

GM Wheat Fails Market Test

“Premature introduction of GM wheat could cost farmers hundreds of millions of dollars each year in lost access to premium markets”

Canadian Wheat Board, 2001

GM Wheat is ready for commercial release in North America. However, wheat exporters in Canada and the US have been clearly informed by their customers that it is not wanted and of the high risk that non-GM wheat will also be rejected if they proceed with any GM wheat. As a result, they have concluded that GM wheat should not be introduced.

Wheat is not a major crop for New Zealand. Nevertheless, the reasons the North American wheat industry has declined to go GM are highly relevant to New Zealand as it considers whether to allow GM food production to begin.

GM soy, corn and canola were introduced to North American food production in 1996¹. At that time, there was little indication of the market resistance that was to meet these products. However, market rejection of all three is now the case for most varieties in Europe and some Asian markets had rejected exports of all three². By 1997, the US had lost its entire market for corn exports to the EU³ along with significant sales in soymeal. Canada meanwhile lost its canola and honey markets in the EU⁴.

Cultivation of these GM crops continued, however, as US soy and corn are produced chiefly for animal feed. Only recently have consumers in Europe begun to raise concerns about the GM content of animal feed. Further, GM soy and corn destined for food have mostly been refined into ingredients that tend not to trigger current GM food labeling requirements. These markets are not expected to last in jurisdictions looking to impose tighter standards. Among them, the European Parliament is currently refining traceability and labeling regimes that will increase the ability of European consumers to identify GM content in their foods.

Enter GM Wheat

Seven years after the first GM crops were commercialised, a GM wheat variety is ready for release. Unlike GM soy and corn, GM wheat is destined principally for human consumption, and will be processed into ingredients that will trigger labeling requirements. For this reason in particular, the decision whether or not to approve GM wheat is set to become a watershed for North American growers, and they are taking it very seriously. The global wheat export market is highly competitive⁵, and in view of the market losses experienced by the corn, soy and canola industries, North American wheat producer boards are questioning whether they can maintain market access in the face of GM contamination.

Clear market signals

When the prospect of GM wheat commercialisation was raised in North America, the main wheat commodity associations went to their overseas buyers to test their receptivity. The response was abundantly clear and consistent.

What Buyers are telling North American Wheat Producers

- "The European milling industry will simply not buy one more kilo of any U.S. wheat at all if GM wheat is commercialised."
Grand Molini, Largest miller in Italy, 2002
- "Regardless of government approval, contracts will stipulate no adventitious presence of GM wheat."
100% of the Japanese wholesale buyers to US Wheat Associates Survey
- "I cannot tell you how to run your business - but if you do grow genetically modified - or enhanced - wheat, we will not be able to buy any of your wheat - neither the GM nor the conventional." *Rank Hovis, supplier to 30% of the milling and baking industries in the UK, 2002*
- "My suggestion is don't attempt to grow it because you will lose your market"
UK Miller to Canadian Wheat Board, 2002

¹ International Service for the Acquisition of AgriBiotech Applications (1997) Global Status of Transgenic Crops in 1997.

² See "Market Rejection of GM Foods: the US experience", Sustainability Council, February 2003, www.sustainabilitynz.org.

³ US Department of Agriculture International Trade Report (November 2001) "Fight for Corn Market in Europe Intensifies".

⁴ National Research Council (2001) "Environmental Effects of Transgenic Plants. The Scope and Adequacy of Regulation". National Academy Press, Washington DC, pp.224-5.

⁵ Robert Wisner (2002) "GMO Spring Wheat: Its potential short-term impacts on U.S. wheat export markets and prices" Iowa State University, Department of Economics.

Surveys by the Canadian Wheat Board, which represents 85,000 farmers, indicate that 82% of Canadian wheat buyers would reject GM wheat.⁶

In America, US Wheat Associates' surveys of Asian and European buyers gathered similar responses:

- 100% of Japanese, Chinese and Korean buyers said they would not buy GM wheat.
- Japanese buyers were equally unanimous in their rejection of trace contamination in conventional wheat shipments, even if thresholds were legal.
- Only a third of Chinese buyers and a quarter of Korean buyers would tolerate trace contamination.⁷
- Many European buyers have warned that they will go to North America's competitors to buy wheat if GM wheat is introduced at all.
- European buyers were not confident segregation systems would work, and saw no need to expose their products to contamination when they could source wheat from non-GM wheat producing countries.

"If GM wheat was grown even by a few individuals, the risk of co-mingling and market rejection would be unacceptable and would affect all farmers, including those who have not adopted the technology"

Canadian Wheat Board,
Grain Matters, May-June
2002

GM Wheat A "Lemon"

Analyses by North American agricultural economists concur with the above market surveys. Two research papers published since 2001 have found that:

- Adoption of GM wheat will affect market prospects for GM and non-GM wheat growers alike. GM wheat is a "lemon".⁸
- For the next six years, the US could lose around 30-50% of its export markets for the wheat varieties concerned (GM and non-GM) if GM wheat is introduced.⁹
- The reputation of US agriculture could suffer if trace contamination incidents justify buyer mistrust of segregation systems.
- Even if segregation could meet buyer requirements, buyers may still decide not to pay the extra costs for segregated wheat and may source wheat from non-GM producing countries.

No approval for GM wheat before conditions met

In 2001, an industry-wide working group was formed in Canada to address the issues raised by GM wheat. The Canadian Grain Industry Working Group on Genetically Modified Wheat, whose members include growers, grain industry members, government officials and GM seed companies, issued a draft list of five conditions that must be met before GM wheat is approved¹⁰.

- 1 **Market Acceptance:** The supply chain must be able to meet the demands of non-GM buyers. Market acceptance for GM and GM contaminated wheat at competitive prices must be assured for multiple years.
- 2 **Segregation systems** must be in place, including clear allocation of management responsibilities, traceability, monitoring and enforcement throughout the supply chain. Technologies for detecting unintended spread of GM wheat must be in place one year before commercial introduction
- 3 **Crop performance and management assessed:** Prior to release, there must be sufficient research into gene flow, weediness and management of weedy herbicide resistant wheat.
- 4 **Positive cost-benefit for farmers:** There must be a positive cost-benefit for all farmers from GM wheat introduction. This assessment must take into account any market benefits from the introduction of the GM wheat, potential losses of markets to non-GM wheat growers resulting from contamination, and the environmental and farm management costs of introduction for adopters and non-adopters.

⁶ Canadian Wheat Board (March 20 2003) "Current State of Market Acceptance and Non-acceptance of GM Wheat".

⁷ US Wheat Associates (September 2002) "GM Wheat Customer Acceptability Survey. Results from Asia".

⁸ W. H. Furton et al, "The Optimal Time to License a Biotech 'Lemon'", Department of Agricultural Economics, Saskatchewan University.

⁹ Robert Wisner (2002) "GMO Spring Wheat: Its potential short-term impacts on U.S. wheat export markets and prices" Iowa State University, Department of Economics. Executive Summary, p. v.

¹⁰ Grain Industry Working Group on Genetically Modified Wheat (February 5 2003) "Conditions for the Approval of Genetically

- 5 **Industry-wide agreement:** GM wheat introduction is not an individual farmer choice, nor is it a matter of seed company choice. Farmers, grain companies, buyers and marketers must all agree that the conditions are met and that the benefits of introduction outweigh the risks before any step to introduce the wheat is taken.

Production of Other GM Grain also Puts Wheat Markets at Risk

Closer to home, it's not only GM wheat that is considered a threat to wheat exports. The approval of GM canola in Australia is also worrying wheat and grain producer boards.

The Australian Wheat Board (AWB), which represents 12% of the country's exports and 3% of GDP, and the Australian Barley Board (ABB) have both been informed by important export customers that they will tolerate no trace GM contamination of any GM grains. Saudi Arabian buyers warn that "they may refuse to trade barley with ABB if Australia produces any commercial GM grain crops in the future". Japanese buyers have similarly pointed out that "Australia may lose its current advantage for non-GM products due to concerns of contamination of non-GM grains by GM canola."¹¹

Both producer boards claim that the supply chain is not prepared for the introduction of GM grains: "We are concerned that Australia's grain storage system is not ready to adequately provide the necessary market assurance that we can supply buyers what they want"¹². The ABB has welcomed the South Australian Government's decision not to approve GM canola for the time being¹³.

GM Wheat: Lessons for New Zealand

While New Zealand is not a significant wheat producer, the proposed GM Wheat introduction in North America offers significant lessons for New Zealand as we consider the merits of allowing commercial GM food production:

- North America is the largest and most extensive GM grower globally. Yet where sectors still have a choice of remaining GM Free at the national level, they are choosing to delay introduction due to market resistance to GM foods,
- GM adoption cannot be a matter of individual farmer choice. All farmers are affected and all stand to lose if a GM variety is introduced, unless minimum market conditions are met.
- Buyer acceptance of GM content determines sales, not regulatory standards in export markets. Similarly, buyers, not regulatory standards, set GM contamination tolerance levels. In many of New Zealand key export markets, labeling and tolerance regulations are simply the minimum standards.
- Buyers in Asia and Europe have little confidence in segregation systems. Introduction of a GMO will likely affect buyer confidence not only in that variety or crop, but in the entire production sector.
- Buyers are likely to seek assurances of national-level GM Free production of that product and indeed that production sector, and will source elsewhere if these cannot be met.
- Incidences of contamination are likely to affect country brand reputation and may lead to irreversible loss of market access, particularly in competitive markets, as buyers source elsewhere to avoid exposure to trace contamination.



¹¹ Australian Barley Board (November 2002) "Our world markets don't want GMO", Chairman's Newsletter.

¹² Ibid.

¹³ Australian Barley Board (March 13 2003) "Segregation and traceability key to release of GMO".

P.O.Box 24304
Wellington
Tel: 04-9133655
Fax: 04-9133760
council@sustainabilitynz.org
<http://www.sustainabilitynz.org>