LAND STEWARDSHIP PROJECT

LSP *Myth Buster* #26

An ongoing Land Stewardship Project series on ag myths and ways of deflating them.

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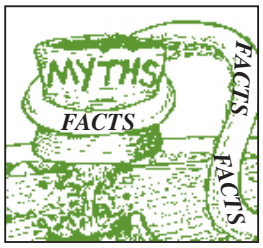
Myth: Genetically modified crops have reduced pesticide use.

Fact:

When genetically modified crops came on the market almost 15 years ago, biotechnology giants like Monsanto eased the public's concerns over "frankenfoods" by promising that these products would reduce pesticide use, and thus be a boon to the environment. For example, soybeans genetically engineered to resist being killed by the Monsanto herbicide Roundup would only need to be sprayed once during the growing season, said biotech's boosters. Roundup is the commercial name for the weed killer glyphosate, which has a chemical formulation that is very volatile.



That means it kills on contact and then dissipates into the atmosphere, making it less of a long-term threat to water quality. An herbicide like atrazine, on the other hand, can be used as a pre-emergent weed killer, meaning it can be applied before plants emerge. This provides long-term weed control but it also means such herbicides stay active in the environment longer, giving them more time to cause problems.

But genetic engineering's promise of fewer crop production chemicals isn't quite working out. In an extensive analysis of USDA chemical use released in November, scientist Charles Benbrook found that genetically modified crops have increased pesticide use by 318 million pounds since 1996, compared to what would have probably been used in the absence of GMO varieties. Herbicide use on crops genetically engineered to resist weed killers rose over 31 percent from 2007 to 2008 alone.

That makes the overall chemical footprint of GMO crops "decidedly negative," concludes Benbrook. One main reason is that the overwhelming popularity of glyphosate has meant a whole lot of weeds are getting exposed to that chemical. And just as overuse of an antibiotic can spawn superbugs, exposing weeds to the same kind of chemical time-after-time is producing plants that can take a spraying and keep on playing.

As Benbrook points out, glyphosate-resistant weeds were practically unknown in this country before the introduction of Roundup Ready crops 13 years ago. Today at least nine such superweeds infest millions of acres of cropland in this country. This winter the farm press was full of reports of herbicide-resistant weeds emerging across the Midwestern and Southern U.S.

Defenders of biotech argue, somewhat rightly, that more of glyphosate is better than less of some of the nastier herbicides that were used in the old days. Remember, glyphosate doesn't stick around long in the environment, making it less of a long-term threat. However, their argument is losing steam as more resistant weeds pop up. Farmers sometimes find they need to spray crop fields numerous times with glyphosate. And even if the weed killer is as benign as the agrichemical industry would have us believe, it's still a pesticide that kills living things, and putting more of it in the environment is not a good thing.

Perhaps even more troubling is the fact that chemical company agronomists are recommending that farmers deal with superweeds by going back to more of the highly-toxic, persistent pre-emergent chemicals glyphosate was supposed to help them avoid in the first place.

More information

◆ To read Charles Benbrook's report, "Impacts of Genetically Engineered Crops on Pesticide Use in the United States: The First Thirteen Years," see www.organic-center.org/reportfiles/13Years20091126_ExSumFrontMatter.pdf.

This **Myth Buster** *is brought to you by the members and staff of the Land Stewardship Project, a private, nonprofit organization devoted to fostering an ethic of stewardship for farmland and to seeing more successful farmers on the land raising crops and livestock. For more information, call 612-722-6377 or visit www.landstewardshipproject.org.*