



The Case for GMO Labeling

NY GMO Food Labeling Bill (A.617/S.485)

Learn more! www.gmofreeny.net on the web and www.facebook.com/GMOFreeNYnet on Facebook

Take action! Contact your NY Assemblymember and Senator today! Ask them to support & cosponsor bill A.617 (Rosenthal)/S.485 (LaValle)

Find your NY Assemblymember here: <http://assembly.state.ny.us/mem/>
Find your NY Senator here: <http://www.nysenate.gov>

What Are GMOs?

Genetic engineering (genetic modification) is a biotechnology that allows for the altering of an organism's genetic material such that it changes the character traits displayed by the organism while it develops and grows. This altering of genetic material can occur by the introduction of new genetic material derived from similar species or unrelated species, or by altering the organism's existing genetic material. Genetic engineering is *not* the same as traditional breeding techniques in that it involves methodologies that transcend natural reproductive processes.

In agriculture, genetic engineering has been overwhelmingly used to create crops (GMOs) that are herbicide-tolerant, insect-resistant, or both. For example, *Bt* corn plants are varieties of corn that have been genetically engineered to produce a toxin derived from the bacteria *Bacillus thuringiensis* (*Bt*) that is deadly to certain insects that attack corn. The modified genetic material from the bacteria is inserted into the corn plant DNA such that the corn now produces its own supply of *Bt* toxin in most tissues, throughout its lifespan, making it deadly to those insects. Most *Bt* corn plants have been engineered to be herbicide-tolerant as well.

GMOs in U.S. Food System

GMO crops were introduced commercially in the U.S. in 1996. Since then they have come to dominate the agricultural landscape. Recent USDA data shows GMO varieties are being grown on 93% of corn acres, 96% of cotton and sugar beet

acres, and 94% of soybean acres. GMO canola, alfalfa, squash, and Hawaiian papaya are also dominant. And a new variety of GMO potato was just approved for commercial cultivation. Furthermore, livestock feed is comprised mostly of GMO corn and soybean. It is estimated that 70-80% of bagged, bottled, boxed, and canned foods in the U.S. contain GMO ingredients such as high-fructose corn syrup, maltodextrin, citric acid, glycerin, and xanthan gum. It is "estimated" because without GMO labeling it is impossible to calculate this with any degree of accuracy. We do know that Americans have been eating GMOs without their knowledge since 1996. We are the ultimate guinea pigs.

Lax Federal GMO Regulation

USDA ensures that GMO crops are safe to grow. EPA ensures that GMOs are safe for human and environmental exposure. FDA ensures that GMOs are safe to eat. But... :

- 1) None of the agencies require long-term animal feeding studies.
- 2) Most of the research has been financed and/or conducted by the biotech industry, which has a strong financial interest in claiming GMO safety.
- 3) Biotech companies are not required to consult with FDA on the safety tests they conduct for new GMOs; the process is voluntary. FDA essentially rubberstamps their approval for commercial sale.

4) Once GMO foods reach the marketplace, FDA has no regulatory oversight.

5) Many FDA, USDA, and EPA staff have strong ties to the biotech industry (the "revolving door") – a major conflict of interest.

6) There are many documented incidences of contamination of the non-GMO food supply with GMOs.

Jury's Still Out on GMO Safety

The biotech industry and FDA both claim GMOs are the same as their conventional food counterparts – they are "substantially equivalent" (aka GRAS – generally recognized as safe) and thus safe to eat. However, this is based on the since disproven theory of "one gene, one protein." Furthermore, the process of genetic engineering can have unintended consequences:

- 1) Mutation caused by insertion of genetic material using gene guns
- 2) Overproduction of naturally occurring toxins
- 3) Adverse changes in nutritional composition
- 4) Creation of new allergens

Despite these potential risks, our federal government does not mandate or perform its own human safety trials, long-term feeding trials on animals, tests for carcinogenicity and allergenicity, or fund independent research. The burden of "proof of safety" is in the hands of the same companies that developed the GMOs. The fox is guarding the henhouse!

Exhibit 1: Health Risks

In contrast to industry and FDA claims of safety, there is a growing body of scientific and medical evidence about the potential risks of GMOs to human health.

1) A 2013 peer-reviewed feeding study of farm-raised pigs showed increased GI inflammation and uterine abnormalities when the pigs were fed a GMO-grain diet. A 2012 independent study of lab rats showed increased incidence of cancer, toxicities, and fertility issues when the rats were fed GMO corn for a 2-year period.

2) Exposure to glyphosate (Roundup), the herbicide most commonly sprayed on GMOs, has been linked to increased incidence of non-Hodgkins lymphoma and birth defects.

3) A 2013 peer-reviewed *in vitro* study showed glyphosate (Roundup) to promote the growth of existing estrogen-receptor-positive human breast cancer cells.

4) A 2011 study found *Bt* toxin in the bloodstream of 93% of pregnant women and 80% of their fetuses. This indicates *Bt* toxin can survive digestion and enter the bloodstream, despite industry claims to the contrary.

5) Internal memos from FDA scientists in 1990-91 – raising questions about the safety of GMO foods and the policy decision *not* to label them – were disregarded by their superiors.

7) In Oct 2013, 300 scientists signed onto a letter refuting the biotech industry claim of scientific consensus that GMOs are safe, stating, “As GM foods are not labelled in North America... it is scientifically impossible to trace, let alone study, patterns of consumption and their impacts. Therefore, claims that GM foods are safe for human health based on the experience of North American populations have no scientific basis.”

Exhibit 2: Environmental Risks

Some of the environmental risks of GMO agriculture are:

1) “Superweeds” resistant to herbicide-tolerant (Roundup Ready) GMO crops have evolved, leading farmers to spray more and more glyphosate per acre as well as return to the use of even more toxic herbicides such as 2,4-D and dicamba.

2) “Superbugs” resistant to insect-resistant GMO crops have evolved, and are causing yields to decrease.

3) Pesticides used on GMO crops are harmful to non-target insects, too, such as Monarch butterflies and pollinators, and are deleterious to soil health.

4) Organic and conventional crops have become cross-contaminated with GMO crops, leading to a loss of biodiversity.

FDA Won't Label GMOs

FDA does not mandate the labeling of genetically modified foods or ingredients, claiming these foods are not materially different from their non-GMO counterparts. However, independent studies have found nutritional and compositional differences between GMO soy and non-GMO soy, and between GM salmon (awaiting FDA approval) and wild salmon. Furthermore, without labeling, any potential harms to human health are untraceable, unquantifiable, and people with food allergies are put at unnecessary risk. FDA's labeling policy favors corporate interests at the expense of protecting public health.

GMO? Let Us Know!

64 countries have laws mandating labeling of GMO foods. The EU has been labeling since 1998! China and Saudi Arabia since 2002. Many of these countries also restrict the cultivation and import of GMO crops. But Americans are still dining in the dark because of the undue influence the biotech and big

food industries exert on our federal legislators and policymaking. These companies cry wolf that labeling will be confusing and costly to consumers, yet these same companies label the GMO foods they export to countries that require labels without raising prices.

In a June 2013 *New York Times* poll, 93% of Americans said they want GMO foods labeled yet we're still shopping blindly. Without GMO labeling, we remain unwitting guinea pigs in the most unethical long-term feeding study ever.

NY GMO Labeling Coalition

While a federal law for mandatory GMO labeling would be ideal, FDA and Congress show no signs of doing what's right. Instead it's been left up to states like Connecticut, Maine, and Vermont to pass their own labeling laws. Now it's time to make New York the next on that list! GMO Free NY has joined forces with Food & Water Watch, NOFA-NY, Sierra Club Atlantic Chapter, NRDC, NYPIRG, Consumers Union, Good Boy Organics, and others to form the NY GMO Labeling Coalition.

This issue affects EVERYONE who eats food! GMO labeling is not about being liberal or conservative, rich or poor. It's about giving us the right to know how our food is produced and to make informed decisions when buying food for ourselves and our families. If it's GMO, let us know!

We rest our case.

NY GMO Food Labeling Bill

Assembly bill A.617 (Rosenthal)

/ Senate bill S.485 (LaValle)

mandates the labeling of genetically engineered foods offered for retail sale in New York.

Contact your legislators today! Ask them to support and cosponsor bill A.617 / S.485. **“Like” GMO Free NY on Facebook** to get our action alerts on how you can help make GMO labeling the law in NY!

www.facebook.com/GMOFreeNYnet