tasted a lot like a biscuit with a poor excuse for pizza toppings on it, but considering the time (early 1950's) it was pretty good, and like today, a novel to make at home.
There are still a lot of people who use the refrigerated Pillsbury biscuit dough as a base to make their pizzas on.
Tom Lehmann/The Dough Doctor
Re: Mark's -Stir 'n' Roll pizza dough - NO Yeast
6643

I would suggest deleting the oil, taking the water up to 70% and increasing the IDY to 0.5%. That should go a long ways toward opening the crumb structure. BTW, that is not a bad looking pizza.
Tom Lehmann/The Dough Doctor
Re: My New York pizza
6644

I can't say for sure without actually having the dough ball in my hands, but I'll put money on one of two things.
1) Essentially all commercially made frozen dough contains either L-cysteine (think PZ-44) or glutathione (think dead yeast) as a reducing agent to both reduce the dough mixing time and to improve processing of the cold dough. If they are getting inconsistent doses of this material into the dough (not hard to do), this might explain the unusually soft and overly sticky dough you are occasionally experiencing.
2) As you note, temperature abuse. Frozen dough does not tolerate temperature abuse well at all, and this could well be the culprit here. In either case, I would contact the manufacturer of the frozen dough and notify them of the problem. You may well need to change suppliers or go to making your own dough to get away from the problem if the dough manufacturer isn't getting flooded with dough performance complaints.

Tom Lehmann/The Dough Doctor
Re: Sticky Dough
6645

Patdf;
I totally agree, give hand mixing a try. You will be surprised at how easy it is, and as for being low cost, nothing will beat it. That's the way pizza was first made, and it still makes a great pizza. If you will send me your e-mail address I'll send you a copy of my home made pizza dough recipe/formula to get you started. Roll up your sleeves, grab a wooden spoon and a bowl, and prepare to have fun learning how to make great pizza. Remember, the journey is as much fun as the destination, and as a side bonus, you get to eat your mistakes as well as your successes.
Tom Lehmann/The Dough Doctor
Re: Kitchenaid mixer time limits
6646

Dan;
Most bacterial starters take a bit more than just a few hours before they show any real leavening power, but possibly the starter that you got is not a bacterial starter, but rather a yeast (wild yeast) starter? What does the manufacturer say about how long it should take before you begin to see the development of leavening gas?
Tom Lehmann/The Dough Doctor
Re: Sourdough Culture Contamination Concern
6647

Jackie;
You'll find the October class to be a tremendous asset in getting your pizzas developed for your planned shop. Many of our students are in your exact same position of preparing to open a store. The dates for this years pizza seminar are October 22 through 26, 2012.
Tom Lehmann/The Dough Doctor
Re: How long out of refrigerator before cooking?
6648

While we normally advocate leaving the dough out of the cooler for 1.5 to 2-hours before opening it into a pizza skin, we have also put a thermometer into the dough to find out what the temperature of the dough is at this time. We found that the dough is typically at 50 to 55F. I don't like using the Zip-Lok bags for dough storage as there is a possibility of the pressure within the bag opening the seal, or blowing out a seam in the bag, in either case the dough will crust over :(, this is why I like to use something like a bread bag. Oil the dough ball, drop it into the bread bag, twist the open end of the bag to close and tuck the pony tail under the bag as you place it into the fridge. This will allow for some expansion of the bag while not allowing it to open, thus saving the dough.
Tom Lehmann/The Dough Doctor
Re: How long out of refrigerator before cooking?
6649

Actually, the dough formula looks to be quite good. You might try lightly brushing the dough with oil when you take it out of the fridge rather than dusting it with flour which can dry the dough, or just leave the dough in the plastic bread bag or container to temper AT room temperature for about 2-hours, then turn it out into the dusting flour and open into a skin as normal. From the pictures of your pizza, it

really looks quite good. Those bubbles around the edge of the crust are normal and add character and texture to the pizza. The area directly under the bubbles as seen in the photos appears to be a bit dense. There are two ways that you might address this, 1) Increase the IDY level to 0.375% of the flour weight. 2) Experiment with a slightly higher dough absorption. 3) Allow the dough to set out at room temperature for an additional 30 to 60-minutes before opening it into a pizza skin. Keep us posted on your progress.
Tom Lehmann/The Dough Doctor
Re: Lack of gluten development = hollow edge crust?
6650

I don't like to use a Zip-Lok bag as it seals the dough too tightly, instead, I like to use something like a bread bag, first lightly oil the dough ball, and drop it into the bag, then twist the open end to close and tuck it under the dough ball as you place it into the fridge. Leave the dough ball in the bag when you remove it for tempering AT room temperature, just turn the dough ball out of the bag into a bowl of dusting flour and begin opening the dough into a pizza skin. A couple things to keep in mind are the amount of yeast you're using and the finished dough temperature. Too much yeast or a dough that is too hot/warm will result in an over fermented dough after three days in the fridge.
Tom Lehmann/The Dough Doctor
Re: Lack of gluten development = hollow edge crust?
6651

Peter;
Yes.
Tom
Re: Storing and keeping flour fresh
6652

Shaun;
While the flour miller takes steps to ensure the flour is bug free and devoid of any insect eggs, nothing is 100% so there is always a possibility that there can be some viable eggs in the flour. When they hatch they will be larvae and the flour will be "wormy", then they mature into adults and you have "buggy" flour, soon to be followed by the laying of eggs and a repeat of the cycle. This can all take place in as little as a month. So, at the very least, you should take steps to ensure the flour is not infested from the outside of the package, this means putting it into a plastic or metal container, no need to be air tight, bust bug tight. Flour does change during storage, it oxidizes, meaning that it gets stronger. This may not be a good thing as it can result in excessive dough memory/snap-back during the forming operation. For this reason, we suggest storing the flour in the fridge if at all possible. If you plan to store it for an extended length of time we suggest first freezing the flour for 45-days or more, then storing it in the fridge.
Tom Lehmann/The Dough Doctor
Re: Storing and keeping flour fresh
6653

Make a half size batch without any added oil, then blend the two together. You can freeze the extra sauce that you have for later use.
Tom Lehmann/The Dough Doctor
Re: Too much oil
6654

Franko;
It's not recommended as the dough has warmed and has expanded to some extent (becoming less dense) as such, it is a better insulator and it will not cool very efficiently, leading to the possibility of a blown dough or excessive fermentation. A much better approach would be to at least partially open the dough ball, thus reducing the cross section and making it easier to cool down. By doing this we have been able to save the dough from one day to the next in a home baking situation, however, in a store setting, we don't recommend this practice as it is too difficult to manage properly which could lead to a disappointed customer (s) something we never want to do at the store level.
Tom Lehmann/The Dough Doctor
Re: Dough ball
6655

We also do a number of pizza parties each year and a couple of things that I've found to work well when I've got the better part of a dozen people looking for food is to put out bowls of pasta and several different sauces along with the first pizza. Also, consider using a party slice rather than a conventional pie slice, this gives more pieces and believe it or not, more time for that next pizza to get baked. Remember to have FUN, talk to your guests as they are sampling your pizza, tell them about how you love making pizza and how honored you are to have them as guests, go on to talk about the next pizza coming up. As people listen, they tend to eat slower, and good conversation slows them down too, just what you need to get that next pizza to their plates.
Tom Lehmann/The Dough Doctor
Re: Making pizza for several people with only one stone
6656

Yes, you should. Your scale probably won't be accurate enough to weigh to the 1/10-gram, so just weigh to the closest number your scale will allow. I normally round my numbers to the nearest whole gram too.
Tom Lehmann/The Dough Doctor
Re: Pizza Dough Calculator Weighing Water Question
6657

I totally agree, the look of the pizza with the "bad cheese" is more like what we see when using diced cheese. Also, you might be hitting the cheese with too much heat. To correct this, try moving the pizza to a slightly lower position in the oven if you can. Most stores sell a fresh mozzarella cheese in a ball form. Try one of these, but don't grate it, instead, peel it like an orange so you get randon size pieces to place over the top of your pizza, then grate or buy some grated Parmesan cheese and sprinkle about 2-ounces over the top of your regular cheese (be sure to get some on the outer edge too) as this will add more depth to the cheese flavor.
Tom Lehmann/The Dough Doctor
Re: In Desperate Need of CHEESE Help
6658

My experience is that the Caputo flour tends to make a slightly softer dough than K.A., so I'm guessing that the 50/50 blend dough was a little tighter and as such it didn't show as much rise, or gain in volume as the softer 100% Caputo flour dough. The amount of fermentation both doughs received was the same, the softer dough just visually got a little bigger because it was a softer dough. You can demonstrate

this by using the same flour for two doughs and adding more water to one dough, the dough with more water will be the softer of the two and show more rise.
Tom Lehmann/The Dough Doctor
Re: Do different flours or a combination of them rise more than others?
6659

Scott;
Here is my emergency pizza dough.
Start with your regular dough formula.
1) Double the yeast.
2) Cut the amount of sugar in half.
3) Increase the water temperature used in making the dough by 15F.
Procedure:
Mix just until all of the ingredients come together and make a fairly smooth dough.
Immediately divide into pieces and ball.
Oil the dough balls and place into individual plastic bags, twist the open end to form a pony tail and tuck under the dough ball as you place it on the kitchen counter.
Allow the dough balls to ferment for 60 to 90-minutes, then turn out into a bowl of flour and open into pizza skins, dress in your normal manner and bake as normal.
Tom Lehmann/The Dough Doctor
Re: Emergency pizza
6660

We have used all sorts of potato on pizzas. Thin sliced, grated (really looks good) as well as cooked and mashed with butter and garlic. When using mashed potatoes I like to apply it in rosettes using a decorating bag and a large star tube, then apply by making little swirly (rosettes). Garnish with a little fine crumbled bacon and a little cheddar cheese in addition to your favorite pizza cheese. Makes for a really nice presentation.
Tom Lehmann/The Dough Doctor
Re: Indulge Me- Potatoes
6661

Not a problem, no worse than using butter, and we all know how hard that gets when its cold. You will certainly pick up the flavor of the bacon or lard. That is why so many people say the tortillas taste so good in Mexico, because in Mexico they're made with lard that has not been as heavily deodorized as the lard which we have here in the U.S.
Tom Lehmann/The Dough Doctor
Re: Using melted lard in dough
6662

To use IDY (instant dry yeast use 1/4 less IDY than ADY (active dry yeast) so your new yeast level will be 0.2474 (call it 0.25-ounce) of IDY.
As for how to manage the dough, immediately after mixing, divide the dough into desired size dough balls, wipe with salad oil and place into individual plastic bags (bread bags work well), twist the open end into a pony tail and tuck under the dough ball as you place it into the fridge. Allow to ferment in the fridge (3-days in your case), then remove and allow to temper AT room temperature for about 2-hours, then turn out into a bowl of dusting flour and open into a pizza skin by hand, then brush with olive oil and dress as desired.
Tom Lehmann/The Dough Doctor

Re: Please look at my recipe
6663

Norma;
We do a wet gluten test where we manually wash the gluten out of the flour under very COLD water. You can then weigh the wet gluten ball weight and divide it by the weight of the flour that you washed it from to get a WET GLUTEN PERCENT, but doesn't mean a lot to most people since when citing gluten we speak in DRY gluten terms, you need to dry the gluten ball in an oven (typically overnight) and use that weight divided by the flour weight. There is a machine that is used to do all of this automatically, it is called the Glutomatic Gluten Washing Machine.
As for incorporating wet gluten into a dough, lotsa luck! That gluten ball is so tough and rubbery that it is impossible to incorporate into any kind of a dough. It kinda reminds one of a well chewed rubber band.
Tom Lehmann/The Dough Doctor
Re: Can a Wet Gluten Mass be incorporated into another dough?
6664

Franko;
The reason why your commercially made frozen dough can be worked right out of the fridge is because it contains a healthy dose of L-cysteine (you will see it listed as an ingredient on the package label. The L-cysteine is a reducing agent used to make the dough softer and more extensible. The manufacturer uses it to help reduce the dough mixing time and achieve full gluten development during mixing at low temperatures. As long as you are not experiencing problems with the dough bubbling during baking there should be no issues with using the dough right out of the fridge. By the way, unless the dough balls are marked/labeled as pizza dough, it is probably a bread dough that you are working with. The biggest problem with any of the commercial frozen doughs is they don't receive any fermentation at all prior to freezing, hence, the dough balls, when slacked out still don't have any fermentation on them and that can have an impact upon the flavor of the finished crust. To some this is important, to others it is not.
Tom Lehmann/The Dough Doctor
Re: Frozen dough ball
6665

10% protein content is a bit too low for making the best pizza. You will be much better served by using the 13% protein content flour. With this higher protein content flour, you will be able to ferment the dough for a sufficiently long time to develop some really good flavor in the finished crust.
You will need to experiment a bit at first to find the correct absorption for the flour. Typically, I would start at 58% dough absorption (58% water based on the weight of the flour) make a dough and see how it performs, then make any needed adjustments on future doughs.
Tom Lehmann/The Dough Doctor
Re: Want to use caputo in 270cl oven
6666

Also, make sure you have a sufficiently high protein level in your flour. We normally like to see about 13% protein content in the flour. A quick call to the manufacturer should get you the protein content, or you can add some vital wheat gluten to the dough formula. I would suggest adding 8% (flour basis) of additional gluten plus 12% (flour basis) additional water. Be sure to dry blend the gluten into the flour

before adding the water.
Tom Lehmann/The Dough Doctor
Re: PIzza Dough over rising and deflating?? Help
6667

Lester;
There are two ways that I slack out frozen dough balls and get them ready to use for making pizza skins.
First, oil the dough ball and place it into a plastic bag (think bread bag), twist the open end to close and tuck under the dough ball as you place it into the fridge. Allow to thaw for 12 to 16-hours, then open and use for making your pizza skins.
A better method (I think) is to remove the slacked out dough ball from the fridge and set it at room temperature for about an hour, then place it back into the fridge for use on the following day. When removing the dough ball from the fridge to use, leave it in the plastic bag and allow it to set at room temperature for 1.5-hours, then turn the dough ball out into a bowl of dusting flour and open into a pizza skin. The second method described allows the dough to develop a little more fermentation flavor that the first method.
Tom Lehmann/The Dough Doctor
Re: What is procedure for taking out a frozen dough Ball
6668

When making pizza at home hand mixing gets my vote too. It really isn't hard, and when done right, the total mixing time will only be a couple of minutes, and you won't get biceps like the village blacksmith either.
Tom Lehmann/The Dough Doctor
Re: How does the Micro Mixer sp5 compare to the Electrolux
6669

Jackie;
IDY and CY (compressed yeast) are closer together than CY and ADY. While IDY also has its share of damaged yeast cells due to the drying process, the issue has been addressed through the addition of a small amount of ascorbic acid to the dry yeast, while the ADY (active dry yeast) has not had any ascorbic acid added, so the doughs made with ADY actually end up slightly softer than when made with IDY. The biggest problem that we have seen is with conversion of one type of yeast to another. When used at correct conversion levels, there is no difference in finished product flavor between IDY, ADY, or CY. The trick here is in using the CORRECT conversion, and the conversion recommended by the manufacturer, may not always be the correct one for your particular dough formula. For bread makers, the correct conversion level is the one that provides the same final proof time as the yeast type being replaced. For pizza makers, I like to use a plastic glass or cup, oil the inside and place a weighed amount of dough into the cup/glass, flatten the top so it is as even as possible, lightly cover with a piece of foil and set aside to proof/rise until the dough reaches the top edge of the glass/cup, then record the time required for the dough to rise to that height, now, replace the yeast with the type you want to use, and repeat, adjust the yeast level until the time needed for the dough to rise to the top edge is the same as with your original yeast. Now, divide the new yeast level by the original yeast level and you will have the correct conversion for your specific dough.
Tom Lehmann/The Dough Doctor
Re: Fresh yeast
6670

We have done a huge amount of work on short time doughs, including emergency doughs, if at all possible, incorporate at least 2.5 hours of fermentation time into your dough making process. This will significantly improve the crust flavor as well as reducing the bubbling and blistering of the dough during baking. Ain't nothin' that speaks of a great pizza like a huge bubble on the pizza during baking that causes the cheese and toppings to slide off and burn in the oven.
Tom Lehmann/The Dough Doctor
Re: Not Using Delayed Fermentation
6671

Craig;
The end result from using fresh compressed yeast and IDY are exactly the same, no difference. ADY, due to the presence of damaged yeast cells provides a little softening to the dough, but nothing else to the finished bread. A number of years ago we did a seamless transition to IDY in our Experimental Bakery where we used it exclusively for several years, and then ultimately transitioning back to using compressed yeast (a political move) just as seamlessly.
Tom Lehmann/The Dough Doctor
Re: Fresh yeast
6672

Finfan;
The easiest way to correct the condition which you describe is to oil the dough balls and then place them into individual plastic bags. Bread bags are an excellent choice. DO NOT tightly close the bread bags, but instead, twist the open end to close it, forming a pony tail, then tuck the pony tail under the dough ball as you place it into the fridge. To use the dough, simple remove a dough ball from the fridge and allow it to temper AT room temperature for about 1.5-hours, then turn the dough ball out of the bag into a bowl of dusting flour and begin opening the dough ball into a pizza skin. This process works perfectly all the time.
Tom Lehmann/The Dough Doctor
Re: dough ball problem question
6673

Semolina flour also makes for a very good peel dust. The larger particle size of semolina flour gives good release from the peel, and since it is slow to hydrate, it doesn't adhere well to the dough. You might try dipping the entire dough ball into semolina flour before you open it up into a pizza skin, this normally minimizes the amount of peel dust needed to get a good release from the peel. Make sure you use a wood, not metal peel for your prep peel.
tom Lehmann/The Dough Doctor
Re: Too much flour on finished pizza.
6674

I am also an advocate of starting the pizza on a low rack position and then moving it to a higher rack position when I don't have a pizza stone to bake on. Additionally, make sure the cookie sheet, or the pan you're baking the pizzas in are dark colored. TIP: DO NOT use an airbake pan. The bottom crust won't color up.
Tom Lehmann/The Dough Doctor
Re: Advice On How to Cook Pizza In a Home Oven Without a Pizza Stone. Need help.
6675

Changing the brand of cheese can certainly help as some brands will color more than others. Many times I will sprinkle shredded Parmesan cheese around the edge of the crust to achieve the same effect. Also, moving your pizza to a higher rack position in the oven may also help by putting more top heat to your pizza, or you might experiment with doing the bulk of the baking at a lower rack position to get the bottom of the crust baked properly, and then moving the pizza to a higher rack position to get the desired browning on the cheese.
Tom Lehmann/The Dough Doctor
Re: Caramelized Cheese Crust
6676

Kerry;
The oven you're looking to buy, is it new or used?
Do you have a dedicated 208-V circuit that you can plug it into?
The oven should work just fine otherwise.
I see these being used in bars from time to time.
Tom Lehmann/The Dough Doctor
Re: Baker's Pride model P22S
6677

Moose;
Are you wanting to get a softer crumb? If so, the addition of oil or shortening/butter to the dough will give you that added characteristic. But I was also getting the impression that maybe the you wanted the cell structure (crumb) to be more open too? If this is the case, the you may need to add a little additional water the dough. You also brought up the question of do I have enough dough to get the desired crumb characteristic. Remember, you need dough to get an open crumb characteristic, so by all means don't be afraid to experiment using more dough to make your pizza skins.
Tom Lehmann/The Dough Doctor
Re: How to get a soft crumb?
6678

When most people think white pizza sauce, they think Alfredo sauce, or some variation based on it. Alfredo sauce is a wonderful compliment to chicken or seafood on a pizza. When I make a seafood pizza I put on a light spread of Alfredo sauce and then apply dried dill weed, followed by the sea food (shrimp and fish), then some red onion, sun dried tomato, and a blend of 75% Mozzarella/25% Shredded Parmesan cheese. Keep it simple, to die for!
Tom Lehmann/The Dough Doctor
Re: White Sauce recommendations or recipes anyone?
6679

Try this, it will make your day a lot easier.
After you mix the dough, immediately divide it into three pieces and form into balls, then lightly oil with salad oil and place into individual plastic bread bags. Twist the open end to close and tuck the pony tail under the bag as you place it into the fridge. allow the dough balls to remain in the fridge for 16 to 48-hours. To use, remove the dough balls that you want to use and allow to temper AT room temperature for about 2-hours, then turn out into a bowl of flour and begin opening the dough ball(s) up into pizza skins, then handle in your normal manner. I'm betting the dough will open a lot easier for you with out nearly as much memory.

Tom Lehmann/The Dough Doctor
Re: still looking for that "flexible" dough
6680

Mark;
So, what is the scaling accuracy of the Taylor 10-C scale that you list for just under $50.00? I sure wish manufacturers and merchants would show the specs on their scales. How is one supposed to know if the scale is appropriate for what they want to use if for without that vital information???
I think for what most home bakers do, a scale that has a capacity of 5-pounds/2.27 Kg. and will weigh to the nearest 1-gram in the metric mode would work well. This Will allow the user to scale the half gram increment by watching the display screen, and when it flashes between two numbers, such as between 7 and 8, this would indicate "approximately" 7.5 grams, close enough for our work.
Tom Lehmann/The Dough Doctor
Re: Digital scale accuracy?
6681

Bill;
I think you've just got a sweet tooth. LOL :)
Tom Lehmann/The Dough Doctor
Re: Confectioners Sugar In Doughs?
6682

Normally it will also give an accuracy range, such as 11-pounds X -ounces, so I looked it up on the internet and found your Model #7918 listed as a Walmart item, and absolutely no specifics are given. If you read the reviews you will see that one review isn't very complimentary, citing lack of accuracy as an issue. It states that this scale will not weigh less than 0.6-ounce/17-grams (sound familiar?) With this range of accuracy I wouldn't post it on the box either. For all practical purposes, this scale has a maximum capacity of 11-pounds X 0.5-ounce/16.5-grams. Meaning that it will weigh in ounces to the nearest half ounce to a maximum of 11-pounds, or in metric to a maximum of 5-kilograms in 16.5-gram increments. This is NOT a very good scale for the advertised application. I hope you saved your receipt.
Tom Lehmann/The Dough Doctor
Re: Digital scale accuracy?
6683

What is the stated range and accuracy of your scale? Exactly how does it read on the box?
Tom Lehmann/The Dough Doctor
Re: Digital scale accuracy?
6684

Phil;
From what you have described, I'm guessing that the water temperature was too cold. You said that the dough had hardly risen by the following day, and a cold dough temperature would explain that. With the 6 to 7-minutes of machine mixing it is OK to add IDY directly to the dough as you did. It is designed for that method of application when machine mixing is used. For a finished dough temperature, you want to look for something in the 80 to 85F range. The reason why the dough didn't color up might be due to the fact that it didn't expand very much during baking (lack of oven spring), this would allow the bottom heat to pass through the

dough into the sauce, where it is dissipated as steam. In order to get the crust to brown, you've got to get the dough surface temperature up to around 300 to 400F. When the dough expands during baking, it creates an open structure which prevents the heat from being conducted through the dough, hence allowing the surface temperature to rise sufficiently high to allow for the browning reaction to take place.
Tom Lehmann/The Dough Doctor
Re: My Lehmann style fail
6685

Norma;
An inquiring mind is a terrible thing to waste.
The most thought provoking word in the English language is the word "why?".
Have a great Thanksgiving!
Tom Lehmann/The Dough Doctor
Re: Confectioners Sugar In Doughs?
6686

Powdered sugar and granulated sugar are one and the same except for particle size. Keep in mind when using volumetric portions that they are NOT interchangeable, but from a functionality standpoint, they are the same. Infact, you can make your own powdered sugar in a food processor.
In case you're wondering (inquiring minds want to know) donut sugar, that stuff that looks like powdered sugar on a cake donut is not actually powdered sugar, even though it is called a powdered sugar donut, or coating. Donut sugar is made with powdered dextrose (not as sweet as sucrose) along with added starch and fat. It is designed specifically for use as a coating sugar on donuts and is never used a a substitute for powdered sugar.
Tom Lehmann/The Dough Doctor
Re: Confectioners Sugar In Doughs?
6687

Moose;
ADY should be mixed with four to five times its weight of water (100 to 105F) and allowed to hydrate for about 10-minutes, stir again, and add to the mixing bowl. I like to add the hydrated yeast to the dough water to further disperse it when making pizza dough at home, you can also rinse out the container that you hydrated the ADY in with the dough water. With IDY you have the option of adding it directly to the flour if you will be mixing the dough by machine for 5-minutes or more. If you will be mixing by hand, or mixing for a very short time, you should hydrate the IDY in four to five times its weight of water (95F) and allow to hydrate for about 10-minutes, then stir once again and add to the dough. Again, I like to add the hydrated IDY to the dough water just as I do the ADY.
Tom Lehmann/The Dough Doctor
Re: Question about Active Dry Yeast please...
6688

Since we're on the topic of peel dust, while a lot of people think it is just a matter of preference as to what is used as a peel dust, it is actually a lot more than that. A soft dough, one that has a high dough absorption, when placed onto a peel with just flour will tend to hydrate that flour quite fast, thus losing the slip characteristics provided by the flour. In this case something that won't hydrate as fast is needed, this is where semolina flour comes into play (it hydrates very

slowly). If the dough is really wet, as some are, corn meal will help to actually hold the dough off of the peel surface, thus facilitating slip. In actual application, we seldom ever use 100% of any of these products, but instead, use a blend of them to make our peel dust, which is all based on the properties of the dough that is on the peel at the moment. My own personal favorite blend is made from equal parts of regular flour, semolina flour, and fine grind corn meal, and I've yet to have a pizza stick to a wood peel when I did my part. By the way, you are absolutely correct, shaking the dressed dough skin on the peel occasionally before taking it to the oven is vitally important to ensuring a release every time regardless of what you're using as a peel dust.
Tom Lehmann/The Dough Doctor
Re: Corn meal on stone
6689

To take the T.F. (thickness factor) one step further, now all you need to do is to calculate the surface area of your new pan size/pizza size and multiply your T.F. by that number to get the correct dough weight for the new diameter.
Example: You now want to make your pizza on a 12-inch diameter format. Pi X R squared = 3.14 X 36 + 113 square inches in a 12-inch diameter pizza. 113 X 0.084-ounces = 9.49 (call it 9.5-ounces). Note: The decimal point was in the wrong spot in the original response. 13-ounces divided by 154 = 0.085 T.F. Another way to express T.F. is ounces of dough per square inch of surface area.
Tom Lehmann/The Dough Doctor
Re: thickness factor explained please
6690

FeChef;
If you want to fry the dough, not a problem, just make sure you set the formed pieces (mini calzones) aside to proof/rise for about 20 to 30-minutes before you place them into the fryer. I like to fry submerged, as they look better, but they can be surface fried if you don't mind the white line. Note: don't put a pressure release hole in the dough if you plan to fry it.
Tom Lehmann/The Dough Doctor
Re: Finally, the perfect dough..but..
6691

Actually, most bubbles are the result of insufficient dough fermentation. Another major contributor to the cause is use of a cold dough (failure to allow the dough to temper AT room temperature for at least two hours after removing it from the fridge (if using cold fermentation). Occasionally, we do find an excessive amount of yeast being used, but if the yeast level is around 1% of the flour weight for compressed yeast, 0.5% for active dry yeast or 0.375% for instant dry yeast you're good on the yeast level
Tom Lehmann/The Dough Doctor
Re: what to do about bubbles
6692

Biz;
I stand corrected on the name of that proofer I mentioned in my above response. It is the Econo-Proof, not Proof and Bake.
Tom Lehmann/The Dough Doctor
Re: Panimatic couche?
6693

Biz;
If you're looking for a proofer, go to Belshaw Bros., Inc. at <www.belshaw.com>
They have a vertical, multi door proofer with about a 30" X 36" footprint and it plugs into a 110V outlet. It takes standard size sheet and screen pans. I believe they call it their Proof and Bake unit. Sells for around $1,300.00 if I remember correctly. Look at used bakery equipment suppliers, there is a lot of good equipment out there just waiting to be adopted.
Tom Lehmann/The Dough Doctor
Re: Panimatic couche?
6694

A quick trip to your local supermarket, and a stroll down the baking goods isle should put you in front of Pillsbury Bread Flour. This flour comes in at around 12% protein content, and should work quite well for a deep-dish pizza. While you're there, pick up a dark colored cake pan, it will work better than your silver colored cheese cake pan.
Tom Lehmann/The Dough Doctor
Re: Anyone have any sources for some of these flours near eastern Ohio?
6695

Waste good pizza dough? No way!
Make one or two breadsticks out of it, or roll it thin and add a little cheese and meat filling, then fold it over and crimp the edges, tear a small hole in the center of the filled pocket and bake along with your pizza. The cook/chef can then enjoy a little appetizer before the main course.
Tom Lehmann/The Dough Doctor
Re: Finally, the perfect dough..but..
6696

Norma;
I should have added to lightly oil the dough ball when you place it in the container as this helps to control any possible skin formation while it is uncovered, and it also helps when its time to pop the dough out of the container, as it just plops out when you have oiled the dough ball.
Tom Lehmann/The Dough Doctor
Re: what to do about bubbles
6697

BP;
If your dough is in proper balance with regard to yeast level, and the temperature is not too high, the dough should not exhibit much of a tendency to bubble as you've described. A good dough temperature is 80 to 85F (probably favoring the 80F side). A dough that has too much yeastor one that is too warm will typically exhibit a greater tendency to bubble during storage in the fridge/cooler. Also, if you leave the dough rest at room temperature for an extended time prior to putting it into the fridge, this may increase the odds of having the dough bubble. If you put the dough into a plastic bowl in the fridge, be sure to leave it uncovered for the first 90-minutes or so, then cover it. This can also reduce the bubbling tendency. If all else fails, put the dough into a bread bag for refrigerated storage. Twist the open end of the bag to close it, and tuck the pony tail under the dough ball as you place it into the fridge, then kiss it good night. No need to leave anything open. Just be sure to oil the dough ball prior to dropping it into the bag, then just turn

the dough ball out of the bag into a bowl of dusting flour and begin opening the dough ball into a dough/pizza skin, dress and bake. If the dough develops a bubble, I normally ignore it until I'm ready to use the dough, then just pop the bubble and open the dough ball.
Tom Lehmann/The Dough Doctor
Re: what to do about bubbles
6698

Paul;
That is correct. Some might argue that some of that water is needed to meet the hydration requirements of the yeast, and that is correct. About 70% of the weight of the yeast is required to fully hydrate it. My feeling is that in a home made pizza or bread setting, we're now splitting hairs and making things more complex than they really need to be, so I just simplify things by saying to subtract the same amount from the dough water that you used to hydrate/suspend the dry yeast in. In short, if you used 4 tablespoons of water to hydrate/suspend the yeast, just remove 4 tablespoons of water from the dough water to keep everything in correct balance and it will be close enough for making dough. If we were making rocket fuel, well, that might be another matter.
Tom Lehmann/The Dough Doctor
Re: dough temp question
6699

In response to replies #4 and 5 above;
ADY is typically, and correctly substituted for compressed (cake) yeast at 50%, or 1/2 of the compressed yeast weight or percentage.
The type of flour used to make the Chicago style cracker crust would be Ceresota brand, but any flour with around 11.5% protein content would work equally as well. When baking in a home oven, I like to par-bake the crusts at 400F, and bake on a stone if possible, or on a dark colored pan if a stone is not available. When baking the dressed dough/crust, I increase the oven temperature to 475 - 500F, and bake on a dark colored, solid pan, like the Lloyd's cutter pan, but any dark colored, solid pan will work. The baking time will be about 25-minutes on a raw dough skin, or about 15-minutes on a par-baked crust. Some experimenting will be needed due to the vast differences in the way different home ovens bake.
Tom Lehmann/The Dough Doctor
Re: Chicago style thin cracker crust
6700

Peter;
Sifting out the adult beetles and larvae might make you feel a little better about using the flour, but you have not sifted out the eggs, which will soon hatch and begin the cycle all over again. Your best bet is to break the bag of flour down into smaller bags and freeze them for at least 40-days. This will kill any beetles, larvae, and eggs. The flour can then be stored plastic or metal containers at room temperature for a much longer period of time.
Tom Lehmann/The Dough Doctor
Re: Caputo flour freshness
6701

F.C.;
With reference to replies #1-3, the dough formula looks like this:
Flour: 358g. 100%

VWG: 10g. 2.79%
Water: 225g. 62.85%
IDY: 3g. 0.84%
Salt: 6g. 1.67%
Honey: 23g. 6.42%

Total% 174.57%

All you need to do now is to decide how much dough you want to make and divide that amount by the total formula % divided by 100. Here's an example: Lets say you want to make 28-ounces of dough. Divide 28 by 1.7457 and you get 16.03911-ounces (call it 16-ounces) of flour needed. Doing it in grams: Lets say you want to have a total of 1000g. of dough. Divide 1000 by 1.7457 and you get 572.83611-grams (call it 573-grams) of flour needed.
Once you have the flour weight, the rest is easy, using your calculator, just enter the flour weight, then press "X" enter the ingredient percent and press the "%" key and read the ingredient weight in the display window. The ingredient weight will be in the same weight units that you showed the flour weight in.
Example:573-grams of flour.
573 X 2.79 (press the "%" key) and read 15.9867 (call it 16-grams) of VWG needed.
Repeat this for each ingredient and you will have your ingredient amounts for your new dough weight.
Tom Lehmann/The Dough Doctor
Re: Finally, the perfect dough..but..
6702

If you can give me your weights for the honey, salt, and yeast I can put your dough into a formula that you can manipulate t give you any weight of dough you desire.
Tom Lehmann/The Dough Doctor
Re: Finally, the perfect dough..but..
6703

Paul;
The answer to your questions are yes and yes. Home mixers just don't provide the mixing action that the larger mixers provide, so you are safe to hedge your bets by suspending the yeast, be it instant dry yeast, active dry yeast, compressed yeast, or instant rise yeast in a small portion of water (95 to 100F), leaving the remainder of the water at a lower (calculated) temperature to adjust your finished dough temperature.
Tom Lehmann/The Dough Doctor
Re: dough temp question
6704

Sour? Flour adhering to the dough will not give the finished crust a sour taste, but it will impart a bitterness to the crust, maybe that's what you mean? As you handle the dough, during the forming process, you should find that you really don't need much more flour after the first "dunk" in the flour bowl, as you continue to shape the dough the dough will have a dry skin and much of the excess flour will simply fall off. A light dusting of flour on the dough is normal. We have our annual pizza seminar coming up next week and I'll try to see if I can get some video footage shot showing the dough balls being opened into pizza skins.
Tom Lehmann/The Dough Doctor
Re: Little confused about flour dusting

6705

While some may say that flour can be stored for up to a full year at room temperature, unless you know how the flour was stored prior to your purchase (fat chance of that) you would be best advised to re-bag the flour into double plastic bags (like bread bags) and then store anything that you will not be using within the next month or so under refrigeration or in the freezer. Your main concern is insect infestation. You may not always see the black or reddish appearance of flour beetles (looks like pepper in the flour) as you can also have the larval stage present. This is when the flour is said to be "wormy". About the only way you'll be aware of this is if you sift the flour, then you will see the larva in the screen after sifting the flour. An old baker's trick is to freeze the flour for 45-days, this will kill all of the insect stages (from adult to eggs), then transfer the flour to a cooler where it can be stored for a much longer period of time if necessary. For the most part, flour is pretty free from insects as it comes from the mill, it is the post packaging contamination that gets it. The problem can/will occur in a warehouse, truck, or other transport, and all too often on a store shelf. And don't over look your own kitchen, I've had to discard buggy flour more than once from my own kitchen, especially when you store the flour in a drawer as I used to do. I now store it in a large glass jar.

Tom Lehmann/The Dough Doctor
Re: Caputo flour freshness
6706

Some of the things that we do to product the typical Chicago style crust are as follows:
Dough absorption around 55% (will vary with absorption requirements of the flour).
Flour protein content should be around 11%.
Some use corn meal, some don't, it you elect to use corn meal, try 8% based on the flour weight.
For the color, use "egg shade" a type of yellow food coloring.
Bake at 450F and plan on a bake time of 25 to 30-minutes for a thin crust and 40 to 45-minutes for a thick crust pizza.
Assemble with sliced cheese going on first, and sauce going on last.
Can't use anything but RAW sausage in Chicago.
Butter or margarine is commonly used in place of olive oil in the dough.
Margarine is commonly used to grease the pans (Bluebonnet).
Chicago thin crust pizzas are NOT crispy with exception for the very edges.
Always party cut a Chicago style thin crust pizza.
Chicago style pizzas are not laminated. The key to getting that open crumb structure is in allowing the dough to rise in the pan before dressing.

Tom Lehmann/The Dough Doctor
Re: Chicago crust from America's Test Kitchen
6707

PK;
I would suggest using only flour, salt, water and yeast for the ingredients.
A good starting point might be as follows:
Flour 100%
Salt 1.5%

Compressed yeast 1%
Water 68% (70F/21.1C)\

Put the water into the mixing bowl, add the yeast and stir until the yeast is suspended, add the flour and the salt and mix just until the dough begins to come together, then set aside and allow to ferment for about 2-hours, turn the dough out onto a floured bench and knead for a minute or so. Form into dough balls, and lightly oil, place each dough ball into a plastic bag, seal by twisting the open end of the bag into a pony tail, and tuck the pony tail under the dough ball as you place it into the fridge. Allow to ferment for 18 to 24-hours, then remove from the fridge and allow to temper AT room temperature for 1-hour, then turn the dough out of the bag into a bowl of flour and open into pizza skins. There are many methods for making the dough but this is one of the easiest I've come across.
Tom Lehmann/The Dough Doctor
Re: Some advice for perfect dough -pizza party with G3 and 00 flour
6708

When you're feeding the masses, that's how it is done. Personally, I'm more concerned about some of the big box wholesale stores putting a vast array of different types of stores and businesses out of of business.
Tom Lehmann/The Dough Doctor
Re: A sobering look at today's commecial pizza business...
6709

Jim;
It is all just a matter of preference. I've seen numbers as low as 1.5 fold increase and as high as 2.5 fold as cited in the article. I normally shoot for a 2 fold increase in size. Remember, you will not be fermenting the dough in a graduated glass beaker, as they were in the article, but rather you will be "eyeballing" the dough to ascertain the magnitude of size increase. Why do I use a 2 fold increase? Because it is easier to say "Yup, that looks to be about twice as large as it was when I started".
Tom Lehmann/The Dough Doctor
Re: Target leavening volume
6710

Dennis;
I agree, that for anyone making pizza at home it is best to first suspend the yeast in a small portion of water before adding it to the mixing bowl. My own personal preference is to suspend it in a small container, and then add it to the dough water in the mixing bowl, which is my first ingredient going into the bowl, then I like to add the salt and sugar, followed by the oil and lastly the flour, since the salt and sugar are now in direct contact with the yeast, it is imperative that you begin mixing the dough right away. I know that the instant dry yeast (IDY) people say that you can add the IDY after mixing the dough for 4 to 5-minutes, but that is based on the presumption that you are using a mixer, and that you will be mixing the dough for an additional 5-minutes, or more, after adding the yeast. I don't even like adding it in the flour, when I'm hand mixing as I am not fully convinced that my style of hand mixing (minimal) will result in proper yeast dispersion.
Tom Lehmann/The Dough Doctor
Re: Heston Blumenthal: Adding the yeast after flower+water
6711

Sure;

You must be a "GLUTEN" for punishment to try to mix a dough for 30-minutes by hand. Just stir it together using a wooden spoon. Total mixing time about 90-seconds. Cover, allow to rise for 2-hours, turn out of the bowl onto a floured table top and fold several times until you can handle the dough with relative ease, then oil the bowl and place the dough back into it to continue fermenting for another 3 to 3-hours, then turn the dough out of the bowl and divide into whatever size pieces you need to make your pizza skins with. Form into balls, cover with a piece of plastic and allow to rise for about 30 to 45-minutes, then open into pizza skins, dress and bake as you wish.
I teach this process to people all the time and it really works well as a simple way to make dough using biochemical gluten development. Once you have this mastered, you can begin experimenting with any of the many other ways to make dough by hand.
Tom Lehmann/The Dough Doctor
Re: Hand Kneading = Anger
6712

SO? What? You don't like the smell of beer? LOL
Actually, it might be pretty good. You have come this far, I'd make a pizza from the dough and see if you like it or not.
Tom Lehmann/The Dough Doctor
Re: should i toss this dough?
6713

It might be that you have just over fermented the culture, or that you have some form of a lactic acid producing bacteria present that is giving you the very sour/acid taste where as a different lactic acid producing bacteria strain might give a totally different flavor profile. This is one of the things that can happen with these natural ferments, it is also what makes working with them so much fun and so rewarding at the same time. If it isn't over fermented, and if you are not using too much, you might need to start over again and hope for better luck the next time. One other thing, are you sure you used the correct amount of inoculant when starting your culture? If you don't use enough to inoculate with, you may not get enough of the desired bacteria and yeasts to propigate the microflora in the culture, and hence you run the risk of ending up with something totally different.
Tom Lehmann/The Dough Doctor
Re: Why did my dough turn out tasting sour??
6714

When I worked in Chicago, Illinois, we used to visit a local deli called Jerry's Deli, as you entered the store Jerry would point at you and say "what you want?" At that moment your lips had better be moving and you had better be ordering, because if you were not, he would say "next!" and he was pointing at someone else and taking their order, and trust me, it could take some time for him to get back to you, and you had better be playing the game when he did! The deli was ALWAYS packed, I guess that was just the ambiance of the store, and those who went there either liked to be abused or watch it happen to others (a lot like the Soup Nazi, but dated 1970).
Tom Lehmann/The Dough Doctor
Re: Order a Pizza or Get Out!!
6715

F.C.;

The secret to getting that characteristic is to use higher levels of L-cysteine, a reducing agent in the dough. You can find L-cysteine in a product called PZ-44 available from Foremost Farms <www.foremostfarms.com>. Be careful when using this though as it can/will quickly turn a dough into something that more closely resembles a cake batter. I would recommend starting out at 2% of the total flour weight, and working up in 0.5% increments from there. Another option to explore is to form your dough into pucks and freeze it for several days. This will damage the yeast, releasing glutathione (first cousin to L-cysteine) into the dough, and it may give you some of the characteristics you're looking for. In this case experiment with the holding time in the freezer. Something between 3 and 10-days should give you some result similar to what you are looking for. Note: If you buy frozen pizza dough you will see this characteristic right from the start.
Tom Lehmann/The Dough Doctor

EDIT (2/7/13): For a link to the PZ-44 product, which was recently sold to another company, see http://web.archive.org/web/20060311221117/http://www.foremostfarms.com/products/ingredient/pdf/450PZ44.pdf.
Re: How do you get that nice shiny blistered dough crust?
6716

Sweetpea;
What you have described is a Chicago style thin crust, not to be confused with the thin cracker.Here is a good formula for making the dough:
Flour: Ceresota 100%
Salt 2%
Oil 3%
Compressed yeast 1%
Water (65F) 48%

Procedure: Put water in the mixing bowl, add salt, then flour, yeast and the oil, mix until the dough just comes smooth, then set aside to ferment for 4-hours, divide the dough into desired weight pieces and form into balls, set aside and allow to proof for about 90-minutes, or until you can roll the dough out without too much difficulty. Roll the dough quite thin (about 1/8-inch thick), place onto corn meal dusted peel and dress as desired, bake at 450 to 475F about 20 to 25-minutes on a baking/pizza stone.
For weights: decide how much flour you want to use, this will be 100%. Then, using your calculator, enter this weight X 2 (press the "%" key and read the weight of salt to use. Repeat this for each ingredient and you will have your formula in weights.
Tom Lehmann/The Dough Doctor
Re: Name That Crust
6717

F.C.
Bakers percents are used when weight measures are used rather than volumetric portions. To find the weight of any ingredient using bakers percent, follow these steps:
Flour is always 100% you decide what weight of flour you want to use, then mark it down as 100%.
Using your calculator, enter the flour weight, then press "X" and enter the percentage shown for the ingredient that you want the weight for, then press the "%" key and read the ingredient weight in the display window. Remember, the weight of the ingredient will be given in the same weight units as the flour weight

was shown in (pounds, ounces, grams, kilograms, etc.)
Example:
You want to use 500-grams of flour. This is shown as 100%
Salt: 1.75%
Oil: 2%
ADY: 0.5%
Water: 60%

500 X 1.75 press the "%" key and read 8.75-grams.
500X 2 press the "%" key and read 10-grams
500 X 0.5 press the "%" key and read 2.5-grams
500 X 60 press the "%" key and read 300-grams
Now you have the weight of each ingredient.
Tom Lehmann/The Dough Doctor
Re: Cant seem to get that fat brown crust
6718

The dough formula is correct as you have shown it. To use ADY you will use half (50%) of the compressed yeast amount and to use IDY you will need to use 40% of the compressed yeast amount. Keep in mind that regardless of the type of yeast used, they should all be suspended in water prior to adding it to the dough.
You are right about the procedure (step #12) being incorrect. They must have taken that from the Chicago deep dish formula when they transscribed and entered the formula in the Recipe Bank. Just sauce the par-baked crust, then add the toppings, and finally the cheese, as the cheese goes on last in the Chicago presentation. Remember, the mixing time is VERY SHORT. The resulting "dough" looks more like a biscuit or pie dough than what you might think of a pizza dough as being. If there ain't dry, white flour in the mixing bowl when you're through mixing, you have over-mixed the dough. Trust me.
Tom Lehmann/The Dough Doctor
Re: Chicago style thin cracker crust
6719

BTB;
Ed and Joe's is the pizza that I was raised on as a kid! I remember them from back in the 50's! Best of all, they're still out there, and everytime I get back to the south side I get one of their pizza.
For the improved (crispy version) of the Chicago thin, cracker crust, go to the PMQ web site at <www.pmq.com> and under "culinary" click on the RECIPE BANK drop down. Then type in "Pizza dough" for your search words. You will find my Chicago thin cracker crust posted there. After step #11, parbake the formed dough skin (be sure to dock it well) These can be saved for use later, or used right away. Resume with step #12, or dress the parbaked shell in your perferred manner and bake in an airimpingement oven for 5-minutes at about 465F. We make this version at all of the pizza shows that we attend. It is also a great buffet pizza as it holds its crisp so well.
Tom Lehmann/The Dough Doctor
Re: Chicago style thin cracker crust
6720

Peter;
After blast freezing, the dough balls are held at the same holding temperature as static frozen dough balls are, -5 to -10F, so the slackout time for both will be the

same. As for Domino's using all in house made dough, not true. I have recently been in their Michigan commissary more than once. Granted, there might be some store out there that are too far off of the beaten path to be served by a Domino's commissary truck, and those stores might still be making their dough in house, but I'll bet the majority of their stores are served by a commissary.
Tom Lehmann/The Dough Doctor
Re: Frozen Commissary-Produced Dough Balls
6721

F.C.;
Putting the pizza in a lower position in the oven will bring it closer to the heating element/burner at the bottom of the oven, while at the same time moving the pizza further from the hottest part of the oven (the top). This will allow you to bake the pizza longer without developing excessive top color, and hopefully, get a better overall crust color. In some ovens I will bake a pizza for about 10-minutes on a lower rack, and then rotate the pizza 180 degrees and place it on a higher rack position to finish baking. This allows me to get a decent bake on both the bottom and top of the pizza. Remember, home ovens are really not the best pizza ovens, not by a long shot, so we need to be creative in how we bake our pizzas in a home oven, and every home oven is a creature onto itself, no two seem to be alike.
Tom Lehmann/The Dough Doctor
Re: Cant seem to get that fat brown crust
6722

F.C.;
While your crust really doesn't look all that bad, if you are looking for even more volume/height, try increasing the dough absorption. With more water, the dough will be softer, and raise more easily during the early stages of baking, giving you more baked height. Getting back to the color issue, the fact that you have made dough with added sugar, and didn't get the desired color, and that you have tried different recipes with the same result, no color, this leads me to think you might have an oven issue. Your local hardware store will have a cheap oven thermometer that you can place on or hang from one of the racks to get a better idea of the actual temperature. Also, if your home oven is heating from the bottom, try placing the baking rack closer to the bottom to see if this will help. By placing the baking rack closer to the bottom, you will increase the heat to the bottom of the pizza while reducing the heat to the top of the pizza, allowing you to bake it a little longer for better crust color development without overbaking the top.
Tom Lehmann/The Dough Doctor
Re: Cant seem to get that fat brown crust
6723

F.C.;
From the picture, it looks to me like insufficient oven temperature. Have you checked the temperature of your oven lately with an oven thermometer? We normally don't use sugar in any of our dough formulas and they brown quite nicely, even in a home oven, if we want to have a lot more crust color we will brush the edges of the dough skin with oil just before it is put into the oven for baking. Regardless of what your oven thermostat is saying, try bumping it up another 50 to 100F to see if that improves the bake.
Tom Lehmann/The Dough Doctor
Re: Cant seem to get that fat brown crust
6724

Peter;
Yes, then can use static freezing rather than blast freezing, but.....the freezing time will be unacceptably long in most cases, so they employ blast freezing to get the freezing tome down to something in the 30 to 40-minute range. The now defunct, Pizza Magia used to use a static, walk in freezer to freeze all of their commissary production. The freezing time was 6-hours on wheeled racks. The only reason why they were able to use static freezing was because they were producing for only a very limited number of stores. Their production schedule was to produce the order of dough balls and get them into the freezer as quickly as possible, then they would begin clean up, followed by building the boxes for the dough balls, then they would take a break, and begin setting up to package the frozen dough. As the boxes were filled, they were labeled and sealed, and placed back into the freezer. The boxes of dough were shipped out from the commissary later that night.
Donato's, Domino's, Pizza Hut, all employ blast freezing for their dough for the efficiency it affords. You can run the dough through the blast freezer and package it as it comes out, then pallet the cases of dough and move them back into a holding freezer at -10F until you're ready to ship.

Tom Lehmann/The Dough Doctor
Re: Frozen Commissary-Produced Dough Balls
6725

Ted;
Here is a good N.Y. style dough formula based on 25# of flour (All Trumps, or equivalent)
Flour 100% 25-pounds
Salt 1.75% 7-ounces
IDY 0.375% 1.5-ounces
Olive oil 2% 8-ounces
Water (65F) 58% 14.5-pounds

Note: To use whole wheat and semolina flour in the above formula:
Replace 3.75-pounds of white flour with Con Agra Ultra grain flour.
Replace 2-pounds of the white flour with semolina flour.
Increase the total dough absorption to 65% (16.25-pounds) This may need to be adjusted depending upon the actual absorption properties of the flour that you are using, plus your handling techniques. Remember, the dough will be slightly tacky immediately after mixing, but this is normal for this type of dough. It should dry up to some extent by the time you are ready to use it on the following day. This is due to the slower hydrating properties of the semolina flour and the whole wheat flour.
Tom Lehmann/The Dough Doctor
Re: What is the Dough Doctor's favorite dough?
6726

W.W.;
The blue is a little lower in protein content. We don't like it as much as the red as the dough is somewhat softer and more difficult to work with especially when you're tossing the dough as we do.
I think you answered your question as to why you are not getting the crispy bottom on your pizzas. With a 2-minute baking time you are getting a very thin bottom crust which will go soft very fast after removing it from the oven. For a test, see if you can find a seasoned pizza screen and bake a pie on it. The air gap created by

the screen will reduce the heat to the bottom of the dough, thus slowing down the bake. With a longer bake, you will develop a heavier bake on the bottom of the pizza, and a crispier crust which will hold its crisp for a longer time. If that works, you will need to reduce the deck temperature to some extent. In wood burning ovens, I normally look for a 4-minute bake time for the crispiest pizzas that will hold their crisp for more than a couple minutes.
Tom Lehmann/The Dough Doctor
Re: Caputo Flour
6727

W.W.;
If you have done as much formula testing as you say you have and still have not achieved a crispy bottom crust on your pizzas, I don't think changing to a Caputo (red) will make much difference, I think I would concentrate instead on how I was baking my pizzas. What can you tell us about how you bake your pizzas?
Tom Lehmann/The Dough Doctor
Re: Caputo Flour
6728

Actually, AJ's is a slice operation that I helped Adam Peyton (the owner) develop. You can read about my new slice concept in PMQ Magazine (A New Approach to Pizza By the Slice). It was published about three years ago. AJ's is the third store to use this concept, that is different from all others. The first store opened in Bangkok, AJ's was the second, and the third was in San Antonio, TX (now defunct due to mismanagement). We use a well fermented dough, top shelf, whole milk Mozzarella cheese, all fresh prepared toppings, accompanied by a generous hepling of great, and friendly service. We use an open kitchen concept so customers can see the dough skins being passed through a sheeter to partially open them, and then hand tossed to full diameter (this method of opening results in a more uniform dough thickness), the pizzas must be baked on the Hex Disks from Lloyd Pans, and they must be baked in one of the new generation of air impingement ovens with a specially developed finger profile developed specifically for this application.
By the way, to answer your question of why do I like the Chicago style thin cracker crust, the answer is because I'm originally from Chicago, and that is the type of crust that I remember growing up with. In case you're wondering, there ain't anything crispy, except for the four corner pieces (party cut) of a Chicago cracker crust. But since the crispy corner pieces are everyones favorite pieces, and the first ones to go, I developed a process for making a Chicago style cracker crust that is crispy across the entire bottom. Now, I can REALLY enjoy my Chicago style cracker crust pizzas!
Tom Lehmann/the Dough Doctor
Re: What is the Dough Doctor's favorite dough?
6729

Here is a sample of what comes across my desk all too regularly.
<www.yakima-herald.com/stories/2011/09/20/granger-dairy-recalls-raw-milk-over-e-coli-concerns>
Caution and food safety awareness are key issues with raw milk and products made from it. I'm not saying don't do it, but be educated, and be careful.
Tom Lehmann/The Dough Doctor
Re: raw organic milk mozzarella
6730

Rumper;
Well, yes and no. When the dough will be frozen, even in a very inefficient home freezer, it will hold up remarkably well for a week to ten days, without the need to add any "secret" ingredient. If I was going to put my money on a "secret" ingredient it would be ascorbic acid which acts as an oxidant in the dough, thus strengthening it to some extent, but it really isn't needed, so in my opinion, it is just a waste of money.
Tom Lehmann/The Dough Doctor
Re: Freezing dough
6731

Just a cautionary note, there is a major epidemic with Listeria as I write this, a number of people have died since August. Listeria is fairly common in raw milk and can also be found in cheese. When consuming raw milk, and especially if you plan on ever selling/sharing any raw milk or product made from it, be sure to have it micro tested, and tested often. If you want to see the latest articles, please send me a request.
Tom Lehmann/The Dough Doctor
Re: raw organic milk mozzarella
6732

I think my all time favorite crust is a thin, cracker crust (Chicago style), my least favorite, boy, that's a hard question to answer, as my motto is: "I've never had a pizza that I couldn't learn to like", would probably be any crust that is not well fermented, as for type, it would have to be a poorly made deep-dish pizza that would get my vote for my least liked pizza. Toppings, that's an easy one, fresh tomato slices, onion, green peppers, sausage, and mushrooms (in addition to the normal sauce and cheese). One more thing, I've really grown fond of using fresh basil in place of the dried stuff, and I like to add a healthy sprinkle of Parmesan and Romano cheese to the pizza too. You do realize that this is making me really hungry! I've gotta make a stop at my all time favorite pizza place: AJ's New York style pizza (Manhattan, Kansas). No, he doesn't make the cracker type crust that I'm so fond of, but he has the best, and crispiest New York style slice I've ever had, and the service is great. You can see his web site at <www.ajsnypizza.com>.
Tom Lehmann/ The Dough Doctor
Re: What is the Dough Doctor's favorite dough?
6733

Try this and let me know what the result is:
Put 3-cups of flour, and 1-tablespoon of salt in a bowl, add 9-ounces of cool water and your yeast. Mix for a couple minutes, cover with a piece of plastic and come back to it 2 to 3-hours later. Turn the dough out of the bowl onto a floured table top. Is the dough manageable, or it it extremely soft and sticky, to the point where you can't do anything with it? Let me know. If it is manageable, I can work it out with you. If it is totally unmanageable, you have flour with high starch damage, and the yeast is hydrolyzing the damaged starch into sugars. The only option you have then is to limit the total fermentation of the dough to not more than 1-hour.
I've been to and worked in the D.R. a number of times, and you do have some decent flour with normal starch damage available, but it may not be available outside of industrial size orders.
Tom Lehmann/The Dough Doctor
Re: Dominican Dough

6734

Varun;
For a 12-inch pizza we use anything from 9 to 16-ounces of dough weight. Obviously, the 9 and 16-ounce weights make a very thin and thick crust respectively, but these are more or less the extremes for a 12-inch pizza. I think anything between 11 and 12-ounces is a good starting point for most 12-inch pizzas, and you can adjust the dough weight accordingly from there to achieve the crust thickness you're looking for.
With proper dough fermentation (biochemical gluten development) and a stainless steel table, you shouldn't have any problem in opening the dough to 12-inches. One trick that I teach to our students is to use a dough roller/sheeter, or just a rolling pin, and open the dough ball to about 3/4 of the target diameter, then finish opening the dough by hand tossing or stretching on the stainless steel table top. I mention stainless steel as it is really easy to open the dough on it by the hand stretching method. On a wood table top the dough is very difficult to open by the hand stretching method.
Tom Lehmann/The Dough Doctor
Re: Problems with Dough
6735

Varun;
If you are looking to make a softer, more tender eating crust try adding fat, either as oil or shortening to the dough. If you add 6% fat (based on the total flour weight) you will get a softer eating crust with reduced chew/toughness, especially in the edge portion. In new York that toughness in the edge is a desirable feature, but in other market areas it is not. I've seen the fat levels as high as 15% in some pizzas crusts that had a very tender eating characteristic. One more thing, if you use oil, be sure to reduce the amount of water added to the dough by the same amount as you are increasing the fat content. Failure to do this can result in an excessively soft, and sometimes difficult to manage dough.
Tom Lehmann/The Dough Doctor
Re: Problems with Dough
6736

I have a number of different thin crust dough formulas posted in the RECIPE BANK at www.pmq.com. Go to their home page and the recipe bank will show up as a drop down under the heading of "culinary". Use the word "dough" for your search word.
Tom Lehmann/The Dough Doctor
Re: Dough problem
6737

Aero;
What kind of cooler are we looking at using? A reach-in cooler limits your options to sheet pans, while a walk-in cooler allows for the use of dough boxes or sheet pans. I like to use food contact approved plastic bags to cover the sheet pans as they can usually be reused a number of times, while Saran wrap must be discarded after every use. Both Saran wrap and plastic bags constitute a parasitic cost, while dough boxes, being more costly up front, are actually cheaper to use in the long term as there is no parasitic cost associated with them except for an occasional washing. In production, we typically don't need to wash the boxes after every use, we just scrape them out (they scrape out very easily) and reuse them. The sheet

pans need to be scraped and washed after each use as the dough has a tendency to adhere to the metal pans, resisting all attempts to scrape them clean. Oiling the pans can alleviate this, but then you need to be very careful that the dough pieces don't skate around on the pan to form a cluster, you then end up with one large piece of dough on the pan on the following day.
Tom Lehmann/The Dough Doctor
Re: Dough Storage - Dough tray vs sheet pans
6738

Norma;
When you first mixed the two doughs together the resulting dough became what we call very "bucky", meaning tight and elastic. You can see this very same thing happening if you take a dough ball that is properly fermented and re-round it just before trying to open it into a dough skin. When you allowed the dough to continue fermenting the gluten relaxed due to exposure to the acids and enzymes of fermentation, thus allowing the dough to become soft and extensible once again. This is why we always say to never re-round the dough balls just prior to opening them into skins.
Tom Lehmann/The Dough Doctor
Re: Question, about how two doughs mixed together became okay?
6739

I've never seen "potable" water with a chlorine level so high so as to kill the yeast. While some municipal water supplies might reek of chlorine, there is actually very little chlorine in the water. Chlorine is a recognized carcinogen and as such it is regulated in drinking water supplies to I believe 100 parts per billion residual chlorine. Like I said in my previous post, I think the pH of the water will have a much more dramatic effect upon yeast performance than the chlorine content.
Tom Lehmann/The Dough Doctor
Re: can to much clorine in tap water bleach out unbleached flour?
6740

Craig;
Both salt and sugar can/will irreparably harm the yeast is allowed to remain in direct contact with it for any length of time. Both the salt and sugar will plasmalize the yeast by drawing the plasma material out of the yeast cells. To see this first hand, just take some fresh yeast (cake yeast) and put it into a container with some salt or sugar, the salt or sugar will begin to absorb moisture from the yeast, thus damaging it. True, it does take some time for this to happen, and if you are careful to not let the salt/sugar yeast mixture set for any period of time, little if any real damage will be done, but everyone isn't so diligent, that's why we always say not to allow the salt and/or yeast to come into direct contact with each other.
Tom Lehmann/The Dough Doctor
Re: can to much clorine in tap water bleach out unbleached flour?
6741

Neither, a loose fitting lid will work fine. I've used a piece of foil loosely crimped over the pan and that works fine, or you can oil the dough and put it into a bread bag, then twist the open end closed to form a pony tail, and tuck the pony tail under the dough ball as you place it into the fridge.
Tom Lehmann/The Dough Doctor
Re: dough storage advice
6742

Actually, if you go back a few years ago, you might remember when Tony's introduced its Italian Pastry Crust Pizza. This was sold in the frozen food case at your local supermarket. It was a type of laminated crust, but rather than putting the fat onto the dough as an unbroken layer, it was added in the form of hard fat flakes and mixed into the dough toward the end of the dough mixing cycle, then, during the dough processing (forming) it was given several simple folds and reduced it thickness to about 3/16-inch, and die cut into skins of target diameter. During baking, the dough delaminated, and also produced voids where the fat flakes were, resulting in a finished crust with pastry like characteristics. Around this same time we saw pizzas that were made on a croissant dough base, made exactly as you have described, or very close to it.
Tom Lehmann/The Dough Doctor
Re: Chicago crust from America's Test Kitchen
6743

Hi Norma;
Just a cautionary warning.
Working with raw milk is like working with raw, shell eggs (like putting an egg wash on calzones). The milk or egg will be heated to a point where it is safe, BUT, cross contamination now becomes the issue, think about how aprons, towels, work surfaces might become contaminated prior to the heating process. Even your hands can/will contribute to cross contamination. Be smart, be careful, be safe.
Tom Lehmann/The Dough Doctor
Re: raw organic milk mozzarella
6744

Actually, no. When commercial bread is made with unbleached flour, the flour has that creamy color, but the color cannot be seen in the dough. Fast forward to the finished bread and you can see that same creamy color in the crumb that you saw in the flour. Due the the huge variation and inconsistency in the crumb structure of a baked pizza crust it is all but impossible to see the creamy color unless you actually do a side by side comparison of two different crusts, one made with bleached, and the other made with unbleached flour, then you can see an overall, slightly creamy or yellow color in the crumb of the crust made with the unbleached flour. However, when chlorine, or a chlorine like compound is added to the water, it lowers the water pH, making it more acid, which is not good for plumbing fixtures, so the municipality buffers the water back to close to 7.0 (neutral), but in many cases they actually get the water too high in pH (slightly alkaline), and this is what has such an adverse effect upon yeast activity (yeast is an acid loving organism). I know this because this is what our problem is here in Manhattan, Kansas. How do you correct for this, simple, just add a small amount of vinegar, or cream of tartar to your doughs to correct for the high pH of the water. You can also check your water pH by using some litmus paper strips available from any drug store. Also, remember not to mix the yeast with the salt, and/or sugar as they do not play well together.
Tom Lehmann/The Dough Doctor
Re: can to much clorine in tap water bleach out unbleached flour?
6745

Ron;
Forget the pizza! Don't get me wrong, it looks great, but the peel is even better! Go into the peel making business!!

I bet there are a lot of readers here that would "belly up to the bar" to buy one. Great work.
Tom Lehmann/The Dough Doctor
Re: Home Made Pizza Peel
6746

IDY at 0.6% is about double of what we typically use. That amount will work OK for making bread, but I think 0.3 to 0.4% IDY will work better for you in pizza dough. You should also have taken the dough directly to the fridge after mixing and balling rather than letting it set out and ferment first. A fermented dough is very hard to cool when you put it into the fridge. If you still find the dough to fragile, increase the protein content of the flour by using all KA flour.
Tom Lehmann/The Dough Doctor
Re: dough very stretchy and was tearing...
6747

Wood peels (with a beveled edge) should be used as your prep-peel (the one you make your pizza on and then use to peel the dressed dough skin into the oven with). The metal blade peels are best reserved for spinning and removing the pizzas from the oven. I like to use use a mix of equal parts regular flour, semolina flour, and fine corn meal for my peel dust, but I've seen rice flour, whole wheat flour, wheat bran, corn meal, semolina flour, regular white flour, and even coarse rye flour used as a peel dust. Regular white flour is perhaps my least favored as it will scorch and take on a bitter taste, plus, it doesn't provide the same level of "slip" on the peel as some of the others do. Corn meal is perhaps the easiest to use as the dough just seems to want to slide off of the peel when it is used. Experiment to see what works best for you.
Tip: Just before putting the dressed dough into the oven, give the peel a to and fro shake to get it moving a little on the peel, then place it into the oven.
Tom Lehmann/The Dough Doctor
Re: from peel to oven....
6748

Most home type, stand mixers, like the Hobart K5A have a very narrow dough hook configuration which does not do an especially good job of catching the dough, as a result, it may take a considerable time for it to sufficiently develop the gluten sufficiently for it to form a ball and actually begin mixing, so don't worry about the long mixing time. As for the bready crust condition, begin increasing the dough absorption to achieve a softer dough, this will expand more freely during the early baking stage (oven spring) resulting in a lighter, more porous crumb structure that will actually bake out better and produce a crispier finished crust texture.
Tom Lehmann/The Dough Doctor
Re: Dough problem
6749

Adam;
We do cracker type crust this way and we use only 45% dough absorption. There is still a lot of dry flour in the bowl after we mix it, but by the following day, after 4-hours at room temperature plus overnight in the fridge, we have a cohesive dough mass that can be folded a couple times (literally) and then portioned and formed into balls (not very pretty dough balls). The dough balls are then allowed to ferment at room temperature until they can be opened into pizza skins using a rolling pin (remember, this is a thin, cracker type crust).

Tom Lehmann/The Dough Doctor
Re: Minimal kneading technique
6750

Kate;
Neapolitan pizzas are a poor choice for a delivery pizza due to their thin crispy bottom crust. It either turns to mush or gets soft and leathery within minutes of going tint the box, not to mention the insulated bag where it will be nicely steamed for nearly 30-minutes. But id you insist: Reduce the oven temperature to 500, not more than 550F, and bake the pizza as long as possible, then place onto a cooling rack for about 60-seconds before boxing and bagging for delivery. This will allow a good deal of the steam to move off of the pizza before packaging. Another option that you have is to package the pizza on an ovenable disk, similar to what is used be Papa Murphy's on their take and bake pizzas, I'm thinking just a flat disk in this case, the consumer is instructed to put the pizza into a HOT oven to dry and re-crisp the pizza. If they'll bake a take and bake pizza, why wouldn't they do this too? As I see it, those are your best shots.
Tom Lehmann/The Dough Doctor
Re: Advice on dough and cooking times for the perfect Neapolitan delivery pizza
6751

Norma;
You should be able to make pizzas on a fried crust (think Indian Bread), like is sold at Arizona and New Mexico festivities. You could also roll the dough out very thin, cut into squares and fry. After frying, dust with a cinnamon sugar mixture and serve. You might also try making something like a fried breadstick, and roll it in a cinnamon sugar mixture after baking, or serve it with a small plastic cup of cinnamon sugar dipping icing (powdered sugar and water plus a little cinnamon). Here is one that might be a bit far out on the limb; Push a wood Popsicle stick into a length of Italian sausage (kept hot in your heated cabinet) then wrap it in pizza dough, and fry it like a corn dog, serve with a plastic cup if pizza sauce for dipping. Note: Some of these items will probably need to be fried submerged, so be sure to have a submerging screen handy when you're testing these out.
Tom Lehmann/The Dough Doctor
Re: Any New Ideas?
6752

I make a great dessert pizza using a cheese base and fresh fruit. To make the cheese base:
16-ounces of cream cheese or creamy Ricotta
8-ounces powdered sugar
Mix together until smooth, then add 2-whole eggs (about 100-grams) and mix in well.
Then add 16-ounces of sour cream and mix until smooth and creamy. The mixture should have the consistence of mayonnaise or soft butter. If it is too stiff, add a little milk or cream to thin it slightly.
Apply about 1/4-inch thick to the dough skin, then add the fruit of your choice, such as thin slices of apple, banana, halved grapes, sliced strawberries, blue berries, Mandarin orange slices, mango slices, peach slices, or slices of kiwi. Bake as you would any thin crust pizza. Allow the baked pizza to cool for a couple minutes, then drizzle with a powdered sugar icing. Serve: Fresh and hot as is, or alamode, or serve it cold.
Tom Lehmann/The Dough Doctor

Re: White Sauce recommendations or recipes anyone?
6753

Abe;
With yeast leavened products there is no need to make any adjustments until you reach about 7,000-feet (think Cree). With chemical leavening (baking powder) you do need to make an adjustment of roughly 8% less for every 1000-feet increase in elevation above from the elevation that the product was formulated at. You will find that the baking is somewhat different in Denver than in Chicago. I would recommend that you bake at 15 to 25F higher temperature.
Tom Lehmann/The Dough Doctor
Re: High Altitude
6754

I make a quick and easy Alfredo sauce by cooking together 1/4 stick of butter, 1-cup of whipping cream, 2-cloves of garlic (minced) and 1.5 cups of Grated/powdered Parmesan cheese. To this I like to add a couple tablespoons of my home made basil pesto, or you could use any commercial basil or sundried tomato pesto.
Tom Lehmann/The Dough Doctor
Re: White Sauce recommendations or recipes anyone?
6755

My own personal favorite is an Alfredo sauce to which I add some basil pesto that I make from my home grown basil. This year we are drying tomatoes, it seems by the bushel, so I'm looking forward to making some home brewed dried tomato pesto and using that in the Alfredo.
The Alfredo sauce is great when making a chicken topped pizza, or even a vegetarian presentation. Try Alfredo sauce sprinkled with dried dill weed, and top with a variety of seafood, add some onion, a few slices of fresh tomato, top lightly with Mozzarella cheese and finish with a sprinkle of grated Parmesan cheese.
Tom Lehmann/The Dough Doctor
Re: White Sauce recommendations or recipes anyone?
6756

We did a study on IDY a number of years ago and we found that unopened packages lost about 25% of their activity, as compared to fresh stock, when stored in a freezer for a period of two years. When we stored it in a south facing window for the same length of time the deterioration was in the neighborhood of 40%. That really isn't bad, all things considered. Once opened, the two mortal enemies of IDY are air and moisture. If you open a bag and plan to use it over the next two weeks you are probably better off storing it at room temperature (65 to 75F) as this will prevent condensation from forming on the yeast each time you remove it from the fridge and open it to use. If you will not be using it for some time, the best way to store it is to either leave it in the original bag, and roll the bag down tight onto the yeast, excluding as much air as possible, securing it with a rubberband, and then storing it in the fridge. The biggest mistake that people make when storing it is putting it into an air tight container that has a huge head space of air above the yeast. It is much better to place the yeast into a plastic bag, in this case, such as a Baggie, and press out the air before sealing it. This will ensure the best activity when you go to use it the next time.
Tom Lehmann/The Dough Doctor
Re: How Long Does IDY Last??????

6757

Peter;
I'd bet that Luigi is just doing it the way he learned to do it. I don't think abusing the yeast by re-hydrating it in cold water is the correct way to slow down fermentation, but to each his own. I'm in your court, in that if I want to slow down the fermentation I'll just save a few pennies and use less yeast, or adjust the temperature of the dough water to give me a slightly cooler dough off of the mixer, hence a slower fermenting dough, but that is using a technology that everyone is not familiar with, which, underscores one of my main objectives, to provide useful information and increase the technical understanding of the ingredients and processes that go into the making of our favorite food PIZZA.
Back when I first started at the PMQ web site I was accused of speaking and writing in a foreign language. That was the language of "bakers percent". Today they all speak that language over there, and many of the long time regulars have developed an excellent understanding of the more technical aspects of dough, sauce, and pizza production.
Tom Lehmann/The Dough Doctor
Re: Yeast stopped working. Dough-y no rise-y anymore!
6758

Norma;
I would recommend working in 5% increments based on the weight of the flour. So, begin with 5% addition of sprouted grain, then go to 10%, and work your way on up until you see something you really like, or don't like. I've probably mentioned this before, but one of the unique things that I found when I was doing a lot of work with sprouted grains in bread dough formulas was the development of a malted milk like flavor....interesting. Also, if you have dried the sprouted grain, be sure to hydrate it in warm water before adding it to the dough. You just want the grains to be soft to the bite, not hard or crunchy. In this way the sprouted grains also provide a unique mouthfeel, much like that of a multi-grain bread.
As for the sun dried tomatoes, we have been using both our cheery tomatoes and the heritage varieties for drying. The cherry tomatoes we just cut in half, and place on the dehydrator trays cut side up. For the heritage tomatoes, I cut them into wedges, 4 to 8, depending upon the diameter/size of the tomato. I then cut each wedge in half, and place onto the dehydrator screens with the cut side up/skin down. We set the temperature at 125F and it takes about 14-hours until the tomato pieces are soft and leathery. It might take a little longer if the dehydrator is completely full. We then transfer the dried tomato pieces to a sandwich size baggie and place in the freezer for storage. To use, either add just as they are, or soak in a little olive oil for a few hours. When used in soups, chili, or stews, we like to add them just as they are and let them hydrate in the juice of the dish, but when we use them on pasta or pizza we like to soak then in olive oil first. They provide a WONDERFUL flavor.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6759

I hear you loud and clear. Person after my own heart!
I teach pizza and bread baking to local farm families and one of the things that I try to get across in each session is that making pizza dough, as well as bread dough isn't rocket science, and toppings need not be expensive. I ask that each person attending the class clean out their fridge, and bring the "cleanin's" with them in a

plastic bag. These become the toppings. We have used things like hotdogs, polish sausage, mashed potatoes, steak, pork chops, one lady thought she had me when she brought a bowl of bean soup. We blended it into the sauce to add a background flavor note. Like you, I also show how to use common toppings such as garden tomatoes and spice them up a bit to make some truly great pizzas. Making pizzas and breads at home can be a complex/technical, or as simple/easy as one wants it to be, and for the most part, it is all good, sometimes better than others, and sometimes even superb, but always a treat for the family, and ultimately, that's what it's all about. Having fun, making good food, and enjoying our mistakes as well as our masterpieces.
Welcome aboard!
Tom Lehmann/The Dough Doctor
Re: Pizza Anarchy
6760

Here's my two cents worth.
ADY and IDY, the instant part of IDY is in reference to the rate of hydration for the yeast. IDY hydrates more quickly than ADY, this is why it can be added to the dough without prehydration, this is also why it tends to tolerate cold water hydrating better than ADY. The whole thing about prehydrating yeast is to minimize the flushing effect of cold water entering into the yeast cells and flowing out, bringing with it the plasma material from within the yeast cells (glutathione). When this happens, the yeast cells are not killed, but they don't ferment nearly as well as sound yeast cells do. Also, there is a reducing (softening) effect upon the dough from the glutathione. This may not be seen as readily by home pizza makers as it might be interpreted as just a little too much water, but in a pizzeria or other large production facility it can mean difficult dough handling properties, or even collapse of the dough at some point. Is it absolutely necessary to prehydtrate IDY or ADY in water at specified temperature? In home made pizza dough, the answer is no, will it hurt anything if you do prehydrate it? The answer again is no. So what is the benefit to prehydrating ADY and IDY? The answer is better, overall yeast performance and consistency. How hard is it to get a small amount of water at 95F for IDY or 100F for ADY? Not hard at all. Just remember that both of these temperatures are at near skin/body temperature, it only takes a minute, actually, just a few seconds.
Tom Lehmann/The Dough Doctor
Re: Yeast stopped working. Dough-y no rise-y anymore!
6761

Norma;
Because the sprouted grains are so high in amylase activity, you have two options, one is to dry them, but make sure they get above 160F during the drying process to make sure you have deactivated all of the amylase enzyme, or another option is to simply add the damp, sprouted grain very late in the dough mixing process, much like you would add raisins to raisin bread. I like to add them about 3 to 4-minutes before the dough mixing is completed. This limits the length of time the enzymes have to work so it also limits their effect upon the dough, while still contributing flavor and mouthfeel top the finished product.
Our garden is going great guns! We are sauteing the peppers and freezing them, and cutting all of the surplus tomatoes into small pieces and drying them (like sundried tomatoes) for use later in the year in stews, pizza, and soups. Squash is doing well too, but running out of ideas for using it. We are making a butternut squash soup once a week...really good!! And or favorite for zucchini and yellow

summer squash is to grate two medium size squash (coarse grated), then fine grate about an inch of fresh ginger root. Then grate the zest from 1/2 of a medium size lemon, combine in a sautee pan and heat thoroughly with an ounce or two of butter. Add 1/2 pint of whipping cream and heat to a medium boil in the sautee pan, plate up wide noodles and spoon the squash over the two plates equally, sprinkle with Parmesan cheese add a little black pepper to taste, and enjoy!!
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6762

Hi Norma;
When comparing the nutritional properties of a whole-wheat crust against those of a crust made from enriched white flour, the whole wheat crust has a much higher fiber content (which is good for you), but the crust made with enriched white flour has an equally as good nutritional profile (it's enriched to the same nutritional profile as whole wheat flour), or possibly better due to the additional fortification of folic acid, but as indicated above, it is still lacking in fiber content. I guess it all depends upon your definition of "more nutritious". Putting on my technical hat for a moment, I would say that for women of child bearing age, the crust made with enriched white flour would be the better pick due to the fortification of folic acid. Personally, I like the texture and chew of the whole wheat crust, as for flavor, yes, it is different due to the bran being present. At home, I cannot tell you the last time we bought white bread.
By the way, did you finally get those garden pests under control?
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6763

Wow, In our microwave, that much water for 50-seconds at full power the water will be very hot. The thermal death point for yeast is about 140F, or a little less. It could be that the water was too hot and killed the yeast. For hydrating the yeast (ADY) you want to use 100F water (use a thermometer), if you are rehydrating IDY the correct water temperature is 95F.
Yeast does have a shelf life. If it is unopened, IDY will have about a 1-year shelf life, while ADY will have about a 6-month shelf life. Once opened, you will probably see some loss of yeast activity (but not total loss) after two weeks for either IDY or ADY, and you should try to use it up within 30-days. Yeast is cheap, and it just makes good sense to use fresh yeast whenever possible. By the way, we have kept IDY, in unopened packages, in the freezer for up to two years and only lost about 25% of the yeast activity, not bad, all things considered.
Tom Lehmann/The Dough Doctor
Re: Yeast stopped working. Dough-y no rise-y anymore!
6764

Oz;
Part of your problem might have to do with the dough temperature. What is the temperature of the dough immediately after mixing?
We normally look for something in the 80 to 85F range, but this is not hard and fast, so it can vary to some extent.
Try forming the dough into a ball after mixing, wiping it with oil and placing it into a bread bag, then twist the open end into a pony tail and tuck it under the dough ball as you place it in the fridge (DON"T TIE IT CLOSED). Allow the dough to ferment overnight (16 to 48-hours), then bring the dough out of the fridge and

allow it to temper AT room temperature for about 90-minutes, turn the dough out of the bag into a bowl of flour, turn the dough ball to thoroughly dust it with flour, then pick it up and dust of the excess flour, place the dough onto a lightly floured surface and, using a rolling pin, roll the dough out to about 2/3 of the diameter you want to have. Now, using your hands, begin stretching the dough out to the desired diameter, making sure to keep your fingers about 1/4-inch away from the edges. This will help to give the finished crust a nice raised edge. From that point on, process it in your normal manner, then with a bit more practice, you will become more proficient, and make a better looking, more uniform skin each time, and enjoy some great pizzas along the way.
Tom Lehmann/The Dough Doctor
Re: Dough not uniform.....
6765

Peter;
You are correct. The usual recommendation is to use about 4 to 5 times the weight of yeast as water to hydrate it in. When I teach home pizza baking most of the time we are using a pound or more of flour so the total weight of water will be at a cup or more, putting the amount of water used for hydrating the yeast in at most 1/2 cup, but probably better at 1/4 cup or even a little less. I stand corrected.
The main thing I try to teach is that the amount of water used to hydrate the yeast in isn't as important as having enough water left over to add at a lower temperature to achieve the desired finished dough temperature.
Thanks for calling that one.
Tom Lehmann/The Dough Doctor
Re: Minimal kneading technique
6766

Adam;
I'm like you, and firmly believe in the KISS principal, so, following this rule, I like to say "use between 1/2 and 1-cup of water to hydrate the yeast in.
One question that I always ask our students: What one common denominator do water, electricity and man all have in common?
Answer: They all take the path of least resistance.
I'm with you, keep it simple.
Tom Lehmann/The Dough Doctor
Re: Minimal kneading technique
6767

PC;
The only aromas associated with clean, whole-wheat flour, bought as a ready milled product, or milled at home are 1) A grainy aroma which is normal. 2) A rancid aroma, slightly sharp and heavy. This is not a desirable aroma as it is due to rancidity of the wheat/flour. Whole-wheat flour will go rancid within a month of milling if not correctly stored (frozen or refrigerated) due to the germ oil being present in the whole-wheat flour. I would candider any other aromas to be "foreign".
One of the foreign aromas that we pickup occasionally is a musty aroma (think old, wet/damp newspapers), this can be caused by improper storage of the flour or wheat prior to milling/grinding. In this case the wheat/flour was stored in a damp location and it may have begun to mold (reason to discard). In some baked products made with whole-wheat flour we find a fruity/melon like aroma. This aroma is due to "rope" spores. Rope is a spore forming bacteria that is not

destroyed during the baking process, and is in fact activated in the oven. It manifests itself by forming the characteristic aroma. Rope is soil borne, so it tends to be more prevalent in whole-wheat items, but it can still affect products made with regular white flours too. Rope is not dangerous, but the aroma is not desirable, so any products found with this aroma should be immediately discarded. In a bakery setting the rope infection can be transferred to other parts of the bakery making it extremely difficult to get rid of. FYI: Vinegar will kill rope spores on contact. So if you ever find that you have this pesty little number as a visitor to your kitchen, just wipe everything down with a a sponge or towel soaked in regular, household vinegar.
Tom Lehmann/The Dough Doctor
Re: Whole wheat cinnamon smell?
6768

For the Provel cheese try a blend of 75% Provalone cheese and 25% Velveeta cheese.
Tom Lehmann/The Dough Doctor
Re: St. Louis (Imo's) Style Crust
6769

Yep, some way or another it got contaminated with cinnamon. They are both dark in color, and someone might have gotten the two confused, or failed to wash out a cinnamon container before filling it with whole-wheat flour. You should bring this to the attention of the manufacturer along with a sample of the flour. The ramifications of an error like this could be devastating, so please bring it to their attention as soon as possible.
Tom Lehmann/The Dough Doctor
Re: Whole wheat cinnamon smell?
6770

JJP;
Actually, we do a pizza school. It is a pizza class that we offer once a year, we've been doing it for over 25 years now. The name of the class is Practical Pizza Production and Technology. Before getting into dough formulations, sauce formulations, etc., we cover the basic function of ingredients that make up each of the component parts of the pizza (dough/crust, sauce, cheese, and meat toppings, then we go on to pizza pans and tools, this year we are adding a presentation on (POS) systems, and a suppliers presentation period, then we go into the fun part and begin making dough and sauce, followed by lots of pizzas. The class is designed for everyone from home pizza makers thinking about opening their own shop, to existing store owners wanting to know more about the technology side of pizza production. To learn more about this class, go to our web site at <www.aibonline.org> and look under seminars/ School of Baking.
Tom Lehmann/The Dough Doctor
Re: Pizza School - 101
6771

Adam;
Due to the fact that during hand mixing of the dough there is a possibility that the ingredients, especially the yeast won't be uniformly dispursed throughout the dough mass. This is the reason why we like to suspend the compressed yeast in the water prior to adding it to the dough. In the case of ADY, it has to be pre-hydrated in water at 100F before addition, but once it has been hydrated, you can safely add

it to the regular dough water for addition. In the case of IDY, while it doesn't need to be pre-hydrated when a mechanical mixer is used, when hand mixing, it is suggested that it first be pre-hydrated in 95F water, and then added to the regular dough water for addition.
Folding the dough is indeed the same as kneeding it, but in this application we are only folding/kneading it a few times, not for several minutes as many typically do. When forming the dough piece into a pizza skin, we begin opening the dough ball from the center out, without ever touching the outer edge of the dough piece. This provides for a light, very porous rim to the baked crust. In some cases we will use a rolling pin to pin out the dough ball to only about 2/3 of the desired diameter, and then complete the opening process by hand stretching. This process also results in a decent raised edge. The main difference between mechanical gluten development and biochemical gluten development is that biochemical gluten development, when taken at the right time gives you full gluten development without any toughness or memory in the dough, while a dough that is mechanically mixed to full gluten development will be tough and rubbery. There is nothing to fear when hand mixing or kneading and then giving the dough time to ferment for biochemical gluten development as this will not result in excessive gluten development, but do keep in mind that the time needed for complete biochemical gluten development may be a little shorter when a significant amount of kneading has already been done to the dough. I hope I have answered your questions, please feel free to ask if you should have any more questions.
Tom Lehmann/The Dough Doctor
Re: Minimal kneading technique
6772

As mentioned, the Hobart N-50 is a beefed-up, industrial version of the K-5A mixer. It is also a gear drive rather than a rheostat drive, so the speeds are much more positive (consistent) when under a load. Another, often over looked mixer suitable for home use is one of the Hobart bench top mixers such as the A-120 or A-200. These are 12 and 20-quart capacity mixers respectively. I see them being offered at restaurant sales and on the internet from time to time. They are both 110-V, but they will probably require a dedicated circuit of 15-amps, or, you can do as we do at home, use a regular wall receptacle, and just don't use anything else on that circuit while the mixer is running. Note: While these are called bench top mixers, they are still a fairly large mixer, too large for the common home counter top, but we got around that by putting the mixer on its own stand, this lowers the mixer height making it easier to use, and we can easily roll it aside when it is not being used.
Mine is an A-120 that I got with three attachments (whip, hook, and flat beater/paddle) when a local restaurant went out of business for just under $1,000.00, expensive, but I'll never need to buy another one.
Tom Lehmann/The Dough Doctor
Re: Another "need mixer advice" thread...
6773

What you have described for rolling the dough out on "greased" foil is exactly what we do when making a pan style pizza. We use Crisco, margarine, or butter in the pan, then place the fermented dough ball in the center of the pan and push it out to the edges of the pan using your fingers. The dough adheres to the fat and doesn't slide around as it does with oil. We do this same thing using a coupe pan for thin crusts when we want to hand stretch. Just wipe or spray the coupe pan with the fat, and then roll the dough to just about full diameter, and finish stretching the dough

to the pan size by hand, then dress and bake as normal.
Tom Lehmann/The Dough Doctor
Re: the secret to ULTRA-THIN crust!
6774

Pete;
Another good trick to getting the dough to stay put in the corners of the pan is to first put shortening (Crisco) in the corners of the pan, then use olive oil on the rest of the pan. The dough will adhere to the shortening and help it stay put until the dough relaxes sufficiently so as not to pull back out of the corners. This trick also works well when you are trying to get the dough to hold to the vertical sides of a round pan too.
Tom Lehmann/The Dough Doctor
Re: Techniques for Forming a Rectangular Dough
6775

Here's another option to using sauce. Use thin slices of fresh tomato rather than "sauce". Slice a ripe tomato (any garden variety works well) into approximately 3/16-inch thick slices and arrange as you would sauce, except, you don't need to go for 100% coverage as you would a sauce, just arrange around the edge, keeping an exposed dough edge of about 1/2-inch, then fill in to the center, don't worry about the gaps between the round slices. This makes for a wonderful flavor as well as presentation.
Tom Lehmann/The Dough Doctor
Re: American Style: How much sauce?
6776

Regina;
If you haven't already done so, do a Google search using the search word Celiac, or Celiac Diet. This will expose you to the world of gluten-free, which also includes many other food allergies too
www.celiac.org
www.csaceliacs.org
www.glutenfreediet.com
www.celiac.ca
www.wellnessfoods.com
www.glutensmart.com
www.glutenfreemall.com
www.amazinggrains.com
Hopefully some of these will provide you with some direction.
Tom Lehmann/The Dough Doctor
Re: Hello from Knoxville, TN
6777

Actually, the metal peels are meant for removing the pizzas from the oven, while the wood peels are meant for use as "prep" peels. The wood doesn't result in condensation formation between the peel and the dough during the prepping of the dough skin, while a metal peel will. Think of it like this, cool/cold dough and warm peel. While there are any number of favorite recipes for peel dust, my own personal favorite is as follows: Equal parts of white flour, semolina flour and fine corn meal.
Tom Lehmann/The Dough Doctor
Re: pies stick to the peel when starting out
6778

Something to be aware of:
We offer a pizza class every year in October, here in Manhattan, Kansas. It is designed for both experienced and soon to be pizzeria operators. In the class we teach everything from the technology of the different ingredients, to how to make dough, sauce, and assemble pizzas, including all of the various dough shaping procedures. This is a fun filled week long class with both classroom and hands-on instruction. You can get more information on the class by contacting Jeff Zeak at <jzeak@aibonline.org> and requesting information on the Practical Pizza Production Course.
Tom Lehmann/The Dough Doctor
Re: going from greek style pizza to ny style pizza
6779

Bill;
Rerun the test a couple more times to see if you get the same results.
Peter is correct in his assessment, but if there is a difference, it should be consistent and occur each time you run the test.
Tom Lehmann/The Dough Doctor
Re: What Happened To My Dough?
6780

No, the California thin crust is moderately thin and crispy, more crackery than what you have described. What you have described sounds more like a Philadelphia style crust. This type of crust gets its characteristics from the high oven temperature (800F) that it's baked at along with the requisite short baking time, typically about 90 to 120-seconds. Paper thin, crispy, but does not maintain the crisp for very long.
The dough is a pretty basic one, just flour (high gluten), salt, yeast and water. The formula looks something like this: Flour: 100%; Salt: 2.5%; Yeast: (compressed) 1%; Water: 60%. The Dough is allowed to ferment overnight in the fridge, then opened into dough skins on the following day, and baked directly on the oven hearth. In Philly they eat this type of pizza with a knife and fork.
Tom Lehmann/The Dough Doctor
Re: thin crust dough
6781

Jay;
Deck temperatures of 500 to as high as 1000F have been used to bake pizzas, but we see temperatures of 600 to 850F used more commonly for traditional, or rustic type of pizzas. I think you will do well if you are getting your stone up to 850F. Just be sure not to use any, or very little sugar in the dough. Don't use any eggs or milk either as these will only lead to excessive crust color development or excessive charring at those temperatures. If your finished pizzas lose their crisp too fast, you may want to consider reducing the baking temperature, allowing for a longer bake and better crisp on the bottom of the pizza. You may also need to balance the bottom (stone) temperature with the bake to the top of the pizza. If the bottom is done, but the top is still not done to your liking, you may need to lower the temperature to allow more time for the top of the pizza to bake. It is a bit of a balancing act.
Tom Lehmann/The Dough Doctor
Re: Pizza stone surface temps for cooking pizzas
6782

Mike;
The problem with placing the stone, or the pizza at the top of the oven is the excessive top heat that the pizza receives there. Pizzas are best baked from the bottom up. By placing the stone and pizza low in the oven, they are closer to the heat source, while the excess heat rises to the top of the oven allowing the pizza to be baked longer for a crispier crust without burning the toppings.
In some of the very large wood burning ovens with 4 to 6-inch thick decks, and high oven crowns (ceilings) we often use the oven peel to raise the pizza up into the crown of the oven, where the heat is much more intense, to achieve the desired level of top color to the pizza (usually a dark brown color to the cheese, but not burned).
Tom Lehmann/The Dough Doctor
Re: Thermal question
6783

CP;
Good lookin' pizza!
You're right about the longer baking time helping to make a firmer crust. This is why I seldom ever use much, if any sugar in my doughs, as it allows me to bake the pizzas longer without developing excessive crust color.
Tom Lehmann/The Dough Doctor
Re: 2 Hour Dough Rise Pizza Cooked Well Done
6784

Essen;
If you dough will handle it, I would suggest adding a little more water. Dough absorption can be somewhat variable, so my advice to get a more open cell structure would be to begin adding incrementally more water. When the dough begins to get difficult to handle you will know that you are at or near the limits of your flour/dough. Once you are at that point, if you still don't have what you want, begin increasing the yeast level, but keep in mind that as you do this, one result might be a loss of refrigerated holding time.
Tom Lehmann/The Dough Doctor
Re: Essen1's NY-style pizza project
6785

Craig;
It is true only for top brewers yeast as it ferments at roughly the same temperature range as bakers yeast. The bottom fermenting yeasts ferment at a temperature lower than what bakers and top fermenting brewers yeast can ferment at. As a result, there is a difference in the balance of acid and alcohol formed, hence a difference in flavor too.
Tom Lehmann/The Dough Doctor
Re: coopers brewers yeast?
6786

Peter;
Your memory is better than mine!
I might add a few updates.
We now recommend that the par-bakes be given only about 1/2 of the normal sauce application, and no cheese. This allows the par-bakes to be stored at room temperature during the day without issues from you local health department. It

also allows for the addition of sauce again when dressing the crust for improved freshness and flavor.
The slice is then dressed to the order, and shredded cheese is applied to hold it all together. I have been recommending Grande Whole Milk Mozzarella because of its flavor, but any good, flavorful cheese will work. Keep in mind that you are not adding all that much cheese to the slice, and considering your return on a 16 or 18-inch pizza, cheese cost is not a big issue, at least it shouldn't be. Quality and taste/flavor should be consideration #1.
I have worked extensively with XLT oven company to identify a profile that works very well with their ovens. Profiles for other makes of ovens can be worked out, but I haven't worked with any of them to do that yet.
The Hex Disk from Pizza Tools.Com is the only carrier/disk that we recommend for baking the slices on with this process as it sheds any spilled toppings, such as cheese like water off of a duck's back.
Tom Lehmann/The Dough Doctor
We have the total bake time for a slice down to 3.5-minutes and 4-minutes for a whole pizza. So you can see the potential for a high volume store.
Re: Reheating Neo-Neopolitan vs. New York Slices
6787

Scott;
Even when stored in the freezer, flour will gradually change with storage time. The most significant change will be in oxidation of the flour. This has a significant strengthening effect upon the flour as far as dough performance is concerned. If the flour was "natural" or not fully matured when originally tested, and then put into the freezer for an extended period of time, and retested, say, a year later, it would perform differently, probably exhibiting more oven spring and a higher raised edge than the first test.
Tom Lehmann/The Dough Doctor
Re: Question re: Storage of flour
6788

Nat;
Actually, if your dough is properly fermented, it really doesn't need to be docked at all. But if you want to dock it, keep the docker about 1/4 to 1/2-inch away from the edge of the dough piece to allow for a nice raised edge. Also, the best dough docker will have very blunt pins, not sharp and pointed. The purpose of the dough docker it to lock the top and bottom parts of the dough together (like spot welding) to control bubbling. If you hold a salting or club cracker up to the light, you will see that the docker holes actually have a thin membrane of dough/crust closing the bottom of the docker holes, this what a docked is supposed to do. The dockers that we use actually have square/flat tips rather than pointed tips.
Tom Lehmann/The Dough Doctor
Re: how to make a donatos pizza(want it to taste like the real thing)
6789

Bill;
What kind of pizzas are you making. If you are trying to make a hearth style pizza in an air impingement conveyor oven, Pizza Tools.Com has a Hearth Bake Disk (cloud pattern) that is designed specifically for this application. You must reset the oven temperature to between 465 and 500F, and delete all sugar, eggs, or milk from the dough formula. The pizzas made on these disks are very similar to those baked directly on a stone hearth. If you were to try this on a screen you would get

a totally different bottom with a hard "pizza bone" around the edge. You might contact them to get a disk or two to work with for testing purposes. We have discussed these disks quite a bit in the Think Tank at <www.pmq.com>.
Tom Lehmann/The Dough Doctor
Re: conveyor oven - stick with the screens or is there something better ?
6790

If you brown the flour in the oven, you will still destroy the gluten forming properties of the flour.
There may be an opportunity to get the flavor that you are looking for by using a roux as an added ingredient to the dough, by that I mean adding it at somewhere's between 5 and 20% of the total flour weight. You might need to beef up the protein content of the dough a little through the addition of some vital wheat gluten (available at most supermarkets). In this case we're looking at the roux only as a flavoring material. A good level of added gluten to add, for openers, would be 15% of the weight of flour in the roux that you are adding. You will need to take into account the water and oil content of the roux as well as the hydration requirements of the gluten (for each ounce of gluten that you add, you must add 1.5-ounces of additional water). It might take a little experimenting, to get the absorption just right, but I think it is "doable".
Tom Lehmann/The Dough Doctor
Re: Roux pie
6791

The reason for making a roux paste/flour is because it does not contribute to a stringy gravy because you have destroyed the gluten forming properties of the flour. Hence, you would not get a very good pizza if you made it in this manner. Please let me know if I misread your question.
Tom Lehmann/The Dough Doctor
Re: Roux pie
6792

Yeast and salt do not play well together, especially for 20-minutes. There is an excellent probability that you damaged the yeast by mixing it with the salt. You also don't say what the water temperature was that you made the yeast-salt suspension with, but if it was much above 100F again, you could have caused some damage to the yeast. Try again, but this time, try this, use a thermometer to get your water temperature to 95F. Put the yeast into the water and stir to suspend, add to the dough and mix in for a couple minutes, then add the salt, no need to suspend in water, and continue mixing as you normally would. Check your finished dough temperature after kneading, it should be in the 80 to 85F range. See if this doesn't give you better yeast activity.
Tom Lehmann/The Dough Doctor
Re: First time using KASL flour... no rise?
6793

Dan;
Pizzas are baked from the bottom up, to get a stronger bottom bake you will need to reduce the top heat in your oven. The color of the stone doesn't make any difference in this case as you are baking with latent conduction heat. Commercial pizza ovens all have some facility for balancing top and botton heat. You mention convection, which is nothing more than heat transfer through fairly gentle airflow, but, convection does increase the top heat significantly, so you might want to see if

you can turn off that feature in your oven. Also, by placing the pizza lower in the oven, you will create a higher crown height in the oven, which is just another way of saying that you are moving the pizza further away from the top of the oven where it is the hottest (heat rises), thus, you will reduce top heat, and because you are moving the pizza closer to the heat source, you are also increasing the bottom heat, just the ticket to getting a better baked pizza.
Tom Lehmann/The Dough Doctor
Re: Bottom-Cooking Issues
6794

Norma;
With a whole-wheat flour, or multi-grain blend, it is all but impossible to achieve full hydration unless some form of a soaker is employed. In this case the soaker is water, whole-wheat flour and salt. It is set aside and allowed to hydrate for roughly 12-hours. I normally allow 1 to 2-hours or overnight in the cooler, to hydrate the whole-wheat flour. Failure to use a soaker can, and usually does result in a dry, stiff dough that doesn't expand well during baking (lacks ovenspring) and has a dense, heavy crumb structure.
Tom Lehmann/The Dough Doctor
Re: 80% Whole Wheat with Levain
6795

Bob;
We have never found there to be a difference in flavor of the baked products made with either bakers or brewers yeast. It is not a good idea to freeze fresh yeast/compressed yeast as this significantly impairs it's activity due to damaged yeast cells resulting from being frozen.
Tom Lehmann/The Dough Doctor
Re: coopers brewers yeast?
6796

Pat;
You New Yorkers are just in love with corn meal. LOL :)
Because they use reel type ovens so much in Chicago, they like to use some type of carrier under the pizza, screen or disk to prevent getting all that corn meal into the oven. Smaller stores with deck ovens certainly do bake right on the deck, or bake on a piece of parchment paper (not my favorite). But those true, Chicago style deep-dish pizzas are baked in a 2-inch deep pan. As for the long baking times, in Chicago, it is common to wait 45 to 60-minutes or more.
Tom Lehmann/The Dough Doctor
Re: Stones for Bakers Pride Countertop Oven
6797

I'm betting that fermentation is the culprit here. Any variations in the amount of fermentation that the dough receives would account for what you are seeing. Some of the things that can influence the fermentation are;
1) Variations in the dough temperature.
2) Variations in the amount of yeast.
3) Variations in the amount of salt.
4) To a lesser degree, variations in the amount of water used in making the dough.
5) The temperature at which the dough is fermented.
6) The time to which the dough is subjected to fermentation.
The dough temperature should be as constant as possible. Use a thermometer to

measure the water temperature as well as the finished dough temperature.
If possible, scale rather than volumetrically portion the salt and yeast as small variations can make a big in the way the dough ferments.
Try to place the fermenting dough in an area where the temperature is as constant as possible. Many like to use the cooler for long, but consistent fermentation times.
Keep in mind that doughs made without any shortening/oil will always be somewhat tough and chewy. To see a good example of this, just buy two packages of tortillas, one with normal fat, and the other fat-free.
To some extent, variations in baking can also influence the texture of the finished crust too, crusts that are not baked quite as long will tend to be tougher and more chewy.

Tom Lehmann/The Dough Doctor
Re: Neapolitan pizza cooling down
6798

Norma;
In addition to your pizza baking skills, I'd say it is time to develop a good recipe for groundhog. Young groundhog, pressure cooked to make it tender, breaded and pan fried is hard to beat. Hate to say this but.....it tastes just like chicken.
Yes, I am serious. Just like chicken!
Tom Lehmann/The Dough Doctor
Re: Can Anyone Help Me With This Insects on my San Marzano Tomatoes?
6799

Peter;
I see where you are coming from. Yes, those dough formulas do contain soda, but not in the context of just soda alone. The soda in the formulas that you have referenced is shown as a constituent part of a leavening system. That is why it is shown in brackets. As you will note, there are also leavening acids included with the soda, such as Monocalcium phosphate (MCP), sodium acid pyrophosphate (SAPP), there can also be glucano delta lactone (GDL), sodium aluminum phosphate (SAPP), and now that sodium reduction is all the rage, look for calcium acid pyrophosphate (CAPP) to become more popular.
Tom Lehmann/The Dough Doctor
Re: Sodium Bicarbonate
6800

Eve;
Fear not! Both great tasting breads and pizza are a snap to make at home.Your first attempts may not be gourmet, but they Will taste good, and that is the fun part, testing, eating, testing and improving, and eating some more. I have a home made pizza dough recipe posted in the RECIPE BANK at <www.pmq.com>. When you get there, look for the drop-down under "culinary" where it says Recipe Bank, click on this and use "dough" for your search word, scroll through the formulas until you find my home made pizza dough recipe. Send me a message and request my home made pizza dough recipe and I'll be glad to send it to you along with suggestions for making home made bread by a procedure that is super convenient, and won't give you biceps like the village blacksmith.
Tom Lehmann/The Dough Doctor
Re: Hello from Arkanasas!
6801

Pat;
You might look at some unglazed floor tiles as an option for the deck material. It doesn't have to be a single piece, just set them in place and they will work just fine. Since you're making a Chicago thin crust pizza, you will want to bake on a disk or screen, and not right on the deck any ways. Look for a baking time of about 30-minutes at 475F. Remember, a Chicago style thin crust is only crispy around the outer edges, that is why those pieces go first when the pizza is brought to the table. The remainder of the pieces are soft and foldable, but Ohhhhh, so good! Lastly, remember to party cut the pizza, never wedge cut it.
Tom Lehmann/The Dough Doctor (An ex south-sider from the "Windy City")
Re: Stones for Bakers Pride Countertop Oven
6802

How much, how many slices of what diameter pizza are you eating?
Tom Lehmann/The Dough Doctor
Re: Hello from Rochester, NY
6803

Dan;
Typically, you would look at the starter as an ingredient. So the first thing to do is to determine how much starter to use. Since all starters are different, you will need to experiment to find out how much to use. For starters, you might begin at 5% of the flour weight, and then work from there. Once you have the amount of starter determined, the next thing to do is to determine as close as possible, how much water is in the starter. Subtract that amount of water from your total absorption and you're good to go.
Tom Lehmann/The Dough Doctor
Re: Calculating Starter Amounts
6804

Mario;
We are always more than glad to assist anyone where ever we can. If you are in need of some good dough formulas/recipes, I have a number of them posted on the PMQ (Pizza Marketing Quarterly) web site in their RECIPE BANK. You can access them at <www.pmq.com> and click on the Recipe Bank. It will be one of the drop downs under the Culinary heading. Be sure to use only "dough" for your search word for the dough formulas, if you use pizza, or pizza dough you will get the different types of pizzas.
I've even taught pizza production to prisoners and street kids. They all love the pizzas, and soon learn if they do well they can eat some of their pizza creations, and once they have created their own pizza, and find out how good it tastes, you will have their attention. From then on it is easy t work with them showing them how to make many different types of pizzas, and from there, you might be able to get some local support to help them transition into a pizzeria. One place that I worked with has its own pizzeria that they use to train the kids in, they are kept busy working and learning about pizza, so they are off of the streets, and eventually graduate to work in another pizzeria, or hopefully, with assistance from the local Government, go into business for themselves. Give a man a fish and he can have a meal, teach a man to fish, and he can feed himself for a life time. Give a man a pizza, and he will have a great meal, but teach a man how to make a pizza and he can go into the pizzeria business!
Good luck with your endeavors!
Tom Lehmann/The Dough Doctor

Re: New Member
6805

Not too shabby! To correct for the streaking on the top, try brushing the entire top and sides with a light coating of olive oil just before you place it in the oven. For a little extra pazzaz you might try sprinkling the top with a little shredded Parmesan cheese too just before you place it in the oven. You can also experiment with different types of cheese in the Stromboli too. My own personal favorite is a 50/50 mix of whole milk Mozzarella and creamy Ricotta. The Mozzarella helps to bind the Ricotta so it isn't so runny when hot. Also be sure to try things like fresh basil, or sundried tomatoes mixed in with the cheese. I also like to think outside of the box with a breakfast Stromboli filled with scrambled egg, sauteed onion, mushrooms, toasted bacon bits, breakfast sausage, and fresh tomato. For the cheese I like to use a blend of Ricotta and sharp cheddar. I hope this gives you some more ideas and motivation to continue your experimenting.
Tom Lehmann/The Dough Doctor
Re: My first stromboli ! Pictures inside
6806

#13;
You sound like a person of my type; the trip is better than the destination; the quest is better than the prize; the hunt is better than the kill; etc. The quest for the "perfect" pizza is actually much better than the pizza itself. There is no greater disappointment in life than to discover that you have fulfilled all of your life's quests. Wait a minute Lord, can you give me just one more hour? I think I may have the solution to the perfect pizza, and I've just got to test it! To my way of thinking, that's not a bad way to check out. Have fun on your quest, and be sure to enjoy a lot of great pizza along the way.
Tom Lehmann/The Dough Doctor
Re: Burnt Pizzas -why are people tolerant?
6807

Actually, brewer's yeast and baker's yeast are essentially the same. The only real difference is in their tolerance to alcohol. If I remember correctly, baker's yeast will tolerate about 12% alcohol and brewer's yeast will tolerate about 13% alcohol. While this may not seem like a lot, it is huge when you are a brewing company fermenting for alcohol. When I was in Saudi Arabia many years ago I would read about some poor fellow getting caught at the airport trying to smuggle in some brewers yeast, with a VERY harsh penalty). You could buy baker's yeast in the local market, and we used it to make beer, wine, and some distilled alcohol spirits. Like I said, they're essentially one and the same.
Tom Lehmann/The Dough Doctor
Re: coopers brewers yeast?
6808

Two things about this video.
1) He has done this more than once or twice! He is very good at what he is doing, and from a sitting position too! Wow!!
2) High tech ovens are not always needed to accomplish the task at hand.
Thank you for sharing.
Tom Lehmann/The Dough Doctor
Re: World's Largest Pizza Skin!
6809

OHhhhhhhhhh, that pie sure does look good!
Right now I'm working on a project that calls for making different types of pizzas with dehydrated potatoes either in the dough (actually works quite well) and as a topping (think mashed potatoes applied with a decorating bag and a star tube), topped with bacon bits, ham/Canadian bacon, onion, and a cheddar-mozzarella cheese blend. Also thing about what can be done with shredded potatoes mixed with a little whole egg and flour to make a potato crust (par-bake) and then top either as a breakfast pizza, or as a gluten-free pizza. Potatoes are possibly one of the most overlooked health foods that really seems to work well with pizza.
Have fun, and enjoy those potato pizzas!
Tom Lehmann/The Dough Doctor
Re: Potato Pie
6810

Dan;
Just about each and every starter is different from any other one. This is why some starters or sours will sell for as much as $20,000.00. Did you know that Panetone (a type of Italian fruit bread) is traditionally made from a sour? And it goes without saying that San Francisco Sourdough bread is also made from a sour, but with a significantly different resulting flavor profile. True, sours and natural starters are made up of a mix of wild yeasts and an assortment of different types of bacteria. It is the specific strain(s) of each, and the mix of them that is responsible for the performance of the sour or starter. In Mexico a starter is commonly used for some types of breads, and the way they make the starter is to save a quantity of dough, to this they add water and flour to feed / propagate it, then they use a portion of this to culture the new dough. Since the original dough is typically made with baker's yeast as the dominant microflora, if it is properly managed, baker's yeast should remain the dominant strain of microflora, and the flavor profile will not change very much, but occasionally, something goes wrong, the starter is left uncovered, or it is allowed to stand at an incorrect temperature (one that is not conducive to the propagation of the baker's yeast) and the starter is lost, meaning that it either doesn't perform as well as it used to, or it imparts a different, and usually undesirable, flavor to the finished product.
Developing and maintaining a sour or starter is a fun undertaking, and also to some extent, an art form where bread flavors are concerned.
Tom Lehmann/The Dough Doctor
Re: Starter Falls Flat
6811

This reminds me of the time when WFO pizzas first came to Chicago, Illinois, back in the late 1970's. The number one complaint was: "My pizza is burnt!" As a resident Chicagoan, (since displaced to Manhattan, Kansas) I can attest to the fact that pizza lovers in Chicago at that time were not used to, or seldom exposed to, char of any persuasion on a pizza. Hence, if there was any char on the crust it was deemed to be burnt. With time the good people of "The Windy City" were educated in the different types of pizza, and today, char is considered to be just another characteristic on some types of pizzas. The amount of char on a pizza is purely the preference of the pizza maker, some like more, some like less, some don't like it at all. I will say this, if you have ever had an English muffin that was toasted, you probably ate something with a good bit of char on it, and for the most part, the char really adds a dimension of flavor to the pizza crust that just plain old "browning" can't provide. As for pizza char at the restaurant v/s char on a home

made pizza, any commercial pizza oven worth having has pretty decent control, in one way or another between top and bottom heat (baking properties) allowing you to get a perfectly baked pizza with a controlled amount of char. Pizzas baked in a home oven, being a kitchen range, or outdoor/backyard WFO typically don't have all of the design features of a commercial oven to allow for this kind of control during the baking of the pizza, hence control of the char is somewhat more problematic, but more importantly, those home baked pizzas are a personal accomplishment, sometimes the end result of a lot of hard work and dedicated time to making a great tasting pizza with the tools at hand. This is why we see so much variation in the amount of char on home made pizzas, it's just the way it is, plus, one other important fact. When I make pizza at home, it is to MY liking, not my customer's, so if I just happen to like a lot of char, you can bet that it will be there by some design.
Tom Lehmann/The Dough Doctor
Re: Burnt Pizzas -why are people tolerant?
6812

Norma;
Yes, I've used my own sprouted wheat to make both pizza and bread doughs. When thoroughly dried, and very lightly toasted, to destroy any enzymatic activity, the finished result will be a malted milk flavor in the baked bread or crust. Since I never was a fond lover of the breakfast drink Ovaltine (malted milk flavor) or malted milk balls (candy), I never persued the flavor.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6813

You are correct in that high absorption doughs are easier to roll out using oil rather than flour. The oil also helps to darken the finished crust color too, just as painting oil on the edge of the crust before baking helps to darken it when rolled out in flour. Commercially, we have the Celeste brand of frozen pizzas that are actually fried, not baked. and many crusts that are formed using the cold press forming method utilize an oil soaked dough ball to improve the forming properties of the dough under the cold press. You can identify a cold pressed crust by looking at the bottom. If it has raised circular rings, creating what appears to be a bulls eye pattern, you have a cold press formed crust in your hands.
Tom Lehmann/The Dough Doctor
Re: Rolling dough out in olive oil
6814

Louis;
I can't come up with any good reason for wanting to add baking soda to a pizza dough formula/recipe. It will raise the pH of the dough away from the favorable lower pH (acidity) for yeast activity and flavor development. Dipping the dough into an alkali (soda) will impact both the crust color and the flavor of the finished product. This is what gives a pretzel its unique flavor. Take a piece of pizza dough, roll it out under your hands to form a thin string, dip it into hot (200F) soda water solution (15 grams soda in 85 grams of water), then sprinkle on a little sea salt, place it on a parchment paper lined baking pan and bake at 450F until golden brown in color and you Will have the beginnings of a pretzel.
Tom Lehmann/The Dough Doctor
Re: Sodium Bicarbonate
6815

Norma;
Yes, you can grow your own sprouts. After sprouting, dry them in a dehydrator, then grind them into a coarse powder (a food processor might work well for doing this). I would expect no difference between fresh sprouted and a commercial product. Just resist the temptation to sample the raw sprouts without thoroughly cooking them first.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6816

Pete;
Good point. For home use, where we are trying to get a finished dough temperature in the 80 degree range, the procedure where we subtract the flour temperature from the number 145 seems to work pretty well. In any case, it sure beats the guess and by gosh method. So, simply take the temperature of the flour and subtract that from 145 to get the desired water temperature to give you a finished dough within the range of 80 to90F. which is quite workable when making pizzas at home. When I make my pizzas for demonstration at home, or for family enjoyment, I use this method for calculating the water temperature, and my mixer consists of a wood spoon and a suitably sized bowl. I suspend the yeast in a very small amount of water (100F) for 10-minutes if using instant dry or active dry yeast. If using compressed yeast, I just stir it into the water that I've added to the mixing bowl, then add the flour, followed by the salt, sugar (if called for), and then I begin stirring, until the mixture looks like wet oatmeal, then add the oil, and stir in for about 1-minute, I then turn the "paste" out onto a floured surface, making sure to scrape the bowl clean, I oil the bowl, the then scoop up the "dough" and kneed in the flour adhering to the outer surface (this just takes a few seconds) and then place the dough back into the oiled bowl where it is allowed to ferment at room temperature for anything from 2 to 5-hours. I then turn the dough (it now actually looks like a dough) out onto the bench with a little dusting flour and kneed the dough for about a minute, or so, adding just enough dusting flour to it to make a nice feeling dough. Then place back into the bowl to ferment again for 30-minutes, now turn out of the bowl into some dusting flour, and roll or hand toss the dough to desired size, dress and bake. This makes for a very rustic looking pizza with a lot of old world charm. Most people that I show this to are amazed at how little work is actually needed to make a great pizza.
Tom Lehmann/The Dough Doctor
Re: Dough Temperature Formula
6817

Nick;
If you have a gas home oven you can do a pretty decent job with a pizza stone, or use unglazed floor tile (works great) and it is a lot cheaper to boot. Place the stone(s) in the upper 1/3 of the oven.
Set the oven temperature at 450F, then allow at least 45-minutes for the temperature to come up and equilibrate. Get yourself a pizza screen, and place the opened pizza skin onto the screen (be sure to season the screen first). Dress the pizza as desired, and place in the oven on one of the lower racks in the bottom 1/3 of the oven. Bake the pizza there for about 5 to 7-minutes, then move to the stone and continue baking until the crust is well colored and beginning to char a little around the edge. You might need to experiment with placement in the oven and exact baking times between the top and bottom positions as all ovens are

somewhat different. This is how I make my pizzas at home, and they always turn out great. By the way, do not put any sugar, eggs, or milk in the dough formula/recipe as any of these will result in premature browning of the crust, resulting in a reduction of crispiness.
Good luck, and have fun making pizzas!
Tom Lehmann/The Dough Doctor
Re: Individual Pizza Oven?
6818

Norma;
In my above reply, (first sentence) I meant to say that sprouted is the same as malted.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6819

Norma;
Sprouted wheat, barley, etc. is the same as sprouted. Please do NOT be tempted to eat any of the raw sprouted grains. The mere act of sprouting is also a form of incubation which also allows for the growth of pathogens, some of which are not so people friendly. I receive notices almost daily of sprout recalls. The one in Europe, that killed and sickened many people was traced back to.....you guessed it, SPROUTS.
You should be able to sprout any type of wheat berry, just be doubly sure it is not commercial seed wheat with a red or green color to it. Farm or elevator stuff is fine and safe, or as safe as you can expect it to be. To sprout the berries, soak in water for 24-hours, then place onto a wet towel in a dark place and hold at 90F. You should see sprouting in a few days.
As for your wild yeast starter, whatever you get will be either a yeast or bacterial ferment, or a combination of the two. There is no way to predict what you will get. As you know, once you get something growing, you must culture it and propagate it until you have enough to work with. The idea then is to add enough, normally about 20% of the flour weight, to the dough so the culture becomes the dominant microflora in the dough. With this done, it will impart its characteristic flavor and aroma. Be sure to save it in different locations because if you lose it (a term used to describe a change in the microflora of the starter/sour), your chances of ever replicating it are not quite as good as your chances of winning the Power Ball Lottery this week.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6820

Steve;
Your procedure won't work when you use a starter as you are. Instead, after you divided the dough into pieces, place each into an oiled, plastic container and cover lightly with a piece of foil, and set aside to ferment at room temperature. I can't say how long this will take as I don't know anything about the type or strength of your starter, but it could take anything from 5 to 6-hours at the short end to 1 day or more at the long end. Watch the dough balls, when they have grown somewhat, and are resilient to the touch, try opening one up, if it opens easily, they are ready to go, if not, you will need to wait longer.
Can you add yeast? Yes you can, and then you don't need to wait nearly as long, but the yeast will become the dominant microflora, completely overwhelming the

bacteria in the sour, hence your sour flavor will be lost.
One last thing, most sourdough starters are used at around 20% of the total flour weight. This is assuming a wet, active starter.
Tom Lehmann/The Dough Doctor
Re: Struggling with the dough!!!
6821

Norma;
Wheat typically doesn't go directly from field to mill. Instead it goes from field to a local grain elevator where it is collected for sale. It may be held there for days or weeks. From there it will go to a flour mill. While the grain would probably still be considered to be green when it arrives at the mill, the flour miller adds a maturing agent (Maturox aka azodicarbonamide/ADA) to correct for this condition. Now, on to your next question. Malted wheat is nothing more than sprouted wheat, typically dried and ground into a powder. The question is: Is it enzyme active or not? If it is enzyme active it will raise havoc on your dough, breaking down starch and turning it into sugars resulting in a soft, sticky dough. If it is not enzyme active, it will only provide somewhat of a malt flavor to your dough. You can test the material in a small dough by using it at 2% of the total flour weight and allowing it to ferment for several hours then making, or trying to make a pizza from the dough. Keep in mind that you can also buy non-diastatic (non-enzyme active) malt powder or syrup from many bakery ingredient suppliers or Malt Products. When this product is used, many people will look at the malt only as a flavoring and a source of sugar as it is somewhat sweet.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6822

Bruce;
I've used a BBQ with apple wood chips to smoke and bake pizza, and I've used smoked cheese on many a pizza, all with good success, so why not smoked tomato? I'm not so keen on the idea of adding any sugar to the tomatoes as this will only encourage scorching of the tomato or sauce during the baking of the pizza. On the other hand, the quest that most people go on when looking for a pizza sauce is one of that just picked, garden fresh tomato flavor. Any cooking of the tomato prior to its use as a pizza sauce actually reduces the delicate flavor profile of the tomatoes. This is not to say that a sauce made with your smoked tomatoes will be bad, it will just be different, and in the world of pizza, different can be good. Flavor, like beauty is all in the eye of the beholder.
Tom Lehmann/The Dough Doctor
Re: Smoked Cherry, Grape or Farmers Market Tomatoes for a Pizza Topping or a Sauce
6823

Norma;
Send a couple of the bugs over to your county agricultural agent, or the entomology department at a local university and I'm betting that they will be able to identify it and also provide you with suggested control measures.
Tom Lehmann/The Dough Doctor
Re: Can Anyone Help Me With This Insects on my San Marzano Tomatoes?
6824

John;

By taking the dough directly from the mixer to the bench for scaling and balling, and then straight to the cooler, we are allowing the dough to be fermented under refrigeration in a very slow, uniform and controlled manner. This is much better than bulk fermentation where there are inconsistencies in the rate of fermentation throughout the dough mass. Also, the acids that are formed during fermentation at the lower temperature are different from those formed at fermentation at higher temperatures, resulting in a different flavor profile to the baked product, being it pizza crust or a loaf of bread. The refrigerated method of dough management works equally as well in a home kitchen as it does in a pizzeria. Some artisan bread procedures call for refrigeration of the dough at least overnight to develop the desired flavor profile in the finished bread.
Tom Lehmann/The Dough Doctor
Re: how long is dough good in the fridge
6825

Just to confuse things:
I have a dough formula and procedure posted in the PMQ RECIP BANK for a Chicago style thin cracker type crust. This is a very different type of procedure in that it calls for mixing the dough for less than 2-minutes. Actual mixing time typically runs about 1.5-minutes. With this short of a mixing time, what comes from the mixing bowl is more of a dry mix of ingredients than a "dough". Think of it more like that of a baking powder biscuit dough than a pizza dough. In this case you take a weighed amount of the "dough" and press it together using your hands into what we call a "puck", this is much the same way you would make a flaky pie dough, infact that is where I got the idea from. Anyways, you press the dough together to form the puck, and place onto a lightly floured sheet pan. When the pan is filled with dough pieces, cover with plastic, or slip inside of a plastic bag and secure closed by tucking the open end under the pan as you place it into the cooler or fridge. If you're doing this at home, a plastic bread bag works well for holding each dough piece. When you come back to the dough on the following day, you will find that the dough has pretty well knit together. Bring a dough piece out of the fridge and set aside at room temperature allowing the dough piece to temper AT room temperature for about 1.5 to 2-hours, then roll the dough out very thin. You cannot stretch the dough to shape it, it must be rolled. Dress and bake the pizza in the normal manner. This makes a very crispy, cracker type crust.
Tom Lehmann/The Dough Doctor
Re: Thin crusty dough did not mix quickly into ball
6826

Most of the time the insect problem comes from within the flour itself, rather than from the outside. It can be a roll of the dice if you will have buggy/wormy flour after much more than a month of storage. The key is to keep the flour as cool as possible. I've got a small chest freezer in my garage that I use for storing things that I inherit, such as extra flour, fish from a neighbor's successful fishing trip, surplus garden vegetables, you name it. It pays for itself in savings, and when I'm not using it, I just unplug it.
Tom Lehmann/The Dough Doctor
Re: Question re: Storage of flour
6827

Norma;
Do check with one or more of your local wheat farmers as to when they will be harvesting the wheat. Wheat right from the field is referred to as "green" wheat. It

will make a product, but not typically the best. Try to hold some of the wheat aside at room temperature for several weeks to age, and then grind it. It will make better products once aged to some extent. Do not grind the wheat first and then try to hold it as the wheat germ will only rancidify, making for very rancid flour. Since you did not mention anything about cleaning the wheat, I'd suggest that you first freeze the green wheat for at least 30-days, then remove it from the freezer and allow it to age at room temperature for 30 or more days. Why freeze first? The freezing of the wheat will destroy and insects or larva inside of the wheat berries, then as you age the wheat, it will not become even more infested.
Tom Lehmann/The Dough Doctor
Re: Grinding Flour Fresh from a Wheat Field to Make a Pizza
6828

The secret to successful dough management is temperature. If you use a suitably strong flour, like Pillsbury "BREAD FLOUR" available form most supermarkets, and have a good dough formula/recipe, and keep the finished (mixed) dough temperature in the 75 to 80F range, you should be able to keep the dough for 2 or 3-days in the fridge. For this application, I would suggest using bread bags to store the dough in. Mix the dough, immediately take it to the bench and scale it into desired weight pieces, then form it into balls, lightly oil the dough balls, and place into individual bread bags, twist the open end of the bag to form a pony tail, and tuck the pony tail under the dough ball as you place it into the fridge. To use the dough balls from the fridge, remove and allow to temper AT room temperature for about 2-hours, then open the dough ball(s) into pizza skins as you normally would.
Tom Lehmann/The Dough Doctor
Re: how long is dough good in the fridge
6829

John;How did you get it to stay crispy for 10-minutes???
When you fast bake a pizza at high temps, you develop a very thin crust, like searing a piece of meat (to retain the juices). Typically, within a minute or so, the pizza begins getting soft and soggy. Some things that you might do to improve the situation are:
Use a thin crust (no sugar, eggs, or milk in the dough formula).
Make sure the dough is well fermented (one or two days in the cooler is sufficient).
Very lightly oil the pizza skin, and then try using thin slices of fresh tomato rather than sauce.
Bake the pizza to the max, some charring is good to have.
That should be your best shot.
Tom Lehmann/The Dough Doctor
Re: Neapolitan pizza cooling down
6830

We occasionally need to store flour for extended periods when conducting experiments for customers. The best way we have found to store flour for extended periods of time is to freeze it for a MINIMUM of 30-days, and then hold it under refrigeration for the remainder of the storage time. To prevent drying of the flour, be sure to plastic bag it. If you won't be using the entire contents of the 50# bag all at one time, we suggest breaking the bag down into smaller bag quantities appropriate for your use needs. Lastly, pull the flour from the fridge and allow it to warm back to room temperature before opening the bag. This will prevent any condensation from forming on the flour while you're in the process of using the contents of the bag, which might be several days. Whole -wheat flour is a totally

DIFFERENT story.
Tom Lehmann/The Dough Doctor
Re: Question re: Storage of flour
6831

The "big lump of mostly dry dough" says it all. There is nothing chiseled in stone when it comes to dough absorption. You need to add sufficient water to the dough to make a smooth, somewhat soft and elastic dough. I would suggest experimenting with adding more water to the dough. When I make dough at home, I will typically start out using too much water, making a dough that is too soft, and somewhat sticky, knowing that this is easily corrected by incorporating a little mo0re flour later on while I'm working with the dough.
Tom Lehmann/The Dough Doctor
Re: Thin crusty dough did not mix quickly into ball
6832

Nat;
To roll the dough out in corn meal, be sure to use a very fine grind corn meal. Begin by placing the dough ball into a bowl of corn meal and thoroughly coating it, then toss some on the bench or counter top where you will be rolling the dough out and roll the dough out in the corn meal. A dough docker is a tool with what look like spurs on it. The function is to lock the top and bottom of the dough sheet together (like spot welding) to reduce bubbling during baking. You can get a docker from just about any kitchen store. Be sure to look for one that has blunt points rather than sharp points as the dull points work better. As for flour, your local supermarket should have Pillsbury BREAD FLOUR in 5# bags, this flour has about 12% protein content and should work well for you.
Proof: To allow the dough to rise after forming/shaping, just prior to baking.
IDY: Instant dry yeast
Knead: To work the dough in the bowl to develop the proteins in the flour into gluten. You can do this biochemically through fermentation, so all you need to do is to mix the dough together thoroughly, then allow the dough to ferment for an hour or so, and you will begin to see the dough becoming more elastic as the gluten forms.
Best Vegetable Oil: Canola oil or better yet, olive oil
Water in the oven: Never, you want a dry bake for pizza
Toppings: For about a 12-inch pizza use 4 to 5-ounces of sauce and about 5 or 6-ounces for the cheese. The dough weight should be about 11-ounces.
Tom Lehmann/The Dough Doctor
Re: how to make a donatos pizza(want it to taste like the real thing)
6833

Randy;
Since you are making these pizzas at home for your own personal consumption you can save a couple dollars and make your own pizza prep peel. Scrounge up a piece of tempered hardboard, 1/4-inch thickness is great, but 1/8-inch will work well too. draw out the shape and size of the peel you want, and cut it out using a jig saw. Clean up the edges with a little fine sandpaper, then, using a sanding block with your sandpaper, bevel the end of the peel to about a 45 degree angle, be sure to sand this bevel from the untempered edge. You're now ready to begin peeling your pizzas into the oven. Use your existing peel to remove the pizzas from the oven, and to spin the pizzas in the oven for a more even/uniform bake.
A good alternative to using plastic containers is to save your bread bags and use

them for storing the dough in. Lightly oil the dough ball(s), and place one into each bag, twist the open end to close, forming a pony tail, tuck the pony tail under the dough ball as you place it in the fridge. Kiss it good night, and it will be ready to use over the next 24 to 48-hours. To use the dough, remove from the cooler, and set aside to temper AT room temperature for about 2-hours, then turn the dough ball out of the bag into a bowl of dusting flour, and open on your counter top, transfer to your prep peel and dress as desired, then peel into the oven for baking.
Tom Lehmann/The Dough Doctor
Re: very quick question regarding pre-made dough
6834

Expresso;
The very first time you fire up the oven, it should be brought up to temperature gradually. Bring it up to 300F, and then after 30-minutes, increase the temperature by 50F, hold it at that temperature for an hour, then increase it by another 50F. Keep repeating this until you are up to full operating temperature. Once at full temperature, hold it there for a couple hours, then shut it down. The next time you use the oven, just set the temperature to where you want it, and wait for it to come to temperature. The gradual ramp-up in temperature goes a long ways in helping to prevent stone breakage/cracking and warping of the ovens superstructure. Remember to toss some corn meal onto the deck to help season it if you are planning to bake directly on the deck surface.
Tom Lehmann/The Dough Doctor
Re: Turning On the Oven
6835

Mike;
It sounds like you might have a Bakers Pride deck oven. Normally, the top heat is expressed in low, medium or high, while the bottom (deck) temperature is set to a specific temperature. Since your oven sounds like an electric oven, some changes in temperature might be needed, but this is what I use as a basic setup for an oven of this type:
Bottom temperature 500 to 550F
Top temperature medium heat. Use the top heat adjustment to get the toppings baked along with the bottom of the crust.
Bake time will vary, but I normally look for something in the 12 to 15-minute range.
Tom Lehmann/The Dough Doctor
Re: Correct Pizza Oven Temperature
6836

Bricklayer;
Your 0.5% level of ADY is "spot on", as is the two days in the cooler. Your 4-hours out at room temperature to temper might be a little long though. We typically allow the dough to temper for 2-hours or three, at the most if the dough ball weights are 20-ounces or more. You should be able to continue using the dough for up to 3, possibly 4-hours once the dough has tempered sufficiently to allow you to begin forming the dough balls into pizza skins. Bottom line, if 4-hours is working for you, and you are happy with the window for using the dough after it has tempered, don't change anything.
The most rewarding part of my job is when I hear from someone like you, that I've helped get started, or turn around a failing business and make a success story out of it. I only supplied the direction, you made it all happen. :)
Tom Lehmann/The Dough Doctor

Re: cold rise
6837

Matt;
What you're doing is probably on par with about as good as it gets. If you are trying to make a more healthy profiled pizza, with reduced sodium content, dress youe dough with slices of fresh tomato, and green leaf basil, reduce the cheese content to not more than 4-ounces for a 12" pizza, and use fresh vegetables and meat that you have pre-cooked yourself (without salt, of course), and you should have a pretty good sodium profile.
Tom Lehmann/The Dough Doctor
Re: Sodium-free Dough
6838

CIZ28;
We can't convert volumetric portions (cups, teaspoons, etc.) into bakers percent. It can only be done with weight measures (grams, kiligrams, pounds, ounces, etc.). When you have a chance, portion out each of your ingredients and weigh the portion, then let me know what those weights are and I can do the conversion for you.
Tom Lehmann/The Dough Doctor
Re: Bakers' Percent??
6839

Bruce;
Be glad to.
Friction, or "friction factor" is just a number that is used in calculating desired water temperature to account for the temperature gain of the dough, as a result of friction (dough rubbing against the side of the bowl) during mixing. The grind of the flour has no influence on "FF" but the size of the dough and the formulation do, especially the amount of water added, the use of reducing agents, such as L-cysteine (PZ-44) or dead yeast, and flour protein content. For most pizza doughs mixed in a planetary mixer, the FF will figure out to be about 35. To calculate FF:
3 X actual mixed dough temperature minus the sum of flour temperature, room temperature, water temperature = FF
The formula for calculating water temperature is as follows:
3 X desired dough temperature minus the sum of the room temperature, flour temperature, and friction factor.
Another formula that works well for doughs that will be in the 80F range is as follows: 145 minus flour temperature = water temperature needed to achieve a mixed dough temperature in the 80 to 85F range.
Tom Lehmann/The Dough Doctor
Re: Dough Temperature Formula
6840

Jah;
I wrote on this very topic about 2.5 years ago in PMQ Magazine. I wrote about reheating slices, and also about a new pizza by the slice concept that I developed, which, by the way is presently in use at a very successful pizzeria here in Manhattan, Kansas (AJ's NY Pizzeria) <www.ajsnypizza.com>.
Tom Lehmann/The Dough Doctor
Re: Reheating Neo-Neopolitan vs. New York Slices
6841

Smith;
The Schwan's Freschetta thick crust pizza isn't too far from the old, DiGiorno deep-dish frozen pizza. Patty's Gourmet Pizza also makes a pretty mean Chicago style Deep-dish pizza too.
Tom Lehmann/The Dough Doctor
Re: DiGiorno Deep Dish?
6842

A.O.
You should not be having this problem if your hood and stack are working properly. You might possibly need a fan in your ventilation system to help draw the smoke up and out. We have both static and powered hoods that we use for different applications.
As for your African hard wood, what kind of flavor does it impart? Remember, all wood is not the same, just ask anyone with a smoker. Apple, cherry, hickory, oak, mesquite, pine (for what it's worth) and your African hard wood all impart a different flavor to the food.
Tom Lehmann/The Dough Doctor
Re: Pizza Oven Smoke!
6843

Jude;
I stand to be corrected, but I believe the blue bag is a lower protein content flour than the red bag. This could well be the cause of the dough tearing, especially when mixed with your own milled wheat. If you want to use the blue bag flour, try adding about 5% vital wheat gluten to the flour. To figure 5% in weight, use your calculator, enter the flour weight, then press "X" and enter 5 then press the "%" key and read the amount of gluten to add for a 5% dosage. Remember, to increase the water content by at least 1.5 times the weight of gluten added. Also, if you enter the total flour weight (combined bag plus your milled flour) in ounces, the gluten weight will be shown in ounces. Whatever weight unit the flour is expressed in is the weight unit that the gluten weight will be expressed in.
Tom Lehmann/The Dough Doctor
Re: Dough is tearing
6844

Thank you everyone for the very warm welcome!
As many of you who know me are already aware, I am away from my desk here at AIB, sometimes for a week or more, as I am out on a contracted assignment working for a customer. Because I'm "old school" I feel that my customer is paying for, and should receive 101% of my attention and efforts while I'm working for them, so I seldom ever respond to e-mails, or monitor boards while out on the road, but I do get caught up again soon after returning back to the office. I mention this because next week will be one of those weeks. I'll be right back at you again as soon as I get back to the office.
Tom Lehmann/The Dough Doctor
Replies to Questions
6845

I keep seeing references to bromated flour. Bromated flour is fine for making pan breads, ain't nothin' that works much better, but when it comes to pizza, bromate is not a friend, unless you like having a dough that is tough and elastic, and likes to

fight you as you try to form it into a pizza skin. That's what bromate (potassium bromate) does. Keep in mind that bromate is frowned upon in California (it is a carcinogen) and not allowed for use in Canada. As a result, most flour suppliers have their flours available either bromated or non-bromated. For example, General Mills has Rex Royal brand that has 12.4% protein and is unbleached and unbromated #57151 and also Washburns brand at the same protein level, unbleached, but bromated #59401. A potential for a locally produced flour similar to Caputo-00, might be General Mills Pollyanna (this is an untreated flour coming in at about 10.5% protein content. I've also had good success using General Mills King Wheat brand flour. If you can't get the G.M. brand in your area, just use these names and ask your flour supplier what he has an an equivalent.
Tom Lehmann/The Dough Doctor
Re: Mea culpa, Caputo is it
6846

Thank you for the warm welcome.
Tom Lehmann/The Dough Doctor
Re: New Member
6847

Bruce;
Not to discourage you from kneading your dough by hand, but did you know that it isn't necessary? Try this sometime, put the water in the mixing bowl, add the yeast to the water and stir to suspend if using compressed yeast, you must prehydrate either IDY or ADY prior to adding it to the water. Then add the flour, and remainder of ingredients. Using a wood spoon (more on that shortly) stir the mass until it is wet and sticky. Remove the spoon and lightly cover to prevent drying, allow to ferment for 2 to 5-hours, turn out onto a floured bench top, fold the dough several times (I'm hesitant to call this kneading), lightly oil the bowl that the dough was fermented in, and place the dough back into the bowl to ferment for another 30 to 60-minutes. Turn the dough out onto your bench top and cut into desired size pieces, then shape into pizza skins for immediate use. The reason why I like to use a wood spoon to stir the "dough" is so you don't over mix the dough. As you stir, the dough will become tougher, and fear of breaking the wood spoon will prevail to the point where you will stop mixing, and that will be sufficient mixing in this application. The gluten development in this case is accomplished through what is known as biochemical gluten development. You can also get it by managing the dough through the cooler overnight too. This is how bakers used to develop their doughs before Mr. Hobart invented his first dough mixer. The procedure is still used in a number of developing countries around the world.
Tom Lehmann/The Dough Doctor
Re: Non stick mats for kneading pizza dough
6848

It will all depend upon the flavor profile that you are looking for. The flavor from the malted milk powder will be that of a malted milk candy. In work that I did many years ago I used 5% of the flour weight to achieve a characteristic flavor of malted milk, if that's what you're looking for.
5% of 155-grams is 7.75-grams. Using your handy calculator: 155 X 5 (press the "%" key) and read the answer in the display window. Remember, your answer will be in the same weight units that you displayed the flour weight in.
Tom Lehmann/The Dough Doctor
Re: King Arthur Malted Milk Powder

6849

Thinking this one through, sprouted wheat will be very high in amylase activity. Amylase enzymes break down starches into sugars. Think malted barley flour aka sprouted barley flour. This is why wheat that has sprouted in the field prior to harvest, due to excessive rain at harvest time, has very little commercial value for going into flour that is used for baking. Hence, sprouted whole wheat flour should be able to be used in a manner similar to malt, and in fact, it should have a bit of a malty flavor (think malted milk balls). The actual use level for a product like this would be quite low, I would think something in the 1 to 3% range, based on the total flour content of the dough. The one question that I have is concerning enzyme activity. It the flour enzyme active (diastatic) or non-enzyme active (non-diastatic)? If it is diastatic, it will make a dough soft and sticky if used at excessively high levels, but if it is non-diastatic, it will only provide that malty flavor to the dough and act much like a sugar would.
Tom Lehmann/The Dough Doctor
Re: Lindley Mills Super Sprouted Flour available from K.A.
6850

I'll toss my hat into the ring on this one too. Cy is indeed highly perishable, needing constant refrigeration, and even at that, it will show signs of deterioration after about 10-days of correct refrigerated storage. The aroma of fresh, compressed yeast can run from musty (like old newspapers found in a damp basement) don't ask, to an ammonia smell. These are normal for compressed yeast. A good visual indicator for old or expired yeast is its color. Dark brown and a cracked appearance are good indicators that the yeast is long in the tooth. Texturally, the yeast can be dry feeling, or it may feel somewhat gummy/slightly sticky, both are normal. As yeast ages, it dies, and glutathione is released from the cells. Glutathione is a reducing agent much like L-cysteine (PZ-44) or you can even buy "dead yeast" as a natural reducing agent. Keep this in mind if you are forced into menu labeling and find yourself in need of a reducing agent. The reducing agent breaks down a portion of the gluten, making the dough more extensible as well as making the resulting crumb structure in the baked product more tender/less chewy. From a flavor and performance point, there is no difference in any of the three yeast types (compressed, ADY, IDY) when used at the correct substitution levels, and reconstituted correctly. A lot of the "old school" bakers still like to use compressed yeast because that's what "it" is, old school, and it fits well into their concept and way of doing things.
Tom Lehmann/The Dough Doctor
Re: The unique crumb chacteristics of Cake Yeast
6851

Steve;
Actually, I might have been at one time, right at your inception, but due to early problems with logging in, I faded away, but I'm back now. :)
Tom
Re: New Member
6852

This is my first time here. I am a regular participant at the PMQ and Pizza Today boards, as well as a very long time participant in all of the pizza shows across the country. You may also read my ramblings in PMQ (In Lehmann's Terms) and Pizza Today (The Dough Doctor). Aside from being a writer, speaker, and consultant for

the retail and wholesale pizza industries, I am a fond lover of Chicago and New York style pizzas, and my motto is: "I've never had a pizza that I couldn't learn to like"
Tom Lehmann/The Dough Doctor
New Member
6853