

Genetically Modified Foods

Student's Name or Students' Names

Department Affiliation, University Affiliation

Course Number: Course Name

Instructor's Name

Assignment Due Date

Genetically Modified Foods

Genetically Modified (GM) foods are groups of foods produced from organisms with an artificially modified genetic material or DNA (World Health Organization [WHO], 2019).

Genetic engineering or modern biotechnology is often done on natural plants to manufacture genetically improved produce. The genomes introduced to plants improve food reliability and the quality of crop yield. Moreover, they make these plants resistant to various diseases. Numerous debates have emerged from two contrasting groups on whether the consumption of GM foods is entirely safe and healthy. Agri-biotech scientists have supported GM foods to solve the global agrarian crisis of food inadequacy and pest invasions (Boccia & Sarnacchiaro, 2015).

Consumers, farmers, environmental activists, and food scientists have expressed their concerns about transgenic foods. They believe that such a diet may cause long-term health effects such as mammary tumors, cancer, liver, and kidney damage (Maghari & Ardekani, 2011). The techniques, procedures, regulations, environmental impact, and potential risks of GM foods will be discussed.

The techniques used to identify, separate, transfer, and modify genes in cells have caused scientists to raise concerns about the potential health risks generated by GM foods' consumption. Transgenic foods are made by inserting the desired gene into an organism's cells using a vector (Bawa & Anilakumar, 2013). During the process, other components like viral promoters and antibiotic resistors may also be transferred. These foreign components replicate in the cells and are absorbed into the human body. Boccia and Sarnacchiaro (2015) believed they could cause allergy problems and other serious health complications. Therefore, it is vital for food security units to reassess the antibiotic resistors that could cause harm to human bodies.

Although GM crops grow faster and produce extraordinarily better-quality foods, environmental scientists have raised their concern about the potential harm these foods pose to the ecosystem. They interfere with the normal gene flow, thereby disrupting biodiversity (Bawa & Anilakumar, 2013). Moreover, genetic engineering and growing the crops to maturity introduce harmful toxins into the environment. Farmers have expressed their concerns that weeds and pests resistant to antibiotics may emerge. This could not only cripple farming, but it could also make the environment unsafe for both plant and animal life (Boccia & Sarnacchiaro, 2015). Therefore, biotechnology experts should regulate the elements that could cause potential harm to the environment and make these foods more natural and safer.

Several countries worldwide have implemented special regulations and restrictions to control the consumption of GM products. The United States has accepted the use of corn and soybeans, which are genetically modified. Only two genetically modified maize and potato breeds are allowed in the European Union (Pollack & Shaffer, 2009). In Africa, some countries, including Kenya, have banned GM imports (WHO, 2019). The governments have argued that these foods could cause harm to the population and the environment. This should call for regulation of GM foods' consumption. Perhaps the modified traits included in the genes should be developed while considering consumer health and environmental welfare. Consequently, they should contain fewer toxins, and their consumption should be controlled.

In conclusion, although GM foods have been viewed as a food insecurity solution, they have been reported to have several drawbacks that have harmed human health and the environment. Therefore, the production of these foods should be regulated by measuring the health and ecological impacts of the elements contained in the artificial genes. The move will aid in making them healthier and more environmentally friendly.

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