

FAQs

Gene Editing and Canada's Grain Sector



The Government of Canada has confirmed that gene-edited crops will be regulated much the same as conventionally-bred crops. The Canada Grains Council welcomes this direction and provides the following answers to common questions from value chain stakeholders.

What is gene editing?

Gene editing is a relatively new method plant breeders can use to make precise, targeted changes to a plant's DNA. This process mirrors what can happen in nature or through traditional plant breeding, but in a more efficient way.

Are all gene edited plants GMOs?

No. The term genetically modified organism (GMO) most commonly refers to a plant that contains foreign DNA (from a different species).

Gene edited plants developed through targeted editing of their own DNA are not GMOs. They are indistinguishable from traditionally-bred plants.

Are gene-edited crops safe to eat?

Yes. Scientists and regulatory agencies around the world, including [Health Canada](#), agree that targeted editing of a plant's own DNA produces no greater risk than conventional plant breeding methods, which date back to the 1800s.

Canada's new guidance for gene edited plants is science-based and internationally aligned. It continues to protect food and environmental safety while encouraging research and innovation in Canada.

How are gene edited plants regulated in Canada?

Gene-edited crops are regulated in much the same way as conventionally-bred crops. Most of the new plant varieties developed in Canada each year have improved agronomic or end-use characteristics, such as higher yields, better disease resistance or improved taste. These plants must meet regulatory requirements for seed purity and quality, and any derived food products must be safe to eat. However, if a new plant variety were to have an unfamiliar characteristic that posed a food or environmental safety concern, it would require an additional pre-market assessment and approval from Canadian regulators before it could be placed on the market. This applies to gene edited plants as well as traditionally-bred plants.

Does this mean industry is regulating itself?

No. Since 1996, Canadian plant breeders have been responsible for seeking pre-market approval for their varieties when required. Health Canada and the CFIA recently updated their guidance to make it clearer and easier for plant breeders to understand which varieties can follow the regulatory path for traditional breeding, and which need an additional safety assessment and approval to enter the market. Failure to obtain a required authorization would contravene the regulations. This is similar to the pre-market approach used for products like food additives and medical devices.

Canada's Regulatory Approach is not changing. All GMOs continue to require government approval before they can be placed on the market.

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Gene-edited plants will be managed using the best practices that already provide grain buyers and consumers with commercial transparency and choice in the type of grain they buy.

Should Health Canada and the CFIA do more to protect market access?

Canadian regulators can best protect market access by remaining science-based, focusing on safety, and being transparent about their decisions. Commercial needs are best managed by industry.

How will Canada's export markets be impacted?

Gene edited plants will be handled by the same systems that are already providing market choice between conventional, organic and GMO grains.

Canadian value chains will discuss market access considerations long before seed of a new gene edited variety is made available to farmers. This includes having a shared understanding of how (and if) a new gene edited variety will be regulated by our trading partners, and whether the variety has been cleared for export markets.

The Canadian seed sector is fully committed to transparency. Information about which seed varieties were produced using gene editing will be publicly available on the Seeds Canada website, as well as from seed companies directly.

Will farmers know if their seed was developed using gene editing?

Yes. Before farmers purchase seed to grow on their farms, they will be able to confirm whether it was developed with gene editing.

Farmers often need to make sure their seed will meet the needs of their customers. For example, a food company producing a product with a health claim may want to buy grain developed with gene editing because it offers a nutritional enhancement. Or, a company producing an organic product may want to buy grain that was not gene edited.

Will consumers be able to choose non-gene edited foods?

While Health Canada has clearly stated that gene editing is safe, consumers can buy from certification systems such as organic and private labels that do not allow gene edited ingredients in their products. In addition, Health Canada is publishing a list of all gene edited products that could be commercialized in Canada.

All food in Canada is regulated under a comprehensive system of science-based and transparent regulations and standards. Canada's food safety system is among the best in the world, consistently receiving top marks in global rankings.