



Background Information on Genetically Modified (GM) Alfalfa, June 2013

Summary

A company called Forage Genetics International has applied Monsanto's genetically engineered (also called genetically modified or GM) Roundup Ready (herbicide resistant) technology to alfalfa.

Health Canada and the Canadian Food Inspection Agency (CFIA) approved GM alfalfa for eating and growing in 2005 but it has not been legal to grow any GM alfalfa in Canada until now. Each new alfalfa variety requires registration before it's legal to sell the seed, and the CFIA registered one GM alfalfa variety in late April 2013. The registration process is considered confidential business information, so farmers and consumers do not know when a company requests registration. (After years of legal challenges, the US allowed plantings of GM alfalfa in 2011.)

Forage Genetics International could put GM alfalfa seeds on the market any time, but conventional and organic farmers in Canada widely agree that contamination from GM alfalfa poses a serious economic threat.

GM Alfalfa Contamination Threatens Export Markets and Organic Farming

Genetically engineered alfalfa will quickly contaminate farmer's fields. Contamination from patented GM alfalfa will negatively affect many different types of farmers, both conventional and organic:

- **Export Markets:** Alfalfa seed and processed alfalfa are both important Canadian exports. Canada is one of the five largest exporters of alfalfa pellets and cubes in the world. Most of our alfalfa products are sent to Japan, the US, the European Union, the United Arab Emirates, South Korea and Taiwan. Most of these countries have not approved GM alfalfa and will automatically reject contaminated exports from Canada.
- **Organic Certification:** Alfalfa is an important high-protein animal feed for livestock. GM feed is not accepted in organic farming rules, and organic dairy and livestock farmers will be at risk of losing a very important feed-source for their animals. Further, contamination from GM alfalfa can lead to farmers losing their organic certification.
- **Loss of Alfalfa:** Many organic farmers will lose the option of planting alfalfa to improve soil fertility.

Introduction to Alfalfa

- **Alfalfa is Hay:** Alfalfa is often planted with other grasses, and is cut for hay and haylage.
- **Alfalfa is a Perennial:** Alfalfa is a perennial crop. This means that the plant lives for many years. Since the plants can regrow from roots, and because they flower multiple times a season, the risk of contamination from perennial crops is significantly higher than in annual crops. GM alfalfa is the first GM perennial crop in the world.
- **Alfalfa Is Pollinated by Bees:** Alfalfa is pollinated by a wide variety of insects, including leafcutter bees, honeybees and several native bee species. Several of these pollinators travel great distances, and their ranges cannot be controlled or predicted with certainty. This means that GM alfalfa will quickly contaminate farmers' fields.
- **Alfalfa is Widely Planted:** Alfalfa is one of the largest crops in Canada by area. In 2011, alfalfa was planted on over 25 million acres. Approximately 80% of this acreage was in the Prairies, another 8% was in Ontario, and the rest was in Quebec and BC.

Alfalfa is Important to Many Family Farms

- **Alfalfa is Animal Food:** Alfalfa is important high protein feed for animals. It is used as a high quality feed for dairy cows and beef cattle, as well as for sheep and horses. It is also grown as pasture.

- **Alfalfa Builds the Soil:** Many farmers plant alfalfa in their crop rotations to build nitrogen levels, maintain soil fertility, aerate the soil and prevent erosion.

- **Alfalfa Products are Important Exports:** Alfalfa is

grown to produce seeds as well as dehydrated alfalfa products such as pellets and cubes, which are exported to livestock producers in other countries. Canada is one of the world's five largest exporters of alfalfa pellets and cubes.

- **Alfalfa is Integral to Organic Farming:** Dairy cows graze on mixed grasses that include alfalfa, and they are fed organic hay with alfalfa. Alfalfa is a high-protein feed for dairy cows, beef cattle and other farm animals. Alfalfa fixes nitrogen and builds soil fertility, which improves organic cereal and grain crops yields, without use of chemical fertilizers.

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Many Foods are Produced with Alfalfa

- Dairy products including milk, butter, cheese, yogurt.
- Beef but also meat from lamb, chickens and pigs.
- Alfalfa sprouts for sandwiches and salads.
- Some honey.
- Some "green" health shakes and supplements.

Additionally, many grain and vegetable farmers rely on alfalfa to build healthy soil to grow these crops.