

Organic and conventional food production: facts and myths

The facts

When it comes to growing food, there is no 'one size fits all' approach. Farmers have a choice of production methods, and regardless of whether they choose organic or conventional production practices, they share the desire to grow safe, healthy food while ensuring the health of the land for future generations.

Conventional food production involves farming practices that may include using genetically modified organisms (GMOs), synthetic fertilizers, and pesticides.

In Canada, the organic industry has set specific standards for organic food production. These standards are made up of two parts:

1. Defines the general principles and standards of organic farming.
2. List of 'permitted substances', which includes crop production aids like pesticides and fertilizers.

Criteria for organic food production include:



Avoiding the use of synthetic products for production, growth, and crop protection, which includes fertilizers and pesticides.



Prohibiting the use of genetically modified seeds.



While organic production must meet a specific set of criteria, these criteria do not speak to the quality, safety, or nutrient content of food produced.

As stated in the Organic Standards:



"Neither this standard nor organic products produced in accordance with this standard represent specific claims about the healthiness, safety and nutrition of such organic products'."

The myths



Myth: organic production does not use pesticides

Pesticides are used as a tool to manage diseases, insects and weeds. While other tools are also used to prevent pests, both organic and conventional farmers use pesticides. Organic growers are only permitted to use a restricted list of pesticides, most of which are derived from natural sources.



Myth: organic pesticides are natural and therefore safer

A naturally-derived pesticide is not an indication of safety. Many bacteria, fungi, and plants naturally produce chemicals that are not safe for human consumption.

All pesticides, whether they are organic or conventional, must go through the same regulatory process and be approved for use by Health Canada's Pesticides Regulatory Directorate (PRD).

Regardless of whether food is grown using synthetic or organic pesticides, it is completely safe to eat.



Myth: organic food is more nutritious

Studies have shown that the variance in nutritional composition between organic and conventional foods is minimal, and any small differences would not have an impact on health². The nutritional profile of food is mainly influenced by the quality of the soil in which it is cultivated.



Myth: organic production is better for the environment

Organic production methods do not necessarily guarantee superior environmental sustainability.

Since organic farming prohibits the use of synthetic pesticides and fertilizers, it often requires more land to produce equivalent yields, which can potentially drive deforestation and habitat loss. Additionally, organic farming may rely more heavily on tillage (the mechanical removal of weeds), which can contribute to soil erosion and carbon emissions.

Conventional production tools like genetically engineered crops can significantly improve sustainability in agriculture by increasing yield, reducing soil erosion, conserving water, reducing greenhouse gas emissions, and improving the efficiency of input use.



The bottom line:

Both conventionally and organically grown food in Canada is safe and nutritious. No two farms are exactly alike, and each farm's unique needs, as well as market considerations, may lead a farmer to choose one approach versus another.

¹ Page iii https://publications.gc.ca/collections/collection_2020/ongc-cgsb/P29-32-310-2020-eng.pdf

² <https://www.acpjournals.org/doi/10.7326/0003-4819-157-5-201209040-00007?articleid=135568>