

GM WHEAT UPDATE

- » Canadian government researchers are field testing a gene-edited wheat that is exempt from government GMO regulation.
- » The world's first genetically modified wheat is now being grown in Argentina.

GENE-EDITED GM WHEAT IS BEING FIELD TESTED IN CANADA

In Canada there are several field tests of genetically engineered (genetically modified or GM) wheat, including at least one **unregulated test plot of gene-edited wheat** at the Agriculture and Agri-Food Canada research centre in Lethbridge, Alberta. Lack of regulation for gene-edited plants increases the **contamination risk**.

Gene editing, such as CRISPR, is genetic modification.

The Canadian Food Inspection Agency (CFIA) lists four regulated field tests of GM wheat in 2023, in Manitoba, conducted by the company AgQuest for fungal resistance and herbicide tolerance. Additionally, in 2024, media reported a gene-edited wheat is being field tested at the federal government research station in Lethbridge, Alberta, **without oversight from federal regulators**.

The Lethbridge researchers are gene editing the circadian clock of wheat to investigate how this could change traits in the plants. The researchers say they are interested in increasing yield and creating drought tolerance and disease resistance.¹

Gene-edited wheat will be exempt from government GMO regulation, with no transparency for farmers.

New federal government decisions (2022/2023) mean that the experimental gene-edited wheat is not regulated for environmental and health safety by government departments.² Gene edited plants that have no foreign DNA (no DNA from other species remaining in the GMO) do not trigger the "Plants with Novel Traits" or "Novel Foods" regulations and can therefore be put on the market **without any government safety assessments**, and without any government oversight. This lack of government regulation means that the gene-edited wheat field test is not included in the CFIA's list of regulated GM field tests.

GM wheat field tests pose a contamination risk.

This lack of regulation also means that these field tests **do not have to comply** with the CFIA directive that requires a 30-metre isolation distance for wheat. The government researchers say that the GM wheat is being grown in isolation away from all other wheat and "was planted by hand to eliminate the possibility of contaminating equipment/machines."³ They say that "it is a well confined and controlled experiment" but have not provided further details.

The removal of government safety assessments for gene editing is leading many researchers and companies to focus on using gene editing techniques to genetically modified plants in order **to avoid government regulation and mandatory reporting**. On the gene edited wheat, a May 2024 article in the *Western Producer* reported that, "Ian Affleck, vice-president of plant biotechnology with CropLife Canada, said the federal government's recent decision to treat gene-edited crops the same as conventionally bred crops paved the way for the project."⁴

Without government regulation of gene edited plants, there is no transparency for farmers, food businesses, or the general public. Many gene edited plants could soon be field tested or released onto the market without any notification to the government or public. The lead government researcher in Lethbridge, John Laurie, says "**As far as I know**, it is the first gene-edited wheat trial in the field in Canada."⁵ [emphasis added]

ARGENTINA GROWS WORLD'S FIRST GM WHEAT

The world's first genetically modified wheat has been commercialized in Argentina and is approved for growing and eating in many other countries. It is not yet approved for use in Canada.

Argentina is the first country in the world to grow a GM wheat. The genetically modified HB4 wheat (IND-ØØ412-7) was developed by the Argentinian company Bioceres. It is a transgenic wheat engineered to be **tolerant to drought and tolerant to the herbicide glufosinate.**

Bioceres says that HB4 increases wheat yields by up to 20% during seasons impacted by drought,⁶ however data from the Ministry of Agriculture in Argentina show that yields are well below average.⁷

- This GM wheat is approved for growing in Argentina (October 2020), Brazil (March 2023), Paraguay (July 2023) and the United States (August 2024). However, it is not yet ready for commercial launch in the US.
- **It is not yet legal to grow or sell in Canada,** and it may never be developed for use in Canada.
- It is approved for eating in Australia, New Zealand, South Africa, Nigeria, Thailand, Indonesia, Colombia, Chile and the United States.
- The company has permission to field test the wheat in Australia.

Argentina is the world's sixth largest producer of wheat in the world, and the fourth largest exporter. Almost half of Argentina's wheat exports go to Brazil; other key markets are Indonesia, Chile and Kenya.

“The damage to the Argentine wheat market would be irreparable and irreversible, since contamination will spread and segregation is not feasible.”

— The Grain Exchanges of the provinces of Buenos Aires, Bahía Blanca, Córdoba, Chaco, Entre Ríos and the Santa Fe; the Rosario Stock Exchange; the Chamber of Industrial Milling; grain export centres; the corridors centre; the milling industry federation; the collectors; and the four entities of the liaison table (CRA, Coninagro, FAA y Argentine rural society), Argentina, 2000.⁸

Argentina, Canada, and the US are members of the “Global Low Level Presence Initiative” which is a group of 15 countries pursuing **global acceptance of GM contamination** in trade.⁹

History of GM Wheat

In 2004, Monsanto withdrew requests in Canada and the US for government approval of its GM glyphosate-tolerant wheat because of widespread farmer and consumer opposition in both countries and around the world.

There has been one escape incident with unapproved GM wheat in Canada (discovered in 2018) and four in the US (discovered in 2019, 2016, 2014 and 2013).¹⁰

1 Bruce Barker, Gene-edited wheat in field trials, Top Crop Manager, October 8, 2024. <https://www.topcropmanager.com/gene-edited-wheat-in-field-trials/>

2 For details see www.cban.ca/noexemptions

3 John Laurie, Agriculture and Agri-Food Canada, email correspondence with Lucy Sharratt, Canadian Biotechnology Action Network, July 12, 2024.

4 Sean Pratt, Gene-edited wheat tested, Western Producer, May 21, 2024 <https://www.producer.com/crops/gene-edited-wheat-tested/>

5 Bruce Barker, Gene-edited wheat in field trials, Top Crop Manager, October 8, 2024. <https://www.topcropmanager.com/gene-edited-wheat-in-field-trials/>

6 Bioceres, 2020, Press release: Bioceres Crop Solutions Corp. Announces Regulatory Approval of Drought Tolerant HB4® Wheat in Argentina, October 8. <https://investors.biocerescrops.com/news/news-details/2020/Bioceres-Crop-Solutions-Corp.-Announces-Regulatory-Approval-of-Drought-Tolerant-HB4-Wheat-in-Argetina/default.aspx>

7 Plataforma Socioambiental – Argentina, 2021, Navidad sin transgénicos ¡No queremos Trigo HB4 en nuestro Pan Dulce! December 10. <https://www.biodiversidadla.org/Recomendamos/Navidad-sin-transgenicos-!No-queremos-Trigo-HB4-en-nuestro-Pan-Dulce>

8 GRAIN et al, 2020, Hands off our bread!, November 5. <https://grain.org/en/article/6548-hands-off-our-bread>

9 See cban.ca/llp

10 See Canadian Biotechnology Action Network (CBAN). 2022. Contamination. www.cban.ca/contamination



The Canadian Biotechnology Action Network (CBAN) brings together 15 groups across Canada to research, monitor and raise awareness about issues relating to genetic engineering in food and farming. CBAN is a project on the shared platform of MakeWay Charitable Society. cban.ca

cban.ca/wheat