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*The*  
**ROOTS**  
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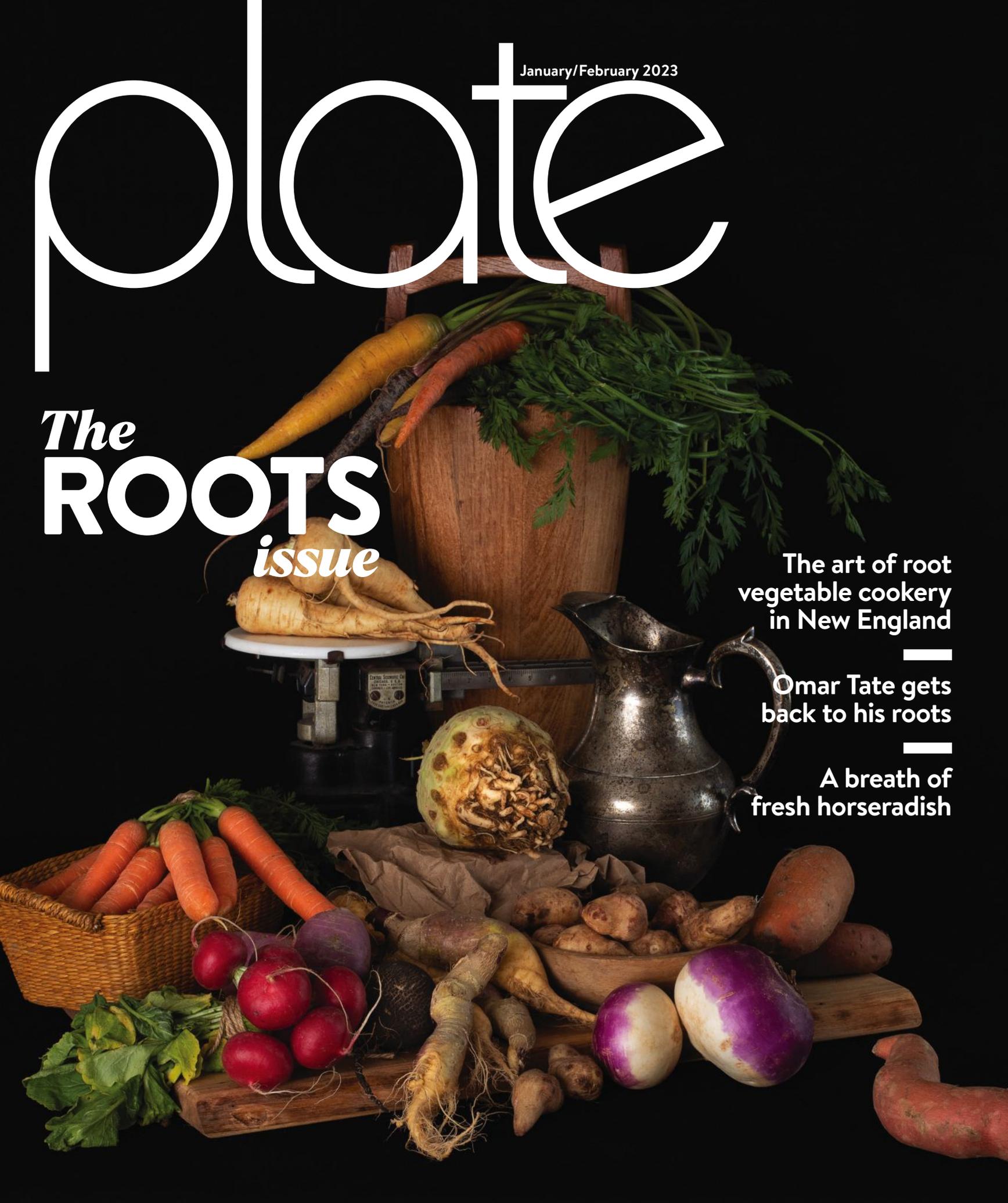
The art of root  
vegetable cookery  
in New England

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Omar Tate gets  
back to his roots

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A breath of  
fresh horseradish







# GRAIN EXPECTATIONS

Baker Don Guerra's artisan breads celebrate Arizona's agricultural past and present

BY REBECCA L. RHOADES

The morning sun has yet to peak over Tucson's Santa Catalina Mountains as Don Guerra, owner of Barrio Bread, begins shaping large boules of buttery yellow dough on a wood table. Using a plastic stencil, he sifts flour over each round; when removed, an impression of Arizona's state flag is revealed. A few brisk slashes with a lame form cross-hatches that frame the image. When baked, the bread's crust will develop dark, crackly ridges that complement the chewy, tender interior.

"Every Friday is really special," Guerra says as he places the bread onto a stiff canvas conveyor belt that sends the loaves into a hulking deck oven. It's the one day of the week when the baker offers pan de Kino—his signature loaf, made with white Sonora wheat, an ancient grain that Guerra helped revive. "It's about seeing these specialty breads made with heritage wheat be so embraced by the Tucson community."

For the past decade, Guerra has been at the forefront of a burgeoning movement to reintroduce some of the ancient and heritage grains that once predominated Arizona's agricultural

economy. In the process, he's built a reputation and garnered numerous accolades, including the 2022 James Beard Award for Outstanding Baker.

A former public school teacher with a baking background, Guerra began baking bread out of a makeshift kitchen in his garage in 2009. Each week, he would bake—and sell out of—upwards of 900 loaves, offering them at schools and farmers markets and through food-share programs. In 2016, a \$100,000 Local Food Promotion grant from the USDA allowed him to move out of his garage and into a 1,000-square-foot storefront in a small 1960s-era shopping mall in central Tucson. He now makes about 6,000 loaves a week.

"When I made my first loaf of bread, there was this excitement," he says. "I had that same feeling when I got local grains in my hands. I knew it was going to be the future of bread in America."

The cultivation of grains in Arizona dates to the late 1600s, when a Jesuit missionary, Father Eusebio Francisco Kino, introduced white Sonora wheat (*Triticum aestivum*) to

Heritage loaves  
at Barrio Bread

Don Guerra

Don C. Guerra  
Barrio Bread  
ARTISAN BREADS





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the region's Pima and Tohono O'odham tribes. Drought-tolerant and fungus-resistant, the wheat was well-adapted to the region's arid environment, and it became a staple of the Southwest's farming industry for almost 200 years.

"Arizona is a premier grain-growing region," Guerra explains. "The ancient grains require less water than modern wheat." Unfortunately, the mechanization of agriculture in the 1900s resulted in increased irrigation and impacted the growth of white Sonora. By 1975, the grain was commercially unavailable, according to Tucson-based Native Seeds/SEARCH, a seed conservation and research organization.

In 2012, Native Seeds/SEARCH, along with several other area growers and nonprofits, received a USDA Sustainable Agriculture Research and Education (SARE) grant to reintroduce white Sonora wheat, along with

Chapalote flint corn, also known as pinole maize. Guerra, who used to deliver his bread to the organization, was asked to be a test baker on the project. He helped persuade local farms, including BKW Farms in nearby Marana, to grow the grain and Hayden Flour Mills in Queen Creek to process it, by promising to use their harvests at Barrio Bread.

"It was about developing local grain economies and making bread to showcase what the farmers can grow," Guerra says. "At first, 10 percent of my bread was their grain, then 20 percent. Every year I'd increase the amount."

Today, Guerra incorporates about 12 heritage wheat varieties into his breads—nearly all of which are sourced from Arizona. In addition to the white Sonora, BKW supplies Khorasan (*Triticum turanicum*), which is known for its large grain and imparts a rich nutty flavor, and Red Fife, which adds a dark red hue to baked goods. Guerra also uses einkorn (*Triticum*

*monococcum*), the oldest wheat known to man; ancient emmer and spelt wheats; and modern durum, hard red, and rye.

"In this country, we think there are wheat, white, and rye breads—tan, white, and gray—because that's what we've known and that's what we have for flour," says Guerra. "But there are thousands of wheat varieties, all with different pigments—shades of tan, rust, blond, brown, all the colors of an Arizona sunset—and characteristics for structure and flavor potential. For me, using these ancient grains is a chance to work with ingredients that are totally unpredictable."

According to Brian Wong, president of BKW Farms, yields for heritage grains are less than those for modern. "Modern grains have been crossbred to get the higher yields that farmers are looking for. That's basically how heritage varieties were pushed out. Most farmers today are growing for scale, not for flavor," he says.

## THE WONDERS OF WHITE SONORA WHEAT

One of the oldest arid-adapted grains grown in the Southwest, white Sonora wheat is a soft, white winter wheat

that's planted between November and January and harvested in May or June. The wheat berries are closer in size to those of a dwarf wheat. Compared with a hard red wheat, which has a head or spike of about 3 to 4 inches, the Sonora wheat head is only 1½ inches long.

While its protein content is similar to that of hard wheats at about 12 percent, it's lower in gluten-forming chromosomes, which lessens the inflammatory response in those with gluten sensitivities. This results in less rise than hard wheats. In baking, it acts like a soft flour, ideal for making tender golden or blond-hued tortillas, cookies, pancakes, and muffins. Combine it as a percentage, up to 50 percent, with hard wheats for excellent performance in bread-baking, or leaven it with sourdough cultures to bring out a sweet wheaty flavor with subtle notes of acidity.

With 75 percent hydration, white Sonora dough results in a moist loaf with an open crumb structure and crackly crust. Barrio Bread's pan de Kino, which uses 80 percent white Sonora flour, boasts 85 to 90 percent hydration.

Flour from a major commercial miller incorporates wheat, including barley, from as many as 10 to 20 different farms, all blended for specific levels of ash content and protein, Guerra notes. A heritage grain flour, on the other hand, uses a single species; the grain's color, size, flavor, aroma, and density may vary from year to year. "It's a living organism, so it changes with its environment," says Guerra. "When it's harvested, it's really the sum of all those seconds and minutes and days and months being in the field and all the different climatic shifts it's gone through depending on what Mother Nature throws at it.

"I'm at the point now where I can show the terroir of the landscape," he adds.

All of Barrio Bread's products are sourdough based (recipe, [plateonline.com](https://plateonline.com)), beginning with a starter Guerra's been cultivating for about 15 years. Flour, water, salt, and the starter are combined and activated with water, causing

microbial growth, or fermentation, which can coax out flavor nuances ranging from roasted corn and toasted coffee to yogurt. The baker decides how long to ferment, how long to mix the dough, and how to scale and shape it. Even if each step is duplicated precisely, the result may differ. "The environment affects the growth of the bread," Guerra says. "The bakery could be hot or cold, humid or dry. What you have at the end is a sum of all those decisions you made. Maintaining consistency is a skill. That's why no one can really produce the same bread as the bakery down the street, even if they have the same formula."

That doesn't stop Guerra from sharing his knowledge with chefs, bakers, and consumers. "The term 'community-supported baker' has a few components," he explains. "First is the bread, which is the economic element of the business. Second would be educational outreach, teaching the community about healthy



ADAM C. BARTLETT

organic bread and how it's made. The third part would be my work promoting heritage grains. Using this model to run Barrio Bread has been the right move because I've been able to use my background as an educator and teach my favorite content, bread. I'm a 'bread-ucator.'"

Guerra's public bread-making classes sell out almost immediately. "Because people have had such a reliance on massive industrial approaches, they've forgotten what it takes to make a loaf of bread," he says. "If we're not sharing traditional knowledge, stories are lost, foods are lost."

He also offers courses to professional chefs and bakers, and lectures on how to develop a sustainable grain economy supported by community bakeries. "This means involving growers, millers, bakers, brewers, distillers—trying to recruit as many people as possible to use up that grain," he explains. "There are already pockets of this happening, in North Carolina, New York, Colorado, California. If someone can

grow it, I can make something nutritious and agriculturally viable."

In 2021, Guerra expanded his food empire, collaborating in January with Tucson culinary icon Carlotta Flores, owner of El Charro Café and matriarch of the Si Charro restaurant group, to open Barrio Charro, a fast-casual breakfast and lunch spot that emphasizes Guerra's use of heritage grains in sandwiches, toasts, and baked goods. This past spring, the pair opened The Monica, a chic downtown bistro that spotlights Guerra's products through pizzas and baguette sandwiches. The baker also developed Barrio Grains, a line of packaged whole grains and flour mixes, produced by Hayden Flour Mills.

"Food is such a difficult medium, but at the same time, it's also an important way to nurture and see that our world continues, so we can't get sloppy with it," says Flores. "There have been chefs before who have had all kinds of

different causes of food: sustainability, clean products, clean spices. Don did it all from the ground up. It's the way we used to cook 100 years ago, and we're back to it."

Guerra says his goals are to leave a legacy of grain-growing, to develop a narrative of where our food comes from and how it's produced, to build a community of garage bakers who will embrace the techniques, and to strengthen the foodshed in Tucson and throughout Arizona.

"Barrio Bread is a bread with a story," he says. "We talk about the grain. We know its origins. We know how many years it's been growing here. We know our farmers by name. The grain travels through many people's hands and through their experiences and expertise. Then I get to make it into something that is going to feed my community. To me, that's very exciting."

Rebecca L. Rhoades is a Phoenix-based writer and photographer.