

Endangered Foods

Could corn, beans and other wonderful foods go extinct?

STORY BY *Pria Graves*

WHEN YOU HEAR THE PHRASE “endangered species”, what comes to mind? Most likely you think of the wonderful wildlings featured in *Losing Paradise*. Calling attention to these disappearing beauties is a perfect use for our art form. But what about the plants we eat? Corn? Potatoes? Wine grapes? Could they disappear? It’s hard to imagine a world without these foods, yet each has faced serious threats in the past. Could they too become endangered?

Most of the history of food cultivation is a story of genetic diversity. Until recently, farmers grew crops and then selected seeds from the strongest, healthiest, best tasting plants to keep for the following year. Generation followed generation, and crops became adapted to the local environment and local tastes. From time to time, a fluke of genetics would produce something really new and different. If it tasted, grew, or lasted better, seeds would be kept and grown on. The result was the burgeoning of hundreds or even thousands of varieties of familiar foods, each with different characteristics. The gene pools of our favored foods were huge.

Then came the age of mechanized agriculture. Machine harvesting requires crops that mature all at once so they can be picked together. Ideally, they are of uniform size and grown close together in fields. To produce these nearly identical plants, seeds ceased to be passed from hand to hand and instead became a commodity, grown in huge batches from carefully controlled genetic stock. Rather than saving seeds from the previous year’s crop, farmers purchased seed from a huge supplier. Over a very few years, older types disappeared as more and more acres were planted with these newer, more uniform varieties. The consumer was encouraged to expect “perfect” produce and color and flavor variations vanished. But the dwindling gene pool has risks.

Consider corn, for example. In the late 1960s, corn breeders began using a genetic variant that made it easier and cheaper to grow lovely, uniformly full ears. New varieties were released under many different names, but in fact, most of the corn crop was based on this single genetic stock. Then in 1970, Southern Corn Leaf Blight mutated slightly and attacked those plants. In that one year, the blight wiped out 15 percent of the U.S. corn crop. Fortunately many of the older varieties were still around and the decimation was stopped. But without the genes still hidden in those older varieties, corn might have been a thing of the past.

While many cultivars look pretty much the same, some of the



vanishing varieties are wonderfully different. Broad or Fava beans (*Vicia faba*) are much more commonly grown in Europe than here in the US. Although mostly used as animal feed (called ‘Field beans’), they’re also an important food crop in many places. Most favas have white flowers with a black mark at the base but there is another lovely variety dating back to 1778 – the Crimson Flowered Fava. In 1978 the last person growing them had a crop failure: only 4 viable seeds remained! Fortunately she passed them on and today, though still uncommon, they are offered by several sources. I have been unable to learn why the gene(s) for the crimson flower were bred out of *Vicia faba*, but having grown it for a number of years now, I can attest that the variety produces delicious beans in addition to being an incredibly beautiful plant. And who knows what other wonderful features its unique genes might contain?

The Heritage Seed Library in Britain estimates that 96 percent of our vegetable cultivars have been lost in the last 100 years. This is huge! And with each of these losses, the unique genes of the variety disappear as well, taking with them their potential for donating unknown strengths to future generations.

Using our art form to call attention to endangered wild species is critical, but I invite you to consider turning your skills toward beautiful and diverse heritage food varieties as well. Our future may depend on them!

Please stay tuned – in future articles I will look at other foods at risk. 🌱

LEFT. *Zea mays*, Indian Corn, 15"x 7", colored pencil on Mylar, ©Nancy Wheeler Klippert, 2012. **ABOVE.** *Vicia faba* 'Crimson Flowered', Crimson Flowered Broad Bean, 14"x10", watercolor on paper, ©Pria Graves, 2009.