

Health and Wellness
Are Genetically-Modified Foods Hurting Us More Than Helping Us? Here's Our Wake Up Call
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Introduction

GM (genetically-modified) foods are crops, animals and other food products that have had their genes changed to create breeds and strains of plants and animals that do not naturally occur. There is a definite two-way street concerning GM foods. One camp promotes these foods for their ability to resist diseases, insect attacks, or herbicides and nobly feed the world. Plants can even be made hardier and more tolerant to environmental stress such as drought or irregular weather. Crops can be made to decrease their growing time and increase shelf-life (by slowing rot damage). GM food can also be engineered to produce higher crop yields and remove unwanted toxins (such as allergens). The other camp questions many aspects of short and long-term health and wellness.

To address the issue of feeding the world, there are other options to GM which are not typically part of the conversation. For example, the far superior method of farming known as “agroecological” is the sustainable way forward for developing countries. Additionally, Integrated Pest Management boosts yields that have proven highly effective in the developing world. Furthermore, there are other innovative low-input and organic methods of safely and effectively increasing yields which provide the same benefits. For example, Marker Assisted Selection (non-GM genetic mapping) is widely expected to be far more beneficial to GM. **Are GM Foods**

Safe or Unsafe? You Be the Judge

Of course there are claims that Americans have eaten GM foods for years with no negative effects. Yet, the truth of the matter is that with completely unpredictable results, foreign genetic materials such as viruses and bacteria are introduced into our food supply through genetic modification. The following countries have either put restrictions on GM foods or banned them altogether: Brazil, Hungary, Paraguay, Venezuela, Algeria, Egypt, Sri Lanka, Thailand, China, Japan, the Philippines, Norway, Austria, Germany, the United Kingdom, Spain, Italy, Greece, France, Luxembourg, Portugal and Saudi Arabia. In fact, over 50 countries require GM labeling, but since the United States doesn't even meet that minimum threshold, no one in our country really knows which foods are GM. Although several of our states have made strides toward GM labeling, so far none have been successful.

GM foods have only been around since 1994, now encompassing a huge portion of crops to varying degrees in the U.S. such as alfalfa, apples, beets, canola, cantaloupe, corn, cotton, flax, graisin (giant raisin), lettuce, papaya, peas, pluot (apricot and plum), potatoes, rice, salmon, soybeans, squash, strawberries, sugarcane, tomatoes, watermelon (seedless), zucchini and many others (in addition the foods listed below). Because there is a GM oil in most foods, it exists in everything from bread and cereal to frozen pizza. And as if soda wasn't bad enough for numerous other reasons, even every soda on the market contains a dose. GM companies know that putting a GM label on their foods is the equivalent of applying a skull and crossbones label. Thus, farmers are using GM feed for chickens and cattle. Hence, eggs, dairy products and meat are not exempt from GM.

Unfortunately for us Americans, there is no long-term safety testing. Of the testing performed on animals, GM foods have shown to have toxic effects such as abnormal changes in organs, accelerated aging, changes in gene expression and immune-system disturbances (where 70-80% of our immune system resides). Although very few studies have been published on the short-term direct effects of human consumption of GM foods, one such study found unexpected effects on gut bacteria. We really don't know how poorly we are treating ourselves until, most likely, unfortunately, it will be too late after decades of consumption and much damage has occurred.

Summarized in one sentence, Dr. Suzanne Wuerthele, US Environmental Protection Agency (EPA) toxicologist states, "We are confronted with the most powerful technology the world has ever known, and it is being rapidly deployed with almost no thought whatsoever to its consequences." Moreover, it is feared by some experts that additional allergic reactions to plants will be the resulting consequence of added genes.

GM Contamination

GM crops are increasingly contaminating both conventional and organic food. When unapproved GM rice is grown in nearby fields, not only does the surrounding rice supply become contaminated, but the seed stocks as well. Consequently, coexistence is practically impossible so the choice between a GM-based, or a non-GM-based, world food supply has arrived.

Not surprisingly, big biotech GM firms have a horrible history of public deception and toxic contamination. The more patents GM companies acquire, the larger their monopoly will be to control the world's food supply. One North Dakota farmer, Tom Wiley states, “Farmers are being sued for having GMOs on their property that they did not buy, do not want, will not use and cannot sell.”

Some fear that the battle to avoid GM foods has been lost due to contamination. Keep in mind though that when a food is certified organic, it is, in theory, completely free of GM. It is important to keep updated on this issue in the future however.

Why Are We Not Protected More?

The FDA neither tests GM foods nor approves them before they are allowed on the market. Instead, the FDA presumes goods to be safe unless there is evidence to the contrary (reactionary). For anyone thinking the FDA is completely capable of protecting us, GM is but only one example where they aren't. Unfortunately, people will become sick and lives will be lost in this process.

Do Something About It!

Click on this link <http://justlabelit.org/> to watch a three-minute video to be better informed and advise your congressperson and senator that GM labeling is important.

Conclusion

These new foods have the potential to make people healthier and improve our world. After all, who would want to stand in the way of allowing more people to be fed with more nutritious food while simultaneously using less land and fewer herbicides and pesticides? Conversely, it is discouraging that to date there are no widely accepted labeling much less a standard for advising the public as to what is actually in GM foods. Without the benefit of needed testing, everyone in the United States is a guinea pig.

Realizing the importance that science can bring us further, but also being cognizant that companies will go out of their way to increase profits at the expense of everyone's health, everyone should PAUSE and THINK MORE CAREFULLY about where our food originates and how it is produced. Certainly misconduct by companies should not go unpunished but that should also neither damn nor disrupt all research. My best advice would be to keep informed on the topic and do your own homework.

Sources Used:

As with most other health topics, there is a lot to learn and know. Listed below are some links and information which was used to write this article:

- (A) http://www.sciencemuseum.org.uk/antenna/futurefoods/debate/debateGM_CIPsafety.asp
- (B) <http://singularityhub.com/2009/07/15/the-genetically-modified-food-you-eat/>
- (C) <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3590489/>
- (D) <http://www.csa.com/discoveryguides/gmfood/overview.php>
- (E) <http://gmwatch.org/10-reasons-why-we-dont-need-gm-foods>

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