

INFORMATION SHEET ON GMO FOODS

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What does GMO stand for and what does it mean? GMO stands for Genetically Modified Organisms and refers to plants that have been genetically altered. There are 2 reasons that they have been modified:

1. To make them more resistant to Roundup, a weed killer. Roundup Ready GMO means that the farmer can use much more weed killer on this crop without actually killing the plant.
2. To insert a bacterial insecticide into the DNA of the plant so that insects that eat the plant are poisoned. These GMOs are also registered as insecticides.

How much of the food grown in the U.S. is GMO? At this time, here are the percentages of the major crops grown in the United States that are GMO:

- Soy – 94% (Used for cattle feed, soy products and soy oil)
- Corn – 88% (Used for cattle feed, corn products, corn oil, and high fructose corn syrup)
- Canola – 90% (Used for cattle feed and canola oil)
- Sugar Beets – 95% (Used for refined sugar)
- Cotton – 90% (Used for cotton for clothes and cottonseed oil for cooking)

What are the major areas of concern regarding GMOs? There are four areas of concern:

1. It is well known that genetic engineering can cause mutations that lead to unpredictable changes in the DNA which can lead to unexpected toxic or allergic effects.
2. Because the plant is more resistant to Roundup, a weed killer, the farmers apply much more Roundup to their fields. This leads to higher levels of this poison in the final product.
3. Over the past 60 years, the overuse of antibiotics has created bacterial strains which are resistant to antibiotics. In the same way, using higher doses of Roundup has already created more weeds that are resistant to this weed killer, causing the farmers to resort to even more toxic chemicals.
4. Bacterial DNA that is engineered to kill bugs in GMO food is potentially very toxic to humans as well.

Have GMO foods been thoroughly tested before approval by the FDA? You would think that before the FDA would approve of these substances for human consumption that they would thoroughly test these issues. In 1992, despite the contrary advice of their own scientific advisors, the FDA ruled that GMO foods are no different from non-GMO foods. The largest GMO company is Monsanto. The FDA official in charge of this policy has gone back and forth from the FDA to the highest levels of Monsanto's leadership. FDA assessments are based on data provided by the company that is applying to sell the seed, the same company that will profit from a positive assessment of its safety. These companies restrict access to their products by independent researchers so their effects on human and animal health and the environment cannot be properly investigated by a neutral party.

Are there research studies regarding the effects of GMO foods? Scientific studies have found harmful effects on the health of laboratory and livestock animals fed GMOs. Effects include toxic and allergenic effects and altered nutritional value. Also most studies have only been 1 to 3 months in length. The only longer term study was recently completed in France by Dr. Seralini. He found significant changes in rats that only became significant after 4 months. Some of the things he found were mammary tumors, pituitary tumors, sex hormone imbalances, liver, and kidney problems.

Do we need GMO to feed the world? Most of the benefits for GMO crops are either exaggerated or false. They have not increased crop yields. They have not decreased pesticide use. They are more expensive for the farmer because he is prohibited from saving his seed to plant next year, a practice that has gone on for thousands of years. Instead he has to buy new seed every year. This is partially responsible for the suicides of thousands of poor farmers in India over the past years. They also contaminate non-GMO plants by pollination.

How do I know if I am eating GMO food? In the US, it is not required to label a food as having GMO in it. In Europe and many other countries, GMO foods must be labeled, and as a result, most GMO foods have been pulled because people won't buy them. Opinion polls show that over 90% of Americans want GMOs to be labeled, but huge amounts of money from Monsanto and other GMO companies have blocked this from happening, both in Congress, and at the state level through misleading commercials. If you buy processed foods from the large food companies like Nabisco, Fritolay, Kelloggs, General Mills, Coca Cola, Pepsi, etc. you can assume that they are using GMOs. If you go out to eat, you can assume that much of the food is also contaminated by GMOs.

How do I know if a food is GMO free? The Non-GMO Project is a nonprofit organization that was created in 2003 by organic retailers to provide a third party testing and certification process for foods. This seal indicates that the product has gone through their verification process. There are hundreds of companies and thousands of products that have been independently verified to meet their high standards. This is the most reliable seal to look for.



This seal indicates that the product meets the US Department of Agriculture standards for organic. By definition GMO foods cannot be used in this product. But this is not as reliable as the non-GMO seal because it is not tested as thoroughly and there are some loopholes in the regulations. But in most cases, it is a pretty good indicator of being free of GMOs.



What about animal and dairy products? Most of the GMO soy, corn, and alfalfa is fed to cows, pigs, and chickens. It is probable that the problems with GMO are transferred to the muscle tissue and the milk of these animals. Therefore to stay GMO free, eat only meat, poultry and dairy that is labeled with one or both of the seals above.

What about Trader Joe's products? Trader Joes has claimed for years that all of its name brand products are GMO free. But they have not submitted any of their products to be independently tested by the non-GMO project. I have decided to only buy products from them containing soy, corn, and canola if they are labeled with the USDA Organic seal. Tell them regularly that you will not buy their products until they have them verified by an independent third party.

What can I do to change the current policies regarding GMOs? In spite of overwhelming consensus against GMO foods from polls, our government agencies and politicians continue to ignore the "people" and instead support Monsanto and other GMO corporations. In Europe, this is not so. GMOs have to be clearly labeled and as a result, people don't buy them, so they stop growing them. The best way to change things is to vote with your dollars. Don't buy GMO products and let the companies know why you are not buying their products. Because non-GMO has been so successful in Europe, some experts believe that with just a small drop in market share and profits, all of the big companies will start transitioning to non-GMO.

Where can I get more information? Here are some links to more information about GMOs:

The non-GMO project website – information about their verification process and list of verified companies and specific foods: <http://www.nongmoproject.org/>

GMO Myths and Truths – Read the summary and download the entire report.
<http://earthopensource.org/index.php/executive-summary>

Genetic Roulette – An excellent feature length documentary about GMOs – Costs a couple of dollars to watch:
<http://www.responsibletechnology.org/>

Non-GMO shopping guide: <http://www.nongmoshoppingguide.com/>

GMO awareness – another good site and a list of smart phone apps to help you find non-GMO foods:
<http://gmo-awareness.com/shopping-list/>

Dr. Seralini's research on the effects of GMO foods: <http://gmoseralini.org/en/>