



BREAD

ISSUE 3:
FERMENTATION

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WELCOME

Welcome to the third edition of Bread, the magazine for lovers and makers of great bread! In this edition, we will explore one of the most important aspects in the craft of making bread: fermentation.

IN HIS 2008 NON-FICTION HIT, *Outliers*, Malcolm Gladwell presented the idea of *10,000 hours*. Drawing from statistical studies and anecdotes from The Beatles to Bill Gates, he explained how talent isn't something you are born with but something you acquire through long hours of practice.

What the actual number of hours is varies depending on the task, but in average, runs around 10,000 hours.

Gladwell didn't include bakers as example in the book, but baking is a craft and the same rule applies: You need to practice hard, and when you do, you will get great results.

LOOKING AT ALL THE BEAUTIFUL LOAVES in this magazine, whether by Ying Shi who has been baking for four years or Mike "[the bejkr]" Zakowski who was part of Team USA in the Coupe du Monde de la Boulangerie earlier this year, you can see where deliberate practice will lead you.

To get there, you and I need to put in the

hours: calculate yet another recipe, mix yet another dough, bake, taste and start over.

Luckily for us, the whole process is rewarding and enjoyable.

ABOUT THE MAGAZINE

PRACTICE IS IMPORTANT, but to get to places, you need a specific type of practice: practice that forces you to explore new things and learn.

This is why this magazine is not a collection of recipes. My goal is to give you tools to understand what happens inside the dough and then let you put those ideas into practice by yourself.

There is nothing wrong with following a recipe, but just like children playing with Legos, when you know what you are doing well enough to throw away the instructions and start working on your own creations, that's where magic happens.

ABOUT THIS EDITION

IN HIS BOOK, *Tartine Bread*, Chad Robertson writes about fermenting, saying "A baker's true skill lies in the way he or she manages fermentation. This is the soul of bread making."

As you read the magazine, you will find a lot of information on the different methods to ferment flour and turn it into bread, first with regular store-bought yeast, and then with wild yeasts such as sourdough and yeast water.

This issue is a bit heavier on the instructional aspects of bread making than the previous two, but people making great bread are still in the center of the magazine. Sébastien Boudet, Ying Shi, and Mike Zakowski all have inspiring experiences to share with you.

FOR THE FIRST TIME in the history of BREAD, in this issue, you will find a guest article, written by someone other than me:

David Mason from Culinary Science kindly offered and contributed an article on the

science of fermentation. The article begins the magazine on [page 4](#).

I HOPE YOU WILL find the journey exciting and find bits of new information and ideas to use on the journey to mastering the art of making great bread!

SHARE AND TALK BACK

IF YOU HAVE ANY FEEDBACK or questions, don't hesitate [to get in touch](#)! I try to answer all of the email I receive.

Also, if you enjoy reading the magazine, I would be more than happy to see you share it to your friends on Facebook, Twitter, or email.

And as always, big thanks for reading!

—Jarkko Laine, editor and publisher





fer·men·ta·tion

n.

1.

a. The anaerobic conversion of sugar to carbon dioxide and alcohol by yeast.

b. Any of a group of chemical reactions induced by living or nonliving fermenters that split complex organic compounds into relatively simple substances.

2. Unrest; agitation.

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BREAD FERMENTATION

by David Mason

In this introduction, David Mason of Culinary Science sheds some light on the art and science of bread fermentation and how it affects the taste of the final product.

BY THE TIME OF READING THIS, you probably have been kneading your dough. You did this either with your hands similar to how the Egyptians did it over 3 millennia ago or mechanically with a food mixer like myself.

Either way you produced a ball of dough with flour, yeast and water at the basic level.

This is where things get interesting

FERMENTATION IS BETTER KNOWN for being responsible for producing fine wines, beers and vinegars with time and atmosphere as the important factors. The fermentation of bread is often overlooked in both importance and in practice.

I offer two examples, firstly from a domestic view, many bread recipes are quick to make and bake, leaving the baker with a fresh loaf but one with little flavour. Secondly, from an industrial point of view, fermentation increases the time to make bread and therefore increases the costs.

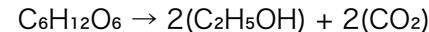
In the UK the Chorleywood Process (similar

to a giant food processor) has been implemented in many commercial brands of bread. This process allows bread to be formed with a fast turnaround and to also use lower quality flour (Edwards, 2007)

BREAD FERMENTATION is the result of single-cell yeast fungi that break down sugar molecules into various chemicals.

It all starts with enzymes present in the flour that once in an aqueous solution can begin to break down the large starch molecules into smaller sugar molecules. Storing the flour in a moist environment will activate the enzymes and thus not be as useful when you come to make bread (This, 2008)

Once the enzymes begin to break down the starch, the yeast can feed on the sugars producing waste products carbon dioxide and ethyl alcohol. The reaction is shown below:



IN TRADITIONAL BAKING, CO₂ is the most important element as it expands the dough into a light foam held together with the strong gluten strands.

During fermentation, gluten is still undergoing reordering that began in the kneading process. This helps to give the final dough its firmer feel (McGee, 2004). It has often been common practice to put the fermenting dough in a warm environment such as the laundry cupboard to improve the rising.

Unfortunately, at high temperatures the dough will rise well but the yeast will produce unpleasant notes (McGee, 2004). A lower environment temperature will improve the dough flavour and aroma, but will increase the fermentation time.

AS COOKS, we need to control the expansion of the dough, so we add salt that inhibits the fermentation process (although too much would kill the dough). A second proofing is often thought to be used to 'knock out' the air



bubbles, but this technique is actually to redistribute the yeast in the dough so that there is an even supply (McGee, 2004).

Simply adding all the ingredients together and allowing to proof is called the straight dough method. It produces nice results but can lack maturity in terms of flavours.

MANY COUNTRIES HAVE their version of a preferment which increases the time that the flour is in contact with the water thus allowing the enzymes present in the flour to start to break down the large starch molecules (This is known as autolysis, a similar process to Marmite), then allowing the yeast to feed.

Yeast will produce plenty of CO₂ at room temperature but at lower temperatures the yeast (although retarded due to cold temperatures) and bacteria produces very desirable yeast flavours (McGee, 2004).

In a Poolish and Biga, some of the flour and all the water are mixed with a small amount of yeast and allowed to ferment overnight to produce those desirable yeast qualities, and also some of the CO₂ that is produced is reabsorbed back into the dough producing an easier dough to work with later on (McGee, 2004).

THE PREFERMENT FLAVOUR s an improvement on the straight dough method but can we get better?

Before yeast was available as a baking ingredient, bakers would rely on wild yeasts to invade the dough to release CO₂ but most

importantly to provide great flavours.

IN A SOURDOUGH, flour and water are mixed together (usually with another ingredient such as raisins or rhubarb that harbour wild yeasts) and allowed to ferment.

Over a week, this is constantly fed with more flour and water to feed the sourdough whilst discarding half the mix that has been exhausted from the yeast feeding on the sugars and to prevent the dough becoming too acidic.

This 'mother' is then ready to be used for sourdough.

ALTHOUGH THE WILD yeasts are a welcomed addition, it is the acid-making bacteria that travel with the yeasts (and outnumber the yeasts by a factor of 100 to 1) that we are interested in as they produce a distinctive flavour (McGee, 2004).

The most famous bacteria known for its unique taste is Lactobacillus Sanfranciscensis, which originated in San Francisco but has since been found all over the world (Quellen Field, 2012). The wild yeast can handle the acidic environment that the bacteria produce but other bacteria find the environment uninhabitable so a sourdough tends not to resemble a chemistry student's petri dish!

ANOTHER ADVANTAGE in sourdough is that the acidic environment delays starch retrogradation, so it keeps for longer.

Unfortunately, the acidic environment of

sourdough does have some negative side effects as the lower pH reduces the browning and therefore the maillard reaction so sourdough breads are often less coloured than other breads.

Also as the yeast is vastly outnumbered by the bacteria, the dough is very slow to rise and can be dense (McGee, 2004).

Nevertheless sourdough creates a bread that is unbeatable in taste. Sourdough is sold in supermarkets throughout the UK but I have yet to find any product requirements that state how the sourdough must be produced (like chocolate or beer). If anyone can shed some light on this I would welcome it!

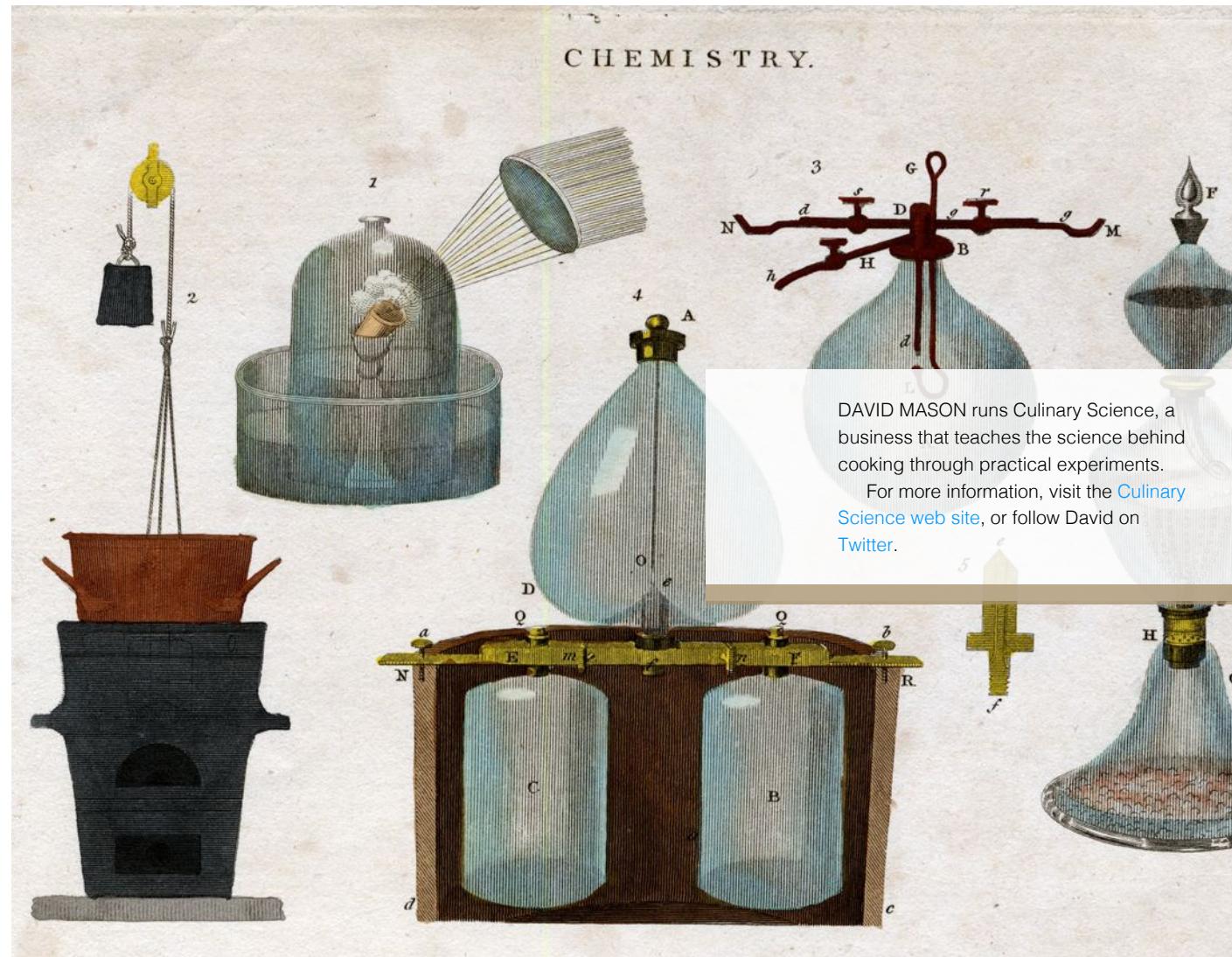
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DAVID MASON runs Culinary Science, a business that teaches the science behind cooking through practical experiments.

For more information, visit the [Culinary Science web site](#), or follow David on Twitter.





A DOUGH'S LIFE

Before flour and water become bread and are served at the dinner table, they go through a short but eventful life as dough. From mixing the ingredients to the final proof, here's what the life cycle looks like.

THE LIFE OF A DOUGH begins as a collection of seemingly lifeless ingredients: flour, water, salt, and maybe some yeast bought from the store. Had you never seen the ingredients turn into bread before, it would be hard for you to imagine the potential they have waiting inside them.

Fermentation begins when you mix the ingredients. The yeast cells wake up, and using the water, the air you knead into the dough, and the starch from the flour, multiply, slowly invading the entire dough and filling it with life!

The proteins in the flour react with the water and form gluten, which your kneading then shapes into stronger forms that can hold the dough together all the way until it gets baked.

You will see bubbles appear as the yeasts eat the sugars and release carbon dioxide into the small gluten pouches in your dough. The dough rises.

IF YOU LET YOUR DOUGH sit on the kitchen

counter and the yeast cells get to do the thing they do, you will notice that at first, the dough rises rapidly, then reaches its top in about an hour (depending on many things, such as the yeast you use and the temperature of your kitchen and ingredients) and then slowly starts to fall.

To see this process in action, look at the series of photos on the next page.

If you are unsure of how long each step takes in your regular dough, do the experiment yourself. Make a small amount of dough and let it rest in a see-through container, checking the dough every now and then.

THIS METHOD of rising dough once and then shaping, without any extra steps is known as the straight-dough method. It is quick way to consistent results, but unless you enrich the dough with for example butter and sugar, the resulting bread won't have very much flavor.

To get more interesting loaves, bakers use different methods of slowing down the activity

of the yeast, such as refrigerating the dough after it has been kneaded or using less yeast in the first place.

TO GET THE DOUGH just right, with holes of the correct size and just the right amount of rising potential in the oven, bakers divide the fermentation process into separate rising steps, each followed by some action done to the dough from folding to shaping and finally baking it.

You have been doing most of this already, but let's take a look at how and why we do what we do.

1. AUTOLYSE

THE FIRST STEP in the process isn't yet fermentation but preparation to get the dough ready to make the most out of fermentation.

The step can be skipped, but as it is not hard and leads to great results while making your kneading easier, it's worth adding to your



baking routine.

AS A TERM, AUTOLYSE was coined by the late French bread professor [Raymond Calvel](#) who was largely responsible for the revival of French bread in France in the mid 20th century.

Despite its fancy name (which means "self-destruction" in Latin) and background, the technique is surprisingly simple: mix flour and water until there are no dry lumps left, then let the dough rest from 20 minutes up to a couple of hours before adding the leaven and salt and working the dough.

By doing this, you give the water time to properly hydrate the dough and form gluten before you add other ingredients and start kneading. It also activates the enzymes ahead of time, leading to a dough that doesn't require as much kneading and is easier to shape.

In other words, a better dough.

AFTER THE AUTOLYSE, put in the leaven, whether yeast or a sourdough starter, and work the dough until it feels right.

As you work oxygen into the dough, you are giving the yeast cells more power for multiplication, but at the same time lessening the actual fermentation that produces most of the flavor in bread. So, while kneading the dough for a long time makes a strong gluten structure, it does this at the expense of taste. What kind of kneading is needed depends on the bread you are making, but for a good rustic sourdough loaf, ten minutes or a little less is a

very good estimate.

Combined with an autolyse step, this is enough to create a dough strong enough for great bread.

2. FIRST RISE

ONCE YOU HAVE FINISHED working your dough, the actual fermentation starts. Some fermentation has been happening already while you worked the dough, but now is the time for the real thing.

As you place the ball of dough back in your dough bowl or into a greased container and cover it lightly, many things start happening inside your dough.

Yeasts consume the carbohydrates in the now well hydrated flour and produce carbon dioxide which rises the dough. Water and flour continue their chemical reactions and gluten grows stronger.

For the rising period, it's important to keep the dough from drying. To do this, cover the dough lightly, either with a cloth or—if the air is very dry—with a tighter cover.

THE LONGER THE DOUGH gets to rise, the more flavor it gains. But if you just let the dough sit on the table for a long time, after reaching its peak (as shown on the previous page), it will start to fall and get an unpleasantly yeasty flavor.

So, to get the benefits of a longer fermentation, you need to make a couple of changes to your process. The first is to use less yeast. The second, and more important



one is to control the temperature of the dough: In a warm environment, yeast rises the dough faster. Similarly, cooling the dough by putting it in the refrigerator or outdoors if the weather permits slows down the process.

For now, let's assume you are keeping the dough at room temperature.

There is one more easy way to prolong the fermentation and improve the strength of the dough.

3. STRETCH AND FOLD

WHEN THE DOUGH has been resting for about half an hour, it has almost doubled in size and could soon be shaped into breads. But unless you are in a rush, don't do that just yet. Instead, take the dough out of the bowl and gently but firmly press most of the air (or carbon dioxide) out of the dough.

Grab one corner of the dough and stretch it over itself and press tightly. Repeat a couple of times. Then roll the dough back into a ball and place in the bowl for another rise.

This process reorganizes the gluten into stronger bonds once more, creating strength to the dough, and divides the air bubbles inside the dough into smaller bubbles so that the gas created by the yeasts has more places to go.

This is useful because according to studies yeast cannot create new air bubbles into the dough as it releases carbon dioxide, just enter ones that have been created by working the dough.

4. SHAPING

WHEN IS A DOUGH READY to be shaped? This is the big question that many people are uncertain of.

Many recipes give a vague instruction saying "when the dough has doubled in size..." but it's often hard to judge the size of the dough visually. Also, the volume of the dough can vary depending on various things.

In general, experimentation and practice will give you a good understanding of the right time to proceed: as you make your bread and look at the results, you will notice the difference the fermentation time makes. This takes time, so don't be discouraged if at first you either proceed too early or too late.

BUT THERE ARE SOME tips that can be useful in understanding the dough. The most straightforward of them is the poke test:

When you think your dough might be ready to be shaped (and the same applies to baking the final loaves), press gently but firmly on the dough. If the dough bounces back quickly, it hasn't been fermenting long enough. But if you can see a clear dent remain in the dough for a while, that's your sign: you can now start shaping the dough.

THIS IS YOUR FINAL CHANCE to build strength into your dough, so unless you are sure your dough is strong and will keep its shape during the final rest, it's a good idea to do the shaping in two steps.

First, divide the dough into pieces of the size

that you want to bake, then shape the pieces, stretching them into shape.

Let the preshaped loaves rest for about half an hour before doing the final shaping.

Then, finish the shaping and leave the dough to rest one last time, on a floured cloth or table, in proving baskets, or in greased bread tins. Which ever way suits you best.

5. PROOFING

THE FINAL REST, called proofing or proving, gives the yeasts one more chance to rise the bread and bring flavor into the dough.

Again, just like in the first rest period, you have the choice of slowing down the fermentation by keeping the dough in a cool spot or of simply letting the bread rise at room temperature.

Keep an eye on the breads so you notice when they look well risen and pass the poke test. That means it's time to bake the loaves.

When considering the right time to bake the bread, it's better to err on the side of baking the bread too early than too late. This leaves some rising power for the oven so you get a beautiful "oven spring"—the rise that happens when the dough gets in contact with the oven's heat.

FERMENTATION IS NOW DONE and it's time to bake the bread. And soon, it is ready to be shared and enjoyed.

"AS YOU MAKE YOUR BREAD AND LOOK AT THE RESULTS, YOU WILL NOTICE THE DIFFERENCE THE FERMENTATION TIME MAKES. THIS TAKES TIME, SO DON'T BE DISCOURAGED IF AT FIRST YOU EITHER PROCEED TOO EARLY OR TOO LATE."

GET BACK ISSUES

THE FIRST EDITION OF BREAD came out in March 2012, followed by a second edition in the beginning of July. Both issues contain heaps of valuable information and inspiration to help you make the most out of your flour, water and leaven.

If you have just joined us on the journey to great bread, you can still download the previous issues for \$2.99 each at [the magazine's web site](#) (or both issues bundled for a total price of just \$4.99).

ISSUE 1: THE ART OF BREAD

THE FIRST ISSUE OF BREAD acts as an introduction to the art of making great bread.

Interviews with amazing bakers (Richard Bertinet, Larry Lowary, and Phil Agnew) give an idea on what makes bread making special. The Real Bread Campaign coordinator Chris Young talks about the importance of making and eating "real bread".

But it's not just theory: the practical instructions in the magazine will get you started with bread making.

ISSUE 2: FLOUR

THE SECOND ISSUE OF BREAD is all about flour, and why and how it matters in making great bread.

Interviews with people involved with flour from farmers to millers to bakers lead you through the journey of flour from field to the dinner table. And then we use this information to dig deeper into the ways to incorporate different flours into your doughs.

TO GET YOUR COPIES, [visit the magazine's web site](#).



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IF YOU ARE NEW TO BREAD and came to this magazine through a friend or a link on the Internet, without subscribing just yet, here's why you should consider a (FREE!) subscription.

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By subscribing to Bread, you will get a new issue filled with bread making information and inspiration four times a year for absolutely no cost, the moment they are published.

The subscription is FREE. All we need from you is the email address you want the magazine to be delivered to and you are set.

And by the way, we (or I, if you prefer) hate spam just as much as you do, so you can rest assured that your email is safe with BREAD.

TO SIGN UP, visit [the magazine's web site](#) now.



INTERVIEW: YING SHI

Ying Shi—better known in the online world as txfarmer—is a software engineer and passionate home baker always looking for ways to improve her craft. Her skills are a great example of where deliberate practice will get you.

YING SHI, OR TXFARMER, as she is known online, is an active bread blogger at The Fresh Loaf. I have been admiring her beautiful bread photography for a long time, but this summer, as I was trying to create the perfect sandwich loaf for my family, I found my way to trying some of Ying's recipes.

With four years of active baking, and almost no baking experience before that, Ying is a good example of where you can get in a rather short time when you put your mind to it and practice a lot.



JARKKO: First, can you tell a bit about yourself, your background, how you got started with bread, and what keeps you baking?

YING: ORIGINALLY BORN AND RAISED in China, I had no baking experience until 4 years ago.

At one point, I decided to start making

Asian style breads and cakes because the ones on US market are way too sweet for my taste. I started browsing China baking blogs and making soft breads and light cakes. Soon after that, I was introduced to a new book called "[Artisan Bread in 5 Minutes a Day](#)".

Looks easy enough, so I bought a baking stone and got started making hearth breads. While the results were fair, I felt it could be improved a lot, so I started reading "[Bread Baker's Apprentice](#)" and "[Bread](#)". That's when I got into sourdough, the rest is history.

I AM A FULL TIME SOFTWARE ENGINEER with a bread loving husband and an always hungry dog. I am also a serious long distance runner with 5 marathons under my belt.

All that means that we, as a household, consumes a lot of carbs, which is the most important reason why I keep baking. I also keep a [Chinese baking blog](#), which has a lot of readers.

The love for writing, photographing, and

sharing is another reason I can't stop baking.

JARKKO: For a long time, I thought of sourdough as mainly a way to make big, chewy, rustic loaves. Your blog proved this assumption wrong: you bake all kinds of bread from croissant to sandwich loaves to panettone using a sourdough starter. What do you need to take into account when baking enriched doughs with sourdough compared to the regular "plain" loaf?

YING: THE MAIN DIFFERENCE between plain hearth loaves and enriched soft loaves is "dough strength". If you compare the two style, the rise (in volume) for Asian style soft sandwich loaves are much more than hearth loaves, which leads to different mouth feel and texture, in addition to different flavor.

To achieve that extra strength, the soft enriched loaves needs to be kneaded much more.

However, the intensive kneading does

destroy some natural flavor of the flour, which is compensated by a lot more enriching ingredients such as sugar, milk, butter etc in the enriched dough.

CROISSANTS ARE A WHOLE DIFFERENT ball game. They are different from everything else in most ways.

JARKKO: Is there anything that can't be done with sourdough and where you'd have to go to regular, store-bought yeast instead?

YING: YES. ANYTHING THAT REQUIRES a very fast rise is not suitable for sourdough. For instance, donuts need to expand a lot in hot oil, very quickly.

Another example is actually croissants. Yes, I do use sourdough starter for croissants, but only as a flavoring ingredient. I still add yeast to the dough. Croissants need to expand a lot and very quickly in the oven to create those honeycomb crumb structures, I haven't seen a pure sourdough version that performs as well.

JARKKO: Another thing I have noticed about your baking is that you are very creative in combining different flavors and ingredients. Your matcha tea croissants was a great example of this! How do you come up with your recipes and how do you proceed from idea to implementation?

YING: I think there are two things that help me to create such unusual combinations:

1. MY CHINESE BACKGROUND adds dimensions to my flavor profile, which is why a lot of my breads have eastern elements. It also makes me less restricted to the usual flavor combos of "western cooking" because I am simply less familiar with them.

2. I AM AN ENGINEER through and through. I love experiments and believe in trying out all the possible combos.

BEFORE I START TRYING OUT SOMETHING, I usually do a lot research online and in books to see what others have done that's similar.

After that, I devise an initial plan, which often fails miserably. Then the experimenting begins: I vary one element at a time until I either succeed or understand why it's a bad idea to begin with.

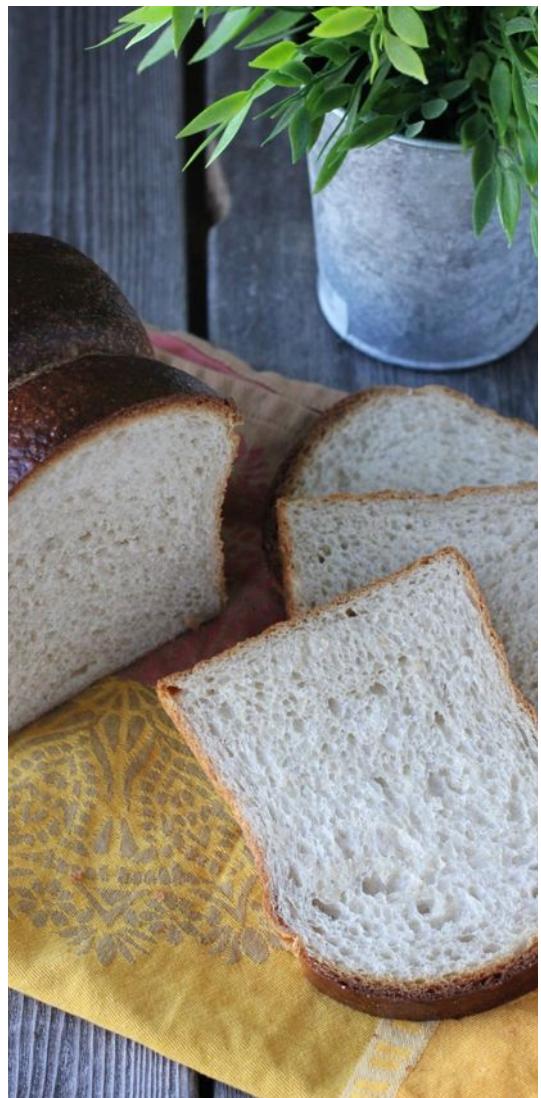
Of course as my baking experience increases, the success rate goes up as well.

JARKKO: You are originally from China. Can you tell a bit about the bread culture in China? How do you think it has affected your baking?

YING: FOR THE LONGEST TIME, there was no bread culture in China. Most people didn't grow up baking or eating breads.

That has changed a lot in the past 15 years. There are a lot of bakeries in China now. However, those bakeries usually only sell "Asian style" breads and cakes heavily influenced by Japanese and Taiwanese





bakeries. Texture tends to be soft, taste tends to be less sweet, etc.

Hard crusted hearth loaves are rarely seen, but that also is starting to change as more and more European and American businesses are opening up in China.

DUE TO SERIOUS CONCERNS about food safety, a lot of home cooks are starting to bake their own breads and cakes, which is the motivation of my Chinese baking blog.

Just like the commercial bakeries, homemade breads/cakes are often limited to Asian style due to two reasons: people are more used to such taste, and the lack of equipment and education for other styles of baking.

Usually Chinese homes don't come with big ovens we are familiar with. In order to bake, people have to buy ovens that's often the same size of our toaster oven, which don't get hot enough to bake hearth breads. Baking stones are hard to get, until very recently. Sourdough is a novelty.

TO THAT END, I am very happy to say that I have had an opportunity to do my part to introduce western style baking to the Chinese baking community. I have translated "Artisan Bread in 5" into Chinese and it's currently on the bestselling list (coming full circle). My blogs about baguettes and sourdough starters have had many followers. A few of my fellow Chinese bakers started online business selling baking stones.

JARKKO: If you were to name one aspect of baking that is the most important to master to get great results, what would that be and why?

YING: FERMENTATION. I am a firm believer that bread baking is essentially an art of managing fermentation.

JARKKO: Is there something you are practicing yourself at the moment, or would like to try next?

YING: BAGUETTES, CROISSANTS, and Enriched Sandwich loaves are three things I always work on. The fact that I can never get them perfect is probably the main attraction.

In addition to that, I really would like to make a good pie crust. Mine is OK, but could be much improved.

Oh yeah, cheese making and grain sprouting are both on my list to work on.

JARKKO: And finally, is there something you'd like to add?

YING: THANKS FOR THE OPPORTUNITY to introduce myself. As a Chinese born US citizen, I think I am in the unique position of straddling eastern and western baking worlds, which is definitely an advantage to my baking experience, and hopefully I can give back by acting as the bridge and communication channel for the two very different baking styles.

LAST BUT NOT THE LEAST, baking is fun and tasty, so let's not forget that whilst elbow deep in flour dealing with inactive starters and flat loaves!

—

To learn more about Ying Shi and her bread making, [visit her blog](#) over at The Fresh Loaf and try out some of her recipes, such as this [rye and cream sandwich loaf](#), or one of her beautiful [baguette recipes](#).

"BAKING IS FUN AND TASTY, SO LET'S NOT FORGET THAT WHILST ELBOW DEEP IN FLOUR DEALING WITH INACTIVE STARTERS AND FLAT LOAVES!"



PREFERMENTS

So far, in the magazine, we have mostly been talking about quick fermentation using yeast. In this article, we move towards slower bread and more flavor with the help of the traditional techniques such as Biga and Poolish.

BREAD CAN VERY WELL BE made in a straightforward one hour of bulk rise and another hour of bench rest. This kind of bread making process is quick and handy, but it will lead to bread lacking in flavor and personality.

By slowing down fermentation you can build up more flavor to your dough by giving the yeast and enzymes more time to act on the starch and proteins in the flour. This also makes the resulting bread last longer and gives its crust a deeper color. All desirable outcomes.

This is why, throughout the years, bakers around the world have been working on different methods of fermenting dough in steps and replacing some of their doughs with this pre-fermented dough.

PÂTE FERMENTÉE

THE EASIEST WAY to get started with slower breads is to take a small batch of your dough and leave it to ferment in the fridge.

For example, if you make 1 kg of dough, you can simply snap 100 grams of it, place it in a jar and refrigerate. Then, when you are ready to make your next bread, make the bread as you normally do but mix this lump of dough in with the rest of the ingredients.

You will be surprised how much personality this simple step adds to your bread.

If you get excited about this old dough method, you can perfect it into an essential part of your bread making process, as they do in many French bakeries where fresh bread is baked every day and there is always some dough left over for the next day's dough.

But as a home baker myself, I mostly see this as the first step from straight yeasted doughs towards the more interesting preferments.

OLD DOUGH ISN'T ONLY good as a preferment, though:

One of my favorite breads is nothing more than a piece of old dough baked in a cast iron

pan on the stove with a table spoon of olive oil.

So, if you have some dough in the fridge and no bread in the house, this is an incredibly fast way to make a delicious snack. Just stretch the dough into a round shape carefully without losing too much of the air inside (as there won't be a second rise, this is important).

Then place the dough in the pan and bake, turning the dough around often to prevent it from burning.

POOLISH

NO ONE KNOWS FOR sure but the story goes somewhat like this:

Around 1840, when commercial baker's yeast started gaining ground, Polish bakers developed the method, which they then brought to France some decades later. French bakers quickly adopted the method, which is nowadays an important part of the French national bread, the *baguette*.

As such, Poolish is probably the best known



of all preferments.

POOLISH IS A WET, batter-like preferment that gives the dough better extensibility and makes it easier to shape into baguettes (or other shapes).

The wet environment is good for the lactic acid bacteria, so it leads to development of some lactic acids—not nearly as much as in sourdough but some—which give poolish its personal taste.

To make poolish, the night before you are going to mix your dough, take one third of the total flour needed for your recipe and mix it with an equal weight of water and a pinch of yeast. Then stir until there is no dry flour left. Cover with plastic and leave to rest.

Depending on how soon you want to bake your bread, either leave the poolish at cool room temperature or put it in the fridge (for making the dough 12 hours or longer after mixing the poolish).

The poolish is ready when it's full of bubbles but hasn't started collapsing on itself yet.

HERE IS A MORE DETAILED poolish recipe for a dough with 500 grams of flour. One third of 500 is 166 grams, so to make the poolish you'll need:

166 G BREAD FLOUR

166 G WATER

A PINCH OF YEAST

THEN, TO MAKE YOUR BREAD, calculate the rest of the ingredients using our basic recipe ([see page 27](#)), taking into account the amount of flour and water already present in the poolish. For example, of the 500 grams of flour, you have used 166 in your poolish, so only add 334 to your final dough.

For yeast, use only 2/3 of the amount of yeast in the recipe as the poolish already contains yeast.

BIGA

BIGA IS THE OTHER of the two most famous preferments, sort of the Italian version of Poolish.

While biga and poolish can be pretty much used in place of each other, they have their own traditional uses and properties. Whereas poolish is a high hydration dough, biga is stiff. And whereas baguette is the typical bread for poolish, for biga it's the Ciabatta.

TO ADD A BIGA to our basic recipe, take again about one third of the total flour to use for your biga. This time, instead of the 100% hydration in the poolish, go for a lower hydration of 60%.

To create a biga for a final dough with 500 grams of flour, you'll need:

166 G BREAD FLOUR

100 G WATER

A PINCH OF YEAST

KNEAD THE BIGA to make sure the flour is well hydrated, then leave it to ferment overnight on the kitchen counter, or up to 24 hours in the refrigerator.

Continue making the bread dough using the standard formula, but remember to take into account the flour and water already present in the biga—just as we did with the poolish above.

THE LINE BETWEEN biga and poolish—and other types of preferments is not quite as clear cut as it seems.

Some Italian bakers make biga with a hydration as high as that in poolish, and some preferments can be even souper than 100% hydration, going as far as mixing all of the water used in the dough with a small amount of flour.

This is good news as it means there is room for experimentation: try making bread with different kinds of preferments, maybe even combining two kinds of preferments in one bread. For example, Chad Robertson from [Tartine](#) fame uses poolish together with some sourdough starter to create his ideal baguette.

In the same way, by experimenting with the preferments, you will find new flavors and gain a better understanding of how the preferments affect the dough.

"BY EXPERIMENTING WITH THE PREFERMENTS, YOU WILL FIND NEW FLAVORS AND GAIN A BETTER UNDERSTANDING OF HOW THE PREFERMENTS AFFECT THE DOUGH."



CREATING YOUR FIRST SOURDOUGH STARTER

Creating a sourdough starter is not hard, and with some patience and good care, you will create a pet colony for life. This article will lead you through the steps of creating your first starter for sourdough bread making.

STARTING MY OWN SOURDOUGH CULTURE has been one of the most exciting experiences in my life. That sounds nerdy, I know. But watching a sourdough culture grow and fall as the result of the life inside the jar is a bit like magic—you create life out of thin air.

Except that it's not magic, but science that has been practiced by our ancestors for hundreds if not thousands of years.

IF YOU HAVE FRIENDS who bake with sourdough, they will be happy to give you a little of their own culture. After all—as you will soon notice—keeping the starter alive means throwing out big parts of sourdough at every refresh.

Some people also buy sourdough cultures from other people who have been growing them for sale. So, if you like, it's well possible to skip this step and start baking with sourdough without first creating your own starter.

But if you are curious, read on. Creating your own starter is not hard, and growing your

own culture from scratch is a lot of fun!

TOOLS NEEDED

CONTAINER (E.G. A BOWL OR A JAR.)

SPOON

INGREDIENTS

FULL GRAIN FLOUR (WHEAT)

BREAD FLOUR

WATER

FOR A SOURDOUGH STARTER, this really is all you need. As you read more about starters, you will find that some people start with raisins or other fruit. Some add sugar to the mix. I have even heard of people starting sourdough starters with the help of some commercial yeast.

But as the point with a sourdough starter is

to create an environment suitable for the growth of the right kind of bacteria and yeasts, I believe it's best to start right away with the kind of diet you will be feeding the starter in the end.

And to get a good, strong starter going, you really don't need more than this! (We'll look at using fruit for a different kind of starter soon enough, when we experiment with yeast water)

STEP 1

MIX ALL INGREDIENTS in your clean bowl or jar. With cleanliness I follow [Sandor Katz's](#) lead and go for clean instead of sterile.

If you like, there is nothing wrong with cooking the bowl to sterilize it before the first time you mix the starter. I have never done this, and my starters have always worked out just fine.

Just wash the container as you normally wash your dishes and rinse thoroughly to make sure there is no dish washing soap left.

"TAKE 50 GRAMS OF FULL GRAIN WHEAT FLOUR AND 50 GRAMS OF BREAD (OR ALL PURPOSE) FLOUR AND MIX WITH 100 GRAMS OF WATER."

AT THIS POINT, the amounts don't matter that much. You just need to get a thick batter with a 50/50 ratio of both flours. But it's often easier to work with exact numbers instead of vague definitions, so for the sake of clarity, *take 50 grams of full grain wheat flour and 50 grams of bread (or all purpose) flour and mix well with 100 grams of water.*

To make it easier to get the right amount of both flours, you can do what Chad Robertson recommends and create your own mix of flours in a separate container by combining 1 kg of full grain flour with 1 kg of bread flour and mixing well.

This way, you can just measure 100 grams of flour straight from that mixture instead of measuring 50 grams of bread and full grain flour separately.

FOR WATER, I am lucky to live in a country with very high quality tap water, so I always go for tap water.

If the tap water where you live is highly chlorinated, you will need to dechlorinate it by letting the water stand in an open vessel on the kitchen counter for at least 4 to 8 hours so that the chlorine evaporates.

Using bottled water is naturally also an option, if that's the water you normally use for drinking.

The main rule here is to use water that tastes good and doesn't have too much chlorine so that it would inhibit the growth of yeasts and lactic acid bacteria in the starter.





STEP 2

COVER THE MIXTURE LIGHTLY. If you are using a jar, don't put the lid on. Yeast requires oxygen to multiply, so it's important to give it a good supply of air to feed on.

Also—although bakers disagree on this—some bakers say that you can catch yeasts and bacteria for your starter from the air.

I usually cover the bowl with a kitchen towel dedicated to bread making. Only when the starter is all ready, I put the lid on.

PLACE THE STARTER in a warm, draft-free place. Especially in summer time, the kitchen sink works very well. I have found that a sourdough starter is not very picky. Those bacteria are strong beasts.

For a couple of days, as the starter is slowly coming to life, watch and enjoy the process. Stir the batter vigorously at least once a day to get air inside and encourage the growth of yeast cells. Then wait.

STEP 3

WHEN THE STARTER is full of bubbles and starts to smell distinctly sour, it's time to start teaching it a consistent feeding cycle.

Take one big table spoon of your active starter, place it in a bowl and mix in 200 grams of your flour mixture (or 100 grams of whole wheat and 100 grams of bread flour) and 200 grams of water. Stir well. Again, the amount of flour you use is not very important. What matters is the ratio between water and flour. I

like to maintain a starter at 100% hydration as it's easy to stir, and having equal amounts of flour and water in the starter makes recipe calculations easier.

Discard the remaining starter and place this new starter in the container in its place. If throwing starter away feels bad, check [page 44](#) for some ideas on how to use your extra starter.

For the next couple of days (or longer, depending on the activity of your starter), keep repeating this process at the same time every day. I like to do it first thing in the morning, but pick a schedule that fits you best, and stick with it.

STEP 4

AFTER A FEW DAYS OF feeding, you will start to notice that your starter has a clear routine of first growing throughout the day, and then falling down by the time you feed it again. It's probably not exactly a 24 hours cycle, but close enough.

When this happens, the starter is ready to be used for your first loaf. But the feeding continues. The longer you use and feed the starter, the stronger and more full with flavor it becomes.

Treat your sourdough culture well and it will outlive you and provide food for generations to come.

THE RECIPE

100% WHEAT FLOUR
(BREAD / ALL-PURPOSE)

70% WATER

2% SALT

2% FRESH YEAST

BAKING BREAD WITH SOURDOUGH

Growing or otherwise acquiring your sourdough starter is just the first step on a long journey that can span decades or even past an entire lifetime. It's time to put your yeast and bacteria to work and bake some bread.

ONCE YOUR SOURDOUGH STARTER rises and collapses consistently in a more or less 24 hour cycle, it's time to put it to the test. If you are not quite sure of your starter's readiness, don't worry too much about it—give it a try and you'll know. The worst that can happen is that you'll end up making a dense bread.

As you make your first loaf using the starter, you'll quickly see if the starter is ready or not. If it's not, refresh the starter again and keep trying (see [page 42](#) for troubleshooting advice if after a couple of tries the starter still fails to raise the dough).

IN THE FIRST ISSUE of BREAD, I presented the basic dough formula that you saw on the previous page. In the second issue we tweaked the recipe a bit by using different flours and then adjusting the amount of water accordingly. Now is the time to tweak the ferment and switch to "wild yeast."

As for the list of ingredients, much doesn't change; most changes are in slowing down the

bread making process to give the starter time to do its work.

~~2% FRESH YEAST~~
20% STARTER (AT 100% HYDRATION)

IN THE BASIC FORMULA we used 2% (bakers' percentage) fresh yeast.

When using sourdough, the number needs to be bigger as with the yeasts also come some flour and water (as well as lactic acid bacteria—but we are not going to count them).

The precise amount of this "fermented flour," as it's often called, depends on the process you use and the hydration level of your starter.

For a starter at 100% hydration such as the one created in the previous article and the simplest possible recipe, 20% of starter is a good place to start.

It leads to a total hydration of 72% in the final dough, which is close enough to the 70% in the original recipe.

SO, LET'S CONVERT the recipe into actual weights and get to work.

1000 grams of flour is easy for the calculations and leads to two loaves:

100% FLOUR

70% WATER

2% SALT

20% SOURDOUGH
STARTER

1000 GRAMS

$$1000 \times 0.70 =$$

700 GRAMS

$$1000 \times 0.02 =$$

20 GRAMS

$$1000 \times 0.20 =$$

200 GRAMS

AS YOU NOTICE, the change to the recipe's ingredients wasn't big. But don't rush to your

kitchen just yet. There is more to say about how we make the dough.

Instead of mixing the dough now and making a loaf of bread two hours later, when working with sourdough, you have to do a little more planning—starting the night before you bake.

STEP 1: REFRESH THE STARTER

FRENCH BAKERS use a process known as *Pain au Levain* in which they build a small piece of sourdough starter into the final dough in three successive feeding steps.

It's a good way to make a nice dough with only a hint of sourness, but you don't need to follow that approach to the letter to make great bread. What we do here is a simpler version of the process.

THE NIGHT BEFORE you plan to make the dough, using your ripe starter (If you feed to starter every morning, it is now at about its peak), create your levain:

1 TABLE SPOON RIPE STARTER
100 G BREAD FLOUR
100 G WHOLE GRAIN FLOUR
200 G WATER

STIR WELL, cover lightly, and leave to rest at room temperature.

STEP 2: MIX THE DOUGH

IN THE MORNING, or about 12 hours after the first step, your *levain* is ready. If you were using a three step levain process, you would continue feeding it with more water and flour to grow it into the actual dough step by step.

In this recipe, however, you will now mix the dough.

FOR THE BEST RESULTS, start with an autolyse step by mixing just the flour and water from the recipe (see previous page) and letting them rest from 20 minutes up to two hours.

After you are done with the autolyse, add 200 grams of the levain from step 1.

Store the remaining 200 grams as your sourdough starter for the next time you bake bread.

STEP 3: STRENGTHEN THE DOUGH

THE GOAL OF KNEADING a dough is to build strength into the dough so that it will be keep the shape you want until the bread has been baked.

When working with yeast, this has to be achieved quickly as the yeast completes its work fast and then starts losing its raising power. In sourdough breads, yeasts work more slowly so we don't have to hurry up, which gives us more freedom in choosing the way we knead the dough.

ONE OPTION—good if you don't have the time to focus on the dough as it rises—is to knead



for about 10 minutes, then add salt and knead again until it is completely dissolved into the dough.

ANOTHER GOOD OPTION that reduces the kneading time to almost zero is to build strength through stretching and folding the dough every 30 minutes as it rises.

Every 30 minutes, as the dough sits in its bowl, without taking the dough out, grab one corner of the dough, stretch it out of the bowl, and then place back on top of the dough. Press tightly at first and as the dough gets more gassy after a couple of hours, start handling the dough in a more gentle manner.

When using this approach, incorporate the salt into your dough after the first 30 minute rest period has passed.

FINALLY, you can go for a mix of the two approaches, kneading only briefly, maybe five minutes or less, and then following the process with a series of stretch and fold sequences.

Also, even if you go with a longer kneading, at the beginning, adding a couple stretch and folds at about every hour or so can help distribute the carbon dioxide inside the dough more evenly.

STEP 4: SHAPING BREADS

WHICHEVER WAY you choose for kneading the dough, you will need to let the dough rise until it's "ready". Deciding when a dough is ready is an art form in itself, and with sourdough, as every sourdough culture is

different, it's hard to give exact time estimates of how long to wait.

As you make more bread with your starter, marking down the time it took to get to the ready state, you will learn the approximate time it takes for your starter to process your dough.

ONCE YOU DECIDE your dough is ready to be shaped, proceed with the shaping just as you would with a regular yeasted dough.

Just remember that the dough will go through one more long rest period, so it needs to have good strength or some support, such as the Banneton baskets commonly used by artisan bakers around the world.

Depending on the temperature and the activity of your starter, by the time you have shaped your breads, it's probably late afternoon or evening and you now have the choice to either slow down the fermentation a bit more by cooling the loaves down in the refrigerator (or outdoors) or baking the bread the same night.

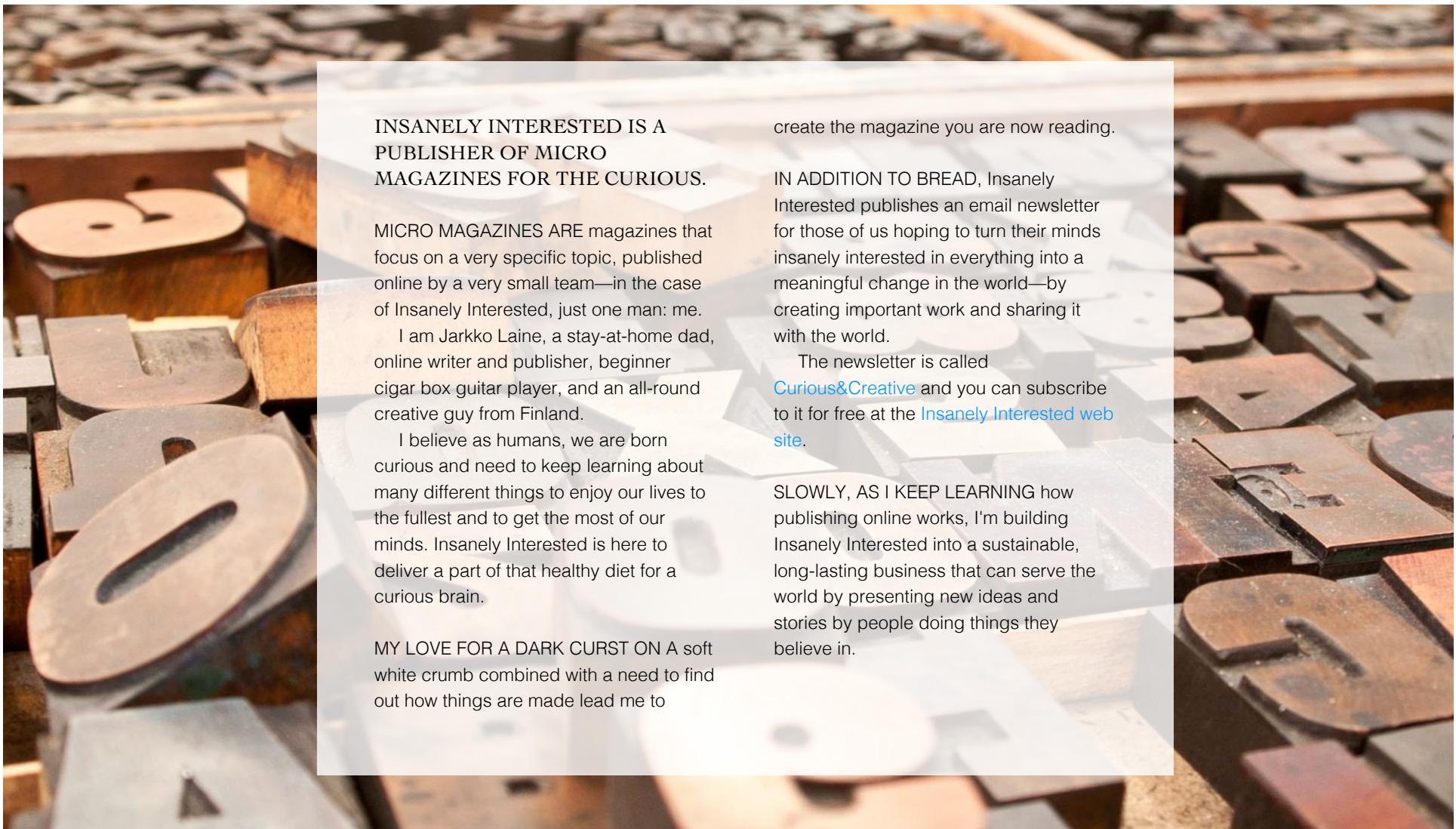
STEP 5: FINAL RISE

LET THE SHAPED BREADS proof, either in a cool environment to bake in the morning or in a warmer location to bake the same night.

If you retard the rise by cooling the dough, take the loaves out of the refrigerator an hour before you plan to bake it so that it can warm a little and maybe get one last good rise before going to the oven.

THEN, BAKE THE BREAD and enjoy!





INSANELY INTERESTED IS A PUBLISHER OF MICRO MAGAZINES FOR THE CURIOUS.

MICRO MAGAZINES ARE magazines that focus on a very specific topic, published online by a very small team—in the case of Insanely Interested, just one man: me.

I am Jarkko Laine, a stay-at-home dad, online writer and publisher, beginner cigar box guitar player, and an all-round creative guy from Finland.

I believe as humans, we are born curious and need to keep learning about many different things to enjoy our lives to the fullest and to get the most of our minds. Insanely Interested is here to deliver a part of that healthy diet for a curious brain.

MY LOVE FOR A DARK CURST ON A soft white crumb combined with a need to find out how things are made lead me to

create the magazine you are now reading.

IN ADDITION TO BREAD, Insanely Interested publishes an email newsletter for those of us hoping to turn their minds insanely interested in everything into a meaningful change in the world—by creating important work and sharing it with the world.

The newsletter is called [Curious&Creative](#) and you can subscribe to it for free at the [Insanely Interested web site](#).

SLOWLY, AS I KEEP LEARNING how publishing online works, I'm building Insanely Interested into a sustainable, long-lasting business that can serve the world by presenting new ideas and stories by people doing things they believe in.



INTERVIEW: SEBASTIEN BOUDET

In Sweden, French sourdough baker Sébastien Boudet leads a friendly grass-roots revolution for the better appreciation of slowly prepared bread and ingredients of the highest quality. Sweden is listening and the message spreads.

"SOURDOUGH IS THE ONLY WAY FOR ME," Sébastien Boudet told me in the beginning of the interview.

For the past two years, he has been leading a grassroots revolution which he hopes will change the face of bread making in Sweden. Working on three fronts at the same time, like a Gillette Mach 3 razor blade, as he says—with private people, with schools and education, and with professionals—he believes he will reach his goal faster.

The approach seems to be working: today, the revolution is spreading fast, and Boudet, who came to Sweden twelve years ago is reaching the heart of Sweden. This summer, he appeared on Swedish radio as the first baker to have hosted Sweden's traditional summer program, Sommarprat which still reaches over 3 million listeners every time it airs.

Boudet's book, *Den Franska Bagaren* (The French Baker) was published earlier this year, and his blog, *Brödpassion*, which he started in 2008 is updated many times a week and

collects an enthusiastic following.

IF ONE THING, Boudet is passionate.

Passionate about using the best ingredients (he is not afraid to call bad flour shit, or to voice his opinion when he sees famous bakers promote bad flour just for the money) and the craft of bread making.

But he is not angry.

Actually, he is a friendly man who says he likes everyone. A friendly man orchestrating a revolution:

"When you are French you think always about revolution. And revolution is about people. It's not the state or the power who says we should do that because it's better for everyone. It's the people who go and say that it shouldn't be like this anymore."

But let's go back to the beginning.

ARRIVING IN SWEDEN

SÉBASTIEN BOUDET was born to a family of

bakers from which he inherited the passion for bread making—and despite his mother's efforts to guide him to some less consuming profession—became a baker just like his father.

Boudet arrived in Sweden (because of a woman he met in Spain) in 2000 and after a year of traveling back and forth between Stockholm and New York where he was living at the time, settled in the country.

"In the beginning, I had some trouble finding a job because nobody was interested in my skills. The bread I was baking, nobody liked it. Everybody thought it was too hard, too thick, and too sour and too heavy. They wanted air," Boudet says.

BUT IT DIDN'T TAKE LONG for the entrepreneurial frenchman to start moving towards his goals.

After a short period of skinning salmon and then baking bread and cakes for a small hotel, he landed a job as pastry chef in the famous

Stockholm restaurant, Berns Salongen.

"I was 26 years old and it was a very good job. Very interesting." Boudet recalls.

TWO YEARS LATER, he started his own business making breads and pastries for local restaurants and hotels.

Just as he had expected based on his own experience as pastry chef, there was huge demand for this kind of a bakery:

"After three years, I was baking 1.5 tons of sourdough bread every night, and the day was 24 hours working with 11 persons."

Business was good but Boudet felt it was not leading to the big change he was trying to achieve:

"In the end I had 320 different products—I was making special bread for everyone. It got a bit heavy in the end. I thought: I want to change the face of bakeries in Sweden, and I'm never going to make it this way. Nobody knows who I am and everybody uses my bread to get the credit for it."

Working against orders, Boudet didn't have the time to experiment with the breads he wanted to make so it was time for a new business.

PETITE FRANCE

FOUR YEARS AFTER starting his previous business, in 2007, Boudet started his French bakery and café, *Petite France*.

"The concept was to have the bakery at the heart of the whole place. In the middle, you have the bakery with a huge stone oven, a

Bongard—a French stone oven—working day and night, where we bake the bread, dry the strawberries, confit the duck, grill the chicken, do the Crème Brûlée, and do the Tartelettes. Everything was going through this oven."

And as you can expect for someone as passionate as Sébastien Boudet, his passion for using only the best ingredients and taking no shortcuts was at the heart of the business since the beginning, whether for food, coffee, pastry or bread.

"I was one of the first ones who started to reconnect to the mill where we make the flour. I would go to the field, choose what kind of wheat or rye I want to have, mill it the way I want it, and then make the bread from it. To start to work with real flour, with natural flour, with flour which is nothing else, just flour itself." Boudet says, and continues to explain the importance of good ingredients in his work:

"I would never put something on the shelf unless I believed it was the best I can do. And unfortunately there are a lot of bakers and pastry chefs who do that."

"I think that's part of my personality and that's why it's been working so well in my place."

"When people come to my place, they can relax. They don't have to think 'Is it good? Is it well done?' Because they know that I'm not scared. People have tried to shut me up and make me be quiet and stop talking about all this because it's very sensitive. It's a very sensitive subject when you start to talk about flour and additives in the industry."



BUILDING A REVOLUTION

WHEN YOU TALK WITH Sébastien Boudet, you can't help but get inspired. A natural agitator, his passion for baking with great ingredients is contagious. And he is not one to save his words.

"In Sweden, home bakers bake just as they do in big factories. People bake at home with industrial flour, with yeast, with bad ingredients. They whip the dough with big machines and then they think they have baked something good at home. When they really haven't. Then, industry can just make the same shit and do as good as the people at home!"

AFTER A COUPLE OF YEARS of unsuccessful attempts at trying to convince the big companies and bakers to start using better ingredients and methods of making bread, Boudet went to home bakers and smaller bakeries who were not too afraid of change:

"I tried to convince the syndicate of bakers to do something. They did nothing. I tried to convince bakers to do something. They did nothing. And I am French, you know. When you are French, you always think about revolution."

So, we are back at the revolution.

"Today, every single person is connected to 300-400 other people and with just two clicks can reach thousands of people. So, I believe the best way to make this revolution spread and to make this revolution be a real revolution is to spend some time with people who want to bake bread at home." Boudet says.

BOUDET SOLD his very successful company 1.5 years ago and focused all of his attention to educating Sweden on great bread.

"I wanted to be independent, so that I don't have any need for sponsors. It's very hard to go to your colleagues who see you as the competitor, another baker which has a shop. By selling my place I got independent: now I'm just some guy, and I can come and help you." Boudet explains.

"My place was up in the sky when I sold it, It was crowded and so I got very well paid. Now, I don't rely on anyone. I can just live and I don't need to work for money."

THROUGH HIS BLOG, Boudet has been growing his following steadily, leading to more chances to meet with people, teach them bread making, and make them a part of the revolution to change the way bakers think about bread.

"I like the fact that when I make courses—I make two-day courses, 15 hours—people get out of there totally brainwashed. They also know that the money they pay on the course, I use it to do free courses for schools." Boudet says.

Offering the bread courses for schools for free makes them easier to sell. When the teachers interested in Boudet's type of bread making don't have to go through school boards or look for outside sponsorships in order to afford the courses, more schools are inviting him.

"My only solution was to be free. I'm free, I

"IN SWEDEN, HOME BAKERS BAKE JUST AS THEY DO IN BIG FACTORIES. PEOPLE BAKE AT HOME WITH INDUSTRIAL FLOUR, WITH YEAST, WITH BAD INGREDIENTS. THEY WHIP THE DOUGH WITH BIG MACHINES.

THEN THEY THINK THEY HAVE BAKED SOMETHING GOOD AT HOME. WHEN THEY REALLY HAVEN'T!"

don't cost anything. So, when I go there, the teachers won't have to ask for permission, I can make a course."

"I buy flour, chocolate, and eggs and butter, and I go there with my truck and make a course for two to three days. We bake everything and I brainwash the students. They get another view of the business of working with bread and cakes." Boudet says.

"The fantastic thing is that when I meet the bakers, and I show them how I make bread, they realize that it's such a different thing to work with good flour: You feel like you are needed. You are not just the worker, you are the baker. You are someone who turns flour, water, and salt into bread, and you can make something fantastic out of just water, flour and salt."

A PROOF OF LOVE

TEACHING HOME BAKERS, Boudet has seen that they have very pure, even noble motivations for making bread:

"Most of the home bakers I have been meeting and have been teaching how to make bread, when they bake a great bread, when they put it on the table, it's their way to say to their family that they love them. It's a proof of love you put in the middle of the table."

"That's why it is very inspiring to teach those home bakers because they are so grateful. They learn more, they get better, and they bake and bake and bake."

He is also convinced that anyone can bake: "When I meet someone they always say 'I



don't know how to bake.' And I say 'Okay, well you know, I don't know how to ride a bicycle.'"

"They look at me and say 'No...' But yes, I don't know how to ride a bicycle."

"They say, 'No... it's not true...', that I'm joking. But I'm not."

Boudet asks: "If it's not possible not to be able to ride a bicycle, why would it be possible not to be able to bake bread?"

Both are just the same. You fall, you learn, you try again, and then you practice as much as you can to learn.

"Nobody can say 'I can't bake.' You just don't want to bake. You don't think it's fun, you don't think it's interesting. But don't say you can't bake. Everyone can bake." Boudet says.

BUT WHAT THEN IS GOOD BREAD? And how do you make it?

Sébastien Boudet names three important aspects. The first one, ingredients, comes without a second of hesitation.

"You have to take the time to search for the ingredients and find good flour and good salt." Boudet says.

"Without good ingredients you can't make nice bread. If you make good bread with bad ingredients, then there's something wrong."

He then goes on to tell that many people come to his courses saying that they have trouble getting their sourdough starters alive and bubbling.

"It's because the flour is totally sterile. The flour is dead. I mean industrial flour is dead, there is no life in it. That's why many bakers

give advice that you use raisins or apricots to feed the sourdough. Because the bacteria you should find in the flour, they are not there."

One of Boudet's current projects is to put on a map the 22 still functional traditional mills in Sweden, "to preserve their knowledge, to preserve their culture, everything around what they have been doing for years, and fighting to be left so that their mill doesn't turn into a museum," as he says.

"My goal is to make sure those mills get a lot to do and start to sell flour more and more."

AS THE SECOND ASPECT of great bread making, Boudet mentions understanding kneading—and not doing too much of it.

He is a big proponent of a long autolyse step, as long as up to two hours.

"That's what bakers were using in the 17th, 18th centuries." Boudet says. "Because it was so hard to knead the dough so they when you let the dough rest that way, you don't need to knead it so much."

He tells people to bake with their hands instead of machines and connect with the dough to really learn to understand how the dough works:

"I'm going to be on a show on Sunday on the TV, and I'm going to tell them "sell your KitchenAid, take the money you get out of it and try to buy better flour."

"And use your hands because they are your best tools"

"The machine is an illusion, it's to sell them something, to make money."

"YOU DON'T NEED TO PUT MORE VITAMINS IN THE FLOUR, IT'S ALREADY THERE. IT'S JUST THAT IF YOU YEAST TOO QUICKLY, YOU DON'T GET THOSE VITAMINS. THEY JUST GO THROUGH YOU."

THIRD, there is sourdough, and the slow fermentation that comes along with it. Partly thanks to the recent trends in food, such as raw food diets and LCHF, we have gained new insight into nutrition, and some of the findings make a solid case for slowly fermented bread.

One such finding is phytic acid, an acid that is present in every kind of flour and fixes minerals, such as iron, copper, and zinc, as well as the vitamin D, making them mostly unavailable for the person consuming the flour. What has been noticed however, through the raw food diets, is that phytic acid breaks down when the flour and water are allowed to stay in contact for 12 to 15 hours.

"When [people subscribing to raw food diets] make a pudding, when they use flour, they always put it in water for twelve hours at first, to break down the phytic acid." Boudet explains.

And the same applies to bread fermented with the sourdough method, he says:

"That's why sourdough is so much better, because under this proofing time, long contact between the water and flour breaks down the phytic acid, and when you break down the phytic acid it lets free all the vitamins and the minerals and everything gets so much better. So, you don't need to put more vitamins in the flour, it's already there. It's just that if you yeast too quickly, you don't get those vitamins. They just go through you."

Another health aspect that comes from slow fermentation is the change in GI or glycemic index. White, industrial bread has a very bad

reputation for rising the glycemic index, but according to Boudet, the same is not true for slowly fermented bread:

"When you have a bread which has been proofing over 24 hours—my bread goes from 24 up to 48 hours—then you get a very good blood sugar. You stay full for a long time."

And finally, there is gluten.

In the industrial bread making process, extra gluten is added to flour to make it stronger. Then the dough is whipped in a blender for 15 minutes, followed by a quick proof and baking.

"This combination makes the gluten in the bread transform to be much more aggressive, and your self-defense will create an inflammation in your body, which raises the risk for cancer and for chronic diseases, such as diabetes. And it rises the risk to becoming allergic to gluten. So, like they say in Swedish: you sit on the branch you are cutting. You make bread that makes people allergic to bread. Think about it, this is totally crazy!" Boudet says, and continues:

"I don't make bread for people allergic to gluten. But I make bread which is very good, which will not create a gluten allergy to someone. I know people who are sensitive to gluten and they can eat my bread one slice of my bread every day and feel good anyway."

BUT BOUDET WANTS to make clear that it's not the sourdough starter itself that does miracles, but the whole change of thinking that comes with moving from yeasted doughs to



sourdough:

"And it's not just the sourdough—sourdough is just the proofing method—but everything around it. When you make sourdough bread, you knead much softer, you choose your ingredients better, and have long proofing times, everything together makes that the bread is much more healthy."

THE REVOLUTION CONTINUES

WITH THE REVOLUTION moving ahead with full speed, Sébastien Boudet is now ready to move on to new challenges.

Or more specifically, to go back to his true passion of being a sourdough baker. He says that in these 1.5 years since selling his previous business, Petite France, he has learned a lot while working with millers and bakers all around the country, and now has a strong itch to bake.

"I need to bake, I need to have my own place. I need to have my own oven. I need to have a home, somewhere I can go to bake in the night time. I miss it," he says.

"And now I feel I have started the revolution and I don't need to take it to the end. There is a lot of people involved now, so I think now other people can continue. I will continue too but in the mean time, I'm a baker. I'm not a businessman, I'm not a journalist, I'm a baker, I need to bake."

It's time to talk a different language:

"I think now I want to spend more time baking and telling things through my bread than through my words."

WHEN THE NEW BAKERY OPENS, it will be a place where the customer can feel the passion the bakers have for what they do. The work will be done by hand, at the center of the bakery, so that everything will be open and visible:

"It's going to be hand kneaded, everything. No blender. We are going to make like 30 kilo at a time. 30 kilo of dough will be hand kneaded in front of the customers. It's going to be just open, everything open, everything here." Boudet explains his vision.

And then there is the big idea, which he is taking from the world of fine wine: connecting the bread to the field where it comes from.

"I'm going to reintroduce the notion of 'cépage.' I'm going to connect the field to the bread. I'm going to try to connect all the mills around Sweden and have special flour and have this cépage word around every bread."

THE JOURNEY TO starting the new bakery has just begun, and Boudet is taking his time to choose the right place for it carefully. He is not in a hurry, and this time, the situation is very different from when he started Petite France.

"For Petite France, it took six months to convince them to let me buy the place and make a bakery out of it. They were scared and said 'we don't want a bakery, we want a restaurant,' because bakeries are trouble for people. They smell bread, in the night time they make noise..."

This time around, people are inviting the new bakery and making great offers for helping it get started!

"I THINK NOW I WANT TO SPEND MORE TIME BAKING AND TELLING THINGS THROUGH MY BREAD THAN THROUGH MY WORDS."

BUT WHILE THE leader of the revolution plans to go back to basics and making the best bread he has ever made, it's easy to feel confident that the revolution continues.

The big Swedish yeast company responsible for all of the yeast sold in Sweden recently launched a product claiming to be sourdough—a product that doesn't have any rising power but requires adding yeast!

On his blog, Boudet told readers to turn the boxes upside down whenever they see them in the store. Now, he says he gets 10 to 15 SMS messages a day with photos of these boxes turned upside down:

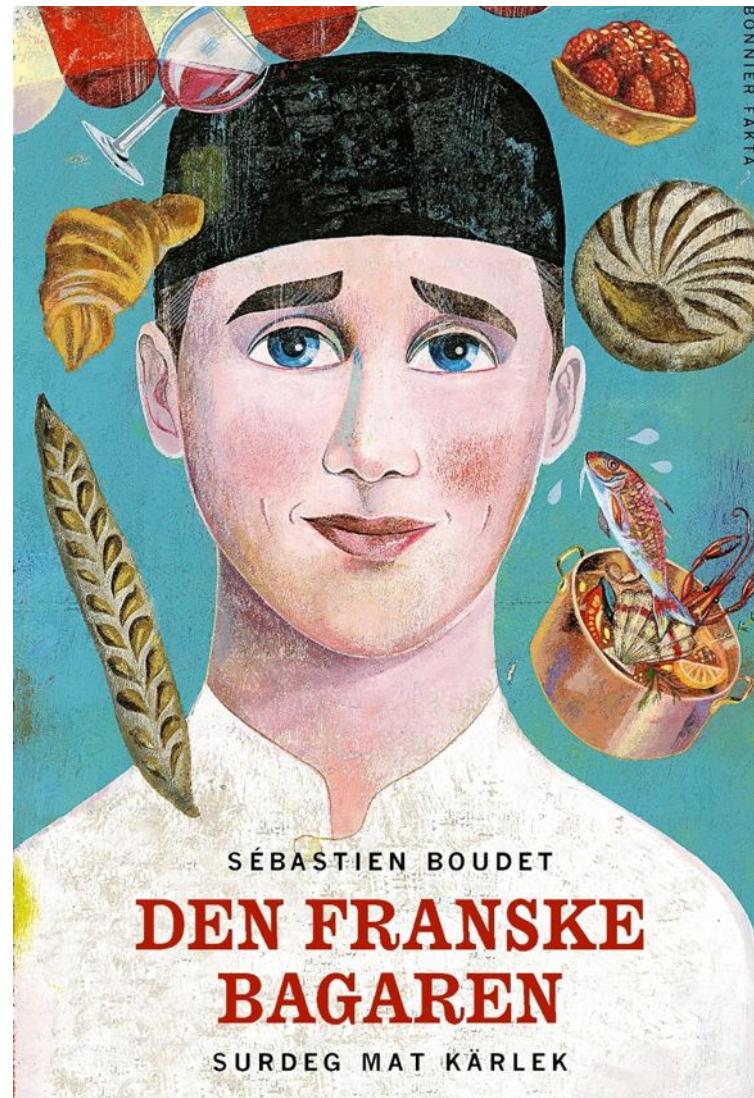
"I told people to put them upside down when they see them. It's the revolution. And everywhere I go to buy food, most of the time the sourdough, they are upside down."

"When everybody all around Sweden see [the boxes] upside down in those windows, they understand and they feel like wow. It's not forbidden, I checked with my lawyer, it's nothing bad, it's just a protest. Sourdough should be sourdough. You can't make sourdough that requires 50 grams yeast for 700 grams of flour."

"I think it's bugging them very much at the yeast company. But at the same time it's a little bit sweet. A sweet way to be a little bit nasty."

The revolution is alive and well, and real bread is back.

"THIS WAY OF MAKING bread is the real way. It's not a trend, it's just that we forgot about it. And now we get back to it." Boudet says.



CENTRAL BAKERY

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CLOSED

FERMENTATION Q&A

How do I know when my bread is ready to be baked? Why isn't my sourdough starter getting started? These questions can be frustrating at times, but don't let them stop you from practicing.

MY STARTER DIDN'T COME TO LIFE

IF YOU HAVE BEEN WAITING for over a week, stirring the dough at least once a day and no life is appearing in your starter, you can try one or all of these ideas:

1. SWITCH TO DIFFERENT FLOUR. Organic flour is said to be better for sourdough starters than regular flour. Also, full grain flour, especially rye makes the starter grow more vigorously.

2. MAKE SURE YOUR WATER is not chlorinated. Chlorine can kill the yeasts and bacteria in the starter. If your tap water is high in chlorine, you can either try to dechlorinate it by letting the water sit in an open vessel at room temperature for at least 24 hours or buy bottled water to see if it helps.

3. DON'T COVER THE STARTER too tightly. The yeasts and bacteria come from many

sources, including the air, so you don't want to block their way to the dough.

4. STIR THE STARTER vigorously and often for a while. Oxygen will cause the yeasts to do aerobic fermentation, or respiration, which multiplies them in the starter.

5. MOVE THE STARTER to a warmer location. Some people use the oven with only the lamp turned. A cupboard above the refrigerator can also work well.

I FORGOT TO FEED MY STARTER

SOURDOUGH STARTERS are very strong beasts and against all the instructions for their proper use can handle tough environments once they have been properly established.

If you forget to feed your starter, you can very well recover it even after a week or two at room temperature and much longer if stored in the refrigerator.

Just scrap the dry and thick crust that has formed on top of the starter and you'll find some light dough. Take a table spoon (or even less) of it and feed with water and flour. In my experience, after a few refreshes, the starter is as good as new again.

Once, I was even able to rescue a completely dried out starter by soaking it first in water to soften it and then adding flour into the soup.

YOUR RESULTS might vary as every starter is different, but before you throw your culture away, it's a good idea to give rescuing it at least a try.

IS MY DOUGH READY?

ONE OF THE THINGS THAT make mastering fermentation tricky is judging when a dough is ready to be baked. With practice, you will learn to read your dough, but some advice can be helpful.

IN HER BOOK, *Bread Science*, Emily Buehler gives the following advice:

"To know when your dough is ready to be folded or shaped, touch it. Consider how springy the dough is—does it bounce back when you push it? If it is very springy, then it is not ready. [...] Also consider how gassy the dough is—it will be full of gas when ready."

The same considerations apply for determining whether the breads are ready to be baked. Buehler continues:

"To examine the dough's strength, poke it gently with your finger—does it bounce back or did you leave a dent? Compare the strength to how it felt when it was first shaped. With time, the dough relaxes. [...] A dent indicates that it is ready to be baked."

This way, by touching your dough at different steps in the fermentation process, you will improve your skills at reading the dough's state and learn to bake the bread when it is ready instead of a specific amount of time.

**"TO KNOW WHEN
YOUR DOUGH IS
READY TO BE
FOLDED OR SHAPED,
TOUCH IT."**



STARTER USES BEYOND BREAD

Discarding unused dough when refreshing your starter is a step in sourdough bread making that makes many home bakers feel a bit guilty. While you can't use all of your starter, here are a few ideas to rescue at least some of it.

IDEA 1: SOURDOUGH PANCAKES

YOU CAN'T EAT PANCAKES every day but when you do, a sourdough starter is a beautiful thing to have in the house. Just a table spoon or two of ripe starter is a great way to give both flavor and texture for your regular pancake recipe.

If you have time and like the sour taste of sourdough, let the starter ferment the batter a bit before baking the pancakes. When doing this, I like to add a bit of sugar just before heating the pan and baking the pancakes, to replace the sugar consumed by the active yeasts in the sourdough starter.

The taste might take some getting used to, but in a while, regular pancakes will feel as if they are missing an important ingredient. Or you can add a little baking soda to take away some of the stinginess of the taste.

IDEA 2: SOURDOUGH WAFFLES

MOST PANCAKE RECIPES can be baked into

waffles just by using a waffle iron instead of a frying pan. So, once you have had enough of sourdough pancakes, the next variation is waiting right behind the corner.

[Here's a recipe](#) you can use for both pancakes and waffles—a quick web search will lead you to many more recipes.

IDEA 3: FRIENDSHIP CAKE

YEARS AGO, when I knew nothing about bread making or sourdough cultures, I received a small batch of cake dough called Herman and a printed recipe with instructions on how to take care of this "friendship cake."

I didn't realize it back then but this cake is actually a form of sourdough. Check out [the recipe on this page](#), and get the "chain letter" going.

SOURDOUGH CAKE MAKING doesn't stop with Herman though. On the internet, you will find many cake recipes using sourdough for

added flavor, such as [this carrot and pineapple cake](#) from the Sourdough Home web site.

IDEA 4: DEEP FRIED STARTER

THIS IS A RECIPE FOR the more adventurous sourdough lovers. Drops of sourdough batter fried in oil:

Mix 1000 grams of water with 600 grams of coarse rye flour and 90 grams of sourdough starter. Leave the batter to rest at room temperature for about 6 hours and fry medium strands of dough using a pastry bag until golden brown and crispy.

Toss with salt and enjoy as snack.

IDEA 5: KVASS

SOURDOUGH STARTER can be used to start all kinds of new ferments based on yeasts and lactic acid bacteria. One such ferment is a drink called Kvass, popular in Russia and many Eastern European countries.

Kvass is made by fermenting stale rye

bread with the help of some sourdough starter.

I haven't tried or tasted Kvass myself, but the recipe in Sandor Katz's book *The Art of Fermentation* seems straightforward enough.

IDEA 6: FERMENTED PORRIDGE

YOU CAN CREATE A FERMENTED breakfast porridge by mixing oats and water with a teaspoon of sourdough starter and leaving to rest overnight. Then, in the morning, as you cook your porridge, you will get to enjoy a pleasantly sour taste—and probably a more easily digestible porridge as well.

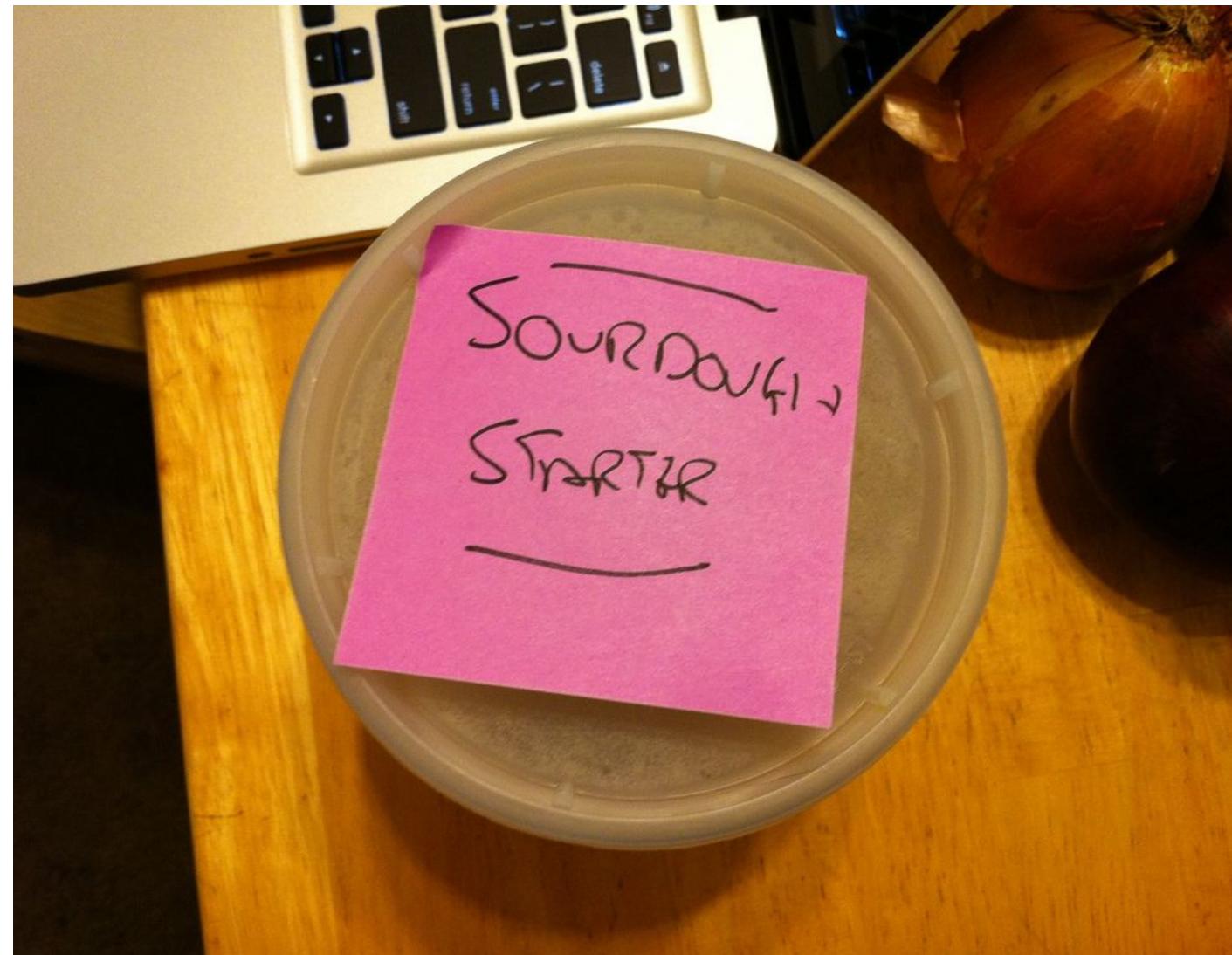
If you want to go further, [you can grow a porridge starter](#) and use it for years to come.

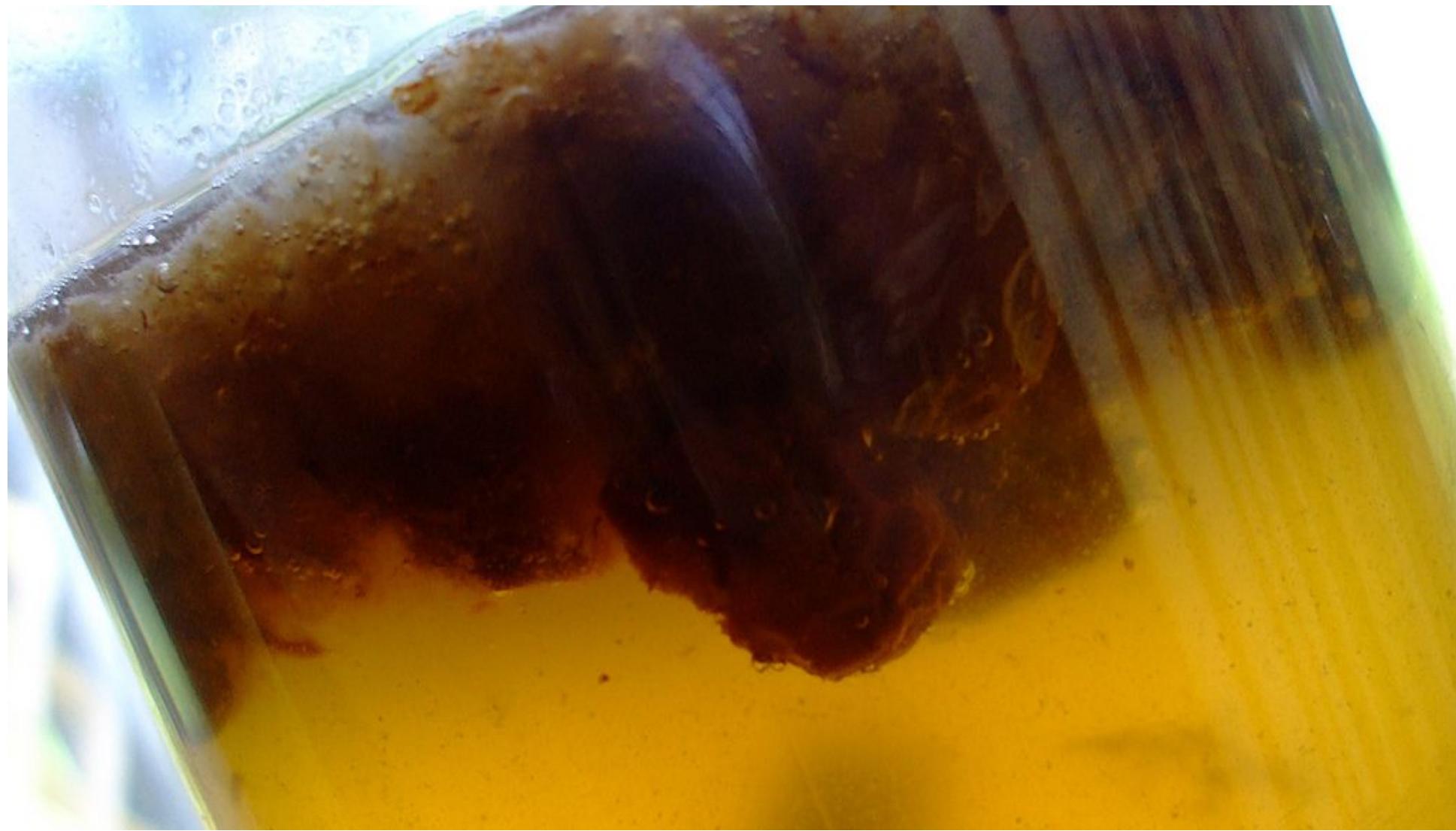
IDEA 7: SHARE OR SELL

WHILE NOT REALLY a way to use excess sourdough, this is a great way to help people who are interested in giving sourdough baking a try but feel that growing their own starter is too complicated or time consuming.

Give your friends and neighbors small batches of sourdough with instructions on how to care for the starter. And while at it, if you are business oriented, selling small, refrigerated jars of fresh sourdough starter might not be such a bad idea.

WITH A LITTLE BIT OF EXPERIMENTATION, you will find even more uses for your yeast and bacteria. When you do, why not share some of your best inventions with the rest of us at [the magazine's Facebook page](#)?





CULTIVATING YEAST: YEAST WATER

Creating a sourdough starter is not the only way to grow wild yeasts. This summer, I discovered a whole new world of fermentation as I stumbled on to yeast water, also known as mead or honey wine.

THE COMMERCIAL YEAST that we think of as the default option for bread making today wasn't invented until the last quarter of the 19th century. So, for the centuries before that, bread was made using wild fermentation: sourdough cultures but also yeast collected from various other ferments as side product, most notably beer.

While sourdough baking has been seeing a revival in the recent years, other methods of collecting yeast are not quite as well known.

One of them is the topic of this article, a ferment called "Wild Yeast Water" by the online bread making community and mead or honey wine by the rest of the world.

I JUMPED IN TO experiment with yeast water out of sheer curiosity, but it turns out the method has some advantages (as well as disadvantages) compared to a traditional sourdough starter.

After couple of months with experimenting with yeast water, I still return to sourdough

when I want to make my favorite breads, but for softer, enriched breads such as sandwich loaves, yeast water is a great method to use as it makes a moist bread with none of the sour taste that lactic acid bacteria bring to sourdough bread.

YEAST WATER IS LIGHTLY fermented wild yeast mead. If you let the fermentation continue for a long time, the liquid becomes stronger with alcohol, eventually stopping the growth of yeast, but before that happens, under the right conditions, you can grow a good amount of yeast using water, honey and fresh fruit.

I created my first yeast water using black tea, which contains tannins that make the environment even more suitable for yeast growth, but I have seen great results with all kinds of fruit as well.

Following these instructions, you should be able to build an actively fermenting yeast solution in a matter of days.

CULTIVATING YEAST WATER

TO MAKE YEAST WATER, take a clean glass jar, fill half of it with fresh water, then dilute a couple of table spoons of organic honey into the water. If the honey hasn't been processed, it will contain natural yeasts in it, but to make sure the liquid has good amounts of yeast to start with, it's good to add some fruit which is known to attract yeast such as grapes, peaches, or apricots—as well as some black tea for tannins.

Don't peel the fruit as the peel is where most of the yeast is. Just wash the fruit lightly (so you don't remove too much of the yeast) and cut to pieces. The smaller the pieces the more surface area is exposed for the fermentation, leading to more activity.

Leave the jar to ferment at room temperature, uncovered—except for a cloth to keep flies away. This is important because if closed tightly, the jar will build up pressure, which can lead to dangerous accidents. Plus,

to encourage yeast growth, you want as much oxygen in the jar as you can get.

To get even more air in the mix, stir it vigorously several times a day.

Add more honey to feed the yeasts about once every day or every second day depending on how active your culture seems to be.

MAKING BREAD WITH YEAST WATER

WHEN THE YEAST CULTURE has been bubbling for a few days and smells like alcohol and maybe a bit yeasty, it's time to give it a go at bread making.

The day before you want to mix your final dough, take a small amount of the liquid and combine with an equal weight of bread flour.

Using more specific numbers, let's start with:

50 G YEAST WATER

50 G BREAD FLOUR

COVER THIS MIXTURE with a cloth and leave for about 8 to 10 hours at room temperature. If you started in the evening, you can do the second build the next morning, or if you started in the morning, you will continue in the evening.

ALL OF THE STARTER FROM FIRST BUILD

100 G YEAST WATER

100 G BREAD FLOUR



#realbread



LET THE STARTER REST for another eight hours. Then, if you like, you can still continue building the starter with more flour and yeast water (or just plain water if you feel your dough already has enough yeast). Or you can mix the final dough.

FOR THE FINAL DOUGH, you can again consult our basic formula, replacing some of the flour and water with your yeast water starter.

For example, if you have built a starter in two phases as above, your starter now contains 150 grams of both water and flour. This means that you can subtract these amounts from the total water and flour required for the formula.

In a 70% hydration bread with 500 grams of total flour, this would mean that you need to add 350 grams of flour and 95 grams of water to your dough in addition to all of the starter.

As the starter already contains the yeast needed for your bread, you don't need to add any.

VARIATIONS

MANY PEOPLE WHO BAKE with yeast water like to combine some sourdough starter with their yeast water starter when making bread. This gives them some of the sour taste from sourdough while keeping it less pronounced.

Again, experimentation is the best way to find out what yeast water is all about and how it fits your baking routine. Take a shot and enjoy a new adventure in the art of fermentation.





INTERVIEW: MIKE "THE BEJKR" ZAKOWSKI

Mike Zakowski has done a very successful career in bread making, owning and managing bakeries and making award-winning breads. Today, he runs a bakery in Sonoma, California where he hopes to keep things small and stay close to his dough.

MIKE ZAKOWSKI runs a very small one-man bakery called [the bejkr] in California's "slow city" or "Cittaslow", *Sonoma Valley*. But it's not just any bakery. Zakowski bakes his handmade loaves in a food wired oven built inside a shipping container in his back yard.

The baker, often described with words such as "renegade" or "anti-corporate" then drives his van and mobile wood fired pizza oven to the local famers' market to sell fresh bread to his loyal customers.

This year, Zakowski found himself in a totally different world, when he participated in the "Coupe du Monde de la Boulangerie"—an event that could be described as as the Olympic Games of bread making—as one of three members in Team USA. The team finished close second, right after Japan.

I ASKED MIKE A FEW questions about his work and projects as well as his thoughts on bread.



JARKKO: How did you go about starting your bakery? Was it a clear and well-planned process or were there bumps and surprises along the way?

MIKE: I JUST DECIDED to build a wood fired oven in my back yard and build my bakeshop out of a shipping container and connect the two for functionality.

I live on a mixed use property and my landlord was all for what I had planned to do so I moved forward with the project.

It was definitely clear and well planned but you always run into bumps along the way in any project I believe.

JARKKO: Could you describe your typical day at [the bejkr] — or is there such a thing?

MIKE: WELL I BAKE FRESH bread for the two farmers markets here in Sonoma. One of them is open only six months out of the year and the other all year.

So those days are pretty set as for the timing and making of the product as I want the freshest possible product for the market.

AS AN EXAMPLE, my work for a Friday market starts on Thursday morning at about 7 A.M. with the shaping of the whole wheat pretzels, then going right into mixing a couple of doughs to be cold fermented, and then right into my preferments for that evening's mix.

I finish the morning session by noon and then have some lunch, take care of some emails and computer stuff before going off to bed from about 2 to 7 P.M.

My first mix starts at about 8 P.M.

I finish up with the bake by 6 A.M., load my van, start fire on trailer oven and leave for the market by 8 A.M.

I set up and start selling by 9 A.M.

JARKKO: Your current work as [the bejkr] is quite different from most bakeries I know of. What drives you to keep the bakery small, do

everything by hand, and not sell outside the farmer's markets you work with?

MIKE: I AM IN A VERY UNIQUE situation as I usually sell out at both of my farmers' markets —which by the way is a bit over 50 hours of work per week as I do everything by myself, including the cleaning.

I also do private stuff on the weekends with my wood-fired trailer oven and teach at my local community center and else where about once a month.

I am very fortunate as I only have to travel one mile down the road to those farmers' markets and that is all the business I need right now. And I hope to only need that in the future as well.

JARKKO: What is the thing about bread that keeps you passionate? What do you enjoy most in making bread?

MIKE: THE SATISFACTION of the finished product and going to the farmers' markets and selling out.

Every part of the process is fun for me: I just love getting my hands in it, mixing it by hand, shaping it by hand and then baking it.

Every time I make bread, it just amazes me that it's a relative simple process that yields such beauty.

JARKKO: I see bakers as craftsmen, and I think you'd agree. What do you consider the most important part of a baker's craft?



**"EVERY TIME I MAKE
BREAD, IT JUST
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MIKE: I DEFINITELY THINK baking is a craft.

I don't believe there is any way to shortcut the process: you have to do it repeatedly to get better at it. The most important part of the bakers craft is having patience and being able to observe what is going on in the process and do what the dough is telling you to do—time and temperature being the key elements to observe.

JARKKO: As this edition of Bread will be about fermentation and sourdough, can you tell a bit about your own sourdough starter and the way you maintain and use it?

MIKE: FERMENTATION IS WHAT it's all about, and properly fermented even more so.

The key to fermentation is finding balance, whether it's just a sourdough or by adding other preferments such as a biga or poolish.

MY OWN SOURDOUGH starter is unique to me and what I do as is everybody else's sourdough to them and their environment.

What I mean by that is I feed it specific flour for specific flavors that I am looking for in the final product. I feed my sourdough 100% stone milled California wheat which yields a much more pronounced flavor than white flour does.

I don't believe there are any secrets to bread making—again its just practice, practice, and more practice. Tips and lessons about sourdough come from observation of the dough and seeing what is happening in the process.

WORLD CHAMPIONSHIPS

JARKKO: You participated in the Coupe du Monde de la Boulangerie earlier this year (Congratulations for your second place!). What inspired you to take part in the competition?

MIKE: I WAS INSPIRED TO COMPETE to elevate my skill set and to bake against the best in the world.

The seed to compete was probably planted back in 2001 and then visiting France to observe the US team compete in the Coupe du Monde de la Boulangerie in 2002.

From there, it was competing to get on the team—and I finally made it. So it was a long process to make it back to France in March of 2012 and compete on the US team, but well worth the time and effort.

JARKKO: What was the competition like? I guess the environment was quite different from your normal work in Sonoma Valley... Is there something to take home from the competition and use back home in your own bakery?

MIKE: THE PRACTICE for the competition was intense: very long days with very little sleep.

As a team we traveled around the country to meet up once a month. Further out and as time got closer to the actual competition, we would meet up twice a month for a four day weekend.

When we went back home, we each would continue to practice on our own as there was a lot of product to make in what seems like a



The Coupe du Monde de la Boulangerie is an invitational artisan baking competition that takes place in Paris, France every three to four years together with the huge bread baking exhibition, Europain.

Every team consists of three members, each with his or her own specialty: baguettes and specialty breads, artistic design, and viennoiserie.

For more information, visit [the competition's web site](#).



short amount of time.

THE COMPETITION and practice is very different from what I do in my home shop back in Sonoma. A lot of the disciplines and attention to detail roll into my home shop but I do everything by hand and in the competition the mixing is done by spiral mixers.

My breads are very rustic as they are baked in a wood fired oven and the competition they are baked in modern deck ovens.

A MOVIE ABOUT BREAD

TOGETHER WITH his friend, film-maker Colin Blackshear, Mike Zakowski is making a movie on bread, [the bejkr], as well as participating in the Coupe du Monde de la Boulangerie.

Back in February, the team was trying to collect money for the movie through Kickstarter but didn't quite reach their goals, so they set up a fundraiser of their own at www.thebejkr.com.

I love seeing bakers at work, so I was eager to know more about the movie and how it is doing.

JARKKO: Why did you and Colin Blackshear decide to make this movie? It's about bread, but is there some special twist that makes the story even more important to share?

MIKE: THE MOVIE PROJECT has been an idea for years now as there is not much out there on the process of making bread, shown in a creative way.



It's about bread but also about the whole process starting with the soil, then the seed, to grain, to milling, to flour, to loaf, to the breaking of the bread with friends—but shown in a very creative and artistic way that will be visually stimulating.

JARKKO: What stage is the movie project at right now? How did the failure to reach your Kickstarter campaign's goal affect the project?

MIKE: WE ARE STILL CONTINUING to film as we want to get the whole cycle of the season.

We just filmed some wheat harvest about a month ago. We filmed at a really old stone mill that is powered by water. Then, once we are done filming, the editing will continue to put it together in a visually artistic piece for many to enjoy.

The Kickstarter campaign did not affect the making of the film at all, but we are about to do a local fUN-rAISING party here in Sonoma on the 11th of November 2012 at our local community center to raise some funds to help with the production of the film.

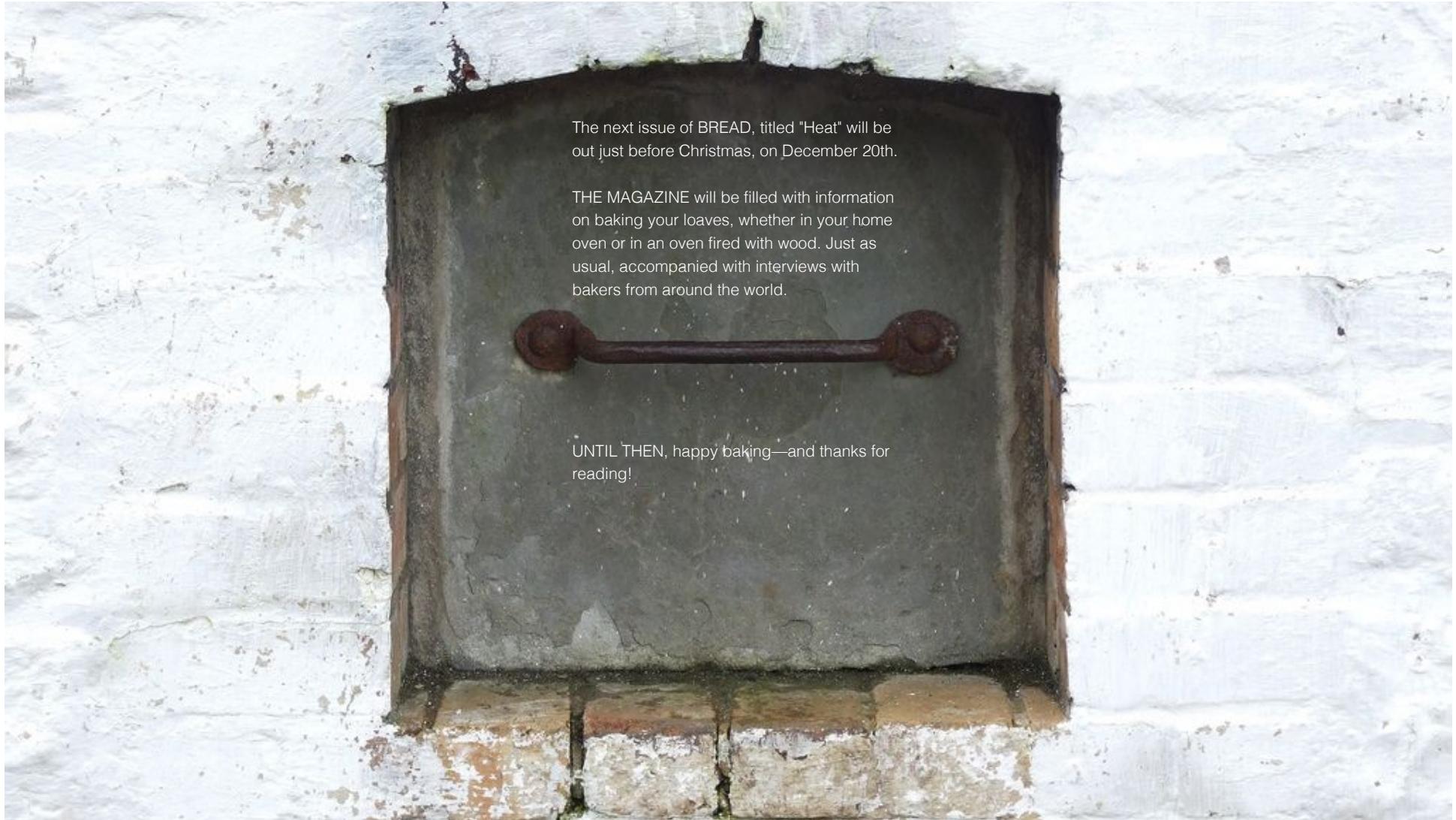
JARKKO: At your web site, you collect donations for the movie. Is this still active, and if someone donates today, is the support still needed?

MIKE: WE STILL CONTINUE TO collect donations for the movie at my website because the more money we can raise, the more attention and time we can put towards the film—so yes, support is still needed monetarily.

JARKKO: And finally, if someone is around your neighborhood and wants to try your bread, what's the best way to find you?

MIKE: IF SOMEONE IS IN SONOMA and wants to try my bread, they can find me at the two Sonoma Valley farmers' markets here in Sonoma on Tuesday evenings from 5:30 P.M till dusk from May through the end of October and then Friday mornings from 9 to 1 all year.

**"IT'S ABOUT BREAD
BUT ALSO ABOUT
THE WHOLE
PROCESS STARTING
WITH THE SOIL,
THEN THE SEED, TO
GRAIN, TO MILLING,
TO FLOUR, TO LOAF,
TO THE BREAKING OF
THE BREAD WITH
FRIENDS"**



The next issue of BREAD, titled "Heat" will be out just before Christmas, on December 20th.

THE MAGAZINE will be filled with information on baking your loaves, whether in your home oven or in an oven fired with wood. Just as usual, accompanied with interviews with bakers from around the world.

UNTIL THEN, happy baking—and thanks for reading!

IF YOU ENJOYED THE MAGAZINE,
[SHARE IT](#) WITH YOUR FRIENDS!

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