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Growing the Beautifully Sustainable Painted Mountain Corn

Saving Heirloom Seeds for Food Security

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Indigo blue, ruby red, scarlet, orange, yellow and ivory kernels shine along the sides of the cobs that local food activist Sue Gray donated to the community garden at Roaring Fork High School (RFHS). Families from the Valley Settlement Project worked in partnership with Fat City Farmers to grow the corn this past summer.

As hardy as it is beautiful, this Painted Mountain corn is specially adapted to high, arid regions. Its historical roots reach back to an iconoclastic and devoutly Christian Montana farmer and to Native Americans who grew multicolored corn for thousands of years. Their corn persisted through frosts, droughts and famines that would quickly kill off the kinds of corn we see in the supermarket.

Gray explains why she began growing Painted Mountain corn: "I wanted a high-altitude corn that could provide a nutritious staple for the Roaring Fork Valley population, the long-range goal being to help provide food security in the event of a global agricultural crisis. Painted Mountain corn is genetically diverse, making it more adaptable to changing climate conditions than modern hybrid and GMO corn."

In 2011, Gray bought a couple packets of Painted Mountain corn from Territorial Seed Company, one of several seed catalog companies that offer it. Gray has been saving seed from that batch and growing it each year to adapt it to our Roaring Fork Valley conditions, so she wanted to save that specific strain. "I had nowhere else to grow it this year, so I was fortunate for the opportunity to use the RFHS garden to continue the seed line," she says. "Corn seeds only remain viable for one to two years, so growing it out every year from last year's seed is vital to continuing the genetic line."

Gray is one of a small, quiet army of contemporary farmers who are dedicated to saving heirloom seeds. Gray spearheaded and manages an heirloom seed-saving project with the Mount Sopris Historical Society. For the past three years, she has saved seed from the MSHS Heritage Garden, which showcases heirloom varieties that were grown one hundred or more years ago. Some of the seeds used to plant the garden in 2012 came from descendants of Carbondale's pioneer families. The seeds are packaged by volunteers and offered to MSHS donors.

Why are activists so concerned about heirloom seeds? Writer Annie B. Bond, author of five books on green living, warns that "the loss of genetic seed diversity facing us today may lead to a catastrophe far beyond our imagining." As an example of what can happen, Bond cites the Irish potato famine, which led to the death or displacement of two and a half million people in the 1840s. She writes, "One blight wiped out the

single potato type that came from deep in the Andes mountains; it did not have the necessary resistance. If the Irish had planted different varieties of potatoes, one type would have most likely resisted the blight."

Over the past decade, gardeners in search of both ornamental and edible plants have scoured graveyards and ghost towns in search of old-fashioned plants and seeds. Exchanges have sprung up, and seed libraries have been established in many places, including one at the Basalt Library. Today, more than 300 seed libraries dedicated to saving heirloom plants are housed in public libraries in 46 states. In some places, however, seed libraries have faced legal hurdles. In Pennsylvania, the seed library at the Joseph T. Simpson Public Library in Mechanicsburg was informed that it was in violation of the Pennsylvania Seed Act of 2004.

Sparked by big agricultural companies that are patenting seeds, the European Union has also erected barriers to seed saving and swapping.

In the U.S. and abroad, a struggle is going on between big agriculture and food activists like Gray. The battle has reached the pages of *The New Yorker*, which in August 2014 published an article critical of India's environmentalist Vandana Shiva called "Seeds of Doubt." Shiva, who has accused multinational corporations such as Monsanto of attempting to impose "food totalitarianism," calls the patenting of life "biopiracy" and has waged legal battles against attempted patents of several indigenous plants.

Closer to home, Montana farmer Dave Christensen spent more than 40 years working to save corn originally grown by the Mandan Indian tribe. Modern corn, which descends from eastern varieties, wouldn't grow where he lived. So Christensen cross-bred western native corns, developing hardy varieties like Painted Mountain corn that would produce food in Montana's cold, dry, high-elevation conditions.

Christensen has taken his corn to some remote and challenging corners of the globe, including North Korea, which has a climate similar to Montana's. Korea's steep hillsides, rocky soils and scarce rainfall ensure that starvation has always remained a threat. Farmers there were able to grow only barley, and only an average of 1,000 pounds per hectare. After Christensen transported 3,000 pounds of Painted Mountain seed corn to them, they were able to increase that yield to 2,600 pounds of grain per hectare.

Christensen's corn is now growing in Siberia, the Ukraine, the Argentine Andes, New Zealand - and here in the Roaring Fork Valley.

The sweet corn usually planted in the U.S. takes 100 or more days to mature, but Painted Mountain corn takes fewer than 90 days. By late September, when this article was being written, some cobs had already been harvested from the RFHS garden for eating.

"This corn can be eaten fresh off the cob, boiled or roasted," says Gray. "Some of the dried kernels will be ground into corn meal or masa, and some will be saved to plant next year. Painted Mountain corn isn't sweet and tender like commercial corn. It is what corn used to taste like before hybrid sweet corns were developed. Most people don't grind their own cornmeal, so right now, it's more of a novelty. But for people who want to grow corn above 5,000 feet, this is a fun and easy crop to grow. The corn cobs are beautiful and can be used for fall decorations if nothing else!"

"My hope is to someday grow enough to distribute to local gardeners so they'll start growing, using and saving the Roaring Fork Valley Painted Mountain corn seed," adds Gray. "The end goal is to contribute to sustainable local food production."



Local growers examine their corn at the RFHS community garden.

Local grower Sue Gray