



EAT
think
VOTE

**PESTICIDES AND GENETICALLY MODIFIED
ORGANISMS (GMOS)**



**FSC
RAD**

Food
Secure
Canada
Réseau
pour une alimentation
durable

Context

Our current food production system is causing environmental harm. Water quality is deteriorating across Canada, soil health is degrading in many provinces, and we are facing both a global climate crisis and an unprecedented biodiversity crisis.

One of the significant drivers of these environmental problems is the use of toxic pesticides. In Canada, the use of synthetic herbicides has increased significantly with the use of genetically engineered (genetically modified or GM) herbicide-tolerant crops. Current and future GM crops threaten to further drive up the use of pesticides. They also pose risks to biodiversity and can contaminate non-GM crops and neighbouring ecosystems¹.

Ultimately, Canada must invest in a transition to ecological agriculture – one that supports farmers to shift away from a reliance on pesticides and GM crops, and encourages the regeneration and long-term preservation of biodiversity, water quality and soil health. To facilitate this transition, both pesticides and GMOs must be regulated with the priority of protecting our health and the environment. This means that decision-making needs to rely on independent science, be transparent, and include public participation.

Our food security, today and into the future, depends on it.



¹ Canadian Biotechnology Action Network. (2015). "Are GM Crops Better for the Environment?" Retrieved from www.gmoinquiry.ca/environment

Context

Genetic modification (GM) is also called genetic engineering

Genetic engineering (genetic modification or GM) is used to create new characteristics in an organism by making changes to its genetic makeup through direct intervention at the molecular level. Making these changes can create unexpected effects in organisms that can create new environmental and health risks.

With genetic engineering, scientists can change the traits of plants and animals by inserting DNA pieces, whole genes, or long stretches of DNA segments from many different organisms. Scientists can also delete or swap DNA sequences or introduce genetic material to silence genes.

There is a lack of democratic process in the regulation of genetic engineering in Canada. Genetically modified organisms (GMOs) were introduced into our food system without public debate and without mandatory labelling. Canadian regulation does not assess any economic, social or ethical questions related to GMOs, and there is no consultation with farmers or other Canadians before GMOs are approved.

Health Canada does not conduct its own safety testing of GM foods but relies almost entirely on corporate-generated science that is not peer-reviewed and is classified as confidential business information.



Context

The term "pesticides" includes herbicides, insecticides and fungicides

Many synthetic pesticides are used in Canadian agriculture to kill weeds, insects, and fungi. The most widely used pesticide in Canada is glyphosate, most commonly used in the brand-name formulation called "Roundup." In 2015, the World Health Organization classified glyphosate as a probable human carcinogen. It has been banned or severely restricted in 17 countries. Independent judges and juries in the U.S. have ruled that Roundup was a contributing factor to the development of cancer in individuals who frequently used it. Canada also continues to allow the use of other pesticides, such as neonicotinoid insecticides and the carcinogenic herbicide atrazine, which have been banned elsewhere, including in Europe.

Pesticide use continues to increase, and contamination of our food, drinking water, soil, and watersheds is increasing as a result. This pollution poses unnecessary risks to our health, the health of farmers, and to the ecosystems we depend on.

Canada can and must dramatically reduce its dependence on pesticides. Many farmers across Canada already produce food organically without synthetic pesticides, and others are using proven, less-toxic approaches to growing our food. With strong government policies and regulations, Canada can innovate towards agriculture that is healthier for people and the planet.

KEY STATISTICS:

- Canadian farmers grow genetically modified corn, canola, soy, and white sugarbeet, as well as a very small amount of GM alfalfa. There is also a GM Atlantic salmon on the market, and GM papaya and squash can be imported into Canada from the U.S.².
- According to all polls over twenty years, over 80% of Canadians want mandatory labelling of genetically engineered food³.
- Since the introduction of GM crops in Canada, herbicides sales have increased by 199% (1994–2016)⁴. Almost 100% of the GM crops grown in Canada are genetically engineered to be herbicide tolerant, often with tolerance to multiple herbicides.
- A recent poll found that the majority of Canadians do not trust our laws to properly protect our health and the environment from toxic pesticides⁵.
- Europe has banned pesticides that are still used in Canada, such as atrazine and neonicotinoids. Elsewhere, 17 countries have now banned or restricted glyphosate, but Canada recently re-approved it for another 15 years⁶.
- Much of our food has pesticide residues. In 2015, Health Canada found pesticides in about 30% of over 3000 food samples tested.
- In 2016 and 2018, Health Canada scientists concluded that the most commonly used neonicotinoids pose unacceptable risks to our environment.
- Organic farmers already grow food without using GMOs or synthetic pesticides, in compliance with the Canada Organic Standard.

² Canadian Biotechnology Action Network. (n.d.). "GM Products." Retrieved from www.cban.ca/gmfoods

³ Canadian Biotechnology Action Network. (n.d.). "Polls on GM Food Labelling in Canada." Retrieved from <https://cban.ca/labellingpolls>

⁴ Canadian Biotechnology Action Network. (2018). "Genetically Modified Crops and Herbicides." Retrieved from <https://cban.ca/wp-content/uploads/GM-Crops-and-Herbicides-Nov2018.pdf>

⁵ The Gandalf Group. (2017). "Canadian Public Opinion on Toxics."

⁶ Sustainable Pulse. (2019). "Glyphosate Herbicides Now Banned or Restricted in 17 Countries Worldwide." Retrieved from <https://sustainablepulse.com/2019/05/28/glyphosate-herbicides-now-banned-or-restricted-in-17-countries-worldwide-sustainable-pulse-research/#.XVTctpNKhVq>

Policy Proposals

Support a transition to ecological agriculture

This can happen through funding and policy support to agricultural programs, ecological and organic farms, research and development, access to land and agroecological training, and market development.

Decision-making on GMOs needs to change significantly:

1. Government safety assessments of genetically engineered foods, crops and animals should be peer-reviewed by independent scientists.
2. Federal regulation should include assessments of the potential economic and social impacts before deciding if new GMOs are allowed onto the market, and farmers and consumers should be consulted as part of this process.
3. All GM foods and GM food ingredients should be clearly labelled.
4. A moratorium on new GMOs approvals should be put in place while significant changes are made to regulation to increase transparency, public participation, and the role of independent science, and while significant concrete supports are put in place to support rapid transition to ecological agriculture.



Policy Proposals

We need stronger regulation of pesticides, a pesticide-reduction strategy, and a ban on neonicotinoids:

1. The National Farmers Union is asking the Pesticide Management Regulatory Agency of Health Canada to eliminate permission to use as a desiccant from the glyphosate label. Glyphosate is a weed killer but it is often sprayed on crops to kill them and hasten drying (desiccation) so they can be harvested sooner. This practice can lead to high glyphosate residues in foods.
2. The legislative review of the Pest Control Products Act offers an opportunity to improve Canada's pesticide regulatory system to better protect human health and the environment. Decision-making should be more transparent and consider the most up-to-date independent science.
3. Canada should implement a pesticide-reduction strategy that includes technical and financial support for farmers to transition to less toxic practices. As a first step in this strategy, Canada should implement a ban on all neonicotinoid pesticides by 2021 and provide support for farmers to transition away from using systemic insecticides such as neonicotinoids.



Questions for candidates

- Will you support mandatory labelling of the genetically engineered foods on the market now?
- Will you support more transparent GMO regulation that relies on independent, peer-reviewed science instead of confidential science from companies? Will you support a peer-review process for all government safety assessments?
- Will you support consultations with farmers before new GM seeds are allowed on the market?
- Will you support a moratorium on all new GMO approvals while regulation is significantly strengthened and mandatory labelling is put into effect?
- Will you work to ensure that the 2020 scheduled review of the Pest Control Products Act strengthens protection for human health and the environment?
- Will you implement an immediate ban on all systemic insecticides such as neonicotinoids, and support farmers to transition to more environmentally friendly alternatives?
- Will you support a pesticide-reduction strategy that provides technical and financial support to farmers so they can adopt less toxic approaches to growing our food?
- Do you believe a transition to ecological and organic agriculture is a key part of a sustainable food future? Will you support more funding for organic farming and the development and adoption of agroecological practices? How will you support this transition?



For more resources on pesticides and GMOs:

- Équiterre: www.equiterre.org
- Canadian Biotechnology Action Network: www.cban.ca