PROTECT ONTARIO FARMS

Stop the Further Release of GM Alfalfa

Alfalfa is important

Alfalfa, popularly called the "Queen of Forages", is the most widely grown forage crop in Canada. It is grown on 30% of Canada's farmland, and on more than 20% in Ontario. It is usually grown in a mix with grasses and harvested as high-quality hay or haylage for dairy cows and other livestock. It also plays an important role in crop rotations on many farms by building both soil organic matter and soil fertility. Farmers in Western Canada have stable, lucrative export markets for alfalfa seed, including in Europe. As a high protein feed, nitrogen-fixer and soil builder, alfalfa is an essential forage crop on organic farms.

The threat from genetically modified (GM) alfalfa

Alfalfa is a perennial plant pollinated by insects which means that genetically modified (GM, also called genetically engineered) alfalfa will quickly spread where it is not wanted. The use of genetically modified organisms is prohibited in organic farming. GM alfalfa threatens the survival of organic farms across Canada and alfalfa seed growers in Western Canada who have important markets in Europe and other countries that do not accept GM alfalfa.

Update: GM alfalfa released in Eastern Canada

In spring 2016, genetically modified alfalfa was released commercially in Canada for the first time. The US company Forage Genetics International (FGI) sold alfalfa which has the genetically modified low-lignin and Roundup Ready traits. The company sold the seeds in Eastern Canada (mostly in Ontario), at an amount that it says is "sufficient to plant a small, targeted launch of less than 5,000 acres of hay."

FGI is marketing alfalfa with two GM traits together (stacked) in one plant. The GM alfalfa uses Monsanto's GM Roundup Ready® herbicide tolerant trait licensed to the company FGI and a GM low-lignin trait called HarvXtra™ that was developed by FGI and Monsanto.

The GM low-lignin alfalfa is designed to produce less of one type of lignin, to extend the hay-cutting period into the 20%-50% flower bloom stage, without loss of palatability or nutrition for animal feed.

The industry's "Coexistence Plans" do not reflect reality

The risk of contamination from GM alfalfa is widely acknowledged and is a source of opposition to its introduction, so the industry developed "coexistence plans" as a public relations strategy to attempt to address these concerns. The Canadian Seed Trade Association (CSTA) developed Eastern and Western coexistence plans that include Best Management Practices (BMPs) for farmers to follow.

The plans have been roundly critiqued as unrealistic and unenforceable. For example, the plans rely on farmers being able to discuss cultivation plans with neighbours. They also ask farmers to "control flowering alfalfa on the edges of fields and in ditch banks" and mow roadside populations of feral alfalfa. The CSTA itself has a long legal disclaimer at the start of its plans, indicating they have no faith in their own plans.

Additionally, the plans only consider the use of the Roundup Ready GM trait and not the use of the low lignin GM trait, which would dramatically alter the plans. According to Forage Genetics International, the GM low lignin trait in alfalfa "offers more flexibility in cutting schedule" – "provides unprecedented flexibility by widening cutting windows" – "gives growers the option to…Delay harvest for 7-10 days

> **COEXISTENCE OF GM ALFALFA AND NON-GM ALFALFA IS NOT POSSIBLE.** Alfalfa is an insect-pollinated, perennial plant meaning contamination is inevitable. Organic farmers, alfalfa seed growers and other farmers will lose domestic and export markets if GM alfalfa is widely released.

for increased yield potential, without sacrificing forage quality." However, the "coexistence plans" lay out the BMP to "Harvest GM alfalfa stands at 10% bloom." The Eastern plan includes the footnote: "This provision will need to be re-assessed as new GM traits enter the approval and commercialization process" but this reassessment was not conducted.

Even though the CSTA developed a "coexistence plan" for Western Canada, the company FGI says it does not have current plans to sell seeds in the West: "The plan for Western Canada is in response to requests for additional stewardship actions that address the possibility of product moving from Ontario/Quebec to Western Canada."

GM alfalfa contamination incidents in the US and Canada

On February 29, 2016, Alberta Farm Express reported that a batch of foundation alfalfa seed contaminated with the GM Roundup Ready trait was sent to a forage seed grower in southern Alberta four years ago. Forage Genetics International was informed of the contamination and placed the blame on US seed companies.

A December 2015, US Department of Agriculture (USDA) study found that, of roadside sites with feral alfalfa that were surveyed in California, Idaho and Washington State, 27% were contaminated with GM alfalfa. What makes the high contamination rate so remarkable is how little cultivated GM alfalfa produced it: The USDA approved Roundup Ready alfalfa in 2005 and it occupied just 1% of national alfalfa acreage in 2006. A federal court prohibited new plantings in 2007 until 2011 and because this study was conducted just a few months after the re-approval in 2011, all of the feral GM alfalfa detected comes from the few fields planted in 2005 and 2006.

Alberta municipalities and counties voted to stop GM alfalfa

On March 15, 2016, the Alberta Association of Municipal Districts and Counties (AAMDC) passed a resolution to work with different levels of government and companies, "to prevent the introduction of genetically modified/engineered alfalfa to the province of Alberta until there is a marketplace and consumer acceptance in Alberta's export markets including China, Japan, the European Union, and the Middle East." The resolution recognized that many of Alberta's forage seed producers sell products into countries that have not approved GM alfalfa products and that release will pose a serious risk of contamination that threatens the province's forage seed exports as well as export hay, feed supplements and alfalfa sprouts. The resolution also calls the federal government to task for not doing "a quantified government economic impact assessment on the effects of genetically modified/engineered alfalfa on Canadian export markets."

15 farm groups ask the Minister of Agriculture to halt GM alfalfa seed release

In April 2016, fifteen conventional and organic farm organizations, representing producers in every province as well as the Yukon, asked the Minister to deregister GM alfalfa varieties and implement a testing protocol for imports of GM alfalfa grown in the US: **"The consequences from the release of GM alfalfa seeds are extremely serious. We ask you to take immediate action to support and protect the future of family farming, organic food production, sustainable agriculture and alfalfa-related exports in Canada."**

TAKE ACTION

Your farm business or farmer association can sign the letter to the Minister of Agriculture. Visit WWW.NFUONTARIO.CA and look for the letter under the "Issues" section.

Write to your provincial Minister of Agriculture today and ask them to stop the future release of GM alfalfa.

Resources

- *The Inevitability of Contamination from GM Alfalfa Release in Ontario*, Canadian Biotechnology Action Network, April 2013. http://www.cban.ca/content/view/full/1523
- *The Canadian Seed Trade Association's so-called "Coexistence Plan" is a gateway to GM alfalfa contamination*, National Farmers Union and Canadian Biotechnology Action Network, July 2013. http://cban.ca/content/view/full/1751
- For references to information in this update: www.cban.ca/alfalfaupdate2016
- **For more information and updates: www.cban.ca/alfalfa**

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Canadian Biotechnology Action Network

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