



DUNCAN GREEN

COUNTERTOP CULTURE

Something Is Fermenting In Sandor Katz's Kitchen

LIZ CRAIN

On a cold winter morning I drive a couple of hours south of Nashville, Tennessee, to a farmhouse where I am greeted by a curly-headed, mustachioed man bundled in a colorful knit sweater, hat, and scarf. This is underground food aficionado and author Sandor Ellix Katz. In the kitchen he is preparing our lunch: roasted squash, watermelon-radish kimchi (spicy Korean pickled vegetables), and pan-fried buckwheat tempeh (soybeans fermented with a special fungus) — all homegrown and homemade. Katz also spends a few minutes checking on a day-old batch of miso, a Japanese soybean paste made with fermented grains. I've brought a bottle of dandelion wine that I made from a recipe in his book *Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods* (Chelsea Green).

As the lunch menu suggests, forty-seven-year-old Katz is a self-proclaimed "fermentation fetishist." He believes that such foods enrich our cultural heritage and improve our health, and since the 2003 publication of *Wild Fermentation* he has traveled the continent and the globe teaching people to make their own sauerkraut, yogurt, and pickled vegetables. The farmhouse where we are having lunch is the future home of Katz's new teaching kitchen, where he looks forward to spreading his gospel without having to get on an airplane. After we eat, we drive a few miles to Short Mountain Sanctuary, an off-the-grid intentional community where Katz lives in a solar-powered cabin without running water. He shows me around, and I meet the goats and chickens and check out the beehives, the large organic garden, the bathhouse, and the sauna.

A New York City native, Katz was in most ways a typical city kid growing up. His family lived in a fourteenth-floor apartment on the Upper West Side, and he attended public school with his two siblings. But on weekends his family would pile into the car and visit his father's farm upstate, where Katz helped pick peas and blueberries. Katz graduated from Brown University in 1985 and worked as a high-school teacher, legal proofreader, and political organizer. His life changed in 1991

when he learned that he was HIV-positive. He left Manhattan and wanted to change the way he lived, but he was unsure how. Then he heard about a community of homosexuals in a remote area of Tennessee who called themselves "faeries," embracing the word and moving beyond its negative connotations. Katz was familiar with gays leaving the country for the city, but he'd never considered doing the reverse. Hoping that country living would keep him healthy, he moved to Short Mountain Sanctuary in 1993, and he has lived there ever since.

One of the major benefits Katz saw to living at Short Mountain was the homemade, and often homegrown, cuisine. New to growing his own food, he soon encountered a problem that has always plagued gardeners: what to do with a surplus harvest. All of the cabbages and radishes were ready to be eaten at once, and Katz was determined to make good use of everything. So he learned to make sauerkraut. This led to other fermenting recipes, including miso, kimchi, wines, and more, but it's the sauerkraut that he's best known for and that earned him his nickname: "Sandorkraut."

Katz has appeared on National Public Radio's Science Friday and been a U.S. delegate at Slow Food International's biennial Terra Madre gathering. His second book, *The Revolution Will Not Be Microwaved: Inside America's Underground Food Movements* (Chelsea Green), garnered praise from those inside and outside the world of eating local, including the late cultural historian Howard Zinn, who said, "It points us not only to eating in a new way, but thinking in a new way."

My tour of Short Mountain ends in the basement of the main cabin, which is lined with hundreds of jars, crocks, and bottles filled with everything from cherry-blueberry mead to pickled beets and plums. In the root cellar Katz shows me a salted and wrapped leg of venison, cured in the style of prosciutto. He is currently working on a new book about fermentation, incorporating new processes he has learned and exploring the role of fermentation in humanity's biological and cultural evolution.

Crain: What are some examples of fermented foods or drinks?

Katz: The most famous ferments are alcoholic beverages, but we also have dairy ferments like yogurt; vegetable ferments like sauerkraut, pickles, and kimchi; and meat ferments like salami. If you look at the foods that we consider “gourmet,” virtually all of them are the products of fermentation. Imagine you’ve just stepped into a gourmet-food shop, and you see the olives. You can’t eat olives off the tree because they’re toxic and contain bitter alkaloids. They have to be cured first. There are a number of methods people use to cure olives, and many involve fermentation.

Take a couple of more steps into this gourmet shop, and you see a cheese counter. The vast majority of cheeses — and certainly any cheeses with strong flavor — are products of fermentation. Then there’s the bakery with all those delicious breads to put your cheese on. If bread weren’t fermented, it would be a dense brick. And many of those condiments that we love to slather on food are products of fermentation. The mother of all condiments is the fish sauce we find in Southeast Asian cuisine. Classical Rome and Greece also used fish sauce, and the word for Americans’ favorite condiment, ketchup, comes from the Chinese word for fish sauce: *ke-tsiap*. Vinegar — from the French *vin aigre*, meaning “sour wine” — is always a product of fermentation, and most of our favorite condiments are based on it. Continue this tour of fermented gourmet foods, and you’ve got chocolate, coffee, vanilla, and cured meats, including pepperoni, pastrami, and corned beef. So fermentation creates extraordinary flavors in addition to preserving foods.

Crain: What are some more-unusual fermented foods you’ve come across during your studies and travels?

Katz: Well, you’ve seen my venison leg curing in the cellar. My inspiration for that was a food that I encountered at Slow Food’s Terra Madre event in Italy in 2008: *violino di capra* — “violin of goat.” It’s the cured thigh of a goat that’s too old to milk. Most goat flesh is tough, unless it’s from a very young goat. This traditional food uses fermentation to turn the meat of an old goat into something tender and delicious.

You may have heard of the fermented tea called “*kombucha*.” I’ve also been making *jun* — a cousin of *kombucha* that’s prepared with honey rather than sugar. The *jun* culture is more active at a lower temperature than *kombucha*. Through the winter it produced a wonderful, refreshing tonic.

I’m continually in awe of the cleverness of people around the world in developing fermented foods. The range of methods used is incredibly varied. There’s no end to it.

Crain: What is fermentation?

Katz: Broadly speaking, fermentation is a transformative action of microorganisms that digest plant and animal matter and turn it into more elemental forms. Any compost pile is an example of fermentation, but we can also make fermented foods. Over millennia people have figured out, through obser-



SANDOR KATZ

vation and trial and error, how to discourage the growth of certain types of microorganisms and encourage the growth of other types: acidifying bacteria and alcohol-producing yeasts. These microbial transformations preserve food, making it more stable, more digestible, and more delicious.

Right now we’re well into the winter here. We have a few fresh greens and root vegetables, but we also need food that we’ve preserved from autumn. Fermentation enables us to keep food from seasons of plenty to use in periods of relative scarcity. Agriculture makes no sense without it: why put all our energy into crops that are ready at a certain time of year unless we have a strategy to enable us to continue eating them year-round? By creating these biopreservatives — acids and alcohol — fer-

mentation made agriculture viable, which led to an enormous shift in human culture.

As far as I can tell, there is no food that does not have some history of fermentation, and there’s no region of the world that does not use it. It’s more critical in temperate climates with shorter growing seasons than it is in equatorial climates with longer growing seasons, but it’s still found in every part of the world.

Crain: Why are fermented foods good for us?

Katz: Beyond simply preserving food, fermentation pre-digests it by breaking compound nutrients down into simpler forms that are easier for our bodies to assimilate. This is hugely important when it comes to dense nutrients such as those found in soybeans, which have lots of concentrated protein. Our bodies aren’t capable of extracting the protein from soybeans unless they’ve been fermented and the proteins broken down into more-accessible amino acids.

Fermentation also adds nutrients. There are higher levels of B vitamins in fermented foods than in the raw foods they’re made from, and there are many unique micronutrients found in ferments that are only beginning to be understood. In fermented vegetables, compounds called “isothiocyanates” are actually thought to be anticarcinogens. Miso contains dipicolinic acid, a compound that functions as a magnet for heavy metals, carrying them out of the body. *Nattō*, a fermented soybean dish from Japan, contains a compound called “nattokinase,” which is used to prevent aneurysms and other blood-clotting disorders. There’s some speculation that it could help prevent Alzheimer’s disease.

What I consider to be the most profound nutritional benefit of ferments is found in “live-culture” foods. These ferments aren’t cooked after fermentation, so the bacterial cultures remain alive. These acidifying bacteria are the same kinds of bacteria that we have in our gut that allow us to effectively digest food and extract minerals and nutrients from it. The bacteria in live-culture ferments also strengthen our immune function by creating a competitive environment, making it difficult for potentially pathogenic bacteria to

establish themselves in our bodies.

Not all fermented foods contain live cultures. Some, like bread, must be cooked. Others, such as sauerkraut, are routinely canned for a long shelf life. That's one reason why it's great to make ferments yourself. If you don't make them yourself, it's important to make sure that what you're getting is alive, so its bacterial population is intact. It's more important than ever to replenish the bacterial populations in our bodies, because our culture today is fighting what I call the "war on bacteria." Our weapons are everything from the chlorine in our water, to antibiotic drugs, to antibacterial cleaning products. All of these amount to a constant assault against the bacteria we need in our bodies in order to function effectively.

Crain: Do yogurt, sauerkraut, and other fermented foods and drinks that we buy at the store generally have live cultures?

Katz: Pretty much all yogurt that's commercially available contains live cultures, and there's a yogurt-industry seal on most containers advertising this. Most commercial sauerkraut has been pasteurized and canned, however, making it sterile. If you're looking for live-culture sauerkraut, you need to read the label very carefully. You'll typically find live-culture foods in the refrigerated section. Live-culture fermentation is a dynamic process, and respiration continues, causing pressure to build up in the food containers. Refrigeration slows that process. The old-world method was to sell these ferments out of open vessels that could breathe. The kraut or pickles would be put into a smaller container for you at the point of purchase.

I really encourage people to make their own ferments. When we make ferments at home, we are embracing the bacteria that we share our space with and inviting them into our bodies as allies. This integrates us into a larger web of organic relationships.

Crain: Do you consider fermented foods an important part of your personal healing and your health?

Katz: Before I answer, let me say that I'm not a strict practitioner of any type of diet. I eat pretty much anything. But I prefer food that is fresh, and especially food that is in some way alive. That's the kind of food that makes me feel good and tastes best to me. I don't suggest that anybody eat only live-culture foods, but I would say that eating fresh foods and ferments makes me feel better.

Some people think I'm promoting fermented foods as a cure-all or claiming that they cure HIV. I am not. There are some snake-oil salesmen out there. I've seen websites that tell diabetics that if they drink *kombucha*, their diabetes will go away. I think that's terrible. Diabetics need to stay away from *kombucha*, which is based on sugar, though there are other wonderful live-culture foods that can enhance their overall health.

When I first came to Short Mountain, I was hoping that clean living and fermented foods would prevent my HIV from developing into any kind of symptomatic illness, but that was not the case. I had a period in 1999 and 2000 when I got really sick, and that convinced me to go on HIV medications, which I've been on for ten years now. I will say that almost everyone who takes these drugs experiences chronic diarrhea as a side

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effect, and I've thankfully never gotten that. To me that's evidence that live-culture foods are keeping my digestive system in good shape.

Whether you're healthy or living with a chronic disease, your digestion can be improved by the regular ingestion of live-culture foods. People with high blood pressure may want to make sure they eat low-salt versions. People with candida, a yeast overgrowth, should avoid ferments that are carbohydrate based. But in general live-culture foods can help improve anybody's health.

Crain: Not all fermented foods are health foods. Alcohol is actually pretty unhealthy, isn't it?

Katz: I hesitate to answer yes or no. Alcohol has had an enduring role in many human cultures. And the alcohol level in fermented drinks maxes out at around 18 percent. The high alcohol content of liquor is a product of fermentation *and* distillation, a much more involved process.

I don't think that alcohol is intrinsically unhealthy. I actually think that in moderation it can be very healthy. The problem is that it's easy for people to become immoderate and addicted, but I don't believe we should demonize alcohol the substance.

Crain: While traveling here, I reread Michael Pollan's *In Defense of Food*. He writes: "Instead of bite the hand that feeds you, shake the hand that feeds you." That seems to sum up the ideal relationship between grower and consumer.

Katz: Food is about a web of relationships. One of those relationships is with the farmer. In a biological sense the pursuit of food integrates us with our environment, but we have partly removed ourselves from that, and at great cost, I think. We need relationships with the animals, plants, and microbes around us. We need to get our hands dirty in the soil and interact with the web of life on a daily basis.

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