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GMOs Guiding Meaningful Opinions



The Gene Technology Newsletter for the
Horticulture Industry

October 2006

Welcome to this edition of *GMOs*, the bi-monthly gene technology newsletter for the horticultural industry. *GMOs* is compiled by Agrifood Awareness Australia Limited in conjunction with HAL.

We welcome any comments or enquiries you may have regarding the content of this publication. We also encourage the use of this information in industry newsletters and web pages.

Knowledge Bank

UNAPPROVED GM RICE FOUND IN US MARKET

Bayer CropScience has notified the US Department of Agriculture (USDA) and US Food and Drug Administration (USFDA) that trace amounts of an unapproved herbicide tolerant genetically modified (GM) rice variety they developed has been detected in samples taken from commercial long grain rice supplies.

According to a statement issued by the USDA, the rice, LLRICE 601, was modified to tolerate applications of glufosinate ammonium. It contains the same protein as other GM products developed by Bayer that are available commercially under the name Liberty Link™. Because this protein has been used in a number of GM products approved globally, the protein has been repeatedly and thoroughly scientifically reviewed and used safely in food and feed, cultivation and import in the US, as well as in other countries, including Australia. The USFDA has concluded “that the presence of LLRICE 601 in the food and feed supply poses no safety concerns...[and] is safe in the environment.”

The GM rice developed by Bayer was field-tested in the US between 1998 and 2001, but commercial approvals for the variety were not sort at this time. The US Government's Animal and Plant Health Inspection Service (APHIS) will now finalise

the approval process, and investigate the circumstances surrounding the incident and the extent of the rice's presence.

The USDA's Grain Inspection, Packers and Stockyards Administration (GIPSA) has now verified a strip kit that detects the presence of the Liberty Link 601 protein at a detection limit of two per cent sensitivity level. The test takes approximately 10 minutes to complete.

Market responses are still evolving. The European Commission has announced that it now requires imports of all long grain rice from the USA to be certified as free from the unauthorised GM variety by an accredited laboratory using a validated testing method.

Unconfirmed reports are also claiming that unauthorised GM rice from China has been detected in products in the EU. The EU Commission and the Chinese Government are currently investigating the claim.

For more information: www.usda.gov in 'Newsroom'.

www.europa.eu/rapid/pressReleasesAction.do?reference=IP/06/1120&format=HTML&aged=0&language=EN&guiLanguage=en

WTO RELEASES FINAL GM TRADE DISPUTE RULING

The World Trade Organisation (WTO) issued the reports of the panel that had examined complaints by the United States, Canada and Argentina, respectively, against “European Communities - Measures affecting the approval and marketing of biotech [GM] products”.

As background to this case, after 1998, the European Commission adopted an across-the-board moratorium under which no GM product application was able to reach the final stage of approval. This moratorium effectively prohibited exports of GM products grown in the USA. The USA felt that the moratorium breached WTO rules, so they challenged it through the WTO dispute settlement mechanism.

The USA claimed that the EU moratorium on new GM products was not based on scientific evidence, and that by not allowing its approval system to operate, the EU was imposing undue delays on GM crop approvals and preventing the marketing of many crops grown in the USA.

A summary of the findings and conclusions includes:

- The Panel found that the European Communities applied a general *de facto* moratorium on approvals of GM products between June 1999 and 29 August 2003. They concluded that the moratorium resulted in a failure to complete individual approval procedures without undue delay, and hence gave rise to an inconsistency with Article 8 and Annex C of the Sanitary and Phytosanitary (SPS) Agreement.
- The Panel found that there was undue delay in the completion of the approval procedure with respect to 24 of the 27 relevant products, and as such the European Communities has breached its obligations under Article 8 and Annex C of the SPS Agreement.
- The Panel concluded that the risk assessments undertaken by the EC scientific committees did not provide reasonable support for a prohibition of the GM products at issue, and that each of the safeguard measures taken by the relevant member States fails to meet the obligations of the European Communities under the SPS Agreement.

The US Government responded to the WTO findings, with US Trade Representative Susan Schwab stating, "After eight years of legal wrangling and stalling by Europe, we are a step closer to clearing barriers faced by US agricultural producers and expanding global use of promising advances in food production".

"I urge the EU to fully comply with its WTO obligations, and consider all outstanding GM product applications, and evaluate their scientific merits in accordance with the EU's own laws, without undue delay," she said.

The US Government also stated, "In addition to the EU's across-the-board moratorium on product approvals, the WTO case

challenged product bans imposed by six EU Member States (Austria, France, Germany, Greece, Italy, and Luxembourg) on seven of the GM crops approved by the EU prior to the adoption of the moratorium. In each case, the panel upheld the United States' claims that, in light of positive safety assessments issued by the EU's own scientists, the Member State bans were not supported by scientific evidence and were thus inconsistent with WTO rules."

For more information:

www.wto.org/english/news_e/news06_e/291r_e.htm

www.usda.gov/wps/portal/!ut/p/s.7.0.A/7.0.1.OB?contentidonly=true&contentid=2006/09/0389.xml

Hot Issues

2007 AG STATEMENT PENDING

The Australian Minister for Agriculture, Fisheries and Forestry, Peter McGauran has announced the Government's response to the report *Creating our future: agriculture and food policy for the next generation*, released in February.

The report called for heightened cooperation between the Federal Government and the state and territory governments on GM foods and crops, including the removal of moratoria in place in all canola-producing states to prevent the production of two GM canolas approved for commercial release by the Federal regulator.

In relation to the report's recommendations about biotechnology, Mr McGauran was quoted in *The Australian* as saying, "I strongly believe that the moratorium on GM commercial crops should be lifted by the states."

"...I believe that for much of 2007 the states would be shirking their responsibilities if they did not begin a debate so that people knew of the advantages and potential disadvantages of GMOs," he said.

As part of the response to the report Mr McGauran made several announcements today, and signalled that the Government response would form the basis of a landmark agriculture and food policy statement ('the 2007 Agriculture Statement') to be released early next year.

SA TO EXTEND GM BAN BY ONE YEAR

Rory McEwen, South Australian Minister for Agriculture, has stated in recent radio interviews that he is preparing legislation to extend the current GM crop moratorium in SA for a further 12 months. This will bring the state into line with Western Australia, Victoria and New South Wales which all have bans in place until 2008.

For more information: info@afaa.com.au

WA BIOTECH STRATEGY RELEASED

West Australian Premier Alan Carpenter launched the state's biotechnology strategy last month. According to a media release, the strategy aims to accelerate the growth of the biotechnology industry in Western Australia and maximise the economic benefits to the State. Initiatives of relevance include:

- \$4.5 million for a new Centre for Food and Genomic Medicine where biotechnology, agriculture and food technology scientists will develop new approaches to the prevention and treatment of major health issues, including diabetes and obesity; and,
- \$1.2 million each year on biotechnology-related research and development in crop biotechnology and animal and pest diagnostics.

Despite these investments in agricultural biotechnology a moratoria banning the commercialisation of GM crops in the state is in place until 2008.

For more information:

www.doir.wa.gov.au/businessandindustry/C5FBB1B831524987B3BEE79C54ADD5FC.asp

MORE FARMER SUPPORT FOR END OF GM CROP BAN

Following the announcement by the New South Wales Farmers Association (NSWFA) that the organisation no longer supported the State Government ban on the commercial production of GM crops, the Producers Forum issued a media release stating that Australian farmers are increasingly united on this issue.

"The fact that the NSW Farmers' Association, representing 11,000 members, upheld a motion calling for the end to the state moratoria on GM crops is an

overwhelming indicator from grassroots producers that they are ready to seize control of their farming system decisions," said Jeff Bidstrup, Producers Forum national convenor.

"Coupled with support from others such as the National Farmers' Federation and the peak grain body, the Grains Council of Australia, all is in order to allow Australian farmers to move forward to compete with the 8.5 million farmers in 21 countries that produce GM crops," said Mr Bidstrup.

The Producers Forum aims to ensure timely access to agricultural biotechnologies for the economic, social and environmental benefit of all Australians and represents growers from around Australia.

For more information:

www.producersforum.net.au

Regulatory Updates

BAYER ENTERS AUSTRALIAN GM CROP MARKET

A GM herbicide tolerant cotton developed by Bayer CropScience has received approval for commercial cultivation from the Office of the Gene Technology Regulator (OGTR). Known as Liberty Link cotton, the cotton has been modified to be tolerant to the broad-spectrum Liberty[®] herbicide. The active ingredient of Liberty[®] herbicide is glufosinate ammonium.

This GM cotton variety has received unrestricted commercial approval and is therefore able to be planted in all areas. Previous GM cotton licence applications have not been approved for growing in northern Australia.

A small amount of Liberty Link cotton will be available for the 2006/07 season. Ninety per cent of the cotton currently grown in Australia is comprised of GM cotton varieties.

For more information:

www.ogtr.gov.au/rtf/ir/dir062notific.rtf

OGTR RESEARCH LICENCE APPLICATION UPDATES

The OGTR is currently seeking comment on a Risk Assessment and Risk Management Plans (RARMP) for the two applications below.

Reference	Crop/characteristic	Developer
DIR 067/2006	Field trials of waterlogging tolerant cotton.	CSIRO
DIR 066/2006	Commercial release of insect resistant and/or herbicide tolerant cotton lines in northern Australia.	Monsanto Australia Limited

The OGTR has recently approved field trials of the crop below.

Reference	Crop/characteristic	Developer
DIR 063/2005	Fungal resistant cotton	Hexima Ltd

For more information:
www.ogtr.gov.au/new/index.htm

The Regulator welcomes written submissions in order to finalise the RARMPs for these two applications. Submissions close on **7 November 2006** and **12 October 2006** respectively.

Reports of Interest

OPPORTUNITIES AND CHALLENGES FOR THE NEXT DECADE OF AG BIOTECH

The US Government has released a report looking at the future challenges and opportunities for the agricultural biotechnology industry. The report emerged from the USDA's Advisory Committee on Biotechnology and 21st Century Agriculture (AC21). The 20-member committee comprises of farmers, technology providers, academics, food manufacturers and shippers, and consumers and environmentalists.

Some of the possibilities for the technology, as well as the barriers it faces into the future from the report are outlined below.

OPPORTUNITIES	CHALLENGES
GM plant varieties that provide improved human nutrition (eg soybeans enriched in omega-3 fatty acids).	Some future GM foods will likely emerge from the developing world. For example, if GM rice varieties developed in China are commercialised, large populations of humans will be consuming a staple GM whole food.
Products designed for use in improved animal feeds (eg increasing the concentration of essential amino acids often deficient in some feed components).	Some future GM varieties and products may need to be produced under identity preservation conditions or require strict segregation from food or feed product streams.
Crops resistant to drought and other environmental stresses such as salinity.	Consumers are more aware of GM products than ever. Increased awareness along the food and feed chain will continue to influence the acceptance of new GM products.
Crops resistant to pests and diseases (eg fusarium-resistant wheat).	Genomic information is being used to enable the development of improved crops and animals through both GM and non-GM approaches.
Additional crops containing a number of GM characteristics incorporated in the same plant.	National regulatory systems for evaluating the safety of new GM products are being developed and implemented in many countries around the world, both eliminating some uncertainties, and, in some cases, complicating the path to market.
Crops modified to produce pharmaceuticals, such as vaccines and antibodies.	Many countries now require mandatory GM food and ingredient labeling, and some require traceability of those products throughout the food and feed chain. Food manufacturers who do not want to label their products as GM are sourcing non-GM crops, further segmenting the marketplace.
Crops modified for particular industrial uses (eg crops having improved processing attributes such as increased starch content).	The commercialisation of a GM plant or animal product is affected by considerations beyond the safety of the product (eg technical challenges and consumer and market acceptance).
GM animals for food, or for production of pharmaceuticals or industrial products (eg pigs producing the enzyme phytase in their saliva for improved nutrient utilisation and manure with	Social and ethical concerns may influence decisions about commercialisation (eg the development of GM animals may generate higher levels of concern).

reduced phosphorus content).	
	Some international agreements specific to modern biotechnology now exist. Additional efforts under these bodies are continuing, but their future outcomes are uncertain.
	There is an ongoing trade dispute over GM foods between the EU and a number of complainants, including the USA.
	Technology producers, food producers and processors increasingly recognise the global interdependence of markets and the importance of resolving GM- related issues.
	With the increased use of GM products, other issues such as testing, liability, coexistence, and intellectual property rights, have emerged.

For more information:

www.usda.gov/wps/portal/!ut/p/ s.7 0 A/7 0 1OB?contentidonly=true&contentid=AC21Reports.xml

Research Updates

USA – GM PLUMS MOVE CLOSER

A new plum variety, the 'HoneySweet' plum could be the next GM horticultural commodity to be released for commercial use, if recent developments in the US regulatory pipeline progress smoothly.

Developed by the US Department of Agriculture Agricultural Research Service (USDA-ARS) in collaboration with the Institute National de la Recherche Agronomique in Paris and Cornell University, the GM variety resists the plum pox virus (PPV), a plant virus devastating stone fruit yields in a number of countries.

The GM plum has been modified by including a copy of the plum pox virus coat protein into plum trees, thereby enabling the plant to resist infection by PPV. The GM plum trees have been tested under field trial conditions since 1995. The trees and their progeny have been evaluated extensively to confirm stability, agronomic performance, effective resistance and other environmental considerations.

In 2004, the USDA-ARS petitioned the USDA Animal and Plant Health Inspection Service to grant the GM plum a nonregulated status. Petitioning for deregulation is often the first step toward the commercialisation of a variety. More recently, in May 2006, an environmental assessment of the GM plum has been made available. A decision regarding the deregulation of the virus-resistant plum is expected within two to three months according to media reports.

The plum pox virus also referred to as Sharka disease, affects other stone fruits such as apricots, peaches, cherries, and nectarines. The virus causes fruit to drop prematurely and scars and deforms the fruit. Total losses are not uncommon once trees are infected. The only method of halting the spread of the virus is to destroy the infected orchards which is proving costly. Eradication efforts in the US have exceeded US\$40 million in just three counties, and Canada has allocated C\$85 million for plum pox eradication over a three-year period.

www.aphis.usda.gov/brs/aphisdocs/04_26401p_ea.pdf

EU – GM CARNATION APPROVAL SOUGHT

According to media reports, European Union biotechnology experts are currently debating whether to allow imports of GM carnations. The carnations, developed in Australia, have been modified to exhibit blue-mauve colouring.

If approval is granted, the carnations would be permitted to enter EU-25 markets as cut flowers for distribution and sale to the general public. They would not be allowed to be grown.

SOUTH AFRICA – GM GRAPEVINES TO BE TESTED

According to the latest CropBiotech Update, scientists at the Institute for Wine Biotechnology at Stellenbosch University, South Africa, have developed several lines of GM grapevine (*Vitis vinifera*) plants with increased resistance to fungal pathogens. These lines will be tested in the field to determine the stability of the modification, and to perform viticultural, and vinicultural evaluations.

The transgenic plants will be grafted on year-old non-GM rootstocks. In order to avoid dispersal into the environment, the flowers of the GM plants will be bagged to contain the pollen, and the grapevines will be covered by a net to prevent seed dispersal.

For more information:

http://academic.sun.ac.za/wine_biotechnology/research_programmes.htm

Market Research

LATEST EU-WIDE SURVEY RESULTS ON GM

According to results of the latest Eurobarometer on biotechnology survey of 25,000 respondents (approximately 1,000 in each EU Member State) 52 per cent believe biotechnology will improve quality of life.

The Eurobarometer, *Europeans and biotechnology in 2005* shows that most Europeans are in favour of medical (red) applications of biotechnology when there are clear benefits for human health; and industrial (white) applications, but they are still mostly sceptical about agricultural (green) biotech, and will continue to be so unless new crops and products are seen to have consumer benefits.

Confidence has increased in the European Union's regulation of biotechnology but there is no evidence that this has influenced the public's reported purchasing intentions, especially for GM foods. Fifty-eight per cent of Europeans believe that the development of GM food should not be encouraged.

Trust in those involved in biotechnology shows growing levels of trust in university and industry scientists (73 per cent and 64 per cent). The EU is seen as more trustworthy than national governments on issues of regulating biotechnology (74 per cent compared with 68 per cent).

This survey is the latest in a series of such Eurobarometers on biotechnology conducted in 1991, 1993, 1996, 1999, 2002 and 2005.

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For more information:

www.ec.europa.eu/research/press/2006/pdf/pr1906_eb_64_3_final_report-may2006_en.pdf

Events

AUSBIOTECH 2006 FORUM

Date: 19-22 November 2006

Description: The theme of the AusBiotech 2006 National Conference is 'Bridging Innovation & Investment'. The conference program seeks to address the topical and challenging aspects of doing business in the key biotechnology sectors and driving partnering opportunities in the Asia Pacific region. Topics that will be addressed across the various biotechnology sectors include: environmental biotechnology, animal health and biotechnology and food for life.

Location: Sydney Convention and Exhibition Centre

Web: www.ausbiotech2006.com.au/

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Gene Technology Contacts

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