

# Genetically engineered foods

Only 40% of people in the U.S. know that some of the foods they are buying and eating are genetically modified (GM), according to a new survey conducted by the International Food Information Council (IFIC), an industry group funded by food, beverage and agricultural industries. Additionally nearly 1 out of 4 people incorrectly believes that such foods are not being sold in the United States.

Currently, the use of genetically modified food is a subject of enormous global controversy. Environmental and consumer groups have demanded that the U.S. Food and Drug Administration (FDA) follow the lead of the European Union, Japan and other nations by requiring labels on GM foods to allow consumers to know what they are buying. The U.S. government claims that such mandatory food labels are not necessary because genetically modified food 'poses no inherent safety risk'.

Back in 1992 the U.S. Food and Drug Administration determined that genetically engineered (GE) foods are in most cases 'the same as or substantially similar to substances commonly found in food' and thus are not required to undergo specific safety tests prior to entering the market.

The FDA has refused to require labeling of genetically engineered foods, despite overwhelming American support for mandatory labeling. Since the agency has refused to protect consumers, some food companies are now taking action by labeling certain products or ingredients "non-gmo", which means "made without genetically modified organisms".



The U. S. may soon be the only country in the world which does NOT require labeling of genetically engineered food.

Australia, July 2000, passed legislation requiring the labeling of genetically engineered foods. The European Union, in September 1998, passed legislation requiring the labeling of genetically engineered foods. Japan passed legislation to require labeling of genetically engineered foods in April 2000, which went into effect in 2001. The Russian government requires labeling of genetically engineered foods as of January 2000. Hong Kong has legislation requiring labeling of genetically engineered foods which was overwhelmingly approved by Legislative Council in January 2000. South Korea has legislation requiring labeling of genetically engineered foods which went into effect in 2001. So does Taiwan.

## Genetically modified food in your supermarket?

Most supermarket processed food items now test positive for the presence of genetically modified ingredients. In addition, several dozen more genetically engineered crops are in the final stages of development and will soon be released into the environment and sold in

the marketplace. According to the biotechnology industry, the majority of U.S. food and fiber will be genetically engineered within the next 5 to 10 years.

The most widely grown genetically engineered crops, accounting for over 90% of all the genetically engineered crop acreage in North America, are corn, cotton, [soy](#) and canola. Potatoes and tomatoes in processed foods may also come from genetically engineered seed.

There are 2 main categories of genetically engineered crops now on the market: "Insect Resistant" and "Herbicide Tolerant".

Herbicide Tolerant crops (which include corn, cotton, [soybeans](#), sugar beet and canola) are crops which are genetically engineered to withstand direct application of herbicides. These herbicides would kill natural crop plants, but farmers are now able to spray weed killers directly onto genetically engineered herbicide-tolerant varieties. This could mean more chemicals onto our food and in our environment. About 70% of genetically engineered crops growing in the United States today are herbicide-tolerant varieties.

Insect Resistant crops (which include corn, cotton and potatoes) are also called 'plant pesticides', because the plant itself is a [pesticide](#). As it grows, the plant produces an insecticide, killing insects when they feed on the crop. Industry claims that these genetically engineered crops will mean that fewer chemical insecticides are sprayed. But scientists have warned that insects will develop resistance in just a few years.



## **Genetically engineered foods: altering the genetic blueprint of life**

The patenting of genetically engineered foods and widespread biotech food production threatens to eliminate farming as it has been practiced for the past 12,000 years.



The technology of genetic engineering, wielded by transnational 'life science' corporations such as Novartis and Monsanto, is the practice of altering the genetic blueprints of living organisms - plants, animals, micro-organisms - patenting them, and then selling the resulting gene-foods, seeds, or other products for profit.

Life science corporations proclaim with great fanfare that their new products will make agriculture sustainable, eliminate world hunger, vastly improve public health and cure disease. In reality, through their political lobbying and business practices, the gene

engineers have made it obvious that they intend to use genetic engineering to dominate and monopolize the global market for seeds, foods, fiber and medical products.

Genetic engineering is a revolutionary new technology still in its early experimental stages of development. This technology has the power to break down fundamental genetic barriers - not only between species - but between humans, plants and animals. By randomly inserting together the genes of non-related species - utilizing viruses, antibiotic-resistant genes, and bacteria as vectors, markers, and promoters - and permanently altering their genetic codes, gene-altered organisms are created which then pass these genetic changes onto their offspring through heredity.

Gene engineers all over the world are now snipping, rearranging, recombining, inserting, editing, and programming genetic material. Animal genes and even human genes are randomly inserted into the chromosomes of plants, animals and fish, creating up-to-now unimaginable transgenic life forms. For the first time in history, transnational biotechnology corporations are becoming the architects and 'owners' of life.

### **What are the potential dangers of genetically modified foods?**

Genetically engineered products clearly have the potential to be toxic and a threat to human health. In 1989, a genetically engineered brand of L-tryptophan, a common dietary supplement, killed 37 Americans and permanently disabled or afflicted more than 5,000 others with a painful and potentially fatal blood disorder, eosinophilia myalgia syndrome (EMS), before it was recalled by the U.S. Food and Drug Administration.

The manufacturer, Showa Denko, Japan's 3rd largest chemical company, had for the first time in 1989 used genetically engineered bacteria to produce the over-the-counter supplement. It is believed that the bacteria somehow became contaminated during the recombinant DNA process. Showa Denko has already paid out over \$2 billion in damages to EMS victims.

### **Dr. Arpad Pusztai on genetically modified foods**

In 1999, front-page headline stories in the British press revealed Rowett Institute scientist Dr. Arpad Pusztai's explosive research findings that genetically engineered potatoes, spliced with DNA from the snowdrop plant and a commonly used viral promoter, the Cauliflower Mosaic Virus (CaMv), are poisonous to mammals. Genetically engineered-snowdrop potatoes, found to be significantly different in chemical composition from regular potatoes, damaged the vital organs and [immune systems](#) of lab rats which were fed the genetically engineered potatoes.

Most alarming of all, damage to the rats' stomach linings - apparently a severe viral infection - most likely was caused by the CaMv viral promoter, a promoter spliced into nearly all genetically engineered foods and crops.

In August 1998, Dr. Pusztai appeared on the British television program 'The World in Action' to report the findings of his study. In an attempt to appease the resulting public furor, Rowett Institute director Philip James (who had approved Dr. Pusztai's television

appearance) said the research didn't exist. He fired Dr. Pusztai, broke up his research team, seized the data, and halted 6 other similar projects.

It later became known that Monsanto, a leading U.S. biotech firm, had given the Rowett Institute a \$224,000 grant prior to Dr. Pusztai's interview and subsequent firing.

Evidence emerged which supports the legitimacy of Dr. Pusztai's research. The research that James claimed did not exist showed up during an internal audit. Later, 'Lancet', the prestigious British medical journal, published a peer-reviewed paper which Dr. Pusztai had co-authored supporting the research.

Prince Charles began to question the safety of genetically engineered foods on his website and became allies with Dr. Pusztai. Charles wrote an article in the 'Daily Mail' expressing concerns over the lack of safety research on genetically engineered foods.

The U.S. media has not covered the disturbing public health questions raised by Dr. Arpad Pusztai's research into genetically engineered potatoes. Genetic engineering continues to receive a clean bill of health by United States' regulatory agencies despite the fact that no independent, government-supported research has been or is being conducted into the effects of genetically engineered foods on mammals .

This is in large part due to the fact that the biotech industry has a sophisticated public relations apparatus in place which has so far successfully been able to spin the industry's line that genetically altered food is absolutely safe. To better understand how public relations firms shape the public's awareness and beliefs, read the "[Why you believe what you believe](#)" page.

Perhaps the most important event in the last few years was the contamination of the food supply with the unapproved genetically engineered StarLink corn. The corn had been approved by the Environmental Protection Agency for consumption by animals but not humans, because of concerns that it may cause [allergic reactions](#).

The StarLink discovery by a coalition of advocacy groups has resulted in approximately 300 food products being recalled, mass litigation within the agriculture community, and drops in exports to key markets. StarLink has also raised questions about the United States' regulatory system, and at the end of 2000, several bills in Congress were proposing major changes in the way U.S. agencies regulate these crops.

### **Monsanto's recombinant Bovine Growth Hormone**

Over 70 million acres of genetically engineered crops are presently under cultivation in the United States, while up to 500,000 dairy cows are being injected regularly with Monsanto's recombinant Bovine Growth Hormone, known as "rBGH".





In 1994, the Food and Drug Administration approved the sale of Monsanto's controversial genetically engineered recombinant Bovine Growth Hormone (rBGH) - injected into dairy cows to force them to produce more milk - even though scientists warned that significantly higher levels (500% or more) of a potent hormone, Insulin-Like Growth Factor (IGF-1), in the milk and dairy products of injected cows, could pose serious hazards for human prostate, breast, and [colon cancer](#).

A number of studies have shown that humans with elevated levels of IGF-1 in their bodies are much more likely to get [cancer](#). In addition, the U.S. Congressional watchdog agency, the GAO, told the Food and Drug Administration not to approve rBGH, arguing that increased antibiotic residues in the milk of rBGH-injected cows (resulting from higher rates of udder infections requiring antibiotic treatment) posed an unacceptable risk for public health.

In 1998, never-before disclosed Monsanto/FDA documents were released by government scientists in Canada, showing damage to laboratory rats fed dosages of rBGH. Significant infiltration of rBGH into the prostate of the rats as well as thyroid cysts indicated potential [cancer](#) hazards from the drug. Subsequently the government of Canada banned rBGH in early 1999. The European Union has had a ban in place since 1994.

Primarily because of scientific concerns that it is a [cancer](#) hazard and likely to cause increased antibiotic residues in milk, rBGH is banned in every industrialized country except in the United States.

## **Genetically modified foods and your health**

I believe it would be wise to avoid genetically engineered foods if at all possible. There may be nothing wrong with them, but it would seem the better side of prudence to limit your exposure to them. They were not designed with your health in mind.

To see what foods you eat which might contain genetically engineered foods, visit the following site:

<http://www.truefoodnow.org/shoppinglist.html>

You will be amazed by how many genetically modified foods YOU consume.

Reference website: <http://www.healingdaily.com/detoxification-diet/genetically-engineered-foods.htm>