



# ***NO GMO SALAD***

**UPDATE AND ACTION REPORT**

PACKED ON 10-07-2025



July 10, 2025

This report provides an update on the **No GMO Salad** campaign launched by the Canadian Biotechnology Action Network (CBAN) in February 2025.

In September 2024, CBAN began investigating the potential imminent introduction of gene-edited salad greens (mustard greens), poised to be the first gene-edited vegetable sold in Canadian grocery stores and the first genetically engineered (genetically modified or GM) vegetable seed targeted at home and market gardeners in Canada.

*The Canadian Biotechnology Action Network (CBAN) brings together 15 groups to research, monitor and raise awareness about issues relating to genetic engineering in food and farming. CBAN members include farmer associations, environmental and social justice organizations, and regional coalitions of grassroots groups. CBAN is a project of the MakeWay Charitable Society.*



# SUMMARY

In May 2025, the company Bayer confirmed to CBAN that its GM gene-edited mustard greens, intended for use in packaged salad mixes, were still **not being grown commercially in Canada or the US**. In October 2024, the company was preparing to launch its GM greens but in May 2025 it backtracked and said it had no target date for release in Canada. However, Bayer continues to promote the GM greens on social media. Bayer, and other companies, want to test the consumer market for selling various gene-edited fruits and vegetables. Bayer and other companies also want to start selling GM seeds to market gardeners and home gardeners.

**Our research finds that gene-edited greens are not yet in grocery stores in Canada and many companies that sell seeds to home gardeners and small growers have non-GMO pledges. In addition, most major packaged greens brands in Canadian grocery stores have non-GM commitments or offer a certified organic option. However, it is clear that Bayer, and other companies, are working to release gene-edited fruits and vegetables in Canada and the US.**

October 2024:

*“...we anticipate that growers will start to send produce to US grocery stores in the next few months... They could reach the Canadian market through these growers in the near future, or from the US growers... We’re in discussions with a major home garden supplier about making these mustard greens seeds available to home gardeners and market gardeners.”*

— MEGHAN MCCORMICK, SENIOR MANAGER, FOOD & FOOD SECURITY COMMUNICATIONS, BAYER, OCTOBER 15, 2024, TO CBAN

May 2025:

*“At this time, they [gene-edited salad greens] are not currently being commercially grown or sold in Canada or the United States, and we have no specific target date for commercialization in Canada.”*

— MOLLY MACHAMER, GLOBAL COMMUNICATIONS MANAGER, BAYER, MAY 19, 2025, TO CBAN

# INTRODUCTION

**New GMOs could be on the market soon.**

Most genetically modified organisms (GMOs) grown in Canada and around the world are used as ingredients in **processed food, animal feed and feedstock for biofuels**. The only genetically modified (GM or genetically engineered) vegetable grown in Canada is GM sweet corn.

However, the new GM techniques of genome editing (gene editing) could mean many new GMOs coming to the market, including **GM whole fruits and vegetables**.

There is no mandatory labelling of GM foods in Canada, and it is unlikely that companies will voluntarily label these new GMOs.

**Gene editing techniques** are new ways to genetically engineer plants and animals to express new traits. Gene editing techniques, such as CRISPR, aim to delete DNA segments or otherwise change a DNA sequence. Unlike traditional plant and animal breeding, genetic engineering makes changes directly to the genetic make-up of organisms in the laboratory. [cban.ca/gene-editing](https://cban.ca/gene-editing)

In 2022-2024, **the Canadian government removed regulation** for most gene-edited plants if these new GMOs have no foreign DNA (no DNA from other species).<sup>1</sup> These changes to regulation were designed by a corporate-government committee, called the “Tiger Team”, made up of representatives from the biotechnology and pesticide industry lobby group CropLife, with other industry lobby groups and government officials.<sup>2</sup>

Now, many gene-edited plants and foods can enter our food system and environment without any government safety assessments or independent science. These GMOs can also enter the market without any notification to the government or to farmers and consumers. **There will be no government approval process and no government tracking for many future gene-edited fruits and vegetables.** [cban.ca/NoExemptions](https://cban.ca/NoExemptions)

## GM CROPS GROWN IN CANADA

Crop	Trait	Where on the shelves
1 CORN	Insect resistant, herbicide tolerant	Corn flakes • Corn chips • Cornstarch • Corn oil and other corn ingredients in processed foods • Sweeteners like glucose and fructose • Eggs, milk and meat* • Some sweet corn
2 CANOLA	Herbicide tolerant	Canola oil • Eggs, milk and meat*
3 SOY	Herbicide tolerant	Soy oil • Soy protein • Soy lecithin • Eggs, milk and meat*
4 SUGAR BEET (WHITE)	Herbicide tolerant	Sugar
5 ALFALFA	Herbicide tolerant, low-lignin	A small amount is grown to feed dairy cows and other farm animals. Not grown for sprouts.
6 SALMON	Faster growing	Production stopped (2024)

\*Many animals used to produce eggs, milk and meat are fed corn, canola and/or soy

## GM FOODS IMPORTED TO CANADA

Food	Grown	Where on the shelves
7 PAPAYA	U.S. (Hawaii)	Papaya in fruit juices and other processed foods
8 SQUASH	U.S.	Some zucchini • Yellow crookneck and straightneck squash
9 PINEAPPLE	Costa Rica	Whole pink-fleshed pineapple, in a few grocery stores.

[cban.ca/gmfoods](https://cban.ca/gmfoods)



# BAYER'S GENE-EDITED SALAD GREENS

**Market Status:** Bayer's GM salad greens are not yet on the market.

In May 2024, Bayer (which acquired Monsanto in 2018) and the US biotechnology company Pairwise (one of Monsanto Growth Ventures' start-up companies<sup>4</sup>), announced a partnership to bring up to ten varieties of gene-edited mustard greens (*Brassica juncea*) to market, engineered using CRISPR, for use in packaged salad mixes. In June 2024, Anne Williams, head of protected vegetable seeds at Bayer said, "We anticipate bringing these mustard leafy greens to market in the late summer and fall of 2024 in North America, with other countries following."<sup>5</sup>

The genetically engineered greens are **mustard greens that have been gene edited to reduce their mustard flavour**. They could enter the market as "mixed leaves, bunched, baby and teen leaf" and could be grown and sold by a few large greens producers in the US and Canada. The GM greens could be marketed as being more nutritious than lettuce.<sup>6</sup> The spicy mustard flavour was removed so they could be advertised as "leafy greens that don't bite back! (a mustard green that eats like a lettuce)."<sup>7</sup>

*"We basically created a new category of salad."*

— TOM ADAMS, CO-FOUNDER AND CEO OF PAIRWISE, AND FORMER VICE PRESIDENT OF GLOBAL BIOTECHNOLOGY AT MONSANTO, MAY 2023<sup>8</sup>

Bayer is the largest seed company, second largest pesticide company, and largest seller of genetically engineered seed in the world. Bayer owns 23% of the global seed market and 15% of the global pesticides market.<sup>3</sup>

Pairwise briefly sold these same GM greens in the US in 2023 under their brand "Conscious Greens" but had removed them from the market by February 2024. The company said it did not have the resources to market the product effectively and wanted to concentrate on developing other gene-edited foods, such as seedless blackberries and pitless cherries.<sup>9</sup> Bayer now licenses the gene editing technology through an agreement with Pairwise.

Bayer used its license agreement to launch its new "open innovation platform," where Bayer is partnering with different biotechnology companies to focus on gene editing in fruits and vegetables to develop "nutrition enhanced vegetables."<sup>10</sup>

In October 2024, Bayer told CBAN that it was getting ready to launch the GM greens, but in May 2025, Bayer told CBAN that it had **"no specific target date for commercialization in Canada."**

As of July 2025, Bayer's greens are not on the market, but a post on Bayer's Instagram from April 2025 features a video about the GM greens, signaling Bayer's intention to continue pursuing its GM fruits and vegetables.



**STOP BAYER'S GM NON-MUSTARDY MUSTARD GREENS.** [CBAN.CA/GMOSALAD](https://cban.ca/gmosalad)



# GREENVENUS™ GENE-EDITED ROMAINE LETTUCE

**Market Status:** The small US biotechnology company GreenVenus is selling a limited amount of gene-edited, non-browning romaine lettuce seeds online, to small growers in the US only.

The variety is called *GreenVenus*™ Romaine Lettuce. GreenVenus describes its romaine as genetically engineered for “superior flavor, unmatched crispness, and exceptional shelf life” and claims that it resists russet spotting (commonly known as “rust” or “browning”), **“ensuring vibrant color and a crisp texture for up to seven days after cutting or shredding.”**<sup>11</sup>

By February 2025, the company was promoting and selling its GM lettuce seeds in packages of 250 and 500. However, the seeds are not being widely advertised, and they **are not currently for sale in Canada.**

The limited online sale of seed packets is a way for GreenVenus to showcase its GeneEditing Platform technology. In addition to its romaine, the company is developing other gene-edited products—such as avocados, grapes, and berries—as part of its strategy to commercialize this technology.<sup>12</sup>

GreenVenus is owned by the venture capital firm Third Security, led by billionaire Randal J. Kirk.<sup>13</sup> Third Security also owns the GM apple company Okanagan Specialty Fruits and the GM mosquito company Oxitec, and it was a majority shareholder in the now non-operational GM salmon company AquaBounty.

Check for updates at [cbn.ca/NoGMOsalad](https://cbn.ca/NoGMOsalad)





# GMO GARDEN SEEDS

**Bayer's gene-edited greens were poised to be the first GM vegetable seed targeted at home and market gardeners in Canada.** (GM sweet corn seed is only sold in quantities that target larger farms.)

Most seed companies that sell garden seeds in Canada have long-standing non-GMO commitments. In December 2024, CBAN reached out to the major seed companies in this sector to ask them to commit, or reaffirm their existing commitment, to selling only non-GMO seeds, and to ensure this includes not selling seeds produced using gene editing.

CBAN also asked companies to clarify their language to ensure that gene editing is included in their non-GMO commitments. This was necessary because the biotechnology industry is promoting the incorrect characterization of gene-edited organisms as non-GMO.

**Most seed companies in Canada reject GMO garden seeds.**

**All organic seeds are non-GMO.** The Canadian Organic Standards prohibit the use of all genetically engineered seeds, including gene-edited seeds.

There is a huge diversity of small seed breeders and companies across Canada that offer non-GMO seeds. For a list of smaller companies you can contact to ask for their policies, visit the Seeds of Diversity website at [seeds.ca](https://seeds.ca).

Some seed companies in Canada have started to sign the updated Safe Seed Pledge, which prohibits seeds made with gene editing. To find these companies, visit [safeseedpledge.org](https://safeseedpledge.org) and use the "Canada" filter to search the directory.



## Seed companies selling at grocery stores, garden centres, and hardware stores

The companies **McKenzie, OSC, and Burpee** have confirmed to CBAN that they will not carry Bayer's GM mustard greens and have reaffirmed their non-GMO seed policies.

Other companies — **Berton Seeds, Zappa Seeds, Cornucopia Seeds, and Mr. Fothergill's**—feature non-GMO signage on seed displays and websites, helping gardeners make informed choices.

## Seed companies that primarily sell through online or print catalogues

**West Coast Seeds, Veseys Seeds, and William Dam Seeds** have strong non-GMO language on their websites and have all signed the former version of the Safe Seed Pledge that was written before gene editing technology was introduced. CBAN has asked them to update their non-GMO commitments to reflect the new Safe Seed Pledge, which includes language that explicitly excludes gene-edited seeds.

**Stokes Seeds**, which sells GM sweet corn, confirmed to CBAN that GM greens will not be in the company's 2025 or 2026 offerings. It is unknown if Stokes will carry the GM greens seeds in the future.

Rupp Seeds is the other major seed company that carries GM sweet corn seed in Canada but has not responded to our request for information about GM greens seeds.



# TRACKING SALAD GREENS IN CANADA'S GROCERY STORES

Five large chains control over 75% of grocery sales in Canada: Loblaw, Sobeys, Metro, Costco Canada, and Walmart Canada.<sup>14</sup> This high level of corporate consolidation in grocery retail means that the big companies have a lot of power to make important purchasing decisions.

Different grocery chains dominate the market in different regions of the country. For example, Metro operates in Ontario and Quebec, and The Jim Pattison Group (Save-On-Foods etc.) and Federated Co-operatives Ltd. operate only in Western Canada.

There are also some smaller grocery chains and an approximate total of 6,900 independent stores across Canada.<sup>15</sup>

**The major grocery chains have not yet publicly pledged to keep their produce sections free of GM fruits and vegetables.** Grocery chains did not respond to CBAN's requests for information.

However, in their Corporate Responsibility Plan 2022-2026, the major Ontario/Quebec grocery chain Metro adopted a policy to not sell GM sweet corn or GM salmon and stated their objective to "not market the main genetically-modified products on the Canadian market".<sup>16</sup>

For information on past responses from the grocery chains see our [2020 report](#).



## Snapshot:

### Major salad brands in Canada's largest grocery chains

**Most major greens brands in Canada have non-GM commitments or offer an organic option.**

CBAN researched the greens brands sold in Canada's major grocery chains. Out of 24 major greens brands that offer **packaged salad mixes and/or packaged "salad kits,"** 58% are non-GMO: had non-GMO commitments stated on their label or website, were certified organic, or confirmed their non-GMO policy through correspondence with CBAN. Among the remaining 10 brands without clear GMO policies, 9 carry at least one organic salad product, though these options may be of limited availability in Canada.

None of the chain house brands offering packaged salad greens for Walmart (*Your Fresh Market*), Loblaw (*President's Choice*), Sobeys (*Compliments*), or the Jim Pattison Group (*Western Family*) have non-GMO commitments. However, all of these brands offer certified organic options, which are non-GMO by definition.

### Canada's major grocery chains and their stores

- **Loblaw:** Axep; Dominion; Entrepôts Presto/Club Entrepôt; Extra Foods; Fortinos; Freshmart; Independent City Market; Intermarché; Loblaws; Lucky Dollar Foods; Maxi; No Frills; Provigo; The Real Canadian Superstore/Loblaw/Atlantic Superstore; SaveEasy; Shop Easy Foods; Shoppers Drug Mart; SuperValu; T&T; Valu-mart, Real Canadian Wholesale Club; Your Independent Grocer; Zehrs operating under the Zehrs Markets, Zehrs Food Plus and Zehrs Great.
- **Sobeys** (Empire Company Limited): Clover Farm; Farm Boy; Foodland, FreshCo; IGA; Kim Phat; Longo's; Marché Bonichoix; Les Marchés Tradition; Rachelle-Béry; Safeway; Thrifty Foods.
- **Metro:** Adonis Markets; Food Basics; Marché Richelieu; Marché Ami; Super C.
- **The Jim Pattison Group:** Bulkley Valley Wholesale; Buy Low Foods; Choices Markets; Nature's Fare Markets, Nesters Market; PriceSmart Foods; Quality Foods; Save-on-Foods; Urban Fare.





Brand is certified organic



Brand is non-GMO via organic certification or a non-GMO commitment



Brand does not have a non-GMO commitment  
\*indicates the brand carries at least one organic product (availability may be limited)



Brand is known to be GMO



BRAND	STORES
Earthbound Farm	Costco, Sobeys, Jim Pattison
Greenbelt Organic Greens	Loblaw, Sobeys, Metro
Organic Girl	Sobeys, Loblaw, Walmart
Fieldless	Sobeys, Loblaw
Folia	Metro
Gen V	Sobeys, Metro, Loblaw, Walmart
GoodLeaf Farms	Metro, Sobeys, Loblaw, Jim Pattison
Haven Greens	Metro, Sobeys
Inspired Leaves	Jim Pattison, Whole Foods, Sobeys, Loblaw, Costco, Walmart
Little Leaf Farms	Loblaw
Mann's Better Leaf and Salad	Sobeys, Jim Pattison, Walmart, Metro, Loblaw, Costco
Queen of Greens	Costco, Walmart
Up Vertical Farms	Jim Pattison, Costco, Sobeys
Vision Greens	Metro, Loblaw

BRAND	STORES
Dole*	Giant Tiger, Metro
Fresh Attitude*	Metro, Walmart, Giant Tiger, Loblaw
Queen Victoria*	Giant Tiger, Loblaw
Taylor Farms*	Giant Tiger, Walmart, Sobeys, Loblaw, Jim Pattison
Compliments* (Sobeys' house brand)	Sobeys
President's Choice* (Loblaw house brand)	Loblaw
Western Family* (Jim Pattison Group house brand)	Jim Pattison
Your Fresh Market* (Walmart house brand)	Walmart
Fresh Express*	Giant Tiger, Jim Pattison, Walmart, Sobeys
Eat Smart	Costco, Giant Tiger, Sobeys, Loblaw, Walmart, Metro



# YOUR ACTIONS ARE NEEDED

## Write to your grocery store

Your voice as a customer is the most powerful voice that influences store policy. You can take action to advocate for a **Non-GMO Produce Section** by writing to your local grocery store and the head offices of Canada's large retailer chains to demand that they **pledge to carry only non-GMO fruits and vegetables**.

Check our campaign page for email addresses and more information to support your action: [cban.ca/ProtectOurProduce](https://cban.ca/ProtectOurProduce)

## Write to your Member of Parliament

Help advocate for transparency and choice in our food system. Ask your Member of Parliament to urgently reinstate government regulation for all gene-edited foods, including mandatory labelling for all GMOs.

You can look up your MP using your postal code at [ourcommons.ca](https://ourcommons.ca)

For more information to write your letter, see [cban.ca/transparency](https://cban.ca/transparency)

## Share information in your community

Share CBAN's new educational pamphlet *Your Food Choices in 2025: Navigating New GMOs, the Climate Crisis, and Food System Resilience*. It gives a snapshot of some of the key problems in our food system as well as the food choices people can make to support a better food future, including ways to avoid eating genetically modified foods. Help us build more support for non-GM and other important food choices.

Order your pamphlets to share at your local farmers' market, health food store or community events. Order from [cban.ca/orderpamphlets](https://cban.ca/orderpamphlets)

To view the pamphlet, see [cban.ca/FoodChoices2025](https://cban.ca/FoodChoices2025)



# STRAWBERRY ALERT



Genetically engineered strawberries may soon become the first gene-edited fruit to enter the market. **There are no GM strawberries on the market yet**, but the US agriculture company Simplot and the biotechnology company Plant Sciences, Inc. have partnered to genetically engineer strawberries using CRISPR.

In 2021, Simplot announced it would use gene editing to try to develop strawberries with extended shelf-life. In December 2024, Simplot stated its intention to start selling a gene-edited strawberry in Canada as soon as 2025, gene-edited for a longer harvest season (remontant).<sup>16</sup> Simplot has not yet responded to inquiries from CBAN.

[cban.ca/strawberry](https://cban.ca/strawberry)

## Avoid GM foods and garden seeds

You can avoid genetically modified organisms (GMOs) by buying organic food or Non-GMO Project verified products and buying organic or other non-GMO seed. Learn more about where GMOs are in our food system, including GM fruits and vegetables, at [cban.ca/gmfoods](https://cban.ca/gmfoods)



## Subscribe

Subscribe for news and action alerts on GMOs at [cban.ca/#subscribe](https://cban.ca/#subscribe)

1 New regulatory guidance exempts many, but not all, gene-edited plants and foods from pre-market regulation. For example, herbicide-tolerant crops still trigger regulation. See [www.cban.ca/NoExemptions](http://www.cban.ca/NoExemptions).

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