Conservation Notes

Saving the Bananas
& Other Risks of Monoculture

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Reading *The New Yorker* (January 11, 2011), I found an article by Mike Peed about bananas and a devastating blight. Not all bananas, but the kind we buy in stores. The growers have bought into monoculture worldwide and the results are scary. Did you know that one variety, Cavendish, represents 99% of bananas exported worldwide? Me, either. There are more than 1,000 kinds of bananas in the world, but they are unfit for export because they are too thick- or thin-skinned, ripen too quickly, bruise, etc., etc. and so are only eaten locally.

The Cavendish is rich in Vitamins B and C, and has lots of magnesium, potassium and fiber, not to mention being cheap at around 60 cents per pound. We Americans consume 7.6 billion pounds a year – almost all of which are grown in Latin America.

Alexander the Great is responsible for bananas heading west from India and China in 327 BC. The first export bananas, Gros Michel, entered the USA into Jersey City from Jamaica in 1870 in the hold of a Cape Cod fishing boat. That enterprise eventually became Chiquita.

Domesticated bananas are seedless and are triploid (three sets of chromosomes). When a Cavendish banana plant is 9 months old, it sends up a secondary stalk from the center pseudostem from which the bunch develops, weighing 80 pounds, and carrying a dozen "hands," each with approximately 20 "fingers," the individual bananas. Several suckers also grow and, after harvest, the best is kept and the others along with the mother plant are chopped down. The process starts all over again for the next year.

A serious fungal disease, Tropical Race (TR) Four, has decimated plants on Asian and Australian plantations. It is a soil-borne fungus that persists for decades. TR One wiped out the Gros Michel export banana, when the resistant Cavendish became the player – until now.

Researchers in Australia are working on genetically altered bananas in an effort to save the industry. Knowing that 50% of Americans and 60% of Europeans oppose genetically modified foods, Chiquita and Dole are working with scientists in Honduras to find a natural way to produce a resistant, commercially acceptable banana.

Eighty-seven percent of bananas grown around the world are eaten locally. Those varieties that are unable to withstand the rigors of transport are grown mixed in together with other kinds in garden plots (think diversity...some are resistant, some not) and are not in the huge plantations

of monoculture cultivar that make up the export market. Some scientists believe that another fungus will come along to take out the next cultivar developed because it is against nature to have huge stands of just one kind of plant. Biodiversity is key.

At the risk of being corny, here's some more science...from *Food and Wine* magazine, September, 2010. In 2009 the US produced 86,482,000 acres of field corn and 254,400 acres of fresh sweet corn. Uses of field corn include: livestock feed 37%, ethanol 28%, export 14%, surplus 12%, and products such as corn syrup and cornstarch only 9%. Florida produces 18% of our sweet corn, NY grows 9% and only 0.07% comes from Iowa. In 2009 the US had 347,760 corn farms compared to only 160,818 wheat farms.

More monoculture here, too. Acres and acres of it. Yellow Dent #2 is the seed corn for all the industrially grown corn. Iowa Seed Savers Exchange is trying to reintroduce seeds that have the flavors and nutrients that have been bred out of Yellow Dent #2.

Whoops, I have just realized that this is February, and, rather than yellow bananas and corn I should have written about red roses, hearts and other lovely stuff!