

Genetic Engineering Companies Promised Reduced Pesticide Use ... But GMO Crops Have Led to a 25% Increase In Herbicide Use

By [Washington's Blog](#)

Theme: [Biotechnology and GMO](#)

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One of the Main Selling Points for GE Crops - Decreased Pesticide Use - Has Been Totally Debunked

One of the main selling points for genetically engineered crops is that they would use *substantially* less pesticides than conventional crops.

Because of that, and other, promises regarding GE crops, they have taken over much of the food crops in America. For example:

- Monsanto reports that - between 2008 and 2009 - [95% of all sugarbeets planted were genetically engineered to be able to tolerate high doses of the pesticide Roundup](#)
- The USDA [reports](#) that 93% of all soy and 85% of all corn grown in the U.S. is an herbicide-resistant GE variety
- Similarly, around [93%](#) of all cottonseed oil and more than [90%](#) of all canola oil produced in the U.S. is herbicide-resistant GE

However, it turns out that GE crops need *a lot more* herbicides than conventional ones.

Washington State University Charles Benbrook - former Executive Director of the Board on Agriculture at the National Academy of Sciences and, before that, Executive Director of the Subcommittee on Department Operations, Research, and Foreign Agriculture, U.S. House of Representatives - published a [study](#) showing:

Contrary to often-repeated claims that today's genetically-engineered crops have, and are reducing pesticide use, the spread of glyphosate-resistant weeds in herbicide-resistant weed management systems has brought about substantial increases in the number and volume of herbicides applied. If new genetically engineered forms of corn and soybeans tolerant of 2,4-D are approved, the volume of 2,4-D sprayed [[background](#)] could drive herbicide usage upward by [another](#) approximate 50%.

Largely because of the spread of glyphosate-resistant weeds, HR crop technology has led to a 239 million kg (527 million pound) increase in herbicide

use across the three major GE-HR crops, compared to what herbicide use would likely have been in the absence of HR crops.

Washington State University [explains](#):

Herbicide-tolerant crops worked extremely well in the first few years of use, but over-reliance led to shifts in weed communities and the emergence of resistant weeds that have, together, forced farmers to incrementally -

- Increase herbicide application rates (especially glyphosate),
- Spray more often, and
- Add new herbicides that work through an alternate mode-of-action into their spray programs.

Each of these responses has, and will continue to contribute to the steady rise in the volume of herbicides applied per acre of HT corn, cotton, and soybeans.

HT crops have increased herbicide use by 527 million pounds over the 16-year period (1996-2011). The incremental increase per year has grown steadily from 1.5 million pounds in 1999, to 18 million five years later in 2003, and 79 million pounds in 2009. In 2011, about 90 million more pounds of herbicides were applied than likely in the absence of HT, or about 24% of total herbicide use on the three crops in 2011.

Today's major GE crops have increased overall pesticide use by 404 million pounds from 1996 through 2011 (527 million pound increase in herbicides, minus the 123 million pound decrease in insecticides). Overall pesticide use in 2011 was about 20% higher on each acre planted to a GE crop, compared to pesticide use on acres not planted to GE crops.

There are now two-dozen weeds resistant to glyphosate, the major herbicide used on HT crops, and many of these are spreading rapidly. Millions of acres are infested with more than one glyphosate-resistant weed. The presence of resistant weeds drives up herbicide use by 25% to 50%, and increases farmer-weed control costs by at least as much.

The biotechnology-seed-pesticide industry's primary response to the spread of glyphosate-resistant weeds is development of new HT varieties resistant to multiple herbicides, including 2,4-D and dicamba. These older phenoxy herbicides pose markedly greater human health and environmental risks per acre treated than glyphosate. Approval of corn tolerant of 2,4-D is pending, and could lead to an additional 50% increase in herbicide use per acre on 2,4-D HT corn.

Science Daily [notes](#):

"Resistant weeds have become a major problem for many farmers reliant on GE crops, and they are now driving up the volume of herbicide needed each year by about 25 percent," Benbrook said.

Forbes [points out](#):

A [new study](#) released by Food & Water Watch yesterday finds the goal of reduced chemical use has not panned out as planned. In fact, according to the

USDA and EPA data used in the report, the [quick adoption](#) of genetically engineered crops by farmers has increased herbicide use over the past 9 years in the U.S. The report follows on the heels of another such [study](#) by [Washington State University](#) research professor Charles Benbrook just last year.

Both reports focus on “superweeds.” It turns out that spraying a pesticide repeatedly selects for weeds which also resist the chemical. Ever more resistant weeds are then bred, able to withstand increasing amounts – and often different forms – of herbicide.

Other Potential Downsides

Genetically engineered foods have been linked to [obesity](#), [cancer](#), [liver failure](#), [infertility](#) and all sorts of other diseases (brief, must-watch videos [here](#) and [here](#)).

And genetically-engineered meat [isn't even tested for human safety](#).

But government agencies like the FDA go to great lengths to [cover up the potential health damage from genetically modified foods](#), and to keep the consumer in the dark about what they're really eating.

The EPA recently raised the allowable amount of a [glyphosate – the main ingredient in Monsanto's toxic Roundup](#) – by [3,000%](#) ... pretending that it won't have adverse health effects.

And – as noted above – the EPA is leaning towards approving corn [specially engineered to tolerate the highly-toxic herbicide 2,4-D](#). Ironically, Monsanto has proposed this new “[Agent Orange corn](#)” to combat the [superweeds](#) caused by the use of Monsanto's Roundup-ready GE crops. What could go possibly go wrong?

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