GM CANOLA IN AUSTRALIA AND MARKETING ISSUES

Introducing GM canola into Australian production

Licensing by the Gene Technology Regulator underpins the commercial introduction of any GM crop. The Regulator licensed 'InVigor' and 'Roundup Ready' canola in 2003. State/territory governments determine whether licensed crops can be grown in each jurisdiction. (See Biotechnology 2 - *Status of Moratoria on GM crops.*)

Using the limited amount of seed available, in 2008 around 9,600 hectares of GM canola (all of which was Monsanto's 'Roundup Ready' canola) was grown by 108 farmers in Victoria and NSW. The GM canola produced was managed in a closed system, with all grain delivered to five nominated delivery sites (three of which were dedicated to the receival of GM canola only).

In 2009, around 300 growers planted over 40,000 hectares of GM canola in Victoria and NSW.

Growers are required by Monsanto to undertake stewardship training before they can purchase seed. Objectives of the stewardship training include optimising agronomic performance, managing on-farm segregation and managing herbicide resistance.

GM canola growers must also sign Monsanto's Technology User Agreement (TUA). The 2008 TUA committed growers to use the purchased seed solely for planting a single crop and only during the 2008 calendar year, and forbade saving any seed for planting in any subsequent year. The 2009 TUA had similar terms. The Australian Pesticides and Veterinary Medicines Authority (APVMA) requires companies to manage the risk of herbicide resistance in weeds. GM canola growers must practice preventative resistance management as per the *Roundup Ready Canola Resistance Management Plan.*

On 17 April 2008 the Primary Industries Ministerial Council noted *A national framework to develop co-existence strategies for GM and non-GM crops*. The framework provided a nationally consistent, non-legislative framework for development of industry specific, market-driven strategies based on the principle of industry management overseen by government for those states that have endorsed the use of GM crops. The framework was subsequently provided to the Gene Technology Ministerial Council in May 2008 for noting. Production of GM canola commenced before this framework was finalised, but under industry initiated arrangements consistent with it.

Grain Trade Australia (formerly the National Agricultural Commodities Marketing Association) was asked to report to governments through the Primary Industries Standing Committee (PISC) Industries Development Committee (IDC) on experiences in 2008 with commercialising GM canola. In April 2009 Grain Trade Australia and the Australian Oilseed Federation published a joint report, *Market Choice in the Canola Industry*, outlining how the 2008 GM canola supply chain performed within the industry's market choice (coexistence) framework up to the point of bulk storage. A final report, which includes details of the subsequent handling and processing of the grain, will be submitted to the PISC IDC in February 2010. The report indicates that the market choice protocols adopted by industry in 2008 were effective and no revision of the protocols is required.

The grains industry believes it has the capacity to manage the commercialisation of GM canola to maintain or enhance trade in Australian canola and to enable market

choice along the supply chain (*Delivering market choice with GM canola*). Farmers make commercial decisions, including to operate organically or to grow non-GM or GM crops. Farmers seeking to capture a premium may incur additional costs.

The Australian canola industry has historically had one grade of canola. Following the lifting of restrictions on the commercial production of GM canola in NSW and Victoria, the Australian Oilseeds Federation and Grain Trade Australia introduced a second 'specialty' standard for non-GM canola (CSO1-A) which may attract a price premium. The non-GM CSO1-A canola may contain up to 0.9 per cent adventitious presence of material from licensed GM crops. The general standard (CSO1) may contain licenced GM and/or conventional canola.

From 2009 and beyond, canola will be segregated and marketed in line with the two canola standards. In late September 2009 GrainCorp announced that farmers who want to deliver into the non-GM CSO1-A canola segregation will not have to pay for additional tests to prove their crops are not genetically modified, despite initial media reports that farmers could be charged around $2.50 per tonne. Not all receival sites will necessarily accept both CSO1 and CSO1-A grades of canola. Buyers wanting non-GM canola may create a demand for a CSO1-A segregation.

In 2009, GM canola was trialled in Western Australia across 17 farms and three research sites, covering 854 hectares. The aim of the trials was to test that both GM and non-GM canola can be transported, handled and exported as separate grains. On 25 January 2010 the Western Australian government announced it would allow GM canola to be grown in WA from this year onwards.

The issue of *Fusarium* build-up in soils when glyphosate herbicide is used has been raised in Ministerial correspondence (McGauran and Burke). This matter is relevant to the use of glyphosate herbicides generally and not GM 'Roundup Ready' crops specifically. APVMA's CEO has said that there is currently no evidence glyphosate causes increased attacks from soil pathogens such as *Fusarium* in GM or conventional crops. DEWHA has conducted a literature search on this issue, noting that in Canada, after long-term use of glyphosate, no long-term impairment of soil function has occurred and that due to binding of glyphosate to soil particles, there is little effect of glyphosate on soil microflora.

Further questions on *Fusarium* should be addressed either to the Department of the Environment, Water, Heritage and the Arts or to the Australian Pesticides and Veterinary Medicines Authority.

Herbicide tolerant canola has been bred conventionally, for example triazine tolerant (TT) canola, and not only using GM technology. TT canola has been widely adopted in Australia despite inherently lower yield potential and oil content, associated with photosynthetic capacity. Emergence of herbicide tolerant weeds is an issue with TT canola.

GM Canola: Marketing Issues

ABARE's research indicates concerns about markets and prices for GM canola are largely unfounded and that Australian growers could lose significant market share if their access to GM technology is restricted. There is no credible evidence that international and domestic markets will be put at risk if Australia grows GM canola. In the traditional export markets for canola – Japan, Mexico, China, Pakistan and Bangladesh – GM canola is generally accepted as readily as non-GM varieties.

ABARE's analysis indicates there has been no consistent premium paid for Australian non-GM canola once transport charges have been taken into consideration.

Future Australian exports of GM 'Roundup Ready' and 'InVigor' canola to the European Union are unlikely to face impediments as these varieties have been approved for food and feed (though not for cultivation) by the European Commission. Barriers affecting Canadian GM canola grain and meal exports to the European Union have arisen because, unlike Australia, Canada grows a number of GM canola varieties not approved by the European Union.

In the three years to 2005, over 94 per cent of Australia's canola exports went to countries with labelling thresholds for unintended GM presence greater than 5 per cent. ABARE concluded in its report *GM Grains in Australia: Identity Preservation* (2006) that if all identity preservation costs were attributed to non-GM canola producers, the cost of doing so would be modest and manageable at around 4-6 per cent of the average farm gate price.

Producers and consumers of organic produce may be concerned about the implications of GM crop production. The ABARE report *Potential impacts from the introduction of GM canola on organic farming in Australia* (2007) predicts that production of GM canola will have little if any effect on the organics sector. Organic canola is not grown to any significant extent in Australia; organic livestock producers can continue to use organic feedstuffs other than canola meal; and organic honey is not permitted to be produced from either GM or conventionally farmed non-GM canola. In the European Union, certified organic products may contain up to 0.9 per cent by weight of unintended GM presence before losing their certified organic status.

Detailed questions about market acceptance and prices should be referred to ABARE.

GM wheat: Considering the future

No GM wheat has been approved by the Gene Technology Regulator for commercial production. However, field trials of GM wheat have and are being conducted in Australia, looking at traits such as starch composition and tolerance of environmental stresses, including dryness. It is anticipated that the outcomes of Australian R&D will not near commercialisation for at least seven years.

On 15 May 2009 (Australian time) three grain industry organisations from each of the United States, Canada and Australia released a joint statement on 'wheat biotechnology commercialization'. The Australian organisations were the Grains Council of Australia, Grain Growers Association and the Pastoralists and Graziers Association of Western Australia. The statement supported the use of biotechnology in developing improved wheat varieties and noted that the signatory organisations will work toward the goal of synchronised commercialisation of biotech traits in wheat in order to minimise market disruption.

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