



# Genetically Modified Food For Thought

## **What is a Genetically Modified Food?**

Genetically modified (GM) foods are foods grown from seeds that have had their DNA changed, usually through the addition of genes from another organism. The first GM food to be approved for sale was in the United States in 1994. It was a rot-resistant tomato called the Flavr Savr.

## **How are they intended to be used?**

The addition of genes from another organism to a seed is designed to enhance the normal characteristics by adding a beneficial trait to a particular crop. GM foods provide advantages to either the producer or consumer.

### **Some benefits Include:**

- Resistance to diseases caused by insects or viruses
- Ability to grow well with use of pesticides
- Resistance to poor weather such as frost or drought
- Slower ripening or increased durability (i.e. bruise less easily) as this is an asset for exporting foods
- Enhanced nutritional content (i.e. in Europe, vitamin A in golden rice)
- Decreased food waste and lower food costs for consumers

## **How are they regulated in Canada?**

Health Canada regulates GM foods to ensure they are safe to eat. Environmental concerns with GM foods are monitored by the Canadian Food Inspection Agency. It takes 10 years for a new GM food to be approved in Canada. GM food companies must submit safety, biological, chemical and nutritional assessments to Health Canada before they can be considered safe for consumers.

## **Labelling**

GM foods are not labeled in Canada. It would be hard to label GM foods since many GM foods are present as ingredients in other foods. For example, corn may be an ingredient in canned goods, cereals, snack foods and frozen dinners.

In the Europe, Japan and Australia labelling is mandatory. Labelling provides consumer choice between GM and non-GM foods. It also allows GM foods to be traced back to the original source.

## Voluntary Labelling

Many consumers, farmers, and retailers are advocates of the consumer's right to know if a food has been genetically modified. The Non-GMO Project, founded in 2001, is a non-profit organization dedicated to protecting the non-GMO food supply in North America. It allows consumers to make an informed choice on GM foods. Under this organization, non-GMO foods are verified to ensure the product meets the consensus-based best practices for GMO avoidance and labeled with **"Non-GMO Project Verified"** seal.



Other voluntary "GMO free" labelling/claims on foods within Canada are not verified by a third party.

## GM Foods in Canada and around the world Voluntary

### Where in the world are GM foods grown?

Growing of GM food is limited to countries with highly industrialized agricultural sectors. These are typically countries who are large exporters of agricultural goods. The United States is the largest grower of GM crops, having 43% of all GM crops globally. Canada owns 6% of GM crops globally.

### GM foods currently grown in Canada

Crop	Where it might be in the Grocery Store
Corn	Corn based cereals and snack foods (e.g. Corn Flakes), corn syrup, corn oil, processed foods, foods sweetened with glucose/ fructose, eggs, milk, meat, sweetcorn
Canola	Canola oil, eggs, milk, meat
Soy	Tofu, soy beverages, soy-based protein, soy oil, eggs, milk, meat
Sugar Beet	Sugar

Some GM foods such as lentils, potatoes, rice, squash, and tomatoes are approved in Canada but not currently grown. The most commonly imported GM foods in Canada come from the U.S. These foods include: cottonseed oil, papaya, squash and milk by-products, such as skim milk powder.

## Health Concerns

- There are still many questions regarding health and GM foods as they are a relatively new development
- Some think GM foods could increase allergens, or have other long term health complications
- Extensive Research from the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) Codex Task force, concluded that ***GM food is as safe as its non-GM foods for animal and human consumption and GM foods do not pose a threat to human or animal health***

## Environmental Concerns

Some environmental concerns include contamination of GM crops with regular crops, less crop variety, and more resistant weeds and other pests.

## What can I do to limit my intake of GM foods?

### Shopping Tips:

1. Go organic (organic foods are not genetically modified)
2. Buy directly from farmers who do not plant GM crops/use GM grains for meat, egg or dairy production
3. Limit processed foods with corn, canola or soy ingredients
4. Shop at smaller/independent grocers- often these small companies produce their own foods, decreasing the chances the crops have been genetically modified
5. Look for voluntary “Non-GMO Project Verified seal” (try independent or health food stores)

***\*Check out the non-GMO project website for a list of non-GMO products, restaurants, and retailers***

<http://www.nongmoproject.org>

### Other Tips:

1. Plant your own garden (when buying seeds ask if they are genetically modified- chances are they are not)
2. Contact food companies for information on use of GM ingredients
3. Be an advocate for GM labelling- voice your opinion to key stakeholders:
  - Health Canada,
  - Canadian Food Inspection Agency
  - Large food companies like Monsanto (currently the largest GM seed company in the world; Monsanto owns 86% of GM seeds grown globally)

## References

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