GMO Crops Still Safe

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A lively discussion at last week's Master Gardener training on GMOs (genetically modified organisms) reminded me of the four weekly columns I wrote in 2013 on the subject. Those articles went into great detail on what GMO crops really are, how biotechnology works, the similarities and differences between biotech and traditional plant breeding, and safety concerns. I thought I'd use today's column to provide an update on the safety of genetically modified organisms:

They are STILL safe to people and the environment. There is still NO evidence that consuming genetically modified foods causes any health problems.

There is no data to indicate that consumption of GMOs is bad for human health. How do we know? GMOs have undergone more detailed evaluation than any other group of plants that we consume. In almost all cases, GMOs differ from a conventional plant by the addition of just one or two genes that produce one or two new proteins. The origin and function of these proteins are well understood, and have been studied to make sure they do not have any characteristics that are likely to cause allergic reactions. Most importantly, over the two decades that GMOs have been on the market, there have been no occurrences of health issues due to genetically modified organisms.

Biotechnology has not led to the creation of "superweeds." There are cases where researchers are seeing the expected result of over-relying on a single pesticide: weeds that were always genetically resistant to glyphosate (Roundup) are becoming more common, but they are not becoming genetically altered themselves. And despite some reports from questionable sources, glyphosate still has a better environmental and safety profile than many other herbicides that we used to use.

Likewise, GM crops don't harm honeybees or monarch butterflies. On the contrary, they may reduce the need for pesticides that do harm them.

What HAS happened in the three years since I wrote this series is that many universities have finally begun to consolidate their research and present it to the public in language that anyone can understand. Purdue University, for example, has created an entire website on The Science of GMOs: https://ag.purdue.edu/GMOs/pages/scienceofgmos.aspx . The major topics this site covers includes:

- What are GMOs?
- Why do we use GMOs?
- Do they harm health?
- How do they affect insects and weeds?
- How does the regulation process work?
- GMO foods and labeling.

The University of Kentucky's Extension Biotech Strategic Initiative this week announced the availability of a new Curriculum on Genetically Engineered Crops. All materials in the curriculum are publicly available and can be found here: http://www2.ca.uky.edu/anr/Biotech/biotech.htm. This site includes videos and written resources for both the general public and Extension staff.

If you'd like to have me send you back copies of my earlier articles, or if you have questions that these websites don't address, contact me at the Purdue Extension Service at (812) 435-5287, and I'll find the answers for you.