

# Genetic Engineering: Two Million People In 52 Countries March Against Monsanto

By [Washington's Blog](#)

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Theme: [Biotechnology and GMO](#)

## Monsanto's Arguments Debunked

[2 million people in 52 countries](#) protested against Monsanto today. ([Pictures here.](#))

In response to the protest, Monsanto's spokesperson [said](#):

Among the challenges facing agriculture are producing food for our growing population and reducing agriculture's footprint on the environment. While we respect each individual's right to express their point of view on these topics, we believe we are making a contribution to improving agriculture by helping farmers produce more from their land while conserving natural resources such as water and energy.

Is this true?

The Independent [noted](#) in 2008:

Genetic modification actually cuts the productivity of crops, an authoritative new study shows, undermining repeated claims that a switch to the controversial technology is needed to solve the growing world food crisis.

The study – carried out over the past three years at the University of Kansas in the US grain belt – has found that GM soya produces about 10 per cent less food than its conventional equivalent, contradicting assertions by advocates of the technology that it increases yields.

Professor Barney Gordon, of the university's department of agronomy, said he started the research – reported in the journal *Better Crops* – because many farmers who had changed over to the GM crop had “noticed that yields are not as high as expected even under optimal conditions”. He added: “People were asking the question ‘how come I don’t get as high a yield as I used to?’”

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The new study confirms earlier research at the University of Nebraska, which found that another Monsanto GM soya produced 6 per cent less than its closest conventional relative, and 11 per cent less than the best non-GM soya available.

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A similar situation seems to have happened with GM cotton in the US, where

the total US crop declined even as GM technology took over.

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Last week the biggest study of its kind ever conducted – the International Assessment of Agricultural Science and Technology for Development – concluded that GM was not the answer to world hunger.

Professor Bob Watson, the director of the study and chief scientist at the Department for Environment, Food and Rural Affairs, when asked if GM could solve world hunger, said: “The simple answer is no.”

Scientific American [reported](#) in 2009:

Proponents argue that GM crops can help feed the world. And given ever increasing demands for food, animal feed, fiber and now even biofuels, the world needs all the help it can get.

Unfortunately, it looks like GM corn and soybeans won’t help, after all.

The Union of Concerned Scientists [wrote](#) the same year:

For years the biotechnology industry has trumpeted that it will feed the world, promising that its genetically engineered crops will produce higher yields.

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That promise has proven to be empty .... [A UCS report] reviewed two dozen academic studies of corn and soybeans, the two primary genetically engineered food and feed crops grown in the United States. Based on those studies, the UCS report concludes that genetically engineering herbicide-tolerant soybeans and herbicide-tolerant corn has not increased yields. Insect-resistant corn, meanwhile, has improved yields only marginally. The increase in yields for both crops over the last 13 years, the report finds, was largely due to traditional breeding or improvements in agricultural practices.

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The report does not discount the possibility of genetic engineering eventually contributing to increase crop yields. It does, however, suggest that it makes little sense to support genetic engineering at the expense of technologies that have proven to substantially increase yields, especially in many developing countries. In addition, recent studies have shown that organic and similar farming methods that minimize the use of pesticides and synthetic fertilizers can more than double crop yields at little cost to poor farmers in such developing regions as Sub-Saharan Africa.

The report recommends that the U.S. Department of Agriculture, state agricultural agencies, and universities increase research and development for proven approaches to boost crop yields. Those approaches should include modern conventional plant breeding methods, sustainable and organic farming, and other sophisticated farming practices that do not require farmers to pay significant upfront costs. The report also recommends that U.S. food aid organizations make these more promising and affordable alternatives available to farmers in developing countries.

“If we are going to make headway in combating hunger due to overpopulation

and climate change, we will need to increase crop yields,” said [Gurian-Sherman](#). “Traditional breeding outperforms genetic engineering hands down.”

Mother Jones [pointed out](#) in February:

Washington State University researcher Charles Benbrook has [demonstrated](#) that the net effect of GMOs in the United States has been an increase in use of toxic chemical inputs.

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And in a new [paper](#) (PDF) funded by the US Department of Agriculture, University of Wisconsin researchers have essentially negated the “more food” argument as well. The researchers looked at data from UW test plots that compared crop yields from various varieties of hybrid corn, some genetically modified and some not, between 1990 and 2010. While some GM varieties delivered small yield gains, others did not. Several even showed lower yields than non-GM counterparts. With the exception of one commonly used trait—a Bt type designed to kill the European corn borer—the authors conclude, “we were surprised not to find strongly positive transgenic yield effects.” Both the glyphosate-tolerant (Roundup Ready) and the Bt trait for corn rootworm caused yields to drop.

Then there’s the question of so-called “stacked-trait” crops—that is, say, corn engineered to contain multiple added genes—for example, Monsanto’s “Smart Stax” product, which contains both herbicide-tolerant and pesticide-expressing genes. The authors detected what they call “gene interaction” in these crops—genes inserted into them interact with each other in ways that affect yield, often negatively. If multiple genes added to a variety didn’t interact, “the [yield] effect of stacked genes would be equal to the sum of the corresponding single gene effects,” the authors write. Instead, the stacked-trait crops were all over the map. “We found strong evidence of gene interactions among transgenic traits when they are stacked,” they write. Most of those effects were negative—i.e., yield was reduced.

Overall, the report uncovers evidence of what is known as “yield drag”—the idea that manipulating the genome of a plant variety causes unintended changes in the way it grows, causing it to be less productive.

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Here’s how the authors of a major paper published in [Nature](#) [one of the world’s leading science journals] last year put it:

Soils managed with organic methods have shown better water-holding capacity and water infiltration rates and have produced higher yields than conventional systems under drought conditions and excessive rainfall.

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

*Postscript: This is a [bipartisan movement](#). After all, polls show that a large majority of Americans want [strong food safety rules](#), and [want genetically modified foods to be labeled](#).*

*And yet Congress is – yet again – handing a big funder [unlimited power](#).*

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