

Bioengineered Crop Policy in the U.S.

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What are bioengineered crops?

Any organism that has been altered using genetic engineering techniques to intentionally change its characteristics (DNA)

- More commonly known as GMOs – genetically modified organisms



History of Bioengineered Crops in America

1973 - Biochemists Herbert Boyer and Stanley Cohen develop genetic engineering

1994 - The first GM crop created through genetic engineering — *Flavr Savr Tomato* — becomes available for sale

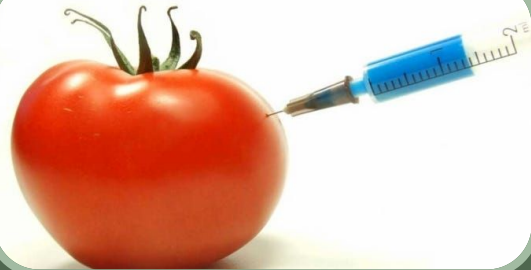
1990s - Summer squash, soybeans, cotton, corn, papayas, potatoes, and canola

2005 - GMO alfalfa and sugar beets are available for sale in the United States

2017 - GMO apples are available for sale in the U.S.

2020 - GMO pink pineapple is available to U.S. consumers.

2022 - “Bioengineered” will be used instead of GMO on labels



January 1, 2022 it was officially required for labels to include whether or not it contains bioengineered ingredients

Actors in Bioengineered Crop Policy

FDA

EPA

USDA



Interest groups

- Regulates most food consumed by humans and animals which, includes GMOs
- Ensures any product containing GMOs meets the same safety standards as all other foods by reviewing information submitted to them from manufacturers
- GMOs go through questioning until the FDA's Biotechnology Evaluation Team is satisfied with the product

- Regulates the safety of plant-incorporated protectants that protect GMO plants from insects and disease
- Monitors all other types of pesticides and herbicides used on crops to ensure they are safe and not posing danger to environment
- Addresses instances when pesticides or herbicides are being misused

- APHIS protects and promotes US agricultural health and regulates genetically engineered organisms
- Biotechnology Regulatory Service under APHIS sets regulations to ensure GMO crops are not harmful to other plants, and addresses instances when they are



- Lobbying groups on behalf of large companies such as Bayer CropScience (Monsanto), Syngenta, and Dow DuPont
- Non-GMO Project in support of organic farming practices



Legislation and Current Trends with Bio. Crop Policy

- Federal Food, Drug, and Cosmetic Act (1938)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (1947)
- Coordinated Framework for Regulation of Biotechnology (1986)
- Plant Protection Act (2000)
- The National Bioengineered Food Disclosure Law (2016)



Problems

- Harmful for the environment
 - Pesticides
 - Herbicides
 - Return to harsh chemicals
 - Runoff
 - Reduction in biodiversity
- Health concerns
 - Possible link to increasing cancer
 - Allergic reactions
 - Intestinal changes
 - Decreased cognitive development in children
- Unfair treatment toward farmers
 - Farmers operate under the thumb of seed corporations
- Regulation
 - Biotech companies press for less oversight
 - Voluntary consultations with FDA
 - Developer of product determines the safety of it, not FDA
 - USDA using consumer complaints to ensure labeling of bioengineered crops is adequate
 - Usage of banned, toxic chemicals being used to combat “superweeds” and “superpests”

Why Be Concerned

- Cancer rates in young people are on the rise - specifically in GI tract
- Dangers posed to the environment
- Safety checks on crops are left in the hands of the developer of the product



Things You Can Do

- Buy organic
- Support local farmers
- Read food labels
- Wash produce that you buy



Recommended Solution

- **Give USDA, FDA, and EPA more power to oversee bioengineered crops**
 - FDA: increase the number of mandatory safety tests conducted on current and new GM products that are more in depth in their review
 - EPA: run frequent tests on pesticides and herbicides used in farm fields to ensure chemicals being used are legal
 - USDA: monitor compliance with current labeling laws by conducting in store inspections
 - USDA: increase protections for farmers from seed companies
 - USDA/FDA: continue to fund research that investigates the impact of GM crops on human health

Sources

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