

*S'Wheat
Talk*

DECEMBER 2019; RED WHEAT

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You Are What

Alex Bois

Like it or love it, hard wheat is the anchor of virtually all bread bakeries in North America. Turkey Red, a hard red variety imported in the 1870s by Menonites fleeing Crimea, grew well in the plains of Kansas, whose climate mirrored that of the steppes of the Ukraine. It was one of the predominant wheats grown in the country until supplanted by higher yielding modern varieties in the mid-20th century. (Here in the 21st century, it is very much back in vogue—bakers love its bold flavor and excellent baking performance as a whole grain flour.)

No one, to my knowledge, is growing Turkey Red around Philadelphia or in the mid-Atlantic at large, probably because it doesn't agree with our hot and humid summers. But we at the bakery don't mind—the varieties of hard wheat that do well here are bursting with flavor. And our farmers have come a long way in the past decade—in spite of the pressures of climate change and having to re-learn a mostly lost craft from scratch—and are growing and processing the best wheats I've had access to in all my years of baking.

Warthog, Redeemer, and Glenn are

the three most common—all red varieties that yield well. The latter, which has a clean flavor, is typically grown as a spring wheat, and is thus higher in protein and stronger (or more elastic, as we prefer to look at it!). Warthog and Redeemer are grown as winter wheats, and both have a wonderfully nutty flavor. Warthog leans a bit weaker, while Redeemer is a great all-rounder that has specifically enamored whole grain, sourdough bread bakers like us.

We use whole wheat local Redeemer flour to make the base doughs for our potato whole wheat, seedy grains, and Homadama loaves, and of course it's the star ingredient in the bread we named after it. We love its flavor, how easy it is to work with, and—maybe surprisingly—that it's actually economically advantageous for our business. We buy it from Small Valley Milling near Harrisburg for 75% of the cost of the high-quality organic white flour we get shipped from Central Valley Milling in Utah.

So, over the past few months, we at Lost Bread have been pondering a question: what is stopping us from filling all of our grain demands with local product? Quality and price are

You

Wheat

no longer valid excuses, so the only thing left is fear... Of what? Failure, extra work, grain weevils, uncertainty, fear itself...

Here's something that gives us a bit of extra confidence: our seedy grains bread, already made entirely from local grain milled fresh in-house, was our top-selling (retail) loaf over the past year, eclipsing even our pretzel shortbread cookies! Which tells us that we've got flavor, health and/or environmentally-conscious, totally kickass customers.

We also have the storage space to accommodate raw grain at a meaningful scale and are armed with a stone mill soon to be augmented with an inline sifter that will allow us to produce lighter, off-white flours in addition to our favorite whole grain ones. And, through the Grain Share project,

we've honed our milling and recipe development skills, and have sneakily started converting our existing recipes to fresh-milled whole grain versions over the past year. And we (and you, it seems) like what we're tasting.

So this is it. We're cutting ties with white flour from the west and sourcing all of our grain from the mid-Atlantic region, to mill fresh in-house.

We are so proud of what we have accomplished together as a bakery team and as an extended community and we're ready to start 2020 with a bang. There will surely be hiccups as we move towards planning acreage of crops and away from on-demand ordering of flour from a distributor, but our farmers are ready and able to fully supply an ambitious, large-scale bakery, and they deserve one that will support them back.

1: It is silly to look at flour strength in baking as something inherently positive, as we might think of strength in other areas. Rather, strength is merely an attribute, and can be good or bad depending on the application. Case in point: the tender and crisp baguettes made from 'weak' soft wheat flour in France. Using a strong spring wheat flour to make the same product would yield something much chewier, possibly more dense, and with a very different crust texture. On the other hand, a bagel or pizza dough made with weak flour might come out of the oven unrecognizable.

GrAINZ

Katherine Rapin

Back in October, a few of us from the Lost Bread crew flew halfway around the world for GrAiNZ—Australia and New Zealand’s gathering of grain lovers including farmers, millers, bakers, and many people who do all three. It’s three days packed full of talks like Food Sovereignty & Local Grain Economies in a Global Commodity Market; Aboriginal Agriculture & First Contact Breads; and Perennial Wheats & Farming Systems, plus hands-on workshops. We joined about 200 folks eager to connect with a new community and hear from leading minds in the world of local grain.

This year, the conference was hosted by Red Beard Bakery in Trentham—a sleepy town of about 1,000, surrounded by the Wombat State Forest 87 kilometers north of Melbourne. It was a long trek for a three-day conference, but midway into the first speaker’s presentation, we decided that, had we been torn from our chairs and sent back to the States right then and there, the entire trip still would have been worth it.

It was Dr. Stephen Jones, renowned wheat breeder and the director of the Bread Lab at the Skagit Valley Campus of Washington State University, who so profoundly kicked off the conference. The man has been studying wheat since he grew his first crop on five acres at California State University, Chico’s student farm in 1977, he

told us. “I’m haunted by wheat in a beautiful way.”

He started with a depressing, big-picture reminder: 120 years ago, there were about 25,000 flour mills in the US1; today there are around 166 mills. And just 20 produce 95% of US flour. Just 20. And most of the hard red wheat that’s destined for these mills is grown with chemical fertilizers and pesticides. And the majority of the flour produced is pure white flour (which is in part why even the term “red wheat” may take a second to process for many of us)—all the good fiber, flavor and nutrition in the bran and germ gets sifted out, leaving us with sad and lonely starch, basically nothingness.

Here in “High Income North America,” we eat only 23% of the recommended amount of whole grains (according to the study “Health effects of dietary risks in 195 countries, 1990–2017”)

and just 50% of the recommended fiber, Dr. Steve told us. Americans eat 24 billion slices of pizza and 7 billion cookies annually; “What if these had just something in them?” he said.

Dr. Steve wants the masses to eat more whole grains. Which is why the Bread Lab developed what they call an approachable loaf—recognizing that not all of us want to eat crusty sourdough boules or loaves packed and coated with seeds. And that not

everyone can afford the typical artisan bakery prices. “We went after the soft and squishy,” he told us; the that so often contains zero good stuff and all kinds of strange additives that have no place in bread.

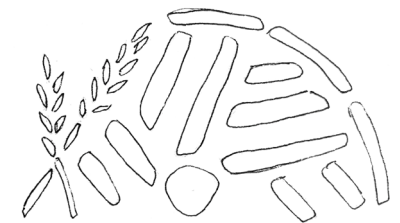
The approachable loaf is made with 60-100% whole grain, contains only seven ingredients, and should be soft, sliced and bagged, and delicious. Bakeries across the country have joined the Bread Lab Collective and are selling their own approachable loaves. Dr. Steve told us of a baker in Vermont who determined just when these should be fresh and on shelves at her local supermarket for all her kids’ friends’ moms to pick them up—I am on Sundays. Now, their lunchbox sandwiches are made with her bread!

The approachable loaf is just one of the forward-thinking ideas coming out of the Bread Lab; they recently developed the first hard red winter wheat specifically for the maritime climate of the coastal Pacific Northwest. SKAGIT 1109 was developed specifically for whole wheat uses and has never been evaluated as white flour. Developed in a way that allows natural selection to determine the composition of the population, it’s considered a modern landrace; its

genetic diversity allows it to continue to adapt and evolve in the field.

Dr. Steve left us with a list of points for moving forward, into a world of smarter wheat breeding, growing and eating.

- Best use of our land—use all the wheat
- Add time back as an ingredient
- Allow diversity back into our crops
- Re-decentralize what we do
- 10% of public plant breeders are women
- Increase efforts to be inclusive
- Increase yield responsibly
- Embrace deliciousness
- Recognize and present beauty (it is right there)
- Place crops as art
- Patents on life? No (thank you).
- Affordable need not be a race to the bottom
- Seed and Soil Matters



1 In Philadelphia in 1760, there were 83 grist mills. Most of these were powered by indoor water mills along the Brandywine and Schuylkill Rivers and Mill, Wissahickon, Creshiem, Darby and Pennypack Creeks. Around that time, the Delaware Valley supplied flour for the American market and exported it to Europe, Africa, and the Caribbean; it accounted for close to half the value of all exports from the Province of Pennsylvania. This was well after we’d tightened up our flour quality standards, which had lapsed behind those of our competitors, New York and Baltimore, in the late 17th century. From 1700 on, the Pennsylvania Assembly passed increasingly strict inspection acts; first requiring all casks of flour to be branded with the millers name—they could be fined or sued if an inspector found problems with its quality.

Green Meadow's Grains

Katherine Rapin

Glenn Brendle and his son, Ian, are farming legends in the region. Glenn started Green Meadow Farm in 1981 despite his dad urging him not to follow in his own footsteps. He was a whip smart kid who started college at 15 and declared his engineering major well before he was a legal adult—too smart to be a farmer, his dad said.

But he wound up back in the fields after a short electrical engineering career, and brought his serious smarts to his new work. At Green Meadow, the Brendles practice what they call minimum impact farming: they store rainwater for irrigation; fertilize with their own compost plus neighborhood manure and waste hay; manage insect pressure without chemical pesticides; and power the farm using waste fryer oil from the customer restaurants (including Lloyd's Whiskey Bar, Watkin's Drinkery, and Tattooed Moms, their top provider).

They've long provided Philadelphia restaurants with high quality produce, meat and herbs—staying tuned in and responsive to the demand and interests of chefs, truly growing for the customer. “There's no sense in committing acreage to something I can't move,” says Ian, who's running the farm these days.

In the last few years, Ian has dedicated more acres of field to grain as he's seen local chefs and bakers' growing interest. “I think, in the next ten to twelve years, you're going to see all the really serious restaurants will have their own mill,” he says. “We're trying to stay—not necessarily ahead of—but with the curve.” This fall, he harvested eight acres of Hickory King and Reid's Yellow Dent corn to fuel the tortilla operation at South Philly Barbacoa (read more in our corn zine, *We're All Ears*). At Lost Bread, we've used Green Meadow's corn in our homadama loaves.

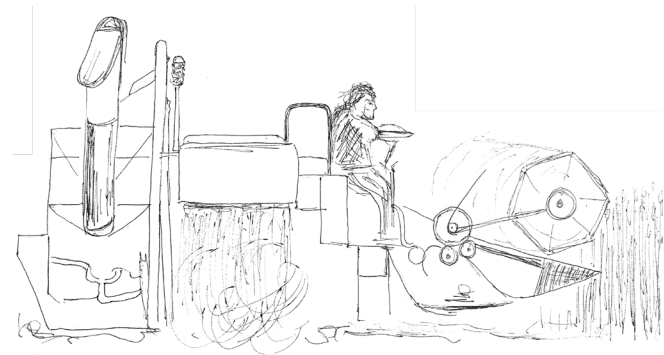
After a visit to Washington State University's Bread Lab five years ago, Ian planted his first wheat on the farm. The lab director, Dr. Steven Jones (who you can read about on page 6) sent him back with a two-pound bag of Espresso wheat—a hard red spring wheat developed at UC Davis. It's a high protein wheat—around 14.7% (which varies depending on climate and growing con-

ditions) that Dr. Jones wanted Brendle to test out on the East Coast. Though he gets good yields and likes the flavor of the wheat, it's not the most popular among the bakers he works with, in part because of its exceptionally high protein content (see page 5).

So this summer, he went in search of a softer wheat—one that would grow well in Lancaster County. “We wanted a higher success rate, so we figured why not grow something that's grown in the region for years,” Brendle says. Through Rohrer Seeds in Lancaster, they sourced a soft red winter wheat native to the area and planted several acres back in mid-October. In the spring, they'll plant Glenn wheat, a hard, red spring variety that the baker at Brandywine Valley Bread is partial to.

Ian's hoping that growing more grain will help the farm stay financially viable. “It's less labor intensive,” he says, “In the last two to three years, labor costs have gotten to where it's almost unsustainable.” After purchasing 27 acres of land adjacent to the farm, they hired more farmhands to manage it, but the numbers aren't working. Growing grain requires dramatically less day-to-day maintenance. Plus, the Brendles already had already overcome what can be the most expensive barrier: equipment. They have Ian's grandpa's old grain drill (machinery that allows a farmer to sow seeds at a particular depth and spacing), an Allis-Chalmers All Crop Harvester that can harvest corn, beans, and small grains like wheat, and seed cleaning equipment.

He's hoping to take the profits from the first few wheat harvest and invest them into a bigger mill and sifter—which will be a welcome change to working in painfully small batches, he says. “I'll fill my 150-200 pound hopper, set my wheels, and let her rip.”



1. According to James, a very friendly salesman at Rohrer's, the seed company has a “Special relationship with Mr. Brendle,” which means they occasionally order in seeds by his request. It also means we have yet to track down the name and the story behind this special red pastry wheat. As far as Ian knows, the variety was simply assigned a number, which is on the seed bag he chucked post-planting. And his go-to guy at Rohrer's, who helped hook him up with this particular variety, retired in August. (Jeff, if you're reading this, please call me!)

Kishk:

An ingredient that defines culture

Kenan Rabah

I grew up in a small village in the mountains of the Golan heights regions, where kishk was definitely one of the most memorable foods I grew up eating. And the process of making kishk is one that tells a great story about that place and its people.

Kishk is a very common ingredient in the Levantine region. It is basically a white powder that smells and tastes like cheese with sharp tartness to it, and is the result of fermenting bulgur wheat in yogurt and drying it in the sun. It is used to prepare a number of traditional dishes that are usually eaten during the harsh winter days. Perhaps the most common dish is a stew made out of potato and meat boiled together with the kishk powder and then finished with dried mint and smoked paprika.

The process of making kishk starts with making the bulgur wheat. We start by boiling the hard wheat berries until they reach an “al dente” texture. Then we dry them out (usually in the sun) for several days, and finally crack the grain to use it for different preparations, one of them being kishk. This usually happens once a year when all the people in my neighborhood gather for a day at the beginning of each summer, and we use a huge pot to boil the wheat berries over woodfire for each household. Once it’s cooked, each one of us grabs a bowl and someone will scoop out the hot wheat

berries for us, so we can run with it to the rooftops, spread them out, and let them sun dry for several days.

Once the bulgur is dried out, we take it to the mill of the village and ask them to crack it for us. Usually, for the kishk, it needs to be coarsely cracked to make the process going forward a bit easier. We mix the bulgur with homemade yogurt (usually it is made out of goat milk to give it a little bit more tartness), and we keep adding more and more yogurt over the next few days until the product is satisfactorily fermented. (The more it ferments, the more funky and tart it gets.) My mom likes to let it ferment for four days to get a funky, cheesy-smelling product that still has some sweetness.

Then the kishk is ready to be dried out again in the sun. We take it to the rooftop and spread it out on sheets of very thin fabric, and let it dry out, making sure to stir it around every day so it dries evenly and quickly (this usually takes up to a week). Then, we take it to the mill and mill it into a fine, very aromatic and flavorful powder that will be ready to use during winter days.

Making kishk is one of my favorite childhood memories. It reminds of home and everything that I like about it. The Golan Heights is a region that has been under the Israeli occupation since 1967, but people have refused to take the Israeli nationality. The UN

won’t validate the Israeli occupation of the territory, but Israel maintains its hold, so we ended up with travel documents with “UNDEFINED” nationalities. I have always wanted to turn this beautiful culture into a DEFINED one, and while politics failed to define us, maybe cooking and unique ingredients like kishk will do so.

Kishk Soup

Kenan Rabah

Yield: 1 Qt. | Prep Time: 45 minutes.

Ingredients:

150 g beef, small diced

140 g onion, small diced

150 g potato, small diced

70 g kishk powder

1000 g water

Salt to taste

Garnish:

Dried mint

Paprika

Bread

- Sweat the onions with olive oil over medium heat, until translucent.
- Add the beef in and cook for 5 minutes. It’s important to note that the beef is optional, and you can make this soup vegetarian by just using more potato instead of beef.
- Add the potatoes and cook for another 5 minutes, then add half a cup of water and let the potatoes simmer until soft.
- Sprinkle in the kishk powder, and slowly add the remaining water while stirring to prevent any lumps. Bring to boil then reduce to simmer and cook for about 20 minutes, until the potatoes are cooked all the way through and the soup thickens a little bit. Add more water as needed.
- Season to taste with salt, keeping in mind that the kishk powder is a little salty itself. Serve the soup with dried mint and smoked paprika sprinkled on top, and tear up some pieces of bread to eat with the soup.

Bran Muffins

Sam DeGennaro

These muffins are super, super moist when they come out of the oven. They're best eaten after resting at least one hour, but last beautifully when covered at room temp for 2-3 days.

Makes 12 muffins

Muffins:

120 g wheat bran
(divided, 75 g & 45 g)

130 g dates

300 g water

100 g wheat flour

50 g spelt flour

5 g baking powder

4 g baking soda

4 g salt

145 g yogurt

zest of 1 orange

105 g oil

2 eggs

80 g sugar

25 g maple syrup

325 g cranberries

Streusel Topping:

150 g pistachios, roughly
chopped

25 g bran

10 g wheat flour

4 g orange zest

40 g softened butter

40 g maple syrup



- Preheat oven to 350.
- For topping, add all ingredients to one bowl and lightly toss, making sure softened butter is well broken up.
- Heat 75 g bran, dates and water over medium heat for 10 minutes, stirring frequently to ensure equal hydration and heating. While the bran and dates cook, measure dry ingredients (flours, remainder of bran, baking soda, baking powder, and salt) into a medium bowl. Measure wet ingredients (yogurt, zest, eggs, oil, sugar, maple syrup) into separate, large bowl. Remove bran mush from heat and smooch softened dates until they're evenly distributed throughout the mixture. Add to the wet ingredients, whisking thoroughly. Add dry mix into bowl of wet ingredients and gently incorporate with a spatula until just barely mixed. Stir in cranberries.
- Fill greased muffin tins approximately 3/4 full and top generously with crumble topping. Bake for 30 minutes, or until knife comes out clean!

Burnt Toast Biscotti

Lex Miller

Makes about 18 biscotti

122 g butter

163 g demerara sugar

**54 g buckwheat honey,
or molasses**

72 g egg

123 g whole wheat flour

123 g bread crumbs

43 g burnt barley flour*

5 g salt

6 g baking soda

**2 g spice blend
(or about 1/2 teaspoon)**

47 g dried cherries

47 g pepitas

Spice Blend

3 g black pepper

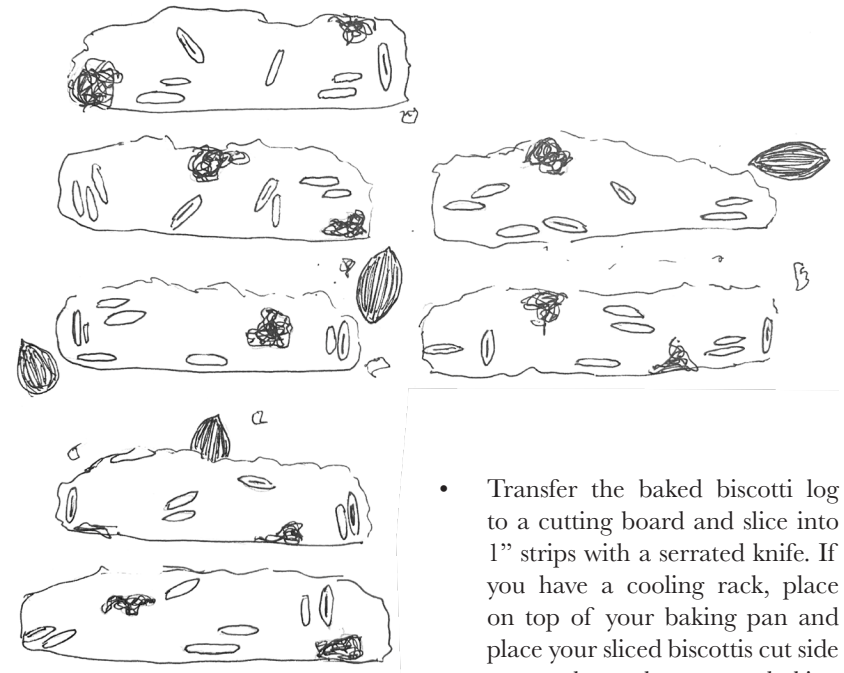
2 g black cardamom

1 g mace

1 g pink peppercorn

(This will make enough for 3-4 logs, but feel free to use your own blend of your favorite spices!)

- Lightly cream butter, sugar, and honey/molasses together on low speed in an electric mixer. Try not to incorporate too much air into the batter, or the biscotti will spread too much when baking. Add egg and mix until incorporated fully.
- Combine all dry ingredients, keeping the cherries and pepitas separate. Add dry mixture to the mixing bowl in thirds, scraping along the way. Add cherries and pepitas last and mix just until combined.



- Turn dough onto your work surface and roll into a log about 18" long. The dough will be soft but do your best to not add any additional flour while rolling out or the biscotti will be too dry. Feel free to use a dough scraper to help shape your log and scrape off any dough that sticks to the table.
- Line a baking sheet pan with parchment paper, and if you have any extra pepitas, roll the shaped log in them to coat the outside before transferring to your baking pan. Bake at 375°F for 35-40 minutes. Remove from the oven, let cool for a few minutes to ensure easy cutting. Lower your oven temp to 325°F.

- Transfer the baked biscotti log to a cutting board and slice into 1" strips with a serrated knife. If you have a cooling rack, place on top of your baking pan and place your sliced biscottis cut side up on the rack on your baking pan and return to the oven for 10 minutes, or until dried out. If you don't have a cooling rack, bake for 5 minutes and then flip biscottis and bake for another 5 minutes to ensure they dry out evenly. Cool completely before dunking in coffee!

*To make Burnt Barley Flour, roast whole barley kernels in a 500F oven for 30-40 minutes until the kernels brown heavily, smoke and exude a roasty, popcorn-like aroma. Allow to cool, then process to a fine powder in a grain mill, spice grinder or blender.

I've Sent Thee Bran...

Thomas Livezey, a wealthy and arrogant colonial miller with a penchant for poetry, sent this letter to a customer along with a shipment of bran. Livezey owned one of the largest mills in Philadelphia in the mid-18th century; you can visit the ruins behind the historic Glen Fern House on Livezey Lane alongside Wissahickon Creek.

“Respected Friend I’ve sent thee bran
As Neat & Clean as any Man
I’ve took Great Pains for fear of Loss
To thee in foundering of thy Horse
It’s Ground With Bur and Ground so nice
It Looks [as though] t’was bokted twice
But that’s No matter Since it’s Such
Thy Man Can’t ever feed tomuch
I mean Can’t founder if he would
I’ve took Such pains to Make it Good
Nor will it Ever Dust his Cloaths
Nor Give thy hoarse a Mealy Nose
And further in it’s praise I’ll say
t’will Never Make him Runaway
but if on this along he’s fed
a Child may hold him with a thread
feed freely then Nor be in Doubt
I’ll send thee More when this is out.

It is 30 bushels I have sent thee, and Notwithstanding the Labour & Care I have taken to oblige thee which the bran itself will testify to anyone Who is a Judge I hva Charges only 15 pr bushell—Lower than Can Well be afforded but I shall not Regard that as it is to a friend—it May appear to thee perhaps that I have Said Rather tomuch in praise of the bran yet upon Examination I think it will appear... [illegible] ... for if it Don’ fully answer the Description I have Given it I should not be unwilling to make some abatement in price—this from thy Most Respectful & Sincere friend

Thomas Livezey

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