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contact@insanelyinterested.com



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WELCOME

It's almost a cliché to say that all we really need and hope for is to live good, meaningful lives. But it's true, so I'll be naive and go ahead and say it anyway.

As I write these words, I have just finished putting together the new Bread Magazine issue you are about to start exploring. Delicate, rich yet fragile and intimate sounds from Sufjan Stevens's new record¹ playing in my ears, I sit at the local library, thinking about a life well lived and what that has to do with bread and this magazine.

I'm inspired by the idea of living quietly with my eyes and ears open. In peace with the world around me but eagerly exploring everything it has to offer. This thinking first led me to start Bread Magazine. And it's this thinking that still makes me want to continue putting out new issues—and baking more bread.

If we break this idea into smaller elements, we'll easily see what it has to do with bread.

Simplicity. We don't need the bells and whistles. Instead, we need the kind of humble joy that comes from keeping traditions alive and turning simple ingredients into something

1 [Carrie and Lowell](#), released March 31st.

memorable. There is much more magic in transforming simple ingredients into a life-giving and awe-inspiring loaf of bread than in buying the latest cool, but ultimately unnecessary electronic gadget.

In this issue, we'll explore one of the first flours ever used by our ancestors—barley. We'll look at barley's baking properties, take a glance at its history, and then use it to bake good, healthy bread.

Taking your time. Closing your eyes and listening to the song with the kind of attention that lets you hear the nuances and feel the raw emotion that the artist put into his work. Taking a bite of a dark-crusted sourdough loaf and trying to describe its flavor. Pushing words back and forth until a sentence forces a smile on your face.

Good bread takes time to make. Whether you see this as a scheduling challenge or an opportunity to take your time and do one thing and do it well is up to you. There is a time for both—it all depends on the demands life puts on you at a given moment—but as I move forward, I hope to be able to choose the latter approach more and more often.

In this issue, you'll meet Sonya Hundal, a fun and easy-going baker from the UK. After reading about her bakery, you'll get to taste her favorite bread. Bake a loaf, take a slice, sit back, and try to see why she picked this bread.

People—and you. A big reason for going into business on my own was to be able to be there when my sons come home from school. It was for them, but also for myself. Bread is the same way: when you make bread, you make it for someone, whether it is your customer, your wife, your neighbor. But every time you give bread, you get something back.

In this issue, you'll see how a group of bakers came together to form a bread club. Then, we'll explore the idea further and look at what it would take to start one ourselves.

Hard work. Bread is a craft and bakers are craftsmen and craftswomen. But what is craft?

Craft is practicing more when everyone else says you are good enough. For a craftsman, work is more than a task on a "to do" list. Work isn't always fun, but he always sees it as a chance to learn and to improve his skills—while creating something that matters.

In this issue, you'll get to follow along with a baker who went chasing after craft by moving to France to study bread making. You will also get tools for your own practice in the form of decoration tips and a closer look at temperature in bread making.

Curiosity. Curiosity is the fuel that brings the rest of the items on the list together and makes you want to take a leap of faith and see what lies on the other side.

In this issue, you'll meet Rowan Walker, a baker who jumped in to bake bagels for the people of Edinburg. Rowan says: "If I can do it, anybody can (seriously)."

So, don't worry about getting your hands dirty and get to work. It'll be fun!

That's what a good life is about: having fun while chasing dreams that have the power to make the world a better place for everyone.

* *

I hope this issue of Bread Magazine will inspire your curiosity, encourage you to experiment, keep you practicing your craft, and give you tools to bake more and better bread.

As always, if you have questions, feedback or ideas, [I'd love to hear from you.](#)

Thanks for reading, and happy baking!

Jarkko



BREAD CLUBS BRING BAKERS TOGETHER

Words: JARKKO LAINE

Photos: KARIN BRULIN, ERIK FOLIN,

CHARLOTT SUNDBERG SÖRÖ,

NIKLAS THEODORU, and OSKAR VEHVILÄINEN

These days, a lot of the most interesting and active community building around bread is happening on Instagram, where bakers in home kitchens and craft bakeries comment on each other's breads, sharing tips and tricks to help their peers get further in the art of bread making.

But as the example of a self-described group of six "bread nerds" from Stockholm who came together to start a bread club shows, meeting people face-to-face still holds a special kind of appeal. And—maybe surprisingly—Instagram is a good tool in making that happen.

THE STOCKHOLM BREAD CLUB

It's difficult to pinpoint when exactly the idea for the *Stockholm Bread Club* was born.

Many of the group members had similar ideas in the past, about getting to know other passionate bread bakers in person. And it's probably a kind of hope for a bread making

community that leads us to join each other on Instagram as well.

But when I asked the group about it, each of the members pointed to Erik Folin and his courage to take action and make it happen.

Erik Folin is a lighting specialist and active home baker who has been baking sourdough bread for well over a decade. At first, his interest was fueled by bread books and blogs, and throughout the years, he has found himself diving ever deeper into the craft and using heirloom wheats and ancient grains.

"I later discovered Sébastien Boudet¹, who at the time ran the little bakery [Petite France](#) here in Stockholm, and got very interested in what he was doing and his philosophy and attitude towards artisan bread." Erik says.

"Eventually in 2011, I got the opportunity to attend one of his bread classes. That really inspired me and taught me the importance of working with the right ingredients."

1 See our [Fermentation issue](#) for an interview with Sébastien Boudet.

The first seed for the Stockholm Bread Club was sown when Erik read an article about community ovens. He got exited about the idea of building one somewhere in Stockholm and even found a place for it, but at that point, the time wasn't quite right for the idea to come to fruition.

"I didn't have anyone with me at the time so the whole thing never took off. Instead, I built my own cob oven at our country house in the Stockholm archipelago." Erik says.

The idea of building a community of bakers around a community oven was pushed to the background but the desire for a bread community was still there. Erik joined artisan bread baking groups on Facebook and the worldwide community of bakers hanging out on Instagram². But while the feeling of

² See our blog for [a big list of bakers to follow on Instagram](#).

community and learning together was strong, it wasn't quite the same as meeting face to face with other bakers.

"Social media is a wonderful way of getting to know people from all over the world and to learn from each other but nothing beats meeting people in the flesh", Erik says.

And so, the idea kept slowly fermenting in the back of his mind, this time focused more on the bakers themselves rather than a community oven for them to gather around.

"I wanted to gather some of Stockholm's home baking bread nerds into a little local group." Erik says.

"It's a really interesting and exciting when you put a bunch of people together with different experiences and backgrounds. You never know what will come out of it. Anything can happen! I wanted to explore that."



"Social media is a wonderful way of getting to know people from all over the world and to learn from each other but nothing beats meeting people in the flesh."



At the same time, separate from each other, the group was baking—and slowly getting to know each other through posts on Instagram.

One of the people who would later form the bread club was Oskar Vehviläinen, a home baker who first got in contact with sourdough bread through his family's roots in Finland.

"My parents are from Karelia, and my relatives used to bake some fantastic 100% rye breads. I loved the bread in a early age and one of my aunts gave me some loaves instantly when we arrived to Finland." Oskar says.

Around five years ago when Oskar spent ten months as a stay-at-home dad taking care of his eldest son, the early experiences turned into a hobby. The one-year-old used to wake up at bakery hours—at four in the morning—and Oskar needed something to do so he wouldn't fall asleep while looking after the boy. He turned to bread baking.

"At Christmas time my girlfriend sent me to a bread and sourdough class over a week-

end and that really hooked me up. So it started around five years ago for me. But on a more nerd level the last two years maybe." Oskar says.

Last autumn, both Erik and Oskar participated in a bread making event, Bread Saloon, at the small wood-fired bakery situated in [Rosendals Trädgård](#), a beautiful garden in central Stockholm. After a talk about [Warbro Kvarn](#), a fine Swedish flour mill using ancient and heirloom grains to produce organic stoneground flour, the two men got talking.

The chat about grains and bread went on and before they knew, a bread club was taking its first steps. Oskar and Erik followed each other on Instagram and started discussing bread over the phone, and after a while the idea of a "bread club" popped up once again.

Only this time, thanks to the connections formed on Instagram, they had a group of people to start the bread club with.

The first person Erik and Oskar contacted was Barbara "Elisi" Caracciolo³, a scientist as well as a passionate baker and [bread blogger](#) who—at least looking at her Instagram and Facebook feeds—always seems to have a dough proofing somewhere in her kitchen.

Barbara's earliest bread memories bring her back to her native Italy.

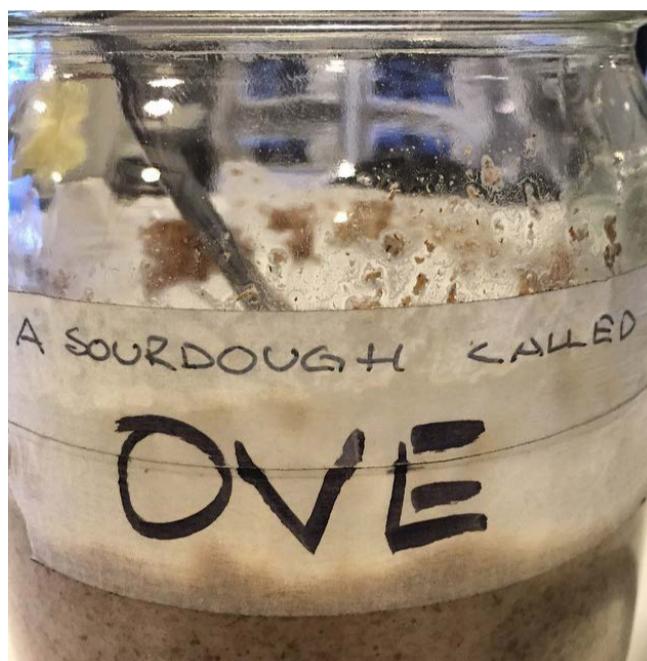
"In particular, I have strong memories of the sourdough bread we used to get in the countryside around Rome, when I was a kid."

But despite loving bread as a child, Barbara didn't start baking bread until three and a half years ago. "I hardly knew what yeast was," she says with a smile.

"After moving to Sweden, I started to miss my Roman sourdoughs, and Roman breads in general, and I began to dream of baking my own bread. But it was only in the summer of 2011 that I put my hands at my first loaf of bread. I baked three times with commercial yeast and then moved on to my home grown sourdough culture, which is the one I keep preferring to use, as I believe it gives me the best results."

Erik, Oskar, and Barbara had bought some heirloom wheat flour of the Ölandsvete variety and as Erik drove to Barbara's place to

"I can't stop thinking of sourdough bread, different techniques, and which bread to make next."



deliver her share of the flour, he also brought with him the idea of starting a bread club in Stockholm.

As you can imagine of a baker strongly involved in the international baking scene on Facebook and Instagram, Barbara was immediately on board.

Barbara's husband, Larry, runs a "cultural café"—a combination of a café and shop, called [Larry's Corner](#), so the idea quickly came up to have the first meeting in that space.

After that, it was all about looking into calendars and contacting the other bakers they thought might be interested.

Barbara and Erik picked two dates and contacted the rest of the group via Instagram's direct messaging, asking them to choose the one that works best for them.

Niklas Theodoru, the group's latest sourdough convert (Niklas baked his first sourdough loaf a year ago, inspired by Martin Johansson's book [Enklare bröd](#)) jumped right in.

"I can't stop thinking of sourdough bread, different techniques, and which bread to make next." Niklas says.

The two other bakers Erik contacted, Rebecca Saari and Charlott Sundberg Sörö, couldn't make it to the first meeting.

³ In bread making circles, Barbara is known as *Barbara Elisi*, Elisi being an alias derived from Barbara's second given name, Elisabetta.

"It felt like we could have talked a couple of more hours but it got late. We asked each others questions, shared our experiences and talked about what this could be in the future."



And so, on February 12, the first four bread club members gathered at Larry's Corner to talk about bread and to get to know each other around some beer, tea and organic chips—"I planned on bringing bread-based appetizers, but I was late, as usual, and ended up running to the nearest supermarket instead" Barbara says.

"Since this was our first meeting, we didn't have a plan or agenda for the meeting. The most important thing was to get to know each other and we talked about whatever came up." Erik says.

Three hours passed quickly as the group talked about their passion for bread, the different approaches to bread making and all of the things they could do together in the future as a group.

"It felt like we could have talked a couple of hours more but it got late. We asked each others questions, shared our experiences and talked about what this could be in the future." Niklas says.

"There are a lot of things that are easier to do if you're able to meet in person rather than online. For starters you will certainly get new friends. You're in the physical presence of another person. That alone makes any type of interaction much easier and pleasant." Erik says.

Add to this that it's a group of people who won't find your obsession for bread silly—they share it.

Or, as Charlott says, they speak the same language: "We have a mutual understanding of the nerdiest of sourdough, you can talk of temperature, steam, stretch and fold, autolyse, grains, proteins..."

"It's very nice to meet a person who can understand your passion and also shares it. And for me that only have baked with sourdough for a year it was great to meet more experienced bakers and discuss things that's been on my mind for a long time and get valuable inspiration and advice." Niklas adds.

Everyone went home with a smile on their face and it's no surprise that the group has plans for the future.

After our interview, the group has already met for a second time, this time with all six members attending—and with a special guest from the USA.

But that's just the beginning. The bread club will bring to its members new opportunities from organizing trips to bakeries or mills to arranging bread making events as well as doing shared flour and tool purchases. Not to forget learning about bread making and sharing the passion:

"We would like to spread the word about the benefits about sourdough bread and how fun it is to make it." Niklas says.

"I think we would like to bake together and we are talking a bit about it, where and when." Rebecca adds.

But for now, the group is happy to let the project grow naturally and see where the future will lead them—be it in size of the group or the things they will do together.

If you are in Stockholm, the group is still welcoming more friendly bakers! Follow the group on Instagram, send Erik a message, and join them as they explore bread making together.

But what if you like the idea but live far from Stockholm? The Stockholm Bread Club shows that it's not only possible but also great fun to find a group of local bread lovers and get together to chat and learn together.

Curious to learn more and eager to put some of these ideas into action in the Helsinki region myself, I went looking for some tips and ideas we can all apply regardless of where we live.

FOLLOW THE STOCKHOLM BREAD CLUB ON INSTAGRAM

If you are interested in following the members of the Stockholm Bread Club and their journey of bringing their bread club up to speed, you can find them on Instagram:

The Stockholm Bread Club
→ [@stockholmbreadclub](#)

Individual Club Members:

Barbara "Elisi" Caracciolo:
→ [@barbaraelisi](#)

Erik Folin:
→ [@e_folin](#)

Rebecca Saari:
→ [@reebrook](#)

Charlott Sundberg Sörö:
→ [@thesourdoughandthecookie](#)

Niklas Theodorou:
→ [@densurebagaren](#)

Oskar Vehviläinen:
→ [@mjolvattenochsalt](#)



"There are a lot of things that are easier to do if you're able to meet in person rather than online. For starters, you will certainly get new friends."

FIND YOUR OWN BREAD CLUB

If you are anything like me, reading about the Stockholm Bread Club got you interested in meeting in person with other bread bakers from your home town. But how do you find a bread club you can join—or people you can start one with?

Thanks to modern technology, it's easier than you might think.

Today, bread baking is a rather "niche" activity enjoyed by a small but devoted group of people, but at least in the bigger cities around the world, it is very well possible that a club already exists. So, before starting your own, it's a good idea to do a quick web search: Start by typing "bread club [your city]" in Google. If that doesn't bring you good results, checking [Meetup](#), Facebook and Google+ is also a good idea. If you are in the UK, check out the [list of bread clubs](#) maintained by the Real Bread Campaign (all of the groups are not bread clubs in the sense we're discussing in this article, though).

Don't worry if you don't know anyone in your group in advance. At Stockholm Bread Club, only Erik and Oscar had ever met in person before, but when they got together, the group felt natural right away.

If you can't find an existing bread club, your next option is to start one yourself. See if you know any bread enthusiasts on social media sites such as Instagram, Facebook, Twitter or Google+ and suggest the idea to them.

One person might be all you need: one contact can lead to the next—and before you notice, you will have found a handful of people to start the project with.

If you want to reach people outside your current social media networks, posting on a bread forum such as [The Fresh Loaf](#), or in a Facebook group you frequent can also bring your idea some more attention.

"Don't be afraid to reach out and ask." Niklas says.

"Don't worry if you don't know anyone in your group in advance. At Stockholm Bread Club, only Erik and Oscar had ever met in person before, but when they got together, the group felt natural right away."

On the other hand, if you are not active on social media or don't feel comfortable reaching out to people through a computer, bread making courses and events are a good place to meet new baker friends who might be interested in starting a bread club with you. A shared experience from a course or event also acts as a good common ground to build the community on.

For example, Rebecca tells that many of the members of their bread club in Stockholm have been to one of Sébastien Boulet's classes or baked from his books.

"Go to different bread events and talk to people, look for people on social platforms like Instagram or Facebook to see who lives in your neighborhood." Erik adds.

WHAT TO DO AT A BREAD CLUB MEETING?

When you get together for your first bread club meeting, you probably want to spend that event getting to know each other, just like the bread nerds from Stockholm did.

Find a relaxing place where you can all feel at ease without too many interruptions and enjoy the company, chatting about your bread making backgrounds and your thoughts about the group and its goals.

But what about after the first meeting?

Every group is different and should decide its format and goals within the group, but ideas from other bread clubs can serve as a good starting point.

Founded in 2003, [Saint Paul Bread Club](#) in Saint Paul, Minnesota, is one of the oldest—if not the oldest—bread clubs still running today. With

over 600 members, it is also one of the biggest ([Los Angeles Bread Bakers](#), with almost 1,200 members, is bigger).

The club's Vice President for Communications, David S. Cargo, told me that the bread club is "an opportunity to form a community around a shared passion, which in this case is baking bread."

This means getting together to talk about bread, but also to share bread and to learn from each other's bakes:

"A large part of our meetings is 'show and tell,' where we see what people have been baking and what they have learned from it." David says.

In Chicago, for the past four years, Jacqueline and Dado Colussi have been organizing meetings for a similar club of autodidact bread bakers called [Chicago Amateur Bread Bakers](#). The group retired from organizing in-person bread club meetups at the end of 2014, and now focuses on the monthly #BreadChat event on Twitter⁴.

"It's been wonderful to bake, learn, and taste each month with our bakers, and we figured four years had been a good run for our little group." Jacqueline says.

"A large part of our meetings is 'show and tell,' where we see what people have been baking and what they have learned from it."

Just like at the Saint Paul Bread Club, at the heart of the Chicago Amateur Bakers' monthly meetings (always on the second Sunday of the month) was a feedback section called "Taste-and-Tell."

⁴ I'm a regular co-host at #BreadChat and encourage you to join us for the fun! You can read our article about the event [in our April 2013 issue](#).

"There's something satisfying and gratifying about receiving feedback—especially feedback at regular intervals—in person from others who share one's interest."

Every month, In preparation for the month's "Taste-and-Tell," Dado and Jacqueline picked a topic to challenge the group members to help them gain experience and build their craft in fundamental skills such as "scoring, shaping, how fats and / or sugars affect bread dough, and the interplay between time, temperature, and yeast."

Jacqueline wrote and posted a description for the focus topic, "setting the topic in a context of bread baking, describing why it's interesting, ideas for approaching it with a sense of play, and the benefits to be gained by mastering this skill."

Then, as the bakers gathered for the meeting, everyone brought a freshly baked yeasted bread made according to the guidelines set by the month's topic. One by one the bakers showed their breads, talking about how the bread was made, what went well and what didn't; surprises, mishaps, and so on.

"Everyone had a chance to taste each bread, ask questions, and give feedback." Jacqueline says.

"There's something satisfying and gratifying about receiving feedback—especially feedback at regular intervals—in person from others who share one's interest."

"This feedback catalyzes one's interest in both depth and breadth. When bread bakers come together, we see them take inspiration from one another's approaches to solving a problem, e.g. controlling the tartness of one's sourdough bread or achieving the crumb structure one's after. Bakers gradually, after preparing for and attending meeting after meeting, develop insight and intuition about the bread-baking process, and they take more and more inspiration from one another."

Another great idea for a bread club activity is to bake bread together.

At Saint Paul Bread Club, the fact that the club's founder, Dan McGleno—or Klecko, as he is known in the trade—is also the CEO of a

local bakery, [St. Agnes Baking Company](#), has given the club members many chances to bake together at professional baking facilities in the bread club's quarterly meetings at the bakery.

"[He] has a theme prepared, and might have done a lot of setup work (and will do a lot of cleanup work after the meeting)." David says.

"An extreme case is when we have a bake-off at St. Agnes, in which case Klecko has arranged for judges, prizes, and a considerable amount of setup at St. Agnes."

But even if you don't have a professional baker in your club, you can use your natural charm—and the power of speaking on the behalf of a club—to find places to bake at.

Erik and Oskar recently visited a small baking cabin in central Stockholm to scout it for a location for a future baking meetup.

"They have a small wood fired oven in there and they used to have bread classes. We talked about to visit them again with our bread group and if it would be possible for us to bake there. Hopefully it will happen this spring." Oskar says.

"They have a small wood fired oven in there and they used to have bread classes. We talked about to visit them again with our bread group and if it would be possible for us to bake there. Hopefully it will happen this spring."



Baking cabins, community ovens, schools, small bakeries with professional kitchens... When you stop to think about it, there are tons of options you could get access to by just asking politely and being friendly.

"Most recently we met at the [Chicago Cultural Center](#), a beautiful old building in the center of Chicago that supports many community projects and art exhibitions and performances. They have a large public community room, with large wooden tables and comfortable chairs, and they allow food to be brought in, perfect for our roundtable "Taste-and-Tell" meetings." Jacqueline says.

Other places where the group has gathered in the past include the back room of a local café and the seating area of an organic produce market.

"We also met variously in an art gallery, a community center that has a wood-burning oven, and—in the summer months—outside, in [Chicago's Millennium Park](#). These out-of-door meetings we organized as picnics. Also once we met at a baker's home, to bake pizza in the wood-fired oven he'd recently constructed in his backyard. And a number of times we were invited to bake bread with the students at a local culinary school."

Jacqueline's experiences from looking for venues in the early days of the bread club are all tips well worth applying for your club:

1. I posted about what we were seeking on Twitter, [EveryBlock](#), [The Fresh Loaf](#), and the [Chicago Amateur Bread Bakers' website](#).
2. I browsed [Meetup](#) for groups in the Chicago area to see where they meet. If a venue kept coming up as a popular place for meetups, this was a good indication that this venue would welcome contact from our group.

3. Once I had a shortlist of venues that I thought would be a good fit for our group, I approached the owner of each venue, introduced our group, and asked if we could hold a meeting there. Our group was welcomed with open arms about as many times as we were turned down, I would say, which was incredibly encouraging and made the process a pleasure.

As the group grew and became a bit known around town, finding a venue became easier, as we could crowdsource venue ideas from group members, and occasionally venues would reach out to us and invite us to meet in their space.

At one point we had so many invitations from venues, we couldn't accept them all.

* *

The Stockholm Bread Club members share an interest for heritage grains and are already planning for grain and flour related activities. Doing flour and other big purchases in bulk and splitting the costs is one idea. But maybe more important, as Barbara says, is "[g]etting more and more familiar with local millers and growers, hopefully making an impact on their work."

Advancing this goal is already in the works:

"Before our first meeting, in one of our many phone calls, I spoke to Erik about doing a trip to the mill, Warbro Kvarn." Oskar says.

"We talked about it again at Larry's Corner with the others. And afterwards Erik contacted the mill and we should be able to make a trip there together in April."

The mill is only open for public on Fridays but thanks to Erik's proactivity, the group will be able to visit them on a Saturday.

"After all, we all work during the weekdays." Oskar says.

KEEPING THE GROUP ORGANIZED

It's up to the group to decide how formally they want to organize themselves. You can set up a formal entity, or you can go the informal route chosen by Saint Paul Bread Club.

"Our founder wanted something very informal, so we are very loosely structured. While we have a notion of officers (I'm the vice president for communications, and we have a president and the possibility for other vice presidents), we are not any kind of legal entity, and collect and spend no money. Our founder believed that once money was involved, the fun would stop for many people. All posts are volunteer positions." David says.

But no matter how you organize your group, some administrative work is needed: the meetings require some preparation (planning the schedule and finding locations at the very least), and you need to keep track of your group members and keep in touch with them.

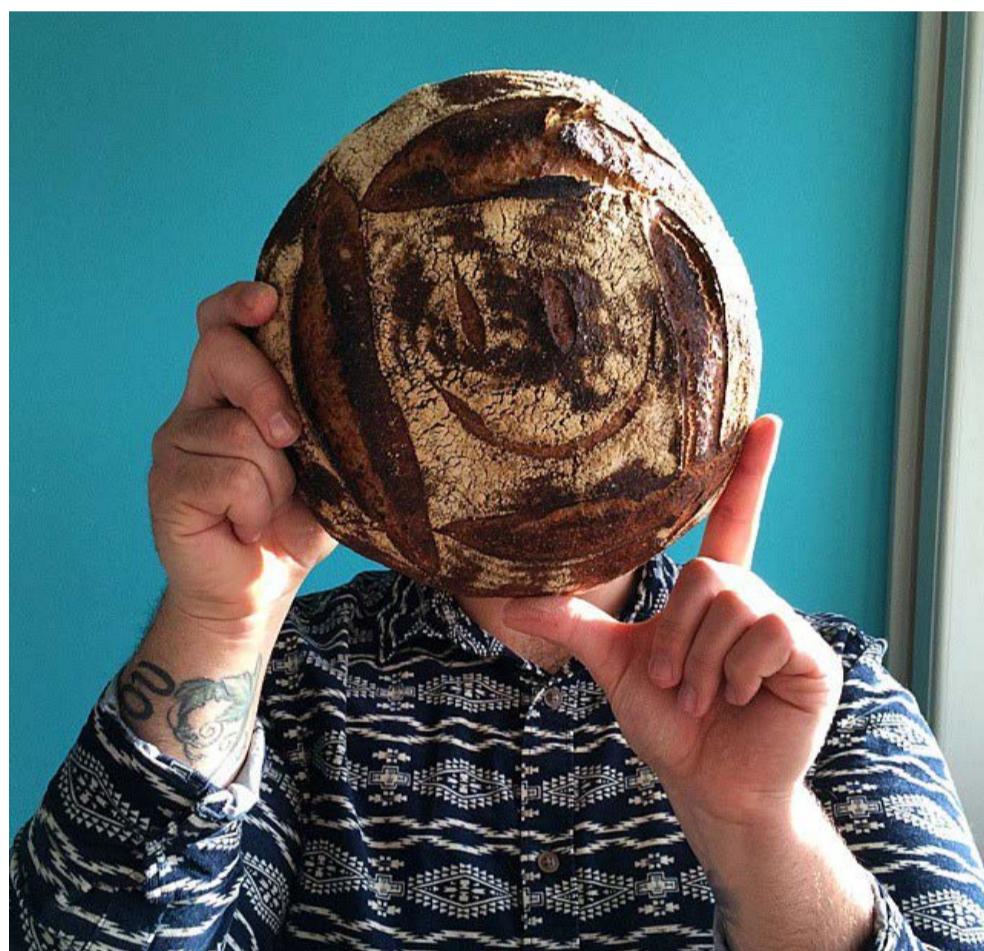
As your group grows, having a web site or a presence on Meetups, Facebook, or Google+ will help people find your group.

"People find us on Facebook or doing an on-line search. Our web pages have fairly high ranking on search engines. I just found us on the first page returned by searching Google for 'bread club'." David says.

"Some people have found us because we are mentioned in Kim Ode's cookbook, [Baking with the Saint Paul Bread Club](#)."

The social networking profiles and a web site can also be used to notify people of upcoming events, but in the end, when it comes to reaching people, nothing beats an old-fashioned email message.

"I maintain a contact list for members, and some events get posted on our Facebook page. So, I send out monthly e-mails letting people know about upcoming events. Events are also listed on our site." David says.



In time, if your group is successful, your email list and social media following will grow, which might feel scary—"how can we manage a group this big?" you might ask.

But based on David and Jacqueline's experience you shouldn't be too afraid about not having room for the people in your bread club.

"Over the years, around 25% of the people who signed up for the group attended a meeting. Around half of the people who came to a meeting became a regular participant." Jacqueline says.

Saint Paul Bread Club has a big list with over 600 members, but the number of people is still manageable. This is partly because everyone will never have the time to participate to every event and partly because, to keep monthly numbers more reasonable, the group has been divided into smaller local groups that meet separately—except for the bigger events such as the St. Agnes meetings.

"That varies quite a bit by the kind of event. Monthly meetings usually range from 3 to 8 (sometimes more, sometimes less). Meetings at St. Agnes have had 20 - 70. Picnics have 20 to 40." David says.

JUST DO IT

Enough with the talking! If you like the idea of starting a bread club with people from your home town, just get started already.

Go through your contacts and send that first message. Who knows where it will take you in the coming months and years.

Charlott has an interesting idea when she says: "In the future it would be great to have a place to bake together and perhaps create a micro bakery."

And at the very least, you will get to experience the joy of sharing your passion with other people. Barbara's answer to my question about what is the best about the meetup says it perfectly:

"Easy to answer. To me the best was seeing the sparkles in the eyes of my fellow bread pals when they were talking about bread! Invaluable."

"Easy to answer. To me the best was seeing the sparkles in the eyes of my fellow bread pals when they were talking about bread! Invaluable."

DECORATING BREAD



Words: JOSEP PASCUAL

Photos: ABEL SIERRA

Josep Pascual's decorative breads taking all kinds of shapes from stenciled triangles to football-like rounds are well known among bakers around the world.

In this article, the artist baker from Barcelona shares some basic techniques from Pascual Method, his toolbox for making great looking breads.

I created the Pascual Method because I compete in international tournaments almost every year, and I was looking for a baking system to be able to make top quality loaves in the few hours you have in an European or World Championships. In these competitions you have to make several pieces of bread, not only excellent in terms of flavor and aroma, but also in terms of creativity and beauty.

You have to make loaves that attract attention and provoke emotions and feelings and you don't have a lot of time to do it.

During the past years, I have developed a new system focused on making natural sourdough. I feed the levain in a different way from the other bakers usually do so I can use a high percentage of levain in bread, all the way up to 100%. This allows me to get nutritional and health benefits never seen before. With this system I avoid using a great quantity of yeast, so the bread ferments quicker and tastes better.

My method involves also the other items, such as the kneading techniques, maturation of the dough, and some techniques I've developed related to controlling and delaying the fermentation. For example, I've created a system to activate the fermentation of a dough in the moment that I want (lethargic dough technique), and also a system to dilate the fermentation of a dough (dilation dough system). So the Pascual Method is not only decorations. It's a sum of techniques and systems that converge in one product, with one absolute criterium: join bread and health in one only and sublime product.

I think that bread has to be good in terms of flavor and aromas, but it can also be beautiful like a piece of art. A nice decoration in bread or pastry increases our prestige and reputation as artisans. We can make a product that will be different from the bread the other bakers do.





STENCILS

You can apply designs in a bread dough with stencils, and you can achieve that the design doesn't destroy during the baking process. Some tips that I can explain related to this item: use a flour or a combination of flours "non explosive". This means you have to choose an appropriate mix of flours with a high percentage of extraction rate.

This kind of flours, with a long final proof, doesn't develop so much in the oven, so you usually can keep the design you made before you bake it.

You can control the spring-oven scoring the dough in the sides with little scorings. This is a way to address the spring-oven and respect the design you made on the top of the bread.

Batards and boules are nice, but you can also make a bread in the shape you want: triangle, square, pentagon... For decoration, you can use stencils that you can buy in stores, or even you can use objects that you've got

in your house or in your office and you never thought you can use to decorate bread (a cooling rack, a kitchen trivet, slotted spoons, etc). Or you can use the leaves of a tree, or any other thing you can find.

Just take a look around and you'll find the inspiration.

If you don't find any object that inspires you, you can make a stencil with a drawing or a design that has a special meaning for you.

The name of your bakery, the logo of your favorite sport club, the favorite cartoon of your son. It's a good idea looking for contrasts, using malted flour or cocoa powder for black-brown color and regular wheat flour for white. You have to use a sieve to dust with flour the stencil you have chosen. You can also use a stencil over a dough coated with seeds, or just make a braid above.



"Just take a look
around and you'll find
the inspiration."



LAYERS

Sometimes we want to apply a decoration or achieve a nice oven spring with doughs that contain flours poor in gluten, or that contain added ingredients like cereals, seeds, or nuts.

This technique consists of kneading in the mixer all the ingredients but the cereals, seeds or nuts, adding only 60% of the water.

You have to keep aside one part of this dough, and then add the rest of the ingredients and the rest of the water. After the bulk fermentation, shape the loaves with the part of the dough which is more hydrated and contains the cereals seeds or nuts.

Flatten the other dough with a rolling pin and wrap the other dough with this thin layer of dough, like a gift. Now, you can apply all the decorations over this smooth dough and this harder dough will be like a container for the other dough.

If you want that both layers to stay together, just paint with some water in between. If you want that the layers separate, you can paint with some oil instead.

* *

Both techniques complement each other. In the last years I've developed more than 20 techniques related to decoration and final shaping that I usually explain in courses and demos around the world, related not only to bread but also to pastry using brioche or croissant dough, creating effects with a regular dough and a dark dough (just adding some cocoa powder to the ingredients).

So now it's your turn. Take a walk, see the world with a baker's look and get inspired.

Like somebody said, our imagination is the only limit to what we can hope to bake in the future.

→ Follow Josep Pascual (and see more of his breads) on [Facebook](#), [Twitter](#) or [Instagram](#).







THE GRAIN OF THE HERMITS

Words: JARKKO LAINE

Photos: WPLYNN, 영철 01, and JARKKO LAINE

Barley (*Hordeum Vulgare L.*) was one of the first grains ever used in bread making, the first traces found dating its original wild variety¹ to at least 22,500 years ago—well before the big shift from hunting and gathering to farming.

In his book, [Bread: A Global History](#), William Rubel writes: “Starch grains from barley and possibly wheat imbedded in a grindstone found by the Sea of Galilee at the Upper Palaeolithic site of Ohalo II are between 22,500 and 23,500 years old.”

As is often the case when it comes to history, the further back we go in time, the fuzzier things get. And so, it’s hard to say for sure if barley or the early forms of wheat, einkorn and emmer, came first—most likely they were domesticated around the same time.

But as a sturdy and flexible grain that grows in vastly different climates from the warm temperatures of the Fertile Crescent to the cold and tough seasons of Northern Europe, it’s not too wild a guess to say that barley deserves

1 Even today, you can find wild barley (*Hordeum vulgare subsp. spontaneum*) in grasslands throughout the Fertile Crescent and Northern Africa.

the number one position. As further proof, in Denmark where barley was a staple in the Viking diet, the plant is called “byg”, Danish for “the cultivated grain.”

And Uruk, considered the world’s first city, built its civilization around bread, which—because of the poor soil in the area surrounding it—was largely barley.

Despite the promising start, barley soon fell behind wheat and even rye in the race for the spot as the most important bread grain and had to settle for becoming the poor man’s alternative (and a key ingredient in many beers and other foods around the world). It’s no wonder: the effect gluten has in wheat is close to magical and thus impossible to beat, and compared to rye, barley’s taste is much milder.

As the world fell in love with the lighter loaves that could be achieved through using wheat flour and proper fermentation, barley became something of the opposite: a coarse, hard bread that was suitable for hermits and ascetics looking for spiritual cleansing and simple living—and the poor who couldn’t afford the more expensive white bread.

"Many a hermit will have punished his body with the coarsest breads in pursuit of life without heat or excitement." Rubel writes.

But while barley has been considered the less favorable flour of the two since the dawn of civilization, the poorer regions of Europe have hung to the grain and barley bread recipes made with varying mixes of barley and wheat as well as rye can be found all over the continent, from bannock in Britain and Ireland to Vollkornbrot in Germany.

"The poorer the European region, the more likely it is that one can still glimpse the tail end of the European flatbread tradition *in situ*, though today's wealth has tended to homogenize the product. The pane carasau of Sardinia is eaten locally but now it is made from fine semolina, while even 50 years ago it was only the village priest and the teacher whose bread was made with this grade of flour; everyone else ate a pane carasau made from a less refined flour, and in the more distant past sometimes barley flour." Rubel writes.

* *

Today, barley is grown throughout the world and used in many ways from beer brewing to animal fodder and traditional foods. As a bread grain, however, it is still mostly a regional curiosity rather than an every day bread—which makes it an interesting grain to experiment with, don't you think?

Even though taste and culture always come first to me, a further reason for getting excited about barley are its health benefits, most importantly the high amount of the soluble fiber, beta-glucan.

Beta-glucan—and fibers in general—is found in other grains as well, but barley has a distinct advantage: the fiber is found throughout the barley kernel and not just in the bran.





"A 100% barley dough made like a regular bread dough won't be able to trap the carbon dioxide produced by the yeast and will lead to more or less a crumbly brick—although one that tastes good."

The effects of beta-glucan in barley (and oats) have been studied scientifically, and in 2011, the European Food Safety Authority (EFSA) issued the following statement² allowing health claims about beta-glucan in barley to be made: "The Panel considers that the following wording reflects the scientific evidence: 'Barley beta-glucans have been shown to lower/reduce blood cholesterol. High cholesterol is a risk factor in the development of coronary heart disease.'"

"The Panel considers that at least 3 g of barley beta-glucans should be consumed per day in order to obtain the claimed effect. This amount can reasonably be consumed as part of a balanced diet."

For most of us, the key takeaway here isn't whether we can market our barley breads with health claims or not. The interesting thing about this statement, I think, is that barley bread is a product worth eating and making—at least when eaten at high enough quantities.

On average, barley contains about 3 to 5 percent beta-glucan, the "naked", hulless varieties containing much more (up to 8%).

According to [a study](#) published in the Journal of Cereal Science in 2011, four slices of bread made with 100% naked barley flour would be enough to cover the daily 3 g requirement set by the EFSA.

That's no simple feat, however.

According to the article, baking properties in naked barley are better than those in regular barley but even then, barley isn't wheat.

While barley contains more protein than wheat, its gluten forming potential is almost non-existent. As I found out baking the bread pictured on the left, a 100% barley dough made like a regular bread dough won't be able to trap the carbon dioxide produced by the yeast and will lead to more or less a crumbly brick—although one that tastes good.

² In the USA, FDA made a similar statement already in 2006.

In theory, according to some German bakers, it should be possible to bake a 100% barley bread that would be pretty close to a rye bread—just less flavorful. I haven't had any success with it yet and experiences found online don't look much better. In Sardinia, a 100% barley bread has been made throughout centuries. The recipe is hard to find, and seems [quite complicated](#).

That's why in practice, for most of us at least, it seems it's best to keep the barley content at around 10 to 25 percent of the total flour, or to look for other types of breads—such as barley crackers or flat breads—to make.

For a loaf bread, a good idea is to take your basic bread recipe (leavened with a sourdough or baker's yeast) and replace anything from 10 to 25 percent of its flour with barley (in Germany, you can officially call a loaf of bread barley bread if it has a minimum of 20% barley flour). This way, you'll get a loaf of bread with a hint of barley, without sacrificing the crumb and structure much. Naturally, the higher you can push the percentage of barley, the more of the health benefits you get.

Also, you don't have to use barley as flour when making barley bread. Barley flakes or grains cooked into a porridge, as described by Chad Robertson in [Tartine Book no. 3](#), are a good way to go. This way, you can add rather big amounts of barley without sacrificing the crumb's structure.

In Finland, barley bread is typically made using buttermilk or milk as the liquid. Milk softens the texture, and buttermilk gives the bread some of the sourness that we enjoy.

But now, let's get started with our experiments and bake some bread using barley flour!

"For a loaf bread, a good idea is to take your basic bread recipe (leavened with a sourdough or baker's yeast) and replace anything from 10 to 25 percent of its flour with barley."



A BARLEY BREAD FROM NORTH AFRICA

Words and photos: JARKKO LAINE



This barley bread is my version of the typical bread found in the Arab countries in Northern Africa and the Levant. Known by many names (for example "Khobz el zraa" and "Mhrach"), it is also made in a variety of different ways: Some bakers include milk, others don't. Some use olive oil, others keep the oil separate and serve it with the bread. The barley to wheat ratio varies a lot.

What all recipes seem to share with each other is a rather high percentage of barley and using barley semolina in one way or another. Some recipes include the semolina in the dough while others only use it for shaping the bread and on top of it.

Finding the semolina (pictured behind this text) is probably the trickiest part in trying this recipe. If you can't find the flour in your local supermarket, your best option is an oriental market or store focused on Middle Eastern products.

Alternatively, if all else fails, replace the semolina with regular semolina, barley flour, or a combination of the two.

In this article, I will present two versions of the bread. First, a simpler, more authentic version, and then one that I have tweaked a little to match my tastes...

RECIPE #1

This version of "Khobz el zraa" is made with a straight yeasted dough.

| Ingredients | Quantity | Baker's % |
|--------------------------|----------|-----------|
| Whole grain barley flour | 200 g | 66% |
| All-purpose flour | 100 g | 34% |
| Active dry yeast | 1 g | 1% |
| Sea salt | 5 g | 1.7% |
| Water | 250 g | 83% |

To make the bread, mix all ingredients and knead for a few minutes using gentle stretches and folds.

The dough will be rather wet and slack, but after a couple of minutes, you'll see some gluten structure start to form.

Put the dough back into your bowl, cover, and let it rest for about an hour. The dough is rather fragile so you'll notice how it starts to break rather than grow as it ferments—so rather than looking for doubling in size, check the dough's structure.

Sprinkle your work surface generously with barley semolina and use it to gently shape the dough into balls of your preferred size (I chose to make buns at 100 grams each). Place the semolina covered balls on a baking sheet and press down gently.

Cover and leave to rest for another hour until the breads have risen. Bake in a pre-heated oven at 200°C for about 20-25 minutes, either on a baking stone or on a baking pan. The bread doesn't brown all that much so take a look at its bottom to assess its readiness.



RECIPE #2

A slightly more complex version with some added enrichments (milk and olive oil) and a poolish preferment.

The night before you want to make the bread, prepare the poolish:

| Ingredients | Quantity | Baker's % |
|-------------------|----------|-----------|
| All-purpose flour | 120 g | 100% |
| Active dry yeast | a pinch | 0.1% |
| Water | 120 g | 100% |

To give your poolish a good start, keep it on your kitchen table for about 30 minutes, then transfer to the refrigerator.

The next morning, check on your poolish to see if it is bubbling vigorously. If it doesn't look quite ready, move the bowl to room temperature and give it some time before moving forward with the recipe.

| Ingredients | Quantity | Baker's % |
|--------------------------|----------|-----------|
| Whole grain barley flour | 240 g | 50% |
| All-purpose flour | 120 g | 37.5% |
| Barley semolina | 60 g | 12.5% |
| Sea salt | 12 g | 2.5% |
| Water | 240 g | 50% |
| Milk | 120 g | 25% |
| Olive oil | 12 g | 2.5% |
| Active dry yeast | a pinch | 0.1% |

Mix all ingredients (if your poolish is cold from the fridge, take that into account and use warm water to get the fermentation going) and knead for a few minutes using gentle stretches and folds.

Finish the bread in the same way as you did with the bread from Recipe #1 above.

Enjoy warm with some olive oil or as a breakfast bun.



BARLEY SOURDOUGH WITH SPROUTED GRAIN

Words and photos: JARKKO LAINE

A good way to get started with using barley in bread making is to take a regular white sourdough bread recipe and replace some of its flour (10-30% of the flour) with barley flour.

That alone will add a nice, if subtle touch to your bread. But as barley's taste is rather mild, I was curious to see if I could bring more of it into the bread without sacrificing too much of the rise and oven spring in the process.

Because of the low gluten content in barley, adding more barley flour wasn't an option. But luckily, barley flour isn't the only way to include barley in your bread. Barley flakes and grains soaked or cooked into a porridge are a good option—see Chad Robertson's [Tartine Book No.3](#) for instructions.

This time, however, I decided to go with another way to include entire grains into the bread—sprouting.



SPROUTING BARLEY

Barley is a great grain for sprouting: it sprouts easily and quickly (in just 2-3 days), requiring minimal work.

I have written about using sprouted grain in bread in more detail in the [February 2013](#) issue of Bread Magazine, but here's a quick reminder that should be enough to get you going.

- 1 Find a good batch of high quality, preferably organic, non-processed grains.

If you can find naked barley, go for it. It's a good grain for sprouting and will lead to a softer texture in the final loaf.

- 2 Wash the grain in fresh water, drain, then place in a clean bowl. Add enough water to immerse the grain in the water.

If some grains float, discard them. Leave for six to eight hours at room temperature.

- 3 Drain the grains and place them in a jar or bowl. Cover the container and place in a dark place at room temperature.
- 4 Keep the grains in the jar until sprouts appear. First hints of sprouts will most likely be visible already in a day or so, but leave for a little longer, until you see clear sprouts.
- 5 Rinse the grains once per day, always draining the water out and returning the grains in the bowl afterwards. It's also a good idea to mix the grains a couple of times during the time so air and humidity gets distributed evenly.
- 6 Once the sprouts are about 1/2 of the grain's length, you are ready to use the sprouted grains



THE BREAD FORMULA

The bread itself is a rather normal sourdough loaf, with some barley flour and sprouted grains thrown into the mix.

The night before you want to mix your dough, refresh your starter with an equal amount of flour and water (I usually go with 200 g each), and a table spoon or two of your storage starter (stored either in the refrigerator or at room temperature). Leave the mix at room temperature so that it'll be ready for you in the morning.

The next morning, check on your starter to see if it is bubbling vigorously. If all is good, mix the dough, adding all ingredients except for the sprouted barley grains. If you want to do an autolyse, keep the sourdough starter separate and add it after the dough has rested for 30 minutes. You may also keep the salt out—these days I tend to mix it in right at the beginning myself...

| Ingredients | Quantity | Baker's % |
|------------------------------|----------|-----------|
| Whole grain barley flour | 200 g | 20% |
| All-purpose flour | 800 g | 80% |
| Ripe wheat sourdough starter | 150 g | 15% |
| Sea salt | 20 g | 2% |
| Water | 700 g | 70% |
| Sprouted barley grains | 200 g | 20% |
| Barley flakes for coating | | |

Proceed according to [the basic steps of bread making as outlined on our web site](#). Bake the bread dark, and let it cool before eating.

If you like a wetter dough, you can increase the hydration depending on how thirsty your flour is. I made a second load with this dough, increasing the hydration to 80%—and got a nice, moist bread I enjoyed a lot.

As always, experiment and play with your formula. And have fun!



LEARNING TO BAKE BREAD IN FRANCE

Words and Photos: DANIELLE ELLIS





Dave, a tall, flame haired Scotsmen taught me to make bread. He shared a house with my future husband and on the nights after their frequent parties, the house reverberated with the thump thump as Dave made bread.

We moved to Bedfordshire and discovered we could buy sacks of flour from Jordan's, now known for their cereal rather than flour.

I continued to make bread. Always in a tin, always wholemeal. As I made my own, I was largely unaware of what else was available—except for the baguettes we relished on our trips to France.

Thinking I knew about bread, I decided to extend my skills and take a croissant making class at [The Bertinet Kitchen](#).

That's when I first saw Richard Bertinet's way of manipulating the dough: he folded air into the dough rather than thumping it out.

I made bread
for friends – and
soon thought:
"What's next?"

Baking at home, I had continued to thump the hell out of my bread, and discovering that there was a different way to knead was astonishing. It was as if I had been riding a bike the wrong way all those years. On this course, we had but a glance at Richard's technique, but I was hooked.

I loved the way Richard taught: no compromises, you need to work hard at it, and so I saved up to attend his five day course. Having mastered the basics, we tried breads from France and Italy. It was only on the fourth day that we made sourdough, as he felt we'd got to grips with his dough manipulation technique. During the course, I learnt so much and made some firm friends. Afterwards, we would email each other about our attempts to create a burst at home.

I made bread for friends, and soon, thought: "What's next?"

Curiously, as an adult in the UK it is difficult, almost impossible to find a long term advanced class in bread making. The school of Artisan Food now offers one — at £18,000 per year!

Whilst I searched, I decided to find out whether I was up to the rigours of bread making on a large scale. In the end, I discovered several places in France through [WWOOF](#), [World Wide Opportunities on Organic Farms](#).

I found a small bakery in Normandy that was prepared to take me on for a short duration, and so I headed off to Boulangerie les Co'Pains¹, an organic bakery where everything is made by hand and most of the bread sold at markets in Caen, Lisieux and Honfleur.

I helped the bakers with every stage of the bread making process as well as selling the bread on the markets.

I hadn't quite appreciated what they meant by making everything by hand until I got there. This was baking as it had been years ago: Huge wooden troughs were filled with flour, bread dough mixed 20 kilos at a time, left to prove, then baked in a wood fired oven.

There was not one piece of electrical equipment in the bakery!

The bulk of the bread was prepared late afternoon. It was actually a lot easier to manipulate than you might think, and getting stuck into the dough—which was all levain based—was rather wonderful. The dough was left to prove overnight. At 4 A.M. the fire was lit and shaping began. With three different bakers, each with a slightly different way of doing things, it was often quite challenging to follow instructions. I struggled with reaching the shelves and never attempted to chop the wood, which was the last chore each baking day.

We made a bread with many different flours including spelt, rye and the particularly tricky einkorn, some finished with nuts or seeds. We

1 Coincidentally, after deciding on the bakery, I found [this article about them on the Farine blog](#).



WORLDWIDE OPPORTUNITIES ON ORGANIC FARMS (WWOOF)

WWOOF enables volunteers to spend time helping their hosts in various ways. The organization came into being originally in the UK in 1971.

Hosts who may have a farm, smallholding, vineyard or cooperative or similar, open their homes to WWOOFers (or volunteers) who provide an extra pair of hands to help with a large range of projects. In return, the volunteer is provided with accommodation and meals and a fantastic insight into how organic produce is made.

Most visits are for around 2 weeks but they can also be a lot longer. To participate, you pay a small fee to the WWOOF organisation in the country you are interested in. That lets you access their listing and get in touch with prospective hosts.

→ Visit www.wwoof.net for more information.



"This was baking as it had been years ago: Huge wooden troughs were filled with flour, bread dough mixed 20 kilos at a time, left to prove, then baked in a wood fired oven. There was not one piece of electrical equipment in the bakery!"

BOULANGERIE LES CO'PAINS

Boulangerie Les Co'pains is situated in Aubin sur Algot, near Cambremer village in the Pays d'Auge, Normandy.

The bakery was set up by Erik Klaasen, who hails from the Netherlands, the bakery is run as a co-operative creating breads made from levain and organic flour. All breads are kneaded by hand and baked in a wood fired oven in what was formerly an ancient mill house.

In addition to selling at markets, the Boulangerie participates in an organic box scheme and supplies local schools with bread.

Throughout the summer, large numbers of school parties are welcomed. The children from as young as five discover and actively participate in bread making to give them an idea of what the craft of a baker entails.

→ The bakers at Boulangerie Les Co'pains have published a small book about their bread and baking operations, called Boulange.

[Read the book for free at Issuu.](#)

made brioche and some biscuits that were particularly popular with the children. Most of the loaves were made in tins.

The wood fired oven needed to be looked after. Each night, logs are stacked in the oven to dry out. The next morning they are moved into the fire itself below. When the oven has reached temperature, the breads are baked in the residual heat.

Selling the breads on the market was amazing. Having created huge number of loaves, we'd head to that day's market and set up. The camaraderie of the stall holders was amazing and it was gratifying to hear the customers praise the bread we'd made. I speak French well, but trying to add up and make change proved tricky, let alone differentiate between the coins. But all in all I proved to myself I could cope with the physical side and was raring to go.

* *

Back home, while creating a list of artisan bakeries in Edinburgh for my blog, [edinburghfoody.com](#), I got to know Katia Lebart who runs the [Wee Boulangerie](#). She explained that she had returned to her native France eight years previously to retrain as a baker in the south west of France, one of a number of such conversion courses for adults.

I thought, why not? Living in France had always been a dream of mine. My spoken French was pretty good...

As I started looking at options, I realized that despite having a degree, I would need to prove I had sufficient skills in French and Maths. Each course required a different set of details. So many hoops to jump through.

Luckily, just as I had signed up for an advanced course at the French Institute, Katia told me that [Banette](#)—a company owned by a group of flour millers—were opening



up their course to overseas participants. For this course, I wouldn't need to take the extra French or Maths or prove my fluency level.

Perfect.

Banette was founded in the early 1980s by a group of millers who wanted to make sure the effort they put in making the flour is translated into a great bread.

To attain this goal, Banette has created a unique training program in which they train bakers at their school, Ecole Banette. In return, the bakers agree to use the Banette flour and follow their recipes for a minimum of three years. Today, there are around 3000 independently owned Banette bakeries in France.

Ecole Banette is located in Briare, in the Loiret in Central France, really miles from anywhere. The closest airport to return home was Charles de Gaulle, 2.5 hours away. An astonishing 12 sessions are taught each year. Some

courses are for continuing professional development, but most are for training bakers to set up their own bakeries in a short time.

In France, bakeries are usually run by couples—he runs the bakery whilst she runs the sales side, it's very unusual to have women running the bakery—so there was an assumption that you'd have a partner who would learn the merchandising whilst you learnt to bake.

The course consists of two parts, each two months long: *Initiation* (I will keep the French word) and *Perfectioning*. Then, as the school is closed in August, that month was meant for getting some work experience.

I really wouldn't advise returning from holiday in Japan, getting on a ferry across the North Sea and driving down through France within 48 hours, but that is what I had to do. The holiday had been booked before the course confirmed.

I arrived late (of course), to discover that rather than ten pupils in a session, there would just be three of us. It was only two months later when another group started that I realised how much we lost out, not being paired up with someone else to share the challenges.

The first couple of weeks were a blur. I'd not enjoyed the communal living in Normandy and knew I'd need to avoid the student accommodation. The place I'd chosen to rent so carefully turned out to be no more than a bedsit in a very old building.

So, I told the rental agent that the place wasn't good enough, but resigned myself to not being able to move. Car boot sales (of which there were many) were raided for kitchen equipment and I got to grips with the local launderette.

At the school, we had use of a large room, a bench each, a spiral and a planetary mixer, and the share of two large ovens. Next to the bench was a *Parisienne*—a cupboard with evenly spaced shelves on which we rested the bread. Flour and other supplies were kept in our workstation. Refrigeration and prover retarders were also on hand.

It was June and hot, the temperature often rising to 30°C. We settled into a routine of meeting early "au cafe"—grabbing a coffee, always on tap. I found the first few weeks confusing. Everything seemed so different from what I had learnt before. Here, you only touched the dough to shape it. Mixing was all done by machine.

We got to grips with temperature. Each recipe has a base temperature (e.g. 60°C), which is used to calculate the water temperature: we measured the air temperature and the flour temperature and subtracted them from the base temperature to work out the water temperature².

² See the article on page 66 for a more detailed discussion on temperature.

"I found the first few weeks confusing. Everything seemed so different from what I had learnt before. Here, you only touched the dough to shape it. Mixing was all done by machine."



As it was so warm, the required water temperature was frequently as cold as we could get from the tap.

On the baking front, it was very up and down. One Thursday was a real low point. I managed to bodge every single task we were given. We were asked to do “*le planning*” and schedule in six different items so that they would all be proved and baked at the right moment. Suffice to say “*le planning*” did not come naturally.

What I was finding hardest wasn’t actually the physical activity but speaking French all day – no one spoke English. After all the baking was completed, we had to go into the classroom to learn theory. It was as if I were a bucket full of water. Any more and it would overflow.

But as the course went on, after a few weeks, we were regularly making 30 baguettes at a time. We were learning to work with very wet dough and how to retard it in various ways to fit in with a baking schedule. On the home front, the letting agency came up trumps. A lady in Chatillon was going to spend the summer on her barge, so I was asked if I would like to rent her house. What a find it proved to be! A house right near the church (luckily the bells only rang from 7 am to 10 pm) with everything one could possibly need to live comfortably.

We got to grips with bakers’ percentages³ and now I wonder how I could ever do without them.

We moved onto sweet doughs (viennoiserie) and got to grips with the pastry brake. I was learning to change habits of a lifetime. I had to become much more organised, much more consistent. The pace was still a challenge. One chap excelled—he always finished first.

Having spent the time using exclusively white flour, I was eager to get onto wholemeal or rye perhaps. I was disappointed to discover

³ See [this article on our blog](#) for a detailed explanation of the bakers’ percentage.

BANETTE

Banette bakers are totally independent, but are fired by the same passion, that of a love of good bread and working as artisans. Banette, set up by a group of flour millers, provides the different flours but also the branding and merchandising of the baker at more than 300 bakeries across France. Each day, more than 3000 Banette bakers promote their passion for good bread to their customers.

The Banette bakers are supported by the millers at every step of the way from opening their business, to help with production and to eventual sale.

Banette bakers are not franchisees, they simply agree to use Banette flours and respect artisan methods established by the research centre at Banette. Ecole Banette was set up to train bakers wishing to convert from different careers and to provide continuing professional education.

→ Visit banette.fr for more information.







that we'd be using "special mixes". Designed to make a baker's life easier, these were a recipe of different flours often with salt and improvers already added. For me, as I was used to delicious tasting breads, these were a disappointment, but they seemed to appeal to the French palate.

After three weeks, we had our first theory test, which threw me into confusion. There were terms in there I had not come across before and had no idea what they meant. This was quickly followed by a change of teacher. I'd found shaping hard, and it was great to learn a different way to tackle it. On the plus side, I seemed to have got to grips with "le planning".

Before we knew it, the end of the first session loomed with its tests in theory and practice. We had to pass each of them to go onto the next stage.

The practical test was a seven hour session during which I had to create 30 banettes (300 g baguettes), 20 maxi baguettes (500 g) and 10 mini baguettes (150 g) which take quite a time to mix, pre-shape, shape and bake. In addition to them, 34 special mix loaves and 36 pains au chocolat. I wasn't happy with my performance and the results showed: I made a mistake in one recipe and should have baked some breads longer. I just scraped through.

* *

In August, for the period the school was closed, I returned to Edinburgh to get some work experience. My first placement fell through and I spent a mad few days trying to organise another before [Breadwinner Bakery](#)—a commercial bakery run by Sean McVey, a baker who has been in the business for 50 years—took me on.

I'd left my car in France and wished every day I hadn't. A journey that would have taken ten minutes, took 45 on the bus.

This placement was a revelation and made so much difference to my success. The bakery is working 24 hours a day, 7 days a week, supplying shops and restaurants all over the city. As it was festival time we were particularly busy. One day, we made 1500 croissants!

Sean is very passionate about his starters and had potato, sourdough and rye starters always on the go and endlessly called me over to watch a particular process. I really enjoyed being part of the team and soon felt part of the family.

**

Back in France, we moved to a different room at the school. I am sure the range of equipment would make most bakers envious. In addition to standard equipment, we had dividing machines and machines that shape baguettes. We had more provers, prover/retarders, and much larger sized spiral mixers.

This was getting serious.

Now, we were using 20 kilos of flour at a time, making many different breads each day and making full use of the equipment to prove overnight at 8°C, then putting the bread straight in the oven, which we hopefully had remembered to program to turn on two hours earlier. No longer were the teachers turning ovens and equipment on for us and reminding us of the next step.

Having agonised over getting the baguettes shaped just right, now it was just a matter of regulating the machine so that they came out the right length and thickness for us to add the pointy ends that were required for a Banette – Banette's trade marked baguette. The emphasis now was on production throughout the day.

The average French person is looking for fresh baguettes early in the morning (from 6:30 A.M.), at lunchtime and on the way home, and the baker needed to be ready.

"The average French person is looking for fresh baguettes early in the morning (from 6:30 A.M.), at lunchtime and on the way home, and the baker needed to be ready."





I was also able to start making some sourdough loaves. Sourdough bread wasn't a part of the standard course, but my teachers encouraged me to experiment. I'd brought some starter from home that had survived being dried. I spent much time trying to find larger and larger containers for the starter. Making enough for 30 kilos of flour meant a lot of starter.

I had a love/hate relationship with my particular oven. Despite my protestations, my teachers refused to believe there was anything wrong with it, until they baked a batch of bread in it for lunch and discovered that the top deck just wasn't browning... Ah yes, lunch... We were definitely spoilt: no matter what else was going on, we were served a three-course lunch each day.

* *

All too soon, the end was in sight. We spent a few days doing some patisserie, another day doing a range of regional breads. The workers from the mill behind would come in each day to grab some bread for their lunch and unfor-

tunately made off with some of our breads before we had a chance to display them all. We were not pleased!

I also spent a very informative day with the woman responsible for merchandising the Bannette stores. I learnt how to display breads, how to promote different breads at different times of day and how to package them beautifully. We'd previously had classes on the financial side of setting up a bakery and how to present it. We visited the mill behind the school where vast quantities of flour were mixed and bagged before being sent all over France.

As we were not setting up our own boulangeries in France, we missed out on the big farewell the previous group had had with all the millers who own the company arriving to greet and congratulate them. But it was an emotional day, giving a little speech to our tutors and other students, followed—of course—by a good lunch. In the past five months, I'd completed 675 hours of professional training, training that was worth every hard, draining day. I loved living in France and made some firm friends—an experience never to be forgotten.



DANIELLE'S TIPS FOR LEARNING BREAD MAKING IN FRANCE

1. Things will take a lot longer than you think.
2. It is understandably difficult for small bakeries to welcome inexperienced people into their business, WWOOF is a fantastic way to see whether bread baking is for you.
3. Make sure you speak the language well before you go. You really cannot get away with the basics.
4. In France, you need to have a bank account to get a mobile phone contract. So check out other options—pay as you go was really expensive
5. Getting a bank account is a challenge. I was asked for documentation that just doesn't exist in the UK. Having said that, Societe Generale were wonderful in sorting things out.
6. Say yes to everything. I made firm friends by teaching my teacher's children English
7. If you are not good at communal living (and I am not) go and find what will suit you. I actually paid the same amount as for student accommodation.
8. Find out exactly what equipment you need. My safety shoes had laces, which are not allowed in France!
9. Bread is a good way to make friends. Share what you make and you will be remembered.
10. Don't let any of my tips put you off. Just do it!

A BAKER'S FAVOURITE BREAD: SONYA HUNDAL

Words and photos: SONYA HUNDAL



Sonya Hundal, the friendly baker from [Greenfield Bakers](#), opens our new series in which we introduce inspiring bakers and ask them to share their favourite (Sonya is British, so we'll use the British spelling) breads.

[Greenfield Bakers](#) is a small bakery in Friskney, Lincolnshire, UK

The principles of the bakery are centered on slow-fermentation, seasonality and local ingredients. All of the excellent stone-ground organic flour comes from the [Maud Foster Windmill](#) in Boston. There is a core range of breads including sourdough always available plus seasonal additions throughout the year. A weekly bake for customer orders is the backbone of the business and the bread stall goes out regularly to farmers' markets, agricultural shows and food events.

My partner and myself have lived and worked for the majority of our lives in more urban settings, but in 2002 with a young family and a desire for more space we moved to an entirely rural location in Lincolnshire.

My professional background is in supply chain management but I have always been interested in food, cooking and in growing fruit and vegetables.

I'd like to say the bakery came about through careful planning and that the idyll of baking bread in the countryside had been a long-held dream of mine but the decision to build a bake-house actually started with a broken bread-maker, and a little bit of madness.

No baker existed within ten miles of us; good quality flour was available. We had an outbuilding ready for conversion and one of us could bake, a bit.

We had some notions of sustainability and planned to plant trees for coppicing so the decision to have a wood-fired oven made sense but was essentially made because we didn't have the funds for a commercial electric deck oven.

I went on a two-day Panary course in Dorset to experience wood-fired baking with Paul Merry and was hooked. My enjoyment of baking is strongly linked to the primal nature of working with fire and all the strange knowledge

"I'd like to say the bakery came about through careful planning and that the idyll of baking bread in the countryside had been a long-held dream of mine but the decision to build a bake-house actually started with a broken bread-maker, and a little bit of madness."

of atmospheric conditions that develops with a wood-oven.

The building work started in 2007 and the first twenty loaves for sale were produced in February 2008. It seems hard to believe now but when we started building the bakery there were few places to buy any specialised equipment and I had to source all of my oven tools directly from a manufacturer in Italy.

Over the years I've been asked many times about my baking credentials and all I can say is that I have read a lot, baked a lot, experimented a lot and failed many times over.

People who bought the first loaves from me in 2008 are still buying loaves from the bakery today and I am undoubtedly the best Indian wood-fired baker in the whole of Lincolnshire, which should give you an indication of how many of us there are in the County!

My favourite loaf changes with the seasons.

Fennel & garlic focaccia is great in the late Spring and the Cheese & onion loaf made with Lincolnshire Poacher cheese has a fabulous flavour but the one that most represents the bakery is the *Cider Rye Sourdough*.

The loaf is only available for a short time when the cider is available; the cider is only available if the previous year's harvested apples from our small orchard made it on time to the customer who makes the cider.

A little bit of madness goes a long way.



CIDER RYE SOURDOUGH

The recipe is an adaptation from Nancy Silverton's *Normandy Cider Rye* via Paul Merry at Panary. There is a step-by-step picture guide on the [Greenfield Bakers Facebook Page](#).

Overnight / 12 Hour Poolish

| Ingredients | Quantity | Baker's % |
|-------------------------------------|----------|-----------|
| Water | 200 g | 100% |
| Dark rye starter (70-75% hydration) | 400 g | 200% |
| White flour | 100 g | 50% |
| Dark rye flour | 100 g | 50% |

Final dough

| Ingredients | Quantity | Baker's % |
|----------------|----------|-----------|
| Poolish | 800 g | 67% |
| White flour | 1000 g | 83% |
| Dark rye flour | 200 g | 17% |
| Salt | 25 g | 2% |
| Dry cider | 500 ml | 42% |

INSTRUCTIONS

1. Mix the water, rye starter and flours together into a slack porridge. Leave for 12-16 hours or longer if working at less than 18°C (64°F).

2. Pour the cider into the poolish to break it down and tip into the flour and salt.

Knead into a rough dough and add more water to create a soft slack dough. Leave for 2 hours and then fold gently in the bowl / container.

3. Leave for another hour before cutting into two and folding each piece gently again.

The dough pieces can go into bananetons or baskets and be left to prove or retarded at this stage, but I like to leave the folded pieces for an hour, shape by hand and leave them to prove again.

4. In a wood-fired oven, these are loaded onto peels, slashed and baked when the air temperature is about 260°C (500°F).



INSANELY INTERESTED PUBLISHING 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 (but passionate) team of writers.

I am Jarkko Laine, stay-at-home dad, writer, the publisher of this magazine, 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. We are 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.

Through little steps, as I keep learning more about online publishing, I keep building the magazine into a sustainable, long-lasting business that can serve the world by presenting ideas and stories from people doing things they believe in.

Having you with me on this journey brings me joy.



BREAD ARTISAN BAKERY

Words: JARKKO LAINE

Photos: TRINA ROBERTS
and CHUCK WILLIAMS

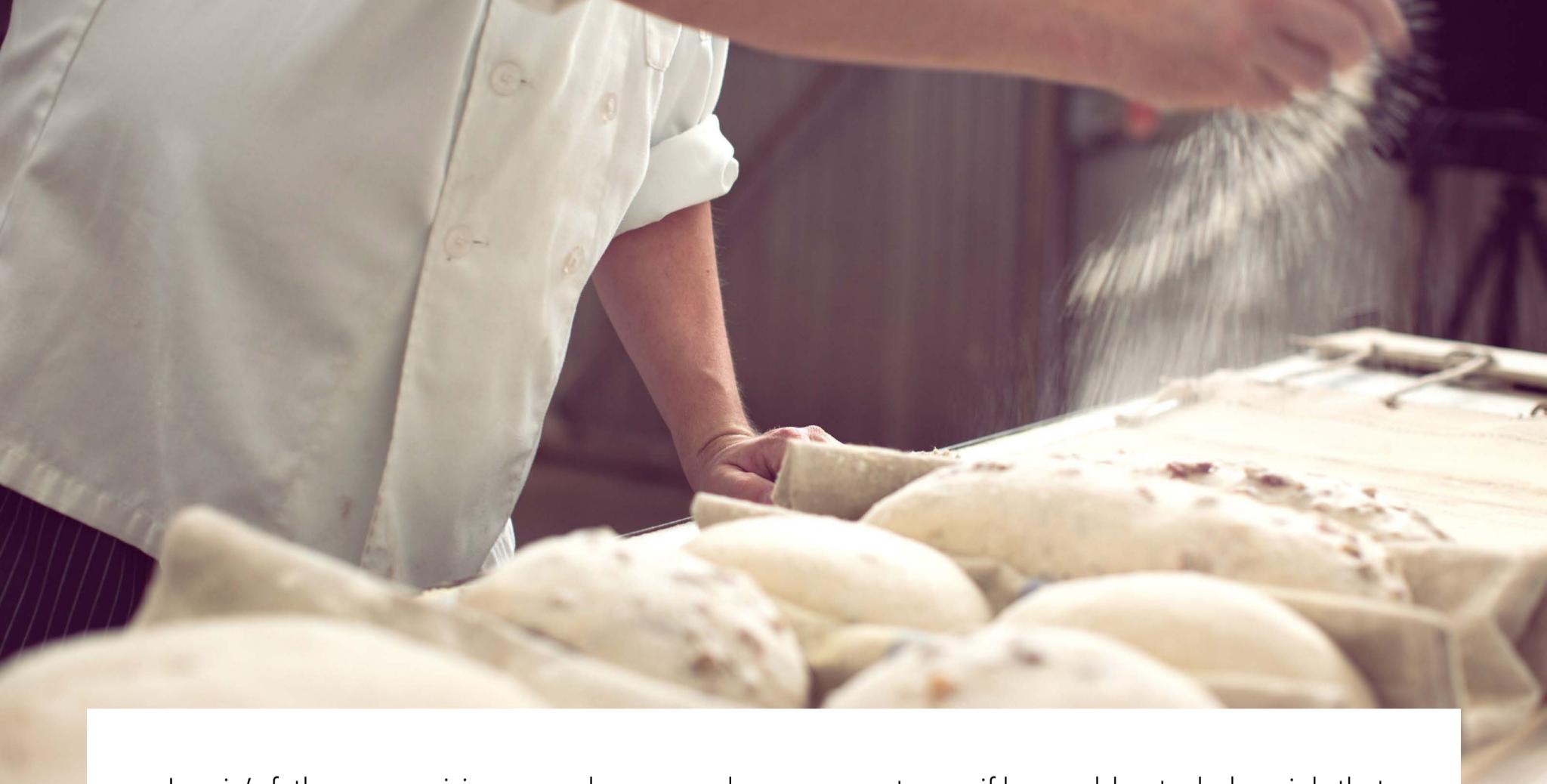
A commercial warehouse area in Santa Ana, California isn't the first picture that comes to your mind when you think of an artisan bakery making traditional French and European style breads. But that's exactly where you'll find [BREAD Artisan Bakery](#).

And why wouldn't you? As a wholesale bakery servicing close to 200 wholesale customers—most notably, the Disneyland resort—throughout Orange County and Los Angeles County, they don't have a storefront, so this is good a place as any.

In the past three years, the bakery has more than tripled their production, working hard to stay true to the methods of baking from the old times and maintaining good relations with the chefs at restaurants and hotels serving their breads. Words like craft, artisan and passion appear again and again on their web site—and they seem serious about it too.

Both the bakery's owner Jonnie Lofranco and her executive baker, Yannick Guegan have been enchanted by bread from their early years.





Jonnie's father was a visionary and gourmand with a dream of bringing the kind of artisan bread found in Europe to California. The enthusiasm was contagious, and so Jonnie, helping her father build his bakery, "Bread n' Spreads" (started in 1995), couldn't help but catch the bug.

When her father passed away too early, Jonnie decided to leave her career in advertising behind and jump into the business of bread.

"After he passed, the family business was being overlooked and it became clear that one of us had to do something. I took the jump and it was the best decision I could ever make."

Through some twists and turns, this lead to the birth of BREAD Artisan Bakery in 2010.

Yannick's journey with bread began in 1984 as an apprentice in a small bakery in Milizac, France. The after-school experience quickly turned out to be what he describes as his true calling, and since then, bread has been a major part of his life. Through a series of apprenticeships and work stints at bakeries around the country, he earned his education following the typical French method of the time.

In 1994, Yannick placed an ad in a news-

paper to see if he would get a bakery job that way—he did, but not at a bakery in France but at Jacques Bakery, a bakery that was just starting its operations in Santa Ana.

Yannick worked at Jacques Bakery until the bakery closed in January 2012, and he was introduced to Jonnie.

"We connected immediately." Jonnie says.

"With many offers on the table Yannick took a chance on me and we have been riding the wave ever since. Prior to Jacques closing I had eaten some of Yannick's bread at a local restaurant—I had to meet the baker. It was my good fortune that shortly after he would be looking for a new bakery in which to create his magic."

Words like craft and artisan repeatedly pop up in the bakery's communication, and the many recommendations on local web sites and publication speak for the fact that they practice what they preach.

So, after getting in touch with the bakery, I decided to ask them a few questions about craft and being an artisan in the modern day.

Here's what Jonnie told me.

* *



"The word 'Artisan' is important to me because I believe it describes what we do here as a passionate and detailed form of art. We do not simply mix ingredients together and hope for the best."



Jarkko: "Artisan" is a word that is used to mean all kinds of things these day—and quite often it's just as a marketing term. What does an "artisan bakery" mean to you?

Jonnie: The word "Artisan" is important to me because I believe it describes what we do here as a passionate and detailed form of art. We do not simply mix ingredients together and hope for the best.

My definition of an artisan bakery is a place where handcraft products are made at the manufacturer to essentially be sold to the final consumers. Products at an artisan bakery are made with quality ingredients, making for a final product with better flavor and overall quality.

Jarkko: Why do you think it still makes sense to make bread the old, slow way when so many bakeries make a living working fast, using lots of automation?

Jonnie: As more people in America start to become better educated on the importance of quality food in relation to overall health, a rising number of people are looking for better and healthier bread.

I believe the demand for healthier bread made with the high "old fashioned" standards we uphold to, will only increase in the years to come.

Jarkko: You mention that early on, Yannick found that he had a true calling for baking bread. What is it about bread that made it so special? Has this changed throughout the years?

Jonnie: When you enter into the world of bread crafting, you get detached from everything else. The night shift hours (not always easy when you are a teenager), the smell of the hot bread coming out of the oven and most satisfying of all, the enjoyment found in sharing the final result of the baked artisan bread.

I don't believe this special feeling has changed throughout the years, because the creative possibilities are endless and make this feel like more of a passion than simply a job.

Jarkko: Craft is a term that is often linked with being an artisan, and it also pops up on your website. Thinking about a baker's craft, what are the key components to it, in your opinion? What is a baker's craft?

Jonnie: In my opinion there are three key components that contribute to a true "baker's craft": The bread has to be handmade, the ingredients have to be of a high quality, and most importantly of all good "craft" bread takes time to make, it is a long process.

With a baker's craft comes the ability to offer a wide variety of good quality product.

Jarkko: Do you have tips for someone early in his or her journey of learning the craft of bread making? What are some of the best ways to keep moving towards finally mastering it?

Jonnie: My tips for both the novice and the expert bread maker would be one in the same: learn from your mistakes and always think you can do better.

Take pride in what you are doing.

"When you enter into the world of bread crafting, you get detached from everything else. The night shift hours (not always easy when you are a teenager), the smell of the hot bread coming out of the oven and most satisfying of all, the enjoyment found in sharing the final result of the baked artisan bread."



Jarkko: When can you say you have mastered the craft of bread making?

Jonnie: I will honestly say, never. We are always learning something new everyday.

Jarkko: What keeps bread making interesting even after 30 years working on this seemingly simple foodstuff?

Jonnie: What keeps it interesting is that it is not only a job; it is a passion. I truly believe that if you like what you are doing, you will always want to learn more and more. Every day is a new challenge and that's what makes this profession exciting.

Jarkko: What do you consider great bread?

Jonnie: I believe it is the love that goes into making the bread, that makes it great. In other words, great bread is made with passion and passion makes the bread great!

Jarkko: Do you have personal favorites in your own selection?

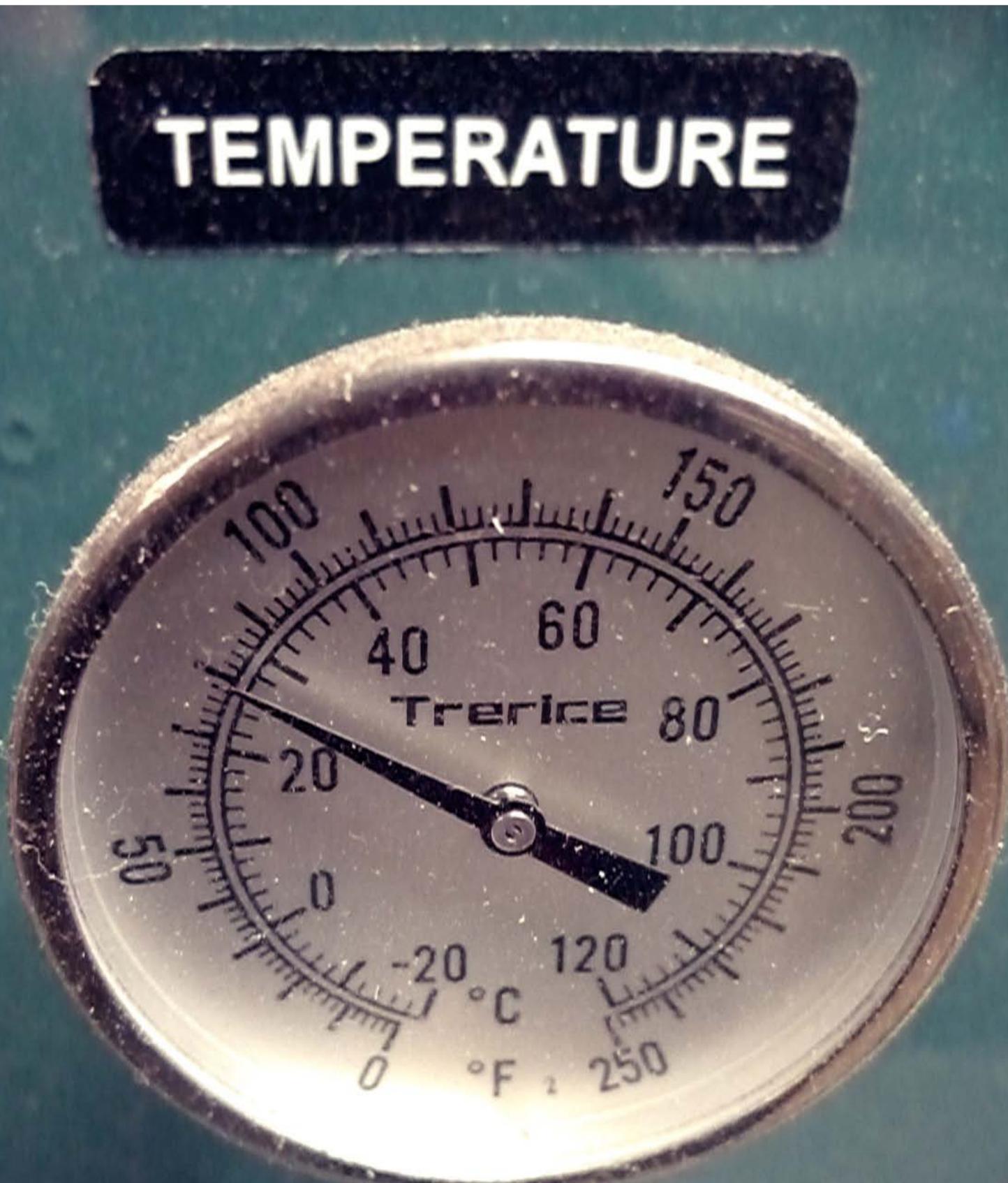
Jonnie: My favorite bread is our Pain de Campagne. It is a traditional French bread with a hearty, thick crust. I would describe it as having a moist, spongy crumb and a slightly sour, nutty flavor.



TEMPERATURE IN BREAD MAKING

Words: JARKKO LAINE

Photos: ANN LARIE VALENTINE, JARKKO LAINE,
REBECCA SIEGEL, and NICK GRAY



It is commonly said that mastering fermentation is the key to mastering bread making. But what does that mean? Or in other words, what does mastering fermentation mean?

Reading the dough to see whether it is ready for the next step or not—yes. But mostly, it means understanding the effect time and temperature have on your bread dough. An effect so important that it made Ken Forkish write (in his book, [Flour Water Salt Yeast](#)):

"Recognizing time as a discrete and crucial element in a recipe is the first detail that sets the best bakers apart. If you manipulate time in proper balance with dough temperature, ambient temperature, and the amount of leavening in the dough, you give yourself a chance to make something special."

WHAT HAPPENS IN A DOUGH

In timing the two rest periods most bread doughs go through—the bulk fermentation and the final proofing—a baker's goal is to find the balance between extracting just the right amount of flavor from yeast and bacteria while still getting a good rise in the oven.

To do this, we need to control how the yeast cells in the dough behave.

Yeast is a family of unicellular micro-organisms classified as fungi, with 1,500 species currently known to man. Most of the time, when we talk about yeast, however, we mean baker's yeast, or *Saccharomyces cerevisiae*.

After mixing a bread dough, at first, the yeast cells use the oxygen in the dough in aerobic fermentation, multiplying to populate the mass of dough. Once all oxygen is used, they go into the mode that we usually understand as fermentation, the anaerobic fermentation in which the yeast cells covert sugars in the dough into carbon dioxide (the air bubbles you see in your bread dough) and ethanol (a big part of a bread's flavor). This goes on until the yeasts have eaten most of the sugars in the dough. If you go this far, you'll see how your dough starts to collapse on itself.

To do its work, yeast needs three things: heat, moisture, and sugar. Moisture is easy: it's the liquids in your dough. Sugar is a little trickier, from the yeast's point of view at least: The starch making up most of bread flour is a complex carbohydrate.

As a simple organism, a yeast cell cannot use the sugars in this form but needs the help of the amylase enzymes. Activated by water and heat, the enzymes—present in yeast and flour—break the starch into a simpler sugars and the process can continue: yeast can feed on the sugars and proceed with fermentation.

Finally, in addition to yeasts and enzymes, there is one more important group of tiny elements at play in producing the taste of a bread dough: bacteria. Mostly important in making bread with sourdough, bacteria that produce lactic and acetic acids into the dough play a major role in defining the flavor of the final bread. And once again, the outcome depends on temperature and fermentation time.

AN OPTIMAL TEMPERATURE?

If you look just at the yeast's biology, an optimal temperature for its fermentation is around 27-32°C (80-90°F). Mix a dough at that temperature and you'll see yeast reproduce and ferment at its highest speed.

But as our goal is not just to produce bread as quickly as possible, we need to take other things into consideration when deciding the optimal temperature. Sure, bread made at this temperature is fast to make, but it will also taste bland and boring.

There is wide agreement that for a straight, yeasted bread dough, a temperature between 24 and 27 degrees Celsius leads to good results.

Yeast cares about temperature a lot, but it also functions at a rather high range of temperatures, only its fermentation speed fluctuating. So, as a natural result, a bread dough can be fermented in a wide range of temperatures, all

leading to slightly different results and taking a slightly different time to be ready.

This is why, in a home kitchen—especially if you are just starting out—you can very well bake bread by the feel, keeping an eye on the dough and baking it when everything looks good. If it takes an hour today and two tomorrow, that's no big deal.

But that won't work in a bakery that runs on a schedule, with customers expecting their daily loaves at a given time every day. You need consistency and predictability, and that comes from understanding and controlling your dough's temperature. Gently setting the environment for the little workers inside the mass of dough so that you control the process rather than the process controlling you.

So, let's get to work and play with temperature a little¹.

CONTROLLING YOUR DOUGH'S TEMPERATURE

The dough's temperature throughout the two rises your bread dough goes through is a combination of two elements: the temperature of the dough as you finish mixing it and the ambient temperature in the space where the dough is left to rise.

Slowly, as the dough sits in the ambient temperature, its temperature approaches that of the room. If the dough mass is big, say, 25 kilograms (not a big dough at a bakery...), this will happen slowly, with the dough maintaining its base temperature for a long period of time.

For smaller pieces of dough, such as shaped loaves of bread—or a 1 kg dough in your home kitchen—the temperature changes rather quickly.

To test this, I mixed four different doughs,

1 If you don't have control over the ambient temperature, you can take it into account and adjust the amount of yeast accordingly, using less yeast to slow down fermentation in a warm environment, or a little more of it, if the temperature is cold.



starting each of them at a different temperature.

In 60 to 90 minutes, all four small doughs had reached the same temperature of 22°C—roughly the room temperature in my kitchen. That said, with simple yeasted doughs, the difference in the dough's starting temperature had a visible effect on the dough's fermentation speed.

Before you move on, do some preparations and grab a notebook (or at least a piece of paper) and a thermometer.

To learn how your dough behaves as its temperature changes, from now on, mark down the temperature of your dough at different steps in the bread making process. This way, you'll learn how the changes you make in the temperatures in the ingredients you put in your dough, as well as the changes in room temperature affect the fermentation.

Let's assume you want to create a bread dough with a temperature of 26°C. How do you set the starting temperature for a bread dough?

The temperature of the dough is the sum of the temperature of the flour, the temperature of the water (or other liquids), and the room temperature. If you add additional ingredients, they all have an effect as well, but are mostly handled by bringing them to room temperature before mixing the dough.

Finally, mixing brings in some heat as a result of friction—which depends on the mixing method and mixer used. If your hands are naturally warm² and you touch your dough a lot,

"To learn how your dough behaves as its temperature changes, from now on, mark down the temperature of your dough at different steps in the bread making process."

² In the bakery manga, *Yakitate!! Japan*, the protagonist is praised for his "solar hands". In reality, cool hands are usually better.

hand mixing too can add some heat to your dough. Usually, though, hand mixing can be left out of temperature calculations.

It's up to you to decide how fine-grained you want to make in your calculations. The literature has a lot of variation, but all of the methods are based on the same idea: measure the temperature of (some of) your ingredients, then use the water to set the dough's final temperature.

When looking for technical knowledge about bread making, I like to go to the French bread making encyclopedia, [Dictionnaire universel du pain](#). Here's the formula it presents for calculating a dough's temperature:

$$\text{Base Temperature} = \frac{\text{Room Temperature} + \text{Flour Temperature} + \text{Water Temperature}}{3}$$

The correct base temperature for a dough is then calculated and tested experimentally, separately for each type of mixer used at the bakery, based on the consistency of the dough.

A stiff dough mixed at high speed will create more friction than a wet dough mixed at low speed and will therefore also be warmer. This means a dough like this will have a lower base temperature to take the friction into account.

When making the dough, this formula is used to calculate the water temperature in the following way:

1. Measure the room temperature
2. Measure the flour temperature
3. Look up the base temperature from your formula, then use it to calculate water temperature.

$$\text{Water temperature} = \frac{\text{Base temperature} - \text{Room temperature} - \text{Flour temperature}}{3}$$

But what if you don't have a given base temperature? No worries! A simplified version will work very well in most cases.

For example, Jeffrey Hamelmann, in [Bread: A Baker's Book of Techniques and Recipes](#), calculates the target (or base) temperature simply by multiplying the desired dough temperature by three (or four, if a preferment is present).

Then, he goes on to calculate the water temperature by subtracting the room, water, friction and optionally a preferment temperature from this number.

Once you're done with mixing the dough, measure its temperature again to see if you reached the target temperature you were after.

Write down the number so you can analyze the results once you have more time at your hands, adjusting the method for the next bake if needed.

For this bake, however, if the dough isn't quite at the required temperature, you can do small tweaks, or just adjust your timing accordingly: If the dough is too warm, pop it into a refrigerator for a few minutes, then check the temperature again. Repeat until you reach the target temperature. On the other hand, if your dough is too cool, you can place it at a warmer spot, or just give the dough a little more fermentation time.

"Write down the number so you can analyze the result once you have more time at your hands."



With your dough mixed, there isn't much you can do directly change its temperature. The changes in ambient temperature will change the temperature of the dough, but do keep in mind that any change will take time to propagate to the mass of your dough. Even when you place your dough in the refrigerator, the fermentation will keep going at the slowly fading speed until all of the dough has cooled to the roughly 4°C inside the refrigerator.

So, if you know you'll need to delay baking a loaf of bread, don't wait until last minute before you put it in the cold. Also, as I mentioned above, a bigger dough will stabilize much more slowly.

The goal of controlling the ambient temperature depends on your needs.

If the space in which you bake your bread is cold, you might want to use a proofer that keeps the ambient temperature at a steady warm temperature (for example 24°C). Most bakeries have rooms that can do this, while also controlling humidity.

On the other hand, if baking in a warm bakery, cooling will be needed. Many bakeries have retarders (or combined retarder-proofers) that can cool down the temperature. At home this is a lot trickier, unless you have a cellar...

Lowering the temperature to the ideal room temperature isn't the only reason to adjust the ambient temperature. In fact, most of the time, you will want to ferment your doughs at lower temperatures to slow down the process—be it to make your baking schedule easier to manage or to improve your bread's taste and other properties through longer fermentation.

Doing the final proof in a cool temperature can also make the dough easier to handle when loading the oven and scoring the tops of the loaves.

The ideal temperature for delaying fermentation, most bakers agree, is 10-13°C (50-55°F). At bakeries, the proofing rooms can also include functionality for cooling the room to this



"Most home bakers I know (myself included) don't use any such appliances and are doing just fine, creating beautiful loaves of bread."

level. Among home bakers, the most common choice seems to be using the fridge and delaying fermentation even further. At 4°C (39.2°F), fermentation is still going on, if very slowly, and so, it can be managed.

Some other options people use are wine coolers, cellars—and depending on the season, even a cool porch or balcony can do the trick. Retarders such as those found in bakeries can be hard to find in sizes that make sense in a home kitchen—but technically inclined can very well make one using the Arduino electronics platform and an insulated box...

However, if you can't afford a proofing box, or don't feel comfortable building one yourself, don't worry. Most home bakers I know (myself included) don't use any such appliances and are doing just fine, creating beautiful loaves of bread.

YOUR TURN

Just like everything in bread making, I see temperature as an amazing possibility to play with the variables and experiment.

So, take your notebook, measure your doughs, observe the results. As you practice and take temperature into account, your results will become more consistent and your timing more predictable.

But don't take my word for it. To get some real-world input, I got in touch with two professional bakers working at different environments. Sam Henley is the co-owner of [Baltic Bakehouse](#), an award winning artisan bakery in Liverpool, UK. Jesse Merrill runs his small craft bakery, [Polestar Hearth](#), in Guelph, Ontario, working through the coldest winter they've ever experienced.

I asked both bakers if they measure the temperature before mixing the dough (both do), how they control the temperature and if they have a tip to share with us.

Here's what they told me about temperature in their bread making.

SAM HENLEY, BALTIC BAKEHOUSE

For a bakery making large batches, the best way for us to control the temp is by adjusting water temperature in the mix, and thinking about the thermal mass of the dough.

If you make a big batch of dough at 28°C, it will hold that temp for most of the bulk rise (2-4 hours) as it has a large thermal mass. We don't need to put the dough in a warm place as it will hold temp. If for instance we are working with a small batch of dough, we may need to put the dough near the oven for the bulk, as it will have lower thermal mass and thus cool quicker. Of course if its summer the bakery is so hot this isn't an issue.

You can also make the dough warmer if the bakery temperature is cool.

For example, one of our doughs we regularly make in 7 kg batches (quite small compared to standard batch weight of 38 kg), in winter when it is cool we mix this dough to about 32°C dough temp, it goes into bulk for 4 hours, so by the end of bulk temp will have dropped perhaps as far as 22 degrees when the bakery is at its coldest. In summer, when room temp never drops below 25 degrees, I can mix this dough to 27 degrees and it will hold this temp for all of the bulk rise time.

With a home baker as their dough batch sizes will be small, a few kg at most, their dough will lack the thermal mass to hold its temp over a long bulk in a cooler room temp. So they will need to think about water temp and the place the dough is rising.

My tip is to practice and keep accurate temp readings and notes. For me this is the hardest part of bread

making to get consistent and something we still struggle with. You can only get good at this by lots of practice.

Also, think about what your actions should be if your dough temp is wrong. For instance if we make a dough too warm, we can reduce bulk time to compensate, or if its too cold increase bulk rise time or proving temp.

It's important to get the dough temperature right, but also knowing what to do when you get it wrong is vital. We're a pro bakery baking 6 days a week and we still get dough temps wrong on a regular basis.

* *

JESSE MERRIL, POLESTAR HEARTH

Yes, we measure ingredient temperatures, but not religiously. A fair amount of it is intuitively based on earlier batches from the day or from the day before.

Thermometer temperatures don't always mean the same thing, really, since general shop temps can be shifting up or down at any given time of the day.

"It's important to get the dough temperature right, but also knowing what to do when you get it wrong is vital. We're a pro bakery baking 6 days a week and we still get dough temps wrong on a regular basis.

Our shop is very low-tech and is pretty cold in winter and pretty hot in summer, so we are constantly shifting our approach to dough temps, practically day by day.

In winter, our main heat radiator is under the rack where primary fermentation takes place. Frequent folding helps to even the temps within the doughs and allows us to monitor by feel and shift bins higher or lower on that rack according to the order in which we want to shape these doughs.

We also fine tune batch temps by putting more or less of the dough into each fermenting bin, so more dough builds its own heat and holds it, speeding things up, less dough cools down and slows down.

In summer, we are often limited by how warm the coldest tap water is. It can get up to 20°C in late summer (late winter it's been 3.5°C!). So we do what we can, with temperature control, sometimes moving the primary ferment to the cooling cabinet.

We also vary our levain percentage dramatically with the seasons. We use an Excel spreadsheet for all of our dough calculations and one of the primary inputs is how much of the flour will be prefermented as levain before mixing the dough. This varies from less than 10% to more than 20% as the seasons shift. So temperature and levain percentage shift, leaving the one constant in the in the dough mixing/shaping to be time.

This allows us to schedule work shifts and keep things running smoothly in our lives (almost!).

My biggest temperature tip may be off topic, but I find it so life-changing that I'll mention it anyway: Try always to have the dough at a slightly chilled temperature when it is ready to bake. Even a moderately chilled loaf, say, 16-18°C is so much easier to handle, score and load and makes such better bread all around that it is only in the direst circumstances that I will load a warm loaf.

We proof all of our breads in the 14-17°C range overnight throughout the year in a home-built retarding cabinet. Inevitably we do still have to warm some and cool others more drastically (sometimes this means putting them outside in the freezing cold, sometimes we put them outside to warm up: Canada, land of contrasting seasons!), but I always always try to have them slightly chilled before loading.

You should, too!

"I use a chest freezer with a light bulb to do warm bulk proofing and a refrigerator with a thermostat control to regulate temps for cold final proofs."

— Eric Theil, [The Baking Room](#)

* *

"I've recently started to measure the temperature of both water and final dough (just after kneading) as suggested in *Flour Water Salt Yeast* by Ken Forkish."

"Previously, I made sure all ingredients were at room temperature and the water was lukewarm, but I'm trying to be more scientific these days. I take temperature measurements of water and dough with my [Thermapen](#) food thermometer and factor in the room temperature which unfortunately varies widely between seasons in my Edinburgh flat."

"The target temperature I'm working towards for the final dough after mixing is 26°C. Taking note of the room temperature for the proofing time also takes the guesswork out of the process and allows for much better planning."

— Pam, [TheBreadSheBakes.com](#)



THE BEARDED BAGEL MAN

Interview: JARKKO LAINE

Photos: ROWAN WALKER

The first written mention of bagels is found in a document published in 1610, the "Community Regulations" of the city of Krakow, Poland— instructing the citizens that bagels should be given to women in childbirth!

Today, bagels are mostly eaten at other situations, all over the world.

This includes Edinburgh, where [Rowan Walker](#) bakes his bagels and delivers them to cafés and restaurants, directly from his home kitchen.

I met Rowan Walker on Twitter, where his nickname, [The Bearded Baker](#), and the accompanying stylized drawing of a black beard caught my attention.

Always a fan of small home-based micro startups, when I noticed that Rowan had just started a business selling bagels, I was immediately interested to learn more. Rowan agreed to answer my questions about bagels, baking and starting his small business.

**

Jarkko: Let's start with some background: who are you and why do you bake?

Rowan: I'm Rowan Walker—also known as The Bearded Baker—and I am a relatively recent addition to the fast growing Edinburgh culinary scene. My offer is simple: I solely do bagels and I supply various shops and cafés in the city centre with the freshly baked good.

I bake for the love of it. I'm not trained and my education is more focused on political analysis, but my dream is to carve a career out of doing something I love, hence the creation of The Bearded Baker.

Jarkko: Can you tell a bit more about how the bagel business came to be?

Rowan: It's been something I've been thinking about for a while now. In Edinburgh, I really struggled to find a good bagel and I noticed a lot of folk were settling for supermarket branded ones—undoubtedly full of refined sugars and unnecessary preservatives.

So I asked a few people around town whether they thought freshly made, local bagels would go down well in town, and the response was resoundingly positive.

I knew that I had found a gap in the market. So I made a few batches, tried out a few different recipes and provided samples to a couple of places and soon after, I got a phonecall from I.J. Mellis asking to start a daily supply.

Since then I've added some more cafés to my client list and I'm aiming for more!

Jarkko: Can you tell a bit about your bagel operations? How many bagels do you make per day? What kind of baking setup do you have?

Rowan: Right now, my operations are relatively small. During the week, I make 18 bagels per day, and on Saturday and Sunday I bake 27—so 144 bagels per week.

There's something quite charming, I find, about small batch baking. The people of Edinburgh can be guaranteed that each bagel has been handmade, homemade, and is fresh that morning. It's certainly something people are looking for these days.

Due to the small batch baking, I can quite happily make everything in my home kitchen. I'm lucky because I have quite a large kitchen with a good, powerful oven. If demand continues to increase exponentially, I'll certainly be looking for a premises that can cope more than my home kitchen.

Jarkko: What's great about bagels?

Rowan: Bagels really are a speciality bread—there's no other bread like it. They've got a wonderful chewiness to them, which I love, and they make the perfect sandwich.

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"The people of Edinburgh can be guaranteed that each bagel has been handmade, homemade, and is fresh that morning. It's certainly something people are looking for these days."





"The more simple your ingredients list, the better. Only five ingredients go into my bagels, and they're all natural and all local to me."

Jarkko: What makes a great bagel?

Rowan: The more simple your ingredients list, the better. Only five ingredients go into my bagels, and they're all natural and all local to me.

Also, a good, long knead is needed: make sure your dough is lovely and smooth, but also slightly stiff.

And, how could I forget, the boiling process—this really makes a bagel a bagel. It makes the bread puff up completely and adds that distinct chewiness that is necessary in any bagel.

Jarkko: How do you enjoy your bagel?

Rowan: As a sandwich, packed full of Scottish smoked salmon and slathered in cream cheese with a few capers thrown in. It really is the perfect lunch.

Jarkko: What tips could you offer to a baker who would like to get started at making his or her own bagels?

Rowan: Persevere. Your first batch aren't going to be pretty, but the more you do it, the easier it gets and the better looking your bagels will become.

It can be quite a frustrating bread to work with, but once you've got it, it really is rewarding.

Jarkko: Is there anything you'd like to add—about bread, baking, bagels or your business?

Rowan: In terms of business, if you have a talent and can make some damn good bread, ask around, provide samples to cafés and shops. There's a chance that you could start a business too. Talent is always recognised!

Plus, if I can do it, anybody can (seriously).

WHAT'S NEXT?

I hope you enjoyed the mix of ideas, stories and bread making tips in this first issue of Bread Magazine in 2015 and are excited to get baking more bread!

The next issue will be published in June, at the beginning of summer here on the North—and winter in the South, with more interesting bakers, bread tips, and... *baguettes*!

If you are already subscribed for the whole year, you'll receive the issue as soon as it's out. If you only bought a single issue, [pre-ordering the rest of the year's issues for \\$7.99](#) is still a good idea—I think.

If you have ideas, questions, or feedback, [send them to me via email!](#) Also, if you haven't visited [our new web site](#) yet, now's a good time.

As always, thank you for reading, and happy baking!

Jarkko Laine
Publisher



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