

# BREAD

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# WELCOME

THE MOST rewarding part in publishing a magazine about bread for me is the chance to meet bakers. Bakers—like most craftspeople, I suppose—are a friendly bunch. They are proud of what they do, and appreciate good bread. But baking bread for a living has given them insight that is easy to miss when you only taste and look at the end result, or bake at home for that matter.

We home bakers often glamorize the craft of bread making and only see the beautiful side of it: being able to make something real with your hands, sharing with community, enjoying the magic of fermentation. There's nothing wrong with that, really. All of those things make up a big part of what it is to be a baker. They just aren't the whole story.

AS I WAS PREPARING this issue, I talked to Zak Stern, also known as Zak The Baker (interview on page 35). He is a passionate baker who feels strongly about the importance of good bread and appreciates the aesthetics of the craft. However, one theme that came through loud and clear in our conversation was that baking bread is hard work.

The working hours—especially for an owner-baker who not only bakes but also works on building the business—take their toll. The work itself requires a lot of physical strength. And you do it every day.

I got a chance to experience this firsthand when I stayed most of the night at Kanniston Leipomo, a small bakery in Helsinki: even though I didn't even participate in the actual baking—all I did was watch and take notes—my legs ached all of the next day. Baking a loaf or two at a time is quite different from feeding hundreds of customers every day.

TALKING TO BAKERS and seeing them work, I have come to think that this real and mundane part of the work is at least as important as the aestethic side. Bread is beautiful and a handmade loaf is a work of art, but it is also something that gets its value from being used (and made) every day.

This way, what is most important about a baker's work becomes not being able to make a beautiful loaf but doing it every day.

Seeing the work as just that: work.

Something you come back to every night, knowing your customers rely on you to deliver them the healthy, delicious bread they have come to expect.

As Zak Stern says in the interview: "When it's one or two in the morning, and I know people are buying this bread every day, and they take it home to their house and they feed it to their families and friends and they share it and are excited about it, it goes a long way."

### \*\*

THIS ISSUE TURNED OUT to be an issue about the bakery: We take a peek behind the doors of a bakery and look at what happens at the bakery when bakers are at work and the rest of the world sleeps. We meet Zak Stern, a baker who is bringing real, slow-fermented bread to Miami, Florida where anything real is hard to find. And we talk about starting a bakery with Ben MacKinnon who runs E5 Bakehouse, a successful sourdough bakery in London.

But that doesn't mean we will forget about actually baking bread ourselves either.

Earlier this summer, I asked you to send me questions about fermentation. Now master baker Eric Duhamel has answered your questions. This way, the issue is a powerful tool in improving your bread making.

After a look at Asian, especially Japanese, bread traditions we dig into how to make bread soft. Instead of the chewy sourdough crumb that I usually love and enjoy, this time we look at how to make bread soft and pillowy and bake bread for those with weak teeth or a preference for this type of bread. I HOPE you will find the journey interesting and inspiring! And should you have any questions, feedback, or article ideas, don't hesitate to email me at contact@insanelyinterested.com.

If you are a writer and would like to write for BREAD, check out this page. Thank you for reading, and happy baking!

—Jarkko





# A NIGHT AT THE BAKERY

IT'S A WARM AND SUNNY Tuesday night in July when I walk from the Helsinki railway station to Punavuori, the hip design district of Helsinki—and the home of Kanniston Leipomo.

The streets are quiet as many of the locals are still away from town for their summer vacations. A few cars drive by. As the city slows down, I am on my way to watch what happens inside the walls of a bakery while most of its customers are asleep.

KANNISTON LEIPOMO is a nearly 100 year old bakery at the heart of downtown Helsinki. Since Alma and Unto Kannisto started it in 1914, the bakery has changed hands a couple of times until landing with the current owner in 1999. The bakery has never been about factory bread, but under the leadership of the current management, while growing production, the bakery has taken a decisive move further into artisan and craft values of what they call "authentic baking."

Selling bread through restaurants and cafés as well as four small stores of its own around Helsinki, Kanniston Leipomo is one of the few leaders driving the appreciation of good bread in Finland.

I ARRIVE AT the bakery at half past eight. The building is plain, looking like it might once have been a store of some kind.

The space was remodeled into a bakery for Kannisto in 2007—before that all baking was done in a smaller space one

block away. Since then, the bakery has still been growing, and later this year, there is another move coming up.

I shake hands with Jukka Hagert, a big man with decades of baking experience. He leads me into the bakery and gives me a hat to cover my hair with.

In the main room, a younger baker, roughly my age, Kimmo Taskinen is already at work dividing dough.

"It's warm in here," the men tell me. That's OK, I say, and introduce myself.

I take out my notebook, promising to stay out of the way ("I might ask a few questions here and there..." I add) and start taking notes and snapping photos.

### \*\*

**20:30** THE FIRST DOUGH has been mixed and is left to rest for a couple of hours. The mixer is already working on its second dough. And in about ten minutes, there wll be yet another dough in the mixer.

Jukka divides and scales pieces of a dough for *Talonpoikaisleipä* (Farmer Bread), a slow-fermented bread made with mother dough. To shape the bread, he simply takes the cut pieces and folds them a little.

"It's a great bread. And easy to make!"







Jukka says.

**20:45** JUKKA IS DONE with dividing the farmer breads. He covers the track with a big plastic bag and moves it aside to let the bread rest.

Next to the rack of farmer bread sit a couple dozen sourdough loaves, rising slowly since morning.

**20:50** THE BAKERS grab a cup of coffee and we take a small break at the door step, enjoying the fresh breath of air. We talk about baking, my history with bread, but we don't have much time, the first hours of the night are always the busiest.

**20:55** KIMMO PULLS out the big and well used baking tins and turns a batch of bread dough on the table. Jukka checks orders to see how many breads of different types are needed.

"The list shows how much bread has been ordered. The schedule depends on us. In the morning, when the delivery guy comes to pick up the bread, everything needs to be ready." he explains.

**21:05** WHILE THE OVEN bakes a batch of pastries shaped by the previous shift, the bakers shape oat and pumpkin seed buns. One divides and rolls, the other dips the

buns in a bowl filled with pumpkin seeds and places them on a baking tray.

The bakers work seamlessly as a team, each setting their pace so that there is no catching up needed. When I mention this to them, they smile and say that it has to be that way. The two men have a long history working together, dating back to the time before they joined Kannisto— Jukka first, Kimmo a few years later, by Jukka's recommendation.

**21:15** INGREDIENTS FOR A mixed seed bread go into the mixer. The bakers are cutting smaller buns. Kimmo rolls and cuts the pieces using a cutting machine. Jukka then picks the pieces and dips them into his bowl of pumpkin seeds. When he runs out of seeds, he takes a big scoop of them from a metal drawer behind him.

**21:20** THE OVEN BEEPS and Jukka goes to check on it. Kimmo adds more flour into the mixer and speeds it up.

Jukka returns to the work bench and wipes his forehead. With two ovens heating the room, it is starting to get hot. "The temperature goes up to 40 degrees Celsius during the summer," the bakers tell me and go on to explain how even a warm summer morning feels cold after a night at the bakery. **21:24** BUNS ARE DONE and go to rest. Kimmo measures ingredients for muesli bread and starts the mixer.

With the mixer running, he then flours the big wooden work bench in the middle of the room again. When done, he pulls a bottle of water from the freezer and takes a sip.

Jukka takes bread out of the oven.

**21:30** JUKKA ADDS a little flour into one of the two mixers, checking if the dough is ready for shaping. I ask him how he knows how much to add. Putting what he does intuitively into words takes some effort, but soon he says that he looks at how the dough releases from the mixing bowl. "The dough could be too tough at that point too... But if it is too wet, it will just make the shaping slower." he says, smiling.

After a few more rounds in the mixer, the dough is ready. And just a couple of minutes later, both bakers are already busy shaping it.

**21:35** JUKKA SHAPES batons and places them in bread tins. Kimmo cuts and scales the dough. Three minutes later, tin loaves are done and Jukka is already shaping baguettes.







**21:40** THE PACE IS FAST. While Jukka is still finishing his baguettes, Kimmo rolls a piece of dough on the table and uses two round cutters to shape buns with a hole in the middle. Just one tray, to fulfill an order from some customer.

**21:45** AFTER AN HOUR filled with shaping and mixing doughs, there is a quick quiet moment to clean up the table, cover it with a fresh layer of flour, and to check on the orders.

**21:48** THE BAKERS place the muesli bread dough on the table and shaping continues. Buns and loaves.

Jukka smiles and whistles while shaping two buns at the same time.

**21:54** AS THEY SHAPE their breads, Jukka and Kimmo keep counting the pieces to make sure just the right number of each shape gets made. Now, they suspect they got the number wrong.

A double check proves that there is one too few muesli breads shaped. That's a problem quickly solved: Kimmo weighs one more piece of dough and shapes the missing loaf.

**22:04** KIMMO WIPES the table and Jukka distributes worn tins on it. It's time for the



next demonstration of team work as the two bakers start measuring and dividing dough for Focaccia.

Jukka turns a batch of dough on the table, then as he measures a piece, he sends it flying through the air to Kimmo, who grabs it mid-air, places it in an oiled tin and presses lightly.

**22:15** COFFEE BREAK. As we stand on the side of the quiet street outside the bakery, night is falling. A car passes by. We chat about bread and the differences between baking at home and in a bakery.

Five minutes later, it's time to get back to work. The doughs set the pace.

**22:35** A SMALL RADIO covered with flour plays Jim Morrison. Kimmo tops the Focaccia with olives and slices of sundried tomato. Jukka divides and shapes Ciabatta with the help of a cutting machine.

"Before, we used to shape it by hand, but the breads were often of different weight." he tells me. Today, the machine divides the bread in equal sized pieces which the baker then stretches gently and places on the baking trays.

**22:50** A THIRD BAKER, Kari Mattila, enters the bakery to start his shift. We

greet each other and then he disappears into the front of the bakery.

The first loaves of the night have already had time to cool a little and he is in a hurry to get them organized and packed for customers. "There is only room for so many trays and carriages in the bakery that I have to hurry and free them for Jukka and Kimmo so they can keep baking." Kari tells me.

**22:55** KIMMO CLEANS up the mixer and starts preparing the rye dough. First, he scoops the liquid rye starters from two big containers into the mixers, then throws in the rye flour.

Jukka is done with Ciabatta and cleans up the cutting machine. The radio plays Stairway to Heaven. The main oven keeps churning out bread.

**23:05** KARI DISTRIBUTES the order lists from different customers on the floor of the front room. "I have a map inside my mind," he says.

The room is small and there are boxes of bread everywhere, but he routinely navigates through the room and moves bread from baking trays to boxes.

"The space is small, but on the other hand, everything is nearby."

Jukka takes a deep breath of air at the

bakery door. "It's always summer in here," Kari says.

**23:20** BREAD COMES OUT of the oven and more goes in. This time, it's time to bake one of Jukka's favorites, the farmer bread.

His other favorite is the bakery's 100 % rye, although, as he says pointing to a tray full of Ciabatta: "That bread is pretty good too."

**23:25** A QUICK BREAK outdoors. Kari lights a cigarette and the bakers chat about sports, rye bread, and whether it is best warm or fully cooled.

Bread with real butter is always good, we all agree.

**23:40** THE OVEN BEEPS once again. Farmer bread is done and the first batch of Ciabatta goes in.

Kari jokes that the oven should have an option for picking a different tune for each typesof bread. "Just like mobile phones do," he says.

**23:48** KIMMO AND JUKKA shape more bread. I have already lost count of what type of bread this is—country bread, it turns out. Smiling and occasionally joking with each other, the bakers count each











### piece of dough.

"24!" Jukka counts, and then moves to the next shape.

One dough is always shaped into more than one shape: some tin loaves, some round boules, a few long batards, buns, maybe baguettes.

The rye dough rests in the mixer.

**00:05** THE RADIO HOST greets us with a good night. Kimmo takes a sip of water and keeps cutting dough. Jukka looks at the sourdough, it is starting to look good.

**00:20** JUKKA SCORES the sourdough loaves and puts them into the oven.

"We used to bake this bread every day, but nowadays only every other day." he says, telling that the demand for white sourdough bread hasn't really taken off yet.

**00:25** WE HEAD OUT on the empty street in front of the bakery for a small coffee break. A few lights shine from the windows on the opposite side of the road, but otherwise, it's quiet.

Kari who has a decades worth of bakery stories talks about old times when there were small bakeries at every corner and bakers used to borrow ingredients from each other. **00:30** PREPARATIONS FOR SHAPING rye breads begin. Kimmo flours the table generously and the dough is mixed one final time.

**00:45** JUKKA AND KIMMO shape rye *reikäleipä*, a rather flat round bread with a whole in the middle.

First, they roll the dough on the table, then use two round cutters to make the right shape. The holes are baked separately and become *ruisnappi*, rye buttons.

**00:50** AFTER *REIKÄLEIPÄ*, it's time to press some rye hearts. The radio plays evergreens and the bakers shape breads in silence. The left-over dough goes back into the mixer so that it can be used with the round rye loaves later.

"We have to do these special shapes first. Otherwise, we wouldn't have enough dough left at the end," the bakers tell me.

**00:58** WHITE SOURDOUGH LOAVES are ready and baked.

"They came out all right," Jukka says and goes on to explain that the focaccia had been rising so fast that he had had to reorganize the schedule and bake the focaccia first. **00:49** JUKKA PREPARES a machine that is used for dividing the sticky and wet dough into pieces of correct size.

Kimmo runs the mixer one more time to incorporate the left over pieces in the rye dough.

**01:00** A QUIET MOMENT before shaping rye breads goes to full speed.

Kimmo sits down to look at his iPhone. Jukka sips some water. The mixer keeps mixing the rye dough.

**01:15** KARI IS STILL packaging breads but the look and feel of the front room has changed completely. Now, it seems to be under control, even in my eyes.

After a number of busy hours, things slow down a little. We take another five minute break outdoors before going back in and mixing the rye dough one final time.

**01:30** "KARI!" Jukka shouts out, inviting the baker to help with shaping rye bread.

The dough is ready and the bakers start carrying it with two hands into the dividing machine.

Jukka manages the machine, dividing the dough, scaling some pieces to see that it's making pieces of the right size and then starts throwing them to the other





two bakers who quickly shape it into tin loaves and rye baguettes trying to keep up with Jukka's quick pace.

**01:40** 62 TIN LOAVES done. The shaping continues with rye boules, or *limppu* as they are known in Finland.

As Jukka throws pieces of dough, some start piling up and Kimmo comments on this. Kari jokes that Jukka does it on purpose.

"Yeah! If you judge my throwing skills, the next throw will be right in your forehead." Jukka laughs.

**01:55** SHAPING RYE BREADS is done and Kari returns to packaging bread. The first batch of rye goes into the oven.

**02:05** AFTER A QUICK BREAK, Kimmo and Jukka start cleaning up the place. Everything has been shaped and there is nothing but baking and cleaning left to do.

"This was a rather laid back day," Jukka says and continues to tell that in the busiest seasons, such as Christmas or Easter, making bread can go on all the way until four so that the cleaning up has to be done on overtime.

"We always clean the place, no matter how long it takes." Kimmo says. **02:20** RYE HEARTS come out of the oven. Kimmo wipes the floor and Jukka cleans the tables.

There is still some time left until the bakers can finish their shifts (at four or four thirty depending on when they came to work), but I say my goodbyes and head home—with a little fresh bread and a great experience with me.

AS I WALK back to the railway station, the night is already past its darkest time and the sky begins to light up. The next day, as I wake up, my legs hurt—even though I was only watching and writing notes.

Baking bread for a living is no easy line of work.





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

A MICRO MAGAZINE IS A magazine that focuses on a very specific topic, published online or off by a very small team—in the case of Insanely Interested, just one man: me.

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

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

MY LOVE FOR A DARK CRUST 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.

THROUGH SMALL STEPS, as I keep learning more about how online publishing works, I am building Insanely Interested into a sustainable, long-lasting business that can serve the world by presenting new ideas and stories from people doing things they believe in.

Having you with me on this journey brings me joy.



# FERMENTATION Q & A WITH ERIC DUHAMEL

MANAGING FERMENTATION is one of the most imporant, as well as most complex topics in baking great bread. That's why, this month, I collected your questions and went to a master baker for advice.

Eric Duhamel is a passionate baker, originally from France but living and working in the UK since 2008. As the Head Baker at Daylesford, he leads a team of bakers making delicious sourdough breads.

You can find Duhamel on Facebook, Google+ and Twitter, where he co-hosts the monthly #BreadChat event.

THANK YOU to everyone who submitted questions. Now, some answers!



"Temperature influences the speed of fermentation This way, it does have an effect on the taste of the finished loaf a long fermentation produces better and more complex flavours."

**QUESTION**: How does the fermentation temperature affect the flavor of the finished loaf?

**ANSWER**: THE TEMPERATURE influences the speed of fermentation. This way, it does have an effect on the taste of the finished loaf: a long fermentation produces better and more complex flavours.

Also, especially with leaven, temperature will influence the chemical reactions involved in the ferments life (yeast and bacteria). Therefore, as the reactions will be different, the taste shall be too.

**QUESTION**: Is there a difference between organic yeast and regular yeast?

**ANSWER**: THE DIFFERENCE is the substract on which the yeast is grown. For organic yeast, it is organic, for regular yeast, it is not.

**QUESTION**: Is temperature the main parameter responsible for achieving greater or lesser sourness in sourdoughs? What other parameters are involved, and how can I decrease the sourness of my sourdough starter and bread?

**ANSWER**: SOURNESS IS USUSALLY synonymous with acetic acidity.

It's true that, generally, a higher temperature leads to more lactic acidity (as opposed to acetic acidity). However, much more parameters need to be taken into account, such as the variety of microorganisms in the leaven (starter), the ratio of starter in the recipe, the starter's level of maturation, the balance between bacteria and yeasts, the type of flour used, and the duration of fermentation.

FOR DECREASING sourness, I would suggest working at a warmer temperature, with less leaven, and controlling the maturation of the leaven well. The leaven shouldn't be fermented past its peak of activity.

However, this is only a generalization and might not be true in every case (leavens can be capricious pets). **QUESTION**: I'm curious to hear more about the temperature bakers prefer for fermentation and opinions on storage of sourdough. As a home baker, would I gain a lot by fermenting doughs in a wine cooler instead of the fridge?

**ANSWER**: THE BIG ADVANTAGE in using a wine cooler is that you can set the temperature more easily than with a fridge, and on a wider range. This way, you can play and experiment more, a bit like with a retarder-proofer.

I LIKE TO keep my leaven in the fridge (2-3 °C), in order to stabilise it.

For the last fermentation of the breads, the sourdough breads are kept between 28 and 32 °C depending on the season and outdoor temperature.

Finally, before being baked, the breads are stabilised at around 15 °C.

STABILISING THE BREADS at 15°C is a technique that calms down the fermentation and gives us more control on how and how fast we load the oven—to maximize the efficiency of the oven loading. You have to remember that our

oven is much bigger than a home kitchen oven; we can load up to 40 sourdough breads per door, with three doors on a deck and four decks. 12 doors in total!

Decreasing the temperature of the loaves also makes them a bit stiffer and therefore easier to manipulate and scarify (the cuts are more precise and the dough doesn't stick on the blade).

And one more advantage: when you load a cool dough, you retard the increase of temperarture in the loaf during the baking a little bit, allowing the breads to develop a bit more in the oven.

> "Our oven is much bigger than a home kitchen oven; we can load up to 40 sourdough breads per door, with three doors on a deck and four decks. 12 doors in total!"

**QUESTION**: In the maintenance of starters, are there methods to direct the yeast activity either towards reproduction and away from fermentation or vice versa?

**ANSWER**: IF YOU WANT to promote the reproduction of the yeast, one of the most efficient things is to encourage breathing instead of fermentation.

To do that, make a very liquid starter and wisk it in order to introduce oxygen to the mix.

**QUESTION**: How long can a yeasted bread dough be kept in cold retardation before the yeast will die and no longer finish the final rise at room temperature?

**ANSWER**: THIS IS A COMPLEX question for which there is no absolute answer. It depends on the method and the

quantity of yeast used.

The time can vary from a few hours until around 48 hours (maybe more but there is practically not much sense in doing this). "At this time, bakers were nicknamed by Antoine Augustin Parmentier as the convicts of the night."

**QUESTION**: What is the purpose of building a levain in 2 or 3 builds? You have to build and maintain the starter anyway, so why not just feed your starter a few times before you use it?

**ANSWER**: YOU MAY BE TALKING about the traditional French method of refreshing a leaven in three refreshments.

This method was developed at a time when the bakers didn't have any way to cool down their dough and leaven and, therefore, stabilise it.

At this time, bakers were nicknamed by Antoine Augustin Parmentier as the *convicts of the night*. They were enslaved by their leaven and their production.

This is why, practically, I personally think that it is a method from an other age, good for experimenting. **QUESTION**: What is the difference between pre-fermenting a part of the dough overnight as opposed to just mixing up the total dough and fermenting all of it overnight? How much preferment can you use in a dough?

**ANSWER**: MAKING THE DOUGH ferment overnight will influence the taste and the texture of the product. When you do that, you can still use a pre-ferment (a sourdough bread can be made this way).

THE RATE OF pre-ferment will influence the whole process and the taste. On a long fermentation, I wouldn't go further than 50 %.

Also, the more leaven you use, the more it will have to be controlled, making sure the dough is not over-fermented. **QUESTION**: Can you make a soft dough using a sourdough starter?

**ANSWER**: OF COURSE! A sourdough can be made stiff or soft, depending on the effects wanted and the type of flour(s) used. It can be used for any kind of bread.

**QUESTION**: Is it possible to make a sweet dough using a sourdough starter? What needs to be taken into account?

**ANSWER:** I WOULD GIVE the same answer as to the former question. You need to be careful with the type and the rate of acidity developed in order to get a pleasant and delicate result. **QUESTION**: When traveling with your starter on the airplane, how to best store the starter? Is it better to take the starter in the airplane or put it in the luggage?

**ANSWER**: IN THE CABIN of the plane, it should be forbidden to carry any liquid or paste-like product... I would recommend a small quantity of starter in a closed plastic pot or a large plastic bag (such as a freezer bag). A dried leaven might be easier to transport than a fresh one, especially on long flights.

If you fly down to Australia or New Zealand, it might be illegal to introduce a foreign leaven (risks of contamination of the environment).

In this case, I recommend you start a brand new one at destination.

**QUESTION**: I am experimenting with the balance between large percentages of pre-fermented flour to extract maximum flavor (free amino acids and sugars for Maillard and caramelization reactions) and still preserving enough gluten intact for an airy crumb. Do you have any insights on navigating that narrow passage?

**ANSWER**: BE CAREFUL, a high rate of pre-fermentation can lead to a lack of sugars rather than a large amount of them (fermentation uses sugars as a fuel).

Working with a flour with a good diastasic activity or/and a good rate of damaged sugar can be more interesting for that.

So, I prefer to use a proper stoneground flour (ground with the germ and at least a part of the bran).

Many millers remove the germ and the main part of the bran before stonegrinding their flour. This is nonsense for someone who wants a real stoneground flour. "A high rate of prefermentation can lead to a lack of sugars rather than a large amount of them (fermentation uses sugars as a fuel)." **QUESTION**: A credible source claims that any starter stored in the refrigerator (at 4 °C) will become devoid of any *L*. *Sanfranciscensis* very quickly.

Is this true? And if it is, what are home bakers missing out when they store their starters in the fridge? *L. Sanfranciscensis* can't be that essential if thousands of home bakers make perfectly enjoyable breads from starters that mostly live in their refrigerators!

**ANSWER**: L. SANFRANSISCENSIS is important for those who want to make a San Francisco style sourdough bread. For the rest of us, we don't need to mind about this specific bacteria.

Personally, I want my leaven to behave like I wish and to give me the taste I like. The rest is more a subject for biologists than bakers in term of practice.

THAT DOESN'T MEAN you shouldn't be interested in this topic (I studied biology, and especially biochemistry for a few years at the university when I was a student, and I like to dig a bit into the subject). I just mean that it is not essential for making a good bread. **QUESTION**: I have often read that a stiff preferment increases dough strength and a wet one increases dough extensibility. Does this apply to rye, too?

My whole rye 100% hydration sourdough starter is quite stiff, so I am not sure if it should be considered a wet starter because of the hydration, or a stiff one because of the texture.

**ANSWER**: AS FOR THE type of acidity developed, this is a general "rule" to which you can find many counter-examples. I would say that there are too many factors for being able to be categoric on this.

Considering the stiffness, this depends more on the texture than the amount of water. Here, stiffness is a way of appreciating the free water in the mix (available easily for the micro-organisms). So, the texture is the best criteria for

this.

**QUESTION**: What should I do to my starter to increase my production from about 3 to 4 breads a week to 20 loaves a day?

**ANSWER**: YOU SHOULD increase the size of your refreshment in two or three times in order to get the right amount, using your usual ratio.

Be careful if you stabilise your leaven in a fridge, a big batch gets cold more slowly compared to a small one and, therefore, takes longer to slow down its activity.

"L. Sanfransiscensis is important for those who want to make a San Francisco style sourdough bread."



QUESTION: How does the fermentation technique affect the dough structure? It seems that the longer the process, the gummier the crumb is. Which lowlevel processes are responsible for this type of crumb?

### **ANSWER:** BACTERIAL FERMENTATION

can be a source of creation of thickeners, mainly through transformation of the cellulose and other fibrous molecules. This is a very technical subject and it is difficult to give general rules.

However, it is true that a long fermentation will promote a better, and pleasant, "chewy" texture.

The texture of the bread is also widely influenced by the quality and the composition of the flour (rate of proteins, of fibres, presence of the germ or not, etc). **QUESTION**: To your knowledge, do long fermentation times used in sourdough bread production degrade the gliadin portion of the gluten protein without affecting the strength of the dough? Does the process of fermentation (and length of fermentation) alter the digestibility of the bread (because of the effect on gliadin or for other reasons)?

### **ANSWER: LONG FERMENTATION,**

especially with leaven, degrades more the proteins of the flour. As the gluten is a proteic structure, it will be affected if the degradations goes too far.

As the phenomenons involved in the fermentation of the dough degrade the components of the flour, it is obvious that the digestibility of the bread will be higher when the fermentation is pushed further.

This is a subject which shows that a non-intensive kneading (to develop the strength of the gluten), a proper fermentation (which partially degrades the components of the flour) and a proper baking (which ensure a proper gelatinisation of the starch and a good coagulation of the proteins) are important to insure a good digestibility.



ONE WAY TO DIVIDE countries in two groups is by what their residents eat at the breakfast table.

Traditionally, Europeans have been munching on bread while Asians have preferred a steaming hot bowl of rice topped with condiments. Many think of the Japanese as the perfect example of rice eating folk but as of late, this image has been turning out more and more false.

BREAD WAS FIRST introduced to the Japanese culture by the Portuguese merchants who arrived at the Tanegashima port in 1543. After this initial contact with Western BREAD IN JAPAN

by JETRO LAINE

culture, bread eating slowly spread alongside with Christianity, but when Japan closed its borders in 1635, all Western influences—bread included nearly disappeared. It wasn't until the Meiji restoration in 1868 that bread started to gain popularity again. Ever since, Japan has been slowly turning into a bread culture.

Japanese people still love rice above all, but as bread is often more convenient and portable, many eat it in the morning especially when they are feeling lazy. And despite its rather short history with bread, Japan has undoubtedly become a country with highly valued bakers, as one could notice when the Japanese team won the first place at the *Coupe Louis Lesaffre Bakery World Cup* in 2012, leaving traditional bread countries such as France, Italy and Poland behind.

SO, WHAT ACTUALLY is Japanese bread culture today and what do the Japanese people think about bread in general?

I have made many trips to Japan, visited Japanese bakeries and talked with locals about their favorite breads and bakeries in order to answer this question.

The first thing that comes to mind is that Japanese prefer their bread soft and fluffy. Sometimes the bread is made softer by adding a special type of rice flour soaked in hot water into the dough. The rice that is used in this procedure is called *mochi-gome* in Japanese. It is a type of rice that is extra sticky and becomes almost glue-like when cooked. Together with extra softness, Japanese bread is also less salty than its European counterpart.

JAPANESE PEOPLE usually get their bread from a supermarket where it is packed in a plastic bag and prepared in a way which makes it as easy to eat as possible.

Some of the most typical ones include different pain de mie style soft and sliced breads called *shokupan*. Equally popular "I have made many trips to Japan, visited Japanese bakeries and talked with locals about their favorite breads and bakeries in order to answer this question."







are the many kinds of filled buns such as yakisoba noodle bread (*yakisobapan*), red azuki bean paste bun (*anpan*) and a bun filled with spicy curry sauce (*karēpan*). Oh, and one should not forget about perhaps the most popular of them all, *melonpan*, a melon shaped sweetened bun.

Most of the supermarket breads and buns taste decent but if one wants to get the best out of Japanese bread culture one has to go to a real bakery.

LUCKILY, bakeries are a common sight at almost every shopping mall and street corner in the big cities of Japan.

A typical Japanese bakery consists of lots of shelves full of traditional bread and sweet and savory treats. The bakery often has a theme which is mimicking the style of a certain European country—such as France. Sometimes the feeling turns out quite authentic, but sometimes the bakeries' names and punch lines can become rather ambiguous.

A good example might be the bakery Hokuo, which once promoted itself with such lines as "Scandinavia Natural Roman" and "Best Bread Message" whatever that means... Surprisingly, the bread was actually very good despite of the initial moments of not really feeling like going in as you think you might accidentally burst in laughter in front of the bakery staff.

USUALLY, every bakery has their own specialty and the customers are made aware of it in one way or another. For example, a small bakery in the suburb of Akitsu is said to be the one and only bakery where the famous animation director *Hayao Miyazaki* buys his karēpan every morning before going on with his usual errands.

Having tasted this particular karēpan myself, it was really good, I must admit. Perfectly crispy outside with a really soft inside filled generously with tasty Japanese curry sauce. Naturally, the same bakery also makes buns shaped in the form of Miyazaki's famous character, Totoro, which brings us to another typical feature of Japanese bread culture: character shaped breads.

IN ALMOST EVERY bakery, there are buns and breads that are shaped into cute characters. At Christmas, you can find snowman-shaped bread and at New Year, every bakery will have their own version of the next year's Chinese zodiac animal.

As the year 2013 is the year of the snake, in late 2012 virtually every bakery had their own version of the snake-shaped

"A small bakery in the suburb of Akitsu is said to be the one and only bakery where the famous animation director Hayao Miyazaki buys his karēpan every morning before going on with his usual errands "



### bread.

THE THIRD TYPICAL feature of the Japanese bread culture is that bread is often meant to be eaten as is. Whereas westerners are used to spreading butter and piling cheese and other condiments on top of their bread, the Japanese prefer to have their bread toppings already baked into the bread when bought.

This means that the bakeries usually have a wide variety of sweet as well as salty buns and breads with all kinds of fillings and toppings available. Some of them are strikingly Japanese, such as a salty bun with *nori*-seaweed topping or a bread filled with *mentaiko*—a reddish paste made of spicy walleye pollack roe.

In fact, it sometimes almost feels as if the sole purpose of a Japanese bakery is to make a "bread version" for all the traditional Japanese dishes imaginable. It's tempting to think that this might have something to do with the idea of bread being portable and hassle-free unlike rice and other complicated dishes. So, by actually making the bread taste like a traditional dish, you can enjoy the familiar taste with the convenience of bread.

OBVIOUSLY, Japanese people like to mix their own traditional food culture in their

breads, but on the other hand, you can also find very authentic croissants, baguettes and other widely known breads from virtually any Japanese bakery—and they pretty much taste the way they should.

So, you can rest assured: If a bakery is determined to be the best French style bakery in Japan, you will get some of the best baguettes from there, even if you had never heard of the bakery before.

The Japanese tend to take their professions very seriously. This applies to bakeries as well. Japanese bakers are very strict about the quality of their products, and they always aim for perfection no matter what. They even break the rules of the traditional bread baking if they think it will make the bread taste better somehow. Recipes are constantly improved and new things are tested.

Occasionally this brings forth new inventions such as adding *mochi-gome* sticky rice flour to the dough to make it fluffier, and even new yeast cultures such as *hatsuga genmai* have been developed for a certain sweet taste.

RECENTLY, many of the bakeries in Japan have been transforming into cafés where you can either buy your daily bread and take it away with you or stay in the café

"It sometimes almost feels as if the sole purpose of a Japanese bakery is to make a "bread version" for all the traditional Japanese dishes imaginable." eating your bread with a cup of coffee, tea or some other drink. The younger generation like their bread warm and soft, so this type of bread eating is getting more and more popular.

Also, at more popular bakeries, bread is prepared throughout the day, which means you get freshly baked bread all the time. I have bought countless breads from Japanese bakeries and they have always tasted fresh and delicious. Once I had a melonpan with a whipped cream filling and the cashier specially urged me to eat it on the same day to avoid the cream turning bad. It almost felt that she was genuinely concerned for my health. How nice is that!

FINALLY, TO ANSWER the question about Japanese bread culture: it is in many ways challenging to describe, but one can see many common points with Japanese culture in general.

Japanese people are often described as being earnest and experimental, technologically at the front lines while being very fond of their traditions. All of these properties are present in the Japanese bread culture as well. And in my view, this is what truly makes Japanese bread Japanese and the Japanese bread culture a real and unique bread culture.



# YAKITATE!! JAPAN

AZUMA KAZUMA is six years old and has never eaten bread before when her older sister drags him to a bakery and forces him to try a piece of bread. The boy falls in love and immediately asks the baker to teach him how to make bread.

The baker agrees, and Kazuma gets to work trying to make a bread his grandfather, an old almost teethless figure, would enjoy. This leads to an epic journey of trying to come up with "Japan", a type of bread that would be truly Japanese.

THAT'S THE SHORT SYNOPSIS for the manga (comic book) and anime (animated film) series Yakitate!! Japan. The journey is full of imaginative bread recipes, quirky characters and overly exaggerated emotions—most of them reactions to Azuma's breads.

The 26 books in the manga series, and 69 episodes in the TV series, documenting Azuma Kazuma's journey from one bread making competition to the next are a roller coaster ride of laughter, surprise, and bread making.

YAKITATE!! JAPAN is a series that can be guaranteed to divide people. Some love it and others just cannot stand it. Its bread making facts aren't always accurate (the main character, Azuma Kazuma, is portrayed as someone who is especially suited for baking because of his naturally warm hands, called solar hands, for example). The series is also very much exaggerated in its style.

That said, I think the series captures something important about being a baker: the joy in improving one's craft and chasing a product you can be proud of.

Also, it clearly inspires people to bake. My two sons find it very inspiring, and every time I watch the anime series with them, they want to bake bread afterwards!

YOU CAN find the manga books as English translations at Amazon, and probably at other well stocked bookstores. Finding the anime outside Japan can be a lot more difficult.





# ZAK, THE BAKER

WHEN I STARTED my studies, I never questioned the idea of going to school, first getting a formal education, and only then putting it all into practice—my time for questioning came only later. I guess most of us never question the modern career path.

But Zak Stern did.

While studying pharmacology, he realized this wasn't what he wanted in his life. Despite not being sure of what exactly it was that he wanted, he decided to get away from the system, the debt involved, to find something smaller and more intimate.

"I knew there was something out there that was for me, so I just went out to look for it. Basically I had been to school for my whole life and I realized I didn't know how to do very much of anything. So I went out to learn the basics: how to grow food, how to be a man. Basic things I never really learned in all those years in school. To finally learn. To have my own education." Stern tells me as we talk on the phone on a day in July after his day's work is complete.

### STUDYING LIFE AND WORK

THIS DECISION lead to a series of apprenticeships all around Europe. Through a program called WWOOF (World Wide Opportunities on Organic Farms), Stern found organic farms in need of an extra pair of hands and through work trade, built his own higher education.

"And I took it quite seriously too, it wasn't just like a holiday for me. I had already done some traveling for holidays, this was more like a learning pilgrimage. I just wanted to learn the basics, so I started on farms, and then over the years as I kept doing it and travelling, I focused more and more on bread and wine and cheese. And then finally, focused on bread and cheese specifically." Stern says.

TODAY, Stern is back to Miami where he runs a bakery called Zak The Baker, but there wasn't such a clear plan when the journey began.

"I went to learn. I went to learn about life, you know. And as I went, I started to notice." Stern says.

On the farms, Stern noticed he enjoyed cooking and being around animals, so he says it became a natural transition to focus on the craftsmanship of bread and cheese. And bread, being the more accessible of the two, became his craft, the one thing he studied wherever he went.

"So, once I realized it was bread and cheese that I wanted to learn, I would look specifically for bread—bakeries on farms —and for cheese makers, and would just zero in on them. I would explain to them: This is not a holiday. I really want to come and learn and do an old-fashioned apprenticeship. And I'm willing to stay a minimum of three months, maximum you know—no ending. Until it's time." Stern says.

Finding your place at the farm and getting to a place where you can really start learning takes time, sometimes as long as five to six months.

"The real good ones, I stayed on for a year at the time, the whole season. I took the time to get to know them, and really establish the relationship with them and learn, not just the craft, but the way of life, you know, the philosophy. Like I was saying, how to be the man I want be." Stern says.

"I gained a lot of the country wisdom that you only learn from working the land. You don't really find this kind of wisdom in the city. I was really impressed, and I still am, by it, I admire this culture, and I try to take it with me even here in the city, in Miami."

ONE OF THE FAMILIES Stern stayed with made a lasting impression on him. They had something he says he was hungry for.

"It was a middle-aged couple that had kids which also had kids. They basically built from nothing a goat cheese farm in the mountains of the Galilee in Northern Israel."

"They lived a very honest, simple life, but there are things about their life I really admired: specifically how hard they worked, they worked very hard, and they put a lot of attention to tradition. And a lot of attention to beauty and craftsmanship."

"I worked with them every day and I think only when they realized that I was serious, that I have a lot of respect for what they do, did they open up and begin to teach me. Yeah, I have a lot of respect to them."

ONE OF THE KEY takeaways, in addition to the general lessons and practice in bread making, was how to work hard. Even when you don't want to work hard.

It is also a topic Stern returns to often



during our discussion, maybe because that's a big part of what being a baker is still for him right now.

"I wake up every morning, at one-two in the morning. It's brutally exhausting some days. But you do it. You work hard. And it's rewarding." he explains.

Speaking about the cheese farmer, Stern says: "I would see he used to get up, he would make cheese twice a day, get up in the middle of the night, make cheese, come back, milk the goats. Then in the evening, make cheese again, over and over and over again. You just do what you have to do."

The life at the farms was a life of simple pleasures, real beauty, not the superficial kind, found in every day work and the products being made.

As Stern says: "I don't think they are living a life in pursuit of happiness. I think they are just living. This is what they do. They have things to do and they do what they love to do. And they live an active life. It's not like they are working to get to somewhere. This is their life, this is it right now."

Life for its own sake.

"Often people work here in order to get to retirement—then they will do what they want to do. You know what I mean? But it's very different, this is their dream and they are living it, and it's hard some days and it's beautiful other days. I don't think they are living in the pursuit of happiness."

THE WORK at Stern's own bakery today seems like a natural continuum to this journey. Stern lives on a farm, baking bread, working hard to make a beautiful product he can be proud of. But one thing he makes very clear is that he doesn't want to over-romanticize either his work or that of the people he apprenticed with.

"You know what I mean, they are just people." Stern says, "They are just farmers, and they had something to teach me and I took it. I don't want to make it seem like they are gods, that's not it. They had something that I needed to learn and it was the right time and the right place for me and I'm grateful."

"And you know what? I find that often people over-romanticize everything that I do and it's not true. There's a lot of times I hated it there. And I was lonely and depressed sometimes. Come on, there's reality! It was hard. There was times, there was winter, I smelled like goat-poop all day, I was tired and they didn't show me any love sometimes and I felt terrible."

But he stayed at it, and in the end, he says, "it was an incredible experience."

"I don't think they are living a life in pursuit of happiness. I think they are just living. This is what they do. They have things to do and they do what they love to do. And they live an active life. It's not like they are working to get to somewhere."



"They got behind me, supported me so much And then I started getting wholesale accounts with restaurants and different places and before you know, it turned into a business. From then on, I was playing catch-up the whole time "

A BAKER'S LIFE is not all that different: "Baking bread is hard. It looks very romantic from the outside, but the work is hard. You wake up very early every day, and you do it every single day. I can't just leave, you know. I would love to take a vacation and just hang out and go hike in the mountains right now."

Pondering on the topic, Stern says: "It's something of a quality of life these people have: they lived a very monastic life. And their attention to beauty and detail was in line with that. And their lifestyle was in line with that. Every day they woke up and did the same thing. But they were extremely connected to their work and to the land and to their animals. I think it's fulfilling. I'm not saying they were always happy, but they were fulfilled, I think."

### STARTING A BAKERY

WHEN IT WAS TIME for Stern to return to Miami—last February—he took a long shower and though about his options: whether to continue traveling and learning or to stay. He decided to stay.

Stern bought four baby goats and turned his friend's garage into a tiny bakery, and started doing what he knew how to do: baking bread. And very soon, the one man operation had turned into a real business.

"It was just me baking bread in an oven in a garage for a eight or nine months. People didn't even know where I was, it was a secret." Stern says.

PEOPLE WOULD SEE see Zak the Baker at the farmers' markets, taste his country bread that looked like what they had previously seen only in San Francisco, New York, or in photos, and they were surprised.

"They got behind me, supported me so much. And then I started getting wholesale accounts with restaurants and different places and before you know, it turned into a business. From then on, I was playing catch-up the whole time." Stern recalls.

"Then I started taking apprentices and started growing. Then I moved into a commercial kitchen, and now, I've already outgrown the commercial kitchen and we're planning on opening our own bakery here in Miami. So, it's quite exciting! The whole process. I have just been hanging on, basically."

And there really has been a lot of hard work involved: Stern now bakes every day while training three other bakers to build a team and grow the bakery. And for a long



time before this it was just him doing everything: "The deliveries, the baking, the inventory, the finances, cleaning, everything. It's just hard holding all this responsibility on my shoulders. It's a lot of weight." Stern says.

"Bread specifically, it's not just something you just mix together and then bake it and then you have the product. No, it's a living thing that's temperamental. You have to be very focused in order to get it right every time. You know, it's quite a craft, and you just have to be focused."

"We create a product every single morning, from nothing. There's not many professions where you just create something from nothing every morning and send it out to be bought. And then you do it again, and again. And it has to be perfect every day because it has my name on it."

But going to the farmers' market every sunday with a product like that makes a big difference.

"It's a major connector to the community. And yeah, for me it's very important to be connected with the community. That's the whole point, one of the whole points why I'm doing this. It's to be a part of a community and to know people and to see who is buying my bread and for them to personally know the baker. The reason why the bakery is called Zak the Baker is because they know who I am." Stern says.

THIS SENSE OF fulfillment, being connected to his work and customers, working hard, pride for the craft, and his beautiful fiancée are what keep Stern baking.

"Oh my god, I'm very proud of the work I do. I'm not always happy about it, you know, because it's hard. And sometimes I'm exhausted, and I would love an easier job some days... But no, I'm very proud of what I do and I love it!" Stern says.

The strong support from his customers also helps. The basic, honest product, made with integrity has quickly found a strong following in Miami, a city where, Stern says, it's hard to find anything fresh.

"I think in Miami, there's a really great response by the people here for what we're doing. They are extremely supportive and I feel like we're doing something important. We are providing a fresh product that's very honest and simple and that's needed, you know. We're not making gluten-free, vegan cupcakes." Stern says, laughing.

"When it's one or two in the morning

and I know people are buying this bread every day and they take it home to their house and they feed it to their family and friends and they share it are excited about it, it goes a long way."

Having someone waiting the product and knowing that it will make them happy is a big motivation: "I mean, how many people have a job where they make other people happy with their job? It's rare!"

### PASSING ON THE WISDOM

HAVING LEARNED his trade through apprenticing, Stern is passionate about passing on the wisdom. Once he had the bakery out of his friend's garage, he started taking in apprentices himself, teaching them to make bread the oldfashioned way. Two of the early apprentices, "local boys from Miami", are now almost full-time bakers working in the crew Stern is building: "Almost, not quite. They still haven't mastered the oven yet but they're working on it now."

And then there's his fiancée, "who came here as an apprentice with her sister and now she's staying to help me open the bakery and we're doing it together."

BUT ONE THING Stern makes clear is that this knowledge is sacred and it is not

"I mean, how many people have a job where they make other people happy with their job? It's rare!" passed on to just anyone.

"I feel like what we do is sacred and I want to pass it on to people who respect it and who will carry it on. So, it's not just like this knowledge that we're broadcasting, if you know what I mean. It's something you have to earn. When you come and you work hard for it, it's yours. You own it and you can do what you want with it. But it's not something that I just write a book and just teach in a lecture." Stern says.

To learn the craft and join the guild of bakers, you have to put in the time and earn it.

"With this day and age and the technology and information, there's just so much information thrown all over the place. The value of it has gone down tremendously, and misinformation has gone up incredibly. Yalla! None of that! Let's focus a bit, back on what's important. Focus our attention on good information."

AFTER LISTING THE BAKERY on the WWOOF web site, Stern has been receiving lots of emails from people all over the world wanting to come and apprentice at the bakery—at the moment, he is gettign around five emails a week.

"It's a lot. We can only take two, three, four at a time." Stern says.

"We've got some people coming for the summer and we've got plenty of emails to decide, to start taking more people in."

"You know, it really doesn't matter if you've ever baked before. It doesn't matter at all if you've never touched dough before. All that matters is that you really want to learn and that you're willing to work hard. That you really want to come and learn the craft. And if you want to come and learn the craft, you work and you do what you got to do and while you live here you're learning how to bake bread..."

FOR THOSE WHO GET chosen and are ready to stay for at least two months, Stern has made sure the experience will be intensive but also fun. A very focused bread apprenticeship.

"We just recently acquired another house that's attached to our house. It's on the farm and now we're putting all the apprentices in that house where they'll have their own kind of a dormitory. They'll eat together, they'll work together."

"They will also help at the farm, milking the goats and feeding the animals and the chickens, and feeding Sadie, my cat. It's up to them to make it how they want it. If they want to make it a nice tight family,



they can. If they want to be independent, it's up to them."

"Either way, it's nice for them to have their own place. I remember when I was working, some of the places where I stayed were really difficult, because you are sharing the same house as the farmers . It's hard, you know, the lack of personal space." Stern says.

BEING AN APPRENTICE is all about learning through work, doing what you know how to do:

"Obviously in the beginning they don't know how to shape bread or how to bake bread, and they don't know how to create formulas. But they can mix dough and they can learn how to measure dough and they can wash dishes... So they do the things they can. We throw them right in, there's no baby steps, you just do work."

"You work the whole day and you see the system and if you do it enough days every day, you will start to see our system in a flow. And if you're paying attention, you will jump right in and fill in the cracks. And then, I'm there. Filling the cracks with them, to explain the theory of why we do this, why we do that. To kind of make it more comprehensive." Stern says.

There is a lot of work, a lot of washing the dishes, a lot of getting wet and tired,

but if you take the work seriously, as an apprentice, you can also learn a lot. As Stern says: "The more you practice, the luckier you'll get. There's no trick. It's touch. Touch takes time. Just keep doing it, and eventually you'll realize that you're really connected to this experience and this feeling, the way you know hot is hot and cold is cold. It just becomes this other feeling you have. Of dough texture, elasticity and volume and whatnot."

"We take our craft seriously, and we like to have a good time. And to live life fully. We don't like to live superficially. It's nice to get deep into things and dive in. And it's not that hard. It's work. And when you are there, you are there. And before you know, you are done. Every day."

WITH THE NEW BAKERY opening this fall and the house for the apprentices just finished, it looks like the next year is turning out to be just as fast paced and exciting as the first.

"We'll open up after the fall, and it will be like a dream come true bakery. Finally, I'm not in someone else's place. I'm not in the garage. No excuses. I can make the best bread I can possibly make in this place because I have all the right equipment, and I'm excited." Stern says.

"We take our craft seriously, and we like to have a good time. And to live life fully. We don't like to live superficially. It's nice to get deep into things and dive in. And it's not that hard It's work."



THERE ARE TIMES when—as delicious as I think it is—the chewy texture of a sourdough loaf is not welcome. Maybe you want to make a toast for breakfast and eat it with some jam or peanut butter. Maybe you are feeding children or older people with weak teeth. Or maybe you just enjoy a soft and fluffy feel of a pain de mie. Just like the Japanese do.

Whatever the reason, making a shreddably soft loaf is an adventure of its own, and a great way to deepen your understanding of the art and science of bread making.

In this article, I will share some tips and techniques for soft bread.

And as always, I hope the ideas will keep you experimenting and finding your own ways to make bread to fall in love with.

# HOW TO: MAKE YOUR BREAD SOFT



### 1. MILK

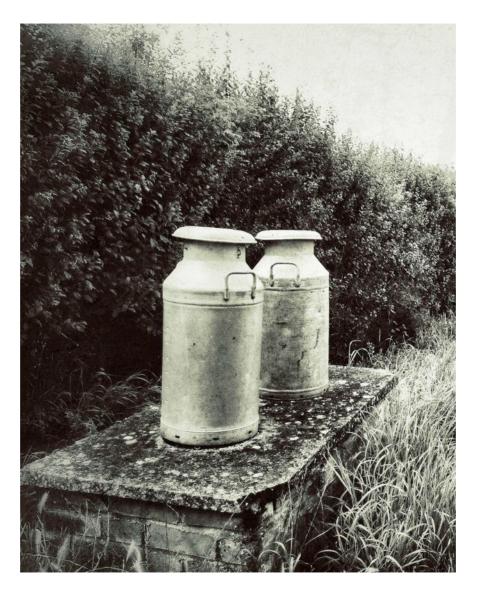
THE FIRST and easiest way to make your bread softer is to replace some (or even all) of the water with milk. In Bread Matters, Andrew Whitley writes: "For those striving for softness in dough, milk is a much better way to achieve it than the hidden enzymes added by the baking industry."

The softening effect is mainly because of the fats in milk—around 3.5% in fresh whole milk—which is why when using milk, whole milk gives you the best results.

Fat binds with flour and softens it by modifying the gluten structure and holding moisture. The downside is that the modification to gluten structure can lead to less rise and therefore less volume.

TO ADAPT your basic recipe to milk, you need to take into account that fresh whole milk contains only around 88% water (in addition to the 3.5% of fat, there are 8.5% other milk solids). This means that to replace 100 grams of water with milk, you need to use 114 grams of milk in your recipe.

If doing these calculations with fresh milk feel too complicated, you can also use powdered milk; in this case, just use water as you normally would, but add



powdered milk according to the mixing instructions.

Some recipes call for scalding the milk by heating it to 80 degrees Celcius (180°F) to denaturate a protein called glutathione which weakens the bonds in gluten. However, as most milk has been pasteurized by heating it to even higher temperatures than that, there should be no need for this extra step in bread making (unless you are using milk straight from the farm!).

INSTEAD OF MILK, you can also use other dairy products such as buttermilk or yogurt, which have a similar softening effect and their own distinct taste.

### 2. BUTTER AND FATS

AS MOST OF the softening effect in milk comes from the fat, the next natural thing to look at is butter.

When adding butter, you can get past some of the gluten weakening effects of fats: knead the dough well before adding the butter. This way, the gluten has already been able to form before you put in the fat.

On the other hand, add the butter earlier, and you get even softer dough... If you look at recipes that use a lot of butter, such as the classic brioche, you will notice that eggs are used to counter the gluten weakening effect of fat. This is mosty because of the emulsifier, lecithin, present in egg yolks. The egg yolk also contains fats that make it a softening agent of its own.

BUT BUTTER is not the only option when using fat. Olive oil (or other vegetable oils) and, the British favorite, lard, are all good alternatives. As liquid oils are hard to add at the end of kneading, which oils and how much of them to use is a delicate balance between a good rise and a soft texture.

For a nice, soft texture, you don't need to add more than a few percents in bakers' percentage.

### 3. OTHER ADDITIVES

IN ADDITION to milk and fat, there are a number of other natural additives that you can use to enrich your bread and make it softer.

Eggs were already mentioned above. Use good, organic or free-range eggs to get the best taste and color. And experiment bravely with the amount: in some brioche recipes, such as the one Richard Bertinet presents in Crust, eggs are even used as the only liquid instead of water or milk.

SUGAR, and therefore also honey and other sugary products, bind moisture the same way fats do. So, adding sugar into a dough will make it softer.

But be careful: a little sugar works as food for the yeasts, but too much sugar does quite the opposite. According to Whitley: "when sugar is added at more than 5 per cent of the flour weight, it begins to have a detrimental effect on yeast activity."

### 4. GLUTEN DEVELOPMENT

AS WE HAVE seen above, making shreddably soft bread is a balance between a good, strong gluten network and softness created by adding ingredients that trap moisture.

To counter the gluten weakening effects, and to create good air pockets for trapping the fermentation gases, a soft bread should be kneaded very well—all the way until a full "gluten window" appears.

In this blog post, bread blogger txfarmer, presents the best explanation of when the dough has been kneaded enough that I have come across so far. "Adding sugar into a dough will make it softer. But be careful: a little sugar works as food for the yeasts, but too much sugar does quite the opposite." For good gluten development, you can also choose a stronger flour that can absorb a lot of water.

### 5. TANG ZHONG

AS WE HAVE seen, most of the methods for achieving a softer dough have to do with holding moisture inside the dough.

One more way to achieve this is the Tang Zhong method that has been used in Eastern Asian cuisine for a long time, but was presented to the larger public a few years ago when Yvonne Cheng released her Chinese book, *65 Degrees C*.

The method, also known as Water Roux, has quickly gained in popularity around baking blogs first in Asia and then the rest of the world.

TANG ZHONG is a mixture of water and flour (I have tried wheat and rice flours with good results, the Japanese use a special rice flour called *mochi-gome*) heated to 65°C (150°F) while mixing constantly, until the proteins in the flour denature and the consistency of the mixture changes.

To make Tang Zhong, mix 1 part of flour to 5 parts of water, and heat until the mixture reaches the target temperature. But don't worry: You don't need a



thermometer. As you can see in the picture on the right, the change in consistence is easily noticeable.

When the mixture is ready, take it off the heat and transfer to a clean bowl to cool down. Once cooled, you can either use the Tang Zhong immediately, or store it for up to a few days in the refrigerator which, according to some recipes, further improves the taste and softening effect of the Tang Zhong.

WHEN ADAPTING a recipe for Tang Zhong, you can't count the flour in the mixture as flour in the final dough as it no longer has any gluten forming potential let in it. A good amount of Tang Zhong to use (in baker's percentage) is somewhere around 20 to 25%.







# DREAMS OF BREAD AND SUSTAINABILITY

by RALUCA MICU

I HAVE ALWAYS BEEN a dreamer. You could say I'm one of those people who dream about dreaming. I have never really been much of a doer.

I have never seriously dreamed about dresses or shoes, even though I might have dreamed, from time to time, like any other girl, about being kissed by that cute guy with a cocky smile. But one dream has always followed me: the bread dream, even if in the beginning it was mostly about eating bread.

AS TIME WENT BY, dreams changed. Now, I am dreaming fervently about sitting under a poplar tree with a book in one hand and a slice of warm bread smothered with salty butter in the other. In this dream, I have baked this bread in my tiny bakery in the early hours of the morning, when the world is all nice and quiet. In about an hour, people will start coming in to get their daily bread. We will say hello and smile at each other, and at the end of the day I will be happy to have done a great job: I have managed to put a smile on people's faces just by offering them a warm loaf of healthy bread, traditionally baked with great ingredients and lots of love.

I WOULD FEEL the same way my great grandmother used to feel when placing her bread, hot from her wood fired oven, into my little hungry hands.

Her bread smelled like childhood. It was deliciously simple, no fancy shaping or scoring, but baked with flour freshly milled in the village, with grains from her own land, mixed by hand in a massive wooden bowl and then baked directly on a stone, in a ridiculously small oven, in the room next to her bedroom.

I'll always cherish the memories of those baking days!

RECENTLY, I DECIDED I should do something about this dream of mine, that I shouldn't just let it become a memory, and that this particular dream needs pursuing. Now is the time for me to be a doer, not just a dreamer.

This was why I signed up to one of the bread baking classes held by E5 Bakehouse, and I am happy I did.

The E5 Bakehouse is an artisan bakery and coffee shop in Hackney, East London, owned by Ben MacKinnon. They bake traditional sourdough breads, in British built ovens, using organic, stone ground flour, from traditional wind and water mills across Britain.

This is where you buy real bread! There are no additives or enhancers here, just good quality ingredients and lots of passion. You can't buy a £1 loaf at E5 Bakehouse, but you can definitely buy a tasty healthy one that will make a world of difference to your breakfast, lunch or dinner. I love Ben's passion and the way his team work at the bakery. They a big happy family, creating the most amazing artisan breads; so I had to go back, talk to him and tell you their story.

I ARRIVED at the bakery early on a Saturday morning. Ben was out walking Starter, the bakery's dog, so I bought myself a coffee and sat down at one of the tables. Then I watched the bakery come to life. The place is amazing: tightly hidden under a railway arch, with the bakers working in the background, punters enjoying their treats in the front, while watching the hot loaves coming out of the oven.

It's such a peaceful, homely and fun place to be in. There is the whirr of the coffee machine, the chop chop of a knife prepping something for breakfast, people asking for their favourite breads and pastries, the laughter of a child stuffing his face with a pain au raisin. The place is alive.

Cars stop in front of the bakery and excited customers step on the pavement, heading straight for the queue. You can see it in their eyes they can't wait to get a hold of that brown bag, touch the crusty loaf inside and then swiftly take it home to enjoy it with their Saturday breakfasts.



I could have sat there for hours, just watching the breads being loaded into the oven, but I was on a mission to talk to Ben.

BEN IS a very interesting character: a thin, blond haired, big-eyed man with an immense passion for bread.

It is almost hypnotising to sit there and listen to him talk the way he does about baking bread.

### \*\*

#### Raluca: Ben, tell me: why bread?

#### Ben: WHY BREAD?!

Well, I took a while thinking about what I wanted to do as a career, having worked in a couple of previous careers in fisheries and renewable energy, both of those working towards sustainable futures, for humanity if you like, to be a bit grand about it.

But I hadn't really found a calling. I wasn't really satisfied with these jobs and I wasn't really achieving my full potential.

So I took a little bit more time to think about what might be good and that's how I ended up baking a loaf of bread at my parents' house in Spain, to have with wine, and I thought: "Why not? Why not try

"Bread is sort of a staple. There is no flair, there is nothing extravagant about bread in my opinion and I feel like, as a society, we need to invest in things which are more supportive of a healthy, sustainable society."

### being a baker?"

BREAD IS SORT OF A STAPLE. There is no flair, there is nothing extravagant about bread in my opinion and I feel like, as a society, we need to invest in things which are more supportive of a healthy, sustainable society.

I really feel like good bread is fundamental and a flagship for that kind of movement, so it seemed like a worthwhile thing to invest in and I could, sort of, deliver my ration for doing it quite passionately and with good back up.

I could justify to myself this is why I want to do it, this is why I'll only sleep 4 hours a night in order to do it and make no money out of it.

### **Raluca**: Rather than sit in an office all day?

**Ben**: YES, RATHER THAN SIT in an office working on a big sustainability master plan or renewable energy developments, which also have their merit, but are less practical. With bread, what I've also found out is that it is quite rewarding to make it over the course of a day and then bake it and you have this beautiful end result that you can enjoy.

It's also rewarding giving bread to people and seeing their reaction and

being paid for it as well.

**Raluca**: Was this passion for bread kindled by a memorable bread related moment as well?

Ben: I THINK IT CAME from a few things.

I sort of remember being in Amsterdam and seeing a really cool little shop that was just a tiny hole in the wall with loads of piles of different types of breads, and I thought: "Wow, that's really exciting!"

Then I was in Portugal, with a girlfriend. She was telling me how great it was when she used to drive from Lisbon to this little village where her mum and dad had a house and they would set out ("you know how late the Latins are" — he smiles without knowing I am a Latin too) at midnight on a Friday, get there at 3 or 4 in the morning and go straight to the bakery and grab some rolls before going to bed. I thought: "Oh, that's exciting!"

There is something really beautiful and exciting about bakeries and bread.

## **Raluca**: How did your bread adventure start, then?

**Ben**: WELL, I began thinking about being a baker more and more seriously. I did a

short course on bread baking at The School of Artisan Food. And then, I started to make bread to sell.

At first I was selling to local pop-up stores and shops and did door-to-door deliveries, even managed to sign up 20 people for a local round.

Next, I found a local pizza oven to bake the bread in, which made my life a lot easier.

# **Raluca**: So you couldn't really bake the bread in your oven at home?

**Ben**: WELL I HAD TO, after a while, because I went back to being at home and continued from there. But you know how it is: you can fit maybe three loaves at one time, so if you're baking thirty loaves it is like five or six hours of constant baking, maxing the oven out fully.

So I did that for a couple of months until I found a place to build a wood fired oven. I enjoyed the romance and challenge of building it.

### Raluca: You actually did it yourself?

**Ben**: YES, I did it myself! I spent two months building it and I didn't know if it was going to work, but it did and it baked bread quite well.



It was really exciting, lighting this oven up each day, using just waste wood from the streets, so it was extremely environmentally friendly, kind of reusing a waste resource, collecting flour from Marriage's (a local miller) and bringing it up. Everything felt really neat and how it should be.

## **Raluca**: It's also very nice being able to work with your hands, isn't it?

**Ben**: YES, IT IS very nice indeed to be able to work with your hands—and there is such a range of possibilities, isn't there? There is such a non-exhaustive list of breads that can be made.

Also, with sourdough, you have a whole new sort of reason, alongside all of those.

It's that going backwards feeling, to a time when we used to appreciate good quality bread. It feels like we've left this tradition behind, we sort of skipped over the last fifty, sixty, seventy years.

I love being part of this reawakening of interest and appreciation of all those benefits the sourdough has in terms of nutrition, flavour, quality.

**Raluca**: There isn't very good bread in London, at the moment, is there?

**Ben**: HISTORICALLY, there's been very, very poor bread. We are beginning to see a bit of a change in that, but still I think the really good bakeries that understand sourdough and looking after sourdoughs and maintaining them, are really few and far between.

That takes real dedication. It requires people with a lot of understanding and intelligence and those people need to be rewarded well, and therefore bread, correspondingly, has to be reasonably priced.

This is still the challenge: converting people over to that kind of thinking about bread: as a staple, but not the kind of cheap staple, but one to be valued and used as a healthy, quality staple that you enjoy eating.

**Raluca**: I guess there is an education piece here, which bakers have to consider as well?

**Ben**: YES EXACTLY, people need to understand why they should go for this bread: because it's healthier, tastier, hand made, and supporting probably much more employment.

**Raluca**: Tell me a bit about today's E5 Bakehouse. How many types of bread do "It requires people with a lot of understanding and intelligence and those people need to be rewarded well. and therefore bread, correspondingly, has to be reasonably priced."





### you currently bake?

**Ben**: WE MAKE about eleven types at the moment, and bagels on Saturdays.

### **Raluca**: Which one is your favourite one?

**Ben**: I DON'T HAVE a favourite actually. I switch around between those eleven. I can always find something which is appealing that day.

I just had the seeded pumpkin rye, which is absolutely delicious. I had it yesterday for lunch with avocado, seeds and some spices. It was delicious. It had been baked about three days before. I cut into it, it was still wonderfully moist, just fantastic. You wouldn't get that in a sliced bread you can buy from the supermarket.

You know, we sell that for £2.80 and it fed the four of us for bread, with more than enough to spare.

I also had the focaccia this week. It's just so delicious on its own with the really nice topping.

Of course the Hackney Wild has a special place in my heart, because it's the first bread that we did; it's our signature bread. It's a fantastic bread: a mix of white and whole wheat sourdough bread that's been fermented for seventy-two hours.

"The fact that we are a small company makes it easier to choose our suppliers, we just look who they are, call them up, have a chat and create a partnership."

**Raluca**: Is the Hackney Wild a favourite with your customers as well?

**Ben**: THEY GO FOR IT more than anything else, because it's well known. It's a very versatile bread and it is kind of a go-to bread.

### **Raluca**: Do you think it's because it makes them feel like a part of the Hackney community?

**Ben**: I WOULDN'T SAY THAT. I would say it is just very good bread.

We do recommend you start with that and if you get bored you can start trying other breads, unless you have a preference for rye or whole wheat in which case there are lots of options.

There is huge variety really, lots of new things to try.

**Raluca**: Are the ingredients that you use, both for your breads and your dishes, really important for you?

#### Ben: ABSOLUTELY!

I actually wanted to mention about bread—the quality of the bread. It probably doesn't make much difference if you use organic or non-organic flour, but for all the other reasons I think it's vital to use organic ingredients.

Because of that we are committed to use organic produce amongst all the things that we serve: lunches, cakes and pastries.

We are not Soil Association accredited although it is something we are looking to be in the future, but we have a strong ethic and our suppliers are all dedicated to organic produce. And it's not just about organic produce, but sourcing locally from people that we trust and that share our values.

The fact that we are a small company makes it easier to choose our suppliers, we just look who they are, call them up, have a chat and create a partnership. We are not bound by strict procurement rules.

**Raluca**: How many people do you employ now?

**Ben**: WE CURRENTLY HAVE thirty-four employees.

**Raluca**: Were all the bakers trained on the job, here at E5 Bakehouse?

**Ben**: YES, all of them apart from one and also both the pastry chefs were trained beforehand.

**Raluca**: This is quite impressive considering you've only started E5 Bakehouse three years ago.

**Ben**: YES, WE STARTED three years ago and we are now selling around seven hundred loaves of bread a day.

**Raluca**: Is all that bread sold through the bakery or do you do wholesale as well?

**Ben**: ABOUT 2/3 of the bread goes to wholesale and we deliver all of our breads by bicycle to local restaurants and shops.

**Raluca**: Do you think there is kind of a community growing around the cafe?

**Ben**: YES, WITHOUT A DOUBT we have a community in our café.

Our staff haven't really changed in the last two years and they all get to know the regular customers and the regular customers get to know each other—if they don't already—so certainly it is a place for people to meet and hang out.

But, I think there is nothing more relaxing than watching other people work, so I think the fact that the bakery is going on behind it, makes the people feel more at ease than being in a formal cafe environment, so that's what I like about it.





Also the fact that we go and deliver to places has created a community between us and the restaurants and shops around us, as we serve them bread every day.

# **Raluca**: Do you think anyone can bake bread?

**Ben**: WELL NO. I think some people have, especially with shaping and working with the dough, a lot of dexterity and sensitivity. It seems some people are more naturally inclined towards handling dough, while other people are just clumsy.

They are probably brilliant at doing something else, but when it comes to trying to handle some dough, it's like their hands are separate from what their minds are trying to do.

I wouldn't like to say they couldn't do it, it would just take a really, really long time.

# **Raluca**: Why did you decide to teach people about bread?

**Ben**: IF PEOPLE ASK: "Can you teach us about bread?" if you have some kind of inclination to do it, you say: "Yes, I'll give it a try!" and then you never look back. I've said yes to a couple of people, I can't remember where the idea came from, if somebody suggested it or if I thought it might be a good idea, but somehow I had a class with two people in the old bakery, made them a nice lunch, baked bread in the wood fired oven.

It was a nice day and we had a good time and the next course maybe it was four people. And then maybe it was six and we ran it as six people for a while and then we had an article in Country Living and quite soon afterwards the phone started to go a bit more and it's been very successful ever since.

OBVIOUSLY, we've developed a knowledge about what we can share and the way we explain how to work with sourdough it's improved quite a lot, so hopefully we are now teaching something really helpful.

**Raluca**: Do you have a favourite baker? Please don't say Paul Hollywood!

**Ben**: OH, in the world you mean?

### Raluca: Yes.

**Ben**: I HAVE WORKED with a lot of bakers, but my favourite ones are the E5 Bakehouse bakers: Eyal, Pete, BenG, Will & Illinca.

"You only need a bowl, some flour and an oven to get your first customers. Then, if the bread is good, if you are enjoying it, if the customers seem to want more, then you know you can take another step."

These are the bakers I know best and respect most. They have incredible passion, and through that they already have a deep knowledge of all aspects of baking. They fuse the discipline of baking, with the social etiquette of teamwork, and through weekly classes, share their knowledge with others.

You know we are all a bit star-struck by Chad Robertson, who isn't?!

**Raluca**: What do you think was the best advice anyone has given you while you were working to become a baker?

**Ben**: JUST GET GOOD at one bread. Just focus on getting one bread right, rather than trying to do lots of different breads.

**Raluca**: Is that the same advice you would give me, an amateur baker who wants to become a proper baker?

**Ben**: I'D SAY if you were looking to start a bakery, just start small. That worked well for us. You only need a bowl, some flour and an oven to get your first customers. Then, if the bread is good, if you are enjoying it, if the customers seem to want more, then you know you can take another step.

But I think just marching in and

investing a lot from the beginning is daunting, scary, stressful, and I don't think it's such an advisable thing to do.

**Raluca**: And I guess if you aren't that good, your chances of failing are higher?

**Ben**: I DON'T THINK it's about being that good. I think it's about other qualities in being a baker, along with just making really good bread.

# **Raluca**: So, do you think bread baking is about talent, practice or both?

**Ben**: OF COURSE it's about practice, it's about understanding the dough, the way the levain works, the ovens work, all of those things. It's a constant learning process as bakers.

**Raluca**: If you were to start again tomorrow would you do anything differently?

#### Ben: AAAH... I mean, No!

I wouldn't start again tomorrow, knowing what I know. If I knew what I knew and started again tomorrow, I just probably wouldn't do it, because it wouldn't be exciting, it wouldn't be a voyage of discovery which is what's been



"The happiest moments are seeing the team, the people working here, when they are having a good time, when they are all together."

#### so interesting about it.

## **Raluca**: What do you think is the best thing about being a baker?

**Ben**: I THINK it's the sense of accomplishment and satisfaction in doing something very valuable that has a clear start and end point. You can see the product of your work and you can see if you got it absolutely right, very nearly right, not quite right or you failed. You can see quite clearly what's going on.

You can go home feeling like "I've done what I needed to do" and the time after that is your time, there is nothing hanging over it. Of course you can read a book on bread, learn more about it, but there is no little baggage to carry around on your back. These aspects I think are very nice.

But also there's the beauty that you always have things to learn.

**Raluca**: I was thinking about that. Some people might think that this job can get boring because of the routine, but that's not really true is it?

**Ben**: IT'S NOT REALLY true if you maintain your interest. For example Ben, one of the bakers, is doing a day of R&D almost every week here, learning more things about fermentation, different styles of baking and so on.

**Raluca**: How about the worst thing about being a baker (apart from the early mornings)?

**Ben**: IT'S VERY PHYSICAL. So one of the negatives is that your body may hurt, quite a lot, you might feel quite tired. You are working a lot of the time on your feet, so your body can feel it!

**Raluca**: What was the happiest moment so far in your baking career?

**Ben**: I THINK PROBABLY, for me personally, the happiest moments are seeing the team, the people working here, when they are having a good time, when they are all together.

Feeling like I've been in a way responsible for bringing these people together and helping to create a nice place to work.

#### Raluca: And the worst?

Ben: The worst?

# **Raluca**: Was it the broken oven you bought off eBay?

**Ben**: HA, noooo... Not at all.... I can't really think of a worst.

**Raluca**: Thank you for taking the time to talk to me.

#### \*\*

TALKING TO BEN, I have realised dreams do come true, you only need to pursue them.

I also realised just how big the cultural gap between us is. He has been taught from childhood to always go for it, to dream and pursue his dreams. I, on the other hand, was taught to always be reserved, to accept what I have got and not take any risks.

I CANNOT help but wonder now, after meeting Ben and the team, and seeing what a wonderful thing they've built together, will I be able to change that about me? I think so. I have to! And all of you out there with a dream, bread related or not, should do so!

I HAVE ALWAYS hated clichés and all these inspirational messages you tend to see everywhere these days, but I do believe that we can do anything as long as we set our minds and hearts to do it. Happy baking everyone!



# NEXT ISSUE

IN THE NEXT ISSUE, we will go back to basics: flour, milling, and wood-fired ovens. On the more hands-on side, we will take a look at gluten-free bread making and how to make good—and real—bread for those who are unable to enjoy a regular loaf of bread.

The issue comes out on October 23.



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