

GM Canola Contamination in Canada

Canadian Biotechnology Action Network, April 23, 2015 www.cban.ca

Summary: Contamination of non-GM canola with GM canola in Canada compromised seed purity to such a degree that canola seed growers no longer guarantee their seed as GM-free. Organic grain farmers in the Prairies largely stopped growing canola due to high levels of GM contamination. Over 97% of canola grown in Canada is now GM.

Herbicide tolerant canola was the first GM crop approved in Canada (1995). The early adoption of GM canola by farmers in Canada was high, but so was contamination of non-GM canola. GM traits were found in volunteer canola plants as early as 1998, and by 2007 GM traits were documented in escaped, and possibly feral, roadside populations of canola.ⁱ

Contamination from GM canola reached such an early high point in Canada that, by 2002, most, if not all, pedigree seed growers in Saskatchewan could not guarantee their canola seed stocks as GM-free. Furthermore, most, if not all, grain farmers in Saskatchewan could not guarantee that their canola crop, even if planted with GM-free seeds, was free of GM contamination.ⁱⁱ

In 2002, Drs. Downie and Beckie from the government department Agriculture and Agri-Food Canada found that 59% of the lots of certified canola seed they tested in Saskatchewan were contaminated with GE canola.ⁱⁱⁱ A year later, Friesen et al. tested certified canola seed stocks and, of the 27 unique, commercial certified canola seedlot samples, 14 failed the 99.75% cultivar purity guideline for certified canola seed.^{iv} Three seedlots had glyphosate resistance contamination levels higher than 2.0%, which is a level of seed stock contamination that is understood to most likely be the result of inadvertent mechanical mixing of certified seed during harvest or handling.

The case of canola shows that the seed industry was unable to prevent contamination, even with the pedigree seed sector's strict varietal purity management control systems and the economic incentive to ensure that these controls work. If professional seed growers cannot avoid the unintended presence of GM in their seed, it is not reasonable to expect the general population of farmers to succeed in containing GM seed.

Studies have found that canola pollen can travel nearly 3 km.^v

Consequences

A class action initiated in 2002 from Saskatchewan organic grain farmers seeking compensation from Monsanto and Aventis for damages due to GM canola contamination was not certified and the case was therefore not heard in court. The claim stated that when Monsanto and Aventis introduced their GE canolas they knew, or ought to have known, that the genetically engineered canola would spread and contaminate the environment. The companies had no regard for the damage these crops would cause to organic agriculture. The claim alleges that loss of canola as an organic crop has robbed organic farmers of a high-paying and growing market.

- i Van Acker, Rene. 2013. Testimony to the Standing Committee on Agriculture and Agri-Food. Tuesday, March 5, 2013. Available at: <http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=6024286&Language=E&Mode=1&Parl=41&Ses=1>
- ii Saskatchewan Organic Directorate. Statement of Claim. Available at: <http://www.saskorganic.com/oapf/pdf/stmt-of-claim.pdf>.
- iii Downie, R. K. and Beckie, H. 2002. Isolation Effectiveness in Canola Pedigree Seed Production. Internal Research Report, Agriculture and Agri-Food Canada, Saskatoon Research Centre, Saskatoon, Saskatchewan.
- iv Friesen, Lyle, et al. "Evidence of contamination of pedigree canola (*B. napus*) seedlots in Western Canada with genetically engineered herbicide resistance traits," *Agronomy Journal* (95), 2003.
- v Rieger MA, Lamond M, Preston C, et al. 2002. Pollen-mediated movement of herbicide resistance between commercial canola fields. *Science* **296**: 2386-88