Seed banks and their diverse contributors are taking on monoculture

Andrew Whitman holds out his hand. At first glance, he appears to be offering up a pile of tiny gray pebbles, or the world’s tiniest snail shells, purple and black flecks radiating from the drier of each. They are alive, and very, very old, but the spirited wonders have nothing to do with the ocean. They are the seeds of tomatoes, the ancient predecessor of maize and corn.

“We got these donated from a man in the Santa Cruz Mountains who has been growing it out for like 20 years. He’s locally adapted, but nobody grows this commercially. It’s a historical gem,” says Whitman, rummaging through the tiny shells back into one of hundreds of carefully labeled mason jars spread out across a table at the UCSC farm.

The 21-year-old UC-Santa Cruz history major founded the Demeter Seed Saving Consortium last year, spurred by his fascination with heirloom plant varieties and a $10,000 grant from the Strauss Foundation. After just one growing season, the seed library is a treasure trove of more than 250 locally adapted heirloom varieties, all donated by master gardeners and seasoned farmers in the area.

The seeds come in all shapes and sizes and are the progeny of familiar and well-loved produce like tomatoes, brussel sprouts, and gourds, as well as rarities one would never expect to find thriving on the Central Coast—like the Ethiopian grains teff.

“Right now, more Ethiopian restaurants import their teff from Ethiopia. But we actually have a localized variety of teff that grows right here in Santa Cruz. So we’re trying to find farmers who might want to start like a domestic teff industry,” says Whitman. Of course, teff wouldn’t need a chance in commercial fields. Whitman’s project—which involves local gardeners to “borrow” heirloom seed as long as they promise to return seeds from the hardiest of those plants at the end of the season—seeks to provide an escape of diversity amid an increasingly homogenous commercial agriculture. Commercial crop varieties have undergone a steady consolidation as industrial farming operations, pursuing greater and greater efficiencies, have favored fast-growing, high-yield varieties. Meanwhile, at the supply end, large companies have been buying up smaller seed companies and discontinuing varieties.

“You’re not seeing commercial farms produce as diverse a number of crops as you were in the beginning of the century. Since the early 1950s we’ve seen like an 80 percent decrease in commercial diversity,” says Whitman.
America now grows only one type of corn commercially, and its four major commodity crops—soybeans, canola, alfalfa, and cotton—are also monopolized by varieties that have been genetically engineered by Monsanto. Vast monocultures and the relentless consolidation of varieties is a phenomenon that Whitman warns is not in the best interest of crops or the people who eat them. He points to the Irish Potato Famine as the prime example of what such vulnerability can bring.

"I think it's just a matter of time before one of our stable crops is afflicted," says Whitman. "I'm not going to say that it's going to happen tomorrow or in the next 10 years, but it's going to happen. I mean, that's just basic biology."

**Life for All**

The seed library's long-term goal is to create a social network on the project's website where members can record the progress of their grow outs, and which will form the basis of the library's "open source encyclopedia of seed information and seed history." It's also completely free and open to the public, which Whitman says is a priority: "We believe that life shouldn't be patented, that life shouldn't be something that's commoditized."

Whitman's seed library is one of three community seed libraries that started in Santa Cruz last year (the other two are located at the Museum of Art and History and the Live Oak Branch of the Santa Cruz Public Library). They are also part of a national trend: seed libraries are popping up across the United States, especially on the coasts and in the north.

"There's kind of a resurgence along with the value of local food systems, especially in the northern states. There are areas that are really developing more of their own sense of identity and food that they're preserved and eaten within its season," says Dale Cole, who donated a large portion of the Demeter Seed Library's seeds from his Cole Farm acreage in San Juan Bautista.

Cole is a long-time organic grower and seed saver known for coming up with the novel idea of Spring Mix, which he now sells to restaurants all over the United States. The seeds he donated include a mysterious cabbagelike variety from a planting that likely cross-pollinated orange and purple cabbages, with a chance of rains from Romanesco cabbages (whose crazy, conical, fractalike formations of califlower that look like they are from another world). The cross-pollination is what Cole calls "a wild, unbridled coupling of varieties" that occurred in his field when he allowed several different cabbage varieties to
SHARING THE WEALTH

Flower and seed in close proximity to the soil.

For Coke, it's about keeping the biodiversity alive by having the seedlings in the ground, and letting the people do the selecting of the best and hardiest varieties from each crop—a sometimes tedious process that he doesn't always have time for in every single crop he grows.

"I am harrowed to see somebody locally who is trying to do that. It's something that people are using and finding value in selecting, instead of just putting it away in a vault someplace and trying to store it for years. It's more active," says Coke, whose latest seed aspiration is to adapt a high-protein wheat variety with good bread-making qualities to the Central Coast.

Keeping seeds active by planning them each year can literally save the food system, adds Iris Wallace of Southern Exposure Seed Exchange in Virginia. Watson gives an example: when Abundant Life Seeds had a fire in their warehouse several years ago, they lost almost their entire seed collection to the fire.

"Because they had been teaching all this seed saving and stuff, and all kinds of gardens and farmers were growing their seeds, they asked people to save seeds and give back to the collection, and they were able to reassemble a large proportion of their varieties in that way," says Wallace.

The Wondrous Heirloom

Although seeds from hybrid plants—plants that are produced by crossing two parents for desired characteristics, such as disease resistance—can be saved and replanted, the resulting seedlings are unreliable. With heirlooms, the seeds from the best plants can be selected each year and replanted with more dependable results.

Theresa Allan of the Southern California-based Seeds of Change seed company explains the selection and adaptation process best: "Every time you grow a seed crop, it will be affected in some form intentional, but often imperceptible, ways by the growing conditions of that particular season. If, for example, only a few of your tomato plants survive a drought, seed saved from the surviving plants may have a genetic trait that helps them tolerate drought. Gardeners who save their own seeds are helping their favorite varieties adapt to their specific garden climate," says Allan.

Heirlooms are also more often bred for flavor, as Gary Lassen of the TomatoFest seed company discovered about 30 years ago when he fell in love with heirloom tomato varieties and began a seed bank that spans more than 650 varieties from around the world. For Lassen, who lives in Carmel, it's about flavor and ownership of one's own food.

"When you get when you have an heirloom seed & you're bringing it with the whole history of that plant, and you'll be able to go ahead and reproduce it over and over again, versus a hybrid you've got to go back to the shop that owns the seed in order to get more seed. It's just bringing more of the power to the person who is doing the gardening," says Lassen, who estimates that some 30 percent of heirloom tomato varieties have grown extinct.

Seed companies are reporting a gardening renaissance taking place in the home garden sector over the past few years. "We got more fine-time gardeners this last couple of years than I think I ever have had before," says Lassen. "We have gardeners who are gardening [on] balconies and rooftops in the cities, and as well as gardeners who are finding mean to garden in areas where the soil was not conducive to growing.

"More and more, especially with GMOs and large companies that are attempting to own your foods by owning the seed, part of our purpose is to have people own their own foods by growing it themselves."

Ernie's Liquors

922 Soquel Ave, Santa Cruz | 831.427.0697

Bike On Down To Artisans

USBC Bike Path Print | $300.00, Doug Rose

Artisans Gallery

Jewelry | Woodworking | Ceramics | Artwork | Cards & More
1366 Pacific Avenue, Downtown Santa Cruz | 831.423.6183