GM ALFALFA: UPDATE & IMPACTS

A presentation to the ISGA 2017 Convention


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ALFALFA


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GM Alfalfa in Canada

- 2005: Monsanto receives regulatory approval from CFIA and Health Canada for GM alfalfa
- 2013: First GM alfalfa varieties registered in Canada
- 2016: Limited plantings in Eastern Canada

GM Alfalfa in the US

- 2007: GM alfalfa introduced in the US
- 2007: USDA sued for failing to provide environmental impact statement. Federal court rules plantings cease until EIS complete.
- 2011: Flawed EIS released and GM alfalfa once again put on the market

Modes of contamination

1. Seed escape
2. Pollinator mediated gene flow
3. Feral and volunteer alfalfa

Modes of Contamination

Seed Escape

- failure to clean out hoppers
- spillage while hauling
- volunteer growth due to seed shattering
- high winds blowing swaths
- flooding resulting in floating swaths
- birds and rodents spreading stored seed
- manure

Modes of Contamination

Pollinator mediated gene flow:

- Monsanto recommends an isolation distance of 900 feet. Leafcutter bees often travel several miles in search of better bloom, or are carried dozens of miles in storms.

- Flaws in FGI's 2000-2002 pollen studies: used only 2 gallons/acre, when the reality of that year was 4-8 gallons, and the bees were only left on the fields for 4 weeks, where 8-12 weeks is the reality

Modes of Contamination

Blooming

- Cutting hay at 10% bloom or less is unrealistic and rarely happens. GM low-lignin alfalfa will be cut at 50% bloom.
- Weather often delays hay cut
- Heat waves can cause sudden bloom

Modes of Contamination

Feral Alfalfa & Volunteer Alfalfa

- USDA research shows significant contamination in feral alfalfa stands in California, Idaho, and Washington

Alfalfa Producers Agree Gene Flow Impossible to Control

"Co-existence between genetically modified or herbicide tolerant forage seed varieties and conventional varieties will be impossible even with the most stringent and sound agronomic practices."
- Kelvin Einarson, Director, Manitoba Forage Seed Association

"If introducing these lines of GT alfalfa means over a period of time eliminating conventional lines of alfalfa (which will inevitably happen through gene flow, through the transfer of seed via equipment, through transfer of seed via birds or wildlife, because of unforeseen weather events, through seed cleaning plants, through bad management, etc) that does not appear to be protecting agriculture." – BJ Kazas, alfalfa seed producer, Lethbridge AB

"Conventional and GE alfalfa coexistence is not possible or practical." – Chuck Noble, alfalfa producer, Bellevue, WA

Contamination in the US

GM alfalfa contamination issue not USDA's concern

USDA approved

Posted Sep. 26th, 2013

Crop experts have warned that the confirmation of contamination threatens U.S. sales of alfa feedstock to many Asian countries who reject GMOs. I file photo

(Reuters) — The detection of a small amount of genetically modified material in a Washington farmer's non-GM alfalfa crop is a "commercial issue" and does not warrant any government action, the U.S. Department of Agriculture said.

The farmer had complained in late August to state agricultural officials that his alfalfa hay had been rejected for export sale because of the presence of a GM trait that makes the crop resistant to herbicide.

The event triggered a wave of concern from consumer and agricultural groups who have fought the government for nearly a decade to keep biotech alfalfa from contaminating conventional and organic supplies.

Crop experts have warned that the confirmation of contamination threatens U.S. sales of alfalfa feedstock to many Asian countries who reject GMOs, and some are encouraging farmers to test every bag of seed they buy before they plant.

Photo and text courtesy of the Western Producer

Contamination in Alberta

Alberta is the largest producer of alfalfa seed, but growers' overseas customers have a zero-GM tolerance policy. Photo: Andrea Toman

Genetically modified alfalfa has somehow made its way into Alberta — raising fears that western Canadian forage seed growers and hay exporters could be shut out of markets worth hundreds of millions of dollars.

Alberta Farmer recently learned that a batch of foundation seed contaminated with Roundup Ready alfalfa was sent to a forage seed grower in southern Alberta four years ago. And that almost certainly means the hugely controversial GM variety is present in the province, said the grower.

Image and text courtesy of Alberta Farm Express

13 years of farmer-led opposition to GM alfalfa in Canada

Wolfville NS - Sacha, almost 3, at the rally in Wolfville Nova Scotia. Thanks to Sacha and his parents for coming out on April 9, with around 90 other people! Photo Credit: Aube Giroux

250 people marched in Guelph, ON
Photo courtesy of CBAN

The Future of Organic Agriculture is at Risk

"GM alfalfa is becoming the largest threat to organic growing that we have ever seen."

-Laura Telford, former Executive Director– Canadian Organic Growers,

Take Action

- Write or call your legislator
- Test seed for GM contamination

Photo courtesy http://
theharvestkitchensisters.blogspot.ca/

Further Resources

CSTA's Coexistence Strategy for Western Canada

http://cdnseed.org/wp-content/uploads/2016/04/CSTA_CoExist_brochure_West_April-29.pdf

The Inevitability of Contamination from GM Alfalfa Release

http://www.cban.ca/Resources/Tools/Reports/The-Inevitability-of-Contamination-from-GM-Alfalfa-Release-in-Ontario

The Canadian Seed Trade Association's so-called Coexistence Plan is a gateway to GM alfalfa contamination

http://www.nfu.ca/story/csta-%E2%80%9Ccoexistence-plan%E2%80%9D-gateway-gm-alfalfa-contamination