

# Example of genetically modified foods article review

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## **Genetically Modified Foods (GMFs)**

GMFs are foods whose DNA has been manipulated by scientists to change the essential genetic constitution of plants and animals (Mather, 2012). This modification involves inserting genetic material from one species into another one so as to give it desired characteristics like pest resistance and resistance to herbicides. The use of GMFs is highly controversial; while they are accepted in countries like the United States, they cannot be sold in Australia and the European Union without labeling, and are banned in Egypt, Japan, and Ireland (Mather, 2012).

Proponents of GM foods cite several reasons to advance their cause. The first is that GM foods are sturdy and able to reproduce in bad weather conditions, which is of great importance especially in developing countries which often experience food shortages (VGDH, 2012). GM plants are also highly resistant to pests and insects which then require little or no application of chemicals like pesticides or herbicides. The proponents argue that less chemical application is in turn beneficial to the environment (Mather, 2012).

Opponents of GM foods claim that genetic modification of foods carries the risk of genetic instability especially on their effects on human beings and the environment in the long term. There is also the risk of allergen transfer across species. A notable example is that of modified soybeans where a gene from the Brazil nut was introduced into the soybean. Production of this soybean was stopped because those who were allergic to the nuts were also allergic to the soybeans (VGDH, 2012). However, little research has been conducted on the long-term health risks of these foods.

As earlier mentioned, GM foods in the United States are not labeled during

their sale. This is because the FDA does not consider GM foods as 'substantially different' from other traditional varieties. Examples of these foods include corn, canola, alfalfa, peas, zucchini, rice, and peas, and most processed foods which may include soy or corn products (FDA, 2012). The U. S. Food and Drug Administration generally refer to GM foods as bioengineered foods. Developers of these foods are required to consult with the FDA where issues related to nutrition and safeties are assessed. The developers are obliged to submit a Premarket Notification Proposal to the FDA 120 days before they begin to market the food (FDA, 2012). Mather, (2012), notes that the FDA, however, does not carry out independent research on these foods. It relies on the data provided by the developers. In conclusion, the potential for GMs is great if further research is carried out to eliminate fears and increase its sustainability. Genetic modification aims to provide food whose ecological, nutritional, and productive value is enhanced (Schonwald, 2012). They are also environmentally-friendly because their increased pest resistance reduce or eliminates the utility of pesticides. They could also be a source of food security in countries where food production is adversely affected by weather and soil conditions. Nonetheless, it is vital for scientists to objectively examine the long term implications of these foods on humans so as to increase confidence in their safety. It is also recommended that foods containing GM foods be labeled so that any consumer is aware of what is being purchased. This is especially true for U. S. residents where labeling of GM foods is not done.

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Schonwald, J. (2012). Engineering the Future of Food. *Futurist*, 46(3), 24-28. Available at Academic Search Premier, EBSCOhost (accessed June 30, 2012).

U. S. Food and Drug Administration (2012). Plant Biotechnology for Food and Feed. Available at <http://www.fda.gov/Food/Biotechnology/default.htm>

Victorian Government Department of Health (2012). Genetically Modified Foods. Available at [http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Genetically\\_modified\\_foods](http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Genetically_modified_foods)