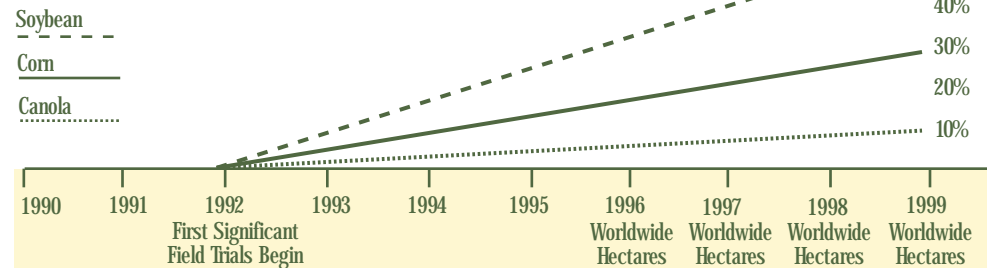


Genetically Engineered Foods

Rushing a Technology to Market

The genetic engineering of food is a recent phenomenon. Field trials of genetically modified crops began in 1992, and the first significant commercial planting was in 1995. By 1999 over 98 million acres of genetically engineered crops were planted worldwide, 71% of which was grown in the U.S. Today, almost 40% of America's corn crop and 55% of its soybeans are genetically engineered, and genetically engineered crops cover more than one-fourth of America's cropland. Presently 60% of processed food in grocery stores contain genetically engineered ingredients, generally in the form of corn or soy derivatives. The rapid advance of this technology has been accompanied with almost no federal safety testing or regulation.

SKYROCKETING USE OF GENETICALLY MODIFIED CROPS
% of total U.S. crop grown genetically modified



GENETIC ENGINEERED FOOD'S BRIEF HISTORY

Year	Worldwide Hectares Planted
1996	1.7 Million
1997	11 Million
1998	28 Million
1999	39.9 Million

THE Cause for Concern

Instead of creating a new set of criteria to determine the health and environmental safety of this new technology, US federal agencies have simply adapted existing regulations to accommodate the introduction of the genetic engineering into the food production system. These loosely derived policies are riddled with loopholes, threatening both public health and the environment. Among the most glaring problems with the federal regulations:

- the corporations developing the technology control the research and conduct all safety testing and voluntarily report negative findings
- no independent, long-term safety testing
- research is considered proprietary and is therefore not available for public scrutiny
- little to no evaluation of the technology for ecological impacts is performed
- no mandatory labeling of genetically engineered foods

THE Potential for Harm

More and more genetically engineered foods are entering the marketplace without adequate testing despite the growing evidence as to the numerous potential risk for our health and environment that these organisms pose.

Potential Health Risks

RISK: New Plant Toxins.

According to the FDA's own scientists, the instability associated with inserting a foreign gene into a cell poses significant health risks. Researchers found genetic material used in the Flavr Savr tomato resulted in toxicity levels responsible for stomach lesions in lab rats.

RISK: Promoting Antibiotic Resistance.

Genetic engineers insert genes for antibiotic resistance into new cells as a marker to see if the new genetic material has been successfully transferred. A recent World Health Organization report warned that illnesses as common as strep throat and diarrhea could become untreatable within 10-15 years if the over use and misuse of infection-fighting drugs continues.

RISK: Unexpected Food Allergies.

When Pioneer Hi-Breed International began inserting genes from a Brazil Nut into their soybean, they discovered that the proteins which cause allergic reactions to people eating Brazil Nuts were also transferred to the soybean.

Potential Environmental Risks

RISK: Unintended Harm to Other Plants or Animals. Scientists at Cornell University found monarch butterflies who fed on Bt pollen from genetically engineered corn plants died or had stunted growth.

RISK: Pollen Drift.

There are several documented instances of pollen from genetically engineered crops being found in non-genetically engineered fields, thus contaminating those crops. Drift poses a significant threat to organic farmers and other who want to avoid genetically engineered food.

RISK: Soil Contamination.

New research on Bt corn (corn engineered to create its own pesticide) found activated Bt emanating from the roots which bound to soil particles and remained toxic to soil insects for up to eight months. How this will impact the long-term ecology of the soil community is unknown.

RISK: Superweeds.

After planting genetically engineered herbicide resistant canola in his fields for three years, a Canadian farmer was confronted with a canola plant that was unresponsive to traditional herbicides when he decided to rotate his fields for the planting of wheat. Laboratory tests revealed that the canola plants contained DNA material from all three of the genetically engineered herbicide resistant varieties of canola he had grown during the last three years.



Why the Rush?

Recognizing the potential for huge profit margins with genetic engineering, agro-chemical companies such as Monsanto, DuPont and Novartis began purchasing seed companies. Today, 75% of the global market for vegetable seeds is controlled by just five seed companies: DuPont/Pioneer Hi-Breed, Monsanto, Novartis, Groupe Limagrain and Advanta. With the introduction of genetically engineered seeds, these companies are reaping record profits and with the rapid development and introduction of newly patented plant genes, these companies have the potential for even greater bottomline.

Unfortunately, these companies bottomline has often come at the expense of human and environmental health. Some of these same companies are the ones who brought dangerous products like DDT, Agent Orange, and Dursban to the market before being adequately tested. It was not until serious environmental and health damage was caused by these products before their use was restricted or eliminated.

In an effort to defend against increased public resistance to genetic engineering in the U.S. these companies and their counterparts in the medical biotechnology industry have launched a \$52 million public relations campaign to promote the supposed benefits of genetic engineering.



For more information, please contact:

MASSPIRG

29 Temple Pl.
Boston, MA 02111
(617)292-4800
masspirg@pirg.org

www.masspirg.org

Clean Water Action

36 Bromfield St., Suite 204
Boston, MA 02108
(617)338-8131

www.cleanwateronline.org

Factsheet Sources:

“Monsanto should not have to vouch for the safety of biotech food. Our interest is in selling as much of it as possible.”

- Phil Angell, Monsanto Director of Corporate Communications

quoted by Michael Pollan in "Playing God in the Garden," New York Times Sunday Magazine, October, 25, 1998

The International Backlash

In India, Europe, Japan and Africa there has been a major backlash against this technology.

- In June 1999, the European Union imposed a moratorium on the approval of all new genetically engineered organisms until stricter regulations are enacted.
- In Africa several nations have joined together in formally opposing the use of genetically engineered crops in their countries.
- In March 2000, 130 other nations signed the BioSafety Protocol which declared that genetically engineered crops are significantly different from traditional crops.

THE Safe Foods Campaign

Federal agencies are ignoring public concern about genetic engineering. A January 1999 Time Magazine poll found that 81% of U.S. consumers believe genetically engineered food should be labeled, yet the FDA's most recent changes in the genetic engineering policy still do not require labeling or comprehensive pre-market health and environmental safety testing.

In addition to demanding federal agencies to act, we are also calling on Shaw's Supermarkets and Star Market to remove all genetically engineered ingredients in their store brands until independent safety testing proves the food safe for human consumption and the environmental, and labels are required for any genetically engineered foods that do meet rigorous safety standards.

A Moratorium on Genetically Engineered Foods

Recently merged, Shaw's Supermarkets and Star Market, now make up one of New England's largest supermarket chains. Their parent company, J.Sainsbury, a leading food retailer in Great Britain removed all genetically engineered ingredients from their store brands in March of 1999 during the height of British opposition to genetically engineered food. J.Sainsbury should do the same for New England consumers!

In the U.S., Whole Foods (owners of Bread & Circus) and Genuardi's, a mid-Atlantic chain have recently pledged to remove genetically engineered ingredients from their store brand products. In addition several food manufacturers including Frito Lay, Gerber and Heinz have asked their suppliers to provide non-genetically engineered crops. In May, MacDonald's Corporation asked their potato suppliers for non-genetically engineered products.

How You Can Help

Write to the U.S. CEO of Shaw's, Ross McLaren, at the address below and the manager of your local Shaw's Supermarket or Star Market. Tell them you do NOT want genetically engineered ingredients in Shaw's Supermarket and Star Market store brands. Tell them that you are not satisfied with the FDA's testing and labeling policies, and that you would like a moratorium on genetically engineered food until in-depth safety testing proves there are no harmful effects to humans or the environment. Also, demand that any food that has been genetically engineered must be labeled to allow the consumer to decide whether to eat genetically engineered foods or not.

Address For Ross McLaren, C.E.O. of Shaws Supermarkets:

Ross McLaren, C.E.O., Shaws Supermarkets
PO Box 600
East Bridgewater, MN XXXXX