

## **Would you choose genetically modified food if given a choice? Some animals won't.**

There's a bowl of corn chips in front of you made from natural corn. Next to it are genetically modified (GM) corn chips. Which do you choose?

If you were a pig or cow, we know the answer—the *natural* corn. Farmers repeatedly let pigs or cows into pens with troughs of GM corn and non-GM corn. The animals would head straight to the closer trough, filled with the genetically modified organisms (GMOs). They'd sniff, maybe take a nibble, then go over to the trough with the natural corn. After finishing off the last kernel, they'd stop by the GM corn one more time just to check it out, but quickly walk away.

An Iowa farmer who read about the finicky livestock decided to see if squirrels had similar dispositions. He nailed an ear of GM corn and non-GM corn onto trees by his house. Sure enough, the squirrels ate only the natural stuff, over and over again. When the farmer stopped replacing the natural corn, the squirrels still refused to touch the GMO. After 10 cold winter days, they got up the courage to nibble a few kernels, but that was all they could handle.

Another curious farmer wanted to repeat this with the squirrels in *his* area. He bought a bag full of GM corn ears, and another of non-GM, and left it in his garage to wait for winter. He waited too long. Mice did the experiment for him. They broke into the natural corn bag and finished it. The GM cobs were untouched.

Farmers, gardeners, reporters, and scientists have noticed similar behavior on at least four continents. Chickens, elk, deer, and raccoons avoided GM corn, while geese, rats, and buffalo refused GM soy, tomatoes, and cottonseed, respectively. Why are animals put off by genetically engineered food? No one knows for sure, but let's get back to the GM corn chips still sitting in front of you.

### **Dangerous side-effects**

Genetic material from bacteria and viruses are forced into the corn's DNA, which is then cloned into a plant. This *process* leads to substantial collateral damage, including changes in hundreds or thousands of natural corn genes, plus widespread mutations. Most of the side-effects are never tested for. We *do* know, for example, that an allergy producing gene, normally silent, gets switched on in a Monsanto corn variety. Proteins change shape, which might be a serious health hazard. And a compound called lignin is significantly overproduced. Lignin on its own may not be so bad, but in the process of producing it, the plant also produces rotenone, a natural pesticide linked to Parkinson's disease. No one has tested your chips to see if contains more rotenone.

In addition to the unpredicted changes, the genes inserted into the corn intentionally put more stuff into your snack food that may be hazardous. Monsanto's Roundup Ready corn, and Bayer's Liberty Link corn have added genes that allow the corn to withstand high doses of Roundup or Liberty herbicide. These varieties, therefore, have more weedkiller residues. Other GM varieties have inserted gene from bacteria that produce an insect killing toxin in every cell (and in every bite).

In addition, genes inserted into GM crops don't necessarily stay put. In the only human GM feeding experiment—done with Roundup Ready soy—functioning genes transferred into the DNA of bacteria living inside our intestines. This means that millions of Americans probably have Roundup Ready gut bacteria—unkillable with Roundup herbicide. No one has yet looked to see if GM corn genes also transfer. If they do, their insecticide-producing genes could turn your gut flora into living pesticide factories, continuously producing toxins inside you—long after you finish your bowl of chips.

Have you made your decision yet? If you still need encouragement, check out last issue of *Urban Garden* to find out why the American Academy of Environmental Medicine wants doctors across the country to prescribe non-GMO diets to everyone.

## **But aren't GMOs supposed to feed the world?**

If you're feeling some moral imperative to support GMOs, that's understandable. The biotech industry spent more than \$250 million convincing you that its gene-spliced foods are the answer to the sick and starving. So don't be embarrassed if you fell for it. Many leading US politicians have likewise been mesmerized by this long running PR ploy. Clinton's Agriculture Secretary Dan Glickman spoke candidly to a St. Louis Post Dispatch reporter about the pro-GMO attitude embedded in the US government:

"It was almost immoral to say that it wasn't good, because it was going to solve the problems of the human race and feed the hungry and clothe the naked. . . . And if you're against it, you're Luddites, you're stupid. . . . You felt like you were almost an alien, disloyal, by trying to present an open-minded view."

Glickman acknowledged that he too "spouted the rhetoric," admitting, "it was written into my speeches."

The current Ag Secretary, Tom Vilsack, is the latest GMO cheerleader. As Iowa's governor, he gave Monsanto an award in 2000, and the next year was anointed Biotech Governor of the Year by the biotech industry trade organization.

In October 2009, Vilsack tried to play the "feed the world" card at a conference sponsored by the Community Food Security Coalition. Bad move Tom. The people in the room were actually experts at feeding the world. Attendees included numerous PhDs and eminent scholars, such as the co-chairman and several leading authors of the authoritative IAASTD report, the world's most comprehensive evaluation of agriculture.

This crowd *knew* that GMOs had no answers for world hunger. The IAASTD report, for example, concluded that the current generation of GMOs does not reduce hunger and poverty, does not improve nutrition, or does not facilitate social and environmental sustainability. A comprehensive analysis by the Union of Concerned Scientists concluded that GMOs do not increase yield; in fact, on average they *reduce* yield. A USDA study showed that farmers' income doesn't increase, and in some cases, it decreases. And it doesn't help the overall economy either. The federal government has been spending \$3-5 billion per year to prop up the prices of the GM crops no one else wants.

Thus, when Secretary Vilsack invoked "the ever-increasing population of the globe and the capacity to be able to feed all of those people," as the excuse to promote GMOs, he was greeted by moans, groans, hisses, and even boos.

That didn't stop Vilsack from playing the same card two days later, but this time he was at the World Food Prize conference. That's sponsored by the biotech industry, so they were overjoyed that the Ag Secretary was still supporting their myth.

### **How do you choose non-GMO?**

Are you now ready to choose the bowl of natural chips? If so, you're not alone. Most Americans, according to a *CBS/New York Times* poll, would also choose foods made without genetically modified organisms (GMOs) if they knew which was which—if they were labeled. But unlike most other industrialized nations, GMOs don't have to be labeled in the US or Canada. Therefore, avoiding GM foods here takes some doing.

#### **Tip #1: Buy Organic**

The best way is to buy organic foods, which don't allow the use of GMOs. And you also benefit from organics' higher average levels of vitamins, minerals, and antioxidants, and lower pesticide residues.

#### **Tip #2: Look for "non-GMO" labels**

Some companies voluntarily label products as “non-GMO.” The best label is now the Non-GMO Project Verified seal. It’s the new uniform, third party verified standard for non-GMO claims that is spreading through the industry.

### **Tip #3: Consult the Non-GMO Shopping Guide**

For a handy list of non-GMO brands by category, go to [www.NonGMOShoppingGuide.com](http://www.NonGMOShoppingGuide.com). View it online, download or order copies, and look for the Mobile Phone Application coming soon.

### **Tip #4: Avoid at-risk ingredients**

If it’s not labeled organic or non-GMO, and the brand is not listed in the Guide, look at the ingredient panel to see if it contains any at-risk GMOs. The most pervasive GMOs are derivatives of corn and soy. Here are some common ones. (A more comprehensive list is available in the Non-GMO Shopping Guide.)

#### **Corn**

- Flour, meal, oil, starch, gluten, and syrups
- Sweeteners such as fructose, dextrose, and glucose

#### **Soy**

- Flour, oil, lecithin, protein, isolate, and isoflavones

Oil from **canola** and **cottonseed** are genetically modified. **Sugar from GM sugar beets** was introduced in late 2008, but a recent ruling in a federal lawsuit may eventually drive it out of our food supply. For now, if the sugar doesn’t say pure cane, it’s likely blended with beet sugar.

Other than corn, there are only three items in the produce section that may be genetically modified. That includes **papaya from Hawaiian** (yes, only Hawaii) and a small amount of **zucchini** and **yellow squash**. Mercifully popcorn is not GMO.

**Aspartame**, the artificial sweetener also known as NutraSweet and Equal, is derived from GM microorganisms.

#### **Meat, fish, eggs and dairy.**

FDA scientists had warned that animals fed GMOs might bio-accumulate toxins, which end up in milk, meat, or eggs. Their concerns were ignored and no safety studies have looked into this. Most US livestock, and even farmed fish, are fed GM soy or corn. To avoid GM-fed animal products, buy organic, wild caught, or 100% grass-fed. Fortunately, there are no genetically modified fish, fowl, or livestock yet approved for human consumption.

**Dairy products** also carry the risk that the cows were injected with genetically engineered **bovine growth hormone, (rbST or rbGH)**. The milk from drugged cows has more pus, antibiotics, bovine growth hormone, and insulin-like growth factor 1 (IGF-1). IGF-1 is a powerful hormone and a high risk factor for cancer. That’s primarily why the American Public Health Association, American Nurses Association, and many other groups condemn the use of rbGH.

Consumer concerns about rbGH has forced Wal-Mart, Starbucks, Dannon, Yoplait, and most of the major dairies in the US to stop using the hormone. Look for labels, consult the Non-GMO Shopping Guide, or buy organic dairy products.

#### **Moving GMOs out of the market**

The declining fortunes of rbGH demonstrate the power of informed consumers. As more and more people linked the milk hormone to cancer, marketing executives realized that allowing their suppliers to use the controversial drug was bad for sales. Because the mainstream media has been pretty silent on the health effects, it took a few years of a concerted consumer education to start the dominoes falling. If the hazards of rbGH had made headline news, the tipping point would have been swift.

The experience of GMOs in Europe shows us just how swift markets can move. In late January of 1999, biotech representatives predicted that 95% of all commercial seeds would be genetically engineered by 2004. But just a few weeks later, their plans to replace nature crashed. On February 16<sup>th</sup>, the gag order imposed on a scientist who had conducted GMO safety studies was lifted by order of the UK Parliament. When Dr. Arpad Pusztai, the top scientist in his field, discovered the extensive damage that a GMO diet can cause, he was fired after 35 years and silenced with threats of legal action. When he finally was able to speak, all hell broke loose.

Within the week, the European press reeled off 159 column feet of articles. Within the month, 750 articles on GMOs were circulating. According to one editor, the coverage divided society into two warring blocks. Within just 10 weeks, the tipping point of consumer rejection was achieved. GM ingredients had become a marketing liability. At the end of April, Unilever publicly committed to remove GMOs from its European brands. Within the week, so did nearly every other major food company.

These same companies continue to use GM ingredients in the US, where the Pusztai controversy was not reported. Here, only one in four people are even aware that they've ever eaten a genetically engineered food in their lives.

### **Engineering a US tipping point**

The Campaign for Healthier Eating in America is designed to achieve a tipping point of consumer rejection of GMOs in the US. Several indicators suggest that it's not far off. A December 2009 issue of *Supermarket News*, for example, predicted "The coming year promises to bring about a greater, more pervasive awareness" of the genetically modified organisms (GMOs) in our food supply." This trade publication, which is used by food executives as a source of industry news and trends, attributed this coming uprising in part to the Campaign's new Non-GMO Shopping Guide.

The article describes how food "culprits" such as fat, carbs, salt, and added sugar can "define the decade" for the food industry; companies scramble to create new low-culprit or culprit-free options. When the specter of GMO health dangers surfaces onto consumers' radar screen, however, there will be a significant difference. Whereas traditional ingredient culprits offer some consumer appeal like better taste or texture, GM foods do not. Furthermore, companies can usually eliminate GMOs *without even changing recipes*. They can simply substitute the *non-GMO* soy or *non-GM* corn, without reformulating.

Therefore, when the industry gets hit with the anti-GMO tipping point, they won't create *separate* brand options of low GMO or GMO-free. Instead, they will eliminate *all* GMOs from their brands and proudly proclaim that here as they do in Europe.

The number of shoppers rejecting GMOs need only be a tiny amount, perhaps 5% of Americans, in order to convince food companies to do a brand-wide GMO cleanout. But when you look at the numbers, no matter how you slice it, they add up to a coming non-GMO tidal wave.

More than 9% of Americans regularly buy organic. About 29% are strongly opposed to GM foods and believe they are unsafe. And 53% say they would avoid GMOs if labeled. While most people do not conscientiously avoid brands with GM ingredients, it's usually because they don't know how. Hence the importance of the Non-GMO Shopping Guide.

### **Time to take charge**

There are so many people predisposed to reject GMOs, we can achieve a tipping point without ever having to convince those who are resistant. Just by educating the people who *want* to know why GMOs are unsafe and how to avoid them, we can kick GMOs out of the food supply.

The Campaign offers educational tools that are easy to use and to pass onto others. There are right-brain books, left-brain books, videos for the visual learner, brochures, articles, podcasts,

CDs, PowerPoints, and of course, shopping guides.

The Campaign also provides strategies and support materials designed specifically for the most receptive targeted groups: Health- and environmentally-conscious shoppers, parents, healthcare professionals, chefs and food service professionals, and even religious groups.

If you would like to lend a hand and help protect the health of those you care about, visit [healthiereating.org](http://healthiereating.org) and look at the action items and tools available. Little did you know that a bowl of chips would turn you into an activist..

To learn more about the health dangers of GMOs, and what you can do to help end the genetic engineering of our food supply, visit [www.ResponsibleTechnology.org](http://www.ResponsibleTechnology.org).

To learn how to choose healthier non-GMO brands, visit [www.NonGMOShoppingGuide.com](http://www.NonGMOShoppingGuide.com).

International bestselling author and filmmaker Jeffrey Smith is the leading spokesperson on the health dangers of genetically modified (GM) foods. His first book, [\*Seeds of Deception\*](#), is the world's bestselling and #1 rated book on the topic. His second, [\*Genetic Roulette: The Documented Health Risks of Genetically Engineered Foods\*](#), provides overwhelming evidence that GMOs are unsafe and should never have been introduced. Mr. Smith is the executive director of the [Institute for Responsible Technology](#), whose [Campaign for Healthier Eating in America](#) is designed to create the tipping point of consumer rejection of GMOs, forcing them out of our food supply.