

The 5 Things You Need To Know About GMOs *Right Now*

Recently a friend came over and I offered to make us a snack. But when I half-jokingly waved the bag of popcorn and said, "Look, no GMOs!" she stared at me blankly and asked, "What are GMOs?". Of course I was taken aback. I sometimes forget that there's one end of the population spectrum that's still focused on whole wheat and organic apples. Not that that's a put down; it's just that this is only the tip of the nutritional iceberg. Thus, I write this article for those of you who may not have a clue as to what GMOs are; or perhaps you've heard of them, but you just aren't sure what all the hoopla is about. The hoopla is justified; it's going to get louder and it's good to be informed. So here are 5 things you need to know about GMO's *right now*.

1. What Are GMOs?

GM stands for *genetically modified* and GE stands for *genetically engineered*. In both instances, O is for organisms. When these terms are applied to food it means that the genetic material (DNA) in the organisms "has been altered in a way that does not occur naturally."¹

Way back in the 1980's, this was a novel idea. In the first experiments (performed on tomatoes) freshness was extended while spoilage was reduced.

It was pretty big news back then, due to how fascinatingly peculiar it was to be tampering with science and nature in this way. However, the product was pulled from the supermarket shelves within three years due to lack of demand.

Fast forward to 2012 and nature has been spun around on her head. Why? Because for certain crops in this country (corn, soy, sugar beets, alfalfa, canola) genetic modification has now become the norm. Today, over 85% of corn and over 90% of soybeans planted in the U.S. are from genetically modified seeds. In addition to this, over 95% of sugar beets (from which most non-organic sugar is made) and most of our canola is also grown from genetically modified seeds. What are they genetically modified *for*? By and large, these seeds are genetically modified to resist the effects of herbicides and weed killers such as glyphosate (this is the active ingredient in Roundup) which is mass-sprayed over crops and farms.

Eventually these seeds grow into plants, which are then harvested into food. Many of these crops go to animal feed (more on that in number 2), but crops such as sugar beets, canola and the rest of the soy and corn (think corn *syrrup*), become part of the American food stream due to their prevalence in many of the processed foods Americans so heartily enjoy. Therefore, it's easy to see how GMOs have infiltrated our diet without our even realizing it.

Although we most frequently hear about GMOs in seeds, the issue is not just limited to plants; it has a presence in animals as well. Take salmon, for instance. Salmon is touted for its health benefits and, as such, is the most widely eaten fish in America. Pending FDA approval, however, is a 'salmon' which has been genetically engineered with growth hormone genes from an eelpout -- a type of fish I've never seen on a menu. I'm guessing this new type of salmon, should it be approved, will still *look* and *taste* like a salmon, but because it was genetically engineered with genes from the eelpout it will experience growth at twice the normal rate. Should this still be called 'salmon' or is it laboratory-tampered "Franken-food"? *Don't you want to know what you're eating?*

So, as you can see, GMOs are not just about seeds and crops, but about what is on your plate as well.

2. Why You Want To Avoid GMOs

What about the effects of GMOs on us after we've eaten them? Human studies are sparse to date, but there is a broad call for more research due to suspicion that foods made from GMO plants are linked to an increase in allergies. Indeed, "soy allergies skyrocketed by 50% in the UK, soon after GM soy was introduced."² Additionally, "scientists recently found GE insecticide in corn showing up in the umbilical cords of pregnant women."³

As I mentioned above, a large amount of genetically modified food crops are slated for animal feed. “So,” you may wonder, “why should that affect me?” Well, first of all, what goes into the animals we eat eventually goes into us. Second of all, in animal studies GMO feed has been associated with the following health risks: “infertility, immune problems, accelerated aging, faulty insulin regulation, and changes in major organs and the gastrointestinal system.”⁴ The time to pay attention to GM testing is *now*, not sometime in the future when these issues are pervasive. If the results seem inconclusive, which some supporters of genetically modified crops believe, then we should demand more testing from the FDA. As Americans, we have a right to know.

One of the benefits of animal testing is that very often the results transfer over to humans. When it comes to GMOs people repeatedly see the words “more studies are necessary”. The animal studies are already mounting. Do *you* want to be the next guinea pig?

3. So What Is America Doing About It?

Unfortunately, not enough; therefore the people have taken matters into their own hands.

Due to rising suspicion about the safety of genetically modified foods, health professionals, environmentalists, scientists and the general public are calling for a wide political movement for further research and, in the meantime, for GMO foods to be labeled as such. According to the organization Just Label It!, which advocates the American right to know if food is genetically engineered, this is a necessary movement. Since “(t)he FDA determined that GE foods were ‘substantially equivalent’ to conventionally produced foods” they concluded that “no labeling was required. After almost 20 years, this policy is still in effect today.”^{5a}

The website goes on to state that “debates about the benefits and risks of GE crops will continue. Meanwhile, an entire generation will have grown up consuming them...we should all have a choice about whether we want to participate in this grand experiment with our bodies and our environment. We have a right to know what’s in our food.”^{5b} Just Label It! is not even asking for the government to *ban* genetically modified or genetically engineered foods, just to label them and give consumers the right to make a choice about what to buy.

In addition to organizations such as Just Label It! and the Environmental Working Group, which posts petitions online to send to the FDA, many states are drafting bills for their own legislatures to pass labeling laws. On April 22, 2012, California residents will vote on the *California Right to Know Genetically Engineered Food Act*, a bill which supports mandatory labeling for genetically engineered foods sold in their state. Since California represents the eighth largest economy in the world, what happens there could very well set the stage for the rest of the nation.

If you watch the news you may recall that back in February 300,000 organic farmers preemptively sued the seed company Monsanto, which also owns the herbicide Roundup, in federal court. The farmers were worried that if any pollen from Monsanto-patented GMO seeds were to naturally drift to their fields, Monsanto would sue *them* for patent infringement. This was a valid concern since Monsanto has already sued other farmers for patent infringement. However this particular case was dismissed on the grounds that the plaintiffs’ allegations were unsubstantiated.

Willie Nelson, the singer and President of well-known organization Farm Aid, lent his notoriety to the farmers’ case with the “Occupy the Food System” action, a spin-off of “Occupy Wall Street.” The media coverage from this campaign will hopefully inspire a wave of support for farmers in similar situations and a movement towards more general public awareness.

4. Where Does The Rest Of The World Stand?

“Unlike most other developed countries – such as 15 nations in the European Union, Japan, Australia, Brazil, Russia and even China – the U.S. has no laws requiring labeling of genetically engineered foods. Yet polls have repeatedly shown that the vast majority of Americans, – over 90% in most studies – believe GE foods should be labeled.”⁶

Labeling in the EU is mandatory. Even some countries in need of aid have restricted the use of GM food. The United States is the only country in the world that allows the unregulated and unlabeled distribution of genetically modified and genetically engineered foods to be sold.

5. What Can You Do?

As it turns out, there is quite a bit you can do on a personal level to make your stance known.

1 - Avoid GM and GE foods to the best of your ability! It's not so easy, as they have really infiltrated our food system, but by avoiding processed foods and paying attention to labels you can at least stand a chance.

2 - Buy 100% certified organic food. While guaranteeing your safety from genetically modified foods, this also makes a statement to producers that you don't support GMOs in our food system. It's simple supply and demand (or, in this case, demand and supply). Although it certainly isn't the *only* reason to buy organic foods, it's a great reason to start.

3 - Many states have bills pending the labeling of GMO products. Find out about this in your state. Or, at <http://justlabelit.org/> you can sign a petition for the FDA to require that all genetically engineered foods be labeled as such.

4 - Raise awareness! Talk about it to your friends, point out the *No GMOs* label on packaging, and pass this article along to a friend.

Not everybody knows what's going on with GMOs in our food supply...but now that *you* do, don't you want the choice to be *yours*?

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1 - The World Health Organization <http://www.who.int/foodsafety/publications/biotech/20questions/en/>

2 - The Institute For Responsible Technology <http://www.responsibletechnology.org/>

3 - Just Label It! <http://justlabelit.org/>

4 - ibid

5 - ibid

6 - ibid