


# The Case Against “FrankenFood”



Genetically modified foods are bad for our health,  
the environment, and farmers worldwide.

“There’s no consumer benefit to a genetically modified organism [GMO], says Jeffrey Smith, executive director of the nonprofit Institute for Responsible Technology ([responsibletechnology.org](http://responsibletechnology.org)) and author of *Genetic Roulette* (Chelsea Green , 2007). “They’re not like extra salt or sugar, which are under attack for health reasons but provide taste. GMOs are simply soaked in poison. They’re either herbicide-tolerant or they have an insect-killing toxin in every cell of the plant, including the food portion. No one is clamoring for a daily dose.” (See our interview with Jeffrey Smith on p. 22).

But few are clamoring to get away from them, either. In the US, we eat GMOs daily and without question, while 40 other countries, including the entire European Union, require some form of labeling on foods with GM ingredients.

Is it okay for Americans to continue blindly consuming the products of genetic manipulation? After digging into the latest research, we at Green America say no—it’s dangerous to the environment, to farmers, and likely, to our health.

## An Uncalculated Risk

“When you look at the studies, GMOs may be a powerful contributor to the rise of major diseases in the US: food allergies, irritable bowels, and a host of other problems,” says Smith. In fact, he points out, the American Academy of Environmental Medicine (AAEM) says there’s enough evidence for concern right now. In 2009, AAEM adopted the official position that all physicians should be prescribing GMO-free diets to patients.

We talked with Consumers Union senior staff scientist Michael Hansen (p. 14), and it’s clear from the many studies he cites that something is awry with US food safety standards—or the lack thereof—when it comes to GM food.

In addition, there’s proof that GM food crops harm the

environment, contributing to the emergence of herbicide-resistant “superweeds” and increased toxic pesticide use. They’re also contaminating nearby organic fields (p. 18).

GM crops have a societal impact, as well; farmer suicides have skyrocketed in India—a tragedy that many say may be related at least in part to the introduction of Bt cotton seeds (p. 17).

The fact is, the science on GMOs is still young. You and your family might not be eating poison every day.

But then again, you might. We at Green America believe the risk isn’t worth it—not when GMO-free food is readily available, if you know where to look.

## Reaching a GMO Tipping Point

After you read the articles in our GMO theme section, we hope you’ll share them with others, to get the GMO conversation started in the US. Smith is confident that if enough people take a hard look at the possible effects of GMOs on our bodies, we could reach a “tipping point” of consumer concern that could make a big difference. (Find our full interview with Smith at [greenamerica.org/go/GMOs](http://greenamerica.org/go/GMOs).)

“If GMOs become unpopular like trans-fats, why would a company keep using them? Even if a company sees a tiny drop in market share that it can point to anti-GMO sentiment as the cause, that will be a powerful signal that it’s time to start removing GMOs from their products,” he says.

To help reach that point, Green America and our allies are calling on the US government to require that GM foods bear a label, as they do in the EU, so consumers can make informed choices (p. 4). As we work toward labeling laws, we’ll show you how to avoid eating GM food (p. 20).

It’s up to us to start the non-GMO revolution, and take back the food we feed ourselves and our children.

—Tracy Fernandez Rysavy, editor-in-chief



Green Festival/Chris Eaves

## The Anti-GMO Tipping Point

Dynamic Green Festival® speaker Jeffrey Smith has traveled around the world, talking with government leaders and community activists on the dangers of genetically modified organisms (GMOs) in the food supply. Known for his ability to translate scientific studies on GMOs into language that everyday people can understand, Smith is the author of *Seeds of Deception: Exposing Industry and Government Lies about the Safety of the Genetically Engineered Foods You're Eating* (Yes Books, 2005) and *Genetic Roulette: The Documented Health Risks of Genetically Engineered Foods* (Chelsea Green, 2007).

Smith is also the founder and executive director of the Institute for Responsible Technology (IRT), a nonprofit collective of scientists and others who work to educate policy makers and the public on the risks associated with GM foods. He's also been the subject of a targeted, robust industry campaign to discredit his work, but we think you might want to listen to him anyway.

Learn more about Smith and IRT—and get a free consumer “Non-GMO Guide”—at [responsibletechnology.org](http://responsibletechnology.org).

**Green America/Tracy Fernandez Rysavy:** How did the potential dangers of GMOs first land on your radar?

**Jeffrey Smith:** It came from a warning by a scientist at a lecture I was attending in 1996, who laid out a number of hard scientific facts showing that there was no way companies could introduce safe GM foods, given the primitive and unreliable nature of the technology.

I realized that the information was powerful and compelling, but it was

known by very few and largely among scientific circles, so I endeavored to translate the scientific concerns into language others could understand. I started with lectures and brochures and then the book *Seeds of Deception*, which became the bestselling book on GMOs. As a result, I launched the Institute for Responsible Technology (IRT).

I'm not against genetic engineering (GE) as a science—not against GE medicine, if the scientists understand

the side effects that can occur. I'm not against gene therapy, where you correct a defective gene and save lives. I'm not against GE studies in labs. But to feed the products of this infant science to people without studying their effects and releasing them into the environment where they can't be recalled is extremely dangerous and irresponsible.

**GA/Tracy:** I think many people have at least a vague knowledge of the impact GMOs have on the environment, but very few appear to understand that they also may affect human health.

**Jeffrey Smith:** When you look at the big picture, GMOs may be a powerful contributor to the rise of major diseases in the US: food allergies, irritable bowel, and a host of other problems.

There's a shorthand way of referring to the studies that find health concerns: The American Academy of Environmental Medicine determined that GMOs pose a significant health threat, citing several animal feeding studies showing reproductive problems, accelerated aging, gastro-intestinal disorders, and problems in the regulation of cholesterol and insulin. The Academy has urged all doctors to prescribe non-GMO diets.

When I speak to doctors around the country, they report seeing an increase in the incidence and severity of certain diseases, which they believe are GMO-related. Moreover, when these doctors take people off of GMO diets, they report that the symptoms—of migraines, gastro-intestinal disorders, weight problems, and more—start to disappear.

**GA/Tracy:** Can you give some examples of the troublesome studies?

**Jeffrey Smith:** When the bodies of animals fed GMOs are compared in autopsies to those fed non-GMO feed, those fed GMOs have a terrible stench related to altered gut bacteria. The stomachs of pigs show ulcers and inflammation. The intestines are beat up and sometimes break in the hand like tissue. The organs are often discolored. These are in studies comparing the same type of animals—the only difference is that some are fed GMOs and some not.



The animal feeding studies for reproductive dysfunctions are astounding. Rodents that eat GM soy had changes in young sperm cells. Their testicles turned from pink to blue. The DNA function in their offspring changes.

In one study where female rats were fed GM soy, more than half of their babies died within three weeks, compared to a ten percent death rate in those fed non-GMO soy. Another study showed that female rats fed GMOs couldn't reproduce. In another, hamsters fed GMOs lost the ability to have babies and died at four to five times the rate of non-GMO eaters. Mice fed GMO corn had smaller and fewer babies.

This is just one topic. In other animal feeding studies, we also see toxicity in the liver and kidneys as a consistent result. Likewise, every *competent* test that evaluated immune-system problems in animals fed GMOs found them.

There are hardly any long-term feeding studies and no post-marketing surveillance. The only human feeding study ever conducted confirmed that the gene inserted into soybeans to make them "Roundup Ready"—or non-killable by the pesticide Roundup's active ingredient glyphosate—transferred into the DNA of the bacteria living inside our intestines, and the transferred gene was functioning. The bacteria became "Roundup Ready." These results could mean that long after we stop eating GMOS, we could have GM proteins inside our intestines.

**GA/Tracy:** There's always this widespread assumption that if these foods were unsafe, the government wouldn't allow them on the market. Is our government protecting us?

**Jeffrey Smith:** In a word, no. When you read the formerly secret internal memos of the US FDA [Food and Drug Administration] scientists at the time they were evaluating GMO policy in 1996, there was an overwhelming consensus that GMOs could create allergies, toxins, new diseases. The FDA scientists repeatedly warned their superiors, asking for long-term, rigorous safety studies.

However, the White House had instructed the FDA to promote GMO tech-

nology. So they hired Michael Taylor, a former Monsanto lobbyist, to oversee the creation of GMO policy for the FDA.

Under Taylor's watch, the FDA publicly claimed it was not aware of any information saying that GMOs were different from conventional foods. On the basis of that lie, the FDA said no testing of GMOs were required, and companies like Monsanto could determine whether their own products were safe, without telling the FDA or consumers.

Michael Taylor is now back in the FDA as the food safety czar.

**GA/Tracy:** Are there any studies that say GMOs are safe?

**Jeffrey Smith:** Sure, but they're most often performed by the biotech companies themselves. In *Genetic Roulette*, I have 41 pages showing how these companies have bad science down to a science. They rig their research—using the wrong detection or statistical methods. They dilute or overcook their samples. Animal feeding studies are too short and superficial to find anything going wrong—and things do go wrong, in spite of their best efforts, but they ignore those findings.

In one case, a Monsanto study showed that Monsanto's GM corn varieties had no effect on health. Then a group of independent scientists re-analyzed the data and linked it to signs of organ toxicity.

When the company wanted to show that milk from cows treated with rBGH [recombinant bovine growth hormone] contained very little rBGH, it had its scientists pasteurize the milk 125 times longer than normal. When that didn't work, the scientists added powdered milk, pasteurized it some more, and finally destroyed 90 percent of the hormone. The FDA reported that pasteurization destroys 90 percent of rBGH in milk from cows treated with the hormone, ignoring the obvious flaws in study.

**GA/Tracy:** You've said we're at a "tipping point" of consumer concern when it comes to GMOs. Can you explain?

**Jeffrey Smith:** There's no consumer benefit to a GMO. They're not like extra salt or sugar, which are under attack for health reasons but provide taste. GMOs are simply soaked in poison. They're

either herbicide-tolerant or they have an insect-killing toxin in every cell of the plant, including the food portion. No one is clamoring for a daily dose.

For these reasons, we believe a tipping point can be achieved without convincing majority of US, just by giving the right information to those inclined to avoid GMOs. If GMOs become unpopular like trans-fats, why would a company keep using them? Even if a company sees a tiny drop in market share that it can point to anti-GMO sentiment in US consumers as the cause, that will be a powerful signal that it's time to start removing GMOs from their products.

We're seeing evidence that the tipping point is approaching. Non-GMO labels (see p. 21) are one of fastest growing labels. There are GMO labeling bills being introduced in more than a dozen states.

In fact, we're seeing a watershed opportunity in California: There's a ballot initiative now calling for mandatory labeling of all GM-laden foods sold in the state. If that passes—and we believe it will in November—I believe that companies would rather eliminate GMOs than admit to consumers that they're using them.

**GA/Tracy:** What can we do to protect ourselves?

**Jeffrey Smith:** That's the question: What can we do if we have living pesticide factories inside our guts? I do know that some doctors are having results getting people off of GMOs.

At least one study fed mice GM soy for eight months, and saw significant changes to the liver, pancreas, and testicles. Then, the researchers put the mice on non-GM soy for a month, and the problems started to reverse. So we have good news there and great news on tipping point front.

On our Web site, we have free materials, including our *Non-GMO Food Guide* ([nongmoshoppingguide.com](http://nongmoshoppingguide.com)) We have a Non-GMO Tipping Point Network where people can sign up to bring this news to their communities. We're also launching a campaign to protect children from GM baby food, cereal, and other GM foods targeted specifically to kids.

We invite people to participate in the non-GMO revolution. 🌱