

THE CRUMB TRAIL

Tracing Philadelphia's local grain supply chain

BY ALEX JONES □ PHOTOGRAPHS BY VINCE M. CAMIOLO

At most of Philly's farmers' markets, shoppers can fill their tote bags with just about every ingredient they could want. If it grows here, you can find it here.

Orchards bring flats of berries and crates of tree fruit; vegetable farmers supply a rainbow of greens, herbs, roots, beans, solanums and cucurbits. Livestock farmers, butchers and fishmongers offer chicken parts, plump sausages, beef roasts and tuna steaks.

Cheesemakers and dairies bring raw milk, tart yogurt and whiffy washed rinds, while food artisans sell kimchi, pickles, jam, hummus, soup, coffee, tea, booze and chocolate. Bakers put out fresh goods from crusty baguettes and whoopie pies to slabs of banana bread and blistered rounds of focaccia embossed with cheese, herbs and tomato.

What's missing from this vibrant cornucopia of locally grown, raised and produced ingredients? Only one of the most essential components of humanity's kitchen for just about as long as there's been humanity: flour.

What's keeping local flour out of the hands of consumers isn't that farmers in our region don't grow wheat and other grains. (They do.) It's not that there isn't a facility that processes grains into flour or meal. (There is.) And it's not that flour milled from locally grown heritage wheat and grains is somehow deficient. (It's delicious, and more nutritious than conventional white flour.)

So what *is* the problem?

To understand what's keeping local flour from being sold alongside rainbow carrots and kombucha at the farmers' market, your favorite independent grocer and your neighborhood Whole Foods, you've got to look at the supply chain and where it currently ends: wholesale customers, like commercial bakeries and restaurants.

Collaborating with the city's cutting-edge bakers, a Bucks County mill has overcome barriers to getting their products to market—but more work is required to make these products available to the average locavore consumer.

Fran and Mark Fischer began processing local grains at Castle Valley Mill in Doylestown about six years ago, but the facility first milled grains in 1730. Mark's grandfather, a German miller, purchased the



Whole grains from Castle Valley Mill

property in the 1940s and restored it; the Fischers have continued this work and then some, operating the only remaining fully functional stone mill in the area.

"When we started, there was practically no small-grain economy [in the area]," Mark says, "so it was a bit of a challenge even finding interesting local grains."

The Fischers set about identifying farmers, often approaching conventional-wheat growers about growing heirloom varieties that were new to them and transitioning a few acres each year to chemical-free practices. Small Valley Milling, a larger-scale organic-grain producer north of Harrisburg, was an indispensable supplier to and supporter of the project.

The Fischers grew their operation slowly, as supply, demand and money allowed. They sent out postcards advertising their products to bakers and chefs in the city. Soon, the likes of Pete Merzbacher, of

Philly Bread, and Alex Bois, then of High Street on Market, were making regular trips up to Doylestown to get their hands on Castle Valley's stone-milled products. They told their fellow bakers, and interest grew.

"It's just been a slow but steady growth, and it's been all word of mouth," says Mark. "The product—stone-ground, locally grown stuff—just speaks for itself."

Today, the Fischers source non-GMO corn and hard and soft wheat, as well as less common grains like spelt, emmer (also known as farro), rye and deep-red Bloody Butcher heirloom corn that they process into flour, meal and grits. Their sources are half a dozen farmers in Pennsylvania who are growing these crops without GMO seed and using organic practices. Their customers are some of the city's top restaurants and most innovative bakeries, which they reach through four wholesale distributors.

"Mark was always very hungry for feedback," says Alex Bois, who worked as High Street on Market's highly lauded head baker until moving on in the fall of 2016. Once Castle Valley connected with bakers, they were able to provide the information the mill needed. Castle Valley expanded the product line to include additional grains as well as flour.

"The exciting thing for [High Street] is that we were able to make breads with completely local grains. They sell very well and they're very popular," says Bois. While these flours show up in many of High



Castle Valley Mill

Street's breads, they're used most in the Ancient Grains loaf and the Keystone Ground loaf, which uses 100% Pennsylvania-grown grains. Sam Kincaid, High Street's pastry chef (who has since taken over the bread program in Bois's absence), also uses grains from Castle Valley in the desserts served at High Street and its tony sister restaurant, Fork.

For Bois, making bread with integrity means leavening naturally and using fresh, local flour. "The way people respond to fresh bread is surprisingly powerful," he says. "I think you can get that response exponentially more so when the grain is fresh and properly processed."

The Fischers were able to make their product much more available to their target customers—wholesale buyers—when they achieved sufficient supply and processing capability to allow them to partner with several area food hubs. These distributors sell all or mostly locally sourced products, providing an easy way for food artisans and farmers to reach large wholesale customers without the legwork, and vice versa.

Hooking up with Lancaster Farm Fresh, based in Leola; Common Market, based in north Philadelphia; and Zone 7, based in Ringoes, New Jersey, enabled Castle Valley to sell to customers the millers wouldn't have had the resources and time to reach on their own.

In 2016, Julius Silvert, one of the city's large food-service distributors, started carrying Castle Valley products—meaning that chefs

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Mark and Fran Fischer

There's much to learn about stone-milled flour
when you've spent your career baking with snowy drifts of Gold Medal or King Arthur.



James Barrett of Metropolitan Bakery



Pete Merzbacher, owner of Philly Bread

could order fresh, local grains and flours for next-day or same-day delivery without added shipping costs. This made wholesale customers happy and allowed the Fischers to reach additional customers while freeing them up from having to deal with additional wholesale accounts themselves.

“The big difference for us was when we went from [selling small quantities] to distributor,” says Mark. “That was a necessary step in order to increase the volume. [You can’t] get to a viable business sending out little boxes. Our four distributors have been instrumental, and they completely get what we’re doing.”



As exciting as Castle Valley’s progress has been, most city bakeries don’t use local grains, and those that do often combine them with more conventionally milled flours from larger entities like King Arthur or Central Milling to achieve their desired end product. Consumers have heard about the mill over the years, and the Fischers field daily phone calls about how amateur bakers and home cooks can get their hands on the product. Unless they want to purchase a 25-pound bag and drive to Doylestown to pick it up, they’re out of luck.

“It seems that most [commercial bakers] who are using [local flour] now are using it because they believe in it, not because customers are demanding it,” Pete Merzbacher, owner of Philly Bread, says. “And the number of [consumers] who are demanding it have too little buying power to really create market signals to producers, whether it’s bakers or chefs or millers or farmers, to do more of it.”

While an increase in demand would be a positive thing—from bakers to farmers—the supply chain isn’t able to put local grains and flours in every kitchen in Philadelphia, residential or commercial, just yet.

“It’s like a train on a track,” Mark says of the regional farmer–miller–baker supply chain. “You’ve got several cars, and no one can go any faster than the one before it or behind it.”

That train tends to move slowly. To get farmers to grow organic heirloom grains, the Fischers agree to purchase their whole crop up front, making each harvest a potentially risky proposition. Issues like vomitoxin (a fungus that can grow on grain if the weather is too humid before the harvest) or improper storage can turn a high-value organic crop fit for human consumption into a low-value grain fit only to feed livestock. Just purchasing a few grain bins to store the carefully cultivated, harvested, and cleaned grain properly requires an investment of tens of thousands of dollars. With this high barrier to entry and potential pitfalls, it’s no surprise that the mill’s market hasn’t expanded by leaps and bounds.

As excited as some of the city’s commercial bakers are to be using local flour, the higher price can be a challenge, especially when baking a wide selection of breads, rolls and sweets primarily for wholesale customers, as bakeries like Philly Bread and Wild Flour Bakery do.

Wild Flour, run by Laura and Nishon Yaghoobian, occasionally uses Castle Valley flour in breads sold at their farmers’-market stands around the city. The Yaghoobians experiment with 100% spelt and whole-grain free-form loaves and bring them to Headhouse Square Farmers’ Market, where they sell well—but price-conscious wholesale business is what drives their growth.

Loaves made with local flour, Yaghoobian says, “are really delicious, but it’s a different type of consumer.” The city’s gastropubs just aren’t ready for the different texture and higher price tag that would accompany a locally milled, whole-grain burger roll. “I like the idea” of using

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Buy bread made from locally grown and milled grains at the following locations:

HIGH STREET ON MARKET

308 Market St. (and the Fairmount, East Passyunk, Headhouse Square and Tuesday Rittenhouse Square farmers' markets in summer and fall)

215.625.0988 highstreetonmarket.com

METROPOLITAN BAKERY

262 S. 19th St. (and several other locations throughout the city)

215.545.6655 metropolitanbakery.com

PHILLY BREAD

Available year-round at the Saturday farmers' market in Rittenhouse Square. The Philly Muffin can also be found at area locations of Creekside Co-op, DiBruno Bros., Fair Food Farmstand, Greensgrow, MOM's Organic Market, Mariposa Food Co-op, and Weaver's Way Co-op.

info@phillybread.com phillybread.com

WILD FLOUR BAKERY

Available year-round at the Saturday farmers' market in Rittenhouse Square and in summer and fall at the Fairmount, Headhouse Square, Collingswood, Bryn Mawr, Upper Merion and Yardley farmers' markets.

215.624.3300 wildflourbakery.net

Buy Castle Valley Mill grains and flours at the following locations:

CASTLE VALLEY MILL

(call ahead to place an order for 25-pound bags and schedule a pickup time)

215.340.3609 castlevalleymill.com

HIGH STREET ON MARKET

Available at the Fairmount, East Passyunk, Headhouse Square and Tuesday Rittenhouse Square farmers' markets in summer and fall

215.625.0988 highstreetonmarket.com

local flours, she says. "I want to see more readily available on a wholesale level and retail for home bakers, but it's a challenge."

Philly Bread's Merzbacher sources whole grains from Castle Valley and mills them himself on a small machine at his Olney production facility. At least some flour from local grains ends up in just about every recipe he makes, which includes a full selection of loaves, breads and rolls for wholesale accounts. Merzbacher also makes the famed Philly Muffin, an oversized sourdough take on the English muffin, and its Heirloom Grains variety includes a healthy percentage of local grain. But it's challenging to move the needle and increase his orders when his wholesale customers seek conventional-style bread products at a low price.

"Nobody knows that we buy local—we don't really do much to promote that," he says. "But even if we address that, it doesn't change that pubs want a regular burger bun, and French toast is probably better for most people with white bread."

In restaurant kitchens, cost is still a challenge. But when flour or grain is only one of hundreds of ingredients used, the higher cost is easier to rationalize than when it's the main ingredient.

"It's a funny spectrum," says Claire McWilliams, baker at Vetri, where Castle Valley products milled on site end up in breads, pastries and pastas. "At one end, you have cheap, cheap, cheap grain, and you'll probably pay five or ten times [more] to get good grain. But relative to your other food costs [like proteins and dairy], it's extremely cheap."

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James Barrett, head baker at Metropolitan Bakery has been using some freshly milled local flour since he implemented the in-house bread program at the White Dog Cafe back in the early 1990s. As with the restaurant's other ingredients, it was important to source as close to home as possible. Before Castle Valley opened up one county over, Barrett purchased organic stone-milled flour from Lindley Mills in central North Carolina, the closest source he could find.

But simply getting fresh, stone-milled flour to the bakery has been a consistent challenge for Barrett for the past 23 years.

"It's always a delivery issue," says Barrett. "It's expensive going through FedEx or other avenues."

And there's much to learn about stone-milled flour when you've spent your career baking with snowy drifts of Gold Medal or King Arthur. Stone-milled flour must be stored in a refrigerator or freezer and used within a few days; to use the flours outside that brief window, the bakery must "age" it for about three weeks so that it's processed at the optimum level of natural enzymatic action.

Once the dough is mixed, bakers not used to working with freshly milled flours or ancient grains might not be prepared for how they act during the production process.

Ancient grains especially, Barrett says, "ferment very quickly because they're so full of enzymes." At Metropolitan, bakers receive special training on how to work with these flours to avoid disasters that would result in dumping dough. "We're on a tight schedule with each bread, so with any of the breads that contain these flours, we treat them with kid gloves."

It takes some getting used to, but once a skilled baker learns how freshly stone-milled flours and rare grains behave, the payoff is more than worth it.

Once McWilliams started using Castle Valley's products at Vetri, she had to let go of lessons she'd learned baking with conventional



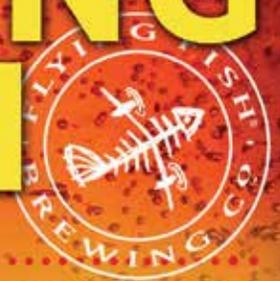
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flour. “There are these things that every single baker knows [are] true that I reluctantly and finally gave up, and now my bread is coming out so much better because these grains don’t act the same way that [conventional] flour acts,” she says.

For home bakers who want to start baking with stone-ground, freshly milled flours, whether from Castle Valley or a larger supplier like South Carolina’s Anson Mills, McWilliams has some advice.

“Commit. Keep doing it,” she says. “At first it might seem harder or like it doesn’t work, but it does work. You just have to figure it out. It’s like a fun puzzle. Your products, what you make, will ultimately be so elevated if you get through the awkward learning phase. It’s humbling, and then the payoff is fantastic.”

For home bakers, Bois recommends research and practice. “My advice is to read a lot and bake a lot,” he says. He also recommends experimenting with local flours for purposes besides reaching for the perfect *levain*: they’re delicious in pancakes, biscuits and English muffins, too.



Eager home bakers now have a simpler way to try out Castle Valley’s grains and flours—at least during farmers’ market season. In 2016, High Street’s bread program branched out beyond the restaurant’s walls; this year, High Street sold breads and sweets at farmers’ markets in East Passyunk, Fairmount, Rittenhouse Square and Society Hill, as well as at its own mini-market on Third Street in front of the restaurant.

Midway through 2016, High Street reached another milestone: Its market stands began offering a selection of two-pound retail bags of Castle Valley products like whole spelt berries, bolted hard wheat (perfect for home bread baking, because the coarsest bran is removed) and Bloody Butcher coarse-ground grits.

This is a game-changing move, because there’s literally no retail outlet in the city of Philadelphia for Castle Valley’s products or other locally milled grains. The Fischers—let alone the rural farmers who grow the grain—don’t have the time or resources to make the trek to city farmers’ markets. (Residents of Flemington, New Jersey, rejoice: Castle Valley Mill products can be found, improbably, at your local ShopRite.)

“Retail for individual consumers has been a real hurdle for us,” says Fran Fischer. While whole grain products like emmer and spelt berries don’t need to be refrigerated, milled flours, grits, and meals do—or else the product will spoil.

“We’re really treating the flour like produce,” says Mark Fischer. “I tell people, you’ve gotta treat it like apples. An apple isn’t gonna go bad if you leave it in your car for a couple hours, but you don’t want to leave an apple on the windowsill for three months and expect it to be good.”

Because a friendly miller or baker isn’t on hand at the point of sale to offer guidelines on how these products should be used, it’s easy for consumers to mishandle or improperly store the product, which can make it challenging for customers at retail stores to get delicious results and experience the full value of these products.

“The High Street method is brilliant, because here’s the final product. You can buy this gorgeous *miche* [loaf] and taste it, and then you can try making your own,” Mark says. High Street has even started handing out free containers of sourdough starter, along with instructions for care and feeding, when farmers’-market customers buy a bag of Castle Valley flour as a way to encourage shoppers to experiment



with stone-milled ingredients at home.

“If you have the time, you can take that stuff home and have your own home-baked *miche* in two days,” Mark says.

Besides trying out the Castle Valley products that High Street offers during farmers’ market season, consumers can support the local-grain supply chain serving Philadelphia by simply showing the bakers they patronize that they’re interested in products made with these flavorful, nutritious ingredients.

“Until people are asking for [local flour], whether it’s from High Street or Metropolitan or Le Bus or myself or Four Worlds, or anybody—just start asking for this stuff,” Merzbacher says. “I will eventually get the memo and finally, I will use my mill for all that I can use it for.” ■