

CAHN-Pro Position Statement

GENETICALLY MODIFIED ORGANISMS (GMO)

“A GMO (genetically modified organism) is the result of a laboratory process where genes from the DNA of one species are extracted and artificially forced into the genes of an unrelated plant or animal. The foreign genes may come from bacteria, viruses, insects, animals or even humans. Because this involves the transfer of genes, GMOs are also known as “transgenic” organisms. This process may be called either Genetic Engineering (GE) or Genetic Modification (GM); they are one and the same.”

-Institute for Responsible Technology

Background

Genetically modified organisms have been in our food supply since 1996. A genetically modified organism is the result of a laboratory process of splicing genes from one species and inserting them into another in an attempt to obtain a desired trait or characteristic. This process may be called either Genetic Engineering (GE) or Genetic Modification (GM).

The most common genetically engineered crops are corn, soy, canola and cotton. Since derivatives from these foods are used extensively in food production, it is estimated that up to 70 percent of the processed foods in Canadian grocery stores contain genetically modified or genetically engineered foods.¹ For example, soy and corn are by-products in most processed foods (soy lecithin, high-fructose corn syrup, corn syrup), canola is in salad dressings and is a popular cooking oil and most of our clothing is made from GMO cotton. Labeling of GM ingredients is not required in Canada.

In Support of Whole Foods for Health: Renew your love for food ... with food that loves you back

The Canadian Association of Holistic Nutrition Professionals (CAHN-Pro) believes that the nutrient content, protective benefits and healing compounds of whole foods are vital for human health. “If common lifestyle risk factors, among other diet-related ones were eliminated, around 80% of cases of heart disease, strokes and type 2 diabetes, and 40% of cancers could be avoided.”²

CAHN-Pro affirms its position that eating natural, preferably organic, whole foods is best for our nutritional health and wellbeing. Tampering with whole foods - whether it be by genetically modifying the seeds, growing crops using synthetic chemicals or by removing valuable nutrients from the foods and replacing them with preservatives and artificial ingredients – compromises the integrity and nutrient value of our food. Genetically modified organisms (GMOs) cannot be considered whole foods because their genetic make-up no longer follows the natural growing cycle. Altering whole foods also changes how our unique biochemistry reacts to those foods, opening the door to a number of potentially nutrition-related health problems such as allergies, a

¹ Greenpeace.ca, GMO Foods

² Research joint programming initiative: “a healthy diet for a healthy life” commission recommendations, April 28, 2010, Brussels

weakened immune system and digestive problems. In May 2009, the American Academy of Environmental Medicine released a policy paper urging all doctors to prescribe non-GMO diets for everyone, stating that animal studies show that genetically modified food is linked to infertility, immune problems, accelerated aging, organ damage, and gastrointestinal problems.³

According to extensive research done by the Institute for Responsible Technology, there has been no post-market surveillance of GMO foods, nor have any human clinical trials been conducted. The fact is that the long-term health consequences of genetically modified foods are yet unknown. The safety of these products is purely theoretical. It is too soon to tell for sure, and there are no human studies to guide us. Furthermore, critics suggest that there may be significant health, environmental and economic risks associated with this technology which also requires further study. As such, CAHN-Pro strongly supports the practice of growing and raising foods the way nature intended, that is, to follow the propagation and breeding processes that have been safely used for thousands of years.

Trusting what Nature created for us to eat

CAHN-Pro and its members trust and respect the innate intelligence of foods that nature created for us to eat. Nature's wisdom supports life, ensuring that all of the nutrients we need for good health are provided, and are in natural proportion to each other. We refer to these as *natural* or *whole* foods, which in their most *wholesome* form (i.e. as close to their natural state as possible) include fibre-rich carbohydrates, proteins, all types of fat, vitamins, minerals, enzymes and phytonutrients.

Whole foods can best be described as *fresh, alive, natural* and of *good quality*.

- *Alive* means that foods that still contain live enzymes and health protective phytonutrients, such as those found in fresh fruits and vegetables.
- *Natural* means unprocessed, unrefined foods like legumes as well as whole and ancient grains.
- *Good quality* refers to foods that contain their natural DNA and cellular properties, and that are grown in nutrient-rich soil without pesticides and synthetic fertilizers.

Avoiding GMOs:

1. Buy organic when possible

Today's organic foods standards help prevent the excessive tampering with food. Since Canada does not require mandatory labeling of GMO foods, buying organic food remains one of the best ways to avoid genetically modified food ingredients. Specifically, organic production prohibits the use of GMOs, chemical fertilizers, various synthetic substances and irradiation.

Organic foods also may have a higher phytonutrient content.⁴ Phytonutrients (or plant nutrients) are largely responsible for the way foods look, taste and smell and they offer specific health benefits. Phytonutrients are part of a plant's immune system. When a plant is grown in organically harvested soils, it produces resilient plants with their own natural defenses against insects, fungus and disease. Since the plant is healthier, it produces more nutrient-dense food.

³American Academy of Environmental Medicine. Genetically Modified Foods. (2009). Retrieved from <http://www.aemonline.org/gmopost.html>

⁴The Power of fruit, beyond antioxidants. Salvestrol. Retrieved from <http://www.salvestrol.ca/aboutsalvestrols.asp>

2. Seek out heritage varieties of produce

Heritage or heirloom vegetables are another way to avoid GMOs as these foods are grown from seeds that have been passed down from generation to generation, often through families. These delicious and colourful vegetables can be found at farmers' markets, select restaurants and backyard gardens and are known for their exceptional flavour (suggesting a higher phytonutrient content). There are over 25,000 heirloom vegetable varieties known today and some studies suggest they may be nutritionally superior to hybrids.^{5 6}

On the other hand, hybrid vegetables, normally found at the supermarket, are the result of two or more varieties of cross-pollinated plants that can't continue to reproduce on their own. While not considered a GMO, they are often bred to maximize consistency, crop yield, and such traits as a tough skin to resist mechanical picking, long distance shipping and pesticide application.

3. Look for Non-GMO marked foods

Thanks to the Non-GMO project, consumers can identify verified Non-GMO foods at participating grocers across North America. The Non-GMO Project is a non-profit organization, created by leaders representing all sectors of the organic and natural products industry in the U.S. and Canada, to offer consumers a consistent non-GMO choice for organic and natural products that are produced without genetic engineering or recombinant DNA technologies.

The Non-GMO Project has successfully created a collaborative non-GMO verification program that began enrolling products in the fall of 2008. Working at every level of the supply chain, all the way back to the seeds, the Project's role is to inspire and ensure viable non-GMO alternatives long into the future. Go to www.nongmoproject.org for more details.

*Approved by the CAHN-Pro Board of Directors
month, year*

Permission to reproduce is granted.
Please acknowledge the Canadian Association for Holistic Nutrition Professionals (CAHN-Pro).

⁵ Environmental Nutrition Newsletter Tribune Media Services. *Heirloom vegetables: Historically and nutritiously precious*. Retrieved from http://www.chicagotribune.com/features/food/sns-food-information-about-heirloom-vegetables_0,2605814.story

⁶ Fruit and Soil Quality of Organic and Conventional Strawberry Agro ecosystems Reganold JP, Andrews PK, Reeve JR, Carpenter-Boggs L, Schadt CW, et al. (2010) Fruit and Soil Quality of Organic and Conventional Strawberry Agro ecosystems. PLoS ONE 5(9): e12346. doi:10.1371/journal.pone.0012346

References

1. Greenpeace Canada. *GMO foods*. (2010). Retrieved from <http://www.greenpeace.org/canada/en/campaigns/ge/Learn-about/>
2. European Commission. Research joint programming initiative: "A healthy diet for a healthy life" commission recommendations, April 28, 2010, Brussels
3. American Academy of Environmental Medicine. *Genetically Modified Foods*. (2009). Retrieved from <http://www.aaemonline.org/gmopost.html>
4. The Power of fruit, beyond antioxidants. Salvestrol. Retrieved from <http://www.salvestrol.ca/aboutsalvestrols.asp>
5. Environmental Nutrition Newsletter Tribune Media Services. *Heirloom vegetables: Historically and nutritiously precious*. Retrieved from <http://www.chicagotribune.com/features/food/sns-food-information-about-heirloom-vegetables,0,2605814.story>
6. Reganold, JP, Andrews, PK, Reeve, JR, Carpenter-Boggs, L, Schadt, CW, et al. (2010). Fruit and Soil Quality of Organic and Conventional Strawberry Agro-ecosystems. *PLoS ONE*, 5,9, e12346. doi:10.1371/journal.pone.0012346
7. Institute for Responsible Technology. (2011). *GMO Basics*. Retrieved from <http://www.responsibletechnology.org/GMFree/Home/index.cfm>
8. The Non-GMO project. <http://www.nongmoproject.org/>