

# BREAD Lines



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**By DAVE MILLER**

Guild Member and Owner  
Miller's Bake House  
Yankee Hill, CA

PHOTO: AMANDA BERGMAN



Harvest at the Bergman family farm

*The Bread Bakers Guild of America is the leading American educational resource for artisan bread bakers. Our mission: to shape the knowledge and skills of the artisan baking community through education. Bread Lines, the newsletter of The Bread Bakers Guild of America, is published four times per year.*

Wheat travels well. There's no refrigeration needed to ship it across the country. It doesn't bruise, and it won't rot, so why are non-traditional wheat-growing areas around the country putting so much effort into establishing, or re-establishing, their own grain cultures and economies? What business does North Carolina or Arizona, or Maine or California have thinking they can grow their own wheat? That's what the Midwest is for!

*Continued on page 4*

I recently wrote a perspective piece defining artisan bread for an audience of professionals who work with cereal foods. It had been a long time since I'd been asked to define "artisan," and even longer since I'd even thought about what it meant. Those of us baking true artisan bread already know what it is. Bakeries that think they are making it, but really are not, probably don't care about the true definition. It's more of a marketing opportunity for them than anything else. Artisans are craftspeople, highly skilled. They aren't just baking "artisanal bread;" they are living a lifestyle. Just like artisans in other fields, they have dedicated their lives to pursuing a craft that is more than simply following a formula.

When it came time to write this edition of "Notes from the Chair," I thought that I would share a condensed version of the article I had mentioned above. I thought for a long time about what to include. I thought about sharing my trip through the bread aisle of the local major supermarket to see how commercial producers are defining artisan. What struck me most was how many breads labeled "artisan" clearly were not. On the front of the package, they use terms like "no high-fructose corn syrup," "no artificial color," and "no artificial flavors." Then the truth is revealed in the ingredients label that includes conditioners such as DATEM (diacetyl tartaric acid ester of mono- and diglycerides), the preservative, calcium propionate, and fumaric acid. The ingredients themselves were the least of what caught my attention. I found it more disturbing that they were using what was

left out of the bread as a qualification for "artisan," with total ignorance of the time and process that artisan bakers adhere to.

Ultimately, I realized the obvious: I don't need to define "artisan" to this audience. You already know. The last thing I want to do is write a bunch of filler.

If this were a movie script, it would read something like "Car screeching to a halt."

This will be my last "Notes from the Chair." This is my 12<sup>th</sup> year serving on the Board of Directors for The Guild, and my 8<sup>th</sup> year serving as Chair of the Board. I have written many Notes over that time, and I have always tried to share a message that was genuine, well-intentioned, and meaningful. I hope I succeeded more often than not. Most ideas were inspired by personal experiences, and others were based on observations as a participant in the baking community. If I had a positive impact on at least one reader for every message, then I achieved what I set out to do.

You may be wondering why I am not waiting until the end of the year to say goodbye. It just felt right to do it now. I wanted it to come at the right time from me, not from anyone else, not because it was the last Bread Lines issue of the year. I don't read from notes when I deliver a speech, and I wanted to do the same for this message, because I feel it's more genuine that way. I didn't want to think about it too much, and I chose to do it my way.

I was active in The Guild long before I joined the Board. I have never had any ulterior motives. The Guild has provided many opportunities to me, and I gave back so that others could experience the



PHOTO: COURTESY OF JEFF YANKELLOW

same. I served as Board Chair as long as I felt I was effective, but organizations need fresh energy and fresh voices, and sometimes that doesn't happen until the door opens. I am opening that door for someone else.

I'm not sure what will fill this space between now and the time when the next Chair takes the role. I have always wanted to give others an opportunity to write guest notes, so perhaps I will find some members who will do just that.

I will still be around as an active participant in the baking community, but I will use other platforms to express myself when that time comes. I will finish serving my term on the Board and have been working on a succession plan for over a year now, with a desire to leave The Guild in good standing in as many ways as possible. Someone will fill my shoes and use his or her own voice and style to push The Guild forward and continue to make the organization stronger every day. I'll see you around the bakery.

**JEFF YANKELLOW**  
Board Chair

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*Continued from cover*

Though it's not thought of as a wheat-producing state, California has a long history of growing wheat. My bakery is in rural Butte County, not too far from the city of Chico, where I sell my bread. Chico was founded by a man named John Bidwell in the 1850s. He made a bunch of money mining gold. In fact, he was a buddy of John Sutter, of Sutter's Mill fame, where gold was first discovered in California in 1849. Bidwell was at the mill, doing bookwork, when it happened.

He ran for governor, twice, unsuccessfully. He was a leader in the Bear Flag Revolt that gave California its independence from Mexico. And he was a visionary when it came to agriculture. While working as a surveyor for the new state, he came across a former Mexican land grant parcel of 22,000 acres, called Rancho del Arroyo Chico, bordered by the Sacramento River on one side and the Sierra Foothills on the

other. He liked the property so much that he bought it with his gold earnings.

He set out right away to experiment with hundreds of crops to see what suited his new land the best — every fruit tree you can imagine, vegetables, nuts, and wine grapes. And he grew wheat — 10,000 acres of wheat. It was wheat that would become his main source of income until he died. In fact, John Bidwell's wheat won the gold medal at the 1878 World Expo in Paris. The three varieties he was growing at the time were Club Wheat, something called Chili Wheat, and Sonora. Whichever variety it was, the judges at the Paris World's Fair declared it the best in the world.

During the years that Bidwell was growing wheat, he wasn't alone. There were many very large farms in the state growing wheat. There was a farm across the river from Bidwell's with 50,000 acres — all planted in wheat. Wheat was planted from Bakersfield to Red Bluff, north of Chico, the entire Central Valley.

Ninety-nine percent of that wheat was put on barges on the Sacramento and San Joaquin Rivers headed for San Francisco Bay. It was then loaded onto schooners that sailed all the way down the length of Central and South America, around Cape Horn, and back up the length of the Atlantic Ocean to Liverpool, England (about 18,000 miles).

All of this is to say that California has never had a local grain economy. Creating one will take a lot of work, if it's possible at all. The California Grain Campaign is one of many initiatives around the country focused on taking grain out of the world-wide commodity system and placing it into a regional, sustainable food system.

We are a grassroots, semi-organized, group of farmers, millers, bakers, farmers market managers, and advocates. We work to support the farmers who want to grow for us, the regional mills that serve as crucial intermediaries, and the bakers who transform these grains into something special.

We saw California's farmers markets as a natural place to start. They do, after all, have a mandate to create marketing opportunities for the state's farmers. Until recently, that meant pretty much everything but grain growers. Since there is already a great deal of grain being sold at these markets in the form of baked goods, we saw that bakers had the potential to play a key role in creating and sustaining a local grain economy. We're asking bakers at participating markets to incorporate California-grown and milled whole grains into the products they make. Our 20 x '20 campaign asks that at least 20% of the total flour usage for market baked goods comes from California farms and mills by 2020.



Larry Kandarian of Kandarian Organic Farms



Rancho Llano Seco wheat harvest - 1800s.

We're not just promoting locally grown and processed grain. We're promoting the concept of keeping them intact as whole grain flour. There are several reasons for this. One major reason is that turning these incredible varieties, both old and new, into white flour strips them of their identity. The differentiating factors of flavor and aroma aren't found in the endosperm. They exist in the bran and, to a lesser extent, the germ. A farmer growing specialty grains can't market them based on superior flavor if the flavor has been extracted. Livestock are the main beneficiaries of the flavor compounds found in wheat. Our house cat does her business in kitty litter made of wheat bran. That's the system we have today.

This isn't to say that a good baker can't produce great-tasting breads with white flour. It means that if you take three different wheat varieties with noticeably different whole grain aromas and flavors and refine them into white flour, those same three varieties will produce breads that are virtually non-distinguishable from one another in terms of flavor.

What our agricultural and milling industries have created over the last 150 years or so is miraculous. In a sense, it's hard to see the value in turning your back on a system that delivers reasonably priced, quality tested flour with predictable baking characteristics to bakers across the country.

One issue we are trying to address is the inherent lack of transparency, which breeds mistrust, the kind of mistrust that resulted in widespread wheat phobia. The reason a book like *Wheat Belly* was able to spark a world-wide panic was, at least partly, because no one knows a wheat farmer. No one knows that there are over 200,000 different varieties of wheat being grown today. No one knows how wheat is bred. It's hard to trust what you don't see or know. There was a huge vacuum to be filled by someone, and the wrong people keep filling that vacuum. If bakers know what is happening in the field, then it is that much more likely that their customers will know, too.

What's surprising to me is the general enthusiasm so many farmers in California and other parts of the country have for closing the loop. Some are taking on substantial risk trying unfamiliar crops and attempting to find local markets for their grain. Everyone is looking for that connection, and regional mills are popping up to facilitate that connection.

On the baker front, there seem to be two parallel realities here in California. There's

the reality for bakers like me who have smaller operations and are in the process of learning more about what is available locally. What we see are more and more options for buying from farmers in our region. In some cases, there are farmers who can't secure enough buyers, either mills or bakers, and are sitting on tons of wheat that can't find a home.

Then, there is the very different perspective that someone like Steve Sullivan at Acme Bread shares. Acme has worked at developing relationships with organic California wheat farmers for years, through Central Milling. In Steve's experience, there isn't enough quality organic wheat available from California farmers to satisfy his bakery's needs, let alone the whole state's needs. Last year, 40% of their total flour needs were met by California farmers.

So, if the goal is to encourage more bakers in the state to support local growers, where does that leave us? The two realities are largely defined by price and baking quality. A bakery like Acme has narrower parameters for cost of ingredients and specific baking qualities than a smaller, specialty or retail bakery might have. Both types of bakeries are needed to support the farmers in our state who want to grow the grains we are looking for and the local mills who make it all possible.

Aside from the 20 x '20 campaign, the California Grain Campaign has put on several educational events and a small grains field day, and we've just published our second *Harvest Catalog*, all of this in just over a year's time. Along the way there have been numerous collaborators, many of whom are Guild members. We are excited to see what will become of the efforts of so many wonderful people. ☀



Mai Nguyen at one of California Grain Campaign's farmers market roadshows.

# Our PRiMaL KNeAD:

## HAND- OPERATED GRAIN MILLS



PHOTO: JACK JENKINS

By **JACK JENKINS** Guild Member and Owner, Country Living Grain Mills — Stanwood, WA

At one time, our early ancestors who wanted to make bread from the natural grains they gleaned or cultivated were forced to resort to mortar and pestle, or two rocks, in order to grind the kernels into a usable flour.

Gradually, they developed past the mortar-and-pestle stages of flour production, using querns, which consisted of two large stones, the topmost of which was turned, while grain dribbled between the stones. Later, animal teams and rivers were harnessed to turn stone plates to convert grist into flour.

Once electric power was developed, flour production took yet another step away from the person who would be consuming the bread. Instead of riverside mills run by the local miller, grain was milled hundreds or thousands of miles away. The bran was sifted out to make a more shelf-friendly product, and the nutrition was bleached out to make a lighter, fluffier,

and less flavorful bread. The loaves were then shipped to distant stores, where they might sit on the shelves for weeks before being purchased by the consumer.

This shift in food production methods, though efficient, had deleterious effects upon the dietary habits of our nation. Flavor, nutrition, and freshness were being exchanged for mass-market pricing, a long shelf life, and a generous helping of preservatives.

Fortunately, groups of entrepreneurial and hard-working individuals, like the members of The Bread Bakers Guild of America, took on the mission of providing locally sourced artisanal breads to their

communities. I have truly been impressed with their perseverance and dedication to their craft. I'm convinced that, in really tough times, their knowledge, along with some grain storage and a wood-fired brick oven, could be instrumental in providing food and saving lives. I recall one family Thanksgiving we spent without electricity and used a brick oven to cook the entire meal. Although no lives were in jeopardy, the holiday spirit was saved, and our stomachs were definitely filled!

My own personal mission was the idea that each home should have an independent way of producing fresh flour, even in conditions where electricity was not available. Many people, accustomed to the comfort and luxury of an extensive power grid, scoff at the idea of not being able to flip a switch to provide light or power to a grain mill — but just last year Hurricane Harvey knocked out power to 300,000 Texas homes, and it took weeks to restore power. Hurricane Maria struck Puerto Rico in September of 2017 and knocked out 100% of the electrical grid, leaving over 3.4 million residents without

power. As of this writing, 1.5 million people there are still without power.

Some 40 years ago, believing that these sorts of disasters were an inevitable fact of existence, I set out to assemble a durable, high-quality grain mill that would produce a fine flour in conditions where no electricity was available. Recruiting the brain power of engineers and other experts, we eventually settled on an aircraft aluminum design, with carbon steel plates capable of grinding as finely as a stone mill.

The resulting hand-operated grain mill was in high demand during the panic of 1999, when a glitch in computer coding threatened to throw the world's power grid offline. People were concerned about having a way to feed their families if electricity were no longer available.

As it turned out, the Y2K scare was the best kind of disaster: one that never happened. And as a bonus, thousands of people learned to grind fresh and nutritious flour.

Some seven years ago, I received this memorable letter:

*I was a young woman tending diapers when I bought my (grain mill from you) thirty years ago. I ground wheat in it almost daily, baking wholesome loaves or feeding my toddlers a hearty breakfast of cracked wheat hot cereal for only pennies.*

*When my babies grew tall enough, they all took turns grinding for me.*

*Now I am a grandmother of twelve, still delighted with my grain mill, still serving up loaf after loaf, smiling as pre-teen grandsons try to outdo each other grinding the most flour for me!*

— Vivian Stoppel, Idaho

Our grain mill is now in use in countries all over the world. Some are in villages in Ghana, where formerly it was the work of an entire day to hike to the nearest miller, grind the grain, and return home before evening. It pleases me to think that, in some small way, I've been part of the movement that has allowed people to become more self-sufficient and to produce fresh flours and highly nutritious breads within their own homes. ✨

[countrylivinggrainmills.com](http://countrylivinggrainmills.com)



PHOTO: COURTESY OF JACK JENKINS

OPPOSITE PAGE: Country Living Wheat Mill.

LEFT: Vivian Stoppel's Country Living Wheat Mill.

SUPPORTING EACH OTHER:

# How to Start a *Community Supported* BAKERY

BY *Meeghen Eaton* Guild Member and Serious Home Baker — Agassiz, BC



Our class, “How to Start a Community-Supported Bakery,” was taught by Don Guerra of Barrio Bread in Tucson, AZ.

Don has a great story to tell about his bakery and community. He described how he started out as a baker, became an educator, and then was drawn back to baking because of his love for it. When returning to baking, he chose a community-supported model over a traditional retail model, both to reduce financial risk and to scale the size of his operation. He wanted time to focus on what was important to him: baking bread hands-on, participating in the local grain economy, and providing education and outreach to his community. Through commitment and hard work, his community-supported bakery is a huge success and a vital part of the community.

Don invited us to learn from each other and “shape some ideas” to apply to a community-supported bakery model that would work for us and our own community. He offered suggestions, based on his experience, of things to consider when setting up our shops.

- » Can you be not only the baker, but the entrepreneur, manager, and technician?
- » What are the rules and regulations that apply?
- » Does your company’s legal structure and insurance coverage offer enough liability protection?
- » How will you set up your physical baking space?
- » What is your niche market? Your brand?

- » Can you balance the bakery with other things in your life? Will the bakery be sustainable?
- » How can you give support to, and receive support from, others as you build and operate your business?

According to Don, here is what contributes to a community-supported bakery’s success:

**Engage and leverage everyone you know** — to help provide expertise in administration, marketing, design, mechanical support, etc. Reciprocate and give back to your community.

**Build relationships with your customers,** get to know each other, and find your niche market. Find those people who are as passionate about good bread as you are — they will advocate for you.



LEFT: Don Guerra with In Park of South Seattle College - great teamwork!  
 ABOVE: All hands on bench for a shaping lesson.



**OCTOBER 28–29**

**HOW TO START  
A COMMUNITY  
SUPPORTED BAKERY**

*Don Guerra*

South Seattle College  
Seattle, WA

**LIAISONS – Kimberly Smith  
and Christopher Harris**

**Tell your story to your customers;**

share what makes your product special, describe your process, and explain why you make your product the way you do. Your customers will gain an appreciation for where their food comes from, who produced it, what goes into making bread, and how much you're invested (and they may be more willing to pay a decent price for it). Show your customers you are a legitimate business. Engage customers by teaching classes, participating in events, and using social media.

**Strike a balance with your community**

and set limits on how much you can comfortably produce. Control the volume you are selling through ordering and subscription systems, then match supply to demand.

**Maximize efficiency** in terms of your bakery setup, production schedule, and distribution method. Don described how he operated a micro-bakery out of his home in a 500 square-foot garage, used an online ordering system, and scheduled production and managed fermentation so bread could be baked fresh on market/delivery day. He got his bread included in a community-supported agriculture program (that managed marketing, customer contact, and payment details) and ran pop-up markets at local schools at the end of the school day when parents came to pick up their kids. He sold a lot of bread that way.



**Concentrate effort on products you do well and that sell well** and manage profitability by minimizing the use of unnecessary ingredients.

**Connect with and promote local farmers/food producers** — make a big deal out of them. Even using a small amount of locally-sourced ingredients in your bread can make an impact.

Bake for your farmer to demonstrate what the grain has become. Farmers and food producers can then promote the way you transform their products.



TOP: Beautiful breads made by a group of happy bakers. The author of this article, Meeghen Eaton, is at the top right, in the blue cap. MIDDLE LEFT: Don's signature stencil on a loaf of Khorasan. MIDDLE RIGHT: Shaping einkorn dough to fit unique rectangular proofing baskets. BOTTOM: Cranberry Walnut crumb.

**Get your farmer excited about keeping the crop in the community.** Can you encourage him/her to grow varieties that are unique and suited to your area? Showcase those varieties.

**Collaborate with others involved with grain** — other bakers, cereal scientists, brewers, distillers, millers, restaurateurs, and institutions. Participate in tasting events and highlight each other's products or by-products. Work with caterers and bake for fundraisers as additional ways for people to discover your product.

**Be solid in your business relationships** and commitments and in the product you are delivering. Don emphasized that what you do as a baker is more important than anything else.

The doughs in class fermented beautifully, and he applied artistic stenciling and scoring to create stunning loaves with wonderful aromas, colors, and flavors. His considerable skill demonstrated what is possible when you practice, continually strive to improve, and devote yourself to a craft.

The class was organized, positive, and relaxed (just like Don himself), and there was time for discussion and a sharing of ideas. With his natural teaching ability, Don helped us explore a different way of living and working, the technology that makes a community-supported bakery model possible, and what can be achieved when people work together and support one another.

Thanks to my classmates for what they brought to the class, and thanks to Don for sharing his knowledge, experience, and truly excellent bread with us! Also, thanks to In Park and Holly Odegard for assisting, South Seattle College for hosting, and The Guild for organizing our class! ✨



CLOCKWISE FROM TOP: The class included lessons in stenciling and scoring. Euro Rye. There were plenty of opportunities for hands-on practice. Einkorn up front. In Park, teaching assistant. Scoring Cranberry Walnut.

# Einkorn

Contributed by *Don Guerra*

85% einkorn sourdough bread. Einkorn is the oldest wheat and contains high levels of protein, B vitamins, and fatty acids. Some consider it to be an alternative for those with gluten sensitivity.

### NOTE

In final dough mix add ingredients to mixing bowl in this order: water, levain, flour.



### PROCESS - Einkorn

<b>Preferment</b>		1 <sup>st</sup> Levain
<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	8:00 at 75°F
<b>Preferment</b>		2 <sup>nd</sup> Levain
<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	12:00 at 65°F
<b>Final Dough</b>		
<b>Mix</b>	<b>Type of mixer</b>	Spiral
	<b>Mix style</b>	Short
	<b>Hold back</b>	Salt
	<b>1<sup>st</sup> speed</b>	0:03
	<b>Autolyse</b>	0:30–0:45
	<b>Add</b>	Salt
	<b>1<sup>st</sup> speed</b>	0:03
	<b>Dough temperature</b>	75°F–78°F
<b>Ferment</b>	<b>Time/temperature</b>	3:00–3:30 at 76°F–78°F
	<b>Number of folds</b>	4
	<b>Timing for folds</b>	0:45
<b>Shape</b>	<b>Divide</b>	2.400 kg
	<b>Preshape</b>	Round
	<b>Rest</b>	0:30 at 76°F–78°F
	<b>Shape</b>	Boule
	<b>Proofing device</b>	12" x 10" banneton
<b>Proof</b>	<b>Time/temperature</b>	12:00–15:00 at 40°F–42°F
<b>Bake</b>	<b>Oven type</b>	Deck
	<b>Score</b>	X on left side, wheat stalk on right
	<b>Steam</b>	Load side 1, 3 sec, load side 2, 3 sec
	<b>Time/temperature</b>	0:40–0:45 at 500°F

EINKORN			Total flour fermented in levain		Total flour fermented in levain		Total flour prefermented	
Total dough weight	10.125 kg		Bread flour	2.13%	Bread flour	12.77%	Bread flour	14.89%
				14.29%		85.71%		100.00%
TOTAL FORMULA			1 <sup>ST</sup> LEVAIN		2 <sup>ND</sup> LEVAIN		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms	%	Kilograms
Total flour	100.00	5.875	100.00	0.125	100.00	0.750	100.00	5.000
Bread flour*	14.89	0.875	100.00	0.125	100.00	0.750		
Whole einkorn flour	85.11	5.000					100.00	5.000
Water	74.47	4.375	100.00	0.125	100.00	0.750	70.00	3.500
Salt	2.13	0.125					2.50	0.125
Starter†	2.13	0.125	100.00	0.125				
1 <sup>st</sup> levain					50.00	0.375		
2 <sup>nd</sup> levain							30.00	1.500
Final dough subtotal							202.50	10.125
Excess levain								0.375
<b>Totals</b>	<b>178.72</b>	<b>10.500</b>	<b>300.00</b>	<b>0.375</b>	<b>250.00</b>	<b>1.875</b>		<b>10.500</b>

\*Hard winter wheat (11% protein)

†Excess 2<sup>nd</sup> levain from previous batch

## AN EXPLORATION OF 100% WHOLE WHEAT:

# Baking with WHOLE GRAINS

BY *Jerod Pfeffer* Guild Member and Owner/Baker, 460 Bread — Driggs, ID

**W**hole wheat bread is a philosophy as much as a food. You don't eat it accidentally, as you might, say, a ham croissant. You seek it out. You might even feel that it has sought you out.

The course, Baking with Whole Grains, taught by Randy George at Noble Bread in Phoenix, Arizona, November 4-5, was an exploration in 100% whole wheat bread made with local flours. Randy owns and operates Red Hen Baking Company in Middlesex, VT, with his wife, Liza Cain, and 42 staff members. He has sourced local wheat from farmers and small mills since 2000.

The central challenge of using local wheat is its variation in mixing and baking. In class we tested six hard red wheat samples from regional farmers and mills. They differed in protein content, falling number (a measure of enzyme activity), and seed variety. We tested both spring and winter wheat. Our formula was a levain-based, 100% whole wheat lean dough (no added fat or sugar) made at Randy's bakery.

As we mixed dough from the six samples, the variations became obvious: hydration levels ranged from 78% to 97% to achieve a consistent medium-soft dough. At the oven we saw how the protein level affected both the volume and crumb.

I also run a wholesale bakery and was excited to upgrade my *pain complet* skills, but my central question for Randy was not, "How?" but "Why?"

We take it for granted that local grains and 100% whole wheat bread are better, but better at what?

Carbon footprint? Probably not. Wheat is non-perishable and efficiently transported. For growers in wet climates, the grain might also require mechanical drying to stabilize and avoid fungal toxin. Better flavor? Hard to say. Randy thought this probably had more to do with fermentation than variety. Nutrition? Well... Kansas and Montana wheat are probably as good for your colon as the stuff down the road. Consistency? Definitely not.

Sometimes smaller is not better. Sometimes smaller is just smaller. The value that large mills add through blending, testing, and consistent milling gives bakers a better chance to make great bread.

It seems safe to assume that long-fermented, wild yeast, 100% whole wheat bread is the healthiest option. Yet most people gravitate toward less hearty loaves.

Which begs the question: What is our job as bakers and food business owners? Are we responsible for "nudging" people toward healthier options? Are we required to provide only the healthiest options? Or, as business owners, should we simply respond to customer preference? The pleasures of the table, after all, are more than the sum of the bran and vitamin count.

"How?" is tricky; "Why?" is murky.

Randy, however, was not making the case that 100% whole wheat sourdough is the only real bread. He makes and loves to eat a great baguette. He was simply



Whole wheat flour samples for testing.



Shaped loaves of Glenn hard red spring wheat.



ABOVE: Students in the sold-out class came from seven US states, as well as Mexico. RIGHT: Randy George talks about making levain with the correct flours for Day 2 production.



NOVEMBER 4-5

**BAKING WITH WHOLE GRAINS**

*Randy George*

Noble Bread  
Phoenix, AZ

**LIAISON – Jason Raducha**

suggesting that this is also great if done well.

Our opportunity as bakers might just be to do what we can control, which is our product. We can make better whole wheat bread that more people want to eat. We can get more flavor, more open crumb, and more attractiveness by focusing on how to work with our basic medium: flour. We can learn. We can read, experiment, and take classes.

My experience in the baking world is that people are as diverse and interesting as bread. Randy has achieved something that looks a lot like the perfect balance of businessman and craftsman. Through his business he explores things that interest him as a baker: local grains and farm, 100% whole wheat wild yeast loaves, and helping the people around him lead satisfying work lives.

In addition to running his bakery, he serves on the board of directors for the Northern Grain Growers Association. He advocated for statewide paid sick leave through his work with the Main Street Alliance of Vermont. He was honored by President Obama at a Working Families Champion of Change event.



There is a saying in politics: “Don’t tell me what you care about. Show me your budget, and I will tell you what you care about.” Baking is the same. What you choose to spend money on says a lot about your values.

Why local wheat? Randy cares about where he lives and cares about farmers. He sees a straight line from the field to his mixing bowl and takes pride in being the man to connect those two points.

It is no surprise that he accepts increased cost and complexity to make something more connected and more interesting. For Randy, 100% whole wheat bread might be the output of a search more than an end in itself. ✨

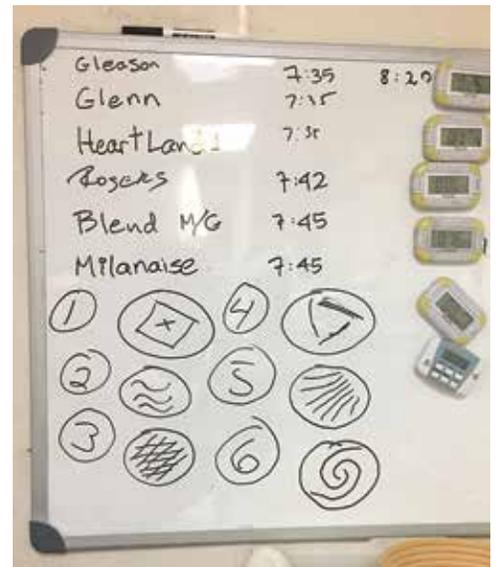


TOP: Hand mixing flours for a short autolyse. BOTTOM: Gently scoring fragile, 100% whole wheat loaves.

CENTER PHOTO: SHEENA OTTO, REMAINDER: JEROD PFEFFER

BAKING WITH WHOLE GRAINS — WHOLE WHEAT SAMPLES

FARMER/MILL	VARIETY	WHEAT TYPE
1 Ben Gleason	Redeemer	Hard Red Winter Wheat
2 Dewavrin Family	Glenn	Hard Red Spring Wheat
3 Heartland Mill	Blend	Hard Red Spring Wheat
4 Rogers	Redeemer	Hard Red Winter Wheat
5 50% Milanaise/50% Ben Gleason	Blend/Redeemer	Hard Red Winter/Spring Wheat Blend
6 Milanaise	Blend	Hard Red Winter/Spring Wheat Blend



PHOTOS LEFT & CENTER: JEROD PFEFFER



PHOTO: JEROD PFEFFER



PHOTOS THIS COLUMN: SHEENA OTTO

CLOCKWISE FROM TOP RIGHT: A list of the flour varieties used in class, the times they were finished mixing, and the scoring pattern assigned to each variety. A sample of each variety was lined up for comparison and tasting. The different varieties of flour after mixing, compared side-by-side for color, texture, etc. Randy George unloading baked loaves. Folding dough during bulk fermentation. Randy George explaining final proof level.

# 100% Whole Wheat Milanaise

Contributed by *Randy George*

PHOTOS: JEROD PFEFFER



A naturally-leavened, flavorful whole wheat bread to pair with good food.

**NOTES**

- Score bread distinctively for identification purposes.
- Score bread so it opens up evenly and allows for maximum oven spring.

**100% WHOLE WHEAT MILANAISE**

TOTAL FORMULA			LEVAIN		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms
Flour	100.00	4.281	100.00	1.105	100.00	3.176
Water 1	81.66	3.496	66.75	0.738	86.86	2.758
Water 2	7.16	0.306			9.65	0.306
Salt	2.03	0.087			2.74	0.087
Starter†	3.23	0.138	12.50	0.138		
Ascorbic acid	0.005	0.0002			0.007	0.0002
Levain					62.40	1.981
<b>Totals</b>	<b>194.09</b>	<b>8.309</b>	<b>179.25</b>	<b>1.981</b>	<b>261.65</b>	<b>8.309</b>

\*\*“Milanaise” dough – La Meunerie Milanaise Organic Integral Whole Wheat Flour  
 †100% water, 50% any whole wheat flour, 50% AP flour

**PROCESS –**

100% Whole Wheat Milanaise

<b>Preferment</b>		Levain
<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of mix</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	8:00–10:00 at 74°F
<b>Final Dough</b>		
<b>Mix</b>	<b>Type of mixer</b>	Spiral
	<b>Mix style</b>	Intensive, double hydration
	<b>Hold back</b>	Salt, water 2, levain
	<b>1<sup>st</sup> speed</b>	Until incorporated
	<b>Autolyse</b>	0:30
	<b>Add</b>	Salt, levain
	<b>2<sup>nd</sup> speed</b>	0:05
	<b>1<sup>st</sup> speed</b>	Slowly add water 2 while mixing until incorporated
	<b>Dough temperature</b>	80°F
<b>Ferment</b>	<b>Time/temperature</b>	2:15 at 72°F–74°F
	<b>Number of folds</b>	2
	<b>Timing for folds</b>	0:45
<b>Shape</b>	<b>Divide</b>	1.000 kg
	<b>Preshape</b>	Round
	<b>Rest</b>	0:20
	<b>Shape</b>	Round
	<b>Proofing device</b>	Willow banneton, dusted with coarse whole wheat flour, seam up
<b>Proof</b>	<b>Time/temperature</b>	2:00–2:30 at 74°F
<b>Bake</b>	<b>Oven type</b>	Deck
	<b>Score</b>	Yes (see notes)
	<b>Steam</b>	Yes (full, ample steam)
	<b>Time/temperature</b>	0:35–0:40 at 480°F, until dark brown

# THE RACHEL'S SPECIAL:

## Q&A with Rachel Midgette

**RACHEL K'S BAKERY IN WASHINGTON, NORTH CAROLINA, HAS A UNIQUE PROGRAM FOR FEEDING THE HUNGRY. THE BAKERY'S OWNER, RACHEL MIDGETTE, A GUILD MEMBER SINCE 2013, TALKS TO LAVERNE DICKER ABOUT HOW THE PROGRAM STARTED, AND WHAT THE OUTCOME HAS BEEN.**

### What kind of business do you operate?

Rachel K's Bakery is a retail bakery, café, and coffee shop and is open from 7 am to 6 pm, Monday through Saturday, for breakfast and lunch. We offer various croissants, sweet buns, bagels, scones, and muffins, as well as homemade soups, salads, and sandwiches. We also sell loaves of bread, coffee, and espresso. Everything is made from scratch on the premises. We got started selling baked goods at our local farmers market in 2010 and opened our current location in March 2015.



PHOTO: RACHEL MIDGETTE

Rachel K's Bakery in Washington, North Carolina. The 1884 building was originally a fire station on the ground floor, with city offices upstairs. It was vacant from 1982 until 2015, when renovations were completed and the bakery opened.

## Where are you located?

We are located in rural eastern North Carolina, in a small town called Washington, on the Pamlico River. The town has approximately 10,000 people and has a fairly high poverty rate (over 20%). Our area attracts an influx of people who retire to our area to enjoy access to the water, a low cost of living, and our beautiful natural landscape.

## What is the Rachel's Special, and why do you offer it?

Shortly after opening Rachel K's Bakery, I began to notice a small population of people who appeared to be homeless or had a severe lack of resources. Occasionally, they approached me on the street and asked for money. I began directing these people to the Bakery, and told them to tell the employees that "Rachel said I could get something to eat." In this way I felt that I could help people who truly needed assistance, without handing out cash that could potentially go toward activities that I didn't want to support. This became a common occurrence, and my staff knew that anyone who came in could get free food.

This coalesced into a formal "code word" when we realized that many were too shy or embarrassed to ask for free food in front of other customers. We posted a sign in our bathrooms, letting people know that they only had to ask for a "Rachel's Special" in order to receive a sandwich and drink at no charge.

## What does the Rachel's Special include?

We've created some basic rules as this program has developed. A person can get coffee and a pastry in the morning, and may come back at lunchtime for a sandwich, salad, and/or soup, and a drink. They have to pick up the meal personally — we don't pack up food for someone who isn't present.

## Who benefits from the Rachel's Special?

The demographic of the people receiving our meals is ever-changing. We've had

everyone from single mothers with young children, to teenage boys, to men of retirement age come through our doors. Every ethnicity and educational level seems to be represented. Some of the people show up only once a month or so, when their budgets just aren't quite making ends meet, while others are regulars.

## How much does this cost your business?

Many business owners will ask how we can afford this. The reality is, although anywhere from six to 12 people receive a free meal on any given day, the total retail value of what we give out in a year is less than 1% of our sales. While it obviously impacts net income, it is an acceptable amount in the overall picture. This is a way for us to give back to our community in a way that is meaningful to us, and also fills a niche that is not otherwise filled in our area.

## Have there been any safety concerns?

Only occasionally during the 2½ years that we've been offering this special have we had any issues. Once, a man became confrontational with one of our employees, and we had to ask him to leave until he calmed down. He raised his voice but left the Bakery with no further issues. Sometimes we also have to remind the people receiving free meals that they are not allowed to ask for money or handouts while on our property. In general, this population has policed themselves, and they are quick to chastise any newcomers for misbehavior if it occurs.

There is a bar located across the street from us. Before we started the Rachel's Special, we would sometimes find beer bottles and cans tossed into our outdoor seating area. Since we began feeding people for free, this has disappeared. The recipients of our meals make an effort to pick up any trash that appears on our grounds and have also been known to wash our windows, weed our flower beds, and do other odd jobs to show their appreciation.

We intentionally do not wait until closing time to hand out free food, to discourage people from hanging around the building and parking lots as our employees leave at the end of the day.

## What do your customers think of this practice?

In general, our customers have responded well to the idea of helping others. Our customers started handing my employees money with instructions like, "This is to help feed people." This has become so common that we aggregate the money and donate it to our local food bank periodically. In 2017, we sent \$600 in customer donations to the food bank. Recently, an article on the Rachel's Special was published in a newspaper in Raleigh, 100 miles west of us, and another \$750 in donations showed up in our mailbox. This money has gone to provide food, shelter, and warm clothing to the homeless population during an unusual cold spell that we've been experiencing this winter.

Rarely, we receive feedback along the lines of "I'm glad you're doing this, but can't you do it somewhere else?" While we are sensitive to the fact that paying customers are the reason that we can continue this practice, we try to be cognizant of the dignity of our less fortunate population and treat them with the same courtesy and respect that we do all of our paying customers.

## Would you recommend this to other business owners?

Yes, I definitely would. I believe that everyone should do what they can to make a difference — however small — in the world around them. I believe that by helping others when they are at their most vulnerable, we are tipping the scales in the right direction. Food is what we know, food is what we can share with people, and food is the way that we can have an impact on the community around us. ✨

[rachelksbakery.com](http://rachelksbakery.com)

## ST. HONORÉ

By ANGELA WILSON

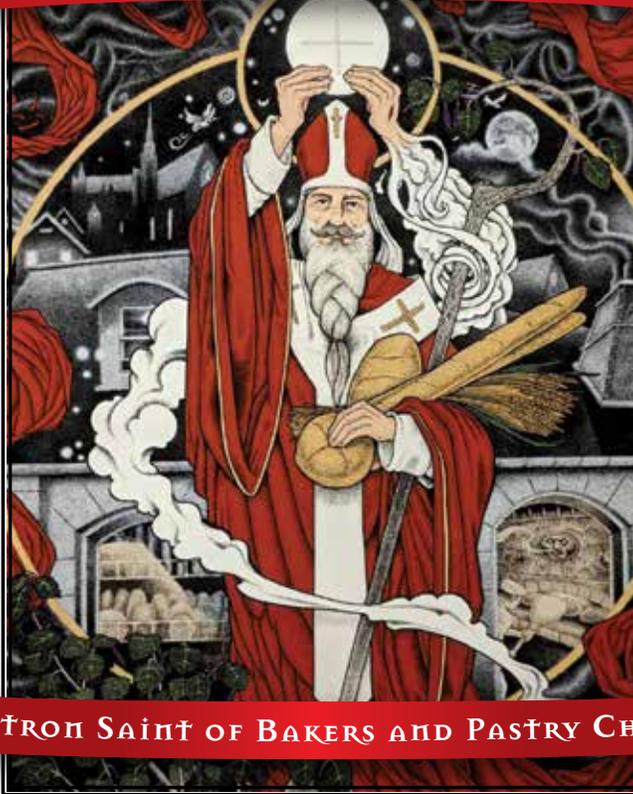
Over the years, I have been a great fan of St. Honoré of Amiens, the patron saint of bakers and pastry chefs. I thought a medal or a card would be a nice keepsake, but I was never able to find anything. Every now and then I would mention this to other pastry chefs, but they had the same answer: We have not seen anything.

Fast forward a few years. I had become a pastry instructor, and I wanted to give my graduating students something related to St. Honoré, but again, there was nothing! Or at least, there was nothing affordable. I found medals of St. Honoré, but since they were in the \$50 range, they were certainly not an option for my students.

Then one day a colleague and I were trying to think of a “thank you” gift for Graison Gill of Bellegarde Bakery, who had been a dedicated friend to our department. A St. Honoré print would be perfect, but none seemed to be available.

I had had enough. I wanted this! I needed this! I was on a mission! Why was there nothing out there? Enter Chris Volion of the Gilley van Weirden Workshop (gvw.ink), an artist I know who has previously created religious-inspired work. After I explained the situation to Chris, he agreed to design a print for me. Now there is a beautiful print available in multiple sizes, which he is going to make into cards that I can give to my students.

My quest is now complete! But who is Saint Honoré of Amiens? Why is he our



PATRON SAINT OF BAKERS AND PASTRY CHEFS

Guild Member and Chef Instructor,  
Delgado Community College  
New Orleans, LA

God on our behalf. For example, you could ask St. Honoré to ask God to help your bread rise, or he could be a smile on your face when the bread goes in the oven, with the thought of “please let it come out of the oven a loaf of perfection,” and a silent “thank you” when it comes out crackly and golden brown, smelling of home, love, and all things good in the world.

patron saint, and what is this elaborate cake named after him? Like many of you, I learned about the Gâteau St. Honoré in school — in my case, at the Culinary Institute of America at Hyde Park. I carried this knowledge with me throughout my career and teach it to new pastry chefs and bakers.

The Gâteau St. Honoré is an intricate collaboration of pastry techniques and an excellent way to judge skill, which is why it is a popular teaching tool.

It incorporates laminated dough in its puff pastry base and the classic pâte à choux as an accompaniment to the base as well as in its crown of profiteroles filled with Chantilly cream and then adorned with caramel and spun sugar. The components come together to form a perfect union of cream, dough, and crunch.

You don't have to be religious to admire patron saints. They are symbolic of many things — jobs, countries, actions — and represent for each of us whatever we want them to represent. In the Catholic Church, patron saints are asked to “intercede” with

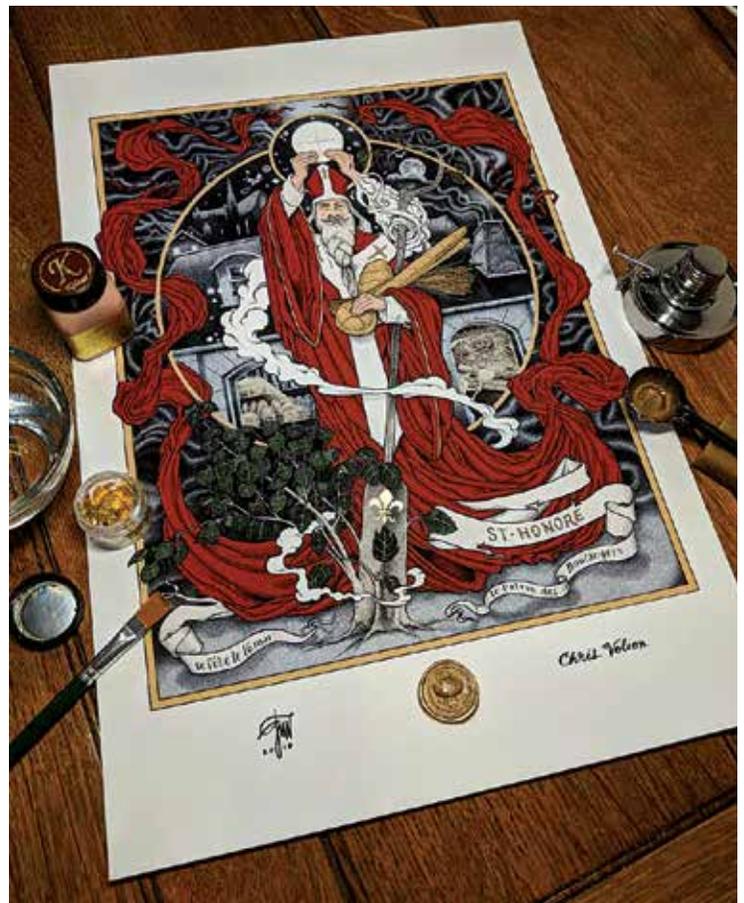
St. Honorius of Amiens was born in the 6<sup>th</sup> century, near the town of Amiens, France. Legend says that when Honoré's old nursemaid heard the news that he had been made a bishop, she was baking bread, and declared that the boy was no more going to be a bishop than her baker's peel would turn back into a tree. The peel then grew roots and branches and turned into a fruit-bearing tree. It is said the tree was still a popular pilgrimage site well into the 16<sup>th</sup> century. Prayers to St. Honoré are said to stop droughts and flooding, and ensure good wheat harvests, again endearing him to the bakers of the world.

In the 12<sup>th</sup> century, a French baker donated land in Paris to finance a church in St. Honoré's honor, on what is now known as the Rue de Faubourg Saint Honoré. His feast day was established by the French Baker's Guild and since the 17<sup>th</sup> century has been celebrated on May 16.

Let's open our doors on May 16 and celebrate bread, baking, and the pastries that make us happy! 🌟



Angela Wilson, chef instructor at Delgado Community College in New Orleans, teaches her students to make Gateau St. Honoré. Because it requires intricate pastry techniques, she finds that it's an excellent way to judge skill.



Artist Chris Volion of the Gilley van Weerden Workshop designed this depiction of St. Honoré of Amiens, patron saint of bakers and pastry chefs.



PHOTOS: ANGELA WILSON

Gâteau St. Honoré has a base made of puff pastry and pâte à choux, filled with Chantilly cream. It is topped with a ring of profiteroles dipped in caramel and is often garnished with spun sugar.



# GÂTEAU ST. HONORÉ

Contributed by

ANGELA WILSON



Gâteau Saint Honoré builds on a puff pastry and pâte à choux base, and is traditionally filled with Chiboust or Chantilly cream although diplomat cream substitutes well. The top is ringed with filled profiteroles and may be garnished with spun sugar.



## GÂTEAU ST. HONORÉ

Yield	1 cake
Components	Amount
Puff pastry	0.300 kg–0.375 kg
Pâte à choux	0.454 kg
Vanilla Chantilly cream*	0.340 kg
Chocolate Chantilly cream*	0.340 kg
Pastry cream†	0.340 kg–0.454 kg
Sugar	As needed, about 0.680 kg

\*May use all vanilla or all chocolate Chantilly cream if desired; Diplomat cream may be substituted

### PREPARE

- Roll puff pastry ⅛" thick and cut 8"-10" round. Dock pastry.
- Rest puff pastry round at least 30 minutes before using.
- Make pâte à choux while puff pastry is resting.
- Pipe ring of pâte à choux around outside perimeter of puff pastry round, continuing inwards in a spiral to the center.
- During baking, the pâte à choux will form a natural lip around the perimeter.
- Bake at 400°F for 25-30 minutes or until fully baked. Cool.
- Pipe remaining pâte à choux into 12-16 profiteroles.

- Bake profiteroles at 375°F for 20-30 minutes or until brown and puffed.
- Make pastry cream, if using.
- Make vanilla and chocolate Chantilly (or diplomat) cream.

### ASSEMBLE

- Make a hard caramel from half the sugar.
- Dip top of each profiterole in caramel and lay, top side down, on a silicone sheet or other non-stick surface; cool.
- Fill each profiterole with filling of choice.
- Reserve enough vanilla and/or chocolate cream to cover inner area of pastry base.
- Fit two pastry bags with Saint Honoré tips.

- Fill one pastry bag with vanilla cream and the other pastry bag with chocolate cream.
- Spread reserved vanilla and/or chocolate cream evenly over inner area of pastry base.
- Pipe alternating vanilla and chocolate rows in an intersecting pattern across inner area of cake. See photo for example.
- Make a hard caramel from remaining sugar.
- Dip bottom of each profiterole in caramel and attach bottom to outer, raised lip of pastry base.
- Garnish with spun sugar using leftover caramel, if desired.



Unsalted bread from Umbria.

# THE MYSTERY OF ITALY'S SALTLESS BREAD

Trade wars, papal rebellion, or salty hams. Why does central Italian bread have no salt?

By VITTORIA TRAVERSO

*This article originally appeared at AtlasObscura.com, January 9, 2018. © Atlas Obscura, Inc., used by permission.*

Ask anyone from central Italy what is distinctive about their local bread and you're almost certain to hear the same thing: "È senza sale." Unlike the bread baked elsewhere in the country — and the world, for that matter — "It is without salt."

But if you go on to ask someone from Tuscany, Umbria, or Marche (three central Italian regions where most towns bake unsalted bread) why that is, you're not going to hear a universal, accepted answer. You might hear stories about trade wars or tax-avoidance strategies

between the ninth and 15<sup>th</sup> centuries, when most of the peninsula was governed by autonomous city-states. But none of these explanations tells the whole story.

In the edited 2016 volume, *Gastronomy and Culture*, an essay titled "The Evolving Role of Bread in the Tuscan Gastronomic

Culture” states that Florentine bread is made without salt because of a trade dispute with Pisa in 1100. Other sources cite a steep salt tax that pushed Florentines to do without. The most epic of these bread-splaining histories is probably that of Perugia’s 1540 Salt War.

“It’s a very good story; I believed it for years when living in Italy,” says Zachary Nowak, a doctoral candidate in American Studies at Harvard University who, with Ivana De Biase, from the University of Perugia, co-authored an article on the subject in a recent issue of the *Journal of Italian Studies*.

### ADVERTISING

Nowak spent years in Perugia working with the Umbra Institute, which offers study abroad programs for American students in Italy. He had heard the Salt War story in bakeries and restaurants around town. “Everyone in Perugia knows the story. The first time you eat pane sciapo — saltless bread — people tell you the story.”

“We make pane sciapo because Perugia went to war against the Pope in 1540,” says Silvia Duranti, owner of local bakery chain Santino. “He imposed a heavy tax on salt and people refused to pay it.” Duranti’s explanation fits with the Perugian’s fiercely rebellious and anticlerical reputation. It is also rooted in actual history, but as to whether the Salt War is the root of pane sciapo ... well, that isn’t crystal clear.

In 1540, Alessandro Farnese — Pope Paul III — controlled much of the region, and though Perugia was not exempt from his rule, it enjoyed a fair degree of autonomy. Its ruler, Braccio I Baglioni, served as chief of the city’s papal army and was therefore able to establish de facto political control. One of the results of this, Nowak and De Biase explain, was that the city was free from one of the most important papal levies at the time: the tax on salt.

“Salt was a very expensive product,” says Nowak. “It was like gasoline is now, a fundamental item for everyday life. You needed it to preserve meat and to make



Hold the salt, please.



Pope Paul III said he needed salt taxes to finance wars against heretics.

seasonings.” The Pope had a monopoly on all salt sold in the papal states. “Taxes on salt were a huge part of income, they probably added up to something like 50 percent of papal revenues.”

Peruginis had made an agreement with Pope Eugene IV in 1431 that granted them the right to buy salt from other suppliers. “Before Pope Paul III, Peruginis could buy salt from across the border in Tuscany, from the Senese. They could buy better salt for cheaper,” says Nowak. But in 1540 Paul III changed his mind and called off the agreement. The price of salt nearly doubled. Peruginis, already contending with a bad harvest, did not take it well. They refuted his assertion that he needed the money to fight the Turks in the east and the Germans in the north, Nowak

explains, and assumed that all the money would go to the lavish court in Rome.

They refused to comply, and the Pope cut them off from church services. In response, the city declared its independence and prepared for war. “On April 18, 1540, the Peruginis attached a crucifix to the side of the cathedral [still known as the Salt Jesus] and symbolically entrusted the keys of the city to it,” Nowak and De Biase write. Many of the town’s most important families showed up to kneel in front of the crucifix to symbolize their vow to defend the town’s liberty.

Paul III sent in his troops, who crushed the city’s armed resistance. By June 6, Pier Luigi Farnese, the Pope’s son and

lieutenant, seized control of the town. And under papal rule it would remain until the unification of Italy in 1860.

So, for proud Peruginis, saltless bread is a continuation of a fierce act of rebellion. “We stopped putting salt in bread as we always had a thing against the Pope,” the baker Duranti says.

But it’s not all so simple. “I believed it for years when I was in Perugia, but then I went to Florence, and the bread was the same. I thought: ‘Florence had nothing to do with Papal States,’” Nowak says. “They were part of the Grand Duchy of Tuscany and not under papal rule.”

He spent months looking for evidence that could help solve the mystery. First, he determined the “geography of unsalted bread” by calling the provincial authorities of 25 central Italian provinces and a single southern one to ask which kind of bread is most common in local bakeries.

The territory mapped, he then began to look at potential environmental factors. One source he found explained that central Italian regions had little access to salt due to their distance from the sea. But that doesn’t explain why the interior of Sicily and central northern Italy both bake salted bread, or account for the presence of canal and river systems for transporting salt. “If distance from the sea was a factor, then you would have pane sciapo only in the middle of the peninsula and in the middle of Sicily, rather than in this oddly shaped area.”

Nowak also sorted through the ricordi (memories) kept by local “gentlemen historians” that belonged to some of Perugia’s most prominent families. He found no mention of removing salt from bread recipes as a result of the 1540 war.

“Plus, if people were used to putting salt in bread they would logically restore to it after the revolt was crushed,” he says. “But they didn’t. So it must have deeper roots.”

Indeed, a reference to bread and salt can be found in Dante’s *Divine Comedy*, com-



The “geography of unsalted bread.”



Dante mentions bread and salt in Canto XVII of Paradiso.

pleted in 1320, more than two centuries before the Salt War. In the Canto XVII of Paradiso, Dante meets fellow Florentine, Cacciaguida, who warns the poet about the pain of his imminent exile:

*You shall leave everything you love most dearly:*

*this is the arrow that the bow of exile shoots first. You are to know the bitter taste*

*of others' bread, how salt it is, and know how hard a path it is for one who goes descending and ascending others' stairs.*

Of course many posit that the reference to salted bread is a metaphor — to say something is “salty” means it is expensive or requires a lot of effort in contemporary Italian — but why specify the saltiness of bread if all bread was salted? “Every commentator said it was metaphorical,” Nowak says. “But I think that for a Florentine to understand that metaphor there needs to be a real world connection.

It makes more sense to me that it’s a hint to unsalted bread at the time and a metaphor, rather than just a metaphor.”

Finally, Nowak looked at the pre-Salt War records kept by Perugia’s most important hospital, the Ospedale di Santa Maria della Misericordia. “Hospitals kept amazing records back then, they kept track of every single lira that was spent,”

the historian says. “I checked inventories and found detailed lists mentioning pots, beans, coal, wood ... but never salt. They even had their own bakery, but never bought salt.” Absence of proof is not proof of absence, but it suggests that Perugini bread lacked salt well before the Salt War.

My 90-year-old grandmother, who spent much of her childhood in Poppi, a small town 20 miles from Arezzo in eastern Tuscany, had a much more practical take on the tradition: “Tuscans make saltless bread as everything else is very salty. Cured ham is so salty that we usually eat it with saltless bread and figs that counterbalance the taste. Plus, saltless bread lasts longer.”

Nowak gave this hypothesis a thought and dismissed it. “If that was the reason, we would find saltless bread in other regions where hams and cheese are very salty, like Apulia or Calabria [in southern Italy].”

It’s possible that it’s all of these reasons and none of them. “My theory is that it goes way back, before the Salt War and even before Dante,” Nowak says. “Back in the 800s or even earlier, but the weakness of my investigation is that I have not found an alternative hypothesis for how unsalted bread evolved.”

For now, the case of the unsalted bread will remain unsolved as well. ✨



Is central Italian bread saltless because the local cheese and ham are particularly salty?

# SAMPLES FOR 2,000

By MICHAEL SELLERS

Guild Member and Owner, Journeyman Bakery  
Peekskill, NY

*In August 2017, I was fortunate to be named “Best New Bread Baker” by Westchester Magazine, our county’s monthly magazine that is famous for its annual “Best Of…” rankings. One of the perks of the award was an invitation to hand out samples of my bread at the “Best of Westchester” party where the 100 winners do a meet-and-greet with magazine subscribers. I was told to prepare samples for approximately 2,000 guests — something my modest baking setup could not easily handle. So I reached out to The Guild’s eGroup, asking for advice on how to prepare for such a massive order. What follows are some of the suggestions I received, as well as things that I learned along the way.*



PHOTOS: COURTESY OF MICHAEL SELLERS

✱ My top concern was how to bake enough bread in advance without it going stale prior to the event. A Guild member suggested that I focus on my German rye, which is based on a Jeffrey Hamelman recipe that is popular with my weekly subscribers. I made thirty 9" Pullman loaves a few days before the event, and, because of the bread's high hydration and density, didn't have to worry about it going stale. In fact, Vollkornbrot improves with a few days of rest after the bake. Guests loved it. I baked several other types of bread, but I used them at my table as part of a display. By the end of the event, guests were asking to buy the display loaves.

✱ Just because organizers expect 2,000 guests doesn't mean that all of them will stop by your table. Ultimately, I think we welcomed 800 people, and I went home with a lot of leftover bread.

✱ I should have paid more attention to easily spreadable toppings to accompany

the bread. I brought a veggie cream cheese as well as whipped butter. Guests weren't crazy about tasting the bread without a topping. I wished I had considered more upscale spread options, but I just didn't have the time prior to the event.

✱ It's important to have a wastebasket handy. For those who tried the bread and didn't like it, it would have been helpful (and less awkward) if a wastebasket had been next to my table to handle discards.

✱ Having on-site help was essential. While one person could have managed it, my two helpers did an excellent job of keeping the sample trays full while I spoke with guests and passed out business cards. During lulls between guest visits, my team (who wore polo shirts with my company logo) went off to meet other winners and sample their food. Their visibility around the event facility attracted more guests to my table.

✱ Never assume anything. Many people had no idea I was a bread-by-subscription baker and kept asking where my retail bakery was located. I should have done a better job with signage to explain my business model. I gave away an informational postcard that featured a 25% discount code, and out of several hundred cards that were handed out that night, only three people ordered bread using the code. It was definitely a missed opportunity.

Overall, this event was a great learning experience, and the majority of guests enjoyed the bread. Even though the preparation was stressful, it was important for me to be there for exposure, and I believe it raised my profile a bit in the local market, especially by using a unique rye bread for sampling. My thanks again to the eGroup members who offered such helpful insights and time-tested wisdom. ✱



# VOLLKORNBROT

Contributed by **MICHAEL SELLERS**

{ Adapted from a Jeffrey Hamelman formula }



*Vollkornbrot is a dense, moist German rye bread with large grains and a slightly sour taste. It is cut thin and often eaten with cheese and cold cuts for breakfast or dinner. This formula is based on Jeffrey Hamelman’s formula in his book Bread, and has been adapted with his permission.*

VOLLKORNBROT 1			Total flour fermented in levain		40.33%			
Total dough weight			1.763 kg		Rye meal		59.44%	
					Rye chops		0.00%	
Ingredients	TOTAL FORMULA		LEVAIN		SOAKER		FINAL DOUGH	
	%	Kilograms	%	Kilograms	%	Kilograms	%	Kilograms
Total flour	100.00	0.905						
Rye meal	67.21	0.614	100.00	0.365			100.00	0.250
Rye chops	32.79	0.291			100.00	0.300		
Water	49.18	0.449	100.00	0.365			34.00	0.085
Soaker water	32.79	0.291			100.00	0.300		
Salt	1.86	0.017					6.80	0.017
Yeast	0.60	0.006					2.20	0.006
Sourdough starter*	2.19	0.020	5.48	0.020				
Sunflower seeds	6.01	0.055					22.00	0.055
Soaker							240.00	0.600
Sourdough							300.00	0.750
<b>Total yield</b>	<b>186.61</b>	<b>1.763</b>	<b>205.48</b>	<b>0.750</b>	<b>200.00</b>	<b>0.600</b>	<b>705.00</b>	<b>1.763</b>

\*Starter uses medium rye flour, 100% hydration



## PROCESS – Vollkornbrot

<b>Preferment</b>		Levain
<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	14:00 at 70°F
<b>Soaker</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	14:00 at 70°F
<b>Final Dough</b>		
<b>Mix</b>	<b>Type of mixer</b>	Spiral
	<b>Mix style</b>	Short
	<b>1<sup>st</sup> speed</b>	0:10
	<b>Dough temperature</b>	84°F
<b>Ferment</b>	<b>Time/temperature</b>	0:10–0:20 at 84°F
<b>Shape</b>	<b>Divide</b>	1.742 kg
	<b>Shape</b>	Cylinder
	<b>Proofing device</b>	Pullman pan
<b>Proof</b>	<b>Time/temperature</b>	0:50–0:60 at 82°F
<b>Bake</b>	<b>Oven type</b>	Deck
	<b>Steam</b>	Yes
	<b>Time/temperature</b>	0:15 at 470°F, then 0:60 at 380°F, depan then 0:15 at 380°F on sheet pan
	<b>Open damper</b>	After first 0:15

### NOTES

- Soaker water should be cold.
- Coat Pullman pan with oil and rye meal or whole rye flour.
- For final 15 minutes of baking, remove bread from Pullman pan and place on sheet pan.
- After bread cools, wrap in linen and let stand for 24–48 hours before slicing.

VOLLKORNBROT 2			Total flour fermented in levain					
Total dough weight			1.743 kg		40.24%			
					59.31%			
					0.00%			
TOTAL FORMULA			LEVAIN		SOAKER		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms	%	Kilograms
Total flour	100.00	0.905	100.00	0.364	100.00	0.291	100.00	0.250
Rye meal	67.86	0.614	100.00	0.364			100.00	0.250
Rye chops*	32.14	0.291			100.00	0.291		
Water	49.63	0.449	100.00	0.364			34.00	0.085
Soaker water	32.14	0.291			100.00	0.291		
Salt	1.88	0.017					6.80	0.017
Yeast	0.61	0.006					2.20	0.006
Sunflower seeds	6.08	0.055					22.00	0.055
Starter†	2.13	0.019	5.30	0.0193				
Levain							299.20	0.748
Soaker							232.80	0.582
<b>Totals</b>	<b>192.47</b>	<b>1.743</b>	<b>205.30</b>	<b>0.748</b>	<b>200.00</b>	<b>0.582</b>	<b>697.00</b>	<b>1.743</b>

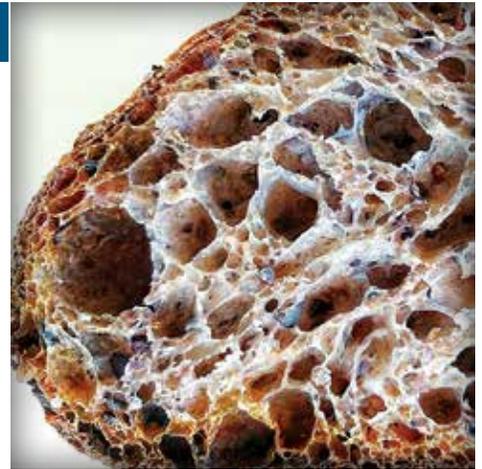
\*Coarsely chopped rye berries

†Medium rye flour, 100% hydration

**THE BREAD BAKERS GUILD OF AMERICA**

There are many invaluable reasons for being a member of The Bread Bakers Guild of America. Among the most cherished is having firsthand access to some of the best artisan bakers in North America, who teach our regional events series. Join us for the 2018 #InGlutenWeTrust class series. We have selected top instructors from around the country to share their expertise, innovative ideas, and overall passion that drives them to the bench each day! Fifteen classes are scheduled in different locations from coast to coast.

**2018**



#InGlutenWeTrust

<b>FEB 27-MAR 1</b>	<b>WHEATSTALK 2018</b> // Multiple Instructors	Johnson & Wales University <i>Providence, RI</i>
<b>MARCH 24-25</b>	<b>FLATBREADS AND CRACKERS WITH HERITAGE WHEATS</b> // Dawn Woodward	Two Knives Catering <i>Amarillo, TX</i>
<b>APRIL 27-28</b>	<b>THE SCIENCE BEHIND SOURDOUGH</b> // Karen Bornarth and Debra Wink	Hudson County Community College <i>Jersey City, NJ</i>
<b>MAY 4-5</b>	<b>SUBTLY SWEET AND SAVORY BREADS</b> // Josh Bellamy	Johnson & Wales University <i>Charlotte, NC</i>
<b>MAY 5-6</b>	<b>WORLD PORRIDGE</b> // Nicky Giusto	The Culinary Institute of America <i>San Antonio, TX</i>
<b>MAY 31-JUNE 1</b>	<b>VERSATILE WHOLE GRAIN DOUGH</b> // Rose Lawrence	Wheat Marketing Center <i>Portland, OR</i>
<b>JUNE 8-9</b>	<b>BREAKING BREAD</b> // Martin Philip	King Arthur Flour at The Bread Lab <i>Burlington, WA</i>
<b>JULY 7-8</b>	<b>ELEVATED AND LAMINATED DOUGHS 2.0</b> // Jeremy Gadouas	Midori Bakery <i>Redmond, WA</i>
<b>AUGUST 7-8</b>	<b>HERITAGE WHEAT BREADS</b> // Andy Clark and Thom Leonard	Grateful Bread <i>Golden, CO</i>
<b>AUGUST 17-18</b>	<b>THE GRAIN EXCHANGE: A FLOUR SUBSTITUTE EXPERIMENT</b> // Cyril Hitz	King Arthur Flour Baking School <i>Norwich, VT</i>
<b>AUGUST 17-18</b>	<b>IN-HOUSE MILLING AND BAKING</b> // Ryan Moore and Mel Darbyshire	The Bread Lab <i>Burlington, WA</i>
<b>SEPTEMBER 8-9</b>	<b>KEEPING YOUR BAKERY BUSINESS LIVELY</b> // Solveig Tofte	General Mills <i>Minneapolis, MN</i>
<b>SEPTEMBER 22-23</b>	<b>WORLD OF LAMINATED DOUGHS</b> // Jory Downer	Delgado Community College <i>New Orleans, LA</i>
<b>OCTOBER 12-13</b>	<b>HOLIDAY BREADS</b> // Didier Rosada	Revent/Kornfeil Test Bakery <i>Somerset, NJ</i>
<b>OCTOBER 13-14</b>	<b>BIALYS AND FARMERS MARKET BREADS</b> // Mike Zakowski	Central Milling <i>Petaluma, CA</i>
<b>DECEMBER 7-8</b>	<b>PRINCIPLES OF FORMULA DEVELOPMENT</b> // Richard Miscovich	King Arthur Flour Baking School <i>Norwich, VT</i>

# KAISER ROLL

By **JEFF ALEXANDER**

*Guild Member and Associate Pastry Chef Instructor, Johnson & Wales University — Providence, RI*



ALL PHOTOS: CIRIL HITZ

**W**ho doesn't appreciate a warm, buttered Kaiser roll served with morning coffee? Growing up, I made frequent trips to the local delicatessen to buy Kaiser rolls for my family. We used them for cold cuts, pork rolls, and memorable grilled hamburgers. The Kaiser roll is an Austrian creation, but when I was younger, I was sure the Pennsylvania/New Jersey region was its home.

The Kaiser roll has a five-segment, curved, star-like pattern that resembles a 19<sup>th</sup> century royal crown.

The word "Kaiser" is a German word that means Emperor. This tasty roll goes by several names, including "Imperial Vienna" and "Emperor Roll." All of these names, however, respect its origins. Austrian bakers introduced to Viennese society a roll made of high-quality flour, fermented with yeast, which they called a Kaiser-Semmel (Imperial Roll), in honor of the much-loved Kaiser Franz Joseph I of the Austro-Hungarian Empire (1830–1916). Franz Joseph himself enjoyed this roll with his morning breakfast of tea and cold meat.

The roll is made from what is traditionally known as a Vienna dough, a lean dough with a small amount of fat added. In some cases, there is also a little sugar and a small amount of egg.

Before mass production, Kaiser rolls were shaped by hand, an art requiring skill and practice to master. It is very difficult to find a hand-shaped Kaiser roll these days, due to the invention of Kaiser stamps and machinery. The art of hand shaping has nearly become a thing of the past.

I had to search long and hard to find an older baker who was familiar with this art. Ernie of The Breakers Hotel in Palm Beach, FL, told me the story of hand-shaped Kaiser rolls and gave me a demonstration. I truly felt lucky, because most of the bakers I talked to said, "Sure, I know how, but it has probably been 30 years since the last time I shaped them."

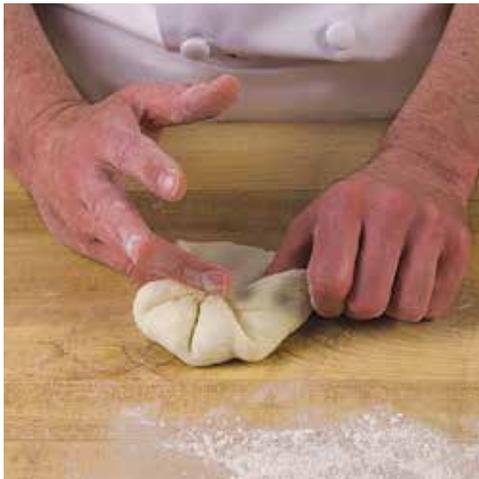
I learned two styles of making these rolls. The classic five-star pattern uses karate-chop motions to fold the flaps of dough into a circular pattern. I had to practice this over and over before I achieved the right look. Then Christoph Bruehwiler, a colleague of mine at Johnson & Wales University and a talented Swiss baker, showed me a very different technique. He said that this was the only way he knew how to make them and what he remembered from his childhood. Starting from a round, rested piece of dough, flatten the dough and then bunch it up in the middle to make a small button. Take the outside pieces of the dough and fold them to just short of the button — there should be

5 to 7 folded flaps coming to the button's edge. The flaps should go in a circular pattern, slightly overlapping; it should look like a small fan.

Both styles yielded a very attractive roll.

Those experiences, coupled with some obscure videos that I found of hand-shaped Kaiser production, fueled my inspiration to become the flyer of the flag for hand-shaped Kaiser rolls.

If your only experience of Kaiser rolls thus far has been the pre-bagged kind you get at the grocery store, or the dried-out ones that come with a burger, I hope to change your mind about including these in your routine bake. In my area of the Northeast, a good Kaiser roll is a highly sought-after treat, because hardly anyone is hand shaping them anymore. People don't know how, or they feel it's just too much work. I have found, however, that with some practice it's possible to crank out several rolls per minute and reap the rewards of a real classic. ☀



Jeff Alexander learned two different techniques for shaping Kaiser rolls. One used karate-chop motions to fold the dough — as shown above. Another folded flaps of dough towards a central button. Some bakers use a plastic stamp to produce the distinctive Kaiser roll markings.

# KAISER ROLLS

Contributed by JEFF ALEXANDER

KAISER ROLLS			TOTAL FORMULA		SPONGE		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms	%	Kilograms
Total dough weight		3.684 kg	Total flour fermented in sponge	22.72%				
Yield		26 rolls	Bread flour	22.72%				
Bread flour*	100.00	2.202			100.00	0.500	100.00	1.702
Water	62.27	1.371			70.00	0.350	60.00	1.021
Salt	1.93	0.043					2.50	0.043
Fresh yeast	0.80	0.018			0.10	0.0005	1.00	0.017
Vegetable oil	2.32	0.051					3.00	0.051
Sponge							50.00	0.851
<b>Totals</b>	<b>167.32</b>	<b>3.684</b>	<b>170.10</b>	<b>0.851</b>	<b>216.50</b>	<b>3.684</b>		
Light rye flour (optional)		As needed						As needed
Cornmeal		As needed						As needed
Seeds		As needed						As needed

\*Hard winter wheat (12% protein)

## PROCESS - Kaiser Rolls

<b>Preferment</b>		Sponge
<b>Mix</b>	<b>Type of mixer</b>	Planetary
	<b>1<sup>st</sup> speed</b>	0:02
	<b>2<sup>nd</sup> speed</b>	0:02
<b>Ferment</b>	<b>Time/temperature</b>	12:00–16:00 at 70°F–75°F
<b>Final Dough</b>		
<b>Mix</b>	<b>Type of mixer</b>	Planetary
	<b>Mix style</b>	Short
	<b>1<sup>st</sup> speed</b>	0:02
	<b>2<sup>nd</sup> speed</b>	0:02 or until somewhat smooth
	<b>Dough temperature</b>	70°F
<b>Ferment</b>	<b>Time/temperature</b>	1:30–2:00 at 70°F–75°F
	<b>Fold</b>	0:45
<b>Shape</b>	<b>Divide</b>	142 g
	<b>Preshape</b>	Round
	<b>Rest</b>	0:20–0:30
	<b>Shape</b>	Kaiser roll; see process notes
	<b>Proofing device</b>	Couche
<b>Proof</b>	<b>Time/temperature</b>	0:25–0:30 at 70°F–75°F; see process notes
<b>Bake</b>	<b>Oven type</b>	Convection or deck
	<b>Score</b>	None
	<b>Steam</b>	13 sec
	<b>Time/temperature</b>	0:12–0:15 at 440°F until golden brown
	<b>Open damper</b>	After 0:15

## SHAPE

- Shape by hand using plenty of dusting flour (bread flour, or light rye flour to enhance definition), or use a Kaiser stamp.
- If using a Kaiser stamp, spray with water and dust with cornmeal or seeds, then stamp.
- If shaping by hand, spray top with water and dust with cornmeal or seeds after proofing.

## PROOF

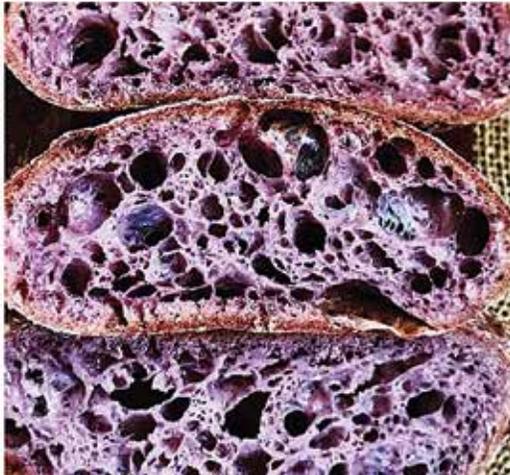
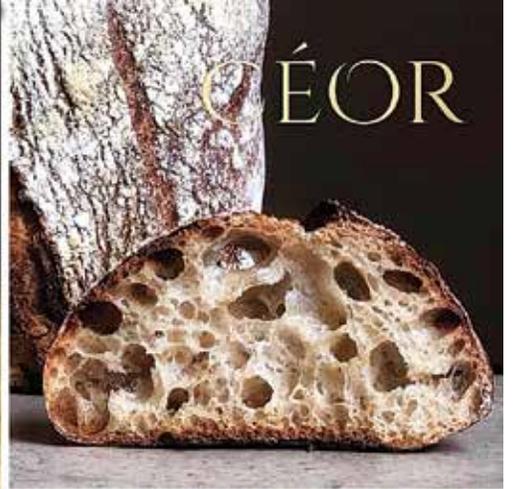
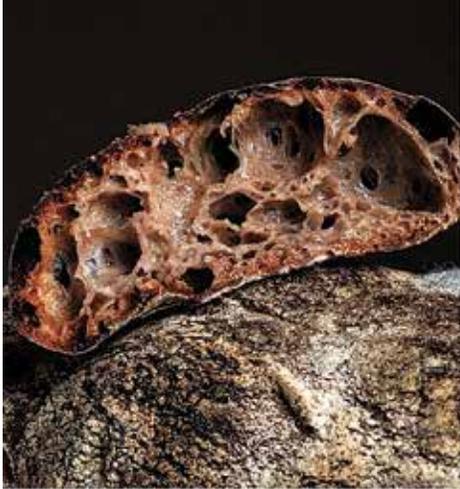
- Proof upside down on floured couche. Rolls should double in size.
- Proof under cover on rack or in proofer at 75°F/90% humidity.

A distinctively shaped roll from Austria that is depicted by a star-shaped pattern. This thin-crust roll with its chewy interior is often used for the best sandwiches and is a true artisan product when hand shaped.



# BREAD COUTURE

By **GUY FRENKEL** Guild Member and Owner, Céor — Los Angeles, CA



ALL PHOTOS: JOE KOHEN

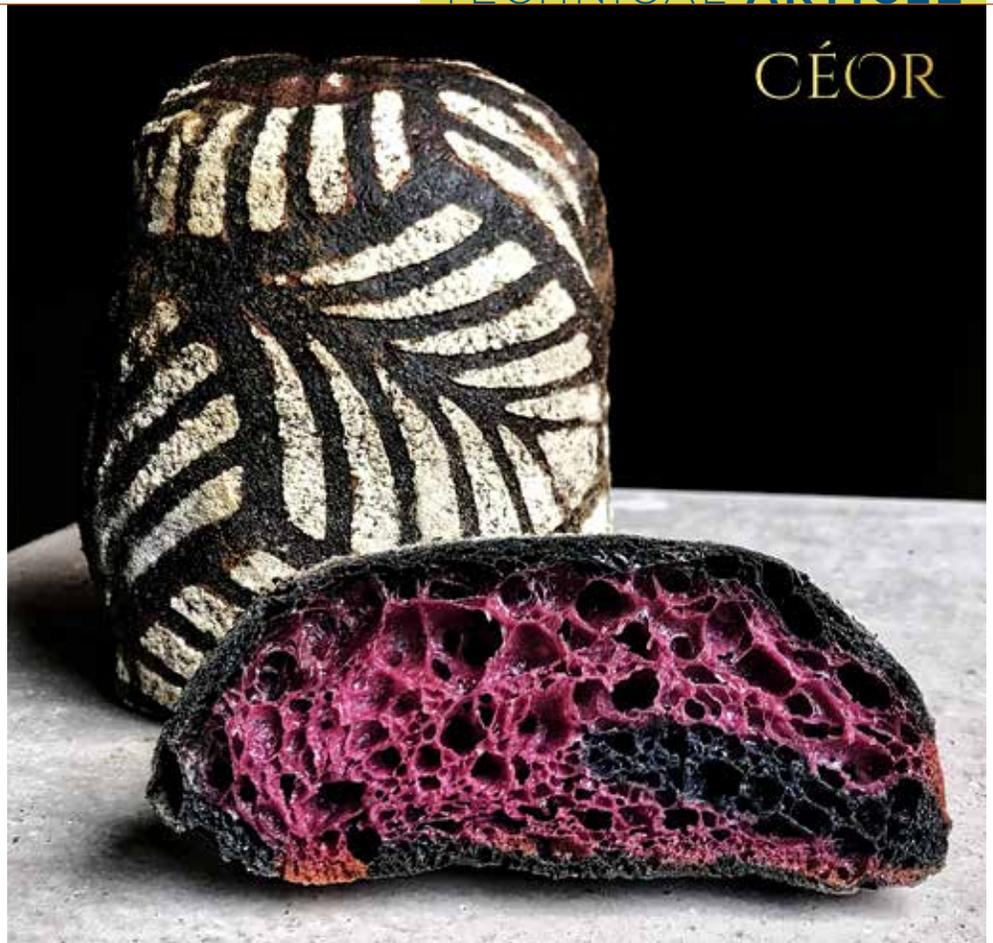
In the story of Rumpelstiltskin, the miller's daughter (with a little help from a magical force) weaves straw into gold overnight. I think it's a wonderful metaphor for bread making — bakers, like the miller's daughter, start off with the humblest of ingredients and overnight, manage to weave them into a variety of golden delights. It's magical.

My name is Guy Frenkel, I bake organic, naturally leavened, handmade bread under the pseudonym Céor (the ancient Hebrew word for sourdough) and I am on a continuous quest for better bread.

## THE GRAINESSANCE

As bakers, we have access to more grain varieties than ever before. Farmers everywhere are waking up to the benefits and joy of growing heritage wheats and ancient grains. I am fortunate to live in California and enjoy close friendships with several remarkable farmers who are not only growing their grains organically and sustainably, but are also busy reviving all sorts of amazing grains. Beyond the now popular spelt and rye, we can find emmer, einkorn, Khorasan, teff, blue tinge Ethiopian farro, millet, buckwheat, triticale, purple and black barley and many more. We can also shop for wheat by name (Turkey Red, Red Fife, Sonora, Yecora Rojo, etc.) and not just by hard/soft, red/white, or winter/spring.

One of my closest friends and collaborators is Larry Kandarian of Kandarian Organic Farms. Larry shies away from modern wheat varieties (he won't grow white wheat, as he deems it too new) and focuses on the rare and exotic. We discuss the upcoming crop and envision new breads that will best utilize the new grains, for example, a Khorasan and teff loaf we called "David and Goliath" (get it?), or an Emmer Beer Emmer Bread which we developed in collaboration with



Guy Frenkel uses freshly milled flour and colorful produce to create striking loaves that are pleasing to the eye and palate.

Mark Jilg of Craftsman Brewing Company. Mark used Larry's emmer to brew a batch of wild yeast emmer beer, which was used as both the hydration and leavening agent for the emmer bread.

It's important to realize that each new crop will behave differently, and formulas must be adapted every season to accommodate for those changes. These grains offer an incredible range of aromas, flavors, and textures, even at relatively small percentages of the overall flour, which leads me to the next trend we are enjoying.

## THE FRESH-MILLED FLOUR REVOLUTION

Bakers everywhere are discovering the benefits of milling their own flour. In my opinion the aroma and taste are superior, and it also gives access to milling all those crazy grains I mentioned above. I buy my white flour but mill everything else just before mixing the dough and can't get enough of the smell of water hitting fresh-milled flour. For my small batches, I use the new Mockmill 200 from Wolfgang Mock, which I can't recommend enough.

Having a mill on hand allows you to mill more than just plain grains. For example, roasted rye, teff, or barley (@ 5%-10% of flour) add unparalleled character to country loaves. You can also mix in seeds, spices, or even dehydrated herbs to the grains you are milling.

## NATURAL FERMENTATION

Commercial-yeast free! There, I said it. There is nothing wrong with *Saccharomyces cerevisiae*. In fact, many starters contain it as part of their microflora. But when relying on unnatural concentrations of it as the sole leavening agent, you are missing out on the complex and wonderful flavors (not only sour!) that proper fermentation has to offer.

Traditionally, a sourdough starter is used to make sourdough bread with the distinct tang. But under proper conditions and the right feeding regime, sourdough starters can successfully leaven all sorts of breads and all varieties of leavened doughs. Ciabattas, baguettes, and even croissants

and challahs can all be leavened without the use of commercial yeast, and when done right, the results can be superior to their yeasted counterparts.

For the sweeter doughs, I use wild yeast water — a way to harvest different yeast and bacteria varieties from organic materials such as fruits, vegetables, edible blossoms, and more. The liquid environment and high sugar levels are a perfect medium for the wild yeast and bacteria to flourish.

For all things sourdough, I recommend the Perfect Sourdough group on Facebook, which was started by the amazing Teresa Greenway (I am one of the administrators). Register your starter at thequestforsourdough.com — the digital arm of the Sourdough Library in Belgium which maintains over 100 different sourdough starters from around the world.

## CULINARY BREAD

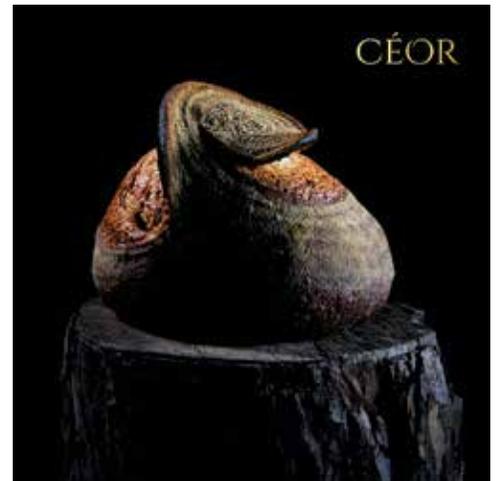
I am a huge fan of three-ingredient bread and make it often. It's an exciting challenge to coerce new and bold flavors

with so little. But I also love using seasonal produce which I get from local farmers at the market. Autumn squash, purple sweet potato, sunchoke, rose petals, stinging nettle, limequats, beets, and many other unexpected produce, transform breads into a unique culinary experience.

## THE ART IN ARTISAN

It's love at first sight — not bite — and while tasty is the reason we gather in the first place, and healthy is a worthy goal, I believe that breads can be as pleasing to the eye as to the mouth. Dough is an exciting medium — unlike clay, marble, metal, or even wood, dough is a truly living thing. Ever changing, even in the oven, it is still expanding in ways that it is almost impossible to determine.

I utilize natural colors from vegetable juices, infusions of blossoms, spices, and other techniques. And I experiment with shapes, create custom made stencils, and use scoring patterns to create breads that are not only beautiful, but also tell a story. ✨



Guy Frenkel's breads demonstrate his experiments with shapes, stencils, and scoring.

ROSE PETAL CIABATTA			ROSE PETAL STARTER		BIGA		POOLISH		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms	%	Kilograms	%	Kilograms
Total flour	100.00	1.460	100.00	0.100	100.00	0.200	100.00	0.160	100.00	1.000
Organic bread flour*	68.49	1.000							100.00	1.000
Whole wheat flour†	31.51	0.460	100.00	0.100	100.00	0.200	100.00	0.160		
Fermented rose water‡	50.00	0.730	100.00	0.100	60.00	0.120	100.00	0.160	35.00	0.350
Water	41.10	0.600							60.00	0.600
Salt	2.05	0.030							3.00	0.030
Olive oil	2.74	0.040							4.00	0.040
Rose petal starter					40.00	0.080	50.00	0.080		
Biga									40.00	0.400
Poolish									40.00	0.400
Final dough subtotal										2.820
Excess rose petal starter										0.040
<b>Totals</b>	<b>195.89</b>	<b>2.860</b>	<b>200.00</b>	<b>0.200</b>	<b>200.00</b>	<b>0.400</b>	<b>250.00</b>	<b>0.400</b>	<b>282.00</b>	<b>2.860</b>

\*Hard red winter wheat, freshly milled

†Hard white wheat, freshly milled

‡See process notes

# ROSE PETAL CIABATTA

Contributed by **GUY FRENKEL**

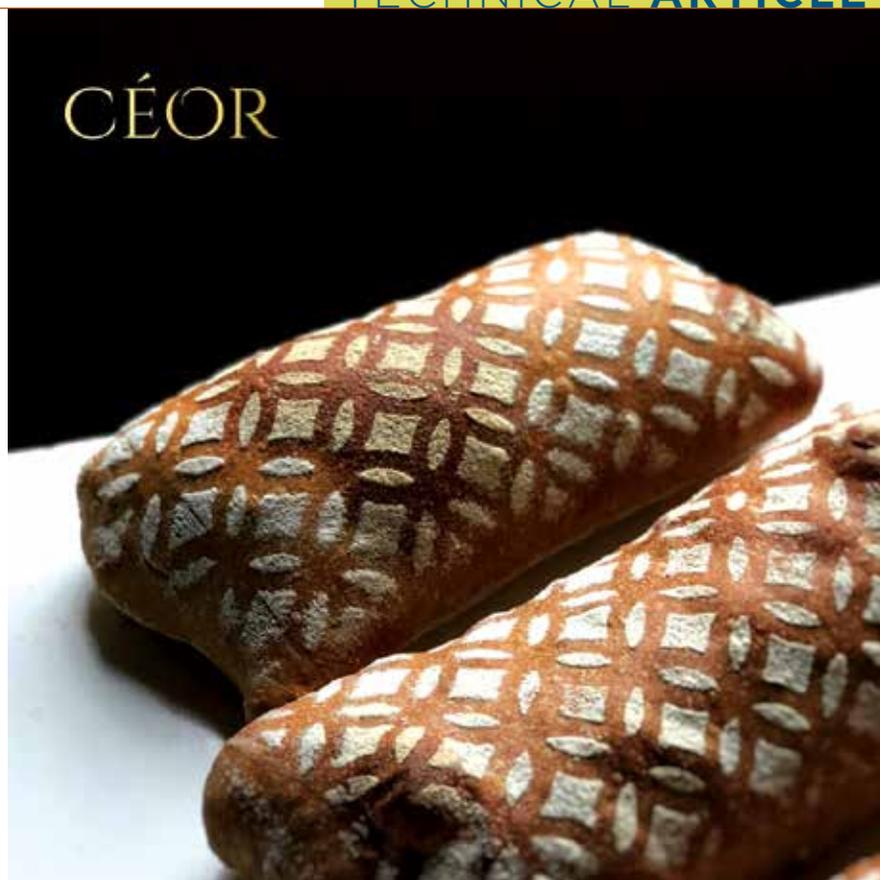
This airy ciabatta is made with freshly milled flour. Leavened with fermented rose petals, it carries the most wonderful and unique aroma. When handled gently and properly fermented, the reward is an open, soft crumb and a shattering, thin crust. Almost any other edible flower, fruit, vegetable, or herb (e.g. rosemary, strawberry, beet, or basil) may be fermented to create the starter.

## FERMENTED ROSE WATER

- Place a handful or two of rose petals in a one liter Mason jar. Add 750 g water and 75 g sugar. Cover.
- Ferment at room temperature for about 3 days, shaking and degassing twice a day. The water is ready when it is well-carbonated.

## BAKE

- Alternatively, bake at 480°F for 25-35 minutes.



PROCESS - Rose Petal Ciabatta				
<b>Preferment</b>				
<b>Mix</b>	<b>Type of mixer</b>	Rose petal starter	Biga	Poolish
		Hand	Hand	Hand
	<b>Length of time</b>	Until incorporated	Until incorporated	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	08:00–12:00 at 65°F–75°F	06:00–08:00 at 72°F	06:00–08:00 at 72°F
<b>Final Dough</b>				
<b>Mix</b>	<b>Type of mixer</b>	Hand		
	<b>Add</b>	Flour, water, ½ rose water		
	<b>Length of time</b>	Until incorporated		
	<b>Rest</b>	1:00		
	<b>Add</b>	Salt, biga, poolish, ½ rose water		
	<b>Length of time</b>	Until incorporated		
	<b>Hold back</b>	Olive oil		
<b>Ferment</b>	<b>Time/temperature</b>	5:00 at 70°F–72°F or 24:00–72:00 at 39°F		
	<b>Fold</b>	0:30, 1:00		
	<b>Add</b>	Olive oil after 2 <sup>nd</sup> fold		
	<b>Fold</b>	1:30, 2:00, 2:30		
<b>Shape</b>	<b>Divide weight</b>	200 g–500 g		
	<b>Proofing device</b>	Well-floured couche		
<b>Proof</b>	<b>Time/temperature</b>	0:45–0:60 at 72°F		
<b>Bake</b>	<b>Oven type</b>	Deck		
	<b>Time/temperature</b>	Preheat 530°F, load, 0:10 at 500°F, 0:25–0:30 at 470°F		
	<b>Steam</b>	10 sec		
	<b>Open damper</b>	Last 0:05		



# Brioche

BY JAMES  
MACGUIRE

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## Brioche is one of the glories of French baking.

Yet it can seem somewhat dowdy when compared to croissants and other fancier pastries and can be a tough sell unless it's covered in sugar or smothered in chocolate. Still, when one first encounters a billowy Parisian brioche à tête, it's difficult to believe that something could be so light, yet buttery, so delicate, yet structured. These qualities come at a price. With all the technical problems involved, bakers may wonder if brioche is worth all the trouble — precarious amounts of butter, which can lead to dough breakdown in sweltering summer bake shops, and a soft, difficult-to-work dough. Not the least are the dangers of overmixing. I remember standing next to Raymond Calvel during the last phase of mixing brioche dough at a high speed as he agonizingly muttered, “*Détachez, détachez,*” — as if to will it to come away from the sides so he could turn the machine off. The consequences of overmixing and the loss of carotenoid pigments are less noticeable in a rich dough than in a baguette, but they exist, and overmixing also leads to an unpleasant cottony texture in baked brioche. He did suggest using an autolyse as a solution to this, but never got around to incorporating the process into a recipe. These days I don't know why we still tend to consider brioche in its own separate category with problems all its own. Autolyse, preferments, holding back part of the liquid until the end of the mix (bassinage) — practices which I would have hoped by now to have completely banished all intensive mixes from artisanal bakeries — can be of huge benefit to brioche.

Long ago, the preferment in brioche was confusingly called a *levain de levure* — a “yeast sourdough” — even though it contained no levain. All of the yeast was added to 25% of the flour and some milk, and allowed to ferment for 45 minutes or so. It was probably a way of activating the yeast and kick-starting the fermentation, but the benefits were there. We think of preferments as a way to work more quickly while ensuring maximum flavor and texture, forgetting that the addition of organic acids at the outset can be extremely helpful in getting the dough to come together. I feel certain that in the day before mixers, their use was the only way of mixing brioche doughs by hand in significant amounts. These days, yeast sponges are rare in France (because it's easier to mix the hell out of a dough than take the extra step). One change I've made is to reduce the amount of yeast in the sponge to allow for longer and more forgiving fermentation, and then adding the bulk of the yeast to the main dough.

This method will probably be a new departure for many Guild members, especially in terms of texture. A non-exhaustive survey of North American brioche recipes revealed significant differences when compared to the classic

*Continued on page 41*

### PROCESS - Kougelhkopf with Sponge

<b>Preferment</b>		Sponge
<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	4:00–5:00 at 73°F–75°F; see process notes
<b>Final Dough</b>		
<b>Mix</b>	<b>Type of mixer</b>	Planetary with dough hook
	<b>Mix style</b>	Short
	<b>Add</b>	Egg 1/sugar mixture, flour; see process notes
	<b>1<sup>st</sup> speed</b>	0:01–0:02, or until rough dough forms
	<b>Autolyse</b>	0:20–0:25
	<b>Add</b>	Salt, yeast, sponge
	<b>1<sup>st</sup> speed</b>	0:02–0:03, slowly add egg 2
	<b>Add</b>	Butter
	<b>1<sup>st</sup> speed</b>	Until incorporated
	<b>2<sup>nd</sup> speed</b>	0:01–0:02 only if needed to incorporate butter
	<b>Add</b>	Raisins
	<b>1<sup>st</sup> speed</b>	Until incorporated
	<b>Dough temperature</b>	75°F–78°F
<b>Ferment</b>	<b>Time/temperature</b>	1:00 at 71°F, then overnight at 38°F; see process notes
	<b>Fold</b>	0:30, 1:00, 1:45
<b>Shape</b>	<b>Divide</b>	425 g dough per litre mold volume; see process notes
	<b>Shape</b>	small balls; seam side down
	<b>Proofing device</b>	Kougelhkopf pan
<b>Proof</b>	<b>Time/temperature</b>	2:00–2:30 at 81°F
<b>Bake</b>	<b>Oven type</b>	Deck
	<b>Steam</b>	None
	<b>Time/temperature</b>	0:10 at 410°F then 0:30–0:40 at 375°F; see process notes
	<b>Finish</b>	See process notes

# Kougelhopf with Sponge

CONTRIBUTED BY JAMES MACGUIRE

This Alsatian yeast-raised sweet bread has less butter than brioche but is more tender and longer lasting. An intensive mix is not required, as all of the milk is added to a larger sponge and there is less sugar in the dough. This kougelhopf is typically not consumed on the day it's baked; butter is brushed on the bread's exterior to keep it from drying too quickly. The bread is finished by sprinkling with powdered sugar and is a delicious treat accompanied by a glass of fruity Alsatian Gewürtztraminer wine.



ALL PHOTOS: JOHANNA CROOLJIMANS

KOUGELHOPF WITH SPONGE			Total flour fermented in sponge 42.50%			
TOTAL FORMULA			SPONGE		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms
Total dough weight		2.764 kg				
Bread flour*	100.00	1.000	100.00	0.425	100.00	0.575
Whole Milk	36.00	0.360	84.71	0.360		
Egg 1	43.50	0.435			75.65	0.435
Egg 2	7.50	0.075			13.04	0.075
Salt	2.00	0.020			3.48	0.020
Fresh yeast	3.40	0.034	0.94	0.004	5.22	0.030
Sugar	19.00	0.190	2.35	0.010	31.30	0.180
Unsalted butter, cold, plasticized	35.00	0.350			60.87	0.350
Raisins†	30.00	0.300			52.17	0.300
Sponge					138.96	0.799
<b>Totals</b>	<b>276.40</b>	<b>2.764</b>	<b>188.00</b>	<b>0.799</b>	<b>480.70</b>	<b>2.764</b>
Whole almonds or walnuts; see process notes		As needed				As needed
Melted unsalted butter		As needed				As needed
Powdered sugar		As needed				As needed

\*Hard red winter wheat (11.7%–12% protein)

†Macerated for a few hours in kirsch or brandy; alcohol weight used is 15% of raisin weight

### SPONGE

- May also ferment 2:00 at 73°F–75°F then overnight in refrigerator.

### MIX

- Whisk egg 1 and sugar to dissolve sugar, then proceed with autolyse.

### FERMENT

- Ferment for 90 minutes if dough or ambient temperature are cool, before refrigerating.

### SHAPE

- Pound cold dough with rolling pin to bring back elasticity before dividing.
- Place whole, blanched almonds (or whole walnuts) into each groove in bottom of fluted molds before filling with dough.

### BAKE

- Bake thoroughly; if underbaked the kougelhopf will soften and collapse.
- Brush outside surfaces with butter, then allow to set.
- Sprinkle with powdered sugar and let rest overnight.

# Brioche with Autolyse

CONTRIBUTED BY JAMES MACGUIRE

This yeast-only recipe is akin to 99% of brioche made in France. Autolyse and sponge boost its flavor by reducing mixing time and adding fermentation.

BRIOCHE WITH AUTOLYSE				Total flour fermented in sponge 25.00%			
TOTAL FORMULA				SPONGE		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms	
Total dough weight		2.460 kg					
Bread flour*	100.00	1.000	100.00	0.250	100.00	0.750	
Milk	22.00	0.220	88.00	0.220			
Egg 1	50.00	0.500			66.67	0.500	
Egg 2	10.00	0.100			13.33†	0.100	
Salt	2.00	0.020			2.67	0.020	
Fresh yeast	3.00	0.030	2.00	0.005	3.33	0.025	
Sugar	9.00	0.090			12.00	0.090	
Unsalted butter, cold, plasticized	50.00	0.500			66.67	0.500	
Sponge					63.33	0.475	
<b>Totals</b>	<b>246.00</b>	<b>2.460</b>	<b>190.00</b>	<b>0.475</b>	<b>328.00</b>	<b>2.460</b>	
Egg wash‡		As needed				As needed	

\*Hard winter wheat (11.7%–12% protein)

†Or more as needed to achieve desired consistency

‡Whole eggs with pinch of salt

## PREFERMENT

- Alternatively ferment 1.5 hours at 73°F–75°F, then overnight in refrigerator.

## FINAL DOUGH

- Premix egg 1 and sugar just before mixing. Mix with flour to form rough dough.

## SHAPE

- Before dividing, pound dough vigorously with a rolling pin to restore elasticity.
- There is no standard size for tête molds, so divide dough to fit. Rule of thumb is 700 grams dough per liter of volume. Measure volume by filling mold with water and then measuring water. Finally calculate required mass of dough.
- Similarly, for Nanterre use 425 grams per liter. Then divide loaf total into 8 portions and form each into a round.

## BAKE

- Deck oven can be used.
- Reduce temperature, as needed.





# Brioche

*Continued from page 38*

French method. As I've noted, the use of sponges is very rare. So is the addition of milk, probably because it was part of the now nonexistent sponge. But even without a sponge, it can still serve to avoid cloying excessive egginess. As in France, the amount of sugar has crept up to a point where brioche has become a sweet dough instead of a rich dough. I've seen as much as 20% sugar, precluding its use in classic savory recipes as Cervelas (a rich sausage from Lyon with pistachios or truffles) or foie gras in brioche. And finally, there are the hydration levels. North American brioche doughs tend to be considerably firmer in texture. Many of the recipes I saw apply 60% hydration to relatively strong U.S. flours. This is the same percentage that Calvel used (45% egg and 15% milk) for much less-absorbent French flours (9% protein). Other French professionals hydrate more, perhaps pushing things a bit (Hermé — 70% egg, Felder — 60% egg +10% milk, Ducasse — 75% egg). Generally speaking, softer doughs make lighter and more tender brioche. The formula shown here uses flour with 11.7%–12% protein, 22% milk, and 60% egg to produce a dough with a texture similar to the one Calvel made.

I mentioned fermentation — meaning fermentation of the finished dough — a key element in the method given here and for all brioche. Very often these days, one sees doughs go straight out of the mixer and into a 40°F walk-in, with little evidence of fermentation activity when they emerge the next day. It's especially important when reducing mixing times that they be compensated for by sufficient fermentation of the dough. Even with an intensive mix for a straight dough brioche, Calvel recommended a 3-hour bulk fermentation before dividing and shaping, or a full 1-hour fermentation for a sponge and dough brioche formula before overnight refrigeration. ☀

## PROCESS – Brioche with Autolyse

### Preferment

#### Sponge

<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated

<b>Ferment</b>	<b>Time/temperature</b>	4:00–5:00 at 73°F–75°F; see process notes
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### Final Dough

<b>Mix</b>	<b>Type of mixer</b>	Planetary with dough hook
	<b>Mix style</b>	Short
	<b>Hold back</b>	Salt, yeast, sponge, egg 2
	<b>1<sup>st</sup> speed</b>	0:02
	<b>Autolyse</b>	0:20–0:25; see process notes
	<b>Add</b>	Salt, yeast, sponge
	<b>1<sup>st</sup> speed</b>	0:05–0:07 slowly adding egg 2, then butter
	<b>2<sup>nd</sup> speed</b>	0:02–0:03 <i>only</i> if necessary
	<b>Dough temperature</b>	75°F–78°F

<b>Ferment</b>	<b>Time/temperature</b>	1:00 at 80°F, then overnight at 38°F
	<b>Fold</b>	0:30, 1:00, refrigerate, 1:45

<b>Shape</b>	<b>Divide</b>	<b>Brioche à Tête</b> 700 g per 1 liter mold volume divided into a larger and smaller portion	<b>Brioche Nanterre</b> 425 g per 1 liter mold volume divided into 8 portions per loaf
	<b>Shape</b>	Rounds, large portion on bottom, small portion on top	Rounds, placed 2x4 in pan
	<b>Proofing device</b>	Fluted mold	Loaf pan

<b>Proof</b>	<b>Time/temperature</b>	2:00–2:50 at 81°F
	<b>Garnish</b>	Egg wash

<b>Bake</b>	<b>Oven type</b>	Convection; see process notes
	<b>Time/temperature</b>	0:45–0:50 at 410°F

# Levain de Pâte Brioche

It is unlikely that someone looking into obscure regional French brioches today would find as much information as Raymond Calvel did for the French language edition of *The Taste Of Bread* in 1991. Many of them were associated with holiday celebrations such as the Fouace des Rameaux for Palm Sunday (Easter celebrations harken back to pagan rites of springtime and fertility, or the Pompe des Rois and Epiphany cakes of Lyon and Bordeaux (originally celebrations of winter solstice). These are being increasingly encroached upon as the puff-pastry-and-almond-cream Galettes des Rois creep south across the Loire from Paris and the North. Others, such as the Brioche and Gâche from the Vendée region, are served year-round.

These festive brioches are often decorated or filled with candied fruit, and flavored with orange flower water, but it is the use of levain which makes them interesting to bakers. Calvel wrote that at one time all these specialties were leavened this way, but his formulas reflect greater or lesser degrees of modernization over time. There are 100% levain versions, hybrids with added yeast, called levain de pâte, others made with a yeast sponge, and finally straight dough. These, alas, are often made extra modern by the addition of mono- and disaccharides and ascorbic acid, bloated caricatures of what they once were.

These levain brioches are challenging, if not forbidding. High sugar levels (25%) make it difficult for the dough to come together, and resorting to an intensive mix compromises the flavor and texture that make them unique. Levain-only versions can take 15 to 18 hours from start to finish, and Calvel's levain de pâte versions not much less as though they were more like sourdough spiked with a bit of yeast (10 or 15 grams per kilogram of total flour compared to 35 or 40 grams for yeast only) than a true hybrid. Also, to be taken into consideration are the expectations of today's customers. Pure versions tend to be a bit dense, and their high sugar levels cloying, so overall they are perhaps too much of a departure from regular brioche. Bakers will have to determine their comfort level in the compromise between the modern and traditional, but a return to a version with mild, yet perceptible, levain flavors is an attractive thought.



A few minor adjustments are preferable to completely abandoning a product with so many possibilities. The following is a generic formula using elements gleaned from Calvel's collection but eliminating crème fraîche, which can be expensive and hard to find. I left in the traditional orange flower water which marries surprisingly well with the levain flavors, but I reduced the professor's unstinting amounts. There is more yeast and slightly more butter, but less sugar. Stiff levain is used, not only because liquid levain did not exist in the old days (see "Defining Brioche," Melina Kelson, *Bread Lines* 24.1), but also because stiff levain gives more lift. In this application, it produces more easily perceptible flavors, especially when combined with a three-hour bulk fermentation and overnight refrigeration.

In their home regions, many of these specialties are shaped into crowns — large doughnuts — and baked on sheet pans, but there are many other possibilities. ✨

# Levain de Pâte Brioche

CONTRIBUTED BY JAMES MACGUIRE {Adapted from a Raymond Calvel formula}

This recipe is inspired by southern French regional brioche associated with religious holidays. The use of levain (which was a defining characteristic, but now has all but disappeared) is revived here in the form of a more user-friendly yeast-levain hybrid. Autolyse is used for flavor retention and to help the dough come together.

LEVAIN DE PÂTE BRIOCHE						
TOTAL FORMULA			LEVAIN		FINAL DOUGH	
Ingredients	%	Kilograms	%	Kilograms	%	Kilograms
Total dough weight		2.464 kg	Total flour fermented in levain	10.00%		
Bread flour*	100.00	1.000	100.00	0.100	100.00	0.900
Milk 1	29.61	0.286	86.00	0.086	22.22	0.200
Milk 2	5.18	0.050			5.56	0.050
Egg	41.41	0.400			44.44	0.400
Salt	2.07	0.020			2.22	0.020
Fresh yeast	1.86	0.018			2.00	0.018
Sugar	20.70	0.200			22.22	0.200
Unsalted butter, cold, plasticized	41.41	0.400			44.44	0.400
Orange flower water	1.04	0.010			1.11	0.010
Starter†	8.28	0.080	80.00	0.080		
Levain					29.56	0.266
<b>Totals</b>	<b>251.55</b>	<b>2.464</b>	<b>266.00</b>	<b>0.266</b>	<b>273.78</b>	<b>2.464</b>
Egg wash‡		As needed				As needed
Large-grain sugar, optional		As needed				As needed
Streusel, optional		As needed				As needed

\*Hard red winter wheat (11.7%–12% protein)

†Same composition as levain

‡Whole eggs with a pinch of salt

## MIX

- Spiral mixer can be used for larger batches of dough.
- Premix egg, milk, and sugar.
- When dough starts to come away from sides of bowl, add plasticized butter.

## SHAPE

- Before dividing, pound dough vigorously with a rolling pin to restore elasticity.
- Poke hole through top of ball of dough and widen by pulling the dough outward.

## PROCESS - Levain de Pâte Brioche

<b>Preferment</b>		Levain
<b>Mix</b>	<b>Type of mixer</b>	Hand
	<b>Length of time</b>	Until incorporated
<b>Ferment</b>	<b>Time/temperature</b>	12:00 at 80°F
<b>Final Dough</b>		
<b>Mix</b>	<b>Type of mixer</b>	Planetary with dough hook; see process notes
	<b>Mix style</b>	Improved
	<b>Hold back</b>	Salt, yeast, orange flower water, levain, milk 2
	<b>1<sup>st</sup> speed</b>	0:02
	<b>Autolyse</b>	0:20–0:25
	<b>Add</b>	Salt, yeast, orange flower water, levain, milk 2
	<b>1<sup>st</sup> speed</b>	0:05–0:07 slowly adding butter, see process notes
	<b>2<sup>nd</sup> speed</b>	0:02–0:03 only if necessary
	<b>Dough temperature</b>	75°F–78°F
<b>Ferment</b>	<b>Time/temperature</b>	3:00 at 80°F, then overnight at 38°F
	<b>Fold</b>	1:00, 2:00, 3:00
<b>Shape</b>	<b>Preshape</b>	Round
	<b>Divide</b>	500 g–600 g
	<b>Rest</b>	0:25
	<b>Shape</b>	Large doughnut; see process notes
	<b>Proofing device</b>	Sheet pan
<b>Proof</b>	<b>Time/temperature</b>	3:00–3:30 at 81°F
	<b>Garnish</b>	Egg wash; large-grain sugar or streusel optional
<b>Bake</b>	<b>Oven type</b>	Deck or convection
	<b>Time/temperature</b>	0:30–0:50 at 350°F; see process notes



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