

## **Community Gardening**

As an ongoing commitment to encourage community gardening, the USDA is installing “People’s Gardens” at USDA facilities around the world. These community gardens are places people can grow their own food and donate extra to local food shelves. This summer the People’s Garden at the USDA headquarters on the National Mall in Washington, DC, has donated more than 170 pounds of produce to The DC Central Kitchen. The DC Central Kitchen offers job training in culinary and food service skills to DC’s homeless.

Across the country there are more than 1 million community gardens that produce on average about \$500 worth of produce per garden each year. These gardens not only provide, fresh, healthy, locally raised food to the participants, they also become a hub of community-building activities. They beautify neighborhoods, become meeting places for residents, and help foster a sense of pride and belonging in the community.

The following articles are from: National Gardening Association

### **Produce More Raspberries in Cool Climates**

It’s raspberry season in many parts of the country. If you love red raspberries and want to get an even bigger crop, consider using a technique developed by researchers in Norway. They grew two red raspberry varieties in greenhouses and outdoors. Plants were grown the first season, then moved to cold storage until the following spring. All of these second-year plants were tip pruned to a height of 5 feet on June 1st and planted either in an open plastic hoop house or outdoors. The highest yields (up to 8 pounds of berries per cane) were achieved on raspberries grown in the plastic hoop house. Yields of plants grown outdoors were lower. Researchers believed of all the factors influencing production, the tip pruning height was the most important. For gardeners in northern climates, growing raspberries in hoop houses and tip pruning second year canes to 5 feet might be the ticket to higher yields.

### **Return of American Chestnut Can Help Reduce Global Warming**

American chestnuts (*Castanea dentate*) were prized trees in North American forests until blight wiped them out in the last century. Researchers have been trying to breed a disease-resistant variety to replace this noble species. Not only are chestnuts great trees for producing wood for furniture and food for wildlife, American chestnuts could also help reduce global warming because of their fast growth rate.

Researchers at Purdue University compared a few remaining American chestnuts growing in the wild with other deciduous tree species, such as northern red oak and black

walnut. They found American chestnuts not only grew faster than these other tree species, but had up to 3 times the biomass of other trees at the same age and sequestered more carbon. The American chestnut could be a key species in reducing carbon dioxide in the atmosphere and mitigating global warming. Breeders are working on a blight-resistant chestnut variety by crossing the few remaining American chestnuts with the blight-resistant Chinese chestnut. They have developed trees that are 94% American chestnut, yet still have the resistance gene.

The following article is from: Global Research, February 24, 2009

### **Monsanto's Bt Cotton Kills the Soil as Well as Farmers**

<http://www.globalresearch.ca/index.php?context=viewArticle&code=20090224&articleId=12432>

Biosafety refers to ensuring that GMO's do not harm the environment or health. The soil, its fertility, and the organisms which maintain the fertility of soil are a vital aspect of the environment, especially in the context of food and agricultural production. A recent scientific study carried out by Navdanya, compared the soil of fields where Bt-cotton had been planted for 3 years with adjoining fields with non GMO cotton or other crops. The region covered included Nagpur, Amravati and Wardha of Vidharbha which accounts for highest GMO cotton planting in India, and the highest rate of farmers' suicides (4000 per year).

In 3 years, Bt-cotton has reduced the population of actinomycetes by 17%.

Actinomycetes are vital for breaking down cellulose and creating humus. Bacteria were reduced by 14%. The total microbial biomass was reduced by 8.9%. Vital soil beneficial enzymes which make nutrients available to plants have also been drastically reduced.

Acid Phosphatase which contributes to uptake of phosphates was reduced by 26.6%.

Nitrogenase enzymes which help fix nitrogen were reduced by 22.6%. At this rate, in a decade of planting with GM cotton, or any GM crop with Bt genes in it, could lead to total destruction of soil organisms, leaving dead soil unable to produce food. The ISAAA in its recent release has stated that there are 7.6 mha of Bt-cotton in India. This means 7.6 mha of dying soils. The impact of GMO's on soil organisms is not commonly studied.

This is a vital lacuna because Bt toxin crops such as Mon 810 corn or Bt-cotton or Bt Brinjal have serious impact on beneficial soil organisms. The government of India is trying to grant approval to Bt Brinjal without Bio safety studies on impact on Soil organisms. The European Commission is trying to put pressure on GMO free countries to introduce Mon 810 corn. The Navdanya study the first that has looked at the long term impact of Bt cotton on soil organisms is a wake up to regulators worldwide. It also shows that the claims of the Biotechnology industry about the safety of GM crops are false.

To get a copy of the report and for further information, please contact -

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### **To Till or Not Till in Compost**

Most gardeners know that compost applied to perennial beds helps the soil and plants in many ways. Usually the added compost is tilled into the soil before planting. Now research from the Washington State University at Puyallup questions whether that's necessary. Researchers applied a 3-inch-thick layer of compost to silty loam soil test plots. Some of the plots were tilled to a depth of 7 inches, while others were left with the compost on the soil surface. Red osier dogwood shrubs were planted throughout the test area. After six years of measuring growth rates and fertility levels, researchers concluded that the difference in growth rates in shrubs in the tilled and untilled sites was minimal. Both treatments improved soil quality and leaf coloration. The tilled-in sites did have slightly higher levels of carbon and nitrogen in the soil. Researchers concluded gardeners shouldn't get too concerned about tilling in the compost when applying it to perennial plantings.

For more information on this research and to obtain a pdf file of this report, go to:

[Washington State University](#).

## **Declining Fruit and Vegetable Nutrient Composition: What Is the Evidence?**

**By Donald R. Davis**

**Journal of HortScience; February 2009, 5 pp.**

The Gist:

If the economy isn't grim enough for you, just check out the February issue of the Journal of HortScience, which contains a report on the sorry state of American fruits and veggies. Apparently produce in the U.S. not only tastes worse than it did in your grandparents' days, it also contains fewer nutrients — at least according to Donald R. Davis, a former research associate with the Biochemical Institute at the University of Texas, Austin. Davis claims the average vegetable found in today's supermarket is anywhere from 5% to 40% lower in minerals (including magnesium, iron, calcium and zinc) than those harvested just 50 years ago.

On the Difficulty of Comparing "Then" and "Now:" Davis is quick to note that historical data can sometimes be misleading, if not altogether inaccurate. Take early measurements of iron in foods: because scientists failed to sufficiently remove clinging soil, iron levels appeared unusually high in certain vegetables like spinach, (which gave rise to the myth that it contained exorbitant amounts of the mineral — a myth further propagated by the popular cartoon character, Popeye). Then again, good historical data provides the only real-world evidence of changes in foods over time, and such data does exist — one farm in Hertfordshire, England, for example, has archived its wheat samples since 1843.

2. On the So-Called "Dilution Effect:" Today's vegetables might be larger, but if you think that means they contain more nutrients, you'd be wrong. Davis writes that jumbo-sized produce contains more "dry matter" than anything else, which dilutes mineral concentrations. In other words, when it comes to growing food, less is more. Scientific papers have cited one of the first reports of this effect, a 1981 study by W.M. Jarrell and R.B. Beverly in *Advances in Agronomy*, more than 180

times since its publication, "suggesting that the effect is widely regarded as common knowledge." (See pictures of fruit.)

Less studied, though, is the "genetic dilution effect," in which selective breeding to increase crop yield has led to declines in protein, amino acids, and as many as six minerals in one study of commercial broccoli grown in 1996 and '97 in South Carolina. Because nearly 90% of dry matter is carbohydrates, "when breeders select for high yield, they are, in effect, selecting mostly for high carbohydrate with no assurance that dozens of other nutrients and thousands of phytochemicals will all increase in proportion to yield."

2. On the "Industrialization" of Agriculture: Thanks to the growing rise of chemical fertilizers and pesticides, modern crops are being harvested faster than ever before. But quick and early harvests mean the produce has less time to absorb nutrients either from synthesis or the soil, and minerals like potassium (the "K" in N-P-K fertilizers) often interfere with a plant's ability to take up nutrients. Monoculture farming practices — another hallmark of the Big Ag industry — have also led to soil-mineral depletion, which, in turn, affects the nutrient content of crops.

The Lowdown:

If you're still not buying the whole "organic-is-better" argument, this study might convince you otherwise. As Davis points out, more than three billion people around the world suffer from malnourishment and yet, ironically, efforts to increase food production have actually produced food that is less nourishing. Fruits seem to be less affected by genetic and environmental dilution, but one can't help but wonder how nutritionally bankrupt veggies can be avoided. Supplementing them is problematic, too: don't look to vitamin pills, as recent research indicates that those aren't very helpful either.