

Example of research paper on genetically modified food and americans right to kno...

[Business](#), [Customers](#)



\n[[toc title="Table of Contents"](#)]\n

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1. [Current world knowledge](#) \n \t
2. [Safety Assessment of GMOs](#) \n \t
3. [The United States Consumers](#) \n \t
4. [Legislation and Labeling](#) \n \t
5. [Scope of Legislation](#) \n \t
6. [Labeling Support](#) \n \t
7. [Ethical issues](#) \n \t
8. [Conclusion](#) \n \t
9. [References:](#) \n

\n[/[toc](#)]\n \n

The idea of genetically modified foods is one of the most controversial issues of the twenty first century. There are several advantages as well as disadvantages that are associated with genetically modified foods and organisms. The controversy revolves around the safety of genetically engineered (GE) foods, the impact of this engineered processes on human health, natural ecosystem and gene flow of such genetically organisms on non-GE food crops. Thus these disputes revolve governments, biotechnological research companies, multinational corporate bodies and non-governmental organizations. While governments have the responsibility of taking care of the environment and safety of its people, responsible also rests on such governments to ensure foods security and GE organisms provides this. Other organizations and businesses empires have vested

interest in the GE technology and market. This paper evaluates the controversies surrounding genetically modified foods. It will further examine the ethical and legal implications of these issues with regard to safety of genetically modified foods. It will also review the knowledge level of citizens of various locations in the world and the understanding towards Genetically Modified Organisms (GMOs).

Current world knowledge

World knowledge about GMOs and food safety is quite diverse depending on the nature of studies performed and the presentation of the results by different research firms. Consumer watch groups and allied organizations such as the Organic Consumer Association have expressed concerns over the long-term effect on the health of consumers of genetically modified foods . These organizations have based their arguments on the fact that genetically engineered foods have their DNA radically altered and this could pose potential health risks in future if such foods are ingested over time. A similar organization the Greenpeace organization argues there has not been successful research by independent bodies due to frustration from multinational corporations involved in the research .

These corporations have employed extreme measures that systematically block any independent parties from conducting research on the safety of GMOs. On the contrary, research organizations argue that they have involved governmental organizations tasked with ensuring public safety under food consumption throughout the process of developing their products. For instance the European Commission under the Directorate-

General or Research and Innovation have since come to the conclusion that after many years of research into GMO technology, the products from these innovations is 'not more risky than say conventional plant breeding technology'. In the United States, the National Academies of Science has not found any documented cases of adverse effects posed by genetically engineered organism. According to Byrne (2010), the nutrition content of first generation GMOs has been found to be extremely close to that of non-GMO foods. However, different organization and scholarly bodies hold a very different view on the safety of GMOs.

Safety Assessment of GMOs

The first forum that looked to study the issue of food safety under GMOs research was at a World Health Organization (WHO) and Food and Agriculture Organization (FAO) meeting in the year 1990. In this meeting it was agreed that due to the fact that GMO technology required a radical shift in the DNA of a food product, this definitely posed a health risk. Additionally Glowka & Christy (2003) argue that studies have indicated that there are adverse changes in the cellular level caused by some GMOs.

One of the possible health concerns that have cropped up from GMO technology is the issue of allergies. Several foods such as nuts, fish and some shellfish have been reported to trigger allergic reactions of in different consumers. Other studies have indicated the possibility of genetically modified presented a similar possibility. While some scientists view this as a product of adjusting the DNA component of the plants, environmentalists have argued that allergic reaction may be due to environmental

consideration caused by green house environments. An example of a food product that failed to make it to the food market is soybean intended and animal feeds. The genetically engineered soybean is said to have increased allergic reaction in animal caused by increased natural essential amino acid referred to as methionine. This example simply underpins that possibility of GMO foods causing allergic reaction.

The United States Consumers

Consumers within the United States seem not to be very perturbed by development and consumption of GMOs. While there are no documented cases of real health risks caused by the use of GMOs, a lot still remains understudy. Companies have been able to tell the effects of long-term use of GMOs and thus consumers are in the dark when it comes to this point. Other nations such as Japan have fully outlawed the sale of and production of GMOs within the country. This decision was based on a study done by one of the Japanese governmental that claimed that GMOs have the possibility of causing cancers . Of course, different experts have fully refuted these claims in different forums with in depth analysis. Still the United States consumers should be protected from any possibility of health risks due to long term consumption of GMOs.

A second aspect that should be of concern to the United States is the commerce that GMO presents and the possibility of eliminating organic farmers. The Center for Food Safety and other groups protested on the possible harmful effect that GMOs present to the organic farming industry in the United States. They argued that allowing Roundup Ready Alfalfa would

facilitate crosspollination with organic products that contaminating the organic products . Such contamination of organic products would lead to their dismissal in markets and countries that are vehemently against GMO products. Courts in the state of California ruled the planting of genetically modified crops within the state would facilitate crosspollination that would in the end contaminate organic foods. Additionally, economic experts have warned without control of such GMOs and their subsequent production would lead to unfair competition in the food market. This then heralds the need of informing the public of such food products on the shelves through legislation.

Legislation and Labeling

A legislation to control safety and health issues as presented by GMOs was first proposed in year 2010 was referred as the Genetically Engineered Food Right to Know Act. This act was based on the fact that several Americans are increasingly purchasing genetically engineered foods albeit without their knowledge . This bill seeks to ensure that consumers are fully aware of what they are consuming due to concerns over health and safety risks, environmental issues, and religiously and morally based dietary restrictions. It also appreciates that due to lack of long-term studies into the impacts of GMOs, Americans should not be test subjects of this research without their knowledge. This legislation ensures that American consumers have their right to protection by ensuring that producers and manufacturers label all foods that contain or are produced using genetically engineered materials.

Scope of Legislation

This legislation requires that all foods or products with genetically engineered materials have clear labels that indicate the same. Generally, genetically engineered materials are any material derived from a genetically modified organism. For instance daily products from animals that have used genetically engineered hormones have to be labeled. Other foods that have been developed through traditional processes such as crossbreeding are not considered genetically engineered .

The labels should clearly bear the label ‘ GENETICALLY ENGINEERED’. This label should also contain other labels that clearly illustrates that it is a government notice that indicates the product contains genetically engineered material, or was produced with genetically engineered material. While this legislation has been found to be important in consumer protection, it has not been fully implemented at the national level. Different states have been left to implement their own policies.

Labeling Support

There are several reasons why labeling at the national level has been forwarded as a very important legislation. First, proponents of national labeling laws have argued that it provide the consumers with the right to know what kind of food they are consuming. In particular, it allows consumer steer away from food that have been perceived to have concerns over health issues. Secondly, several surveys have indicated that most Americans are for the idea of a national labeling and information legislation on genetically engineered organisms (Civic Impulse, 2010). Thirdly, more than 25 countries

in Europe, which are United States' trading partners, have implemented these labeling rules .

Ethical issues

There are ethical issues that surround the whole aspect of genetically modified organisms. One of the key issues that accompany genetically modified products is the fact that no long term research has been performed on the impacts of these genetically modified foods on human health. Experts argue that the consumption of gene-altered organism has a significant impact on the cells of the human body . Biotechnology companies are reporting huge incomes from this technology without appropriating the knowledge on their impacts. Consumers would have to continue using genetically modified organized foods in order to know the long-term impacts of using these foods.

The second ethical issue that plagues this technology emanates from the fact that few industries dominate that seed industry. Different firms have been engaged in vertical integration and therefore huge corporations have resulted from these mergers. The outcome is that competition in the GMOs commercial sector is virtually non-existent as the oligopoly that exist in the market allows the few firms to coordinate and present a single front. This puts pressure on other farmers, the consumers and the government. These corporation managed to influence the government at a huge scale and thus governments are not in a position to instill there rules.

Conclusion

Genetically modified foods have been termed by several scholars as the only solution to the troubles of food insecurity that many nations in the world faces. Countries such as those in Africa and Asia that face persistent droughts and famines could turn to GMOs to increase yield and use drought resistant crops. However, health issues that have been associated with GMO technology need to be addresses. If the technology has no evidence of health issues, then the technology should be allowed to penetrate other markets and regions such as Africa.

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