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You Are What You Eat

In a lush bed at Sankofa Farm in the south east corner of Philadelphia's historic Bartram's Garden, young green sorghum stands about a foot high. The bright, tapering leaves branch out from the stalk very much like corn (they're both grasses – members of the poaceae family). It's Coral sorghum1, a South Sudanese variety that grows about 10 feet tall and is harvested for both its sugar-rich stalks and nutritious seed.

The plant is grown at Sankofa in the spirit of resilience. "Some of the crops that we believe to be particularly suited to an unstable climate are African crops," Sankofa co-founder Chris Bolden-Newsom said while scooping handfuls of compost onto a straw-covered bed. Sorghum can withstand drought and extreme heat and doesn't need much fertilizer to thrive. "African crops are resilient, just like African people – we are extremely adaptable."

To Bolden-Newsom, that's not an accident – you are what you eat, he says. "Resilient people should eat resilient foods."

We walked to a small patch of bordered, straw-covered earth – Sankofa's African Diaspora Garden. Bolden-Newsom knelt to the ground to show me the rounded leaves of peanut plants, hill rice ready to be transplanted, and small pigeon peas and sorghum. Okra, climbing gourds, and cotton will grow here, too. "These are foods that have been important for the African people throughout the diaspora,"

Bolden-Newsome said, stepping toward the bottle tree near the center of the plot. Crops from this plot are given away and seeds collected.

"The seeds are saved for continually replanting and for people who want to rematriate these crops in their lives." It's part of Sankofa's goal to connect communities, especially African American families and new West African immigrants who live nearby, with their history through agriculture and cooking traditions.

Bolden-Newsome is from Mississippi. "Growing up in the deep south, sorghum – we call it saw-ghum – was the traditional sweetener," he says. Sorghum molasses is made by squeezing the juice of the tall stalks and then boiling it down until it's thick and golden. Coral sorghum, the variety grown at Sankofa, can be pressed, and the grains can be popped, ground into flour, or boiled.

They'll grow a full row of the crop this year, in addition to the plants in the diaspora garden, but most of the seed will be saved (kept and distributed by Bolden-Newsom's partner, Owen Taylor of True Love Seeds), rather than sold at Sankofa's farm stand. "We can't get sell every African crop because our people don't remember our story," Bolden-Newsom says. "People have been turned against their traditional foods." The goal of education and reconnection with history is in the farm's name. Sankofa is a Twi (dialect of Akan) word meaning 'go back and get it,' often used in a longer phrase to convey that there's nothing wrong with going back to fetch what you forgot.

1. The Coral sorghum seed came to Sankofa by way of Nate Kleinman, co-founder of the Experimental Farm Network in New Jersey. The variety is from Malakal, South Sudan, the hometown of Kleinman's friends, whose Shilluk people have been expelled from their homeland during the ongoing civil war. He requested coral, and 10 other varieties from Malakal, from the USDA to grow in their honor.

Kick n' Stitch

Mark Hernig has a particularly strong opinion on antiques: "Rather than just sitting there to look at, you can put it to use and make something useful," he says. Like brooms, for example. Hernig uses an antique, foot-powered broom winder he bought from an antique store in Virginia to make corn brooms the old-fashioned way – hand crafted with high-quality materials and thoughtful artistry.

Chances are, you've used a corn broom; they're those natural fiber brooms with a wooden handle and scruffy golden yellow brush, woven together with wire. They've been produced in the U.S. since the mid-late 18th century; before the production was industrialized, they were made by hand with machines like the one Hernig operates in his shop. And before the U.S. began relying on Mexico for its supply in the early '70s[1], the crop used to make these brooms was grown here in the U.S.

Corn brooms are made with a variety of sorghum called broomcorn (Sorghum vulgare) that produces exceptionally long, thin-but-sturdy fibers called panicle branches at the top of the plant. After the seeds are stripped from this 'brush', the small branches are bundled and taken to the shop. If done by hand, the broom maker sorts them into handful-size bundles and softens them in water before attaching to the handle with a machine called a winder. Hernig uses a foot treadle machine referred to as a 'kicker.' The fine step is flattening the brush in a broom press and stitching with twine to retain the shape. (Hernig has detailed this entire process with photos and descriptions at his online museum: kicknstitchbrooms.com)

Broomcorn cultivation was popularized in the U.S. in part by (who else?) Ben Franklin. In a letter sent from Philadelphia to the brother-in-law of one of Franklin's many lovers, Catherine Ray, or 'Katy,' in Boston in 1757, Franklin wrote:

"I inclose you some of the Grain called Whisk Corn, or Broom Corn. It must be planted in Hills like Indian Corn, 3 or 4 Grains in a Hill. It looks like Indian Corn when growing, till the Top comes out, of which they make the Whisk Brushes for Velvet, and excellent Brooms. Give my dear Friend Katy enough of the Tops to make a Whisk for her Mantelet; and with it, if you please, a Kiss from me, and my best Wishes."

As the crop spread from Massachusetts, New York, Connecticut and Pennsylvania to the west, corn broom production grew. From 1960-1965, the U.S. produced 20,000-30,000 tons of brooms every year. These days, we import both corn brooms and broomcorn from Mexico. For now, that's where Hernig gets his bundles of brush, though he has grown a small plot of his own and plans to expand. It's part of his goal of self-sufficiency, "To make as much as we can local and high quality," he says.

He's taking a brief break from broom production to fix up his dad's old livery stable – a place where horses were rented out or kept, Hernig explained. "Back then, when you'd come to town, you'd need to stable your animal as you did your activities."

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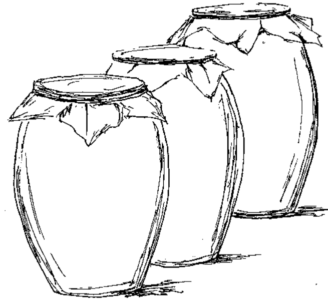
He's renovating the stable to create a working museum where visitors can watch vintage machines and craftspeople, like broom makers and blacksmiths, at work. Hernig says making brooms by hand is meditative, something he'll do for the rest of his life.

"I hope to keel over sitting in front of my machine."

1. The 1996 Broomcorn Broom Dispute was a U.S Mexico squabble over whether imported Mexican-made brooms "constitute a substantial cause of serious injury, or a threat of serious injury, to the domestic industry." An investigation, requested by U.S. Cornbroom Task Force, found that Mexican corn brooms did not pose a significant threat to the U.S. industry. The NAFTA tribunal ruled in Mexico's favor and the U.S. removed the 32% tariffs they'd imposed on Mexican-made brooms. Considering the very serious injury - poverty, malnutrition, farmers' loss of livelihood and land - the flood of U.S. subsidized corn into Mexico caused, to take just one example, and that U.S. companies relied on raw materials imported Mexican to make the products at the time, the Broomcorn Broom 'Dispute' looks more like an (offensive) joke.



Baijiu

Baijiu is the liquor of China; the high ABV (typically 80-120 proof) spirit made with fermented sorghum is enjoyed around dinner tables, sipped neat late into the night, and knocked back at business meetings. Distilleries across the country use unique blends of grain, fermenting, and aging techniques to produce a wide variety of flavors. Baijiu can taste fruity, floral, or cheesy, and it's usually damn fiery. It can cost less than a dollar or thousands.

I wanted to taste the most consumed spirit in the world[1] that, before a few weeks ago, I'd never even heard of. So I hopped on the Chinatown bus and ended up a few blocks from the Manhattan Bridge, scanning the shelves at Sam Wai Liquor Store. My friend Sam Chen, from Sichuan, helped me make sense of the wide variety of bottles; she pointed out which are good for cooking, which are cheapest, which are the most prized. I picked up a small clear bottle with a red star. "Very popular," the store owner said. "People want to taste the baijiu, or

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get drunk, and not spend a lot of money – they get that one."

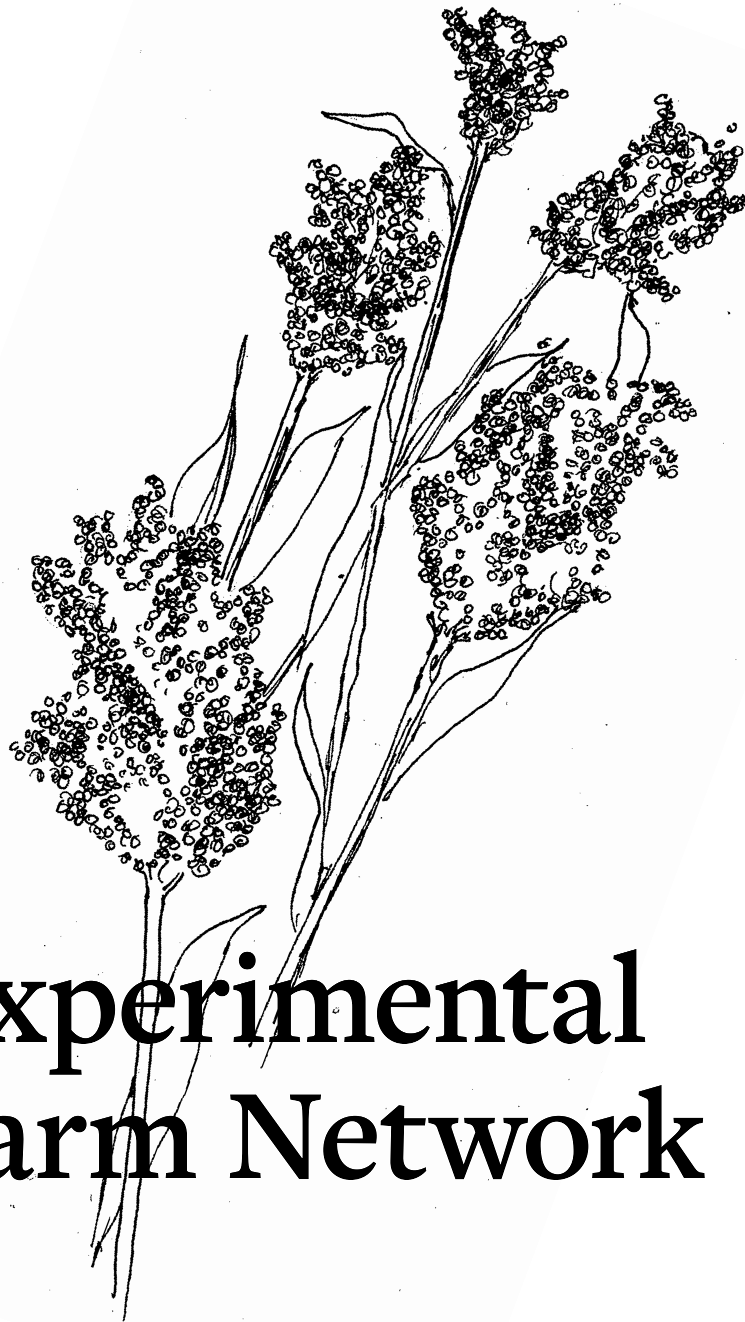
Red Star is a Beijing-based brand; their baijiu is among the most widely drunk in China. The bottle I held was a type of baijiu called erguotou, which means 'second head of the pot,' or second distillation. Though it burns like hell going down, it's a style of light aroma baijiu, one of four main categories: Rice (mellow, glutinous rice-based, rare), Light (sorghum-based, made in Beijing area, fastest to produce), Strong (made with multiple grains including sorghum, fermented in clay pits, complex taste), and Sauce (made with only sorghum, fermented several times over the course of nine months to a year in pits lined with stone bricks, can be expensive!).

I also grabbed a bottle of Luzhou Laojiao Dah Chu Chiew, a strong aroma baijiu from Sichuan. Luzhou Laojiao has been making baijiu since 1573 (!); it's one of the oldest distilleries in the country. Their Dah Chu Chiew smells like super ripe pineapple and tastes sweet at first, with a serious burn on the exhale.

Baijiu is so endlessly varied and complex in part due to qu. Qu is like a dried starter, made by cultivating molds, yeast, and bacteria in a mash of starch like wheat, barley, and/or peas. It's formed into bricks or balls, often dried, and used to initiate fermentation in products like soy sauce, vinegar, and doubanjiang (fermented bean paste).

Jiuqu, which translates as 'liquor ferment,' is the specific type of qu used to make baijiu. When added to the mash, it converts starches to sugars and sugars to alcohol (achieved through malting grains and introducing yeast in most distilled spirits). As the mash is fermented in earthen pits and clay pots, year after year, unique ecosystems of microbes develop and change, imparting particular flavors in each batch of baijiu.

1. China is the biggest importer of U.S.-grown sorghum -- much of what we don't use for feed grain or ethanol production here in the states is used to make baijiu. U.S. sorghum is a battleground commodity in the current U.S. China Trade War; in March, China bought U.S. sorghum since last July when the country imposed a retalitory 25% tariff on American grain.



Experimental Farm Network

FOODWAYS

Growers and researchers around the world are working to revolutionize grain production by developing perennials. Perennial crops, like asparagus, rhubarb, and blueberry bushes, produce food year after year, without the need for cultivation. They require fewer resources to grow and their established root systems sequester carbon in the soil. Farmers and researchers are looking to develop more perennial varieties as a way to both mitigate and survive climate change.

The Land Institute, a Kansas-based sustainable agriculture research, education, and policy organization known for creating the first perennial wheat, Kernza®, has been working to develop perennial sorghum since the 80s. They began crossing annual Sorghum bicolor with the perennial grass Sorghum halepense, also called Johnsongrass – a pervasive weed in many parts of the world. The strains they've developed are being tested in Kansas, Texas, and Georgia, as well as overseas in Italy, Mali, Uganda, China's Yunnan Province, and Bali.

There's a perennial sorghum research project in the works close by, too. At the Experimental Farm Network, a collaborative plant-breeding and research organization in Elmer, New Jersey, co-founder Nate Kleinman is working with growers across the country to cultivate M61, a sorghum variety developed by former legendary plant breeder, Tim Peters. Kleinman got the seed from Andrew Still and Sarah Kleeger, owners of Adaptive Seeds in Oregon.

"They gave me two heads," Kleinman says – enough seed to plant out a few rows on their farm in South Jersey.

There was a lot of diversity in the crop, Kleinman says, meaning instead of looking uniform, some seeds produced just one stalk and others 12; the plants ranged from two to seven feet tall; the seed husks were black, brown, and tan. It was a strain with plenty of genetic diversity.

In the fall, Kleinman collected the seed from all the plants and waited. The following spring, one lone sorghum stalk grew back. "We took all the seeds from the survivor plant and sent them to volunteer [growers] across the country." Kleiman says.

Last spring, those volunteers sowed the seeds on their land and harvested the seed in the fall; in the coming weeks, Kleinman will hear whether or not their plants survived the winter. He hopes that, even if it takes a decade, they'll be able to develop a reliably perennial crop before crossing with locally adapted lines. "This is very long-term work," he says.

But in the short-term, the growers at EFN do get to enjoy the flavor of sorghum. Kleinman has a particular affinity for the plant.

"I loved the idea of growing sugar in my backyard," he said. He didn't have the equipment to press the cane and extract the juice (which is boiled down to make molasses), but it didn't matter. "All you had to do was rip a stalk in half and suck the juices out."

Now he has a press, and grows about four different annual varieties from Sudan. Coral sorghum is among his favorites. To harvest, "You wait until the seeds have just ripened, when they've just turned chalky," he says. "Then you chop down the whole thing; you can juice the cane and thresh the grain." Once mature and cured, the grain pops like popcorn and boils up like barley.

But Kleinman's favorite way to eat sorghum seeds is when they're still green and immature, a seasonal delicacy in India called ponk. There, farmers roast the entire seed head in hot coals, place them in a pillowcase and beat the bundle with a broomstick to thresh seeds free from the brush. Throughout peak season (December and January) people gather in the fields for ponk parties; they harvest, roast, and enjoy the green seed among the plants' tall stalks. At markets, it's sold fresh by the bag to be used in home kitchens.

Kleinman looks forward to ponk season on his farm. After threshing the green seeds – pillowcase-broomstick style – he steams them lightly and adds butter. "It's chewy and sweet," he says, "There's nothing better."

KEEPWELL'S SORGHUM MOLASSES VINEGAR

Isaiah Billington & Sarah Conezio

Sorghum cane, a traditional Pennsylvania crop, yields a sweet, sweet juice, like sugar cane. It's got a wonderful grassy and green flavor. To preserve the juice for the winter, it's boiled down like maple sap into a thick syrup. The cooking process adds a layer of sticky caramelization to the aroma that never goes away, even as we ferment all of the sugar out of it. What we're left with is a vinegar with a wonderfully complex and sweet aroma and a pure sour taste.

This vinegar is the perfect choice when you need to blur the boundary between sweet and savory, like in a brown butter vinaigrette or barbecue.

Note: The vinegar will never spoil at room temperature, but the probiotics it contains will create a raft that floats in the bottle. Please keep the vinegar in cold storage to avoid the inconvenience.

CAROLINA BBQ PORK

You'll Need:

- Pork shoulder roast, 4-5 lbs (Use boneless for convenience or bone-in for flavor.)
- 2 medium onions, rough chopped
- 3 cloves garlic, smashed
- 1 tablespoon salt
- 1.5 cups sorghum molasses vinegar
- 2 tablespoons brown sugar
- 1 teaspoon ground black pepper
- 1 tablespoon crushed red pepper flakes

Preheat oven to 300*F. Place pork shoulder roast in roasting pan and cover with foil. Do not trim fat; place fatty side facing up so that it bastes the meat while cooking. You can easily skim and discard the rendered grease before serving. Addthe rest of the ingredients and cook on low for four hours; remove the foil and cook for one hour more. Meat should fall apart under the pressure of a fork. Remove pork from slow cooker, shred with two forks. Skim fat from cooking liquid and fold enough juice into shredded meat to make it tasty. Serve on buns!

STRAWBERRY SORGHUM SHRUB

Deb Bentzel

Shrubs are endlessly adaptable, and a great way to preserve the flavors of seasonal fruits and herbs. In the coming months, try peaches, nectarines, plums, berries, or cherries in place of strawberries. Add herbs, spices, and other ingredients like fresh ginger, basil, star anise, or peppercorn. Try out different vinegars based on the fruit you choose for your shrub; for example, rice wine vinegar is stellar with pears, and a light apple cider vinegar lovely with blueberries.

Makes about two cups

You'll Need:

- 2 lbs (about 1 quart) Strawberries (local! red! ripe!)
- 75 g Sorghum syrup
- 75 g Sugar, granulated
- 185 g Sorghum molasses vinegar
- 185 g Apple cider vinegar

Hull and slice strawberries and toss gently with sorghum syrup and sugar. Allow sweetened strawberry mixture to macerate 1-2 days in the fridge.

Strain sweetened juices from fruit; you'll end up with about 370 g of fruit syrup. (You can use the solids as you would fruit compote or cook down to make jam.) Mix fruit syrup with vinegar to taste. We recommend a 1:1 syrup to vinegar ratio, but feel free to start with less vinegar and adjust to taste.

Use your shrub to add both sweet and sour flavors to cocktails, or simply mix 1-2 tablespoons with about 8 oz club soda. Shrub can be stored in the refrigerator up to 6 months.

"With this book I respectfully invoke the heroic, aggrieved souls wandering in the boundless bright-red sorghum fields of my hometown. As your unfilial son, I am prepared to carve out my heart, marinate it in soy sauce, have it minced and placed in three bowls, and lay in out as an offering in a field of sorghum. Partake of it in good health!"

Author's dedication in the classic Chinese novel, Red Sorghum by Mo Yan, translated by Howard Goldblatt.

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