

## [Brandywine Table]

# Fermented Foods

AT THE CROSSROADS OF "TASTES GOOD" AND "GOOD FOR YOU."

Laura Muzzi Brennan

I NEVER THOUGHT I'D SEE THE DAY WHEN SAUERKRAUT was cool. But that day has dawned. Everyone from chefs and slow food advocates to medical doctors are singing the praises of the humble cabbage dish and its cohort of fermented friends.

Why the fuss? In a nutshell: fermented foods not only boast complex flavors, they also boost gut health and in turn your immune system.

Some fermented foods are so familiar—yogurt, vinegar, beer, chocolate—we forget they're fermented. Others like the 3 Ks—kimchi, kombucha, kefir—are steadily making their way onto mainstream grocery store shelves and restaurant menus.

What's more, with a little patience, they're easy to make at home, a point Chef David Freitag emphasized when I signed up for his fermentation class through Main Line School Night.

By day, Freitag is a chef at the Exton Whole Foods' seafood department. By night, he brews mead and kombucha, bakes sourdough bread and transforms cabbage and herbs into lavender sauerkraut. Long before he started teaching he was sharing information with a rapidly growing community of DIY fermentors.

The easiest way to understand fermenting, says Freitag, is to learn from Sandor Katz whose books include *Wild Fermentation* and *The Art of Fermentation*. To paraphrase Katz, fermentation happens when good bacteria/yeast/mold consume sugars and create acids that preserve food from bad bacteria and encourage the growth of good bacteria.



Chef David Freitag's fermentation class

Fermentation may occur naturally, as in the case of sauerkraut and kimchi (Korean spicy, sour vegetable dish) where salt activates bacteria found on the vegetables' surface. Or it may need a nudge from a "starter," either an heirloom culture or a commercially produced one.

Sweet tea, for example, gets transformed into kombucha by the addition of an heirloom culture called a SCOBY (Symbiotic Colony of Bacteria and Yeast). Wine becomes vinegar when a "mother" gets involved. (Mothers and SCOBYs both look like mini freeform gummy Frisbees, but mothers contain no yeast.)

You can purchase starters at food co-ops, organic markets and bakers' supply shops. But Chef Freitag pointed my fellow students and me to some unexpected places, namely Craigslist where I found three people selling SCOBY. There's also a group called Friends of Carl who will send you a sourdough starter for the price of a self-addressed stamp envelope. (For the record, Oregonian Carl Griffith shared the 150-year-old starter nurtured and preserved by his family with anyone who asked.)

Other good resources for obtaining starters or just connecting with fellow fermentors: Meetup.com, your local foodie Facebook page and Pickle.com, where *Ferment Your Vegetables* author and Philly resident Amanda Feifer shares recipes and advertises classes. You can also reach out to Chef Freitag at PhillyFerments@gmail.com.

As I immersed myself in the fermenting world, I couldn't help but see parallels to parenting: you give your child a good start, nurture them along the way, and in time, you'll be rewarded.



### Yogurt

*Note from Chef Freitag: Your basic yogurt consists of nothing more than milk and a starter. You can, however, add such things as vanilla, fruit and sweeteners. Usually, you'll want to wait to add these until the yogurt is ready to serve. The starter you use will dictate what the final product will be. If there's a yogurt you're fond of—as long as it has live active cultures—you can use that as a starter. You can also purchase pure strain starters in powdered form. Using the store-bought yogurt or the pure strains will allow you to make only two or three generations out before you need to get more of the original again. As an alternative, there are heirloom varieties that let you continually produce a consistent product without having to buy a new starter.*



Yogurt maker or small glass jars

- 1 qt. cow, sheep or goat milk (whole milk yields the thickest yogurt)
- 2 Tb. of your favorite yogurt or powdered starter

Heat 1 qt. milk to about 185° for at least 5 minutes. Stir to prevent scalding.

*Note:* The longer you hold the temperature at 185°, the thicker the yogurt becomes. If you are adding vanilla, add it now.

Allow milk to cool to 110°. In a separate bowl, mix ½ C. of the milk with your starter to create "inoculated milk." If you're using powdered starter, follow the directions on the package.

Take the inoculated milk and add back into the remainder of your milk. Pour the mixture into your yogurt maker or into glass jars and maintain the yogurt at a temperature of 110° for 6–8 hours.

If you aren't using a yogurt maker, place the jars in an oven that's been heated on the lowest setting (about 250°) and then turned off but with the light left on. Or, wrap the jars in towels soaked in hot water and pack them in a cooler to keep the heat in. The longer you let the yogurt sit at a high temperature, the more tart it will become.

After 6–8 hours, chill. If adding fruit, mix it in immediately before eating.

Makes 1 quart.

### Kombucha

*Note from Chef Freitag: Kombucha is a fermented sweet tea that's made by combining water, tea, sugar and SCOBY (Symbiotic Colony of Bacteria and Yeast). This fermentation takes about a week. The ideal temperature is 80–85°, if you keep the kombucha warmer than room temperature, it will be fine. Always use plain black caffeinated tea (although I often add a little mint tea). Don't use flavored teas as their oils can cause issues. Every batch will make a new layer of SCOBY at the top of the jar. You only need a golf ball size SCOBY (roughly ¼" thick) to do the fermentation. You can share, candy or compost your extra SCOBY. Note that the larger the SCOBY, the quicker the fermentation.*

## Fermentation in Kennett Square

Make room, mushroom! You're not the only food putting Kennett Square on the map.

Kennett's weekly farmers market hosts a lineup of vendors (below) who produce fermented foods ranging from sourdough to sauerkraut. What's more, plans are in the works for an October fermentation festival with demos, tastings and all sorts of probiotic hijinks. For up-to-date info on the market and festival, [HistoricKennettSquare.com/Events/Kennett-Square-Farmers-Market](http://HistoricKennettSquare.com/Events/Kennett-Square-Farmers-Market).

**Brandywine Valley Bread:** Naturally leavened sourdough breads (rustic baguettes, boules and sandwich loaves) made with organic and local grains. At market every Friday.

**Cucina Verde:** Small-batch lacto-fermented sauerkrauts. At market 2nd and 4th Fridays.

**Inspired Brews:** Small-batch seasonally inspired kombucha with ingredients sourced from local farms. Flavors include strawberry rhubarb, gingery, elderflower lemonade. At market 2nd and 4th Fridays.

**Fiddle Creek Dairy:** Greek and Swiss style yogurt made with whole milk from the microdairy's herd of grass-fed Jersey cows that graze on 33 acres. At market 1st, 3rd and 5th Fridays.

**Keepwell Vinegar:** Naturally fermented vinegars made with local sugar sources. Flavors include maple, black garlic, sorghum molasses, wildflower honey, bitter lemon and ramp. At market 1st Fridays.

**Rex Farms Orchard/Big Hill Ciderworks:** Farm-to-bottle hard ciders in modern, heritage and sour styles. At market every Friday.

**Victory Brewing:** Year-round and seasonally inspired craft beers in a variety of styles including IPAs and lagers. At market 1st Fridays.



- ½ gallon jar
- 1 qt. water
- ½ C. sugar (raw sugar is best although any table sugar will work)
- 5 black tea bags
- 1 mint tea bag, if using
- SCOBY from a previous batch
- 1 C. kombucha from a previous homemade batch or
- 1 C. store-bought unflavored kombucha

In a large saucepan, boil water. Add sugar and tea bags. Turn off heat. Stir to dissolve sugar and steep tea for at least 10 minutes. Remove tea bags and allow tea to come to room temperature.



Students learn about fermentation in the Main Line School Night class.



Place SCOBY and 1 C. kombucha from previous batch into a wide-mouthed ½ gallon jar. Add the sweet tea mixture and water as needed to reach the level where the jar starts to narrow at the top. Cover the jar opening with paper towel or cheese cloth so the kombucha can breathe. Place in a warm place, such as the top of your refrigerator.

After 5 days, taste a small amount of the kombucha. It should start to taste a bit acidic. When it's slightly less tart than you'd like, it's time to start a new batch. Take 1 C. from this batch and start again.

*Note:* If you want to take a break from making kombucha, make a fresh batch and store it in the refrigerator or in a cooler place in your house. When you want to make more, use this as a starting liquid and make a fresh batch.

Decant the kombucha into sealable jars or bottles. If you want to add flavorings, such as fruit juice or ginger, do so at this point.

Leave bottles out for another 1–2 days so they can carbonate. Refrigerate. Drink within 1–2 months.

### Sauerkraut

*Note from Chef Freitag:* This recipe uses one of the oldest methods of preserving vegetables. It consists of salting shredded vegetables and allowing the naturally occurring “good” bacteria to acidify the solution. The salty, acidic solution prevents unwanted bacteria from growing while the good bacteria synthesizes B and C vitamins through the fermentation process. Cabbage is at the center of this simple recipe, but you can add an array of vegetables and seasonings. Generally, you want a salt solution of 2–5%, so use 1–3 Tb. salt per pound of vegetables. (If you're making a brine, rather than just tossing salt and vegetables together, use 1–3 Tb. per quart of water.) In deciding how much salt to use, consider your taste as well as the fact that less salt = faster fermentation and shorter shelf life, while more salt = slower fermentation and longer shelf life.



1 qt. canning jar

Medium head of cabbage

1–3 Tb. sea, kosher or pickling salt (never iodized salt)

Shred cabbage into a large mixing bowl. Mix in salt. Bruise the cabbage using a wooden spoon, your hands or a rolling pin. Doing this breaks down the cell walls.

You'll notice liquid being expressed from the cabbage. You may let it rest in the bowl, covered, to allow more brine to form or go straight to packing it in the jar.

When packing into the jar, press cabbage down enough to squeeze out all the air pockets. Ideally, there will have been enough brine formation to completely cover the cabbage. Add a weight such as a small glass bowl, a nonreactive stone (not limestone or marble) or a small Ziploc bag filled with brine to help hold down the loose pieces of cabbage.

Place the lid on the jar, but do not screw on tightly. Place jar on a bowl or plate to catch the overflow brine. Since the bacteria produce large amounts of CO2 during fermentation, the loose lid allows gases to escape but prevents air from entering the jar.

Wait overnight and press down again. If there's not enough brine to cover the cabbage, mix up some separately and add it to the top. While fermentation is most active, you may need to press down the cabbage daily to work out the air bubbles. If necessary, add brine at any point to keep cabbage covered.

After a week or so, taste the sauerkraut. If you like the flavor and texture, refrigerate it. If not, taste it every few days until it achieves the flavor and texture you like.

It will last in the refrigerator for months, even up to a year.

If you notice any mold or sliminess at any point, just scrape it off the top. Under the brine, everything will be fine.

Makes 1 quart.

### Beet-hued Cured Salmon

*A few months ago, I tasted cured salmon whose garnet hue came from grated beets. I was hooked and had to try making it at home. This recipe is a hybrid of Bon Appetit's twist on Jessica Koslow's recipe and Mary Karlin's gravlax recipe in Mastering Fermentation. Karlin explains that for traditional gravlax, the salmon is cured with only salt and sugar, but she adds whey, a fermenting agent, to make the flesh firm enough for slicing.*

1 C. organic whole milk plain yogurt (I used Seven Stars)

1½ lbs. thick salmon fillet, skin on, pin bones removed, cut into 2 equal pieces

3 Tb. unrefined fine sea salt

3 Tb. raw unrefined cane sugar

Zest from one medium lemon

1½ tsp. white or black peppercorns, crushed

⅓–½ C. roughly chopped fresh dill

1 beet, peeled and coarsely grated

Line a fine mesh sieve with cheesecloth or paper towel and set it over a bowl. Put yogurt in cheesecloth and drain in the refrigerator for a 1–2 hours. The liquid that drains out is the whey.



Set aside 3 Tb. to use and save the rest for another use or discard. The remaining strained yogurt cheese (labneh) is delicious drizzled with olive oil and herbs (mint, dill, your choice) and served with pita wedges.

Set salmon on a parchment-lined baking sheet, skin side down. In a small bowl, mix salt, sugar, lemon zest and crushed peppercorns. Rub mixture over salmon flesh, pressing it in. I also spread a little on the skin as well. Sprinkle flesh with 3 Tb. whey.

Mix dill and beets together and spread on top of flesh. Place one piece of salmon on top of the other so their flesh sides are touching

each other. Fold the parchment paper over the salmon and wrap tightly with plastic wrap.

Place another baking sheet on top and weigh it down with canned goods. Refrigerate for two to three days, turning the salmon twice a day.

Wipe off seasonings and beet-dill mixture.

Slice and serve with any of the following: rye bread, bagels, cream cheese, sour cream, crème fraiche, chopped dill, chopped onion, chopped egg and capers.

Serves 8–10 as an appetizer on party bread or bagels. ♦

*Laura traces her love of all things culinary to the first time she leafed through her mother's Betty Crocker's Cooky Book—which still occupies a place of honor*

*among her 700+ cookbooks. A passionate supporter of local food, she co-founded a farmers market, judges area food contests, and anticipates restaurant openings with the excitement most people reserve for winning a Mega Millions jackpot.*



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