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Report Highlights:

The United States has substantial interest in Australia's policies and regulatory framework regarding agricultural biotechnology and products derived thereof. Unprocessed (whole) biotech corn and soybeans have not received regulatory approval in Australia and, thus, cannot be imported without further processing. Foods with biotech content must receive prior approval and be labeled if biotech content is more than 0.1%. This requirement can restrict sales of U.S. intermediate and processed products. Australia's policies and views on this technology influence other countries in the region, and elsewhere, which may follow Australia's lead in developing a regulatory system of their own.

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Please note: Hyperlinks to various Internet sites are used extensively throughout this report. These links may not be usable in the Adobe Acrobat version of the report so we recommend that users download the Word version to have access to the most detailed and up-to-date information on accessing the Australian market.

Section I: Executive Summary

The United States has substantial interest in Australia's policies and regulatory framework regarding agricultural biotechnology and products derived thereof. Unprocessed (whole) biotech corn and soybeans have not received regulatory approval in Australia and, thus, cannot be imported without further processing. Foods with biotech content must receive prior approval and be labeled if biotech content is more than 0.1%. This requirement can restrict sales of U.S. intermediate and processed products. Australia's policies and views on this technology influence other countries in the region, and elsewhere, which may follow Australia's lead in developing a regulatory system of their own.

Overall, the Australian government is supportive of the use of agricultural biotechnology and has committed long-term funding to research and development. The State governments have also committed funds for research and development, but most are being more cautious about the introduction of the technology and are using their powers over 'marketing' to restrict biotech crops in their jurisdictions. Major farm groups and the Commonwealth government's science organizations do not support this position and have argued openly for its acceptance.

Australia has a substantial risk assessment based regulatory framework for dealings with gene technology and genetically modified organisms, as well as a process for assessment and approval of genetically modified foods. The Gene Technology Act of 2000 established Australia's regulatory scheme for dealings with gene technology and genetically modified organisms (GMOs). The Commonwealth's Gene Technology Regulator serves the key role in assessing, regulating and licensing GMOs and enforcing license conditions. Genetically modified foods must also be assessed, determined to be safe, and be approved before being sold for human consumption. The standards for such foods are developed by Food Standards Australia New Zealand (FSANZ) and are contained in the Food Standards Code. There are labeling requirements for genetically modified foods containing modified genetic material and/or novel protein, and for foods with altered characteristics. Imports of viable GMOs and food products containing genetically modified ingredients would need to meet these same regulations.

To date, biotech cotton, carnations and canola varieties are the only agricultural crops approved for commercial release into the environment in Australia, while biotech cotton is the only crop grown widely in the country. Research is being conducted on other biotech crops, with field trials controlled by the Office of the Gene Technology Regulator (OGTR) being conducted on some, i.e., rice, white clover, narrow-leafed lupin, grapevines, pineapple, papaya, sugarcane and poppies. Approval has already been granted for food products derived from biotech corn, soybean, sugarbeet, potatoes and oils from biotech cotton and canola.

For GMOs that have not received regulatory approval in Australia, U.S. export opportunities are, obviously, restricted. For the United States, the commercial impact of this constraint is most pronounced for feed grain, e.g. whole corn, and soybeans. Furthermore, bans and restrictions on the growing of GMOs in a number of Australian states and territories is slowing the commercialization and adoption of the technology and negatively impacts the ability of a U.S. company (Monsanto) to market one of their GMO products (canola).

Australia's regulatory framework for genetically modified food and feed has only a relatively limited impact on U.S. exports of these products. Australia requires that food products derived from GMOs, if they contain more than 0.1% of biotech product, get prior approval from Food Standards Australia New Zealand before they can be sold. Such products must also be labeled to indicate that they contain biotech products. Often, Australia does not

allow the importation of many grains and/or grain products for phytosanitary reasons, rather than the fact that they are genetically modified.

In addition to Australia's regulatory framework for biotechnology, a government agency – Biotechnology Australia (BA) – coordinates non-regulatory biotechnology issues for the Australian Government. BA, a multi-departmental agency, includes members from the Australian Departments of Industry, Tourism and Resources; Health and Ageing; Agriculture Fisheries and Forestry; Environment Australia; and Education, Science and Training. BA is responsible for developing and implementing Australia's National Biotechnology Strategy (NBS). The NBS supports the Government's vision for biotechnology – capturing the benefits of biotechnology for the Australian community, industry and environment, consistent with safeguarding human health and ensuring environmental protection.

Section II: Biotechnology Trade and Production

Commercial Crops

Biotech cotton, color modified carnations and canola are the only crops approved for commercial release by Australia's Gene Technology Regulator. Biotech cotton varieties are estimated to be grown on about 80 percent of Australia's cotton area. The Regulator approved the commercial releases of two biotech canola varieties in 2003. However, commercial plantings of biotech canola are being held up due to moratoriums that have been implemented by state governments in all Australia's major canola producing states.

Biotech Cotton

Biotech cotton has been grown commercially in Australia since the approval and introduction of Bt, or Ingard, cotton in 1996. 'Ingard' cotton contains a gene from a soil bacteria, *Bacillus thuringiensis*, or Bt, that provides insect resistance. Commercial plantings of 'Ingard' cotton in Australia were restricted to 30 percent of total cotton area for insect resistance management purposes. Australia's Commonwealth Scientific Industrial Research Organization (CSIRO) developed 'Ingard' cotton, using a gene owned by Monsanto.

Roundup Ready cotton (herbicide tolerance) and Roundup Ready/Bt cotton (herbicide tolerance/insect resistance) were subsequently approved and grown commercially for the first time in 2001. Roundup Ready/Bt cotton was developed using conventional breeding of the two GMO varieties.

In 2003, Australia's Gene Technology Regulator approved an additional cotton variety – 'Bollgard II' – for commercial release and the first major commercial plantings were made during the 2003/04 season. 'Bollgard II' contains two 'Bt' genes (as opposed to the one in 'Ingard' cotton), which delays the development of insect resistance to the Bt toxin. 'Bollgard II' is being phased in as 'Bt' cotton is phased out. Once 'Bt' cotton is phased out, 'Bollgard II' can be used on up to 80 percent of Australia's cotton area which is equivalent to about 250,000 hectares. 'Bollgard II' was developed by CSIRO using genes under license from Monsanto.

In addition, there are a number of biotech cotton varieties that are currently undergoing trials. These include insect-resistant and herbicide-tolerant varieties, as well as a high oleic acid content variety being developed by CSIRO.

CSIRO analysis indicates that 'Bt' cotton allowed Australia's cotton farmers to reduce pesticide applications by about 50 percent, compared to conventional cotton varieties. CSIRO research shows that 'Bollgard II' will reduce pesticide applications by up to 75 percent.

Australian food standards require approval and labeling of food or food ingredients that contain new genetic material or protein or have altered characteristics as a result of gene modification. Refined oil from biotech cottonseed, however, does not require a label because the oil contains no genetic material and the cottonseed oil is identical to conventional cottonseed oil.

Carnations

Biotech carnations, modified for flower color, were approved for general release in Australia in September 1995 under the former voluntary system (GMAC). Biotech carnations have been commercially available in Australia since 1996. Only one company, Florigene, is licensed to grow biotech carnations and it is believed that they are the only company in the world dealing with biotech carnations. Currently five genetically modified carnations are being grown.

Canola

The commercial releases of two biotech canola varieties (InVigor[®] hybrid & Roundup Ready[®]) were approved by OGTR in 2003. However, commercial plantings of these varieties are being held up due to moratoriums that have been implemented by state governments in all Australia's major canola producing states. As a result of the bans, Monsanto has withdrawn from the Australian market for their Roundup Ready[®] canola product.

Applications Under Evaluation

A list of GMO applications currently under evaluation by OGTR is contained in Appendix I of this report.

Imported Products

Under the Gene Technology Act 2000, approval or authorization must be obtained to deal with genetically modified organisms. This means that the importation of live, viable GMOs, are regulated under the Act. Importers need to apply to OGTR for a license or authorization to import any GMO into Australia. OGTR and the Australian Quarantine and Inspection Service (AQIS) work closely to regulate and enforce this situation. The AQIS application form for an import permit now contains a section relating to the genetically modified status of the product.

Foods containing biotech materials must be approved by Food Standards Australia New Zealand and be labeled if the biotech content is greater than 0.1% before they can be sold in Australia. This applies to all domestically produced and imported food. A list of currently approved biotech food products is contained in Appendix III of this report.

Processed animal feeds, such as soy meal, are not covered by biotech legislation in Australia. These products, therefore, do not require prior approval or a license (see Section III of this report) to be imported. There are, however, quarantine restrictions on some products. Unprocessed biotech products imported as feed (i.e. whole grain, etc), would require a license from OGTR, as there is a possibility that seed could be released into the environment.

Section III: Biotechnology Policy

The GMO Regulatory System

The Gene Technology Act 2000 (the Act) came into force on June 21, 2001 as the Commonwealth component of a national regulatory scheme. The Act and the associated Gene Technology Regulations 2001, provide a comprehensive process for the Gene Technology Regulator to assess proposed dealings with live and viable GMOs ranging from contained work in certified laboratories to general releases of GMOs into the environment, and extensive powers to monitor and enforce license conditions. An Inter-Governmental Agreement, between the Commonwealth and the states and territories, underpins the system for regulating genetically modified organisms in Australia. The Ministerial Council for Gene Technology, comprising ministers from the Commonwealth and each state and territory, oversees the regulatory framework and provides advice to the Gene Technology Regulator on policy principles to assist in decision-making. The individual states and territories have passed or are developing complimentary legislation to the Gene Technology Act in their jurisdictions.

The object of the Gene Technology Act is: "To protect the health and safety of people, and to protect the environment, by identifying risks posed by or as a result of gene technology, and by managing those risks through regulating certain dealings with genetically modified organisms."

The Act prohibits all dealings with GMOs unless the dealing is:

- A licensed dealing;
- A notifiable low risk dealing;
- Exempt dealing; or
- Included on the GMO Register.

Key features of the Act are the appointment of an independent Gene Technology Regulator and a requirement for transparent and accountable implementation. The Regulator administers the regulation of all dealings with GMOs in Australia, in accordance with the Act and ensures compliance with the conditions of any approvals. The Regulator consults extensively with the community, research institutions and private enterprise.

The Gene Technology Regulator liaises with other regulatory agencies, including the Australian New Zealand Food Authority (ANZFA), the National Registration Authority for Agricultural and Veterinary Chemicals (NRA), and the Therapeutic Goods Administration (TGA), to coordinate the approval of biotech products for use and sale. The Act creates a Public Record of GMO Dealings and GM Products that resides on the OGTR website: www.ogtr.gov.au.

The Act also establishes three committees to advise the Regulator and the Ministerial Council:

- The Gene Technology Technical Advisory Committee (GTTAC) – a group of highly qualified experts who provide scientific and technical advice on applications;
- The Gene Technology Ethics Committee (GTEC) – a group of expert ethicists, which provides ethical advice, particularly in the areas of law, religious practices, animal welfare and population health; and
- The Gene Technology Community Consultative Committee (GTCCC) – a group of people representing the broad interests within the Australian community, including consumers, researchers, and environmentalists. This group looks beyond the science of gene technology to matters of general concern to the community in relation to GMOs.

GMOs vs GM Product

The Gene Technology Act 2000 distinguishes between genetically modified organisms (GMOs) and genetically modified (GM) products. A genetically modified product 'GM product' means a thing (other than a GMO) derived or produced from a GMO (Section 10 of the GT Act).

The Office of the Gene Technology Regulator (OGTR) does not directly regulate the use of GM products in Australia. However, the use of GM products is regulated by other regulatory agencies in a number of situations. Food Standards Australia New Zealand (FSANZ) regulates the use of GM products in food for human consumption, and the Therapeutic Goods Administration regulates the use of GM products as human therapeutics. The National Industrial Chemical Notification and Assessment Scheme (NICNAS) regulates any GM products derived from industrial chemicals and the Australian Pesticides and Veterinary Medicines Authority (APVMA) evaluates and approves pesticides and veterinary medicines containing GM products.

GMOs Already Licensed by OGTR

A list of GMOs already licensed by OGTR is contained in Appendix II of this report.

Biotech Food

Food Standards Australia New Zealand (FSANZ) is the Australian Government agency responsible for approving GM food products for the Australian market. Mandatory labeling of genetically modified foods, where introduced DNA or protein is present in the final food, came into force in Australia on December 7, 2001. Regulations for labeling are contained in [Standard 1.5.2](#) of the [Food Standards Code](#). A list of currently approved biotech food products is contained in Appendix III of this report.

Under the Standard, food or ingredients labeled genetically modified contain new genetic material or protein as a result of the genetic modification or have altered characteristics, e.g. changed nutritional values, compared to the conventional food. Some flavorings may also be derived from genetically modified organisms, but labeling is only required if they are in a concentration of more than 1 gram per kilogram (0.1%). Food additives and processing aids do not need to be labeled unless the introduced genetic material is present in the final food.

Under the labeling standard, for packaged foods the words 'genetically modified' must be used in conjunction with the name of the food, or in association with the specific ingredient within the ingredient list; and for unpackaged foods for retail sale (such as unpackaged fruit and vegetables, or unpackaged processed or semi-processed foods) the words 'genetically modified' must be displayed in association with the food, or in association with the particular ingredient within that food.

Biotech Feed Products

Animal feeds containing GMOs (e.g. whole grains or oilseeds) are regulated by the OGTR. The OGTR considers any biosafety risks associated with the product and, if necessary, will apply special conditions, or may prohibit the use of the product as animal feed. As an example, after a GMO has undergone field trials, the organization conducting the trials may wish to use the unviable by-product (such as seed) as animal feed. Before the product is used in any way, the Gene Technology Regulator will consider any risks and, if necessary, will apply conditions or disallow the product to be used.

The Australian Quarantine & Inspection Service (AQIS) and the OGTR must approve genetically modified whole grain commodities (including oilseeds) imported into Australia for animal feed (such as whole soybeans and corn). The AQIS provides quarantine inspection and certification for the arrival of imports of the products to ensure the product is free of pest and disease and specific license conditions are enforced to ensure the product meets requirements. The OGTR also assesses the product, issues a license to the organization importing the product, and may apply further conditions above those stipulated by AQIS.

Large amounts of biotech feed products are used in Australia's intensive livestock sector. A large proportion of Australia's soybean meal is imported, including from the United States. All cottonseed meal used in Australia is considered to be biotech as over 80 percent of the cotton crop is planted to biotech varieties. Biotech and non-biotech cotton varieties are not typically segregated in Australia.

It should be noted that some industries, in particular poultry and dairy, have moved to source non-biotech products for their feed under pressure from consumer and other interest groups.

Genetically modified animal feed does not require special labeling in Australia.

Coexistence Between Biotech & Non-Biotech Crops

Coexistence of biotech, conventional and organic crops has occurred in Australia since biotech cotton varieties were commercially grown in 1996. As part of any license to grow a biotech crop, OGTR stipulates the conditions under which the crop can be grown to ensure no cross-contamination with conventional or organic crops in the vicinity.

In 2001, in recognition of the need to manage issues relating to the coexistence of grain crops, in particular biotech canola, the grains industry in Australia established the [Gene Technology Grains Committee \(GTGC\)](#) to develop and recommend to industry and government stakeholders, plans based on a strategic framework for enabling the coexistence of different production systems and supply chains. The committee was made up of representatives from across the grains industry, including seed producers, growers, bulk handlers, marketers and food producers.

The framework entitled, "A strategic framework for maintaining coexistence of supply chains" was released in December 2002, providing a basis for growers to deliver biotech or non-biotech grain (and oilseed) crops into the marketplace. Following feedback on the framework, the GTGC then developed a specific canola management plan, The Canola Industry Stewardship Principles (released in July 2003), in preparation for the commercial release of biotech canola.

To date, the Principles have not been able to be assessed due to state and territory governments (apart from the Northern Territory and Queensland) implementing moratoriums on the commercial production of biotech food crops.

Biosafety Protocol

Australia has not signed or ratified the Biosafety Protocol and the Australian Government has no timetable for consideration of accession to the Protocol. This is due to concerns about how the Protocol will operate in practice (documentation requirements, and the liability and compliance arrangements are yet to be agreed), uncertainty about how parties will implement the Protocol and whether they will do so in a way which respects all of their international obligations, and uncertainty about any individual country's capacity to influence

decision-making. Moreover, the government considers that the Protocol is not needed for Australia to manage biotech imports as Australia already has a robust regulatory framework through the Office of Gene Technology Regulator.

Section IV: Marketing

Market Acceptance

Australia has a substantial, risk assessment based regulatory framework for dealings with gene technology and genetically modified organisms and the Government is supportive of the technology. Australia's biotechnology sector is small in global terms, but growing, with an estimated 370 biotechnology companies in 2004.

Most Australian states and territories (using their powers over commodity 'marketing') have moved to restrict or ban the commercial planting of biotech crops in their jurisdictions. Biotech canola, which OGTR approved for commercial release in 2003, has been the driving force behind most of these restrictions. Major Australian commodity groups have voiced concerns about introducing biotech canola and have advocated for a 'go-slow' approach, largely because of the potential impact biotech canola could have on their domestic and export businesses.

The Australian cotton crop is over 80 percent biotech, and there has been little controversy concerning its cultivation. Indeed, environmental benefits and the significant decline in pesticide and herbicide use for this crop have been widely reported. Biotech cottonseed does appear in the domestic market through the oil and meal, and this has not met with any major opposition.

The experience with biotech canola, however, would seem to indicate that it could be some time before Australia has large-scale commercial plantings of biotech food crops, even when varieties have met the approval of OGTR. OGTR is currently assessing applications for field trials for biotech wheat, while field trials of other biotech wheat varieties were conducted dating back to 1996. Presently, however, there is significant resistance to any commercial growing of biotech wheat. AWB Limited, the monopoly wheat exporter, has expressed concern about biotech wheat's potential impact on its existing export markets and argues that commercial releases shouldn't go forward until market preferences change and/or the supply chain can guarantee segregation. This commercial resistance and the restrictions in place in the states and territories will make the introduction of biotech wheat problematic.

Private voluntary groups have been active in Australia in attempting to pressure producers, food processors and retailers to stop using biotech products in their businesses. These efforts have been widely reported, but their effectiveness has been relatively limited. A recent survey found that Australians are more likely to be concerned about pollution, greenhouse effects and nuclear waste than any risk in the use of gene technology.

National Biotechnology Strategy

The Australian Federal Government launched the [National Biotechnology Strategy](#) (NBS) in July 2000 with A\$30.5 million over three years (FY 2001–04) for targeted initiatives to support the Government's vision for biotechnology. The Strategy was boosted in January 2001 by a further A\$66.5m from the Innovation Statement, Backing Australia's Ability, with funding for the Biotechnology Center of Excellence and additional funding for the Biotechnology Innovation Fund. Biotechnology also receives funding through other programs in the health, agriculture, environment and education portfolios. In addition to the

Commonwealth Government's contribution to biotechnology development, Australia's State and Territory governments also commit resources to the development of biotechnology.

The key objective of the Strategy is to provide a framework for Government and key stakeholders to work together to ensure that developments in biotechnology are captured for the benefit of the Australian community, industry and the environment, while safeguarding human health and ensuring environmental protection. The Strategy addresses six key themes with specific objectives and strategies to achieve them:

- Biotechnology in the community
- Ensuring effective regulation
- Biotechnology in the economy
- Australian biotechnology in the global market
- Resources for biotechnology; and
- Maintaining momentum and coordination.

Biotechnology Australia

[Biotechnology Australia](#) (BA) is located within the Department of Industry, Tourism and Resources and ensures that the key elements of the National Biotechnology Strategy are implemented. BA coordinates the non-regulatory biotechnology activities of the Australian Government. It has five formal partners - the Department of Industry, Tourism and Resources, the Department of Agriculture, Fisheries and Forestry, Department of Health and Ageing, Department of Environment and Heritage, and Department of Education, Science and Training. BA also works with the states and territories to strengthen national efforts on biotechnology through the Biotechnology Liaison Committee.

An evaluation in 2003 of the first three years of the NBS found that the NBS has made significant progress in meeting the Government's objectives, but that challenges remain. To continue to address these challenges, BA received funding of A\$20m for the next four years under the Backing Australia's Ability - Building our Future through Science and Innovation initiatives announced in May 2004.

Targets for 2004–05 are:

- Further strengthen the national approach on biotechnology with the states, territories, industry and other sector representatives
- Increase public awareness activities aimed at providing factual and balanced information on biotechnology to the Australian community
- Coordinate Government activities and support for the Biotechnology Ministerial Council, the Australian Biotechnology Advisory Council and the Biotechnology Liaison Committee
- Complete studies and initiatives in agricultural biotechnology where information gaps exist, focusing on supply chain management, marketing, and emerging issues
- Undertake studies supporting the role of the Minister for the Environment and Heritage in providing advice to the Gene Technology Regulator under the Gene Technology Act 2000, and implementing a nationally consistent approach to access and use of genetic resources

National Farmers Federation

In March 2003, the National Farmers Federation released a [Biotechnology Position Statement](#) recognizing the potential of biotechnology as a valuable tool within agricultural production systems and urging that all potential benefits should be available to farmers to make informed choice in their farming decisions.

Country Specific Studies Relevant to U.S. Exporters

The **Department of Agriculture, Fisheries & Forestry** has a number of publications available on the [Agriculture & Food Biotechnology page](#).

Agrifood Awareness Australia – This organization publishes a large number of bulletins and information guides.

Rural Industries Research & Development Corporation (RIRDC) has recently published the following studies:

[Impact of Genetic Engineering on Consumer Demand, February 2005](#)
[Global Response to GM Food Technology: Implications for Australia, February 2005](#)

Biotechnology Australia also has a number of [papers & reports](#) available on their website.

Section V: Reference Material

Below are links to various organizations involved in the agricultural biotechnology sector in Australia.

[Australian Government](#)

[Office of the Gene Technology Regulator](#)

[Biotechnology Australia](#)

[Food Standards Australia New Zealand](#)

[Australian Pesticides & Veterinary Medicines Authority](#)

[Therapeutic Goods Administration](#)

[Department of Agriculture, Fisheries & Forestry](#)

[Other Organizations](#)

[Agrifood Awareness Australia](#)

[National Farmers Federation](#)

Appendix I: GMO Applications Under Evaluation

The Office of the Gene Technology Register has received the following applications for evaluation. All applications are posted on the OGTR website when they are first received and again when public comment is sought. Full details of all applications can be found at: www.ogtr.gov.au/ir/index.htm

Crop	Trait Category	Applicant	Status
Indian Mustard	Field trial of herbicide tolerant Indian Mustard (<i>Brassica juncea</i>)	Bayer Crop Sciences	Application notified December 2004.
Cotton	Commercial release of herbicide tolerant cotton (LLCotton25)	Bayer Crop Science	Application notified November 2004. Application 'clock' stopped pending provision of additional information
Cotton	Field trials of herbicide tolerant (Roundup Ready® Flex MON 88913) and herbicide tolerant/insect resistant (Roundup Ready® Flex Mon 88913/Bollgard II®) cottons	Monsanto Australia Ltd	Application notified November 2004. Call for public comment opened February 2005
Wheat	Field trial of genetically modified wheat with altered grain starch	CSIRO	Application notified September 2004. Call for public comments opened January 2005.
Wheat	Field trial of genetically modified salt tolerant wheat on saline land	Grain Biotech Australia	Application notified September 2004. Call for public comment opened March 2005
Cattle Vaccine	Trial vaccination of cattle with recombinant <i>Bovine herpesvirus</i> vaccines	Queensland Department of Primary Industries & Fisheries	Application notified June 2004. Call for public comment opened March 2005
Poultry Vaccine	Development of Fowl Adenovirus (FAV) Vaccine Vectors containing the chicken interferon gamma gene.	Imugene Limited	Application notified December 2003. Application 'clock' stopped pending provision of additional information.
Pork Vaccine	Development of Porcine Adenovirus (PAV) Vaccine Vectors containing pig genes for immuno-regulatory molecules (either interferon gamma or interleukin 5)	Imugene Limited	Application notified December 2003. Application 'clock' stopped pending provision of additional information.

Appendix II: GMOs Already Licensed for Use in Australia

The following biotech crops have been granted licenses by OGTR for various uses. Full details are available on the OGTR website at: www.ogtr.gov.au/gmorec/ir.htm

Crop	Trait Category	Applicant	License Purpose	Status
Cultivated rice/ <i>Oryza sativa</i> L. cv Nipponbare	Herbicide tolerance, antibiotic resistance and reporter genes have been randomly inserted into rice plants. Some plant growth traits may be modified by gene knockouts.	CSIRO	Field trial of genetically modified rice (<i>Oryza sativa</i> L.) functional characterizations of the rice genome	Current
Sugarcane/ <i>Saccharum officinarum</i> L. x <i>S. spontaneum</i> L.	Altered sugar production and Antibiotic resistance	The University of Queensland	Field trial of genetically modified sugarcane expressing sucrose isomerase	Current
Cotton/ <i>Gossypium hirsutum</i> L	One reporter gene (enables detection and quantification of gene expression) linked to one of two promoters, and either one or two selectable marker genes (antibiotic resistance)	CSIRO	Cotton Field Trial - Evaluation under field conditions of the cotton rubisco small subunit promoter driving a reporter gene	Current
Cotton/ <i>Gossypium hirsutum</i> L	Insecticidal action, antibiotic resistance	Hexima Limited Ltd	Field trial to assess transgenic cotton expressing natural plant genes for insect control	Current
White Clover/ <i>Trifolium repens</i> L	Viral Disease Resistance, Antibiotic resistance	Department of Primary Industries (Victoria)	Field Evaluation of Genetically Modified White Clover Resistant to Infection by Alfalfa Mosaic Virus	Current
Cotton/ <i>Gossypium hirsutum</i> L	Insecticidal and herbicide tolerance	Dow AgroSciences Australia Pty Ltd	Agronomic assessment and seed increase of transgenic cottons expressing insecticidal genes (cry1Ac and cry1Fa) from <i>Bacillus thuringiensis</i>	Current
Cotton/ <i>Gossypium hirsutum</i>	Insect resistance, herbicide tolerance	Dow AgroSciences Australia Pty Ltd	Agronomic assessment and seed increase of transgenic cotton expressing insect tolerance genes from <i>Bacillus thuringiensis</i>	Current

Crop	Trait Category	Applicant	License Purpose	Status
Cotton/Gossypium hirsutum	Modified fatty acid content in cottonseed oil	CSIRO	Field Evaluation of Genetically Modified High Oleic (HO) Cotton	Current
Cotton/Gossypium hirsutum	Herbicide tolerance	CSIRO	Field trial for breeding and pre-commercial evaluation of cotton expressing tolerance to the herbicide glufosinate ammonium	Current
Cotton/Gossypium hirsutum	Insect resistance, herbicide tolerance, antibiotic resistance	CSIRO	Breeding and pre-commercial evaluation of transgenic cotton expressing a vegetative insecticidal protein (VIP) gene and a herbicide tolerance gene	Current
Cotton/Gossypium hirsutum	Enhanced herbicide tolerance, insect resistance, antibiotic resistance, reporter gene expression	Monsanto Australia Ltd	Field trials of herbicide tolerant (Roundup Ready® MON 88913) and herbicide tolerant/insect resistant (Roundup Ready® MON 88913/Bollgard II®) cotton	Current
Cotton/Gossypium hirsutum	Insect resistance, antibiotic resistance	Syngenta Seeds Pty Ltd	The evaluation of Transgenic Cotton Plants Expressing the VIP Gene	Current
Cholera vaccine/Vibrio cholerae.	Attenuation by removal of cholera toxin subunit A and inclusion of a mercury resistance marker	CSL Ltd	Commercial release of recombinant live oral cholera vaccine (Orochol® vaccine)	Current
Canola/Brassica napus	Herbicide tolerant hybrid canola	Bayer CropScience Pty Ltd	Field Trial - Seed increase and field evaluation of herbicide tolerant hybrid canola	Current
Grapevines/Vitis vinifera L.	Expression of modified colour, sugar composition, flowering and fruit development, expression of green fluorescence protein, antibiotic resistance	CSIRO	Field trial of grapevines - evaluation of berry color, sugar composition, flower and fruit development and gene flow study	Current
Carnation/Dianthus caryophyllus	Modified flower color	Florigene Ltd	Ongoing commercial release of color modified carnations	Current

Crop	Trait Category	Applicant	License Purpose	Status
Pineapple/Ananas comosus	Reduction of blackheart, delayed flowering, reporter gene expression, antibiotic resistance	Department of Primary Industries	Field trial of pineapple plants modified for blackheart reduction and to delay flowering	Current
Pineapple/Ananas comosus	Delayed flowering, herbicide resistance, reporter gene expression	The University of Queensland	Field trial of pineapple plants modified to control flowering	Current
Papaya/Carica papaya	Delayed fruit ripening, reporter gene expression and antibiotic resistance	The University of Queensland	Field trial for evaluation of papaya to delay fruit ripening and to test the expression of the introduced genes	Current
Cotton/Gossypium hirsutum	Herbicide tolerant, insecticidal cotton	Monsanto Australia Ltd	Commercial release of herbicide tolerant (Roundup Ready®) and herbicide tolerant/insect resistant (Roundup Ready®/INGARD®) cotton	Current
Cotton/Gossypium hirsutum	Insecticidal cotton	Monsanto Australia Ltd	Commercial release of insecticidal (INGARD®) cotton	Current
Canola/Brassica napus	Herbicide tolerance, Hybrid Breeding System	Bayer CropScience Pty Ltd	Commercial release of InVigor® hybrid canola (Brassica napus) for use in the Australian cropping system	Current
Canola/Brassica napus	Herbicide tolerance	Monsanto Australia Ltd	General release of Roundup Ready® canola (Brassica napus) in Australia	Current
Sugarcane/Saccharum interspecific hybrid	Green fluorescent reporter gene	Bureau of Sugar Experiment Stations	Agronomic assessment of transgenic sugarcane engineered with reporter genes	Current
Poppy/Papaver somniferum	Altered alkaloid production pathway	CSIRO	Field trial of oilseed poppy in Tasmania to evaluate alkaloid production	Post harvest monitoring
Cotton/Gossypium hirsutum	Insect resistance	CSIRO	Field trials of insect resistant cotton	Post harvest monitoring
Cotton/Gossypium hirsutum	Insect resistance and herbicide tolerance	Monsanto Australia Ltd	Commercial release of BollgardII and BollgardII/Roundup Ready® cotton	Current/Post harvest monitoring

Crop	Trait Category	Applicant	License Purpose	Status
Canola/ <i>Brassica napus</i>	Hybrid breeding system and herbicide tolerance	Aventis CropScience Pty Ltd	Small and large scale trialing of InVigor® canola (<i>Brassica napus</i>) for development for the Australian cropping system	Current/Post harvest monitoring
Cotton/ <i>Gossypium hirsutum</i>	Insect resistance	Department of Agriculture (WA)	Preliminary field evaluation of Bollgard II® cotton in the Kimberley region of WA	Post harvest monitoring
Cotton/ <i>Gossypium hirsutum</i>	Insect resistance	Department of Agriculture (WA)	Integrated pest management systems for INGARD® cotton	Post harvest monitoring

Appendix III: Approved GM Food Products

The following table contains a current list of approved biotech food products. Detailed information is contained in [Standard 1.5.2](#) on the FSANZ web site.

Food produced using gene technology	Special conditions
Food derived from glufosinate ammonium-tolerant corn line T25	
Food derived from glufosinate ammonium tolerant soybean lines A2704-12 and A5547-127	
Food derived from glyphosate-tolerant corn line GA21	
Food derived from glyphosate-tolerant corn line NK603	
Food derived from glyphosate-tolerant soybean line 40-3-2	
Food derived from glyphosate-tolerant sugarbeet line 77	
Food derived from high oleic acid soybean lines G94-1, G94-19 and G168	The label on or attached to a package of a food derived from high oleic acid soy bean lines G94-1, G94-19 and G168 must include a statement to the effect that the food has been genetically modified to contain high levels of oleic acid
Food derived from insect- and potato leafroll virus-protected potato lines RBMT21-129, RBMT21-350, and RBMT22-82.	
Food derived from insect- and potato virus Y-protected potato lines RBMT15-101, SEM15-02 and SEM15-15.	
Food derived from insect-protected and glufosinate-ammonium tolerant corn line 1507	
Food derived from insect-protected and glufosinate ammonium-tolerant DBT418 corn	
Food derived from insect-protected Bt -176 corn.	
Food derived from insect-protected corn event MON863	
Food derived from insect-protected corn line MON 810	
Food derived from insect-protected, glufosinate ammonium-tolerant Bt -11 corn.	
Food derived from insect-protected potato lines BT -06, ATBT04-06, ATBT04-31, ATBT04-36, and SPBT02-05	
Oil and linters derived from bromoxynil-tolerant cotton containing transformation events 10211 and 10222	
Oil and linters derived from glyphosate-tolerant cotton line 1445	
Oil and linters derived from insect-protected cotton line COT102	
Oil and linters derived from insect-protected cotton lines containing event 15985	
Oil and linters derived from insect-protected cotton lines 531, 757 and 1076	
Oil derived from bromoxynil-tolerant canola line Westar-Oxy-235	

Food produced using gene technology	Special conditions
Oil derived from glufosinate-ammonium tolerant canola lines Topas 19/2 and T45 and glufosinate-ammonium tolerant and pollination controlled canola lines Ms1, Ms8, Rf1, Rf2 and Rf3	
Oil derived from glyphosate-tolerant canola line GT73	