



# Zero Tolerance, Billion Dollar Losses

## The Cost of Getting Ahead of Market Approvals for GMOs

Growing GMOs before they have been approved for use in export markets continues to result in punishing consequences.

Most of New Zealand's key trading partners have zero tolerance for unapproved GMOs and regularly reject shipments or impose strict testing if these are detected.

The Government has decided not to deregulate new types of genetic engineering before our trading partners, stating that as an exporter of billions of dollars of food products, "we do not want New Zealand getting ahead of market perceptions of these new biotechnologies". The North American experience demonstrates just how costly that can be.

## CORN

### Viptera and Duracade

USA, 2013, \$ 4.7-5.7 Billion US (est)

Beijing responded harshly to the discovery of a GM corn (Viptera) **not approved for import to China** in US export consignments. The borders were closed even to shipments that contained trace levels of the unapproved corn. While plantings of Viptera accounted for **just 3% of US production**<sup>1</sup>, by September 2014, corn exports to China plunged 87% from 2013 levels, with 1.25 million metric tonnes rejected.

Initial industry estimates put the cost of the Viptera episode at between **\$1-2.9 billion** for the 2013/2014 marketing year for the US corn, distilled grain and soybean sectors. A further **\$1.2 – 3.4 billion** loss to those sectors was predicted if a second GM corn (Duracade) was grown before approved by Beijing.<sup>2</sup> Soybean and other crops were also predicted to take a hit as US corn flooded the domestic feed market. The latest numbers, filed in the US courts, put the cost to the US economy at \$4.7-5.7 billion.<sup>3</sup>

The fallout has created legal and commercial turmoil within the US, with 360 lawsuits filed for 800 parties in a battle "where there will be no winners".<sup>4</sup>

## Starlink

USA, 2000, \$1 Billion US

Triggering the **largest food product recall in history**, the discovery in food exports of GM Starlink corn - approved only for animal feed in the US - **cost the US food industry an estimated US \$1 Billion**.<sup>5</sup>

Although **less than 1% of US corn production** at the time,<sup>6</sup> Starlink product contamination was widespread. In the US alone, **300 food products were removed from the shelves.**<sup>7</sup>

Export market reactions were swift and strong: US corn **exports to Japan for starch use dropped almost a third over a three-year period** (from late 1999 to March 2002) while South Korean import of corn for food manufacturing **more than halved** over 18 months (November 2000-March 2002).<sup>8</sup>

## RICE

### LibertyLink

USA, 2006, \$1 Billion US (est)

**"The global market for US long grain rice collapsed"** following the discovery that US rice exports were contaminated with an unapproved, experimental GM rice line.<sup>9</sup> Europe Japan, Mexico, Taiwan, South Korea, Philippines and Russia closed their borders to US rice or required certification, testing or labelling.<sup>10</sup> **Rice prices fell nearly 65% below forecasts made before the contamination.**

**US exports to the EU have not fully recovered** as European importers are "unwilling to take the legal risk of large-scale imports of US long grain rice"<sup>11</sup>. (In 2013, EU imports of US long grain were just 4% of US production, compared to one quarter in 2005). This, despite an exhaustive seven-year campaign to eliminate GM rice and certification from the USDA that the supply chain is free of LibertyLink.<sup>12</sup> Meanwhile, **Cambodia and Burma**, among others, **have replaced the US as suppliers to the European market.**<sup>13</sup>

## FLAX

### Triffid

Canada, 2009, \$ unknown

**Europe closed its borders** to Canadian flax after a German food company detected unapproved GM flax ("Triffid") in bakery products from Canada. Although the GM flax was never commercially released, 10% of Canadian production was contaminated and **the unapproved GM flax was detected in exports to 36 countries.**

At that time, **Europe took nearly 70% of Canada's flaxseed exports.**<sup>14</sup> Now the European market for food-grade linseed is just a third of Canadian exports "because buyers remain nervous"<sup>15</sup>. Russia, Kazakhstan and Ukraine have taken much of Canada's business.<sup>16</sup>

Tens of thousands of tests later, traces of Triffid remain in seed stocks<sup>17</sup> and routine testing of farm-saved seed is required to demonstrate that production is GM free.<sup>18</sup>

New Zealand flax producers supply the Canadian industry with GM Free seedlines<sup>19</sup> and report new market opportunities as Japanese buyers seek GM Free supply.<sup>20</sup>

# Lessons for New Zealand

## What the US experience says

### US Rice Industry

"one of the lessons of the LibertyLink contamination is that we must continue to insist that there be consumer acceptance and widespread global regulatory approval before new technologies are introduced into the marketplace."<sup>21</sup>

"There are numerous negative consequences incurred when the Chinese and other U.S. export markets are put at risk through commercialization of biotechnology-enhanced seeds before approvals for import into foreign markets are obtained."<sup>22</sup>

### North American Grain and Feed Association and Export Grain Association

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Planting unapproved GMOs "diminish[es] the United States' reputation as a reliable, often-preferred supplier of grains, oilseeds and grain products in world markets."

"Wide-scale planting of traits that aren't approved by key importing countries would diminish the competitiveness of American grain and feed exports".<sup>23</sup>

### Archer Daniels Midland (ADM)

<sup>1</sup> Tidgren K A. 2014. Syngenta Litigation Still Pending Despite China's Viptera Approval. [CALT](#), Iowa State University.

<sup>2</sup> National Grain Feed Association. 2014. *Lack of Chinese Approval for Import of U.S. Agricultural Products Containing Agrisure Viptera™ MIR 162: A Case Study on Economic Impacts in Marketing Year 2013/2014*; and 2014. *Potential Forecasted Economic Impact of Commercialising Agrisure Duracade™ 5307 in U.S. Prior to Chinese Import Approval*. April 16.

<sup>3</sup> Karnowski S. 2017. 1st farmer lawsuit on deck against Syngenta over China trade. Associated Press, April 23.

<sup>4</sup> Tidgren K A. 2014. Syngenta Litigation Still Pending Despite China's Viptera Approval. [CALT](#), Iowa State University.

<sup>5</sup> Macilwain C. 2005. US launches probe into sales of unapproved corn. *Nature*.

<sup>6</sup> *Ibid*

<sup>7</sup> Lin W, Price G K and E W Allen. 2003. StarLink: Impacts on the U.S. Corn Market and World Trade *Agribusiness*, 19(4).

<sup>8</sup> Lin W et al. 2003, p. 485.

<sup>9</sup> 2009. Class Action Complaint Against Bayer in the East Arkansas District Court, para 73.

<sup>10</sup> Li Y, Wailes E J, McKenzie A and M Thomsen. 2010. LL601 Contamination and Its Impact on U.S. Rice Prices. *Journal of Agricultural and Applied Economics*, 42(1):31–38.

<sup>11</sup> USA Rice Federation. 2013. The Proposed Transatlantic Trade and Investment Partnership. Comments to the USTR, May 10.

<sup>12</sup> *Ibid*

<sup>13</sup> United States International Trade Commission. 2015. *Rice: Competitiveness of the U.S. Industry*. Report # 4530

<sup>14</sup> CBC News. 2010. Triffid seed threatens flax industry. January 10.

<sup>15</sup> Dawson A. 2014. FLAX: Making a comeback, but seed is tight. *Manitoba Cooperator*, May 16.

<sup>16</sup> Schindle S. [The Future of Flaxseed](#). *The Communicator*.

<sup>17</sup> Cross B. 2015. Triffid not completely eliminated from pipeline: flax council. *The Western Producer*, April 2.

<sup>18</sup> Flax Council of Canada. 2014. Flax Council of Canada Stewardship Program Update. November 21

<sup>19</sup> Canadian Flax Industry Update 2013. Schindle S. [The Future of Flaxseed](#). *The Communicator*.

<sup>20</sup> Finnie S. 2011. Contain the GE Genie. *Straight Furrow*, December 13.

<sup>21</sup> Nunes K. 2014. U.S.D.A. certifies U.S. rice as non-transgenic. *Food Business News*.

<sup>22</sup> National Grain and Feed Association (NGFA) and North American Export Grain Association (NAEGA). 2014. Joint Statement Regarding Letter to Syngenta Requesting Suspension of Commercialization Activities of Syngenta's Agrisure Viptera® and Duracade® Corn. January 23.

<sup>23</sup> Singh A D. 2014. ADM refuses Syngenta genetically modified corn. [Bloomberg](#), February 27.