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Has crop engineering gone too far?

By Allison M. Heinrichs
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Considered the grand dame of the Sewickley garden circle, Peggy Standish always has an eye open for disease-resistant petunias or zinnias that will yield more buds -- and has no problem if it takes genetic engineering to achieve it.

But when it comes to vegetables, Standish draws the line.

"I get a little queasy when they do it with tomatoes and vegetables," said Standish, 64, of Sewickley. "I worry about introducing other elements into corn and tomatoes and things that we eat. I just don't think they've been on the market long enough to be proven safe."

Standish isn't alone. Partly because of the public perception that genetic engineering isn't safe or desirable, almost 80 seed companies in the United States and Canada have signed a "safe seed" pledge stating that they "do not knowingly buy or sell genetically engineered seeds or plants." It's a big stance in the home gardening industry, which caters to a hobby more than half of all Americans enjoy.

Genetic engineering, or "modifying," is the scientific alteration of genetic material in a living organism -- the moving or swapping of genes in DNA strands, sometimes with those from completely different species. In plants it is usually done to increase yields or improve resistance to disease. Such crops have been on the market with U.S. Department of Agriculture approval since the mid-1990s.

Currently no company markets genetically engineered seeds to the home gardener, but with 87 percent of the soybeans and 52 percent of the corn commercially grown in the U.S. being genetically engineered, some people say it's only a matter of time.

"It could already be in some gardening seeds, but (companies) don't have to

If you want to go

The Sewickley Civic Garden Council will hold its 41st Annual May Mart to sell locally grown flowers, vegetables and herbs from 9 a.m. to 1 p.m. May 13 on Broad Street in downtown Sewickley. Money raised from the sales goes to beautifying the area and maintaining its natural diversity. There will be free parking.

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label the seeds as being genetically engineered, so you wouldn't be able to tell," said Sujatha Byravan, president of the nonprofit Council for Responsible Genetics.

Despite concerns raised by some scientists and environmental groups, there is no conclusive evidence that genetically engineered plants are dangerous, said Felicia Wu, a University of Pittsburgh assistant professor of environmental and occupational health who has done research with the U.S. Environmental Protection Agency.

"As a risk analyst, I believe that the genetically modified organisms commercialized today are most likely safe for human health and the environment," Wu said.

Sam Tumminello, a grower at Frankstown Gardens in Penn Hills, said he's not afraid of using science to get better vegetables. For several years he's sold tomato plants grown in the nursery's greenhouse from seeds bred by scientists for their disease-resistant traits.

"They don't crack or get blight," Tumminello said. "They're just better, and there's no difference in taste."

Though his tomatoes aren't genetically engineered -- they were made by cross pollinating plants with desirable traits, something farmers have done for hundreds of years -- Tumminello said he trusts his seed brokers. If they offered genetically engineered tomato seeds at a reasonable price, he'd plant them.

"Anything that will keep my customers happy, I have to try it," he said.

All America Selections, an Illinois-based plant testing organization, annually releases a list of new seed varieties they believe gardeners will enjoy. While they encourage the use of science to create purple carrots and peppers with a spiciness that can be controlled by the amount of sunlight and water they receive, they prohibit genetic engineering.

"The public perceives it as undesirable," said executive director Nona Koivula, adding that All America Selections does not necessarily consider genetic engineering unsafe. "If the public perception changes, then maybe we'll change our policy."

When Barb Kline orders seeds to plant on the 2-acre Mildred's Daughters' Urban Farm she co-owns in Lawrenceville, she always checks to make sure the company has signed the safe seed pledge.

"One of the big things that we really want to do at Mildred's Daughters is try to preserve the genetic diversity of the seed supply," Kline said.

She worries that genetic engineering will create a few plants that everyone will want because of their attractive qualities. She believes people will then stop growing other flowers and vegetables and they'll eventually die out, resulting in

only a few plants dominating the horticultural landscape.

Called "heirlooms," plants that have been farmed for at least 50 years and produce seeds with the same traits as the original plant are becoming more popular among gardeners, partly because they are the antithesis of genetically engineered crops.

Gail Becker -- who describes herself as a "wannabe gardener" because caring for her young children prevents her from devoting a lot of time to digging in the soil -- said that when she does garden, she tries to stick with heirloom vegetables.

"I've started thinking about genetic engineering," said Becker, of Sewickley, but added that the main reason she grows heirlooms is that "they just taste better."

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