Genetically Modified Wheat Contamination in Canada and the US

Background

June 14, 2018

There are no genetically engineered (genetically modified or GM) wheat varieties approved anywhere in the world. None have ever been commercially grown and sold. However, field trials of different GM wheat varieties continue in Canada and the US, at undisclosed locations. There have been three GM wheat contamination incidents reported in the US, 2013-2016.

In 2004, Monsanto withdrew its request for approval of its GM herbicide-tolerant (glyphosate-tolerant) “Roundup Ready” wheat in Canada and the US after protests from farmers and consumers along with resistance in the international market.

GM Wheat Contamination Incidents in the US

There were three GM wheat contamination events reported in the US: in 2013, 2014 and 2016. All three were incidents with Monsanto’s GM herbicide-tolerant (glyphosate-tolerant) Roundup Ready wheat, last field tested in 2005 in the US. The 2013 incident temporarily closed two export markets for US wheat.


September 2014: Monsanto’s GM Roundup Ready wheat was found growing on a former trial site at a university research centre in Montana. It did not reach commercial channels.

May 2013: The US Department of Agriculture (USDA) announced that a farmer in Oregon had found Monsanto’s GM Roundup Ready wheat in her field. The USDA’s investigation concluded that the contamination was an isolated incident but said they were “unable to determine exactly how the GE wheat came to grow in the farmer’s field.”

Japan and South Korea suspended imports of US wheat after the contamination was discovered. China, Thailand and the Philippines tightened inspections and the European Union encouraged member countries to increase import testing.
Monsanto paid over $2 million to settle lawsuits from US farmers who claimed that the company had failed to protect the wheat market from contamination.  

GM Wheat Field Tests in Canada

The exact locations of experimental GM crop field trials are not disclosed in Canada (nor in the US). In Canada, the government discloses how many field trials are conducted in each province and identifies the crop type, the GM trait(s), and the name of the company running the trial.

The last time Monsanto grew trials of GM wheat in Canada was in 2004 (2005 in the US).  

In 2017, there were 11 field trials of wheat with “novel traits”, some or all of which could be genetically engineered, in Manitoba and 43 in Saskatchewan:

- In Manitoba: AgQuest (on contract for other companies); herbicide tolerance, selectable marker, fungal resistance
- In Saskatchewan: Bayer CropScience; herbicide tolerance, yield increase

In 2016, there were 3 trials in Alberta, 7 in Manitoba, and 74 in Saskatchewan.

- In Alberta, Manitoba and Saskatchewan: ICMS (Integrated Crop Management Service Inc); herbicide tolerance
- In Manitoba: AgQuest; herbicide tolerance, selectable marker, fungal resistance
- In Saskatchewan: Bayer CropScience; herbicide tolerance, yield increase

Field tests of wheat with “novel traits” in Alberta:

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<th>Year</th>
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In July 2013, the Ottawa Citizen reported a 2012 containment breach of wheat research trials at Agriculture Canada’s Ottawa Experimental Farm by a flock of Canada Geese. The geese ate the GM fusarium-resistant wheat at the open-air site, possibly spreading viable undigested GM wheat seed through their droppings.

GM Contamination in Canada

In 2009, Canadian exports were found contaminated by a GM flax developed and approved in Canada but not approved in our major export markets. It reached at least 35 countries that had not approved the GM flax. The total cost of this contamination incident to the Canadian industry is estimated at $29.1-million.

The source of the contamination was never established. The GM flax was not growncommercially or sold on the market. (In 2001, seed growers were multiplying 200,000 bushels of seed for future use but it was all crushed when the flax was taken off the market that year.)

For more information: www.cban.ca/wheat

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coordinator@cban.ca 613 809 1103
1 Canadian Food Inspection Agency, Plants with Novel Traits (PNTs) – Approved confined research field trials / Terms and conditions


3 Monsanto Statement on Discovery of Glyphosate-Tolerant Wheat Plants in Washington State
https://monsanto.com/company/media/statements/statement-gmo-wheat-plants/


http://www.capitalpress.com/content/RS-Japan-wheat-060713


https://www.reuters.com/article/usa-monsanto-wheat-idUSL2N0T22O820141112

12 Canadian Food Inspection Agency, Plants with Novel Traits (PNTs) – Approved confined research field trials / Terms and conditions


14 The Canadian Biotechnology Action Network monitored the European Commission’s Rapid Alert System for Food and Feed in 2009 for reporting of flax contamination. See www.cban.ca/flax

http://www.saskflax.com/quadrant/m223edia/Pdfs/Research/150223_Final_Document_Flax_Value_Added.pdf