FOOD STANDARDS
Australia New Zealand
Te Mana Kounga Kai – Ahitereiria me Aotearoa

Report on the Review of Labelling of Genetically Modified Foods

December 2003

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1.0 Executive Summary

This is the report of the Review of Labelling of Genetically Modified (GM) Foods. The Australia New Zealand Food Standards Council (ANZFSC) endorsed the Standard for the labelling of GM food in November 2000 and it was subsequently gazetted in December 2000. At that time Ministers agreed to a 12 month transition, until December 2001, for the new Standard to come into effect. In addition there was a 12 month stock-in-trade provision allowing manufacturers 12 months to sell through stock that had been manufactured prior to the labelling regime coming into effect in December 2001.

In Australia and New Zealand the mandatory labelling of GM foods is a requirement of Standard 1.5.2. When the Standard was agreed to, Australia and New Zealand were among the first countries to adopt a mandatory labelling regime. Consequently, Ministers requested a review be conducted within three years of the date of gazettal of the Standard to consider developments in the regulation of GM foods internationally.

In August 2003, the (now) Australia and New Zealand Food Regulation Ministerial Council (ANZFRMC) agreed to five terms of reference for the review, including stakeholder consultation requirements. Consultation for the review resulted in the receipt of 472 submissions from Australia and New Zealand: 432 from individuals; 5 from government; 19 from industry; 5 from public health professionals; and 11 from other organisations. Submissions from individuals accounted for approximately 92% of the total submissions received.

The terms of reference for the review are:

Food Standards Australia New Zealand (FSANZ) will conduct the review and prepare a report for ANZFRMC, governed by the following terms of reference.

1. **Prepare a review of GM food labelling legislation or regulation internationally (proposed and existing), with particular focus on the EU, USA, Canada and APEC countries.**

2. **Compare the current Australian/New Zealand requirements for GM food labelling with the requirements of countries listed in (1).**

3. **Examine consumer attitudes in relation to the labelling and acceptance of GM foods, where they have been publicly reported in Australia/New Zealand and those countries listed in (1).**

4. **Summarise developments in the Codex Alimentarius in respect of a standard for the labelling of GM food.**

5. **Prepare in association with New Zealand Food Safety Authority and Australian State and Territory authorities a summary of implementation of the GM food labelling standard in Australia and New Zealand and report on compliance and enforcement with the Standard to date.**

1. A review of GM food labelling legislation or regulation internationally (proposed and existing) with particular focus on the European Union, United States of America, Canada and APEC countries

This Review has considered proposed and existing GM food labelling regulation in the following Asia-Pacific Economic Cooperation (APEC) countries: Brunei Darussalam, Canada, Chile, People's Republic of China, Chinese Taipei, Hong Kong China, Indonesia, Japan, Korea, Malaysia, Mexico, Papua New Guinea, Peru, Philippines, Russia, Singapore, Thailand, United States of America, Vietnam, as well as the European Union.

The analysis of international regulations for the labelling of GM foods illustrates that specific food labelling requirements vary markedly from country to country.

When examining the food labelling regimes currently in existence, it is apparent that there are generally two schools of thought regarding the mandatory labelling of GM foods. The first school of thought is that consumers have a right to information to allow them to make an informed purchasing decision irrespective of whether a GM food has been assessed as safe prior to being permitted onto the market. The second is that labelling is generally not required because an approved GM food is as safe other foods. The exception to this is where a GM food has altered characteristics when compared to its conventional counterpart[1].

In terms of regulatory outcomes, adherence to the first school of thought will lead to the adoption of a prescriptive mandatory regime for the labelling of GM foods based on the provision of information to facilitate informed consumer choice. The European Union has recently revised their 'composition of final food' labelling regime and from April 2004 will require mandatory food labelling where a GM food or a food derived from a GM source has been used anywhere in the production process, irrespective of the presence of GM material in the final food. This 'method of production' labelling for GM foods is unique to the European Union as most other comprehensive mandatory labelling regimes, including the requirements in Australia and New Zealand, are triggered by the presence of novel DNA and/or novel protein in the final food. Russia appears to have adopted a mandatory labelling regime consistent with the approach taken in Australia and New Zealand.

Like Australia and New Zealand, the European Union has also adopted additional mandatory food labelling requirements where a GM food has altered characteristics when compared to its conventional counterpart. These requirements apply for example, where a GM food has altered compositional or nutritional characteristics.

Japan, Korea, Chinese Taipei and Thailand have also adopted mandatory labelling regimes based on approved sources of GM food. In Japan, labelling is required only where prescribed commodities (GM soy, corn and potato) are present in amounts greater than 5% of the final food and where novel DNA and /or novel protein is present. Similarly, Chinese Taipei and

[1] 'Altered characteristics' means that when the GM food is compared to its conventional counterpart, it is different in relation to:

- composition or nutritional values;
- anti-nutritional factors or natural toxicants;
- factors known to cause allergic responses in particular sections of the population; or
- its intended use.

Thailand provide exclusions from mandatory food labelling where approved GM food is not present in amounts greater than 5%. Malaysia is proposing to adopt a GM food labelling regime similar to that operating in Japan however the presence threshold is likely to be set at 3%.

The People's Republic of China and Indonesia require the mandatory labelling of approved GM food crops and their products. From the information available it is not possible to determine if mandatory food labelling is based on the presence of novel DNA and/or novel protein in the final food or on the method of production. It is also not possible to determine whether additional food labelling requirements apply where an approved GM food has altered characteristics.

Canada and the United States of America require the mandatory labelling of GM food only where the approved GM food has altered characteristics. In Canada and the United States of America this mandatory approach is supported by a voluntary regime, which relies on the general provisions in food law and fair trading law to manage labelling claims which might potentially be false, misleading or deceptive. Hong Kong currently has no formal regulation in place although it seems they are intending to adopt a regime similar to that in existence in Canada and the United States.

Singapore, the Philippines and Mexico currently have no explicit regulation in place for the labelling of GM food. While Mexico is proposing to adopt a mandatory food labelling regime, based on the information available to this review it is not possible to determine the exact nature of the proposed requirements.

It has been difficult to determine the status of GM food labelling regulation in Brunei Darussalam, Chile, Papua New Guinea, Peru and Vietnam.

2. Compare the current Australian/New Zealand requirements for GM food labelling with the European Union, United States of America, Canada and APEC countries

Differences in food labelling policy and the need to develop GM food labelling regimes consistent with existing food regulatory frameworks explain why the regulation of GM food varies from country to country. There is also not a singular view regarding the definition of a GM food or the level of regulation necessary to maintain an appropriate level of public health and safety protection whilst providing sufficient information to facilitate consumer choice. Furthermore, the differing labelling regulations in existence internationally are not static and subject to change, as has recently been demonstrated in the EU where there has been a shift from a 'composition of final food' labelling regime to a 'method of production' labelling regime for GM foods.

The detailed comparative analysis conducted for this review indicates that the food labelling regime for GM food in Australia and New Zealand is one of the most stringent in the world. The regulatory framework in Australia and New Zealand, which is underpinned by a pre-market food safety assessment process, is more detailed than virtually all of the countries considered in this review. Only the European Union appears to have a more stringent GM food labelling regime. However, the European Union allows certain exclusions from food labelling which are not permitted in Australia and New Zealand. For example, processing aids derived from GM sources are not subject to mandatory GM food labelling in the European Union even if they contain novel DNA and/or novel protein. Subject to certain

conditions, the European Union also permits a threshold level for the unintentional presence of non-approved sources of GM ingredients in foods. All non-approved sources of GM food are illegal in Australia and New Zealand.

In Australia and New Zealand, Division 2 of Standard 1.5.2 of the *Australia New Zealand Food Standards Code* (the Code) sets out the labelling requirements for GM foods. The standard requires that food and food ingredients (including food additives and processing aids) must be labelled with the words 'genetically modified', if it contains novel DNA and/or novel protein, or where the food has 'altered characteristics'. Altered characteristics means that when the GM food is compared to its conventional counterpart, it is different in relation to:

- composition or nutritional values;
- anti-nutritional factors or natural toxicants;
- factors known to cause allergic responses in particular sections of the population; or
- its intended use.

There are certain exclusions to the food labelling requirements for GM foods in Australia and New Zealand. These exclusions refer primarily to highly processed foods where the result of processing removes all novel DNA and/or protein, such is the case with highly refined oils, and to minor ingredients, including processing aids and food additives (unless they contain novel DNA and/or protein). Flavours that are present in amounts no more than 1g/kg are also excluded from the labelling requirements. Also the food labelling requirements do not apply to food intended for immediate consumption that is prepared and sold from food premises such as restaurants and takeaways as well as vending vehicles and the Standard allows a food in which GM food is unintentionally present in a quantity of no more than 10g/kg per ingredient to remain unlabelled.

Despite the existence of these exclusions, the GM food labelling regime in Australia and New Zealand applies to all foods containing approved novel DNA and/or novel protein. Therefore, the requirements in Australia and New Zealand are not limited to certain approved GM food commodities or to approved GM food commodities when present at certain levels, for example 5%, in other foods. The latter is the current approach taken in Japan, Korea, Chinese Taipei and Thailand where the scope of the mandatory food labelling requirements is much narrower than in Australia and New Zealand and would not capture flavourings, food additives, processing aids or ingredients when used in very small amounts.

Like the European Union, Australia and New Zealand require additional food labelling when an approved GM food has altered characteristics. Currently, some mandatory food labelling regimes, such as those in Canada and the United States, are triggered only where an approved GM food has altered characteristics. To date, the vast majority of approved GM foods do not have altered characteristics. In practice this means that very little, if any, GM food would be captured by a mandatory food labelling requirement solely based on altered characteristics.

However, it is important to note that the United States has developed and Canada are in the process of developing industry guidelines regarding the voluntary labelling of all GM foods to ensure compliance with general fair trading provisions.

There is significant variation in the level of prescription of each of the mandatory GM food labelling regimes considered in this Review. Significantly, although Australia and New Zealand were among the first countries in the world to adopt mandatory GM food labelling,

the requirements in Standard 1.5.2 remain among the most comprehensive, both in scope and breadth of capture, of any country in the world.

3. Examine consumer attitudes in relation to the labelling and acceptance of GM foods where they have been publicly reported in Australia and New Zealand and those countries listed in (1)

Attitudes to and acceptance of GM foods is a very complex area. Studies use a variety of indicators to determine the level of consumer acceptance of GM food. While each of these provides a useful insight into the acceptance of GM foods, given the significant variability in the research methodology of the various surveys considered in this review it is difficult to arrive at a definitive conclusion.

Generally, surveys in Australia and New Zealand indicate that consumers have concerns about GM foods but that these concerns are no greater than other food related or environmental concerns. Although consumers express concern about GM foods it does not necessarily follow that they will reject buying or eating them. Certain surveys suggest that there may be greater acceptance of GM foods where there are perceived benefits to the consumer, allowing them to balance these benefits against the perceived risk during decision-making.

An examination of the surveys considered in this review suggests that consumers in Australia and New Zealand have similar views to consumers in the United States of America, Canada, European Union, United Kingdom and Hong Kong. That is, the majority of consumers show some opposition toward the purchase of GM foods.

With regard to consumer attitudes towards labelling, it is apparent that in Australia and New Zealand the majority of consumers want mandatory GM labelling so that they can make informed purchasing decisions. Surveys conducted in other countries also indicate that the majority of consumers support the labelling of GM foods. It is obvious from the consumer submissions to this review that there is a measure of support in Australia for labelling that is process based which means labelling all foods and ingredients derived from an organism produced using gene technology irrespective of whether novel DNA and/or novel protein is present in the final food. This is the approach to be taken in the European Union from 2004.

Based on the studies conducted to date it is difficult to determine the strength of the link between consumer demand for GM labelling and the actual use of GM labelling in purchasing behaviour. It appears that consumers want to have the ability to choose whether they eat GM foods, whether they exercise that choice or not.

4. Summarise developments in the Codex Alimentarius in respect of a standard for the Labelling of GM food

Over the past 10 years Codex Alimentarius has been working toward producing a harmonised labelling standard for GM foods. This has proved to be a challenging process as some member countries during this time have developed and implemented different domestic labelling policies. Therefore reaching consensus on both the definition of GM food and the labelling regime continues to be difficult.

While Codex has adopted a labelling standard for GM foods which is triggered when an allergen has been introduced to a new food, and has also adopted definitions in both the organic labelling guideline and in the draft *Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants*, progress on general labelling requirements for GM food has stalled.

At the last Codex Committee on Food Labelling (CCFL) meeting in May 2003, there was agreement to establish a smaller drafting group to assist in identifying options to progress the GM labelling guideline. Australia and New Zealand are both on this working group. At its first meeting in October 2003, the working group considered only one option in detail. That option is to develop mandatory labelling requirements to address safety and health issues and for significant differences in the GM foods, and optional labelling for method of production. Some members of the working group expressed reservations about aspects of this approach, and the matter will be put to the full session of the CCFL for consideration in plenary at its next meeting in Canada in 2004.

5. Prepare in association with New Zealand Food Safety Authority and Australia State and Territory authorities a summary of implementation of the GM food labelling standard in Australia and New Zealand and report on compliance and enforcement with the standard to date

Implementation

The Australian and New Zealand Governments have developed a number of resources to assist industry implementation of the labelling requirements for GM foods in Standard 1.5.2 including the business processes that should be in place to ensure ongoing compliance. The industry user guide, *'Labelling Genetically Modified Food'* published by FSANZ and developed by an intergovernmental working group representing enforcement agencies from the jurisdictions, outlines the labelling requirements of the Standard and provides information as to how industry can determine whether they have a labelling obligation and how they can ensure ongoing compliance. This guide is available on the FSANZ website. In addition, FSANZ and the New Zealand Food Safety Authority have developed Factsheets, which also outline the labelling requirements for GM foods. FSANZ has also established an Advice Line that provides information to industry about the requirements of the Code, including those relating to GM foods.

Standard 1.5.2 came into effect concurrently with the *Australia New Zealand Food Standards Code* (the Code) coming into effect in December 2001. Compliance requirements for labelling under Standard 1.5.2 were included in industry and stakeholder education sessions in all jurisdictions during the transition to the Code coming into force.

Compliance

Recently, separate industry compliance surveys were undertaken by enforcement agencies in Australia and New Zealand to ascertain the level of compliance with the GM labelling requirements of Standard 1.5.2 and to assess the systems that food businesses have in place to ensure ongoing compliance. Both surveys had two arms of investigation, product testing and document audit. To ensure industry awareness of the requirements of Standard 1.5.2, the user guide *'Labelling Genetically Modified Food',* along with other GM food labelling reference

material, was provided to a number of food manufacturers[2] throughout the course of the surveys.

The survey in Australia was a limited examination co-ordinated by the South Australian Department of Human Services with input from other jurisdictions. The Australian survey was conducted in 2003 with 51 product samples tested and 36 food businesses document audited. The New Zealand survey was a larger compliance project co-ordinated by the New Zealand Food Safety Authority over a 12 month period (June 2002 – June 2003), in which 117 product samples were tested and 269 food businesses were document audited.

Product testing found a high level of compliance in Australia and New Zealand with the labelling requirements of Standard 1.5.2. Product samples tested were those that were not positively labelled but contained soy or corn ingredients that may potentially have been derived from a GM food. No non-approved GM varieties were found in the New Zealand survey and Starlink corn, a non-approved GM variety, was not found in any of the Australian samples tested.

For the combined total of 168 products tested, all but one was considered to be compliant with the labelling requirements of Standard 1.5.2. The non-compliant product was identified in the New Zealand survey and tested positive for the presence of GM material in an amount more than the 10g/kg of novel DNA and/or novel protein permitted in an ingredient of a non-GM food where the presence is unintentional. Enforcement action was initiated in this instance, the product was recalled and the labelling rectified.

The other major findings for the product testing component of the surveys were:

- In Australia, 10 out of the 51 samples tested were found to contain traces of GM material. In all cases the quantity was less than the amount of 10g/kg of novel DNA and/or novel protein permitted in an ingredient of a non-GM food where the presence is unintentional.
- In New Zealand 18 of the 117 samples tested were found to contain traces of GM material. The quantity in 17 of these samples was less than the amount of 10g/kg of novel DNA and/or novel protein permitted in an ingredient of a non-GM food where the presence is unintentional.

Document audits, carried out on a combined total of 305 food businesses in Australia and New Zealand, investigated the business processes that manufacturers had in place to allow them to determine the GM status of foods used in their products. While the document audits found that manufacturers in Australia and New Zealand have actively avoided the use of ingredients derived from GM sources, examination of business processes indicates that it is significantly the larger manufacturers that have implemented adequate management systems to support this business decision. As a result, it appears that ingredient suppliers have moved to supply non-GM ingredients to meet the requirements of major customers but are also supplying the same ingredients to small and medium industry and in the process, assisting them with compliance with the Standard in the absence of formal systems.

[2] In this report on the Review of Labelling of GM Foods, ‘ manufacturer’ includes supplier, packer, vendor or importer.

Enforcement

It is the responsibility of the State and Territory governments in Australia to enforce the requirements of the *Australia New Zealand Food Standards Code*. In addition, the Australian Quarantine Inspection Service (AQIS) holds jurisdictional responsibility for enforcing the Code in relation to foods imported into Australia. The New Zealand government enforces the requirements of the Code for foods imported into New Zealand or produced domestically.

The compliance surveys carried out in Australia and New Zealand demonstrate the desire of manufacturers to comply with Standard 1.5.2. It is important that enforcement agencies work with industry to ensure they are aware of and understand the requirements of Standard 1.5.2 in order to foster voluntary compliance. The approach of enforcement agencies to enforce the Standard is to examine documentation held by manufacturers ensuring that due diligence is being exercised, that manufacturers can confidently verify the GM status of foods and ingredients, and that they are utilising this information to correctly label products in accordance with the requirements of Standard 1.5.2. However, where concerns exist about the veracity of compliance decisions made by manufacturers, especially with regard to those products that are either not positively labelled in terms of the GM status or have made a negative claim such as 'GM free', enforcement agencies may undertake product testing to verify compliance.

In these circumstances, qualitative testing, which provides a yes or no answer for the presence of GM material in a food is carried out in the first instance. If the product tests negative for GM material, no further action by the enforcement agency is required. If the product tests positive for the presence of an approved GM variety, the manufacturer would be advised of the results and has the option of re-labelling the product as containing GM ingredients or demonstrating that the food does not fit the definition of GM food as set out in subclause 4(1) of Standard 1.5.2 because it falls into one of the exclusion categories set out in paragraphs (e) or (f).

With regard to the exclusion under paragraph (f) " *a food, ingredient, or processing aid in which genetically modified food is unintentionally present in a quantity of no more than 10g/kg per ingredient*", the manufacturer would need to demonstrate that they intended to purchase non-GM ingredients by having in place adequate traceability systems and produce quantitative data to show that the level of GM material detected is less than the 10g/kg permitted for the unintentional presence of GM food in an ingredient of a non-GM food. If either of these two requirements were not met it would be difficult for the manufacturer to argue that the presence of GM material is unintentional.

The approach summarised above demonstrates that Standard 1.5.2 can and is being effectively enforced by the enforcement agencies in Australia and New Zealand.

2.0 Introduction

In December 2000, the (then) Australia New Zealand Food Standards Council (ANZFSC) agreed to a labelling regime for Genetically Modified (GM) foods. Australia and New Zealand were among the first countries in the world to implement mandatory GM food labelling. As a consequence, Ministers requested that the newly adopted requirements be reviewed within three years of gazettal i.e. by December 2003.

In August 2003 the Australia and New Zealand Food Regulation Ministerial Council (ANZFRMC), adopted the Terms of Reference (ToR) to set the scope of the Review of Labelling of GM Foods. ANZFRMC asked Food Standards Australia New Zealand (FSANZ) to conduct the review and produce this factual report based on the research and information gathered on the specific topic areas covered in the ToR.

It is important to note that this report does not draw conclusions from the research carried out, nor does it make recommendations in relation to future regulatory direction regarding the labelling of GM foods in Australia and New Zealand. In accordance with the ToR (which are set out on the following page) this body of work, in order of presentation:

- outlines the current requirements for labelling of GM foods in Australia and New Zealand under Standard 1.5.2 of the *Australia New Zealand Food Standards Code*;
- summarises the implementation of the labelling requirements in Australia and New Zealand as well as reporting on industry compliance and enforcement ;
- compares the current regime for the labelling of GM food in Australia and New Zealand, as set out in Standard 1.5.2, with regulations in other countries;
- documents consumer attitudes and acceptance of GM foods and labelling where they have been publicly documented in Australia and New Zealand and in other countries; and
- summarises the work of the Codex Alimentarius Commission in relation to developing an internationally accepted standard for the labelling of GM foods.

ANZFRMC also required FSANZ to establish a Food Regulation Standing Committee (FRSC) Steering Group to oversee the review and to provide guidance and direction when required. Membership of the Steering Group includes representation from the New Zealand Food Safety Authority, Australian Government Department of Health and Ageing, Australian Government Department of Agriculture Fisheries and Forestry, the New South Wales Department of Health, the Victorian Department of Human Services, and the South Australian Department of Human Services. The Steering Group was chaired by FSANZ.

Ministers also required FSANZ to consult with key stakeholders during the review. Ministers agreed that key stakeholders should be contacted directly and invited to submit a response to questions based on the ToR. These questions were also made available on the FSANZ website and as a result submissions from other stakeholders were also received. The information provided by all stakeholders and the issues raised (whether within or outside the scope of the review) have been included in a summary for this report.

3.0 Terms of Reference for the Review

The ToR for the Review of Labelling of Genetically Modified Foods as outlined below were endorsed by ANZFRMC on 1 August 2003. The ToR set the scope for the review and the issues to be examined and reported on by FSANZ.

Food Standards Australia New Zealand (FSANZ) will conduct the review and prepare a report for ANZFRMC, governed by the following terms of reference.

1. **Prepare a review of GM food labelling legislation or regulation internationally (proposed and existing), with particular focus on the EU, USA, Canada and APEC countries.**

2. **Compare the current Australian/New Zealand requirements for GM food labelling with the requirements of countries listed in (1).**

3. **Examine consumer attitudes in relation to the labelling and acceptance of GM foods, where they have been publicly reported in Australia/New Zealand and those countries listed in (1).**

4. **Summarise developments in the Codex Alimentarius in respect of a standard for the labelling of GM food.**

5. **Prepare in association with New Zealand Food Safety Authority and Australian State and Territory authorities a summary of implementation of the GM food labelling standard in Australia and New Zealand and report on compliance and enforcement with the Standard to date.**

4.0 Consultation for the Review

At the time that the ANZFRMC agreed to the ToR for the review they also agreed that public consultation be conducted and endorsed a list of 38 stakeholders consisting of Government, Industry and other organisations, which were invited to submit responses to questions (Appendix A) in relation to the ToR. Ministers also asked that the ToR and consultation questions be placed on the FSANZ website allowing other stakeholders the opportunity to provide a submission.

The consultation process highlights that the issue of labelling of GM foods is one that generates considerable public interest as a total of 475 submissions were received. The vast majority of these submissions are from individuals, with a keen interest in and strongly held views on the labelling of GM foods. The following table provides a breakdown of submissions by country and stakeholder representation.

Stakeholder Group	Australia	New Zealand
Government	5	0
Individuals	424	11
Public Health Professionals	5	0
Industry	17	2
Other Organisations*	6	5
Total	**457**	**18**

*includes consumer groups, lobby groups etc

The summary of submissions is at Appendix B. Whilst many submissions have raised issues that are considered outside the scope of this review (i.e. they did not specifically address the questions relating to the ToR) there has been considerable comment with regard to how the Australia and New Zealand regulation compares to those internationally, particularly in relation to the European Union (EU). Some stakeholders have also provided details in relation to consumer attitude surveys which supplemented FSANZ's examination of consumer attitudes towards GM foods and labelling in Australia and New Zealand as well as internationally. However, very few submissions have addressed ToR 4, which relates to the development of an international labelling standard by Codex Alimentarius, or ToR 5 that deals with the issues of implementation, compliance and enforcement.

Summarised in the points below are several common themes that were expressed in stakeholder submission to this review, regardless of whether they are specific to the ToR for the review. Therefore these points are representations of stakeholder opinion and should not be considered as recommendations in relation to future direction of the regulation of GM foods.

- There is some support among government and industry submitters for the current labelling regime to remain unchanged. These submitters considered the regime provides an appropriate balance between the protection of public health and safety and the provision of consumer information and the ability for industry to comply with the regulation.
- Submissions from industry expressed opposition to any changes to the current labelling regime on the basis that only a short amount of time that has lapsed since the introduction of GM food labelling and the cost involved to industry.

- Submissions from government and industry acknowledged that the Australia/New Zealand regulations are amongst the most stringent in the world.
- Submissions from individuals generally indicated support for Australia and New Zealand to move towards the new EU labelling laws. Consumer groups and individuals would like to see an increased level of information provided and have also suggested that highly refined foods such as oil and sugar should not be excluded from GM food labelling.
- Generally submissions from consumers expressed concerns about the use of gene technology, particularly the safety of GM foods and perceived risks to health (i.e. unknown long term effects and increased exposure to allergens) as well as concerns about the perceived risks to the environment.

There were also general comments presented in some submissions about the review and consultation process itself.

- Some industry submitters were concerned that they were not specifically invited to make a submission.
- Many stated the view that insufficient time has lapsed since Standard 1.5.2 was implemented to warrant a review or to change the labelling requirements. This comment highlights that many submitters, from most sectors, were of the view that the outcome of this review would result in an amendment to the Standard despite there being no mention of this in the ToR governing the scope of the review.
- Some submitters, mainly individuals, felt that the ToR for the review were too narrow, noting in particular that the consultation questions asked for information which FSANZ could have collected without assistance from submitters.

5.0 Background

5.1 What is a GM Food?

Gene technology uses recombinant DNA techniques to alter the heritable genetic material of living cells or organisms. This technology allows an organism to be altered in a specific and directed way, for example by introducing genetic material from another source. In recent years, gene technology has been used in the agricultural industry to genetically modify crops such as corn and soybeans. For instance, particular traits have been added to the plants' genetic makeup to prevent insect and disease damage or reduce the need for pesticides. This may have the benefit of increasing the size of the crop that can be harvested from the same amount of land.

Foods derived from genetically modified plants and animals are generally referred to as GM foods. The term GM food applies to foods that contain GM ingredients and to food additives or processing aids produced using gene technology (ANZFA, 2000).

The *Australia New Zealand Food Standards Code* provides for the regulation of GM foods in Australia and New Zealand in Standard 1.5.2. This standard is separated into two divisions. The first division contains the requirement for pre-market assessment of all GM foods, as outlined in the next section. The second division contains the requirements for the labelling of GM foods that apply once a GM food is approved for sale and use. Labelling of GM food is discussed in Section 6.

5.2 GM Food Safety Assessment

Division 1 of Standard 1.5.2 requires all food produced using gene technology to be subject to a pre-market safety assessment and approval before sale and use in Australia and New Zealand. FSANZ is responsible for carrying out the safety assessments under the Standard.

The Australian and New Zealand safety assessment process is based on the concepts and principles developed by international organisations such as World Health Organization (WHO), the Food and Agriculture Organization (FAO) of the United Nations and the Organisation for Economic Cooperation and Development (OECD). It is also in line with the safety assessment guidelines adopted by the Codex Alimentarius Commission. These principles and guidelines have been used to develop safety assessment processes for GM foods by a number of countries including Japan, Canada and members of the EU.

The framework for the assessment of GM foods in Australia and New Zealand considers:

- the use of an inherently cautious, scientific, risk-based assessment process;
- the need for case-by-case assessments;
- the new genetic material, new proteins and other characteristics of the GM food;
- intended and unintended effects of the genetic modifications; and
- comparisons with conventionally produced foods (i.e. substantial equivalence) (ANZFA, 2000)

5.3 GM Foods Approved for Sale and Use in Australia and New Zealand

Under Standard 1.5.2, there are currently 21 GM varieties of crops approved for use in food in Australia and New Zealand. The major crops from which these GM varieties are derived are:

- soybean
- canola
- corn
- potato
- sugarbeet
- cotton

A full list of approved GM varieties is at Appendix C. The potential for processed foods to contain GM foods as defined in Standard 1.5.2 depends on a number of factors including the size of commercial plantings worldwide of GM crops, the extent to which manufacturers choose to source products derived from GM crops as food or ingredients for their products and the level of processing to which the GM food or ingredient is subjected (FSANZ 2003).

5.3.1 GM Foods Approved in Other Countries

There are a number of GM commodities that have been approved by overseas regulators that have not been approved in Australia and New Zealand. The sale and use of such food in Australia and New Zealand would be illegal under food legislation giving force to Standard 1.5.2. These GM foods include: flax, papaya, squash, tomato, cantaloupe, rice, chicory and radicchio as well as other GM varieties of corn, cotton, canola, soybean, sugarbeet and potato.

5.4 Other Organisations Involved in the Regulation of GM Organisms and Foods

Besides FSANZ, there are a number of other government organisations in Australia and New Zealand that are involved with the regulation of GM organisms (see table 5.1). However, their responsibilities encompass broader issues than foods such as the environment, enforcement of Standard 1.5.2, quarantine and the regulation of chemicals (ANZFA 2000). These organisations work together where products require the approval of several agencies.

Table 5.1

Activity	Government Agency	
	Australia	*New Zealand*
Safety of Food	• FSANZ	• FSANZ
Enforcement of Standard 1.5.2	• Health Departments in each State and Territory	• New Zealand Food Safety Authority
Environmental issues (including live releases of genetically modified organisms)	• The Gene Technology Regulator • Australian Government Department of the Environment and Heritage • State and Territory Departments of Primary Industries	• Environmental Risk Management Authority • Ministry for the Environment
Broader public health matters	• The Gene Technology Regulator / Gene Technology Technical Advisory Committee	• Ministry of Health, • Environmental Risk Management Authority
Imports and Exports	• Australian Quarantine and Inspection Service • The Gene Technology Regulator • FSANZ • Australian Government Department of the Environment and Heritage	• Ministry of Agriculture and Forestry • Ministry of Health
Safety and regulation of insecticides or herbicides (including registration of insect protected crops, registration of herbicides used on herbicide tolerant crops, setting of residue limits in foods)	• Australian Pesticides and Veterinary Medicines Authority • Therapeutic Goods Administration • Australian Government Department of the Environment and Heritage • FSANZ	• Ministry of Agriculture and Forestry • Ministry of Health
Other Issues	• The Gene Technology Regulator	• Environmental Risk Management Authority • Ministry of Research Science and Technology

6.0 Labelling of GM Foods in Australia and New Zealand

6.1 Labelling Requirements

The labelling provisions of Division 2 of Standard 1.5.2 (Appendix D) came into effect in December 2001. All food produced using gene technology is required to undergo a pre-market safety assessment before sale and use in Australia and New Zealand. As the safety of GM food is assessed, labelling is primarily intended to provide information to facilitate consumer choice. GM food labelling allows consumers to purchase or avoid GM foods depending on their own views and beliefs.

The standard requires that food (including ingredients, food additives and processing aids) be labelled with the words 'genetically modified', if novel DNA and/or novel protein, from an approved GM variety is present in the final food. Therefore the general labelling requirements are based on the presence of novel DNA and/or protein in the food rather than on the process used. There are also some additional labelling requirements where GM foods are not substantially equivalent to conventional counterparts and where consumers need to be advised of altered characteristics (see section 6.2).

The standard provides a definition for GM food under subclause 4(1):

> *'genetically modified food means food that is, or contains as an ingredient, including a processing aid, a food produced using gene technology which –*
>
> *(a) contains novel DNA and/or novel protein; or*
> *(b) has altered characteristics;*
>
> *but does not include –*
>
> *(c) highly refined food, other than that with altered characteristics, where the effect of the refining process is to remove novel DNA and/or novel protein;*
> *(d) a processing aid or food additive, except where novel DNA and/or novel protein from the processing aid or food additive remains present in the food to which it has been added;*
> *(e) flavours present in the food in a concentration no more than 1g/kg; or*
> *(f) a food, ingredient, or processing aid in which genetically modified food is unintentionally present in a quantity of no more than 10g/kg per ingredient.*

The statement 'genetically modified' must be used in conjunction with the name of the food or in association with the specific ingredient in the ingredient list. If the food is unpackaged then the information that otherwise would have been on the package, must be displayed on or in connection with the display of the food.

6.2 Additional Labelling and Information Requirements

There may be additional labelling and/or information requirements for GM foods that have 'altered characteristics'. Altered characteristic means that when the GM food is compared to its conventional counterpart, it is different in relation to:

- composition or nutritional values;
- anti-nutritional factors or natural toxicants;
- factors known to cause allergic responses in particular sections of the population; or
- its intended use.

Additional labelling or other information requirements may be specified in the Table to Clause 2 of Standard 1.5.2 for any GM food with altered characteristics or where the GM food raises significant ethical, cultural and religious concerns with respect to genetic modification. FSANZ determines whether an additional labelling requirement is warranted through the standard development/variation process.

6.3 Exclusions from Labelling

As indicated in Section 6.1, the labelling requirements under subclause 4(1) of Standard 1.5.2 do not apply to all food produced using gene technology. Types of food not subject to labelling requirements are primarily:

- highly processed food where the processing removes all DNA and/or protein; and
- minor ingredients, including processing aids and food additives (unless they contain novel DNA and/or novel protein).

6.3.1 Unintentional Presence of GM Foods in Non-GM Foods

The Standard also allows a food in which an approved GM food is unintentionally present in a quantity of no more than 10g/kg (1%) per ingredient to remain unlabelled (GM foods that are not listed in the Standard are not permitted in any food either intentionally or unintentionally). This exclusion applies to circumstances where the manufacturer has actively sought to avoid GM food (including ingredients or processing aids) but there is an inadvertent presence of GM material. As long as the presence is unintentional and under the permitted amount of 10g/kg per ingredient, there is no requirement to label the product as containing an approved GM food, ingredient or processing aid.

For this provision to apply the food manufacturer needs to be able to demonstrate that they have sought to source non-GM food for their product. Although the Standard does not specify the business practices that should be in place to ensure compliance with the labelling requirements, FSANZ has developed the industry user guide '*Labelling Genetically Modified Food*' which discusses due diligence requirements of food manufacturers and procedures that can be implemented to ensure compliance with Standard 1.5.2. Such measures include document verification, identity preservation systems [3] or batch testing. The user guide is available on the FSANZ website at http://www.foodstandards.gov.au/assistanceforindustry/userguides/index.cfm

6.3.2 Foods Prepared for Immediate Consumption

Under subclause 4(4) of Division 2 of Standard 1.5.2 food intended for immediate consumption that is prepared and sold from food premises and vending vehicles is exempt from GM food labelling requirements. Types of food premises captured by this exemption

[3] Identity preservation is a system of procedures that is used commercially to maintain a segregated supply chain. Normally applied from 'seed to supermarket' an IP system includes fully documented evidence of compliance of ingredient supply with procedures designed to eliminate accidental mixing of GM foods with non-GM foods.

include restaurants, take away outlets, caterers and self-catering institutions. However the Food Acts in Australian States and Territories have a general provision which prohibits a food business or person from supplying food by way of sale if it is not of the nature or substance demanded by the purchaser. Therefore if a consumer wants to know whether the ingredients used are from a GM source, the onus is on the manufacturer to provide information about the product, which is not misleading or untruthful. This is another mechanism which enables the consumer to obtain the information they require to make an informed purchasing decision.

6.4 Negative Claims

Standard 1.5.2 is silent on the use of negative claims such as 'GM free' and 'non-GM'. Such claims are made voluntarily by food manufacturers and are subject to the provisions regarding false and misleading conduct under the Commonwealth *Trade Practices Act 1974*, the New Zealand *Fair Trading Act 1986* and the fair trading and food Acts in each Australian State and Territory.

These legislative requirements prohibit a food business from engaging in conduct that is misleading or deceptive or likely to mislead or deceive in relation to the advertising, packaging or labelling of food, to falsely describe food, or to provide food not of the nature or substance or quality demanded by the purchaser. In general terms, if the food is expressly or implicitly represented to be of a particular nature, such as 'non-GM' or 'GM free', but actually contains novel DNA and/or novel protein, and the negative claim leads consumers to believe that it does not, the manufacturer may be in breach of fair trading and food laws on the grounds of false or misleading conduct.

The situation may arise where a manufacturer complies with the labelling requirements under Standard 1.5.2 but may be in breach of fair trading and food legislation such as where the manufacturer volunteers a claim over and above that which they are legally required to do. For instance, a manufacturer sources a non-GM ingredient for their product and voluntarily labels the product as being 'GM-free' but subsequent testing finds traces of novel DNA from an approved GM food. If the amount present is below the 10g/kg permitted for a GM food in an ingredient of a non-GM food where its presence is unintentional and the manufacturer has business processes in place to substantiate they intended to source non-GM ingredients, it may be considered that the traces of novel DNA present are the result of a one-off accidental mixing. As the level is below the permitted amount of 10g/kg per ingredient, the manufacturer may be considered to be compliant with Standard 1.5.2 and not be required to label the product as containing a GM food.

However, as the manufacturer has voluntarily labelled the product as 'GM–free' the negative claim may mislead consumers to believe that it does not contain any novel DNA even though its presence is unintentional. Under these circumstances the manufacturer may be in breach of general provisions of fair-trading and/or food legislation. Both the Australian Competition and Consumer Commission (ACCC) and New Zealand Commerce Commission (NZCC) who administer the Commonwealth *Trade Practices Act 1974* and New Zealand *Fair Trading Act 1986* respectively, interpret 'free' as meaning absolutely free.

7.0 Government Implementation of the Labelling Requirements for GM Foods

FSANZ has published the industry user guide *'Labelling Genetically Modified Food'*. The user guide was developed by an intergovernmental working group representing jurisdictional enforcement agencies and outlines the labelling requirements of Standard 1.5.2 and means by which manufacturers can comply with these requirements. In addition, FSANZ and New Zealand Food Safety Authority (NZFSA) have developed Factsheets, which also outline the labelling requirements for GM foods. FSANZ has also established an Advice Line that provides information to industry and consumers about the requirements of the Australia New Zealand Food Standards Code including those relating to GM foods.

Standard 1.5.2 came into effect concurrently with the *Australia New Zealand Food Standards Code* coming into effect in December 2001. Compliance requirements for labelling under Standard 1.5.2 were included in industry and stakeholder education sessions conducted in all jurisdictions during the transition to the Code coming into force.

7.1 Industry User Guide on the Labelling of Genetically Modified Food

The industry user guide is available on the FSANZ website and is a useful reference tool that FSANZ and the enforcement authorities can refer industry to. Although not legally binding, the guide provides information as to when labelling is required and the way in which manufacturers can ensure that they comply with the requirements. Whilst Standard 1.5.2 does not require documentation to support labelling decisions the user guide encourages industry to implement such systems and keep documentation that verifies the GM status of ingredients and foods used in production.

The user guide, along with other GM food labelling reference material, was provided to a number of food manufacturers throughout the course of separate industry compliance surveys conducted in Australia and New Zealand. These surveys (discussed in more detail in section 8.0) were primarily instigated to determine whether manufacturers are complying with the labelling requirements of Standard 1.5.2 and to assess the business processes that have been put into place to enable them to do this. In this report, manufacturer includes supplier, packer, vendor or importer.

In the Australian survey, manufacturers were provided with the user guide where it was evident that no systems to determine the GM status of ingredients were in place. In the course of establishing the document audit schedule for the New Zealand survey, 922 businesses identified as potentially using or importing GM ingredients were provided with information on the Standard and referred to the user guide on the FSANZ website. Of these, 269 manufacturers were targeted for document auditing and the user guide was used as the reference tool to demonstrate the steps used to establish a product's GM status and how it should be labelled.

8.0 Compliance with and Enforcement of the Labelling Requirements for GM Foods

8.1 Industry Compliance

Recent surveys have been conducted in Australia and New Zealand to assess the level of industry compliance with the labelling requirements of Standards 1.5.2. Both surveys had two elements:

1. Testing final 'off the shelf' products for the presence of GM material to ascertain whether there was a labelling requirement. Products tested were those that were not positively labelled but contained ingredients such as soy and corn products that could be derived from a GM food. Validated qualitative testing was used in the first instance to determine whether GM material was present. If the sample tested positive, further quantitative tests were conducted to ascertain the amount of GM material present. Polymerase Chain Reaction (PCR) was the detection method used for both qualitative and quantitative analysis.

2. Standard 1.5.2 does not explicitly state that documentation confirming the GM status of food be obtained and held by a food manufacturer although it is implicit that this is required. Therefore both surveys also assessed the adequacy of the business processes that food manufacturers had implemented to demonstrate that they had taken all reasonable steps to comply with the requirements and ensure that they can confidently determine the GM status of foods used in production processes[4].

Food derived from soy and corn were the focus of both surveys as there is widespread use of minimally processed ingredients derived from these crops throughout the food supply, therefore increasing the possibility of final products having to be GM labelled if ingredients or foods derived from GM varieties had been used in the food production chain.

The Australian survey was co-ordinated by the South Australian Department of Human Services with input from other jurisdictions. The survey was a limited examination, which, in addition to providing an indication as to how businesses are adapting to the requirement to label GM foods and the need to determine the status of ingredients used, was also designed to assess the usefulness to enforcement authorities of conducting document audits in determining compliance. The full report, "*Australian Pilot Survey of GM Food Labelling of Corn and Soy Food Products*" can be found on the FSANZ website at: http://www.foodstandards.gov.au/_srcfiles/GM_Survey_Report_Final_for_website.doc

The survey conducted in New Zealand was a larger compliance project coordinated by the New Zealand Food Safety Authority (NZFSA) over a 12 month period (June 2002 – June 2003). The compliance project was undertaken in response to a recommendation of the Report of the Royal Commission on Genetic Modification. The major goal of the project was to assess the level of compliance with the labelling requirements of Standard 1.5.2 by industry through document auditing. The survey targeted food manufacturers and tested products that could potentially contain GM soy and corn ingredients. The project also

[4] 'manufacturer' includes supplier, packer, vendor or importer.

included the provision of information to food manufacturers to ensure the food industry was fully informed about the requirements relating to foods produced using gene technology. The full report "*Assessment of Compliance with Standard 1.5.2 – Food Produced Using Gene Technology*" can be found on the NZFSA website at: http://www.nzfsa.govt.nz/labelling-composition/publications/reports/assessment-of-compliance-1-5-2/index.htm

Table 8.1 on the next page outlines the major findings of the surveys.

Table 8.1 – Major Results of the Industry Compliance Surveys Conducted in Australia and New Zealand

Australia	New Zealand
Document Audit	**Document Audit**
• 36 food businesses* document audited - 14 large food businesses - 5 medium food businesses - 17 small food businesses	• 269 food businesses document audited - 231 manufacturers - 38 importers
• 12 (86%) of the large manufacturers and 2 (40%) of the medium manufacturers had implemented management systems and were able to demonstrate the GM status of ingredients/foods • None of the small manufacturers and 3 (60%) of the medium manufacturers had not implemented management systems to determine the GM status of ingredients/foods	• 165 (71%) of manufacturers and 24 (63%) of importers had adequate documentation on the GM status of ingredients/foods to make adequate assessment of labelling requirements • 66 (29%) of manufacturers and 14 (37%) of importers had incomplete information on the GM status of ingredients/food • 15 (6%) of manufacturers (these were classed as small manufactures) and 10 (26%) importers were unable to provide evidence to determine the GM status of ingredients/foods.
	• NZ survey also investigated manufacturer awareness of the labelling requirements and GM foods - 81% of the manufacturers and 53% of importers audited were aware that the standard was in force - 60% of manufacturers and 37% of importers had an awareness of ingredients that may potentially be genetically modified.
Product Testing	**Product Testing**
• 51 samples - samples were commonly eaten foods containing soy or corn - 37 samples were from 36 manufactures that had also been document audited	• 117 samples - samples were commonly eaten foods containing soy or corn - 14 samples were from 12 manufacturers that had also been document audited
• All samples tested complied with Standard 1.5.2 • Non-approved GM food was not found in any sample • 10 out of the 51 samples were found to contain traces of GM material. In all cases the quantity was less than the amount of 10g/kg permitted for the unintentional presence of a GM food in an ingredient of a non-GM food and therefore deemed to be compliant with the Standard • 4 of the 10 products were found to have traces of GM material but all had adequate business processes in place to demonstrate that the GM material was there unintentionally and therefore complied with Standard 1.5.2. Negative claims are a matter for Australian Competition and Consumer Commission which administers the Commonwealth *Trade Practices Act 1974*	• All but one of the samples complied with Standard 1.5.2 (an imported product) • Non-approved GM food was not found in any samples • 18 of the 117 samples were found to contain traces of GM material. In all but one case, the quantity of GM material was less than the amount of 10g/kg permitted for unintentional presence of a GM food in an ingredient of a non-GM food and therefore deemed to be compliant with the standard. Enforcement activity was initiated on the sample that was found to contain GM material at greater than 10g/kg • 2 out of the 17 samples that were found to contain traces of GM material but complied with the standard had made a 'GM –free' claim. These cases were referred to NZCC that administers the New Zealand *Fair Trading Act 1986*. One of these is currently the subject of enforcement action

*food businesses = manufacturer, importer or supermarket with generic product

8.1.1 Product Testing

Each of the surveys demonstrates that the majority of manufacturers are complying with the requirements of Standard 1.5.2. The New Zealand survey reported that no non-approved GM varieties were found and the Australian survey reported that no samples tested contained the non-approved GM variety Starlink corn. In Australia, all 51 samples tested complied with the labelling requirements and in New Zealand only one of the 117 samples tested failed to meet the labelling requirements.

Whilst some unlabelled products were found to contain traces of GM material, the amounts in all but one New Zealand sample were well below the 10g/kg permitted for unintentional presence of a GM food in an ingredient of a non-GM food and therefore considered to be compliant with Standard 1.5.2. Enforcement action in relation to the New Zealand sample (an imported product) that had GM material in amounts greater than 10g/kg was instigated resulting in the product being recalled and only being allowed back on the market once labelling had been rectified to reflect the presence of the GM ingredient.

Four soy milk products in Australia and two sausage products in New Zealand that were found to contain traces of GM material (below 10g/kg) also had negative claims on the label regarding their GM status. As previously outlined, whilst Standard 1.5.2 is silent with respect to the use of 'non-GM' and 'GM-free' claims, all claims on food labels are subject to fair trading and food legislation in Australia and New Zealand. The ACCC and the NZCC administer and enforce fair trading legislation. Both Agencies consider that manufacturers should exercise caution when using negative claims to ensure that they comply with provisions prohibiting false, misleading and deceptive conduct including where this relates to advertising or providing information to the consumer.

The four soy milk samples containing traces of GM material were from manufacturers that had also been document audited (see section 8.1.2 below) and found to have adequate identity preservation systems in place. The claims on the labels stated that ingredients were sourced from non-GM ingredients under an IP system. However the fact that traces of GM material were found was still of interest to the ACCC. The New Zealand samples were collected as part of the general surveillance program and the manufacturers were not initially document audited. As the New Zealand compliance project also instigated enforcement activity where required, the results and information concerning these samples, which bear 'GM-free' claims on their labels, were formally referred to the NZCC for investigation. Subsequent to the compliance survey being conducted the manufacturer of one of the sausage products has been charged under the New Zealand *Fair Trading Act 1986* and the decision has been taken not to prosecute the manufacturer of the other sausage product.

8.1.2 Document Audit

The document audits conducted in both surveys found that the most common means of establishing the GM status of a product was by examining supply chains with most manufacturers relying on information received from suppliers. A range of methods are employed to gain this information such as:

- obtaining declarations, statements or letters from suppliers confirming the GM status of ingredients supplied;
- obtaining and/or auditing supplier's documentation on the GM status of ingredients they supply which may include:

    - product/raw material specification sheets that declare the status of the ingredients supplied ;
    - test results for specific foods/ingredients/raw material that have the potential to be genetically modified;
- guarantees from suppliers that ingredients are derived from Australian grown crops (where non GM varieties are commercially grown e.g. corn and soybeans) or certificates verifying the authenticity of the country of origin of ingredients;
- independent third party verification; and
- an 'approved supplier program' requiring suppliers to meet certain requirements. This might include having in place identity preservation systems which provide assurances that non-GM foods are segregated from GM foods throughout the supply chain.

The surveys reported that batch testing of raw or final products (in addition to receiving assurances from suppliers) was also employed by some manufacturers although the use of this procedure was lower than manufactures relying on documentation alone – only seven (3%) manufacturers and one (3%) importer audited in New Zealand and one manufacturer audited in Australia used batch testing.

The results of the document audits indicate that larger businesses have identified the need to have systems in place to make an adequate assessment of the GM status of ingredients and foods used in products. In New Zealand the total number of manufacturers that were document audited was 269 and of these 189 were considered to have adequate documentation on the GM status of ingredients and foods. The remaining 80 manufacturers were assessed as inadequate including 15 smaller manufacturers and 10 importers that could not provide any documentation whatsoever that would allow them to make an accurate assessment of the GM status of ingredients.

Whilst the Australian survey sample was smaller, the results parallel those in New Zealand. A total of 36 small (17), medium (5) and large (14) manufacturers were document audited. On comparison, more (86%) of the larger manufacturers audited were able to demonstrate they had implemented systems that allowed them to determine the GM status of ingredients used in their products. By contrast, only 40% of medium manufacturers audited were able to demonstrate this whilst none of the smaller businesses audited had management systems in place.

As evident in the two surveys, the lack of business processes or documentary evidence confirming the GM status of ingredients does not necessarily equate to non-compliance with labelling requirements. However, it may increase the risk of non-compliance and enforcement authorities strongly encourage businesses to have adequate systems in place to demonstrate compliance.

Of the 51 products tested in Australia, 37 samples came from the 36 manufactures that were also document audited. As mentioned previously, all 51 samples were considered to be compliant with the labelling requirements of Standard 1.5.2. In New Zealand, document audits of manufacturers were conducted prior to product testing. Fourteen of the 117 samples tested came from 12 manufactures considered not to have sufficient evidence to demonstrate compliance with the standard. Of these 14 samples, product testing found that only one did not comply with the labelling requirements.

8.1.3 Industry Costs Associated with Compliance

The compliance surveys conducted in Australia and New Zealand do not provide details about the financial costs to industry in establishing systems that ensure compliance. A submission to this review by the Australian Food and Grocery Council (AFGC), (see summary of submissions at Appendix B) outlines broad costs provided by a number of their member companies indicating that the costs associated with traceability of ingredients and testing verification purposes are:

- System set up costs – $150,000 per company; and
- Annual system maintenance and testing – $50,000 – $100,000 per company

Information regarding the types of systems in place and details regarding the number of product lines per company that could potentially contain GM ingredients, for which management systems are required, were not provided. These variables would most likely influence the financial costs associated with compliance.

8.1.4 Conclusions From the Surveys

The two surveys concluded the following regarding industry compliance with Standard 1.5.2.

- There is a high level of compliance in Australia and New Zealand with the labelling requirements for GM foods. For the combined total of 168 products tested, all but one were compliant with the labelling requirements of Standard 1.5.2
- On both sides of the Tasman, food manufacturers have made conscious decisions to avoid the use of ingredients derived from GM sources but the findings of the document audits suggest it is the larger manufacturers that have implemented adequate management systems to support this and ensure they remain compliant with the labelling requirements of Standard 1.5.2.
- More manufacturers are relying on information regarding the status of ingredients provided through the supply chain than on testing end products.
- One of the objectives of the Australian survey was to ascertain the effectiveness of conducting document audits as an alternative to product testing for enforcement activities. The survey established that document auditing is considered a useful tool in this regard.

8.2 Enforcement of the Labelling Requirements for GM foods

Food standards in the *Australia New Zealand Food Standards Code* (the Code) are developed and varied by FSANZ but responsibility for enforcing food standards rests with the State and Territory governments in Australia and the New Zealand government. Food standards are given legal force in these jurisdictions through adoption or incorporation into the State and Territory Food Acts and the *New Zealand Food Act 1981*. In relation to imported foods, the Australian Quarantine Inspection Service (AQIS) within the Australian Government Department of Agriculture, Fisheries and Forestry holds jurisdictional responsibility for enforcing the Code in relation to foods imported into Australia under the *Imported Food Control Act 1992*.

The Code does not prescribe how the standards are to be enforced. It is the responsibility of enforcement authorities to determine when a breach has occurred and what enforcement action is required. FSANZ works with the jurisdictions to ensure there is a harmonised interpretation of the Code and assists in coordinating the approach to enforcement. FSANZ

does not specify the labelling enforcement regime within which the authorities should operate.

8.2.1 Enforcement Regimes

The compliance surveys conducted in Australia and New Zealand highlight activities carried out by some enforcement authorities in relation to GM food labelling. It was not the intention of the surveys to gather information in the interests of prosecution under the Food Acts but rather to report on the compliance activities by industry. The projects were also conducted over a defined period of time and therefore do not represent ongoing enforcement regimes for GM food labelling within which authorities operate.

However, enforcement authorities do have established enforcement regimes that cater for GM food labelling on an ongoing basis. Current enforcement regimes in the Australian States and Territories and in New Zealand prioritise labelling monitoring activities according to whether labelling is required to reduce acute public health and safety risks (for instance, allergen labelling where such information could prevent illness or death in certain population groups). Other labelling requirements, including GM food labelling, are enforced by general compliance assessment and response to complaints from consumers or industry.

AQIS has a different enforcement regime within which it operates for the monitoring of imported foods to ensure compliance with the Code including labelling provisions. Imported foods in Australia are categorised according to risk assessment advice provided by FSANZ in relation to the potential health and safety risk of particular food commodities. As GM foods are not considered to be high-risk they fall into the category of foods that are subject to random surveillance of which about 5% are referred by AQIS for inspection. Under this process AQIS would determine if the food is correctly labelled according to the requirements of the Code, including compliance with Standard 1.5.2.

8.2.2 Enforcement Activity Related to Compliance

The outcomes of the compliance surveys undertaken in both Australia and New Zealand clearly demonstrate the food industry's desire and effort to comply with the labelling requirements of Standard 1.5.2. In this spirit of cooperation it is much more desirable, both in terms of outcomes and costs, for enforcement agencies to work with manufacturers to ensure they are aware of and understand the requirements of Standard 1.5.2 and to foster voluntary compliance rather than to rely on legal proceedings which would ordinarily be contemplated as a last resort.

There is a range of activities, undertaken by enforcement agencies to enforce the requirements of Standard 1.5.2. The onus is on food businesses to develop and implement procedures to ensure that food products meet the requirements of food legislation, including the requirement for the labelling of food. The user guide *Labelling of Genetically Modified Food* sets out the principles of due diligence and the importance of manufacturers to adopt verifiable documentation systems. This in turn enables enforcement agencies to undertake audits of manufacturer's documentation to ensure due diligence is being exercised.

Where the outcome of the enforcement investigation identifies that the product is not compliant with the labelling requirements of Standard 1.5.2 an enforcement agency may decide that the following corrective action by the manufacturer is appropriate:

- re-labelling the product to accurately reflect the GM status, in some cases this may require a product to be recalled; and/or

- putting in place a better due diligence/compliance plan which enables the GM status of the food to be determined on an ongoing basis; and/or
- sourcing food from suppliers that also have in place robust management systems that verify the status of foods.

A proactive adjunct to enforcement is to examine compliance plans and documentation held by manufacturers. Further, if following inspection concerns remain as to compliance, especially with regard to those products not positively labelled in terms of the GM status (or have a negative claim such as "non-GM" or "GM free"), enforcement agencies may undertake product testing to verify compliance.

One approach to such an investigation is outlined below.

1. **Enforcement agency samples food that is not labelled as containing GM ingredients and undertakes a Qualitative PCR test.**

   If the results of the test are:
   - negative – then no further action required; or
   - positive – identification of the type of GM food is required to determine whether it is an approved or non-approved GM variety according to Division 1 of Standard 1.5.2.
     - If it is a non-approved GM food, the product cannot be sold in Australia or New Zealand.
     - If it is an approved GM food, the manufacturer is informed that the food contains detectable GM ingredients. The manufacturer cannot rely on the exclusions to labelling under paragraphs 4(1)(c) and (d) and therefore the product should be labelled in accordance with clause 5 of Standard 1.5.2 or removed from the marketplace (see step 2). The alternative is that the manufacturer demonstrates that one of the exclusions under paragraph 4(1)(e) or (f) applies (see step 3).

2. **Manufacturer may re-label the product as containing GM ingredients or removed from the marketplace, or**

3. **Manufacturer may demonstrate that the food does not fit the definition of genetically modified food as set out in paragraph 4(1) (e) or (f) of Standard 1.5.2**

   a. Of these, paragraph (f) "a food, ingredient, or processing aid in which genetically modified food is *unintentionally* present in a quantity of no more that 10g/kg per ingredient" (emphasis added) requires a manufacturer to demonstrate that two conditions of the exclusion have been met. Firstly that the presence of the GM ingredient is unintentional and secondly that the amount is below 10g/kg per ingredient. Ways in which the manufacturer could demonstrate compliance are outlined below.
      i. Demonstrate through the use of an identity preservation system with known performance parameters, the intent to purchase non-GM ingredients. The performance of identity preservation systems is generally expressed as a guarantee of accuracy, usually expressed as a percentage (e.g. 99% accurate). The suppliers should be able to provide evidence to validate their guarantee of accuracy; or
      ii. Where no identity preservation system is used but evidence of an intent to purchase non-GM ingredients is available, the manufacturer may provide quantitative data to show that the level of GM material detected is less

than 10g/kg in order to demonstrate that the product falls within the exclusion within the definition; or

iii. Where there is no evidence of intent to purchase non-GM ingredients, nor documentation from the supplier that they have intentionally sought and supplied non-GM foods and food ingredients, this exclusion is unlikely to apply, in that it would be difficult to argue that the presence was unintended.

b. For 'i', 'ii' and 'iii' above, a positive qualitative test would indicate that the manufacturers system for sourcing ingredients would need to be reviewed and/or where possible upgraded to ensure future supplies do not continue to contain GM material.

c. Notwithstanding the evidence provided by the manufacturer, if a product is repeatedly found to contain GM foods/ingredients in qualitative tests, the exclusion may not apply as it may be difficult to argue that the presence is unintended unless there has been adjustments and improvements to compliance plans in response to previous positive tests.

With regard to negative claims that expressly state or imply the absence of GM ingredients within a food, a qualitative positive test is sufficient to demonstrate the presence of GM material in a food, and call into question the validity of the claim on the label.

There may be times when enforcement agencies need to initiate legal proceedings. However in the absence of a risk to public health and safety, prosecuting a manufacturer for a breach of the labelling requirements of the Code is usually a last resort, reserved for flagrant or repeated breaches or where there is an absence of corrective action by manufacturers.

In the circumstances where prosecution is pursued and non compliance is established by the presence of novel DNA, enforcement agencies can use the National Association of Testing Authorities (NATA) accredited qualitative laboratory tests to support their action. However, currently there are no NATA accredited facilities to conduct quantitative testing. This may pose a theoretical problem where the exclusions in paragraphs 4(1)(d) and (f) are raised, and an enforcement agency is bound to use NATA accredited tests. We understand that this may not be the case across all jurisdictions.

9.0 Labelling GM Foods: International Perspectives

9.1 Regulatory Approaches

Regulations for the labelling of GM foods vary greatly between countries throughout the world. It is apparent that there are two schools of thoughts regarding the mandatory labelling of GM foods:

1. Regardless of whether a GM food passes a pre-market safety assessment, consumers should be provided with information which allows them to make an informed purchasing choice; or
2. Labelling is generally not required because an approved GM food is as safe as its conventional counterpart. The exception to this is where the GM food is significantly different when compared to its conventional counterpart.

Applying these different views to the various types of regulatory approaches, the first is usually the basis for imposing mandatory labelling for almost all GM foods whilst the second primarily defaults to a voluntary labelling regimes except where the GM food is different from its conventional counterpart. Within each approach however, there are varying degrees of regulation. Table 9.1 demonstrates in a broad sense the different types of regulatory regimes that exist in other countries, moving from regimes that are fully regulated to those that are a mixture of regulatory and voluntary approaches.

Table 9.1

Level of Regulatory Prescription

Major elements of labelling regimes in various countries		Examples of Countries
Mandatory labelling regime fully regulated	**Method of production labelling** - mandatory labelling of all foods derived from or containing ingredients derived from organisms produced using gene technology.	European Union
	Composition of food labelling - Mandatory labelling of all GM foods and ingredients where novel DNA and/or protein are present in the final food.	Australia/New Zealand, Russia
	Composition of food labelling (narrow capture) - Mandatory labelling of designated food items that contain GM foods or ingredients as major components of food only where novel DNA and/or protein are present in the final food.	Japan, Chinese Taipei, Korea, Thailand, and Malaysia (proposed)
Labelling regime mix of regulatory and voluntary approaches	**Equivalence labelling** - Mandatory labelling of GM food only where it is significantly different from its conventional counterpart.	Canada, USA, Hong Kong (proposed)
	Voluntary labelling - Voluntary regime (where GM is similar to conventional counterpart) reliant on general provisions in food or fair trading law relating to false, misleading and deceptive labelling or advertising and an Industry Code of Practice developed to assist with compliance.	Canada, USA
No regulation	**Other** - No regulation in place. May allow for voluntary labelling but no evidence of guidelines or Code of Practice.	Philippines, Singapore

9.2 Comparison of Regulatory Outcomes

Different countries have different regulatory frameworks and legal instruments with which to regulate the labelling of food. However, when comparing the GM food labelling regime that exists in Australia and New Zealand to those elsewhere in the world, we must look beyond the regulatory structure and consider the labelling outcomes that the regulation offers.

The table at Appendix E identifies each component of the Australia and New Zealand GM food labelling regime in terms of the labelling outcome, and compares this to the labelling outcomes in the European Union (EU) and the Asia-Pacific Economic Cooperation (APEC) countries, which includes among other countries, the United States of America (USA), Canada and Japan. Included in the table is an indication of whether the specific labelling outcome represents regulation that is more or less stringent than that of Australia and New Zealand. In addition, the use of negative claims is examined.

Information was sourced directly from government officials or from the appropriate government websites. Secondary references were also used where required and included unofficial translations of regulations (Foreign Agricultural Service/USDA – GAIN reports) or from other publications that presented the findings of similar investigations.

The analysis indicates that the GM food labelling framework in Australia and New Zealand is one of the most stringent regimes in the world. This regulatory framework is more detailed than other countries, indicating the specific circumstances where a GM food is to be labelled, where information can be provided by other means or where the food is exempt from labelling. These regulations take into account the many different elements of food manufacture such as packaged versus unpackaged foods, foods sold for immediate consumption or where manufacturing and refining processes significantly changes the raw product. The regulations also reflect the need to provide consumers with meaningful information whilst ensuring there is a framework that allows manufacturers to determine the circumstances in which this information should be provided.

Below is a brief summary of the major findings of the analysis for the countries examined when compared to the requirements for Australia and New Zealand. For the complete analysis refer to the table at Appendix E.

9.2.1 European Union

- The EU has endorsed several amendments to the existing mandatory content labelling regime that are planned to take effect in April 2004. From this date the EU will require full traceability throughout the food chain and GM food labelling requirements have been extended to include animal feed as well as all foods that consist of, contain or are produced from a GM food (European Union, 2003). The new amendments require GM food to be labelled even where novel DNA and/or protein are no longer present in the final product. This is underpinned by the requirements for full traceability of GM foods as supply chain management, traceability, segregation and documentation will have to be employed to verify labelling obligations, which in certain respects means that the EU has the most demanding labelling regime from an industry perspective.
- The major differences when comparing the EU regime with that of Australia and New Zealand is that the overarching labelling requirements are not based on presence of novel DNA and/or novel protein in the final food but rather whether a GM food or

food derived from a GM source has been used anywhere in the production process. Therefore some of the foods exempt from labelling under the Australia/New Zealand regime, such as highly refined foods where novel DNA and/or novel protein is not evident in the final food, are required to be labelled in the EU under the new approach.

- In the EU, flavourings are also required to be labelled as derived from GM irrespective of the amount of flavouring present in the final food (European Union 2003). Currently in Australia and New Zealand GM flavourings do not have to be labelled as such if they are present in the final food in a concentration of no more than 1g/kg.
- However processing aids are the exception to the EU's labelling approach. The definition of food and feed in EU regulation excludes processing aids that are used during the food or feed production process (European Union, 2003). Further, food and feed that are manufactured with the help of a GM processing aid are not included in the scope of the new regulation (European Union, 2003). Unlike Australia and New Zealand where the labelling exemption for processing aids only applies where novel DNA and/or novel protein is not present in the final food, the EU regulations effectively provide an exemption to all processing aids produced from genetic modification, even where novel DNA and/or novel protein remains. Therefore, this aspect of the EU regulations is less stringent than in Australia and New Zealand.
- Whilst Australia and New Zealand have similar regulation to the EU with regard to the unintentional presence of approved GM foods in non-GM foods, the EU has lowered its threshold from 10g/kg to 9g/kg.
- The EU regulations also allow the presence of **non-approved** GM foods in a food up to a threshold of 5g/kg, as long as the GM food has had a favourable safety assessment (i.e. analysis that is required to be supplied as part of the application for approval in the EU) (European Union, 2003). However it is important to note that this is not a labelling threshold; if non-approved GM material is present at levels in excess of 0.5%, it cannot be legally sold. This is markedly different from the situation in Australia and New Zealand as all GM food varieties must be safety assessed and approved before they are released onto the market. The presence of any non-approved GM foods in food at any level would result in a breach of Division 1 of Standard 1.5.2.
- The EU has a similar approach to Australia and New Zealand in relation to unpackaged GM food, where the information regarding its GM status can be displayed either on the food display or immediately next to it. With regard to foods sold for immediate consumption such as in restaurants and take-aways, the EU regulation does not explicitly exempt those foods from labelling. Under the previous regulations it was optional to provide the information however it is expected that detailed rules will be developed informing industry on how best to comply with the labelling requirements when food is offered for immediate consumption (Food Standards UK, 2003).
- The EU has a similar approach to Australia and New Zealand regarding negative claims, which are regulated by general provisions prohibiting misleading representations.
- The new regulations were endorsed by the European Parliament in June 2003.

While this section of the report is intended to describe the GM food labelling regimes in existence internationally and how these compare to Australia and New Zealand, it is interesting to note that the majority of individuals and consumer groups that submitted to this review supported the new EU regulations. These submitters expressed the view that Australia and New Zealand should also adopt the new regime, which is based on process rather than content of the final food, as it ensures that the information on labels is what is expected and needed by consumers in order to make an informed purchasing choice.

By contrast, many of the submissions from industry oppose the EU regime and state that there is no scientific justification for such requirements. They indicate that this type of regime would be difficult to monitor and enforce given that it requires food to be labelled even where novel DNA and/or novel protein is not present in the final food and as such no scientific analysis could confirm that a manufacturer is actually complying with the labelling requirements. Industry submitters have indicated that compliance would also be costly for industry, as it would require sophisticated supply chain management, traceability, segregation and documentation systems to verify whether highly refined foods, in particular, should be labelled. Some submissions also raise the issue that such a regime could be seen as an unnecessary barrier to trade.

9.2.2 Russia

- In September 1999 Russia introduced regulations that require the mandatory labelling of all GM foods. The regulation is based on the presence of novel DNA and/or novel protein in the final food, similar to the Australia and New Zealand exclusions relating to highly refined foods and additives and processing aids (USDA, 1999)
- Exemptions regarding flavourings, unpackaged foods, foods for immediate consumption or the unintentional presence of GM food in a non-GM food were not mentioned in the information available to this review.
- There are no additional labelling requirements where the food has 'altered characteristics' and the regulation is silent on negative claims.

9.2.3 Japan

- Japan has mandatory labelling requirements, based on the presence of novel DNA and/or novel protein, for prescribed foods derived from GM soy, corn and potato but only where it is a major ingredient and accounts for 5% or more of the total weight (Ministry of Health Labour and Welfare (MHLW), 2003). This is regarded as less stringent than the requirement in Australia and New Zealand as Standard 1.5.2 captures all food or foods containing ingredients that contain novel DNA and/or novel protein, unless explicitly excluded, regardless of the amount present or if it is a major ingredient.
- Like Australia and New Zealand, GM foods in Japan are subject to pre-market safety assessment and approval before being allowed on the market.
- The Japanese regulations also link prescribed labelling formats according to whether an identity preservation system is in place (the table at Appendix E indicates these prescribed formats). Negative claims are optional only where an identity preservation system is in place (MHLW, 2003).
- There are no additional labelling requirements in relation to GM foods with altered characteristics. Labelling is also not required where novel DNA and/or novel protein is eliminated in the final product. Therefore as in Australia and New Zealand, highly

refined foods and additives and processing aids where no novel DNA and/or novel protein is present in the final food are excluded from having to be labelled.

- There is no specific exemption for labelling in relation to flavourings but in practice flavourings may not constitute major ingredients or account for 5% of weight under the general labelling requirement, therefore avoiding the requirement for GM declaration. This may be considered as less stringent than the Australia and New Zealand requirements as a GM flavouring needs to be labelled if it constitutes more than 1g/kg (0.1%) of the final food.
- The Japanese regulations do not specifically address unintentional presence of GM material in a non-GM food but such foods may not be captured by the general requirement in the first instance i.e. unintentional presence of GM material would be at low levels and not considered as a major ingredient or account for 5% of the total weight. Therefore the amount of GM food that can be unintentionally present before triggering the requirement for declaration is at a level higher than that permitted in Australia and New Zealand.
- The information regarding the Japanese regulations available for this review does not specifically mention whether foods intended for immediate consumption need to be labelled.
- The current Japanese labelling requirements for GM foods came into force in April 2001.

9.2.4 Chinese Taipei, Korea and Thailand

- Chinese Taipei, Korea and Thailand all have similar mandatory general labelling requirements for prescribed GM foods and food products where the GM food component is a major ingredient and/or accounts for 5% of the weight of the final food (ABARE, 2003, Korea Food & Drug Administration (KFDA), 2001 and Ministry of Public Health (MPH) – Thailand, 2002). There are no additional labelling requirements for GM foods presenting altered characteristics.
- The labelling regulation in Thailand and Korea is based on the presence of novel DNA and/or novel protein in the food (KFDA, 2003 and MPH – Thailand, 2002). Information that was sourced regarding the situation in Chinese Taipei does not indicate if the regulation of labelling of GM food is also based on the presence of novel DNA and/or novel protein.
- Highly refined foods are exempt from the labelling requirements in Korea and Thailand if no novel DNA and/or novel protein is present in the final food (KFDA, 2001 and MPH – Thailand, 2002). The Chinese Taipei regulations prescribe the highly refined products that are exempt from labelling such as soy sauce, soybean oil, corn oil, corn syrup and corn starch (ABARE, 2003).
- Additives and processing aids and flavourings are not specifically exempt in the three countries but these products may not be captured by each of their general labelling requirements as in most cases processing aids and additives are unlikely to be major ingredients or constitute 5% of the weight of the final food.
- Thai regulations address the situation of selling food in markets and exempts small producers that directly sell to the consumer as they are in a situation where information can be provided directly. In contrast, the Korean regulations require separate display panels where individual food items are sold on-site whilst the

Chinese Taipei regulations do not provide any specific exemption from labelling or allow information regarding the GM status of a food to be provided in other ways.

- Of the three countries, only Korea specifically addresses the unintentional presence of a GM food in a non-GM food but only in relation to bulk produce. The threshold is set at 3% and an IP system must be in place (KFDA 2001).
- Korea allows products to be labelled as 'may contain GM [name of food]' when it is impossible to verify the source of ingredients (KFDA 2003). Thailand prohibits the use of all negative claims (MPH – Thailand, 2002). No details of the situation in Chinese Taipei were obtained.
- The Korean regulations came into force from March 2001.
- The introduction of the labelling requirements in Chinese Taipei is staggered for specific food categories and started in January 2001.
- Thai regulations came into effect in May 2003.

9.2.5 United States of America and Canada

- Different approaches regarding the mandatory labelling of GM foods are clearly evident when comparing Australia and New Zealand to North America. As GM foods in the USA and Canada undergo a pre-market safety assessment, both of these countries consider that GM foods should be treated the same as all other foods in terms of labelling and as such there are no general 'catch all' mandatory labelling requirements. Labelling is only required where the GM food is not substantially equivalent in terms of composition, nutritional value or intended use (Health Canada, 2003 and U.S Food and Drug Administration (USFDA), 2001). Allergens should be declared, as should other components that have health implications although in Canada there is no requirement to also indicate that these changes have occurred because the food has been genetically modified (Health Canada, 2003).
- The USA has developed industry guidance where the manufacturer wishes to voluntarily label their product as sourced from GM food but negative claims are subject to general provisions prohibiting misleading representations (USFDA, 2001).
- Canada is in the process of developing an industry standard for both voluntary positive and negative claims. With regard to negative claims, it has been proposed that a 5% threshold for unintentional presence of GM material be allowed when making non-GM claims (Health Canada, 2003). There is no such threshold in Australia and New Zealand.

9.2.6 People's Republic of China

- In June 2001 China's state council published a regulation that specified procedures for managing the development, distribution and use of genetically modified organisms in agriculture. All GM foods must be safety assessed and issued with a safety certificate (USDA, 2001).
- The following year the Chinese Ministry of Agriculture published implementation regulation concerning the labelling of GM foods. China requires mandatory labelling for listed GM food crops and their products (USDA 2001). This includes soybean (seed, flour, oil and meal), corn (seeds, oil and flour), rapeseed/canola (seed, oil and meal) and tomatoes (seed, fresh tomato and sauces) (USDA 2001).

- From the information available it is not clear if the labelling regime is based on the presence of novel DNA and/or novel protein in the final food or whether labelling should indicate that the food or ingredients are derived from organisms produced using gene technology.
- The information available to the review does not specify additional labelling requirements where the food may have altered characteristics resulting in a difference from its conventional counterpart.
- There are no exemptions for specified GM foods or for different circumstances in which a GM food may be presented to the consumer (e.g. food purchased in a restaurant). Additionally, the information available to the review does not address the unintentional presence issue.
- The Ministry of Agriculture stipulates that non-GM products should not be labelled as 'GM-free' (USDA, 2001).

9.2.7 Other APEC countries

- Investigations into the labelling of GM food in other APEC countries resulted in the following:
    - limited information regarding the labelling regime and outcomes (Indonesia); or
    - confirmation that the country does not have specific regulations in place and/or are considering it at this time (Hong Kong China, Malaysia, Mexico, Philippines and Singapore); or
    - inability to locate any information regarding the labelling of GM foods which may indicate that the country does not have specific regulations in place or simply that the GM food labelling issue is not a priority at this time (Brunei Darussalam, Chile, Papua New Guinea, Peru and Vietnam).

9.3 Regulation of the Traceability of GM foods

In order for manufacturers to comply with labelling requirements and to substantiate the claims they make on labels, certain regulations may require certification systems, traceability or identity preservation systems to be in place. The table 9.2 outlines the traceability requirements that are reflected in regulations or compliance guides in various countries.

Table 9.2: Examination of Requirements Governing Traceability of GM Foods in Other Countries

	Country	Regulation/legislation	Requirement
Requirements reflected in regulation or compliance plans	Australia / New Zealand	Requirement not specified in Standard 1.5.2 but FSANZ provides guidance for compliance in it's industry user guide '*Labelling Genetically Modified Food*' which advises that certain business processes should be in place. Note the user guide is not legally binding.	Certification/verification processes may be required in two situations: • Where the manufacturer is using voluntary negative labelling claims e.g. "non-GM ingredients" or "GM-free". • If GM material is found in food at less than 10g/kg and is not positively labelled. Manufacturers need to provide evidence that appropriate steps were taken to source non-GM food and ingredients.
	European Union	New EU regulation which will come into effect in April 2004.	• Along with the new labelling requirements for foods derived from GM foods, there are also new traceability rules. • Business operators must transmit and retain information about products that contain or are produced from GM food at each stage of production and distribution line. • In practice this means a seed seller/farmer/manufacturer etc. has to inform any purchaser that the food is GM, together with more specific information allowing the GM food to be precisely identified. The seed seller is also obliged to keep a register of business operators who have bought the seed.
	Russia	Russian Federation Food and Agriculture Import regulations and Standards - Decree	• Business operators engaged in the manufacture or distribution of GM food are required to include information on the presence of materials and components made of GM sources in the production and/or transport documents.
	Japan	Food Sanitation Law	• Links prescribed labelling requirements to where identity preservation systems are in place. Requires that certificates be produced at each stage of handling process to certify an IP system is in place.
	Korea	Enforcement rule of the Food Sanitation Act, Article 11 (Import report)	• An importer is required to submit certified documentation to the heads of the regional offices in Korea Food and Drug Administration or local National Quarantine Stations (NQS) when importing foods. • IP handling certificates or government certificates recognised as having equivalent effect with that of IP handling certificates apply to the types of foods subject to GM food labelling but that do not bear any GM food labels.
	People's Republic of China	Regulation on the Safety Administration of Agricultural GMO's	• Requirement for any organisation engaged in production of GM planting seeds, breeding livestock, poultry or fish fry to keep production records, which indicate the place of production, gene, genetic source and method.
No requirements evident	United States, Canada, Philippines		• Voluntary labelling regime in place and no regulation regarding traceability.
	Singapore		• No regulation in place. Information available to this review does not indicate whether there are requirements regarding the traceability of GM foods.
	Chinese Taipei, Indonesia, Thailand		• Mandatory labelling regime in place but the information available to this review does not indicate whether there are requirements regarding traceability of GM foods.
	Hong Kong China, Malaysia, Mexico		• No regulation currently in place but propose to implement a mandatory labelling regime – information available to this review does not indicate whether there will also be requirements regarding the traceability of GM foods.
	Brunei Darussalam, Chile, Papua New Guinea, Peru, Vietnam		• No information was available to this review regarding GM food labelling and traceability regimes that are currently in place or proposed.

10.0 Consumer Attitudes to GM Foods and Labelling

The terms of reference for this review requires an examination of consumer attitudes to the acceptance and labelling of GM foods in Australia and New Zealand as well as in other countries. FSANZ has sourced a number of studies that investigate these topics. In addition several studies were provided or referred to FSANZ in submissions by stakeholders.

A comprehensive summary of data and major findings relating to consumer attitudes towards labelling and acceptance of GM foods in various countries has been collated in the form of a Consumer Attitude Matrix (refer to Appendix F). The data presented in the matrix is mostly from quantitative surveys. Although qualitative assessments are an excellent tool for exploring underlying issues, they cannot provide an indication of the prevalence of opinion among a population, nor the strength with which it is held. Therefore the quantitative surveys sourced for this review attempt to measure the attitudes of representative population samples towards GM foods.

These surveys differ regarding the questions asked and the comprehensiveness of the investigations. Some surveys are public opinion polls where a few very direct questions were asked whilst others are more extensive exploring various aspects of GM food. The surveys also present differences in relation to sampling methods, for example some surveys are based on information from respondents that were randomly selected whilst others are base on selected samples, such as members of organisations or magazine subscribers. Other surveys relied on respondents phoning in or providing opinions via websites. Such approaches are more likely to attract responses from those with strongly held views on the topics under consideration. Therefore arriving at a definitive conclusion regarding the attitudes of consumers to GM foods, given the significant variability in survey methodology, is not possible.

The reference grid in the Consumer Attitude Matrix at Appendix F provides details regarding the type of survey and the sampling methodology employed for each study. The discussions below draw on the major trends and issues emerging from some of the studies included in the Consumer Attitude Matrix.

10.1 Consumer Attitudes to and Acceptance of GM Foods in Australia and New Zealand

Attitudes to and acceptance of GM foods is a very complex area. Studies use a variety of indicators to determine the level of consumer acceptance of GM food such as expressed concerns, whether they will eat/buy GM products or whether consumers consider that the perceived risks of GM foods outweigh the benefits. Each of these provides different insights into the acceptance of GM foods such that it is difficult to arrive at a definitive position as to whether consumers, in general, are for or against GM foods.

Many studies into consumers attitudes have found that consumers express concerns about the safety of GM foods, despite approved GM varieties of food being scientifically assessed as being as safe as other foods. Studies have also shown that consumer concerns tend to be greater where there is less awareness and understanding of the science involved. An examination of consumers perceived risks of GM foods and what shapes their perception of risk is beyond the scope of this review. Therefore this section presents the broader consumer attitudes and acceptance of GM foods in Australia and New Zealand where these have been documented.

A recent article in 'Food Australia' suggests that consumer attitudes to GM foods need to be understood in context,

'*GM food concerns are smaller than concerns about pollution, greenhouse gases and nuclear waste, and are also smaller than other food-related concerns including pesticides in foods, human tampering of foods and food poisoning* (Cormick, 2003)'.

An Australian survey conducted in February 2001 in which a random sample of 1000 people were interviewed by telephone found that food safety, bacterial contamination and chemical pesticides were of more concern to respondents than GM foods (MARS, 2001). A New Zealand study conducted by the Consumers' Institute in which a questionnaire was mailed out to a random selection of 'Consumer' magazine subscribers found that 54% of respondents said that genetic modification was a very important or important issue when deciding what food to buy, however it ranked sixth on the importance scale after use by dates, taste, nutritional information, types of ingredients and price (NZFSA, 2002).

The Australian Consumers' Association recently conducted a survey of their CHOICE Online Members on issues regarding GM Foods. Invitations to complete the survey were included in a CHOICE Online Member newsletter that was emailed to approximately 30,000 members in September 2003. The Australian Consumers' Association received 645 responses to the survey. The majority of respondents (84%) expressed concerns about GM foods and are worried about eating them.

However, the fact that consumers have concerns about GM foods may not necessarily mean that they will avoid buying or eating GM foods. In comparison to the survey conducted by the Australian Consumers' Association where 84% of respondents said they had concerns or are worried about eating GM foods, a recent opinion poll conducted by Roy Morgan Research and in which 25, 612 people in Australia and 12,927 people in New Zealand were interviewed, found that only 55% of Australians and slightly fewer New Zealanders (49%) go as far as saying that they won't buy GM foods.

The acceptance of GM foods is also more pronounced when clear and desirable benefits are presented. A survey conducted by Millward Brown Australia on behalf of Biotechnology Australia in 2001 in which a random sample of 1001 people where telephone interviewed found that 60% of people indicated that they would eat GM foods if they had been genetically modified to be healthier (Biotechnology Australia, 2001). A New Zealand postal survey found that 60% of respondents were prepared to support GM food under some circumstances (Small, B., 2003). The results imply that the acceptance of GM food may depend on whether or not the consumer perceives that there are tangible benefits and that those benefits outweigh their concerns and perceived risks. To support this, a 2002 study that surveyed 1008 Australian consumers in mainland metropolitan areas found that in the absence of valued benefits most respondents strongly rejected GM food (Owen *et al* 2002). In addition the study found that despite consumer concerns with GM foods, respondents were prepared to pay a premium for products with a clear and desirable benefit but only if the benefit could not be achieved by more traditional production methods otherwise there would need to be a substantial cost benefit (Owen *et al* 2002).

In summary, the data conveys that consumers do harbour concerns and are perhaps a little unsure about GM foods but these concerns are not as great as other food related or environmental concerns. The fact that consumers have these concerns does not necessarily

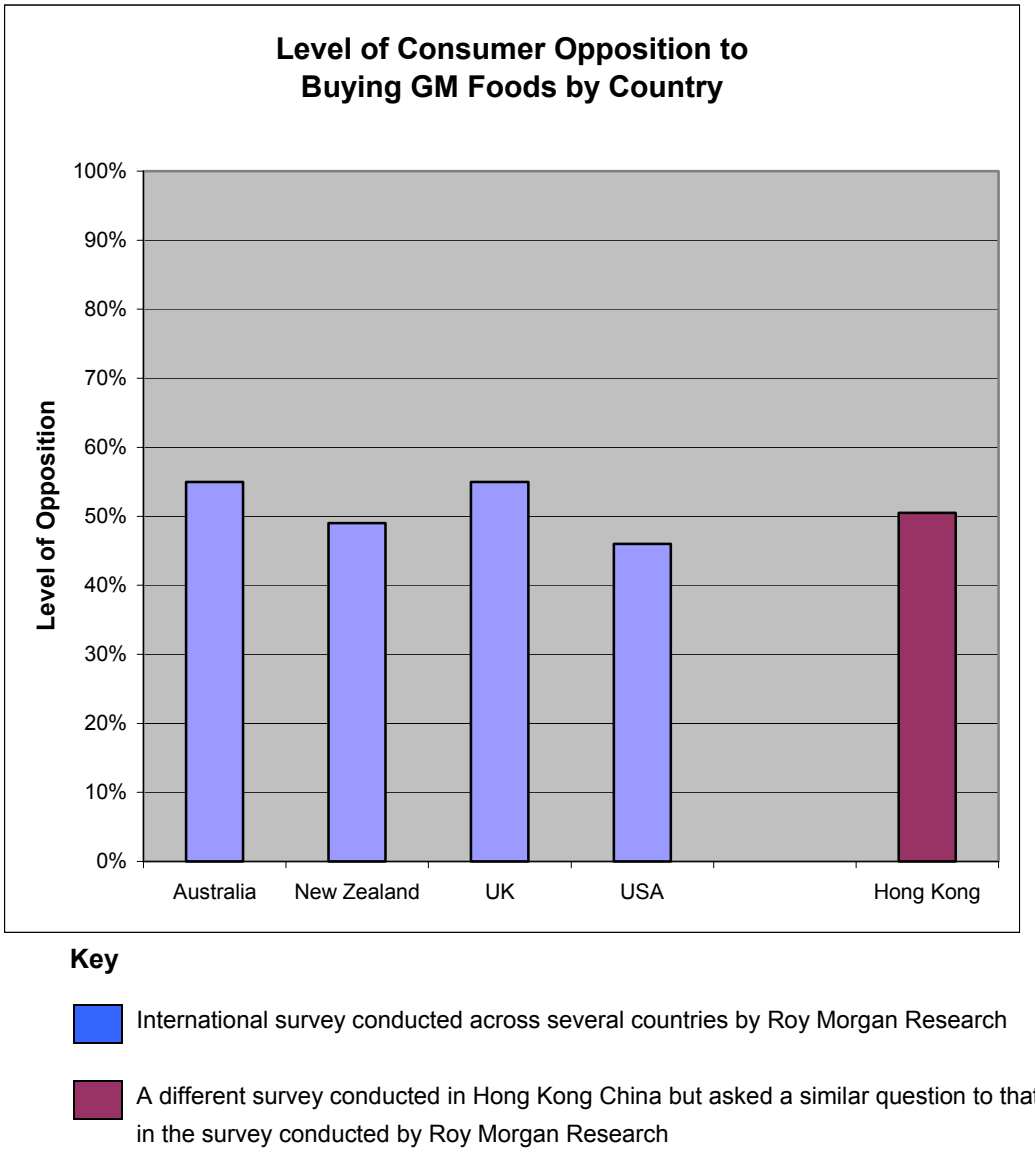
mean that they will also reject buying or eating GM foods. In addition, where GM foods are perceived to have benefits, consumer acceptance may be greater where it is considered that the benefits outweigh the perceived risks.

10.2 Consumer Attitudes and Acceptance of GM Foods in Other Countries

Figure 10.1 presents the results of surveys, which explore consumer attitudes toward buying GM foods in Australia and New Zealand and in other countries. This was compiled using a variety of different surveys so the data presented should not be considered a robust comparison but rather as a general indication of the level of acceptance of GM foods across various countries. The actual results of each of the surveys, along with the methodology employed and the sample size are included in the text following the figure.

As was mentioned in section 10.1, there are many indicators regarding consumer acceptance of GM foods and whether consumers will or will not buy GM food is just one. The majority of APEC countries are not included in the figure as surveys that explore consumer attitudes to GM foods in these countries were not available.

Figure 10.1



Results of surveys presented in figure 10.1:

- *Australia* – **55% of Australians won't buy GM foods**; 38% don't try to avoid it *(Roy Morgan Research, 2003, interviews conducted April 2002-March 2003, n=25,612 aged 14+)*
- *New Zealand* – **49% of New Zealanders won't buy GM foods**; 46% don't try to avoid it *(Roy Morgan Research, 2003, interviews conducted May 2002-April 2003, n=12,927)*
- *UK* – **55% of Britons won't buy GM foods**; 39% don't try to avoid it *(Roy Morgan Research, 2003, interviews conducted May 2001-November 2001, n=1,100 aged 14+)*
- *USA* – **46% of Americans won't buy GM foods**; 47% don't try to avoid it *(Roy Morgan Research, 2003, interviews conducted March 2002-August 2002, n=5,099 aged 14+)*
- *Hong Kong* – 34.6% of people would buy GM foods; **50.5% would not**; 7.9% said it depends on the situation and 7% don't know *(Hong Kong Food and Environmental Hygiene Department, 2001, public survey conducted by Mercado Solutions (Asia) Limited in November and December 2000, telephone interviews n=2017 aged 15+)*

Figure 10.1 illustrates that about half of the consumers that participated in a survey conducted by Roy Morgan Research between 2002 and 2003 across several countries including Australia, New Zealand, the UK and the USA are opposed to buying GM foods. A different survey conducted in Hong Kong China asked a similar question to that asked in the Roy Morgan Research and consumers surveyed in this country are similarly opposed to buying GM foods (Hong Kong Food and Environmental Hygiene Department 2001).

A survey conducted in the EU by the organisation Agricultural Biotechnology in Europe in July 2002, in which a total of 3500 people across France, Germany, Italy, Spain and the UK were interviewed, found that 27% of respondents would not buy a food product they regularly purchased if they noticed GM ingredients listed until they had found out more about the gene technology used in development, whilst 31% said they would never buy the product again.

A survey conducted by Pollara Research in 2003 for the Government of Canada, in which 600 Canadians were telephone interviewed, found that 34% of respondents are somewhat uncomfortable and 16% of respondents are very uncomfortable with the idea of buying GM foods (Government of Canada, March 2003).

A Chinese survey, in which 480 consumers residing in the city of Nanjing were randomly selected for telephone interview, found that only 20% of respondents thought GM foods were unsafe and would not purchase them (Zhong, F., et al, 2002). However, this may not indicate that the level of acceptance of GM foods is greater in China than in other countries as the survey also found that a majority (30-50%) were undecided about GM foods although their purchasing decisions could be easily influence by future information (Zhong, F., et al, 2002).

10.3 Consumer Attitudes to the Labelling of GM Foods in Australia and New Zealand

A recent survey conducted by the Australia Consumers' Association in September 2003 found that 84% of respondents strongly agreed and 10% of respondents somewhat agreed that there should be comprehensive labelling of foods containing ingredients derived from gene technology. In April 2002, a survey conducted by Taylor Nelson Sofres on behalf of Greenpeace, in which 1001 randomly selected consumers were telephone interviewed, found that 96% of respondents said that foods containing GM ingredients should be labelled (Greenpeace 2002). Historically, support for the labelling of GM foods is also strong indicating that there has been little variation of opinion between surveys conducted over

different time periods. In a 2001 survey, 90% of respondents disagreed with the statement *'it is not worth putting special labels on GM foods*' and in July 2000, 93% of respondents supported labelling of GM foods to enable consumers to make an informed choice (Biotechnology Australia, 2001 and Biotechnology Australia, 2000). Back in 1999, 89% of respondents disagreed with the statement '*that it was not worthwhile labelling GM foods*' (Biotechnology Australia, 1999).

The New Zealand survey conducted by the Consumers' Institute for NZFSA in 2002 indicates that there is strong support for the labelling of GM foods. 64% of respondents thought that information about the GM status on food labels was very important or important, however a significant group of participants (21%) were also undecided on this issue (NZFSA, 2002).

The Australian Consumers' Association has suggested that Australian consumers are confused about the GM status of foods that do not carry a reference to GM. In their recent survey, 44% of respondents thought that no reference to genetic modification meant the food or its ingredients did not derive from organisms produced using gene technology and 18% were unsure what the absence of GM food labelling meant (ACA 2003). 39% thought that the food or ingredients may have been genetically modified or contain small traces of GM ingredients (ACA 2003). This may indicate that the majority of those surveyed think in terms of process labelling rather than in terms of the presence of novel DNA and/or novel protein in the final food, which is the basis of the current requirements in Australia and New Zealand.

The study by the Australian Consumers' Association indicates that there is support for the labelling of highly refined products derived from GM foods indicating that some consumers would prefer the labelling regime to be process based with 60% strongly disagreeing and 15% somewhat disagreeing with the current exemption relating to highly refined foods (ACA, 2003). However the level of support for process labelling found in the survey conducted by the Australian Consumers' Association in 2003 is lower than the survey commissioned by Greenpeace in 2002 as 92% of respondents said that foods containing refined GM products such as oils should be labelled (Greenpeace, 2002). In addition to wanting highly refined foods to be labelled, the same survey found that 85% of consumers believe that labelling should apply to foods containing GM ingredients that are sold in restaurants (Greenpeace 2002).

Besides the data provided in surveys, submissions to this review also indicate how Australians and New Zealanders regard the current labelling requirements. Approximately 80% of submissions from individuals have stated that Australia and New Zealand should align with the new EU labelling regime, which is underpinned by full traceability requirements. Many submissions also supported a process based labelling regime where all food and ingredients derived from organisms produced using gene technology are required to be labelled.

It is evident that there is wide support for mandatory labelling of genetically modified food. However, ascertaining whether consumers actually use the information in purchasing decisions is difficult to assess and presents conflicting findings. The survey conducted by the Australian Consumers' Association found that 28% of people always check labels to ensure the food has not been genetically modified and 44% of people try to look for non-GM food. Together, this accounts for 72% of people that rely on the information on labels to avoid purchasing GM food. In another survey conducted in January 2002, 33% of people said that the presence of a GM label on a food would not alter their behaviour, 15% said they

would buy the GM food, whilst 41% said they would not buy the GM food (Biotechnology Australia, 2002). This was also investigated in May 2000 and at this time fewer respondents said they would buy GM foods (9%) while more respondents said they wouldn't buy GM foods (46%) (Biotechnology Australia, 2002).

By contrast, a FSANZ survey, in which a total of 1940 people in Australia and New Zealand were interviewed and considered GM food labelling together with other labelling elements, indicates that the use of GM food labelling is not a priority amongst consumers. In the survey Australian and New Zealand participants were asked to identify from 15 examples all the labelling elements they use, even if only occasionally, when purchasing food. Only 16% of respondents said they use GM food labelling which ranked eleventh behind labelling elements such as date marking, ingredients list and Nutrition Information Panels (NIPs) (FSANZ, 2003). Another New Zealand survey also found that participants ranked the importance of GM labels fifth after use by dates, ingredients, NIP and food additives (NZFSA, 2002).

The varied results from the surveys highlights that it is very difficult to assess whether consumer's support for mandatory labelling of GM foods in order to make an informed purchasing decision actually translates to the use of GM labels when choosing foods. Also, when GM food labelling is not considered in isolation, the recent survey undertaken by FSANZ would suggest that consumers place more emphasis on other labelling elements to inform product choice.

The food industry also has anecdotal evidence that may shed some light on consumer demand for and use of GM food labelling. A submission to this review from the Australian Food and Grocery Council (see Appendix B) stated that member companies have indicated that there is no significant customer demand for increased labelling with respect to GM foods or ingredients. They do note that whilst companies receive customer inquiries with regard to the use of GM foods and ingredients in products, this does not directly relate to requests for increased labelling detail. They also note that any increased customer inquiries correlate more with increased 'anti-GM' publicity. This is also illustrative of the situation in New Zealand. A submission from the New Zealand Grocery Marketers Association stated that member companies received few inquiries about GM foods on their customer service hotlines. Of the thousands of calls that large food manufacturing companies receive annually, approximately 2% or less of the calls relate to GM inquiries.

In summary, in Australia and New Zealand the majority of consumers want GM food labelling so that they can choose whether or not they purchase GM foods. There is also support among consumers in Australia for labelling that is process based which would mean labelling of all foods (including ingredients) that are derived from an organism produced using gene technology irrespective of whether novel DNA and/or novel protein is present in the final food. However it is difficult to determine the strength of the link between consumer demand for GM food labelling and actual use of GM food labelling in purchasing behaviour. It appears that consumers want to have the ability to choose whether they eat GM foods, whether they exercise that choice or not.

10.4 Consumer Attitudes to the Labelling of GM Foods in Other Countries

The information presented in this section is from a variety of different surveys and only provides an indication of consumer attitudes towards labelling of GM foods. The actual results of each of the surveys, along with the methodology employed and the sample size are included in the dot points below. The majority of APEC countries are not included in this discussion as surveys that explore consumer attitudes to GM foods in these countries were not available.

In the period between 2001 and 2003, surveys suggest that there is strong support for mandatory labelling in Hong Kong (97.7%) China (95%), EU (95%) and Australia (94%) (ABE 2003; ACA 2003; Hong Kong Food and Environment Hygiene Department, 2001 and Zhong, F., et al, 2002). In the USA and Canada, surveys indicate that consumer support has reached 92% and 85% respectively for the same time period (ABC News, 2003 and Government of Canada, 2003). In a New Zealand survey only 64% of people said that information on food labels was very important or important. However this survey also found that a large group (21%) were neutral and not prepared to state whether they thought it is an important or unimportant labelling element (NZFSA, 2002).

It is interesting that in Hong Kong China, where there is currently no mandatory GM food labelling regulation in place and it is proposed that a voluntary regime be employed, an overwhelming majority of consumers surveyed (97.7%) agree that GM foods should be labelled. The same applies to the USA and Canada that already allow voluntary labelling of GM foods.

Most recent data/survey sourced covering this issue (2001-2003 period)

- *Australia* – **Total of 94% of CHOICE Online members either strongly agree or somewhat agree that there should be comprehensive labelling of foods containing ingredients derived from gene technology or genetic modification**. This total is made up of 84% strongly agreeing and 10% somewhat agreeing *(ACA, 2003, data collected in September 2003, selected sample – Choice Online members were invited to answer 5 questions, 645 responses were received)*
- *New Zealand* – **A total of 64% of respondents thought that information about GM on food labels was very important or important.** This total is made up of 40% saying its very important, 24% saying its important *(NZFSA, 2002, data collected August 2002, questionnaire mailed out to randomly selected 'Consumer' magazine subscribers, 5366 responses received)*
- *EU* – **95% of respondents favour the labelling of GM crops and foods regardless of the stage of processing** *(ABE, 2002, survey conducted by Agricultural Biotechnology in Europe in July 2002, n=3,500, aged 18+ (France: n=700, Germany: n=700, Italy: n=700, Spain: n=700, UK: n=700))*
- *UK* – **94% of respondents said that foods with GM ingredients should be labelled as such** *(Consumers' Association (UK), 2002, quantitative data collected may 2002, questions were included in the BMRB's ACCESS Face-to-Face Omnibus survey, n=998 aged 18+)*
- *USA* – **92% of Americans said GE foods should have some special labels** *(ABC News, 2003, data collected in 2003, random sample, telephone interviews, n=1024)*
- *Canada* – **85% said Canada should introduce a new labelling system for GM foods** *(Government of Canada, 2003, telephone survey conducted by Pollara Research in March 2003, n=600)*
- *China* – **95% of Chinese support labelling of GM foods** *(Zhong, F., et al, 2002, telephone interviews conducted in July and August 2002, random sampling, n=480 valid interviews)*
- *Hong Kong* – **97.7% of people in Hong Kong agree that GM foods should be labelled** *(Hong Kong Food and Environmental Hygiene Department, 2001, public survey conducted by Mercado Solutions (Asia) limited in November and December 2000, telephone interviews n=2017 aged 15+)*

11.0 The Development of a Codex Standard for the Labelling of GM Foods.

11.1 The Codex Alimentarius Commission

The Codex Alimentarius Commission (Codex) was created in 1962 to implement the joint United Nations Food and Agricultural Organization (FAO) / World Health Organization (WHO) Food Standards Program. Membership in Codex is open to all member nations of the United Nations and currently 165 countries participate. Codex is the body responsible for compiling the standards, codes of practice, guidelines and recommendations that constitute the Codex Alimentarius (the international food code) setting the basis for internationally harmonised food standards for global implementation. During the past three decades or more, all important aspects of food pertaining to the protection of consumer health and fair practices have come under the Commission's scrutiny.

Once a Codex standard has been adopted, member countries are encouraged to incorporate the standard into any relevant domestic regulations and legislation. However, under the World Trade Organization Sanitary and Phytosanitary Agreement (WTO SPS), member countries retain the right to impose more stringent food safety regulations considered necessary to ensure domestic consumer protection, provided the different standards are scientifically justifiable and otherwise consistent with the WTO SPS rules.

11.2 Development of an Internationally Accepted Labelling Standard for GM Foods

The Codex Committee on Food Labelling, hosted and chaired by Canada, examines international food-labelling issues; drafts labelling provisions that are applicable to all foods; and endorses labelling provisions prepared by Codex Committees. Over the past 10 years, the Codex Committee on Food Labelling has been considering the issue of GM food labelling in an effort to develop a standard that has input from all member countries thus promoting international harmonisation. This work demonstrates the challenging process of developing a food standard with international consensus, particularly where member countries have already developed markedly different labelling policies. Furthermore, these differing labelling policies are subject to change at the national level, as has recently been demonstrated in the EU, resulting in a shift from a 'composition of final food' labelling regime to a 'method of production' labelling regime.

Whilst Codex has adopted a labelling standard for GM foods where an allergen has been introduced to a new food, and has adopted definitions in both the organic labelling guideline and in the draft *Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants*, progressing general labelling requirements has stalled.

Key elements under consideration by Codex Committee on Food Labelling are listed below and have been reflected over the years in a Draft Guideline Document (originally based on the recommendations by the Codex Executive Committee) and the Draft Recommendation document:

1. A *definition* of food obtained from modern biotechnology and the preferred term to be used on labelling, for example, genetically modified/engineered versus modern biotechnology.

2. Options for possible labelling regimes. The options put forward in recent times essentially reflect the different policy approaches in the USA and EU (pre-dating the new EU regulations that were adopted in July 2003).

   - Option 1 - mandatory labelling required where a GM food is no longer equivalent in terms of composition, nutritional value or intended use. Allergens and other components having health implications must be declared.

   - Option 2 - mandatory labelling required where:
     - a GM food contains protein and/or DNA resulting from gene technology; or
     - the GM Food is no longer equivalent to its conventional counterpart; in this case labelling requirements specified in Option 1 apply but also included is the presence of substances raising ethical, cultural or religious objections.

   - The following are also being considered in terms of a labelling regime:
     - threshold level in food for the presence of GM food below which labelling is not required (based on standardised testing),
     - threshold level for adventitious /accidental inclusion of GM foods.

The full summary provided by the Chairperson of Codex Committee on Food Labelling prior to the most Committee's recent meeting (31st session held in April 2003) outlining the 10-year effort to develop a standard for the labelling of GM foods is at Appendix G. The outcomes of the most recent session of the Committee are discussed below.

11.3 Outcomes of the 31st Session of CCFL (April – May 2003)

Given the difficulty the Committee had been facing in reaching consensus on the GM labelling of food issue, a proposal raised by the Chairperson to establish a smaller Working Group to develop options for the management of the Draft Recommendations and Draft Guidelines was supported at the 31st Session. It was agreed that the Group would meet between sessions as required and the summary of discussions as well as proposals submitted to the Group be circulated to all Codex members. Bearing in mind this decision, it was agreed to retain the Draft Definition and proposed Draft Guideline at their current stages in the standard formulation process, until further discussions take place at the next session of the Committee.

The Working Group comprises 23 member countries including Australia and New Zealand and held its fist meeting in October 2003. The working group considered only one option in detail, to provide mandatory labelling requirements to address safety and health issues and for significant differences in the GM foods, and optional labelling for method of production. Some members of the working group expressed reservations about aspects of this approach, and the matter will be put to the full session of the Codex Committee on Food Labelling for consideration in plenary at its next meeting in 2004.

References

1. ABARE 2003, *Market Access Issues For GM Products – Implications for Australia*, Department of Agriculture, Fisheries and Forestry – Australia, Canberra.

2. ABC News 2003, *Poll: Most in US Would Shun Labelled Biotech Foods*, www.abc.news.go.com

3. Australian Consumers' Association 2003, *Media Release: Consumers Say GM labels Aren't Good Enough*, http://www.choice.com.au/goArticle.aspx?id+103991&p=1

4. Agricultural Biotechnology In Europe (ABE) 2003, *European Views on Agricultural Biotechnology: An Overview of Public Opinion*, http://abeurope.dynamicweb.dk/images/files/abe_issues_paper_7.pdf

5. ANZFA (FSANZ) 2000, *GM Foods and the Consumer*, http://www.foodstandards.gov.au/_srcfiles/gm_and_consumer_pub02_00.pdf

6. Biotechnology Australia 1999, *Public Attitudes Towards Biotechnology, Yann Campbell Hoare Wheeler Research Study*, http://www.biotechnology.gov.au/library/content_library/BA_pYCHW.pdf

7. Biotechnology Australia 2000, *Media Release: Consumers After Choice on GM foods, Not Rejecting Them*, http://www.biotechnology.gov.au/content/controlfiles/display_details.cfm?ObjectID=443164A1-7F7B-410C-BD068DA14499A560

8. Biotechnology Australia 2001, *Biotechnology Public Awareness Survey Final Report, Milward Brown Australia Research Study*, Biotechnology Australia, Canberra

9. Biotechnology Australia, 2002, *Media Release: Survey Shows More Australians Would Eat GM Food Despite Concerns*, http://www.biotechnology.gov.au/content/controlfiles/display_details.cfm?ObjectID=443164A1-7F7B-410C-BD068DA14499A560

10. Cormick, C. 2003, 'What Does the Public Think About Gene Technology', Food Australia. Vol. 55 (10), p.453.

11. Council of Canadians 2000, *Press Release: National Poll and Cross-Country Protest Demonstrate Consumers Won't be Fooled by GE Foods*, www.biotech-info/canadian_poll.html

12. Food Standards UK 2003, *GM Labelling*, http://www.foodstandards.gov.uk/science/sciencetopics/gmfoods/gm_labelling

13. Foreign Agricultural Service/USDA 2001, *GAIN Report #CH1024 – China, Peoples Republic of, Biotechnology GMO Administration Regulation 2001*, USDA

14. Foreign Agricultural Service/USDA 1999, *GAIN Report #RS9057 – Russian Federation, Food and Agricultural import regulations and Standards, Russian Biotech Labeling Law 1999*, USDA

15. FSANZ 2003, *Food Labelling Issues: Quantitative Research with Consumers, NFO Donovan Research Report*, FSANZ, Canberra.

16. FSANZ 2001, *User Guide – Labelling of Genetically Modified Food,* http://www.foodstandards.gov.au/assistanceforindustry/userguides/index.cfm

17. Greenpeace, (unpub), *Australian Attitudes to Genetic Engineering , Survey by Taylor Nelson Sofres.*

18. Government of Canada 2003, *Public Opinion into Biotechnology Issues in the United States and Canada, Eighth Wave of Research by Pollara Research and Earnscliffe Research and Communications*, Government of Canada, Ontario.

19. Health Canada (unpub 2003), Standard for Voluntary Labelling and Advertising of Foods That Are and Are Not Products of Genetic Engineering (Third Letter Ballot Draft).

20. Health Canada, *Labelling of Novel Foods Derived through Genetic Engineering*, http://www.hc-sc.gc.ca/food-aliment/mh-dm/ofb-bba/nfi-ani/e_faq_3.html.

21. Hong Kong Food and Environmental Department 2001, *Report on Food Safety Survey*, www.fehd.gov.hk/publications/text/foodsurvey/

22. Institute of Food Research 2002, *Public Preferences for Labelling of GM Food*, www.ifr.bbsrc.ac.uk

23. Korea Food and Drug Administration (unpub 2001), *Labeling Standard for Genetically Modified Foods (Unofficial Translation*), KFDA, Seoul.

24. Korea Food and Drug Administration (unpub 2001), *Labelling Requirements for Genetically Modified Foods*, KFDA, Seoul

25. Market Attitude Research Services 2001, *2001 Global International Food Issues Monitor: Australia*, MARS, Sydney

26. Ministry of Health, Labour and Welfare, *FAQs on Labelling System for Genetically Modified Foods*, http://www.mhlw.go.jp/english/topics/qa/gm-food/gm1.html

27. Ministry of Health 1999, *Media Release: Genetically Modified foods Labelling Decision in Line with Consultation Results,* http://www.moh.govt.nz/moh.nsf/7004be0c19a98f8a4c25692e007bf833/8908632c1a1759d84c2567c3002ca1ca?OpenDocument

28. New Zealand Food Safety Authority 2003, *Assessment of Compliance with Standard 1.5.2 – Food Produced Using Gene Technology*, http://www.nzfsa.govt.nz/labelling-composition/publications/reports/assessment-of-compliance-1-5-2/index.htm

29. New Zealand Food Safety Authority, 2002, *Consumer Use of Food Labels, A Report by Consumers' Institute for NZFSA*, NewZFSA, Wellington

30. Owen, K., Louviere, J. and Clark, J. 2002, *The Potential Impact on Agricultural Producers of Responses to Genetically Modified Products*, Rural Industries Research and Development Corporation, Canberra.

31. Roy Morgan Research 2003, *In Australia, UK, Most Try to Avoid Genetically Modified Foods; New Zealanders and Americans Divided*, www.roymorgan.com/news/polls/2003/3652/

32. Small, B., 2003, *Consumer Attitudes to GM Changing, Survey Finds*, www.lifesciencenetwork.com

33. Thailand Ministry of Public Health 2002, *Unofficial Notification of Ministry of Public Health (No.251) B.E. 2545. Re: Labelling of Foods Obtained through Certain Techniques of Genetic Modification/Genetic Engineering*.

34. The Center for Food Safety 2002, *Compilation and Analysis of Public Opinion Polls on Genetically Engineered (GE) Foods (Updated February 1, 2002),* www.centerforfoodsafety.org/facts&issues/polls.html

35. The TAG Working group on GM Food Labelling 2003, *Australian Pilot Survey of GM Food Labelling of Corn and Soy Food Products*, www.foodstandrds.gov.au/_srcfiles/GM_Survey_Report_Final_for_website.doc

36. Zhong, F., Marchant, M., Ding, Y. and Lu, K. 2002, *GM foods: A Nanjing Case study Of Chinese Consumers Awareness and Potential Attitudes*, www.agbioforum.org/v5n4/v5n4a02-ahong.htm

APPENDIX A

Consultation Questions for the Review of GM Labelling of Food and List of Identified Stakeholders

Consultation Questions

1. Are you aware of any international developments, particularly in the EU, USA, Canada and APEC countries, regarding the regulation of GM labelling of food and ingredients since Standard 1.5.2 in the Australia New Zealand Food Standards Code came into effect on 7 December 2001?

2. How do these labelling regimes compare to the Australia/New Zealand standard?

3. Are you aware of any published consumer research in Australia and New Zealand that examines consumer attitudes in relation to the labelling of GM foods? (If possible, please make these studies available to FSANZ).

4. Are you aware of any published consumer research in the countries listed in question 1 that examines consumer attitudes in relation to the labelling of GM foods?

5. How do consumer attitudes towards the labelling of GM foods and ingredients in Australia and New Zealand compare to consumer attitudes in the countries listed in question 1?

6. In relation to TOR 5), you may wish to comment on the implementation, compliance and enforcement of Standard 1.5.2 in respect of labelling. If so please provide evidence in support of your comment.

List of Identified Stakeholders

AUSTRALIA

1. ACF GeneEthics Network and Australian Conservation Foundation*
2. AGRI Food Awareness Australia*
3. AusBiotech Limited
4. Australian Barley Board
5. Australian Chamber of Commerce and Industry (ACCI)
6. Australian Consumers Association*
7. Australian Food and Grocery Council*
8. Australian Industry Group
9. Australian Medical Association*
10. Australian Oilseeds Federation
11. Australian Wheat Board*
12. Avcare*
13. Biotechnology Australia*
14. Dieticians Association of Australia*
15. Food Regulation Standing Committee Members*[1]
16. Greenpeace Australia Pacific Ltd*
17. National Council of Women Australia
18. National Farmers Federation*
19. Public Health Association of Australia*
20. The Institute of Health and Environmental Research Inc*

NEW ZEALAND

1. Consumer Institute of New Zealand Inc*
2. ESR
3. Federated Farmers
4. Greenpeace NZ Inc
5. Health Promotion Forum
6. Meat Industry Association
7. Medical Council of New Zealand
8. National Council of Women of New Zealand*
9. New Zealand Citizens' Advice Bureau Inc
10. New Zealand Dietetic Association
11. New Zealand Grocery Marketers Association (Inc)*
12. New Zealand Medical Association
13. New Zealand Seafood Industry Council
14. Poultry industry Association of NZ
15. Public Health Association of NZ
16. Royal Forest and Bird Protection Society
17. Safe-Food Campaign
18. Wellington Regional Chamber of Commerce

*Indicates that a submission was received

[1] Submissions provided by the Australian Capital Territory Health, New South Wales Health (Safefood NSW and NSW Agriculture), South Australian Health and Victorian Government (several Departments).

APPENDIX B

Summary of Submissions to the Review of Labelling of GM Foods

Submissions in this summary have been categorised according to country and the following stakeholder representational groups:

- Government;
- Individual Consumers;
- Industry;
- Public Health Professionals; and
- Other Organisations

The order of summarised submissions in each category are alphabetical. With regard to the Individual Consumers category, the summary it is ordered alphabetically based on the surname of the submitter. In some cases, a single summary appears against all the names of individual consumers that raised the same issue(s) in their submissions.

For the purposes of this summary, where submitters have used the term GE (for Genetically Engineered/Genetic Engineering) this has been used in the summary instead of the standard GM (for Genetically Modified/Genetic Modification). The same approach applies to the acronyms GMO (Genetically Modified Organisms) and GMF (Genetically Modified Food).

AUSTRALIAN SUBMISSIONS

Government

Name	Summary
ACT Health	• Considers current GM food labelling regime adequate, serving consumers and benefiting industry by restoring confidence in food industry and allowing informed choice.
Biotechnology Australia	• Provided a list of 36 possible sources of consumer attitude information. • Also provided short comment on behalf of Industry Department: Businesses have already implemented GM food labelling standard as required and any change to standard would create unnecessary regulatory burden. Changes should be minimised and industry representatives consulted about any changes to regulation.
NSW Health; Safefood NSW and NSW Agriculture	• Notes that Brazilian government is submitting a draft bill to Congress to regulate the growing and sale of GM food. Will be treated as priority, allowing debates and a vote within 45 days. Expecting that the government's position on GM soy should be clear before summer crop planting season. Despite ban on planting and commercial sale of GM crops, black market GM soybeans have been widely planted. Sale of illegal GM soy allowed until early next year. • Draws on anecdotal evidence suggesting that majority of consumers have impression that local laws are not as comprehensive as corresponding international laws, perhaps with exception of US. • Correspondence received by NSW Health prior to review indicates consumer organisations, as well as activist environmental organisations demand tightening of labelling requirements to include those foods exempted by existing requirements. • NSW is in full agreement with report published by National Genetically Modified Food Labelling Working Group of TAG, of which NSW Health was a participating member.
Department of Human Services – South Australia	• SA has recently been involved in the 'Australian Pilot Survey of GM Food Labelling of Corn and Soy Food Products' (report attached to submission). • Survey conducted in two parts: testing for presence of GM material in foods, and assessing documentation systems. Information was collected in relation to the existence and type of documentation systems maintained by businesses and whether the GM status of foods was recorded or tracked in any way. • In summary, survey finds systems range from extensive to non-existent.
Victorian Government (Whole of Government submission)	• Understands that the EU has softened its stance on GM but admits to lack of time to research this fully. • Notes changes to EU legislation requiring producers to trace all GM organisms and to label products if containing more than 0.9% GM. • Believes Australia/New Zealand are among the few countries to have GM food labelling. • Notes Australia's 1% labelling requirement and that EU has not allowed any exceptions, unlike Australia/New Zealand. • Provides links to various consumer research sites: www.which.net/campaigns/food/gm/index.html (UK Consumers' Association); www.ifr.bbsrc.ac.uk/science/ScienceBriefs/public_pref.html (study examination attitudes of Norway, Italy and England); www.cbc.ca/consumers/market/files/food/cac_gmo//index2.html (Canadian Consumers' Association article); www.which.net/campaigns/food/gm/findings/html (findings on UK consumer attitudes to GM food); www.greenpeace.ca/e/campaign/gmo/documents/Labelling.pdf (Canadian polling data from 1994-2002 on GM food labelling). • Notes that the Gene Ethics Network claims 90% of Australians are against GM food. • Believes most consumers support mandatory labelling and reject voluntary labelling; want even undetectable GM ingredients to be labelled; stand to benefit least from use of GM technology; are not satisfied that manufacturers have not removed GM material from products; think GM free

Name	Summary
	labelling should only be used on foods which have had no contact with GM material throughout production; feel there is not enough information on GM technology. • Notes that at least one study listed above indicates that consumers require GM food labelling for foods where labelling is not usually required (i.e. unpackaged foods).

Individual Consumers

Name	Summary
Ajani, Shushila	• Believes untested GE foods are unlabelled. • Wants to see a strict and comprehensive labelling regime. • Animals fed on GE animal feed should be labelled accordingly as should GE soy infant formula. • There are too many exemptions in the current regulatory system. • Notes EU labelling regime and supports its recognition of consumer choice, health and environmental concerns. • Wants to see full traceability. • Tolerance levels for detectable GE ingredients should be reduced to the smallest percentage.
Alexander, Bev; Connor, Shaun; Ganton, T.; Gooding, Wendy; Hadden, D.; Harmer, Tarryn; Kelly, Margaret; Kemp, Suzanne; Kinnear, Dallas; Livermore, Cathy; Medworth, Yvette; Thoresen, Marguerite; Tonkin, Margaret; Wilhelm, Linda	• Are very concerned that governments allow most GE foods to be unlabelled. • State that Standard 1.5.2 should require all foods made using GE to be labelled and the standard has failed, as foods made using GE are unlabelled. • Are unable to find GE soy, corn, canola or cottonseed on labels. • State that Australia should adopt Europe's labelling laws that require GE labelling.

Anderson-Oliver, Mitra; Andrado, Bianca; Arrowsmith, Sarah; Azzopardi, Paula; Balbi, Soo; Balazs, Emma; Barker, Amanda; Beinat, Lyn & Maurice; Bekiaris, Violetta; Blake, Jenny; Bower, Deborah; Bradbrook, Samantha; Brooker, Tania; Brooks, Kim; Burdekin, Sarah; Burnham, Karen; Burns, Jenne; Chenery, Stephen; Chresta, Lars; Collins, Sue; Collins-Franchi, Lily; Connable, Brett; Cooke, Anna; Coupe, Jacqueline; Cowlam, Cassi; Craig; Craswell, Alison; Cross, Janine; Crowfoot, Alex; Daisley, Norma; Dau, Peter; Dave & Di; Deacon-Haigh, Julie; Deighton, Judith; Denham, Ann-Marie; Dickason, C.; Dickson, Ilona; DiTeodoro, Sonia; Dixon, Ian; Earney, Lynda; Ennis, Christiena; Faldt, Kathy; Field, Catherine; Fischer, Lucie; Franchi, Peter; Geach, Leann; Geach, Simon; George, Jessica; Glover, Colin; Graham, Alice; Graham, Paul; Grace, Nicholas; Grogan, Janet; Grose, Debbie; Grose, Scott; Harrer, Sonja; Harrison, Elske; Hill, Deanne; Hindmarsh, Karlene; Hines, Kathryn; Honey, Rachel; Horridge, Rebecca; Hoye, Jasmine; Hubbard, Grahame; Hubbard, Sharon; Isaacs, Sarah; Jancey, Narelle; Jennings, Lyndall; Johnson, Elaine; Jolly, H.S.; Jones, Melissa; Jones, Ven; Kanost, Dawn; Kelley, Sharon; Kenyon, Leo; Killick, Frank & Ann; Killick, Evelyn; Kingston, Allan & Lynda; Klerides, Spiros; Knerr, Konrad; Knox, Peter; Kousidis, Poppy; Kyriacou, Sam; Lackey, Kate; Lambert, L. A.; Lambert, Sharon; Lapthorne, Siobhan; Lee, Monette; Lehmann, Melissa; Lindsay, Glenda; Lorimer, Nadine; Lowe, James; Luddington, Sarah; Mahony, Ananda; Malling, Waverley; Manicaros, Mathias; McClure, Trina; McElroy, Rebecca; McMillan, Danuta; McNab, Maureen; McManamon, Jacinta; McWilliams, Wendy;	• State that consumers have a right to know whether they are eating food produced from GE ingredients and the current GE labelling system in Australia does not fulfil this requirement.
	• State that they do not want GE food anywhere in the food chain.
	• State that Australia must introduce a fully traceable food labelling regime for GE foods that includes:
	  o mandatory labelling for all food derived from GE crops (including highly processed oils and starches);
	  o all products from animals fed GE food; and
	  o all animal feed derived from GE crops.
	• Believe that Australia should follow the European legislation, which comes into force in September 2003, which will require the labelling of all foods derived from GE crops.

Name	Summary
Meckel, Martina; Meares, Christine; Meleisea, Ellen; Mildren, Suzanne; Moody, Kim; Mott, Sue; Mullings, Christie; Norcott, Felicity; Novak, Tibor; O'Meara, Francine; Ong, Ben; Osborn, Kaye; Osboldstone, Glenn; Oseckas, Tim; Otmar, Irene; Parsons, Richard; Paterson, Sara; Patterson, Narelle; Paton, Pete; Pena-Dufour, Jaya; Peters, Donella; Peterson, Vanessa; Pill, John; Poulakos, Andria; Poulakos, Bette; Poulakos, Jenny; Pride, Vicki-Lee; Purnell, Lisa & Scott; Rabl, Lucy; Radford, Peter & Robyn; Rees-Osborne, Susan; Reh, Erik and Ely May; Reid, Emma; Resch, Gerhard; Rickenbach, U.; Sihan, Jonathan; Rodrigues, Alan; Ross, Skye; Russell, Susan; Rutherfurd, Sonya; Sabadini, Anna; Scott, Jessie; Sheilds, Mike; Sholakis, Kerren; Staddon, Valerie; Mark; Suares, Yvonne; Swift, Susan; Tasmanian Environment Centre (Steadman, Magaret); Taskis, Wendy; Tomasulo, Lesley; Trevere, Fabienne; Turner, Brett; Ven Jones, Kelly; Valerie; Wagner, Roger; Walker, Ben; Wallwork, Jessica; Watkeys, Stephanie; Ward, Anna; West, Sharan; Wong, Marian; Wyld, Anne; Wyse, Elizabeth; Zubkov, Denis	
Anne, Linda; Blain, Leonie; Bowler, Jeremy; Brett, Peter; Daisley, B; Des, Carmel; Dunne, Isla; Edge, Wendy; Emerman, Marsha; Grevillea, Janet; Haas, Peter; Ho, Joakim; Matt; Ivory, Megan; Kaba, Songul; Kern, Kris; Kidd, Julie; Lewis, Jo; Lo, Brendan; Luque, Ariella Mata; Lyssa, Alison; Madigan, Peter; Maini, Margherita; Manokore, Trevor; Manser, Melanie; McGee, Andrew; Moritz, Gai; Murphy, Pat; Osbourne, Don; Penfold, Chris; Pfingst, Jason; Sinclair, Phillip & Stephanie; Toll, Kate; Turner, Eloise; Ward, Lauren; Weale, Ben; Wright, Janine;	• Wants to see comprehensive labelling laws for GM in Australia.
Bagnall, Lyn	• Believes GE foods are being sold unlabelled and expresses concern over long term safety.
Barry, Nicky	• Concerned about long-term health implications of GM. • Wants to see two-tiered labelling structure. Firstly, that a product contains GM and secondly, what percentage of GM.
Bates, Pam	• Products derived from GE must be labelled in large print. • Consumers must have the right to choose not to eat GE products.
Berry, Louise; Dominguez, James; Lappin, Natasha; Shaddick, Dale	• Opposed to GE foods. Wants to see compulsory labelling. • Concerned about long-term health implications.
Birch, Chris	• Is Coeliac and concerned about the effects of GM Canola on people with this health problem. Wants to see GM Canola adequately labelled.
Blair, Joanne	• Wants to see comprehensive labelling, including statements on the front of packaging, not hidden in the NIP. • Would like to see sellers of fresh produce displaying signs declaring if any GE produce is sold in store. • Believes the public are being misled on GE content in food.
Blair, John	• Wants to see mandatory labelling for all foods derived from GE crops including oils and starches and foods produced from animals fed on GM feed. • Would like to see Australia adopt the EU labelling regime.
Blair, Louise; Pratley, Dean	• Wants to see a full and comprehensive labelling system for GM foods. • Notes wide range of exemptions in Australia and expresses health concerns. • Would like to see Australia adopt a system similar to EU labelling regime, including animals fed on GM feed.
Blakey, Catherine	• Believes all food, raw, packaged, stock feed or fertiliser should be labelled if containing GE material. • Supports EU labelling regime and wants to see fully traceable labelling in Australia including starches and highly refined products. • Should also include clothing and tampons made from GE cotton.

Name	Summary
	• Believes there are loopholes in the system.
Bodame, Christopher; Gargula, Amanda; Newton, Marie	• Opposes GM food • Believes not all GM foods are labelled correctly and supports mandatory labelling
Bombak, Robert; Howell, Pauline; Plant, Louise	• Opposes GM food in Australian food supply
Bonney, Sandra; Blackwell, Linda; Goulding, Vicki; Hawkes, Helen & Dellas Anne; Henry, James; Jacobs, Margaret; Muir, Alex; Neal, Sarah; Saal, Jenny; Vilnis, Melanie;	• Wants a comprehensive and accurate labelling system, including for canola oil. • Wants to see Australia follow the EU labelling regime.
Bradley, Ron, Rolfe, Dixie, Scott, Marie	• Supports mandatory labelling of all GE foods • Supports Australia adopting EU labelling laws
Brett, Susan	• Cites BSE in UK as an example of misuse of food. • Wants to see comprehensive labelling of GE foods. • Wants to see Australia follow EU labelling regime.
Brown, Jamie	• Concerned about environmental contamination. • Believes current labelling laws do not provide adequate information to consumers • Wants to see a fully traceable food labelling regime and adoption of EU system in Australia.
Bujeya, Darren	• Supports protection of human health from potential illness caused by GE. • Supports large and eye catching labelling on all products containing GM material
Burdekin, Sarah; Di Teodoro, Sonia; Klerides, Spiros; Kyriacou, Sam; Poulakos, Andria; Poulakos, Bette; Poulakos Jenny; Sholakis, Kerren	• State that they would like a freeze on all GE foods and are appalled that Australia has such a relaxed and unethical approach to such an important issue.
Calitz, Rick	• All GE foods should be labelled. • Labels should be standardised, and consideration given to those with poor eyesight. • Funding should be made available to publicise the new labelling. • Fresh produce should have clear labels on the side of packages and boxes. • Oils, extracts, flavourings etc should be labelled where GM is present. • Instructions on how to obtain more details about GE should be included on labels.
Carroll, Peter; Crouch, Nick; Schwartzeberg, Kellby	• Supports mandatory labelling of all GE Food • Believes GE foods are currently unlabelled in Australia
Chindarsi, Rachan	• Notes that long-term health effects are unknown.

Name	Summary
	• Would prefer complete ban on GE but would settle for full and comprehensive labelling wherever GE occurs in the food chain. • Australia should "upgrade" its laws to reflect those adopted by the EU.
Clark, Louisa; Stubbs, Tamara; Sullivan, Sally; Warren, Denise;	• Wants to see all products, including oils and starches and animal feed, labelled when GM is present.
Clarke, Stewart; Duffy, Leo; Flanagan, G.J.; Wright, Lee; Wood, C.; Woods, Pam	• Foods containing GM ingredients should be labelled accordingly. • Notes EU labelling regime.
Cleland, Deborah	• Believes GM food is unethical, unsustainable, unhealthy and dangerous. • Wants to see a major overhaul of food labelling laws in Australia with mandatory labelling of GM products, including animals fed on GM feed. • Wants to see Australia follow EU labelling system.
Clements, Anna	• All foods derived from GM crops should be labelled accordingly. • Believes current labelling laws are weak and ineffectual.
Cohen, Ian	• Believes Australia's labelling regime contains loopholes, restricting consumer choice. • Notes that canola oil derived from GE should be labelled. • Australia should adopt the EU labelling regime. • Notes consumer opposition based on religious, ethical and moral reasons.
Cole, Caroline	• Concerned that the review was not widely advertised. • Concerned about safety of GM foods. • Notes various risks connected with gene technology including herbicide and resistance use of animal vaccines being incorporated into GM crops etc. • Provides links to various online articles and studies opposing GM foods.
Collett, Claire	• Believe loopholes in present labelling regime allow foodstuffs with high GE content to go unlabelled • Supports consumer's right to know what they are eating • Opposes GE presence in the food chain, including cross-pollination. • Supports fully traceable food labelling regime • Supports Australia adopting regime comparable to EU labelling laws
Costis, Nina; Ruiner, Shane	• Believes most GE foods are unlabelled. • Cannot find GE soy, corn or cottonseed labelled. • Concerned about unknown health risks.
Craig, Athol & Skaidra; Deakin, Philip; Duffy, Leo; Easton, Peter; Grey, Barbara; Griffis, M; LeRoy, Tony; MacPherson, Jenny; Mallett, Rob; Misselbrook, Janet; Nelson, Janet; Nitekahua; Palmer, Michael & Geraldine;	• State that they do not want GE foods in Australia as they have been shown by independent scientists to pose very serious risks to both human and environmental health. • State that reassurances of their "safety" on both counts by Government agencies and GE companies are simply a lie as no adequate long-term studies have been done. • State that they cannot and do not trust the "scientific data" that is provided to them through mainstream channels as it is biased by vested interests being conducted by the same GE companies who want to force this "food" on them in the first place. • Exercise their basic human right to have freedom of choice over the foods they eat and refuse GE foods. • Demand clear labelling if the so-called "democratic" government and multi-national biotech. GE food companies attempt to foist GE foods upon

Name	Summary
Tonkin, Jill; Webb, Valerie; Wilcock, Ken	them through dishonest ie no labelling.
Crowfoot, Alex	• States that new GE labelling laws coming into force in Europe in September ensures all foods derived from GE will be labelled. This shows that: o it is fully possible, and feasible; and o any exports from Australia will have to be labelled anyway. Adopting this legislation will make it much easier for Australian exporters and will demonstrate an aligned commitment which can only help our exports.
Cumming, Lara; Howard, Therese	• Wants to see total GM content of foods on labels. • Would like to see Australia adopt the EU labelling regime.
Davine, Richard; Zutt, M.	• Opposed to any GE food being produced or imported into Australia.
Dodd, Joanne	• Concerned about health risks, in particular allergies. • Wants to see a fully traceable labelling system, including starches and highly refined products. • Notes EU labelling laws and supports Australia adopting something similar.
Dods, Rachelle; Forrest, Kerry; Judi and Gwilym; Lillicrap, Christian; Payne, Steve	• Is concerned about any GE ingredients being in foods without adequate labelling and would like all GE ingredients, however small, to be listed on labels. • Would like our labelling laws to mirror the recently introduced laws in Europe where all products derived from GE crops must be labelled, including cooking oils and GE animal feed.
Domaschenz, Linda	• Café owner concerned about providing GM free foods to customers. • Concerned about litigation issues if unknowingly selling GM foods.
Douglas, J.; Humphries, Owen; Lunn, Ray; South, Helen	• All GE foods should be labelled accordingly.
Dunn, Samantha; Ruditsch, Leanne	• Concerned that most GE foods are unlabelled. All foods derived from GE must be labelled no matter the quantity in the final product. • Australia should adopt the EU labelling regime.
Endean, Colin	• Believes Australian labelling regime does not provide enough consumer choice on GM. • Is a certified producer of organic olive oil – produce must be GE free. Canola oil competes with olive oil and therefore canola oil produced from GE seed should be labelled accordingly. • Wants to see a fully traceable labelling regime for all foods derived from GE crops. • Believes Australia should adopt the EU labelling regime.
Ennich, Edeltraud; Taylor, Stephen	• Believes Australian labelling regime does not provide enough consumer choice on GM. • Is a certified producer of organic olive oil – produce must be GE free. Canola oil competes with olive oil and therefore canola oil produced from GE seed should be labelled accordingly. • Wants to see a fully traceable labelling regime for all foods derived from GE crops. • Believes Australia should adopt the EU labelling regime.
Ennis, Christiena	• Wants to see more comprehensive labelling, including GE food traces and animals fed on GM animal feed
Errol, Vanessa; Kerr, Alex	• Supports the consumer's right to complete information. • Opposes GM for spiritual, gastronomic and environmental reasons. • Wants to see all foods derived from GE crops labelled accordingly.
Feeney, Fiona	• Wants to see more comprehensive labelling, including animals fed on GM animal feed.

Name	Summary
Ferguson, Georgina	• Opposed to GM for health reasons, including reduced effectiveness of antibiotics and increase in allergens. • Opposed for environmental and ethical reasons. • Notes Taylor Nelson Sofres study in 2001 in which 65% of respondents opposed GM.
Fukofuka, Ofa; Naylor, Joanne	• Wants to see all foods containing GM labelled accordingly. • Believes there is a lack of consumer choice.
Gallie, Saja	• Concerned that Australian labelling laws will be negotiated away in the Free Trade Agreement.
Gassner, Martina	• Notes unknown factors relating to safety of GE foods. • Wants to see a fully traceable labelling system for GE foods and the adoption of the EU labelling system.
Geach, Leann	• States that she is concerned for the health of her unborn baby and would be like to be able to avoid GE foods during her pregnancy but current labelling laws are denying her this wish.
Gibson, Helen; LoRicco, Shannon	• Believes Australia's labelling laws are weak regarding GM food. • Will continue to protest against GM food by buying organic food only.
Gleeson, Hogan	• Potential risks of GE foods may well outweigh the short-term economic or political gain.
Gleeson, Rachel	• Believes Australian labelling laws are not stringent enough. GM foods should be fully labelled and that Australia should adopt the EU standards.
Gormley, James; McBride, Corrine; Mikus, Samantha	• Believes most GE food is not labelled accordingly. • Supports full labelling of where GE food is present. • Believes Australia should adopt EU labelling laws.
Grimes, Michael	• Believes that most GE foods are unlabelled. • Believes the government is proceeding on the basis that GE foods are not harmful.
Grundy, Ken	• Notes that gene technology may not necessarily be a negative. It may allow for increased nutrition but labelling is still required for those who wish to avoid GM foods.
Gunter, George; Scarman, Gabrielle	• Wants to see more comprehensive labelling. • Opposed to growing or importing GE products. • Believes GE foods are not currently labelled in Australia. • Notes EU labelling laws and would like to see Australia adopt the same.
Guy, Graham	• All GM foods must be labelled in large print, including cattle fed with GM animal feed. • Notes health, religious, ethical and environmental concerns. • Should be heavy fines for failure to comply. • Organic alternatives should be available at a competitive price.
Gwen & Jen	• Wants to see a fully traceable labelling system and expresses concern about safety issues.
Halliday, Rick	• Supports Australia adopting labelling regime comparable to EU
Hammial, Phillip; Welch, Anne	• Express concern that the Free Trade Agreement will allow the US to export unlabelled GM food products to Australia and New Zealand . • State that they do not want GM food anywhere in the food chain. • State that they want a fully traceable food labelling regime for GE foods that includes: o mandatory labelling for all food derived from GE crops; o all products from animals fed GE food; and o all animal feed derived from GE crops.
Harant, Gerry	• Would like to see a stricter labelling regime for GM on the following grounds: o no discernable advantage to small-scale agriculture;

Name	Summary
	○ exports to countries having a strict regime are going to be adversely affected; ○ imported products labelled as GMO free will have an advantage; and ○ unlabelled produce will ultimately be unsaleable.
Harding, Graham	• Consumers have a right to full choice • Where export product labelling requires a higher standard of disclosure, that higher standard would be adopted for Australian consumers. • All products derived from the GM process must be labelled.
Hedger, Greg	• Concerned about lack of labelling for GM derived canola oil. • Wants better labelling standards in Australia (notes EU labelling regime). • Wants a fully traceable labelling regime including highly processed starches and oil and animals fed on GM animal feed. • Concerned about the amount of lobbying of FSANZ by parties with a vested interest in GM technology, promoting products as safe. Concerned about the long-term health implications.
Hedley, Barbara; Jans, Diana; Rush, Emma	• Wants mandatory labelling for GM foods, and for it to be fully traceable and include oils, starches and animals fed on GM feed. • Concerned about long-term health implications.
Hegarty, Jane	• Wants to see government take a stronger stance on GM food labelling. • Concerned about health implications, in particular with allergies. • Believes insufficient research has been conducted into cross pollination issues and ecological damage.
Hellwig, Melissa	• Believes consumers have a right to know what they are eating and that Australians may be unknowingly eating GE food. • Believes current labelling is inadequate. There should be "may contain" statements on packaging. • Supports Australia adopting similar regime to that of the EU.
Hill, Hemi	• Believes consumers have a right to know content of all food. • Believes present labelling standards for GM food in Australia are inadequate. • Believes Australian consumers are not protected and that Monsanto is testing potentially harmful bioproducts on Australians. • Believes GM products contain viruses.
Hogan, John	• Unsure that eating GM is actually harmful but believes clear labelling is still essential. • Believes FSANZ is doing a great job.
Hooper, Christine	• Opposes GM foods. Believes Monsanto is controlling the industry.
Hopper, Peter	• Concerned about products made from animals fed with GM animal feed. • Would like to see Australia adopt EU labelling laws.
Ingram, KJ	• Would like to see Australia comply with EU legislation.
Ireland, Chris	• Works as a molecular biologist – wants to see complete choice for consumers with clear and adequate information on labelling. • Notes exemptions for highly processed foods and foods derived from animals fed GM feed. Wants to see process based labelling. • Consumer choice is important in this case because of the insufficient data that's been collected on long-term safety. • Notes EU labelling regime and believes Australia needs to have the same system.
Itter, Klaus	• Wants to see all loopholes closed, zero GE content in all foods, if not then declared otherwise, Australia to follow EU labelling regime, Australia to have a fully traceable food labelling regime including preservatives, oils, starches etc, all products derived from animals fed GE feed to be labelled, GE content labelling, consumer choice.
Ivancsik, Fiona	• Believes Australia should adopt EU labelling regime.
Jackson, Margaret	• Has a long history of studying GM food (university degree).

Name	Summary
	• Believes GE is inadequately researched, infiltrated into the food chain from USA, promoted for corporate greed, reducing choice and degrading food quality. • Believes it will not be possible to eat organic foods in the future as GE contaminates seed stock and the food supply. • Wants to see full GE labelling in Australia.
Joseph, Jeff; Wright, Anatara	• Concerned about health implications of GM food. • Wants more consumer choice.
Kentz, Maryanne	• Supports mandatory labelling of all GE foods. • Believes GE foods are presently unlabelled. • Supports Standard 1.5.2 being amended to ensure all GE foods are labelled
Killick, Alistair	• Would like to see the following not exempted from GM food labelling: o highly refined foods where novel DNA and/or protein has been removed; o processing aids and food additives; o flavours which are present in a concentration of less than or equal to 1%; and o food prepared at the point of sale. • Raises concern over safety and ecological issues. • Notes labelling on cornflakes packets stating it is "enriched with Super Corn" which does not explicitly state it is a GMO.
Knotts, Christine	• Wants to see a fully traceable labelling regime, including highly refined products and products from animals fed GE feed. • Would like to see Australia adopt the EU labelling regime.
Langley, Lillian	• Refuses to buy or eat imported food as its GE status is unclear. • Believes America is trying to force its food onto Australia as Europe and Africa have refused to take it. • Concerned about peanut allergy being made worse through GE foods.
Lashko, Anna	• States that recent changes to European legislation require that all GM foods, including highly processed foods such as oils have to be labelled. Additionally, all GM animal feed will have to be labelled and the level of allowable accidental contamination lowered from 1% to 0.5%. Similar regulations have been adopted in China. These regulations are tighter than the current Australia/New Zealand standard and the European reduction in the allowable level of accidental contamination means that their allowable level is half of the allowable level in Australia and New Zealand. • Strongly believes that individual consumers must be given the right to make the decision themselves whether or not to purchase GM foods. Therefore labelling laws need to be comprehensive in order to give consumers maximum information on which to base their decision. • Believes that all foods involving GM at any stage in the food chain needs to be labelled including: o highly processed foods such as oils, starches and other refined ingredients; o animal products (meat, milk and eggs) derived from animals that have been fed GM food; and o foods with any amount of GM ingredient, so that there is an incentive to take all measures to avoid accidental contamination. • Suggests a labelling system incorporating two levels or ratings of GM foods; one in which the product contains GM ingredients; and one in which GM foods have been involved somewhere in the food chain although GM ingredients are not present in the final product.
Leroyer, Serge	• Believes Australia's labelling system does not meet the needs of consumers. • Wants to see a fully traceable food labelling regime including mandatory labelling for all foods derived from GE crops, including highly refined products and for all products from animals fed GE feed.
Lewis, Dina	• Believes all products containing GM ingredients should be fully labelled. • Concerned about cross-pollination between GM and non-GM crops.

Name	Summary
Lingham, Mark	• Notes EU labelling regime. • Believes motivation for GE is purely economic, with no science base in the introduction of it into the food supply.
Lock, Kristen	• Wants more information to enable greater choice. • Concerned about Australia's economic position and the impact of GE foods in trade. • Wants mandatory and fully traceable labelling.
Lowe, Kate	• Believes there is an absence of appropriate labelling of GM foods in Australia. • Foods containing GM ingredients must be labelled correctly. • Concerned about the long-term effects of gene technology. • Would like to see Australia adopt EU labelling regime.
Mackenzie, Mairi Anne	• Labelling of GE food is necessary to allow people to support non-GE, responsible trade and agriculture. • Believes GE food is environmentally damaging and so further investment in GE crops should be discouraged so as to minimise the outlay that Monsanto and similar companies recoup from GE technology. • All GE foods should be labelled.
Maguire, Richard	• Opposed to removal of requirement to label presence of GM material. • Believes GM poses potential and as yet unknown threat to human health. • Believes the vast majority of consumers world wide do not want GM food in the food supply. • Concerned that unlabelled GM foods for export may affect the Australian economy and its farmers. • Concerned that removing GM food labelling would reduce consumer choice. • Believes financial benefit to producers who grow GM crops is questionable. • Concerned about the spread of material from a GM to a non-GM crop. • Believes removing the GM food labelling requirement would provide no cost benefit to consumers. • Believes only large corporations such as Monsanto would benefit from removal of GM food labelling. • Supports inquiry into effectiveness of current labelling regime.
Mann; West, Harley	• Wants mandatory labelling of GM foods to enable greater consumer choice.
Markowski, Jo-Ann	• Supports mandatory labelling of all GE foods. • Believes GE foods are unnatural, detrimental to human health and that environmental effects are unknown. • Supports consumer choice.
McCann, Dianne	• Fears the possibility of unknowingly eating GE foods. Wants explicit and accurate labelling.
McCready, Kevin	• Food containing even the most minute amounts of GM product should be clearly labelled as such. • Current exemptions for oils and starches are unacceptable. • Won't buy products which don't have a label stating "does not contain GM"
McCue, Maggie	• Concerned about loopholes in current labelling regime. • Wants to see canola oil labelled if it contains GM oil.
Meissl, Heidi; Owens, Paul; Thompson, Nichole	• Wants more consumer choice and information.
Montgomery, Jackie	• Doesn't buy canola oil as she can't tell whether it contains GM or not. • Wants a thorough labelling system similar to the EU labelling regime.
Mossman, Sue	• Wants to see all foods derived from GE crops labelled accordingly. • Is a beekeeper and is concerned about bees collecting pollen from GE crops.

Name	Summary
Mueller, Ute	• Concerned about undermining of rights of consumers to know how food is produced. • Stricter labelling is needed, in particular for food using GM technology in the processing stage and food inadvertently contaminated with GM. • Animal products made from animals fed with GM feed should be labelled accordingly.
Muntz, Bob	• Wants to see a better labelling regime for GM foods.
Murrell, Frances	• Concerned about health risks of GE food. • Labelling of GE food should be mandatory to enable proper consumer choice. • It is in Australia's interest to strengthen GM food labelling in order to export to other countries where the labelling is more stringent.
Nagle, Kerry	• Opposed to GM food, including stock fed on GM animal feed. • Wants to see fully traceable food labelling, including fresh and processed food. • Would like to see Australia following the EU labelling regime.

O'Bryan, Robyn	• Expresses concern regarding the inadequate GE labelling system for food products sold to Australians.
	• States that if the GE process is so safe/beneficial, why is the industry so anxious to avoid full disclosure of GE ingredients.
	• Wants a fully traceable food labelling regime for GE foods that includes:
	  o mandatory labelling for all food derived from GE crops (including highly processed oils and starches);
	  o all products from animals fed GE food; and
	  o all animal feed derived from GE crops.
	• States that the European legislation can require this form of labelling and so can Australia.

Oliver, Jane	• Supports full GE labelling. • Uses Greenpeace guide when shopping.
Ondrus, Frank	• Convenor of Householders' Options to Protect the Environment (HOPE) and endorses submission by GeneEthics Network in relation to inadequacy of GE labelling laws. • Notes loopholes in Australia, including canola oil and chicken fed on GE feed. • Notes EU labelling system and would like to see Australia adopt same.

Parbery, Peter (Doctoral Candidate, University of Melbourne)	• Notes main differences between Australia's and EU's labelling laws:
	  o GM seed and animal feed require labelling in EU labelling regime. Animals fed on GM feed don't need labelling in either Australia or EU.
	  o Old and new EU labelling regime require labelling of GM food served by restaurants and caterers. Exempt under Australian law.
	  o In EU labelling regime processing aids, additives and flavours are governed under separate legislation to foods generally under the old legislation, but not in the incoming legislation.
	  o Notes the 0.1% threshold for adventitious contamination in Europe is 0.1% versus 1% in Australia. Also notes the 0.5% adventitious contamination threshold for foods which have not been approved for marketing.
	  o Both Australia and Europe make provisions for GM food labelling on grounds of "ethical or religious concerns."
	• Notes public concern over GM foods per se has settled substantially since the adoption of comprehensive labelling.
	• Co-existence is a major issue for farmers in Australia and Europe, particularly in relation to the commercial release of GM canola. Issue arises as a result of consumer demand for non-GM food, and more specifically to the issue of segregation, traceability and thresholds.
	• Europe's new process labelling regime has strong implications for the commercialisation of GM canola (oil will require labelling under new regime) but would not have under the old regime. Not a consumer concern but an implication of process labelling which is consistent with the view that since 1998-2000, consumer concerns have shifted from questions about the health implications to questions about environmental and economic impacts.
	• Notes two 'recent' European studies (Marris and Wynne and Weldon – Public Perceptions of Agricultural Biotechnologies in Europe (European Commission) and European Commission (2003 – Eurobarometer 58.0 – Europeans and Biotechnology in 2002.

Name	Summary
	• Notes European public opinion appears less inflamed than in the 90s, however, the unofficial moratorium on new approvals (since 1998) and the insistence of certain Member states on full traceability and process Labelling suggests substantial political pressure remains. Unclear how much this reflects consumer concern 'in the kitchen'. Research suggests that resistance to GM foods cannot be adequately (or constructively) understood as being due to ignorance, emotionality or irrationality on the part of NGOs and consumers. • Notes Australian public, on observation, appears to sit somewhere between the US and Europe in attitudes towards GM.
Parker, Matthew	• Believes Australia should adopt EU labelling regime. • Notes health risks and desire for a natural, healthy diet.
Parsley, Pamela; Petersen David	• Notes lack of market acceptance for GE foods. • Foods derived from GE should be labelled.
Pate, Coralie	• Fundamental right to have clear and correct labelling if containing GM ingredients. • Animals fed GE feed should be labelled if for human consumption.
Patel, Craig	• Would like a labelling system for foods that provides for full disclosure, particularly if the food contains GE products, derivatives thereof or is from GE stock/plants
Paterson, Marie-Rose	• Believes highly refined products should not be exempted. • Believes Australia will be disadvantaged if it doesn't follow similar path to that of EU.
Payne, Sharon	• Concerned about health implications of GM foods. • Wants to see full GM food labelling. • Would like to see Australia follow EU labelling regime.
Penman, Katy	• Adequate and precise labelling will enable better consumer choice. • Supports Australia moving towards the EU labelling regime.
Poirier, Dave; Rattray, Noelle; Thomas, Peter; Underwood, Edith and Richard	• Supports mandatory labelling of all GM food.
Pride, Vicki-Lee	• Considers that labels do not provide enough information as to the contents of the product or its origin eg containing animal products.
Raymont, Will	• Cites cane toads as example of danger of 'release of corporate owned life forms into the Australian environment. • Concerned about lack of evidence of GM ingredients on labels. • Concerned about supermarket employees having little or no knowledge about GM. • Concerned about the statement that the GMO alternative is not substantially different. • Concerned about percentage labelling of GMO products. • Notes appearance in supermarkets of "Contains no GMO" labelling as only real sign of any kind of GM food labelling. • Notes lack of public awareness on the issue of GM. • If organic food is labelled, then so should GM food.
Rentoul, Jocelyn	• Demands the right to know whether foods contain GE ingredients, therefore accurate labelling ensures that this is paramount. • States that her preference is for no GE foodstuffs, however, if they are used, would like the choice to decide whether to consume them or not. • States that labelling should include all food derived from GE crops, all foods produced from animals fed GE crops, and all animal feed derived from GE crops.
Resch, Gerhard	• States that GE technology could prove to be an efficient toolkit for farmers if it is based on thorough independent research and used in a sustainable and responsible manner.

Name	Summary
	• Expresses serious concerns regarding the lack of research and testing of the health effects of GE ingredients in the food chain. The rapid introduction of this technology without proper research shows a total disregard to the Precautionary Principle. • Has further concerns on the effects of GE crops on biodiversity and sustainable farming practice, especially, the inadequate attention given to prevention of cross-contamination with other crops. • Is also concerned for farming communities who may be forced into further dependency on large corporate suppliers and be exposed to litigation for unintentional production of patented GE genetic material as has occurred in Canada and USA.
Riddett, Marianne	• Organic farmer who is concerned about loopholes in the standard and wants to see clear and unambiguous information for consumers on labels.
Rihan, Jonathan	• States that the currant labelling laws appear to have many loopholes e.g. a chicken that is fed upon a diet of 100% GE food would not in itself have to be labelled as a GE product, despite the obvious connections. • Does not want GE food anywhere in the food chain. • As consumer wants the right to know if the food consumed is produced from GE ingredients, the current labelling regime does not fulfil this requirement. • States that a fully traceable food labelling regime for GE foods must be introduced which includes mandatory labelling for all food derived from GE crops (including highly processed oils and starches and from animals fed GE feed; and all animal feed derived from GE crops. • Notes that new labelling laws in Europe and that Australia should follow this legislation.
Rivers, David	• Believes labelling laws should be reformed to provide consumers with more and accurate information.
Rivers, David & Nadine	• Wants to see reform of labelling laws to provide greater consumer choice. • Opposed for ethical reasons – a vegetarian who fears animal by-products being used in gene technology. • Concerned about health implications – long-term effects of GM food are unknown. • No proven benefits of genetic manipulation. • Notes EU labelling regime and believes Australia should follow this lead.
Rowe, Robert S	• Opposes the introduction of GM foods in Australia. As a scientist believes that the precautionary principle should be applied. • Believes that there is no way of knowing the long term effects of GM food crops and it will be impossible to reverse the situation. • If GM foods are sold, believes that informative labelling should apply so that consumers can make an informed choice. • Believes that producers of these foods should be subjected to market forces, i.e. that the market decide whether to consume GM foods and in order to this consumers must be informed whether a food is GM or contains GM ingredients. • Considers it unethical to withhold such information where the implications are central to health. • Wants comprehensive GM labelling laws.
Rolfe, Joanne	• Would like to see Australia following the EU labelling regime. Believes Australians are eating in the dark compared to Europeans.
Rutherfurd, Sonya	• States that, as a medical doctor and nutritionist, has looked into the pros and cons of GE foods and is unconvinced of the benefits and concerned about the risks. • Advises people against buying GE foods as much as possible.
Saville, Lynette	• Supports mandatory labelling of all GE foods. • Supports fully traceable food labelling regime for GE foods including all food derived from GE crops (i.e. oil and starches) and all products sourced from animal fed GE seed.
Smith, Mark	• Opposes GM foods for environmental reasons. • Believes the only benefit of GM technology is financial – for the gene technology companies. • Supports move towards EU labelling regime.
Smith, Robert	• Believes consumers do not know whether or not they are eating GE food in Australia.

Name	Summary
	• Supports Australia moving towards EU regulations.
Steer, Graham	• Believes the government allows GE foods to be unlabelled. • Believes there has been a lack of research into long-term health effects of GE. • Notes other forms of labelling such as "Fat Free" and "Gluten Free" as examples of other successful forms of labelling.
Stegley, Lucy	• Believes most GE foods are unlabelled and wants to see fully traceable labelling and the adoption in Australia of the EU labelling regime.
Sullivan, Christine	• Concerned about the long-term health and environmental implications of gene technology.
Sunland, Iris	• Concerned about health implications of GM food. • Proposes an identifiable logo for foods containing GM ingredients.
Tedder, Margaret & James	• Believes Australia should follow EU labelling regime. • Wants to see greater consumer choice. • Cost to producers is not a valid argument.
Tietjen, David	• All ingredients should be labelled. • Believes inadequate labelling opens producers to class actions.
Tayen	• As a consumer has a right to know if there are GE ingredients in foods consumed. believes the current labelling system does not fulfil this requirement. • Is a certified producer of organic olive oil and has invested substantial resources in growing organic produce. Is in competition with Canola oil and protests to the fact that a GE canola product does not have to be labelled. • Believes that GE food should not be allowed anywhere in the food chain, until much longer term trials and full biological understanding of impact and effects of GE modifications in all their manifestations. • Requests that a fully traceable food labelling regime for GE foods that includes mandatory labelling for all foods derived from GE crops (including highly processed oils and starches) and all products from animals fed GE feed and all animal feed derived from GE crops. • States that Australia should follow the new European regime for the labelling of GM foods.
Vikstrom, Anton	• Opposed to GM foods. • Concerned that current labelling laws have loopholes allowing GM foods into the food supply unlabelled. • Supports stringent GM food labelling. • Supports GM traceability. • Supports legislation to stop further release of GM material. • Supports adherence to World Environment Summit Agenda 21 principles of the Precautionary Principle. • Supports following EU labelling laws.
von Behrens, Rolf	• Notes that OGTR received over 1000 submissions on the issue of GM canola, with the majority being opposed. • Concerned about the way in which FSANZ conducted the GM food Labelling review (i.e. no direct request for public comment on front page of website). • Includes submission made to OGTR on GM canola. • Includes document entitled "The Case for a GEM Free Sustainable World" by the Institute of Science in Society and Third World Network 2003".
Wallis, Emily	• All GE foods should be labelled. • Notes lack of information on long term health risks. • Australia should adopt EU labelling regime.
Watt, Donna	• Concerned about environmental implications. • Wants to see mandatory labelling of all GM foods.

Name	Summary
West, Sharan	• As a consumer with health issues due to chemical sensitivities and links to the organic farming industry, asks that GE labelling be legislated to identify all GE contaminants.
Wickham, Debbie	• Concerned that GE ingredients are put in food without public knowledge. • Doesn't want any GE ingredients in the food chain but where they do exist, should be fully labelled. • Wants to see Australia adopt the EU labelling regime.
Wright, Tauba	• Believes argument that improved labelling will increase cost of food is invalid. Is prepared to pay more for GM free foods. • Concerned about long-term health implications.
Young, Illena	• Wants to see clear, unambiguous labelling of GE foods. • Notes EU labelling laws and would like to see something similar in Australia.

Industry

Name	Summary
Agrifood Awareness Australia (Industry initiative to increase public awareness of GM technology)	• Notes USA and Canada have not introduced mandatory labelling while EU has recently introduced a new standard requiring mandatory labelling. • Believes a system which includes refined foods (oils and sugars) is not science-based and would be hard to monitor and enforce as highly refined foods do not contain GM material or DNA. This provides a situation in which it's impossible to determine if the end product is derived from a GM crop or not. • Notes food labelling standards vary and/or are under discussion and development in APEC countries. Notes Japan has possibly the most well established system with its tolerance level of 5% for unintended presence of GM content. • Notes Australia's GM food labelling laws are among the world's most stringent and are science–based, looking at the end product — i.e. a system which is product rather than processed based. This, combined with a set threshold, provides a testable and enforceable system, leading to meaningful consumer choice. • Is aware of considerable market research in Australia and internationally, drawing particular attention to unpublished study by Sydney Uni and supported by the Rural Industries Research & Development Corporation (RIRDC) – link to draft version at www.rirdc.gov.au/reports/GLC/US-92A.pdf First part of study provided only here. Second part to be finalised – provided in hard copy by respondent. • Results of this market survey broadly indicate that both the type of modification and the nature of the benefits are important in terms of consumer response to GM foods. Study also showed that respondents were prepared to pay a premium for products with clear and desirable benefits – "however, in its absence substantial compensation in the form of lower prices is need to induce them to purchase a genetically modified product." • While gene technology is largely not viewed positively by consumers, it appears to not be the primary concern, probably ranking halfway – issues such as cost of living, employment, crime, education, health and the environment ranking higher. • Media reports and international market research studies suggested consumer responses vary – but Agrifood Awareness suggests that for countries with minimal GM crops, it is hard to ascertain if such market research results actually transfer to consumer purchasing behaviour. • Believes current FSANZ GM food labelling laws have answered consumer request and provide for meaningful system which is science based.
All Seasons Wholefoods	• Will not stock GM foods in store and if a product can't be determined as being GM-free, it will not be purchased.
Australian Food and Grocery Council	• Considers that (although a little excessive) the current standard 1.5.2 contains appropriate labelling provisions that lie between the extremes of regulation found in the EU, which is excessive, and the USA, which is less informative. • AFGC recommends that the current provisions should remain unchanged because: ○ the current standard provides appropriate, adequate and meaningful information to consumers where a GM food is not substantially equivalent or contains DNA or protein;

Name	Summary
	○ insufficient time has elapsed since Standard 1.5.2 was implemented to warrant a review and possible change to labelling requirements; the provisions have only been in effect for a little under 3 years and the implementation has been costly. The industry is unaware of reasons why it should be further changed; ○ consumer activists have engaged in scare campaigns not based on science and which prey on lack of understanding. Little GM food is sold as a result as manufacturers and supermarkets wish to avoid being unfairly targeted. ○ little GM product is used and hence insufficient food labelled in accordance with Standard 1.5.2 has reached the market to enable adequate assessment; ○ the limited survey undertaken by FSANZ has indicated compliance is high; ○ The survey undertaken in New Zealand by SafeFoodNZ has indicated compliance is high; ○ There is no significant demand on food companies by their customers for increased labelling detail for GM ingredients; and ○ There is no significant benefit that would outweigh the costs that more detailed labelling would impose. • AFGC is opposed to labelling for 'process', however there are occasions when process labelling might be justified, such as labelling with the word 'unpasteurised'. • AFGC would be totally opposed to any change that would extend the current labelling provisions to require the labelling of a GM food that is substantially equivalent and did not contain novel DNA protein, including the labelling of products derived from animals fed on GM feed. • Stated that member companies have indicated that there is no significant customer demand for increased labelling with respect to GM foods or ingredients. They do note that whilst companies receive customer inquiries with regard to the use of GM foods and ingredients in products, this does not directly relate to requests for increased labelling detail. They also note that any increased customer inquiries correlate more with increased consumer activist anti-GM publicity.
Australian Meat Industry Council	• Notes that current labelling requirements remain valid on the international market. • Some markets require additional information in regards to GM status of food, this is being filled through market forces and the relevant manufacturers seeking to gain access to these markets can provide this information as a supplement to the current mandatory requirements. • FSANZ labelling requirements provide consumers with information required to make an informed decision. Any additional information required by either domestic or global market segments is currently provided through market forces. • Food manufacturers, at great cost to industry, have been required to completely redevelop labelling and packaging in order to comply with GMO and nutrient regulations of the new Code. AMIC and its members strongly object to further change in regulations that may require yet another change to labelling, unless there is evidence to support such changes as a food safety requirement.
Australian Wheat Board	• Marketer of bulk commodity wheat therefore no direct contact with consumers. Has not conducted market research into attitudes towards the labelling law.
Avcare (peak body representing companies commercialising GM crop technology.	• Has provided a table from the Grocery Manufacturers of America outlining food labelling regulations in other jurisdictions. • Expresses concerns about current definition of 'GM Foods' as present in clause (1) (a) and (b). Food is not genetically modified. Varieties of crop plants and food producing animals may have specific genes events added to their genomes, which result in them inheriting specified traits. These varieties of crops or animals may be used to produce food. Food can also be produced via fermentation processes using microorganisms that may have an additional trait or traits added by a GM technique. • Suggested amendment to Clause 1 (a) and (b): "food that requires labelling as genetically modified is a food, or contains ingredients, including processing aids, that is produced from a crop, food animal or micro-organism that has a trait or traits derived from GM events. The final food (a) contains DNA and/or protein derived from the GM event; or (b) has altered qualities. • Views mandatory labelling as having been imposed by a vocal minority with fear of GM techniques, although these groups have been quiet on GM techniques in pharmaceuticals and medical devices – products for which there are no mandatory labelling requirements. • Claims public views on GM are not based on food safety concerns, as this is rigorously tested, but on perceptions. Therefore, it is important that

Name	Summary
	more false perceptions are not raised by FSANZ's definition of foods being themselves GM. • Provides a summary of GM food labelling regimes of Canada, US and EU – notes that the 0.1% difference between Australian standard and proposed EU standard is not statistically significant when the error margins for the quantification of GM presence are taken into account.) • Notes EU exclusion of refined foods – this despite the fact that testing for food produced from a crop using GM techniques is not possible as no DNA would be present. Supply chain management, traceability, segregation and documentation will have to be employed to verify whether foods should be labelled. • Notes most APEC countries do not have standards and that Japan sets a tolerance level of 5%. • Australian standard is amongst the most stringent in the world. • The strength of Australian legislation is that it is enforceable – linking labelling to the presence of DNA and protein in the final food. The emphasis on product and not process is a positive attribute of the FSANZ labelling regime and must be maintained if the standard is to remain workable. • Accepts that consumers have a right to know but claims that majority of consumers are not interested in whether their food contains ingredients derived from GM crops or animals. Vocal minority insists on food being GM Free. • Notes Trades Practices Act currently contains statutes covering "truth in labelling" (voluntary labelling of foods as 'GM Free') cites this as providing parallels to labelling of 'organic' or 'biodynamic' foods. There is no Government standard in Australia controlling 'organic' foods, only a voluntary industry driven standard and an export certification scheme by AQIS. Cites 'halal' and 'kosher' as following similar voluntary standard. This is based religious, ethnic or ethical grounds and yet no mandatory labelling exists. • On the issue of 1% adventitious labelling: this is the same as mandating a labelling regime which requires a 'fat' label for food which is 99% protein and 1% fat. At least there is a molecular difference between the protein and the fat, whereas two varieties of corn in a corn chip, one of which may be a GM variety, is comparing like with like. • Avcare supports the current voluntary labelling system for 'non-GM' and 'GM free' as it provides the consumer with a labelling system which describes what they really want and is in line with current approaches to organic labelling and labelling for religious and ethical reasons. • No mandatory labelling for restaurant foods in Canada or US. Mandatory in the EU – some exemptions (i.e. tomato paste). No option with EU regulations to state 'May contain GM ingredients'. • Avcare believes exemption of restaurant and takeaway foods in Australia is sound. Cooking and mixing ingredients with others makes determining genetic origins extremely difficult. • Avcare supports Subclauses (3) and (4) remaining unchanged. • Considers it unfair that the Government, the public and industry must bear the costs of implementing and complying with a mandatory labelling system which is for the benefit of only a segment of the consuming public. • Clause 7 – inclusion of this clause raises confusion and alarm and could be better explained with an additional general statement that additional labelling may be required. May include instances where demonstrated positive health effects may be attributed to the food derived from foods produced from a crop or food animal with an attribute which will have a positive consumer appeal.
Bayer CropScience	• Consumers should be informed on the issue of GM food labelling to such an extent that they understand the labelling regime is a well-considered system and does not incorporate any "loopholes" as advocated by certain anti-GM lobby groups. • Notes EU regulations. Has been actively involved in the consultation process for these regulations and supports recent developments. • Notes push by lobby groups to the meat and by products from animals fed GMOs to be labelled as GM as well. • Believes labelling of highly refined products and products from animals fed GM is not required and cannot be justified from a scientific point of view. • Notes US and Canadian regulations and supports moves by Canadian government to develop a voluntary code of practice. • Notes APEC regulations including China, Japan, South Korea, Malaysia, Taiwan, Thailand and Vietnam. Notes there are no labelling laws in the Philippines.

Name	Summary
	• Notes that labelling for GM food in APEC countries has not impacted negatively on Bayer CropScience. • Considers that Australia and New Zealand play a key leadership role in policy development for APEC region. Also considers that the process and outcomes of the FSANZ review of GM food labelling should be conveyed to APEC countries so that they can learn from our experience and develop harmonised policy that is not disruptive to on-going trade within our region. • Recognises that not all labelling regimes need to be the same but there must be some general principles that apply. These include the need for each to be science based and transparent, that as a minimum, labelling of GM foods should be related to substantial differences in the novel product and should be practically detectable. Any thresholds should relate to practical and achievable standards as agreed by industry. • Supports FSANZ position on labelling of animal feed and animals fed with GM feed. There is no scientifically valid reason to extend the requirements to these products. • Aware that Codex is developing labelling requirements and that FSANZ is participating in them and the outcome should serve to improve the transparency of labelling requirements for industry – an outcome supported by Bayer CropScience. • Believes mandatory labelling of substantially equivalent foods by FSANZ is not required as labelling is not associated with health and safety but consumer choice. • Considers that voluntary labelling of GM foods would put it in line with other production systems (eg organics, Halal and Kosher). • Notes Biotechnology Australia's survey and outlines results. Supports continuation of such research. • Notes various consumer surveys including USFSA but expresses concern about results including lack of clarity on what and how questions were asked. • Notes long history of eating GM products in North America with no observed negative health effects – also that consumer concern is relatively low in the USA. • Notes continuing surveys by International Food Information Council, Asian Food Information Council and Council for Biotechnology Information. • Notes consumer reaction to various products including tomato paste and chymosin, which were clearly labelled and readily accepted in Europe. Notes political and practical context is different in Europe and urges FSANZ to maintain and publicly defend the current position.
Biological Farmers of Australia Co-op Ltd	• The organic industry effectively regulates a requirement of zero allowance for GMOs in certified Australian organic produce enabling consumer choice and clear demarcation regarding GE. • Proposes that all products containing GE ingredients be labelled as such. • Believes current 1% tolerance level is not currently understood by consumers and it is only a matter of time before the issue arises and raises serious concerns regarding the integrity and truthfulness of labelling. • Requires a zero tolerance for GMOs (not just nil on a test result) with appropriate labelling.
Cooperative Research Centre for Innovative Dairy Products	• Notes Australia has one of the most stringent labelling regimes in the world and was one of the first countries to implement such laws. The approach is substantively, though not entirely, science based, and is product rather than process based. This, combined with a set threshold, provides a system which can be tested and is therefore enforceable, providing meaningful consumer choice. • It could be argued that GM food labelling is unnecessary given the rigorous testing foods are subjected to. • Believes that labelling food with or without GM material is a branding issue, rather than a food safety issue. • Cautions FSANZ against setting itself up to administer system not based on rigorous science which establishes freedom from harmful effects. • Supports the dairy industry position on GM foods, which is that GM foods will not be introduced to consumers without rigorous testing under regulations, set by OGTR and/or FSANZ. Recognises need to assess potential risks as well as benefits in gene technology and to offer choice.
Dairy Australia	• Concerned about not having been formally advised of the review as part of FRSC's targeted list for consultation. • Currently working within the regulatory requirements for GM and does not wish to see any extension or more stringent labelling requirements. • Notes that Australia's major trading partners (EU, Japan and USA) have no regulatory requirement for labelling of produce derived from animals fed GM feed because there is no scientific basis to distinguish such produce and no evidence of any significant difference between products

Name	Summary
	resulting from the use of approved GM animal feed. • Introduction by Australia of more extensive GM food labelling requirements has the potential for other countries to use this as a justification for the adoption of related non-tariff trade barriers. This is also important in regard to free-trade agreements, some of which are currently under discussion. • More extensive labelling requirements and consequent compliance costs would be a burden to Australia's competitive position. Dairy exporters already struggle to pay farmers a reasonable return because of intense competition in the international market place – additional costs would erode the viability of the industry. • The adoption of various tolerance levels for GM food labelling recognises the difficulty of ensuring absolute segregation and may provide a practical approach but it adds to the confusion where the label information doesn't have a scientific approach.
Grains Council of Australia	• Believes current standard is effective and provides all necessary information and assurances to consumers. • Believes current exemptions for refined foods are appropriate and should remain in place. • Does not see any justification for reducing the permitted level of unintentional (and therefore unlabelled) presence of GM in food. This would lead to added production costs. Given that GM products are subject to stringent assessment by OGTR and FSANZ, there could well be justification for relaxing the permitted unintended presence level. Notes the Japanese permitted level of 5%. • Supports continuation of the current exemption from labelling of food derived from an animal or other food-producing organism that has been fed on a GM food, so that only food derived from a GM organism can be classified as GM food. • Supports a strictly science-based approach. Recognises that consumers are entitled to all relevant information but also that the provision of that information should not impose undue cost to manufacturers and producers, particular in cases where the food has been assessed and found to be substantially equivalent.
Monsanto	• Strongly supports need for regulatory systems to be based on sound scientific principles and commends the rigorous safety assessments underpinning FSANZ's approach to evaluating foods derived from agricultural biotechnology. • Supports a labelling system that recognises the FSANZ safety assessment process, which should then guide whether or not labelling would be appropriate. • Recognises that some consumers are concerned about the production process (ethical, religious or ethnic reasons) – Monsanto supports a voluntary system for GM foods that have been assessed as substantially equivalent to non-GM lines (consistent with current approach for organic, biodynamic, Halal or Kosher foods). • Supports a voluntary labelling system for GM foods (where foods have been assessed as substantially equivalent to conventional counterparts). • Acknowledges Australian labelling system is stronger than GM food labelling systems developed by some other countries. • Difficult to justify costs to community and economy associated with a mandatory labelling system that is not related to human health and safety. This implies government and industry resources are being diverted from real food safety risks towards ensuring compliance with a system that is not science-based. • Commends FSANZ for linking its labelling requirements to the presence of proteins and DNA in the final food product and for defining a 1% threshold for the unintentional presence of protein/DNA. Current standard is therefore enforceable, without relying on excessive documentation. Should the Ministerial Council consider that a mandatory labelling scheme continues, Monsanto believes that these fundamental principles must remain, and that the system must be science-based, equitable and allow reasonable and cost-effective enforcement.
National Farmers Federation Ltd	• Recognises importance of reviewing food standards but acknowledges that Australia has one of the most stringent food labelling frameworks in the developed world. • Refers to NFF Biotechnology Position released March 2003 (provided): "NFF supports Australia's current food labelling requirements for GM food, and encourages governments to continue to maintain realistic and practical policy on this issue." Also, "NFF is supportive of specifications outlined in the Australian Food Standards Code, permitting a 1% unintended presence of GM material within non-GM commodities."

Name	Summary
	• Increasingly concerned over misuse of GM food labelling requirements by certain countries in order to protect domestic industries from import competition. • Supports domestic GM food labelling remaining based on rigorous scientific risk assessments, delivering consumers optimum choice without placing unreasonable or unjustified requirements and therefore costs on companies wanting to market food products in Australia. • Essential that Australia's labelling regulations are consistent with our obligations under the WTO Agreement on TBT, which seeks to ensure that technical regulations, in the form of packaging, marking or labelling requirements, do not pose unnecessary barriers to trade. • Refers to ABARE report Market Access Issues for GM Products which provides valuable analysis of key market access conditions or restrictions for GM crops and contrasts different GM food labelling regimes within Australia's key markets for grain commodities. Also details variations between different markets with respect to tolerance levels for the unintended presence of GM in non-GM products, treatment of highly refined products (oils and sugar) and the treatment of food for catering purposes. Report provided in hard copy. • Notes recent decision of EU in relation to GM food labelling. Supports the new legislation with some exceptions. • Believes there is no justification for inclusion of highly refined products such as oils and sugar in GM food labelling legislation on the grounds that monitoring compliance is problematic given that modified DNA or protein is undetectable in the end product. • No scientific basis for suggested EU requirement for mandatory labelling for animal products potentially derived from animals fed on GM feed as no residual GM protein or DNA can be found in these products. Notes that some EU supermarket chains have introduced 'non-GM feed' labelling on meat, eggs and milk products in response to perceived market advantage rather than any genuine consumer risk or scientific evidence. • Acknowledges USA, Canada and Argentina have refused to introduce mandatory GM food labelling requirements, opting for voluntary labelling only. • Regularly draws on Biotechnology Australia's annual survey of public attitudes toward GM. • Recognises that ongoing canola debate has led to marginal increase in public concerns but long-term trends over three years indicate higher public confidence in GM foods now than compared to 1999. Evidence suggests that as awareness levels increases, perception of risk associated with GM decreases significantly. • Expresses concern over methodologies used by smaller interest groups with clear agendas to ban the release of GM crops. NFF urges FSANZ to ensure the independence and integrity of consumer survey material prior to considering this information within the scope of the review process. • Urges FSANZ to ensure that any review of GM food labelling standards does not disrupt or destabilise ongoing negotiations under the Australia-US Free Trade Agreement. • Sees no justification for changing current approach – urges FSANZ to maintain current standards relating to unintended presence thresholds, highly refined products and the treatment of animal products where GM feedstuffs may have been consumed.
Nestlé Australia (also for Nestlé New Zealand	• Supports submission by AFGC on review of GM foods, especially position that current provisions should remain unchanged.
Seed Industry Association of Australia	• The following motion was adopted at the SIAA Convention in 2003: SIAA has accepted the regulatory regime of GM by FSANZ and OGTR. Has confidence that these organisations protect human health and safety and the environment through a rigorous assessment of GM food components sold in Australia. SIAA therefore does not believe that labelling of GM food should be required in the future. The SIAA would, however, support labelling of any novel pharmaceutical GM food should they be approved for introduction into the Australian market.
Unilever Australasia	• Supports submission by AFGC and reinforces that the current labelling provisions should remain unchanged because: o current standard provides appropriate, adequate and meaningful information to consumers where a GM food is not substantially equivalent or contains novel DNA or protein; o very little product available on the market to enable an adequate assessment of the requirements; o surveys by FSANZ and NZFSA have indicated that compliance is high; o no obvious market failure;

Name	Summary
	○ no significant demand on food companies; ○ would be no significant benefit that would outweigh the costs that more detailed labelling would impose; and ○ any changes to the current standard would undermine consumer confidence in the regulatory process for foods produced using GM technology.
WA Chamber of Commerce and Industry	• Endorses submission by Australian Chamber of Commerce and Industry.

Public Health Professionals

Name	Summary
Australian Medical Association	• Aware of international developments. Notes Canada is presently developing a voluntary standard of labelling. • Notes that Australia/New Zealand standard incorporates novel DNA and is subject to exemptions. • AMA is abreast of consumer studies presented by Biotechnology Australia. • Notes that consumer attitudes towards the labelling of GM foods and ingredients in Australia and New Zealand are related to the provision of education and information in an accountable manner. • Variation of attitudes between countries listed in (1) are reflected in available surveys which may require scrutiny in order to ascertain whether any relevant social, health or legal policy has impacted on the results.
Dieticians Association of Australia	• Not aware of any published consumer research in relation to labelling of GM foods.
McLaren, Michelle (Dietician)	• Believes GM foods have been incorrectly assumed to be equal to conventional foods. • Lists various processes used in GE procedures to demonstrate lack of equivalence such as random insertion of genes, antibiotic resistance, gene switching etc. • Lists a number of agricultural impacts such as pesticide resistance, 'terminator' technology and horizontal gene transfer of foreign gene traits. • Would like to see thorough testing via independent, long term randomised control trials. • Believes there are loopholes in the current system. • Notes various risks associated with GE including health implication, crop contamination, superweeds, lower yields and crop loss, antibiotic resistance. • Wants to see comprehensive labelling to enable consumer choice.
Natural Medicines of Australia Ltd	• Concerned about traceability of GE products. • Supports implementation of fully traceable GE labelling regime.

Other Organisations

Name	Summary
Australian Consumers' Association	• States that ACA is neither for nor against GM. Role is to represent best interests of Australian consumers. • Would welcome use of GM technology that has potential to offer consumer benefits without undue risk to health or the environment. Not confident

Name	Summary
	that this is yet the case and that GM technology should be treated with caution. • Consumers concern seems to be more about GM food rather than other uses (eg medicine). Consumer concern should not be ignored by government or dismissed as alarmist, emotional or uninformed. • Consumers are concerned about the long-term health implications, unknown and unintended - tests have only been conducted on animals, sometimes only on a small sample for a short time. These studies are inconclusive in regard to human health. • Consumers are concerned about environmental implications. For instance, some insect resistant crops require less chemical pesticides because they produce Bacillus thuringiensis (Bt) endotoxin. Reducing the use of pesticides is ecologically beneficial but Bt crops can speed up spread of Bt resistance among pests feeding on the crops and risk genes for herbicide tolerance breeding with the genes of weeds, creating a new generation of 'superweeds'. • Consumers are also concerned about cross contamination between GM and non-GM crops and the implication for lack of choice. Crops must be adequately segregated. • Some consumer concerns are based on religious or ethical grounds. Ethical objections include opposition to DNA manipulation and gene transfer between plants and animals. Religious concerns include avoidance of certain foods which can't be avoided if gene transfer between species takes place. • Some consumer concern that GM will increase allergenicity, eg that an existing allergen gene will be introduced into a wider range of foods. Allergy to peanuts is a prime example. There is also a risk of the creation of new allergens. • Consumers are not demanding GM foods and realise small number of large multinational biotechnology companies will benefit more than consumers. Some will acknowledge potential benefits of improved taste or nutritional composition but ACA is not convinced that consumer benefit is driving the use of GM. • Consumers are also sceptical about the argument that GM will eliminate poverty in developing countries. • GM foods raise antibiotic resistance concerns given that antibiotic resistance marker genes are inserted into GM plants so scientists can tell if a new gene has been successfully inserted. ARM genes could be transferred into the gut of animals or humans or even bacteria in the environment hence the risk that some diseases could become resistant to antibiotics. • All GM foods and food produced using GM ingredients should be labelled to allow freedom of choice. • ACA acknowledges that Australian labelling standards are comparatively stronger than that in other countries. Agrees with principle of GM food labelling standards being based not on health and safety (as any GM food approved is considered to be safe) but feels that current labelling laws do not go far enough to provide consumers with the level of information they desire. • Consumers are not necessarily concerned with the final food product, but with the production method. Under current labelling laws, highly refined products such as oils do not have to be labelled because the GM component is not present in the final food. This is irrelevant to consumers. Therefore ACA believes that highly refined products should require GM food labelling to allow informed choice. • Cites changes to GM regulation in EU as most significant development worldwide. • Notes that Codex is currently developing guidelines for the labelling of foods produced using GM and the process is at Stage 4. • Notes USA and Canadian labelling laws require GM foods to be labelled where a health threat is possible and also notes the voluntary labelling law based on presence or absence of GMOs – lenient compared to Australia. • Despite USA and Canadian consumers increasingly wanting mandatory labelling of GM foods, the laws do not take into consideration the consumer's right to make an informed choice. One study indicated 92% of consumers felt mandatory GM food labelling should be introduced. 47% opposed US policy that only requires labelling in certain conditions and 73% disagreed with the statement that "food manufacturers should be allowed to label GM foods if they choose but it does not need to be mandated by law." ACA does not support such a lenient labelling regime. • Notes most significant difference between EU and Australian labelling laws relate to animal feed and refined foods. • ACA does not support exemption of oils and sugar from standard 1.5.2 as consumer concerns are less about the end product and more about the

Name	Summary
	production process. Under EU law these foods will have to be labelled and ACA would welcome a similar extension of Standard 1.5.2. • Notes Japanese labelling laws are similar to EU and Australia and also notes the 5% threshold. • Aware of Biotechnology Australia's commissioned consumer studies and also an AC Nielsen survey which found that 68% of consumers didn't want GM food. ACA was unable to locate this research. • ACA conducted a brief survey to accompany this submission and the survey is attached. Most important finding in survey was that majority of respondents did not agree that canola oil should be exempt. Also notes that there is confusion of the GM status of foods where their labels make no reference to GM. • Has listed a variety of surveys gathered from the internet from countries such as UK, US, EU with some detail on their findings.
Bentleigh-Bayside Gene Alert	• Demands comprehensive GE food labelling. • Believes Australia's GE food labelling laws have many loopholes allowing many foods to be exempt – eg canola oil. • Has looked for GE soy, corn, canola or cottonseed on labels and can't find it. • Believes Australia should adopt EU labelling laws.
Braidwood Greens (Catherine Moore)	• Want to see complete and candid information about new production processes on all food labels. • Recommends all exemptions be removed from the standard. • Notes that high oleic acid soybean must be labelled because its altered chemical composition will be identifiable in the final product. • Notes penalties for misuse of "GE-Free" claim. Suggests consistent and mandatory use of GE labelling where the technology has been used in any part of production. • Recommends that the policy review of Standard 1.5.2 be commissioned from the Food Policy section of TGA. • Disappointed by narrow scope of review. Review calls for facts which FSANZ could collect itself. Questions do not address policy issues which underpin the standard. Consultation is a sham. • Notes submission by Institute of Health and Environmental Research. In particular: o calls for adoption of summary point 3 – that there be six monthly surveys and testing of all foods likely to be produced by GE (including GE foods NOT approved in Australia) so that the standard is legally enforced. o adoption of an extended version of the EU's process-based labelling laws, so that FSANZ can fully meet its duty of care for public health and safety of foods produced using gene technology. Full labelling would be a crucial part of epidemiological studies, if they were needed. • Notes international developments, eg China and EU. • Labels should also include a new trait conferred on the GE organism used to produce the food. • Notes that some other countries have more comprehensive GE labelling and this is accomplished by using identity preservation systems. • Notes Codex standard that insists all irradiated and certified organic foods must be labelled – a compelling precedent for GE food labelling. • Rejects bargaining away or watering down of Standard 1.5.2 labelling provisions as part of trade negotiations. • Notes Biotechnology Australia surveys. • Notes WHO magazine survey with question "Would you be likely to buy GE foods if, for eg, they cost less than non-GE foods" 79.9% said no. • Notes online poll at www.geneethics.org with question "Should all foods produced using gene technology be labelled?" and 93.89% said yes. • Notes surveys in Australia, Britain and Canada. • Notes debate prior to implementation of Standard 1.5.2 – a large number of NGOs supported complete labelling of GE foods as did, initially, health ministers. Intervention by Bill Clinton and John Howard overturned the decision.
Consumer Association of South Australia	• Notes EU legislation, in particular that the labelling will inform consumers where animals have been fed GE feed. Also notes labelling in EU of highly refined oils and starches and fully traceable system. • Believes if Australia implemented similar system to that of EU we establish the world's best practice, which would give us an advantage over other countries not yet offering this system.

Name	Summary
	• Notes lack of consumer choice offered in USA. • Notes regulations in other countries such as China, Japan, Korea, Thailand, and Brazil. • Notes Korea, China and Russia exempt highly refined products that have no foreign DNA. • Believes Australia/New Zealand labelling laws are still largely ineffective as there is a vast list of exemptions. • Notes various polls (New Zealand Weekly Herald, Roy Morgan etc) highlighting consumer resistance to GM. • Has included CASA conducted survey in which overwhelming response was that regardless of opposition or support for GM, clear labelling was required. • Concerned about lack of formal policing by the states. Notes Environmental Health Officers have a lot of responsibilities and so GM would probably not be a priority. No time or funding available. Suggests regular and random surveys. • A traceback system and truthful labelling would assist in meeting the objective of protecting public health and safety. • Has no direct input into Codex but is aware that consumers do and has heard it reported that the process is a frustrating one, with delegations eventually promulgating government policy rather than consumer views. • Supports further strengthening of the Standard by adopting and implementing EU labelling regime.
Dubbo City Council	• While many residents are not totally opposed to GE technology, many believe that GM products, particularly food, need to be handled with care until acceptable scientific evidence is available regarding their safety. • Notes that a lack of evidence demonstrating harmful effects from GE does not constitute that GM food is safe to eat. • Standard 1.5.2 has been used by DC Council to address concerns where particular issues have been raised by the community and food handlers. Therefore it is disappointing to find that many GM foodstuffs familiar to the general public (eg canola, cotton, soy and corn) do not require labelling. Notes that this reduces community's perception of the relevance of the standard and may result in food operators being forced by public pressure to directly request food suppliers to provide appropriate assurances in relation to GM status. • Rigorous labelling standard necessary to ensure any unforeseen long-term or indirect impacts resulting from introduction of GM can be detected, assessed and managed. • Imperative that consumers are given the opportunity to make an informed choice whether to accept or avoid GM foods. • The council supports any proposal that enhances the ability of consumers to make informed decisions and strongly opposes the proposal that results in reduction in the information currently being provided on food labels. • Urges FSANZ to reveal the names of the four soy infant formula products that were found to be contaminated with GE ingredients in New Zealand. • Believes an independent review of FSANZ is necessary. • Notes various international developments in GE regulation, including EU, America and Japan. • Notes that New Zealand still has no country of origin or levels of GE on labels. • Has provided a list of articles on issue of GE. • Believes consumers have little faith in FSANZ and feel that their concerns are ignored/marginalised.
GeneEthics Network	• Wants to see access to full information for consumers, i.e. full and comprehensive labelling of GE foods. • Recommends that no exemptions to Standard 1.5.2 be allowed as the current standard allows most foods produced from gene technology to remain unlabelled. • Recommends process based labelling. • Recommends all ingredients, processing aids, additives, colours and products from animals fed GE feeds be identified on labels. • Recommends food labels disclose which novel trait is engineered into the GE plant, animal or microbe from which the food is made. • Recommends a policy review of standard 1.5.2 be commissioned by TGA. • Recommends FSANZ adopt the submissions by the Institute of Health and Environmental Research Inc, in particular the adoption of summary point 3 – that there be six monthly surveys and testing of all foods likely to be produced by GE (including foods not approved in Australia) so that the

Name	Summary
	standard is legally enforced; also the adoption of an extended version of the EU processed-based labelling laws. • Notes that internationally, GE labelling standards are more process based than product based, more stringent and broader. • Favours labelling of animal products. • Notes that organic and irradiated foods are labelled under the Codex Alimentarius standards, which offers a precedent for other products of novel food production (i.e. GE) to be labelled.
Greenpeace Australia	• Recommendations: o That Australian GE labelling laws be expanded to include: - Labelling of all products derived from GE crops – including oils and starches etc; - Labelling of all products produced using GE processing aids; - Labelling of all GE feed; and - Labelling of animal products from animals fed GE feed. o A significant increase of resources allocated to enable smaller food manufacturers to better understand and comply with labelling laws. • Concerned about the consultation process – understand review was not a public inquiry but GM is of great public concern and warrants a better mechanism for public engagement. Concerned there was no call for public input into the ToR and that the wording of ToR is more likely to promote an information gathering exercise than an active inquiry. In light of this, Greenpeace would expect that a public inquiry process would precede any proposed amendments to Australia's food labelling laws. • Growing awareness among consumers that in affluent countries, purchasing decisions are a key expression of political choice and Australians are increasingly voting with their dollars through schemes such as green power, fair trade, organic or GE free products. Proliferation of eco-labelling and certification schemes is testament to this. • Possible health impact of GE foods is a concern and the lack of rigour of the regulatory system does little to allay fears. Also a fear of possible environmental impact of GE crops and lack of scientific understanding of the long-term impact underpin these concerns. • Ethical, religious or political reasons for avoiding GE foods – concern about eating DNA from another species that would not occur naturally – viewed by some as 'playing God' with nature. Labelling for Hallal and Kosher foods has evolved as part of democratic right to free religious expression. This is widely recognised and doesn't need to be 'understood' by scientists to have validity. • Concern about Monsanto and Bayer meddling with food. Both public and regulators have grounds for concern given the track records of these companies (PCBs were developed and marketed by Monsanto). • Mechanisms for ensuring full traceability will enable informed choices. EU regulations are far superior to current Australia and New Zealand regulations. Without traceability there can be no monitoring of adverse health effects and no recourse for action should a product need to be recalled. • Outlines safety concerns of France and the US – issues of adequacy, accuracy of safety tests and similar issues raised by Australia's Public Health Association (PHAA). • Notes issue of "substantial equivalence" – based on flawed assumption that a GE food can be characterised as substantially equivalent to its conventional form if the GE variety is as safe as the non-GE variety. This is deliberately vague, developed out of commercial and political expediency and hardly provides reassurance to consumers. • Notes nature of mandatory labelling regulations in Brazil, China, Indonesia, Japan, Saudi Arabia and non-mandatory labelling in Canada and USA. Provides Greenpeace briefing document entitled Governments Worldwide Require Regulation and Labelling of GMOs. • Views Australian labelling regulations as sitting in middle of international spectrum. Stronger than Canada and USA but not as informative on GE status as EU. • Notes US mandatory labelling relates only to nutritional value and allergenicity. • Notes China has implemented fully traceable system, although full details are difficult to discern and new regs are in the process of being

Name	Summary
	implemented. • Notes that products derived from GE crops do not need to be labelled in Australia is a breach of public's right to know what they are eating. Exemption of GE canola oil is deceptive. Greenpeace recommends that any modification of Australian labelling laws should move beyond the EU regulations and include labelling of animal products that have been fed GE feed, as well as products produced using GE processing aids (oils, sugars, starches etc) • Notes that new EU laws require animal feed produced from GE crops are labelled accordingly. Consumer products derived from the use of this feed will not require labelling, however producers and industry will be able to identify GE feed and pass this information onto consumers. • Notes Australian dairy industry has policies to ensure dairy cows are not fed GE feed. Several major pork and beef producers have implemented similar policies. • Notes EU's threshold of 0.9% for "adventitious or technically unavoidable presence" of GE ingredients and that in Australia the 1.0% refers to each ingredient used in product, not the overall mass or volume of the product. Greenpeace supports application of a 'lowest detectable' threshold, which can be adjusted in accordance with technological developments. Currently the limit would be set at 0.1%. • Lack of labelling of restaurant and takeaway food is a loophole and should be remedied under Standard 1.5.2. • Cites Taylor Nelson Sofras Study in which 92% of Australians supported labelling of foods derived from GE crops and should include highly refined products. • Other consumer polls provided include Biotechnology Australia (2001), Roy Morgan, US FDA, US ABC News, as well as others from UK and US. • Effectiveness of GE food labelling can only be established by systematic monitoring and adequate enforcement mechanisms. Greenpeace conducted tests of seven major brands and five returned positive results for GE at levels marginally below the 1% threshold. This was higher than the percentage of positives from the FSANZ survey that showed approximately 20% of products as positive for low levels of GE. • Many companies are finding it difficult to exclude GE foods from their supply chain, despite best efforts. • Notes concern over definition of 'unintentional presence". In some cases, 1% contamination is designed into the system of food manufacturers and is therefore 'unintentional' – and a breach of the code. • Recent survey by FSANZ indicated that small and medium sized businesses are ill-equipped to deal with labelling requirements or are simply unaware that labelling laws exist and that many smaller companies complied more by accident than design, which is clearly not appropriate.
Institute of Health & Environmental Research; Public Health Association of Australia	• Notes changes to EU labelling. • Notes consumer pressure has led to international strengthening of GM food labelling and that the news of new EU regulations will mean Australian consumers will not settle for anything less than this. Expects this will lead to Australia eventually obtaining equivalent labelling laws. The choice is whether to adopt them now or after what may be a messy consumer-led fight that could harm confidence in the food supply, food regulators and food industries. • EU being one of our major trading partners means many Australian producers and manufacturers will have to comply with EU's labelling regime. For these, an equivalent labelling or traceback system in Australia will impose no extra cost and the establishment of an EU equivalent system in Australia will give Australia equal labelling and traceback provisions to the world's best practice and an export advantage. • Supports adoption of labelling laws similar to that of EU so that products from animals fed on GM feed (eg honey, meat, milk and eggs), highly refined products (eg oils and starches), food prepared at point of sale, processing aids and food additives using GM microbes and GM flavours are all labelled accordingly. • Has provided two publicly reported investigations (both from UQLD) on consumer views on GM. Notes considerable consumer concern about GM foods and that people want clear labelling. • Requests that FSANZ take note of submission on consumer attitudes by ACA.

Name	Summary
	• Codex developments further reflect the continuing trend towards the tightening of GM food labelling laws, principally as a result of consumer pressure. • Believes there is essentially no monitoring or enforcement of GM food labelling standard – submit that the standard should be made enforceable. • Notes concerns about FSANZ survey "Australian Pilot Survey of GM Food Labelling of Corn and Soy Food Products": o no rationale given for the inclusion and exclusion of certain products (i.e. potato products, less processed versions of soy as such soybeans etc); o no rationale as to why 69 samples were collected and only 74% tested. o no information on how samples were obtained, i.e. if randomly selected, what methodology was used? o appears that survey only tested GM residues by varieties of GM soy and corn that are approved for sale in Australia (except for Starlink corn in some corn chips and tacos) rather than all varieties available worldwide. Survey may be underestimating the level of GM contamination in Australia; o on a small sample size, FSANZ has shown that management systems involving documentation do not prevent GM residues occurring in Australian food. Therefore concerned that FSANZ then recommends that a document survey could replace direct measurement of GM residues in food in determining compliance with GM food labelling requirements. • Appears to be no provision for repeating the GM survey, either in its current form or more thoroughly. Suggests a lack of regular surveys makes determination of true exposure of Australian public to GM foods difficult. May lead to unfair advantage for less scrupulous manufacturers and suppliers. • It appears that enforcement may largely rest with Environmental Health Officers in local councils and shires. Seeks to have the Commonwealth and/or State and Territory governments allocate money to a central agency to undertake a thorough basket survey at least every six months, of randomly chosen foods that are likely to contain GM ingredients. Also to detect unapproved GM food ingredients. • Raised the issue that there are currently no National Association of Testing Authorities Australia (NATA) accredited laboratories in Australia for the quantification of GMO residues in food products. Therefore concerned that the GM food labelling standard cannot be legally enforced and that this unenforceability may be known to members of the food industry advantaging less scrupulous manufacturers and suppliers and give them an unfair advantage over other companies.
The Tablelands Environment Network (QLD)	• Supports mandatory labelling of GM foods. • Believes labelling of GM foods should be carried through any subsequent commercial processing. • Believes animals fed on GM food should be labelled as such. • Believes manufacturers have responsibility to assure public of safety of GM foods.

NEW ZEALAND SUBMISSIONS

Individual Consumers

Name	Summary
Bieleski, Jocelyn and Paul	• Believe the labelling system in New Zealand is inadequate because of the exemptions (oils etc). • Notes EU labelling regime will include oils and sugars etc. Believes the EU labelling regime is more stringent than ours. • Would like to see GM food labelling threshold reduced to the smallest traceable level.
Bleakley, Claire	• Believes labelling laws do not meeting consumer expectations. • Labelling should indicate the level of GE found in the product. • GM food labelling is not clear to consumers and consumers often have to guess which foods contain GE content. • Notes various studies (Monsanto, UKFSA) suggesting lack of safety in GE technology and claims FSANZ has disregarded these studies in favour of diminished labelling and approval of unsafe foods. • Notes EU is implementing fully traceably system, that two thirds of American consumers want comprehensive labelling and that Japan requires labelling and health and safety information before the product can be publicly released. • Notes New Zealand has no country of origin or levels of GE on labels and that Minister Marion Hobbs has assured the public that food in New Zealand will be GE free. • Notes that consumer acceptance does not prove safety of GE technology. FSANZ must find the money to conduct safety testing on GEOs before releasing them into the food chain. • Notes that Health professionals and consumers rate GE badly and that many consumers want comprehensive labelling. • Believes FSANZ does not listen to submitters – only includes industry views.
Bonar, Mark	• Believes New Zealand labelling laws do not inform consumers if they are eating GE ingredients.
Drace, Charles	• Believes all food containing GE ingredients must be labelled, even for the most minute amounts. Supports fines for those who do not comply.
Green New Zealand (name not supplied)	• Opposes gene technology being used in food.
Hadfield, Nigel	• Believes presence of GE in foods leads to suicide.
Jones, Oraina	• Believes current labelling of GM foods is inadequate. • Believes no GM food labelling has been found in New Zealand supermarkets. • Believes FSANZ should undertake its own assessment of GM foods. • Supports mandatory labelling of all foods containing GM material. • Supports mandatory labelling of all foods derived from GM plants. • Supports use of Precautionary Principle to assist in preventing increase in micro nutrient deficiency disorders such as anaemia and thyroid problems.
Lyall, Cheryl	• All foods using GE technology should be labelled, including that which is below the 1% threshold.
Plows, Joanna; Kolff, Hein	• Supports labelling in Australia comparable to EU labelling. • Supports country of origin traceability. • Concerned about spread of GM material to non-GM crops. • Believes FDA and others have poor assessment procedures. • Provided link to www.Stuff.co.nz - poll showing 67% want stricter labelling laws.

	• Discovery Channel conducted a poll in several countries in which 58% opposed GM Foodstandards Australia New Zealand. • 80% of New Zealand consumers support New Zealand remaining a GM free nation (www.sustainabilitynz.org/news_item.asp?sID=114).
Sorrenson, Amanda	• Opposes current labelling requirements. • Believes there is secrecy around gene technology. • Believes current labelling laws protect producers, not consumers. • Supports mandatory labelling of GM food.
Towns, Marion	• Angry that most GE foods are unlabelled.

Industry

Name	Summary
Poultry Industry Association of New Zealand (PIANZ)	• Some Poultry Industry Association members use GM soy in poultry feed and others do not. • Expiry of moratorium on GM experimentation in New Zealand has raised the issue's profile, leading to increase consumer call for GM food labelling. • PIANZ's view is that this is irrelevant to poultry meat as GM soy is part of the feed process in some cases but clear scientific evidence indicates that the proteins break down in the gut of the chicken and there is no transfer of GM materials to poultry meat. Compulsory labelling should not apply. • No position on GM food labelling has been established by PIANZ except to say that any decision must be based on science.
New Zealand Grocery Marketers Association	• Submits that Standard 1.5.2 does not require amendment as the review is premature. Insufficient time has lapsed to enable a reasonable assessment of the labelling requirements. Little GM food being marketed currently thus there are insufficient labels to enable an adequate assessment. • Implementation of labelling requirements has been costly but industry has been able to meet them. • The Association has supported Standard 1.5.2 because providing high quality products with meaningful labels is the foremost priority. • Labelling beyond substantial equivalence is thwarted with difficulties – it implies a difference where non exists. The current standard can be monitored and enforced effectively and amendment to the current standard will result in added costs and monitoring and enforcement will be increased. • Notes FSANZ Survey which showed that compliance is high. • Claims that the finding of lobby groups opposed to GMF that "everyone is opposed to GMFs and hence all foods where genetic modification has been used somewhere in the food chain must be labelled" is a misrepresentation as: o FSANZ's food labelling survey found that unprompted awareness of GM is extremely low; o New Zealand consumer surveys conducted in May 2001 and May 2003 by Ag Research founding significant decrease in opposition to the use of GM foods and medicines; o The survey found that people are becoming more comfortable with use of GM; o Member companies receive few enquiries about GM products; and o The Greenpeace booklet on the status of GMFs makes no difference to companies' sales whether they are in the green, red or orange categories. • Notes that each country's market is different so what is acceptable in one country may not be acceptable in another. More relaxed approach in USA, where people are more accepting, would not suit the EU where opposition to GMFs are high. • Submits that standard 1.5.2 has found an effective and comfortable middle ground. • Notes that anti-GM food activists are lobbying for more extensive labelling of GMFs and are seeking mandatory GM free labels and labelling indicating where GM has been used in anywhere in the food chain. GMA believes this must be countered for the following reasons: (has supplied

	an attachment outlining a lengthy list of reasons): o Supports concept of de minimus tolerances or thresholds, which provide a critical means of discriminating between products containing significant amounts of material, derived from GMOs from conventional crops. o Carryover or mixing of trace material, even with Good Agricultural and Manufacturing Practice, is unavoidable. o Application of de minimus does indicate a lack of willingness to label accurately but recognises impracticality of "zero tolerance". o Food companies wishing to meet market needs by providing products derived from conventional material will be inhibited from making negative claims – simply because of the chance of trace material. o Food companies will be pressured to default to the "…may contain…" statement for many products that are sourced from conventional crops but not audited rigorously, and certified. o Certification of "sourced from conventional crops" is dependant on meeting the standard definition. A zero tolerance will be almost impossible to meet, and hence certification for thresholds will be unlikely. o Thresholds provide additional assurance that non-GM status claims will be considered accurate by regulators removing the uncertainty of "all reasonable steps" demonstration for compliance. • Notes concerns about implications for new labelling, i.e. cost to industry and changing not just the label but also perhaps the package to accommodate new information. • States that member companies have indicated that there is no significant customer demand for increased labelling with respect to GM foods or ingredients. They do not note that whilst companies receive customer inquiries with regard to the use of GM foods and ingredients in products, this does not directly relate to requests for increased labelling detail. They also note that any increased customer inquiries correlate more with increased consumer activist anti-GM publicity.

Other Organisations

Name	Summary
Capital GE Free New Zealand	• Commends the new EU labelling regime. • Notes two British studies http://www.bma.org.uk/ap.nsf/Content/gmcrops?OpenDocument&Highlight=2,gm,foodshttp and www.royalsoc.ac.uk/files/statfiles/document-165.pdf which illustrate concerns for more thorough analysis into the health impact of GE foods. • Notes study by Independent Science Panel stating that GM crops have not yet been found to be safe (www.i-sis-org.uk/ispr-summary.php • All foods with identifiable GE DNA must be labelled.
Consumers Institute of New Zealand	• Notes 2002 survey of members on behalf of NZFSA to determine use of food labels. Survey found that use by or best by dates, ingredients, nutrition information, food additives, endorsements or approvals and country of origin all had greater importance than GM information. • Provides brief summary of 2000 AC Neilson survey. • Provides the following consumer research: GM Dilemmas – UK Consumers Association (www.which.net/campaigns). • Report on Consumer Focus Groups – USFDA, Oct 2000 www.cfscan.fda.gov/~comm/biorpt.html). • Believes more consumer research needs to be undertaken in Australia and New Zealand before parallels can be made with other countries.
GE Free New Zealand in Food & Environment Inc.	• Believes present labelling regimes do not support FSANZ's claims that the standards are in place to protect public health and safety. • Believes FSANZ should undergo an independent review. • Supports New Zealand pursuing comparable labelling to new EU labelling regime, including restaurant food. • Tolerance levels must be reduced to smallest detectable percentage in light of new processes that are able to detect levels as low as 0.1%. • Supports a system of traceability to country of origin and ultimately to individual fields for all crop production. • Measures to allow unintended contamination must be removed.

Name	Summary
	• Emergency procedures for removal of contaminated foods to be withdrawn from sale within 24 hours of discovery. • Provided information on harm of GE foods – studies on soy, antibiotic resistance, food borne diseases, herbicides and links to cancer. • Poor assessment procedures are apparent and regulatory assessments take no research quoted by submitters on safety concerns into account, focussing instead on industry concerns. • GE Free New Zealand suggests GE foods require constant monitoring to ensure safety and stability. • Both New Zealand and Australian governments appear intent on supporting US position on GE – ensuring minimal labelling and full exposure to untested crops – seems that free trade deals overrule public health and safety concerns – including conditions which are precursors to cancer. • In the absence of a full ban on importation of GE foods, FSANZ should ensure food is appropriately labelled. • Does not support sale of unlabelled GE foods against wishes of the majority given the link between GE and disease, allergens and presence of toxins. • Provided following links to studies and polls: www.stuff.co.nz (stricter labelling laws) http://ngin.tripod.com/010403b.htm, www.sustainabilitynz.org/news_item.asp?sID=114, www.btinternet.com/~nlpwessex/Documents/ironcurtainmodernscience.htm, www.gene.ch/genet.html • No invitation was received to submit to such an important review. • Consultation with the wider community appears to have been precluded. • Such a short period of consultation was decided upon. • Other groups who have an obvious interest in the proceedings were not invited to take part in consultation • There is an imbalance in the groups taking part in the consultation process.
GE Free Northland	• Believes the current GE labelling regime is inadequate as the standard only partially meets the needs of consumers. • Notes varied reasons for New Zealand consumers wanting to avoid GE food (ethical, environmental, religious, allergies etc). • Notes need for clear labelling for Maori people as high quality, safe and reliable food (i.e. free of transgenics) is important for their physical and spiritual well-being. • Notes warning by some scientists of unanticipated health risks. • Believes consumers are deceived into buying GE products. • Notes Colmar Bruton poll in New Zealand in which the majority of respondents stated a desire for New Zealand to remain GE free. • Notes unacceptable level of exemptions in labelling regime, including oils, sweeteners, additives, animal feed). • Believes FSANZ has poor assessment procedure, as it takes no notice of information provided by submitters, focussing solely on industry concerns. • Notes EU labelling regime and suggests FSANZ should implement similar regulations. • Suggests restaurant food should be labelled to inform consumers of presence of GE material. • Believes FSANZ fails to provide consumers with adequate information, despite provision of this information being a stated FSANZ objective.
National Council of the Women of New Zealand	• Considers that FSANZ is progressing towards GM food labelling that will be acceptable to consumers.
The Green Party of Aotearoa New Zealand	• Believes current standard only partially meets consumer needs – fails to provide enough information for informed choices. • Believes standard fails because there are no mandatory requirements for verification and traceability. • Sees use of 'unintentional' with regard to GM levels below 1% as a loophole. • Submits that standard on GM food should be revised to bring it into line with new EU regulations. • Is aware of all international developments in labelling of GM foods and follows closely EU regulations in general.

Name	Summary
	• Believes the current standard allowing food to be sold without GM food labelling if no GM DNA or protein can be detected is misleading. • Asserts that the threshold for approved material should be lowered to 0.5% for approved GM material and retained at zero for unapproved material (compared to EU's levels of 0.9% and 0.5%). • EU regulations require operator to prove contamination could not be avoided – Green Party supports this requirement – producers in New Zealand and Australia must be required to provide evidence that all possible steps were taken to avoid GM contamination. • Endorses EU approach to labelling of GM animal feed but acknowledges it is outside jurisdiction of FSANZ. • Supports the introduction of a traceability system to overcome problems outlined in NZFSA's 2003 report "Assessment of Compliance with Standard 1.5.2". • Traceability system will facilitate quality control, verification of labelling claims and possibility of withdrawing products if unforeseen adverse effects to human health or environment should occur. • Provided copy of Consumer's Right to Know (Food Information) Bill – Explanatory Note and General Policy Statement

INTERNATIONAL SUBMISSIONS

Individual Consumers

Name	Summary
Harbison, Sally (Zambia)	• Understands that GE labelling laws allow some foods which are not substantially genetically engineered need not be labelled as such. Would like assurance that products are GE free. • Expresses fear of long term impact of GE on human health.

Other Organisations

Name	Summary
Africa Bio	• Supports right of consumers to exercise informed choices to meet their preferences or perceptions. This needs to be considered against a background of practicality, cost and prevention of fraudulent claims. • Notes the objectives of Codex to develop global guidelines for food standards ie clear labelling, easy to understand, not misleading and that a new food product which is substantially different to its conventional counterpart in composition, nutrition or mode of preparation must also be labelled. Notes that countries have not followed the same approach as regards labelling food derived from GM. • Notes that US considers food which has passed bio-safety tests does not require labelling. • Notes more stringent EU labelling regime. • Cites Australia and New Zealand as only countries to have conducted extensive investigation into practical and cost implications of GM food labelling (KPMG Report to ANZFA, 1999). • Notes that comprehensive labelling will cost industry an additional 6% and several hundred million rand to government to set up and implement monitoring systems, thereby increasing food prices. • Notes that South African labelling laws try to strike a balance between informed choice for consumers and preventing unnecessary increase in food prices. • These draft regulations require mandatory labelling of foods from GM origin if they differe significantly from their conventional counterparts or if containing an animal or human gene in food products. Notes provision for products containing less than 1% novel DNA or its protein is from a GM origin. Labels for “GM Free” and “May contain GM” are not permitted. • Africa Bio rejects calls by certain lobbyists for “mandatory labelling of all foodstuffs which may be of GM origin, irrespective of whether the GM origin can be detected and irrespective of the cost implications.” Imposing such added costs is irresponsible and undemocratic. • Encourages adequate monitoring by government in order to minimise fraudulent labelling.

APPENDIX C

Approved GM Food Varieties

CROP	PRODUCT
SOYBEAN	Glyphosate-tolerant soybean line 40-3-2
	High oleic soybean lines G94-1, G94-19 and G168
CANOLA	Glufosinate-ammonium-tolerant canola Topas 19/2 and T45 and glufosinate-ammonium tolerant and pollination controlled lines Ms1, Ms8, Rf1, Rf2, RF3
	Glyphosate-tolerant canola line GT73
	Bromoxynil-tolerant canola Westar-oxy-235
CORN	Insect-protected corn line MON 810
	Glufosinate-ammonium tolerant corn line T25
	Glyphosate-tolerant corn line GA21
	Glyphosate-tolerant corn line NK603
	Insect-protected and glufosinate-ammonium tolerant DBT418 corn
	Insect-protected Bt-176 corn
	Insect-protected and glufosinate-ammonium tolerant Bt-11 corn
	Insect-protected and glufosinate-ammonium corn line 1507
	Insect-protected MON863 corn (Approved by FSANZ Board in September 2003 but awaiting endorsement from the Australia New Zealand Food Regulation Ministerial Council)
POTATO	Insect-protected potato lines BT-06, ATBT04-06, ATBT04-31, ATBT04-36, and SPBT02-05
	Insect- and potato leafroll virus-protected potato lines RBMT21-129, RBMT21-350 and RBMT22-82
	Insect- and potato virus Y-protected potato lines RBMT15-101, SEMT15-02 and SEMT15-15
SUGARBEET	Glyphosate-tolerant sugarbeet line GTSB77
COTTON	Insect-protected cotton lines 531, 757 and 1076
	Glyphosate-tolerant cotton line 1445
	Bromoxynil-tolerant cotton transformation events 10211 and 10222
	Insect-protected cotton event 15895

APPENDIX D

STANDARD 1.5.2

FOOD PRODUCED USING GENE TECHNOLOGY

Purpose

Division 1 of this Standard addresses health and safety requirements, regulating the sale of food produced using gene technology, other than additives and processing aids. The Standard prohibits the sale and use of these foods unless they are included in the Table to clause 2 and comply with any special conditions in that Table.

The Authority will assess the safety for human consumption of each food produced using gene technology or such class of food prior to its inclusion in the Table. The safety assessment will be performed according to the Authority's approved safety assessment criteria.

Additives and processing aids which are produced using gene technology are not regulated in Division 1 of this Standard. Other Standards in this Code regulate additives and processing aids and require pre-market approval for these substances.

Division 2 of this Standard specifies labelling and other information requirements for foods, including food additives and processing aids, produced using gene technology.

Table of Provisions

Clauses

Division 1 – Sale and use of food produced using gene technology

1 Interpretation

For the purposes of this Standard -

a food produced using gene technology means a food which has been derived or developed from an organism which has been modified by gene technology.

Editorial note:

This definition does not include a food derived from an animal or other organism which has been fed food produced using gene technology, unless the animal or organism itself is a product of gene technology.

gene technology means recombinant DNA techniques that alter the heritable genetic material of living cells or organisms.

2 General prohibition on the sale and use of food produced using gene technology

A food produced using gene technology, other than a substance regulated as a food additive or processing aid, must not be sold or used as an ingredient or component of any food unless it is listed in Column 1 of the Table to this clause and complies with the conditions, if any, specified in Column 2.

Table to clause 2

Column 1	Column 2
Food produced using gene technology	**Special conditions**
Food derived from glufosinate ammonium-tolerant corn line T25	
Food derived from glyphosate-tolerant corn line GA21	
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 Bt-176 corn.	
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 transformation events 10211 and 10222	
Oil and linters derived from glyphosate-tolerant cotton line 1445	
Oil and linters derived from insect-protected cotton lines 531, 757 and 1076	
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	
Food derived from glyphosate-tolerant corn line NK603	

Table to Clause 2 (Continued)

Food derived from insect-protected and glufosinate ammonium-tolerant DBT418 corn Oil derived from bromoxynil-tolerant canola line Westar-Oxy-235 Oil and linters derived from insect-protected cotton lines containing event 15985 Food derived from insect-protected and glufosinate-ammonium tolerant corn line 1507	

3 Exemption to general prohibition on sale and use

(1) For the purposes of this clause -

(a) the Act means the *Australia New Zealand Food Authority Act 1991*;
(b) the Authority means the Australia New Zealand Food Authority established under the Act;
(c) the Council means the Australia New Zealand Food Standards Council.

(2) The prohibition in clause 2 does not apply to a food produced using gene technology where -

(a) that food is the subject of an application under section 12 of the Act to vary the Table to that clause;
(b) the application has been accepted in accordance with section 13 of the Act by the Authority on or before 30 April 1999;
(c) the Authority has evidence that that food, in one or more countries, other than Australia or New Zealand, is lawfully permitted to be sold or used as an ingredient or component, by a national food regulatory agency; and
(d) the Council has not become aware of evidence that that food poses a significant risk to public health and safety.

Division 2 - Labelling etc of food produced using gene technology

4 Interpretation and Application

(1) For the purposes of this Division -

genetically modified food means food that is, or contains as an ingredient, including a processing aid, a food produced using gene technology which -

(a) contains novel DNA and/or novel protein; or
(b) has altered characteristics;

but does not include –

(c) highly refined food, other than that with altered characteristics, where the effect of the refining process is to remove novel DNA and/or novel protein;

(d) a processing aid or food additive, except where novel DNA and/or novel protein from the processing aid or food additive remains present in the food to which it has been added;

(e) flavours present in the food in a concentration no more than 1g/kg; or

(f) a food, ingredient, or processing aid in which genetically modified food is unintentionally present in a quantity of no more than 10g/kg per ingredient.

altered characteristics means any of the matters specified in paragraphs 7(a), (b), (c) or (d) of this Standard.

novel DNA and/or novel protein means DNA or a protein which, as a result of the use of gene technology, is different in chemical sequence or structure from DNA or protein present in counterpart food which has not been produced using gene technology.

(2) Any statement required by clause 5 may be contained in the statement of ingredients where the genetically modified food is an ingredient or processing aid.

(3) Where genetically modified food is displayed for retail sale other than in a package, any information that would have been required under clause 5 of this Standard on the label on the food if it was packaged, must be displayed on or in connection with the display of the food.

(4) This Division does not apply to food intended for immediate consumption which is prepared and sold from food premises and vending vehicles, including restaurants, take away outlets, caterers, or self-catering institutions.

(5) This Division does not apply to food packaged or manufactured prior to 7 December 2001 for a period of 12 months after the commencement of that Division.

(6) Subclause (5) ceases to have effect on 7 December 2002.

Editorial note:

Subclause 4(5) will cease to operate on 7 December 2002. From this date all food will need to comply with the labelling requirements in Division 2. Subclause 4(5) only applies to the labelling requirements in this Standard and has no effect on the provisions in Division 1.

5 Labelling of genetically modified food

The label on a package of genetically modified food must include the statement 'genetically modified' in conjunction with the name of that food or ingredient or processing aid.

Example for single ingredient genetically modified foods:

Soy Flour
Genetically Modified

Soy Flour
From genetically modified soya beans

Example for genetically modified food ingredients:

Ingredients: Soy Protein Isolate (genetically modified); Maltodextrin; Vegetable Oil; Food Acid (332); Emulsifier (471); Vegetable Gum (407); Water Added.

6 Labelling of food which is not genetically modified

The label on a package of food which is not defined as 'genetically modified food' in clause 4 of this Standard is not required to include any statement about the genetic status of the food.

7 Additional labelling/information requirements

Notwithstanding the provisions of this Division, Column 2 of the Table to clause 2 may specify labelling or other information requirements in relation to food produced using gene technology listed in Column 1 of the Table where –

(a) the genetic modification has resulted in one or more significant composition or nutritional parameters having values outside the normal range of values for existing counterpart food not produced using gene technology;
(b) the level of anti-nutritional factors or natural toxicants are significantly different in comparison to the existing counterpart food not produced using gene technology;
(c) the food produced using gene technology contains a new factor known to cause an allergic response in particular sections of the population;
(d) the intended use of the food produced using gene technology is different to the existing counterpart food not produced using gene technology; or
(e) the genetic modification raises significant ethical, cultural and religious concerns regarding the origin of the genetic material used in the genetic modification.

Editorial note:

The Compliance Guide for Standard 1.5.2 as published by the Australia New Zealand Food Authority should be read in conjunction with this Standard.

Claims about genetic modification or its absence are subject to the *Australian Trade Practices Act 1974* and State and Territory Food Acts, and the Western Australian Health Act, and the *New Zealand Fair Trading Act 1986* and Food Act.

Division 2 of this Standard is to be reviewed 3 years from its date of gazettal.

International Comparison Analysis - Regulatory Outcomes for the Labelling of GM Food

Key:
Black text: Similar to the Australia/New Zealand requirements
Blue text: Less stringent than the Australia/New Zealand requirements
Purple text: More Stringent than the Australia/new Zealand requirements

AUSTRALIA/ NEW ZEALAND GM Food Labelling Outcomes of Division 2, Standard 1.5.2	General Requirements - Packaged foods	General Requirements - Unpackaged foods	Additional requirements	Specific Labelling Exemptions					Negative Claims
	Based on presence of novel DNA and/or novel protein. Where a GM food or ingredient is present in a packaged food, 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. This general requirement also applies to food that has 'altered characteristics'	**Based on presence of novel DNA and/or novel protein** Where a GM food or ingredient is present in unpackaged foods for retail sale, the words 'genetically modified' must be displayed in association with the food, or in association with the particular ingredient within that food. This general requirement also applies to food that has 'altered characteristics'	**Based on equivalence** Additional information to be included on label is prescribed by Standard 1.5.2 on case by case basis - required where the food has 'altered characteristics' or identified ethical, cultural or religious concerns regarding GM.	Highly refined foods that have undergone refining processes that have the effect of removing DNA and/or protein.	Additives and processing aids that do not carry forward novel DNA or novel protein to the final food.	Flavourings (including individual aromatic, carrier and other components) at no more than 1g/kg in the final food.	Food intended for immediate consumption that is prepared and sold from food premises and /or vending machines.	Unintentional presence of a GM food not more than 10g/kg per ingredient.	Standard silent on negative GM food labelling claims, these addressed by the Australian *Trade Practices Act 1974*, State & Territory Food Acts, WA Health Act, the NZ *Fair Trading Act 1986* and the NZ *Food Act 1981,* in relation to false misleading and deceptive representation/labelling.
Brunei Darussalam	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Canada -	**Current** – (distinction between packaged and unpackaged foods not made). GM foods are treated the same as non-GM foods in relation to labelling requirements. Therefore no mandatory requirement to declare the presence of a GM food or ingredient in a food product. Reg. - *Food and Drug Act* (see part 1 section 5). **Proposed** - Industry standard for voluntary labelling is being developed. Includes guidelines for making both positive and negative claims. Source – *Standard for Voluntary labelling and Advertising of Foods That Are or Are Not products of Genetic Engineering, June 2003 (Third Letter Ballot Draft)*		**Current –** mandatory labelling required if there is a health or safety risk (i.e. from allergens) or a significant change in nutrition or composition -these decisions are made by Health Canada based on Safety assessment. No mandatory requirement to indicate that food is also a product of genetic engineering.	N/A	N/A	N/A	N/A	N/A	**Current-** Canadian *Food and Drug Act,* part 1 section 5(1) addresses negative GM claims – information must be truthful and not misleading. **Proposed** -Industry Standard for voluntary labelling will also address negative claims Proposes a 5% threshold for adventitious presence of GM material when making non-GM claims.
Chile	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available

AUSTRALIA/ NEW ZEALAND GM Food Labelling Outcomes of Division 2, Standard 1.5.2	General Requirements - Packaged foods	General Requirements - Unpackaged foods	Additional requirements	Specific Labelling Exemptions					Negative Claims
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People's Republic of China –	**Current** – (distinction between packaged and unpackaged foods not made). Mandatory labelling for prescribed categories of GMOs. 5 categories of GM crops such as soybean, corn, cotton, rapeseed and tomato and some of their products are required to be labelled. From the information available it cannot be determined if the requirements are based on the presence of novel DNA and/or novel protein in the food or whether the food is derived from an organism produced using gene technology (i.e. labelling regulation is processed based) Reg. - *Regulation of the Safety Administration of Agricultural GMOs* (Ministry of Agriculture) In addition, the Ministry of Health requires labelling of all food products that contain GMOs		**Current** - No additional labelling requirements set	**Current** - No specific exemption	**Current** - No specific exemption	**Current** - No specific exemption	**Current** - No specific exemption	**Current** - No tolerance level has been set.	**Current** – The regulation is silent on negative claims although Ministry of Agriculture stipulates that non-GM products should not be labelled GM-Free
Chinese Taipei	**Current** –(distinction between package and unpackaged foods not made) From the information available, it cannot be determined if the labelling regulations are based on the presence of novel DNA and/or novel protein in the food. Mandatory labelling for foods containing GM soybean or maize ingredients that are more than 5% by weight. Introduction is phased with compliance dates of: Jan 01 – raw soybeans and corn, soybean meal/flour, corn grit/meal/flour Jan 04 – processed products such as tofu, soy milk, soy curd, frozen corn, canned corn, soy protein; and Jan 05 – highly processed soybean and maize products Source – *based on information from US Department of Agriculture (ABARE Report July 2003)*		**Current** - No additional labelling requirements set	**Current** – soy sauce, soybean oil, corn oil, corn syrup and corn starch are currently exempt.	**Current** – No specific exemption but the 5% threshold under the general requirement may exclude this category	**Current** – No specific exemption but the 5% threshold under the general requirement may exclude this category	**Current** – No specific exemption	**Current** – No tolerance level has been set but the 5% threshold under general requirement may address adventitious presence.	No other details available at this time

AUSTRALIA/ NEW ZEALAND GM Food Labelling Outcomes of Division 2, Standard 1.5.2	General Requirements - Packaged foods	General Requirements - Unpackaged foods	Additional requirements	Specific Labelling Exemptions					Negative Claims
	Based on presence of novel DNA and/or novel protein. Where a GM food or ingredient is present in a packaged food, 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. This general requirement also applies to food that has 'altered characteristics'	**Based on presence of novel DNA and/or novel protein** Where a GM food or ingredient is present in unpackaged foods for retail sale, the words 'genetically modified' must be displayed in association with the food, or in association with the particular ingredient within that food. This general requirement also applies to food that has 'altered characteristics'	**Based on equivalence** Additional information to be included on label is prescribed by Standard 1.5.2 on case by case basis - required where the food has 'altered characteristics' or identified ethical, cultural or religious concerns regarding GM.	Highly refined foods that have undergone refining processes that have the effect of removing DNA and/or protein.	Additives and processing aids that do not carry forward novel DNA or novel protein to the final food.	Flavourings (including individual aromatic, carrier and other components) at no more than 1g/kg in the final food.	Food intended for immediate consumption that is prepared and sold from food premises and /or vending machines.	Unintentional presence of a GM food not more than 10g/kg per ingredient.	Standard silent on negative GM food labelling claims, these addressed by the Australian *Trade Practices Act 1974*, State & Territory Food Acts, WA Health Act, the NZ *Fair Trading Act 1986* and the NZ *Food Act 1981,* in relation to false misleading and deceptive representation/labelling.
Hong Kong. China	**Current** – No regulation in place **Proposed –** Voluntary labelling regime for GM foods Source – *Health Welfare and Food Bureau website*	No other details available at this time.	No other details available at this time.	N/A	N/A	N/A	N/A	N/A	No details available at this time.
Indonesia	**Current** – food derived from biotechnology is required to be labelled. From the information available, it cannot be determined if the labelling regulations are based on the presence of novel DNA and/or novel protein in the food. Source - *Government Regulation No. 69/1999 (ABARE Report July 2003)*	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.

AUSTRALIA/ NEW ZEALAND GM Food Labelling Outcomes of Division 2, Standard 1.5.2	General Requirements - Packaged foods	General Requirements - Unpackaged foods	Additional requirements	Specific Labelling Exemptions					Negative Claims
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Japan	**Current** – (distinction between packaged and unpackaged foods not made). Labelling is based on the presence of novel DNA and/or novel protein in the food. Mandatory labelling required for 44 foods derived from GM Soya, Corn and Potato where they are one of three major ingredients and accounts for 5% or more of total weight. Framework: • Labelling mandatory when a product contains GM ingredients that have been handled according to IP handling e.g. 'genetically modified food" • Labelling mandatory when a non-GM food has not being segregated from GM foods according to IP handling e.g. "not segregated from GM food products" • Labelling optional when a product does not contain GM ingredients and has been handled according to IP handling e.g. "not genetically modified" Reg. - *Food Sanitation Law (for public health), Ministry of Health Wealth and Labour.*		**Current** - No additional labelling requirements set.	**Current** – Labelling not required where GM DNA or protein is eliminated in final product.	**Current** – Labelling not required where GM DNA or protein is eliminated in final product.	**Current** – no specific exemption but 5% of weight and major ingredient provisions in general requirement may exclude this category.	**Current** –no specific exemption for this category.	**Current** - no specific exemption but 5% weight and major ingredient provisions in the general requirement may address adventitious presence.	**Current** - Optional only where IP handling in place.
Korea	**Current** – Labelling is based on the presence of novel DNA and/or novel protein in the food. Mandatory labelling for bulk produce (maize soybeans, soybean sprouts, potatoes) and also of designated processed foods, which contain GM soybean, corn or bean spout as one of the top five ingredients. Reg. - *Labelling Standard for GM foods (KFDA Notification 2000-43, 2001-43)*	**Current** – Regulation for packaged food applies equally to unpackaged although separate display panels required where individual food items are sold on site.	**Current** - No additional labelling requirements set	**Current –** Labelling not required for products that do not contain residual recombinant DNA or protein in the final product	**Current –** Labelling not required for products that do not contain residual recombinant DNA or protein in the final product.	**Current** - No specific exemption but GM ingredient has to be one of the top five in the food, which may exclude this category	**Current** – operators of instant food sales do not need to label individual food items sold onsite if separate display panel is displayed.	**Current** - Adventitious presence threshold level set at 3% for bulk produce. IP system must be in place.	**Current** – When impossible to verify the source of ingredients product can be labelled as 'may contain GM soybeans'

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	Based on presence of novel DNA and/or novel protein. Where a GM food or ingredient is present in a packaged food, 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. This general requirement also applies to food that has 'altered characteristics'	**Based on presence of novel DNA and/or novel protein** Where a GM food or ingredient is present in unpackaged foods for retail sale, the words 'genetically modified' must be displayed in association with the food, or in association with the particular ingredient within that food. This general requirement also applies to food that has 'altered characteristics'	**Based on equivalence** Additional information to be included on label is prescribed by Standard 1.5.2 on case by case basis - required where the food has 'altered characteristics' or identified ethical, cultural or religious concerns regarding GM.	Highly refined foods that have undergone refining processes that have the effect of removing DNA and/or protein.	Additives and processing aids that do not carry forward novel DNA or novel protein to the final food.	Flavourings (including individual aromatic, carrier and other components) at no more than 1g/kg in the final food.	Food intended for immediate consumption that is prepared and sold from food premises and /or vending machines.	Unintentional presence of a GM food not more than 10g/kg per ingredient.	Standard silent on negative GM food labelling claims, these addressed by the Australian *Trade Practices Act 1974*, State & Territory Food Acts, WA Health Act, the NZ *Fair Trading Act 1986* and the NZ *Food Act 1981,* in relation to false misleading and deceptive representation/labelling.
Malaysia	**Current** – No regulation in place **Proposed –** New legislation should come into force on 1 January 2004, which will require mandatory labelling of foods that contain GMO substances that comprise of 3% or more of the volume of the product. From the information available it cannot be determined if the future requirements will be based on presence of novel DNA and/or novel protein in the food. Source – *ABARE Report July 2003*	No other details available at this time.	No other details available at this time.	**Proposed –** no specific exemption	**Proposed –** 3% threshold excludes these substances.	**Proposed –** 3% threshold excludes these substances.	No other details available at this time.	No other details available at this time.	No other details available at this time.
Mexico	**Current** – No regulation in place **Proposed –** Mandatory labelling of all foods containing ingredients derived from GM organisms. Approval of new regulation possibly in September 03. From the information available it cannot be determined if the future requirements will be based on the presence of novel DNA and/or novel protein in the food.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.	No other details available at this time.

AUSTRALIA/ NEW ZEALAND GM Food Labelling Outcomes of Division 2, Standard 1.5.2	General Requirements - Packaged foods	General Requirements - Unpackaged foods	Additional requirements	Specific Labelling Exemptions					Negative Claims
	Based on presence of novel DNA and/or novel protein. Where a GM food or ingredient is present in a packaged food, 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. This general requirement also applies to food that has 'altered characteristics'	**Based on presence of novel DNA and/or novel protein** Where a GM food or ingredient is present in unpackaged foods for retail sale, the words 'genetically modified' must be displayed in association with the food, or in association with the particular ingredient within that food. This general requirement also applies to food that has 'altered characteristics'	**Based on equivalence** Additional information to be included on label is prescribed by Standard 1.5.2 on case by case basis - required where the food has 'altered characteristics' or identified ethical, cultural or religious concerns regarding GM.	Highly refined foods that have undergone refining processes that have the effect of removing DNA and/or protein.	Additives and processing aids that do not carry forward novel DNA or novel protein to the final food.	Flavourings (including individual aromatic, carrier and other components) at no more than 1g/kg in the final food.	Food intended for immediate consumption that is prepared and sold from food premises and /or vending machines.	Unintentional presence of a GM food not more than 10g/kg per ingredient.	Standard silent on negative GM food labelling claims, these addressed by the Australian *Trade Practices Act 1974*, State & Territory Food Acts, WA Health Act, the NZ *Fair Trading Act 1986* and the NZ *Food Act 1981,* in relation to false misleading and deceptive representation/labelling.
	Source – *Life Sciences Network, 12 June 2003.*								
Papua New Guinea	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Peru	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available
Philippines	**Current** – Voluntary labelling (in process of developing regulations) Source – *ABARE Report, July 2003*	N/A	**Current –** No additional labelling requirements set.	N/A	N/A	N/A	N/A	N/A	No other details available at this time.
Russia	**Current** - (distinction between packaged and unpackaged foods not made). Mandatory labelling of all GM foods. Labelling regulation based on the presence of novel DNA and/or novel protein in the food. Source - *Unofficial translation from USDA website, GAIN Report #RS9057,(Russian Federation Food and Agriculture Import Regulations and Standard (Decree))*		**Current –** No additional labelling requirements set.	**Current** – Foods not containing residual GM DNA and protein are not subject to labelling.	**Current** – Foods not containing residual GM DNA and protein are not subject to labelling.	**Current** – No specific exemption	**Current** – No specific exemption	**Current** – No specific exemption	**Current** - Decree is silent on negative claims.
Singapore	**Current** – no specific regulations on GM foods but Singapore is following the Codex debate Source – *Agrifood and Veterinary Authority of Singapore.*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No other details available at this time.

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Thailand	**Current** – (distinction between packaged and unpackaged foods not made). Mandatory labelling required for listed food products (22 soy and corn categories) where they contain recombinant DNA or protein resulting from gene technology of 5% or more and are one of the 3 major ingredients (accounting for 5% or more of the total weight). Source – Unofficial translation, *Notification of Ministry of Public health (no. 251) B.E. 2545*		**Current** – no additional labelling requirements set	**Current** - No specific exemption but general requirement based on presence.	**Current** – no specific exemption but 5% threshold and major ingredient provisions in general requirement may exclude this category.	**Current** – no specific exemption but 5% threshold and major ingredient provisions in general requirement may exclude this category.	**Current** – exemption to 'small producers' who produce and directly sell to consumers in a restricted area and also could provide information directly to the consumer.	**Current** - No tolerance level has been set but the general 5% tolerance may address adventitious presence.	**Current** – all negative claims are prohibited, e.g. 'free from GM', 'Non-GM food', and 'segregated GM constituents'.
United States of America -FDA's Draft Guidance for Industry (January 2001); Federal Drug and Cosmetic Act	**Current** – (distinction between packaged and unpackaged foods not made). GM foods are treated the same as non-GM foods in relation to labelling requirements. Therefore no mandatory requirement to declare the presence of a GM food or ingredient in a food product. Source – *Federal Food, Drug and Cosmetic Act* Industry guidance for voluntary labelling in place. Source – *FDA's Draft Guidance for Industry, January 2001.*		**Current** –General requirements under the *Federal Food, Drug and Cosmetic Act*, section 403(i) and section 201(n) apply. Similar to Australia/New Zealand requirements. In addition, if the common name of the food no longer adequately describes the new GM derived food, the name must also be changed to describe the difference	N/A	N/A	N/A	N/A	N/A	**Current** – Industry guidance in place but subject to sections 403(i) & 201(n) of the *Federal Food, Drug and Cosmetic Act* regarding misleading labelling.
Vietnam	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available	No data available

AUSTRALIA/ NEW ZEALAND GM Food Labelling Outcomes of Division 2, Standard 1.5.2	General Requirements - Packaged foods	General Requirements - Unpackaged foods	Additional requirements	Specific Labelling Exemptions					Negative Claims
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European Union	**Current** – mandatory labelling of all approved GM foods or ingredients irrespective of presence (i.e. labelling regulation is process based). Picks up highly refined food such as soya or maize oil. For pre-packaged products consisting of, or containing GMOs, the words "This product contains genetically modified organisms" or "this product contains genetically modified [name of organism(s)]" appear on the label. Reg. – *(EC) No.1830/2003*	**Current** – mandatory labelling irrespective of presence. For non-packaged products offered to the final consumer the words "This product contains genetically modified organisms" or "This product contains genetically modified [name of organism(s)]" shall appear on or in connection with the display of the product. Reg. – *(EC) No.1830/2003*	**Current** - based on equivalence concept, has to be labelled indicating that the new characteristic or property was obtained through genetic modification. Reg. - *(EC) No. 258/97* **Current** –for additives and flavourings the label must indicate the new characteristic or property and was obtained through genetic modification. Reg. - *(EC) No. 50/2000*	**Current** – no exemption, mandatory labelling will cover these foods irrespective of presence.	**Current** – no exemption for additives, mandatory labelling will apply irrespective of presence. Processing aids are not covered by the definition of food and feed and therefore not included in the scope of the new regulation. Therefore no mandatory requirement to label processing aids, even where there is the presence of novel DNA and/or protein.	**Current** – no exemption, mandatory labelling will cover flavourings.	**Current** – No specific exemption. Non-pre-packaged food must have information regarding GM status permanently and visibly displayed either on the food display or immediately next to it.	**Current** – a 0.9% threshold for unintentional presence of GM food or ingredients in a non-GM food or feed. **Current** – a 0.5% threshold for unintentional presence of GM material in food which has a favourable safety assessment but awaiting approval – *NOTE this is not a labelling requirement, if the non-approved GM material is above the threshold, it cannot be legally sold.*	**Current** – does not address negative GM food labelling claims specifically. However, general requirements in Council Directive *79/112/EEC* require that labelling must not mislead the consumer.

Consumer Attitude Matrix

The matrix consists of four tables and a reference grid, and identifies major and common themes that have been explored in the various surveys. Data that correlates to these major themes is listed by country and in chronological order. At the end of each entry is an indicator that correlates to the reference listed in the grid included at the end of the matrix. Further, colour shading of the information presented indicates that the data is from a survey that has either been conducted in several countries or that the survey report includes data spanning over time periods (i.e. a tracking survey).

TABLE 1 - Public Attitudes to the Labelling and Acceptance of GM Foods

	Australia (Mandatory labelling)	New Zealand (Mandatory labelling)
1. Major issues explored regarding the acceptance GM foods		
1.1 Do consumers think GM is a food safety related concern?	**2001-2003** • *February 2001* – study found food safety, bacterial contamination and chemical pesticides are more concerning to consumers than GM foods (A8) **1998-2000** • *2000* - over half of the respondents in Australia see the issue of GM foods in a health and safety context (US8)	
1.2 Consumer awareness of availability of GM food products.	(The surveys sourced do not examine this issue)	(The surveys sourced do not examine this issue)
1.3 Perception of GM Foods • **the acceptability of the use of biotechnology in food production** • **GM foods - safe/unsafe** • **types of GM foods that consumers would buy/eat or type of genetic modification that is acceptable for foods?**	**2001 - 2003** • *September 2003* – 47% of CHOICE Online Members have serious concerns and are very worried about eating GM foods; 37% have some concerns and are somewhat worried; 11% have no concerns and not at all worried; 5% said they don't know enough about the issues to have an opinion (A1) • *March 2003* - 55% of Australians won't buy GM foods; 38% don't try to avoid it (US4)* • *2002* - study found that despite concerns of GM, respondents were prepared to pay a premium for products with a clear, and desirable benefit that can only be achieved through GM otherwise needs to be a substantial cost advantage (A4) • *2002* - study found that in the absence of valued benefits most respondents strongly rejected the GM food i.e. consumer resistance to GM products without a valued benefit (A4) • *2002* - study found even with tangible consumer benefits, demand for GM products could be subject to substantial variation as a result of positive or negative GM incidents and publicity (A4) • *January 2002* - 60% of people said they'd buy GM foods if they were healthier; 51% said they'd buy GM foods if they tasted better; 40% of people said they'd buy GM food if they lasted longer; 45% said they'd buy GM foods if they were cheaper (A5) • *2001* - 49% would eat GM foods (abstract); 60% of people would eat GM foods that are healthier; 43% would eat GM foods that taste better (A7) • *February 2001* - 15% of people said they would continue to buy a product if they noticed it contained GM ingredients; 22% said they'd buy it but plan to find out more; 35% would not buy it until they'd found out more; 24% would never buy it again (A8)	**2001 - 2003** • *May 2003* - 26% of New Zealanders totally oppose GE food; 8% totally supported it but a large middle group (60%) prepared to support GE food in some circumstances (NZ1) • *April 2003* - 49%of New Zealanders won't buy GM foods; 46% don't try to avoid it (US4)* • *August 2002* - about 29% of *'Consumer'* subscribers thought GM was a very important consideration when deciding what food to buy; 25% said important; 28% neutral; 11% said unimportant; 7% said very unimportant - GM ranked 6th after use by dates, taste, NIP, Ingredients and price according to the very important rating (NZ2) • *May 2001 –* 36% of New Zealanders totally oppose GE food, 3.4% totally supported it but a large middle group (51.7%) prepared to support GE food in some circumstances (NZ4) **1998-2000** • *February 2000* - nearly half of respondents disagreed that genetic engineering was necessary, could improve quality and healthiness of food or lead to an increase in the standard of life for themselves and their families (NZ5) • *February 2000* - 57%-58% of respondents generally felt negatively towards the use of gene technology in food production, of which a quarter felt extremely negative; only 10-15% felt positive; about a third of respondent were undecided (NZ5) • *February 2000* - nearly half of respondents disagree that GE was necessary, could improve quality or healthiness of foods, or lead to an increase of standard of life (NZ5)

	Australia (Mandatory labelling)	New Zealand (Mandatory labelling)
	• *February 2001* - if the GM ingredient enabled significantly fewer pesticides to be used, 18% would continue to buy the product; 23% would buy it but plan to find out more; 35% would not buy it until they'd found out more; 18% would never buy it again (A8) • *February 2001* - if GM ingredients aided the protection of natural areas by enabling more food to be grown on less land, 15% would continue to buy the product; 22% would buy it but plan to find out more; 35% would not buy it until they'd found out more; 18% would never buy it again (A8) • *February 2001*- if GM ingredients made the food more nutritious and healthier to eat, 19% would continue to buy the product, 24% would buy it but plan to find out more; 33% would not buy it until they'd found out more; 18% would never buy it again (A8) • *2001* - 57% of respondents agreed that the use of biotechnology in the production of food and drink was a useful application for society (lower level of agreement than other applications); 73% said it was a risky application for society (rated higher than other applications); 59% disagreed that is was morally acceptable for society (lower level of acceptability than other applications) (A7) **1998-2000** • *July 2000* - 65% of all respondents said they would eat GM foods if there was a benefit (A9) • *May 2000* - 65% of people said they'd buy GM foods if they were healthier; 41% said they'd buy GM foods if they tasted better; 36% of people said they'd buy GM food if they lasted longer; 36% said they'd buy GM foods if they were cheaper (A5) • *2000* - 51% of Australians feel negative toward GM foods (US8) • *2000* - 21% of Australians expect GM foods to provide no benefits or advantages at all and 21% are unsure, whilst 24% quoted 'improved efficiency/higher yields' as the major benefit of GM foods (US8) • *2000* – 23% quoted 'safety/health concerns/allergies' and 28% quoted 'impact unknown/Experimental' as the main risks associated with GM foods, whilst 22% were unsure of risks (US8) • *1999* - 57% would eat oil/ margarine derived through GE so that it was healthier, 51% would buy GM fruit/vegetables if they tasted better; only 38% would eat GM meat and 44% would buy GM fruit/vegetables that lasted longer (A10) • *1999* - 66% of respondents agreed that the use of biotechnology in the production of food and drink was a useful application for society (lower level of agreement than other applications); 67% said it was a risky application for society rated higher than other applications); 62% disagreed that is was morally acceptable for society (lower level of acceptability than other applications) (A7)	
2. Major issues explored regarding the labelling of GM foods		
2.1 Do consumers think GM foods should be labelled / support labelling regime in their country?	**2001 –2003** • *September 2003* – 84% of CHOICE Online members Strongly Agree that there should be comprehensive labelling of foods containing ingredients derived from gene technology or genetic modification; 10% somewhat agree; 4% somewhat disagree; 2% strongly disagree and 1% don't know (A1)* • *September 2003* – 60% of CHOICE Online Members strongly disagree that highly refined products derived from GM foods (e.g GM canola used to produce canola oil) does not have to be labelled because GM material is not present in the final product; 15% somewhat disagree; 10% somewhat agree; 7% strongly agree and 8% don't know (A1) • *April 2002* - 96% of consumers said foods containing GE ingredients should be labelled; 3% said they shouldn't (A3) • *April 2002* - 85% of consumers believed that foods containing GE ingredients that are sold in restaurants & similar should be labelled; 13% shouldn't be labelled (A3) • *April 2002* - 92% of consumer said foods containing eggs, milk and meat from GE fed animals should be labelled; 7% said shouldn't be labelled (A3)	**2001 -2003** • *August 2002* - 34% of '*Consumer*' subscribers identified what they thought was missing from food labels, GM status was the most frequently mentioned, followed by info on additives, date info, level and types of fat **(unprompted)** (NZ2) • *August 2002* - About 40% of *'Consumer'* subscribers thought info about GM on food labels was very important; 24% said important; 21% neutral; 10% said unimportant; 5% said very unimportant - GM ranked 5th after use by dates, Ingredients, NIP and food additives according to the very important rating (NZ2)* **1998 - 2000** • *August 1999* - out of 5713 stakeholder submissions (representing individuals and organisations) to a consultation report that asked, "Should the criteria for labelling foods using gene technology extend to those virtually the same as conventional foods?" 331 said that GM food that is virtually the same is still not the same as its conventional counterpart, and therefore should be labelled; 2228 said that consumers have a 'right to know' and to

	Australia (Mandatory labelling)	New Zealand (Mandatory labelling)
	• *April 2002* - 92% of consumers said that foods containing refined products such as oils should be labelled 7% shouldn't be labelled (A3) • *May 2001* - About 65% of Tasmanians think labelled GM foods should be allowed in Tasmania; 29% think labelled GM foods shouldn't be allowed (A6) • *2001* - 90% of respondents disagreed that it is not worth putting special labels on GM foods (A7) **1998-2000** • *July 2000* - 93% of Australians support labelling GM foods to enable consumers to make an informed choice (A9)* • *1999* - 89% disagreed that it was not worthwhile labelling GM foods (A10)	make informed choices about what food they buy and eat; 627 concerns about environmental/health/long term effect of food that is 'virtually the same' as its conventional counter part mean that it should be labelled. Over all this accounts for 57% of people that support the labelling of GM foods (NZ6)*
2.2 Consumers use of GM labels in purchasing decisions	**2001 - 2003** • *September 2003* – when food shopping 28% of CHOICE Online Members always check food labels to ensure the food has not been genetically modified; 44% try to look for non-GM food; 12% said it's too much effort to check for GM labels; 16% don't care about GM status and it is not a criteria when buying food (A1) • *September 2003* –44% of CHOICE Online Members assume a label without reference to GM means the food has not been genetically modified at all; 9% assume the food may contain small traces of GM ingredients; 30% assume the food or an ingredient may have been genetically modified and 18% are unsure what it means (A1) • *September 2002* - 16% said they use GMO declarations (Aust & NZ respondents) (A2)	**2001 – 2003** • *September 2002* - 16% said they use GMO declarations (Aust & NZ respondents) (A2) • *October 2001* - now that some foods may contain GM ingredients, 72.2% of respondents indicated that they check labelling more carefully; 46% buy more products labelled as organic or GE free; 33.3% avoid certain foods/products but 8.7% said they'd avoid products labelled organic or GE-free (NZ3) • *May 2001* - now that some foods may contain GM ingredients, 53.6% of respondents indicated that they check labelling more carefully; 32.7% buy more products labelled as organic or GE free; 16.3% avoid certain foods/products but 12.4% said they'd avoid products labelled organic or GE-free (NZ3)
2.3 Are consumers less likely to buy foods that are labelled GM?	**2001 -2003** • *April 2002* - 68% of respondents would be less likely to buy or not buy a product if they knew it contained ingredients from GE plants or animals; 23% as likely to buy; 2% more likely to buy; and 7% didn't know (A3) • *April 2002* - 61% of respondents said they would be less likely to buy or not buy a products that contained ingredients such as eggs, milk or meat from an animal raised on a diet or GE feed; 32% said as likely to buy; 2% said more likely to buy; 4% said don't know (A3) • *January 2002* - 33% of people said the presence of a GM label on a food would not change their behaviour; 15% said they would buy GM foods; 41% said they would not buy GM foods (A5) **1998-2000** • *July 2000* - 37% of people said that labels on GM foods would make no change to the type of food they bought; a further 9% said they would actively buy GM foods (A9) • *May 2000* - 37% of people said the presence of a GM label on a food would not change their behaviour; 9% said they would buy GM foods; 46% said they would not buy GM foods (A5)	

TABLE 2 - Public Attitudes to the Labelling and Acceptance of GM Foods

	United States (Voluntary Labelling)	Canada (Voluntary Labelling)
1. Major issues explored regarding public attitudes to GM foods		
1.1 Do consumers think GM is a food safety related concern?	**2001-2003** • *April 2003* – 1% said GM was a food safety concern **(unprompted)** (US2) • *Aug 2002* – 2% said GM was a food safety concern **(unprompted)** (US2) • *September 2001* – 2% said GM was a food safety concern **(unprompted)** (US2) • *January 2001* – 2% said GM was a food safety concern **(unprompted)** (US2) **1998-2000** • *2000* – 44% of Americans see the issue of GM foods in a health and safety context (US8) • *2000* – about 25% of Americans are concerned about the unknown impact or perceived experimental nature of GM foods; about 28% of Americans cite food safety and health concerns when asked about perceived risks and 25% percent say they are concerned about the unknown impact of GM foods (US8)	**1998-2000** • *2000* – over half of the respondents in Canada see the issue of GM foods in a Health and Safety context (US8) • *2000* – About 29% of Canadians are concerned about the unknown impact or perceived experimental nature of GM foods; about 32% of Canadians cite food safety and health concerns when asked about perceived risks and 29% percent say they are concerned about the unknown impact of GM foods (US8)
1.2 Consumer awareness of availability of GM food products.	**2001-2003** • *August 2003 –* 25% (13% strongly) support the introduction of GM foods into the US food supply whilst 48% oppose (31% strongly) (US1) • *April 2003* – 36% responded yes to being aware that GM products are for sale at supermarkets; 34% said no; 30% don't know (US2) • *March 2003* – 27% said yes to knowing whether they have eaten GM foods; 52% said no they haven't eaten GM foods; 21% said don't know (CA1) • *August 2002* – 35% responded yes to being aware that GM products are for sale at supermarkets; 34% said no; 31% don't know (US2) • *September 2001* – 33% responded yes to being aware that GM products are for sale at supermarkets; 36% said no; 31% don't know (US2) • *April 2001* – 41% are aware that GM foods are currently for sale in supermarkets; 32% do not believe such products are in food stores; 28% are not sure (US7) • *April 2001* – whilst there are few GM fruits and vegetables in the market place 20% of Americans believe they have already eaten a GM Fruit or vegetable; 65% specifically stated they had not eaten GM fruits and vegetables; 16% were unsure (US7) • *January 2001* – 36% responded yes to being aware that GM products are for sale at supermarkets; 44% said no; 20% don't know (US2) • *January 2001* – 26% (8% strongly) support the introduction of GM foods into the US food supply whilst 58% oppose (US1) **1998-2000** • *May 2000* – 43% responded yes to being aware that GM products are for sale at supermarkets; 23% said no; 34% don't know (US2) • *October 1999* – 38% responded yes to being aware that GM products are for sale at supermarkets; 38% said no; 24% don't know (US2) • *February 1999* – 33% responded yes to being aware that GM products are for sale at supermarkets; 47% said no; 20% don't know (US2) **1995-1997** • *March 1997* – 40% responded yes to being aware that GM products are for sale at supermarkets; 37% said no; 23% don't know (US2)	**2001-2003** • *March 2003* – 33% said yes to knowing whether they have eaten GM foods; 45% said no they haven't eaten GM foods; 22% don't know (CA1) **1998-2000** • *September 2000 –* 29% of people said they had eaten products containing GM ingredients in the last month; 48% said no (CA6)

	United States (Voluntary Labelling)	Canada (Voluntary Labelling)
1.3 Perception of GM Foods • **the acceptability of the use of biotechnology in food production** • **GM foods – safe/unsafe** • **types of GM foods that consumers would buy/eat or type of genetic modification that is acceptable for foods?**	**2001-2003** • *August 2003* – 27% of consumer say GM foods are 'basically safe' while 25% say they are 'basically unsafe'; when informed that more than half of products in grocery stores are produced from some form of biotechnology or GM, belief that GM foods are safe increases to 44% while belief that those foods are unsafe declines to 20% (US1) • *August 2003* – 43% of respondents say they are likely to eat GM foods; 50% say they are not likely to eat GM foods (US1) • *July 2003* – 46% considered GM foods safe (US3) • *March 2003* – 10% of Americans strongly agreed that GM foods present few benefits over non-GM foods and presents many more risks; 35% agreed; 37% disagree; 7% strongly disagree; 11% don't know (CA1) • *March 2003* – 14% of Americans said they are comfortable with the idea of buying GM foods; 41% somewhat comfortable; 29% somewhat uncomfortable; 15% very uncomfortable; 1% don't know (CA1) • *March 2003* – 23% strongly agree to corn being GM to resist pesticides; 48% agree; 18% disagree; 8% strongly disagree; 3% don't know (CA1) • *March 2003* – 24% strongly agree to wheat being GM to resist disease; 49% agree; 17% disagree; 6% strongly disagree; 3% don't know (CA1) • *August 2002* – 46% of Americans won't buy GM foods; 47% don't try to avoid it (US4)* • *September 2001* – 38% of respondents say they are likely to eat GM foods; 54% say they are not likely to eat GM foods (US1) • *September 2001 –* 29% of consumer say GM foods are 'basically safe'; 25% say they are 'basically unsafe' (US1) • *June 2001* – 52% think GM foods are unsafe; 35% safe; 13% no opinion/unsure.(US6) • *April 2001* – Only 58% of Americans say, in abstract, that they approve of the use of GM to create new kinds of plants however 85% say they would approve the use of GM to create more nutritious grain that could be used in poor countries; 80% also say they approve of the use of GM to create rice with enhanced Vitamin A to prevent blindness - similarly only 28% say they approve of Gm to create hybrid animals but 76% say they would approve the use of GM to create sheep whose milk can be used to produced medicines; 84% would approve the use of GM to create hormones like insulin to help diabetics (US7) **1998-2000** • *2000 –* 51% of Americans feel negative towards GM foods (US8) • *2000* – Some 20% of Americans expect GM foods to provide no benefits or advantages at all and 8% are unsure; 31% quoted 'improved efficiency/higher yields' as the major benefit of GM foods (US8) • *2000 –* 28% quoted 'safety/health concerns/allergies' and 25% quoted 'impact unknown/experimental' as the main risks associated with GM foods; 12% were unsure of risks (US8)	**2001-2003** • *March 2003 –* 11% said they are very comfortable with the idea of buying GM foods; 36% somewhat comfortable; 34% somewhat uncomfortable; 16% very uncomfortable; 2% don't know (CA1)* • *March 2003* – 15% strongly agreed that GM foods present few benefits over non-GM foods and presents many more risks; 49% agreed; 25% disagree; 4% strongly disagree; 6% don't know (CA1) • *March 2003* – 12% strongly agree to corn being GM to resist pesticides 44% agree; 29% disagree; 11% strongly disagree; 4% don't know (CA1) • *March 2003* – 12% strongly agree to wheat being GM to resist disease; 48% agree; 28% disagree; 9% strongly disagree; 3% don't know (CA1) • *October 2002* – 10% said they are very comfortable with the idea of buying GM foods; 31% somewhat comfortable; 33% somewhat uncomfortable; 24% very uncomfortable; 2% don't know (CA2) • *March 2002* – 11% said they are very comfortable with the idea of buying GM foods; 41% somewhat comfortable; 29% somewhat uncomfortable; 18% very uncomfortable; 2% don't know (CA3) • *March 2002* – 15% strongly agreed that GM foods present few benefits over non-GM foods and presents many more risks; 46% agreed; 28% disagree; 4% strongly disagree; 7% don't know (CA3) • *March 2002* – 9% strongly agree that GM foods are probably safe because they haven't heard they are the cause of any sickness; 43% agree; 34% strongly agree; 10% strongly disagree; 4% don't know (CA3) • *March 2002* – 11% strongly agree to corn being GM to produce higher volumes so it costs less; 40% agree; 32% disagree; 14% strongly disagree; 3% don't know (CA3) • *March 2002* – 13% strongly agree to wheat being GM to resist pests in order to increase volume; 44% agree; 26% disagree; 13% strongly disagree; 4% don't know (CA3) • *September 2001* – 10% strongly agree to corn being GM to enhance its nutritional value; 43% agree; 30% disagree; 13% strongly disagree; 4% don't know (CA4) • *September 2001* – 7% strongly agree to corn being GM to be produced in higher volumes to cost less 38% agree; 35% disagree; 17% strongly disagree; 3% don't know (CA4) • *September 2001* – 8% strongly agree to wheat being GM to resist pests in order to increase volume; 50% agree; 25% disagree; 13% strongly disagree; 4% don't know (CA4) • *March 2001* – 14% said they are very comfortable with the idea of buying GM foods; 37% somewhat comfortable; 28% somewhat uncomfortable; 19% very uncomfortable; 1% don't know (CA5) **1998-2000** • *February 2000* – 15% of people strongly agree that they would buy a GM food if it were more nutritious than other food; 44% agree; 28% disagree; 9% strongly disagree; 4% don't know (CA7) • *February 2000* – 7% of people strongly agree that they would buy a GM food if it cost less than other food; 31% agree; 42% disagree; 16% strongly disagree; 4% don't know (CA7) • *2000* – 75% of Canadians familiar with GE foods are worried about their safety (CA8) • *2000 –* 59% of Canadians feel negative towards GM foods (US8) • *2000* – 79% of Canadians have heard of GM foods but only 5% feel they know 'a lot' about the issue; slightly more (24%) feel they have 'some' understanding (US8) • *2000* – 24% of Canadians expect GM foods to provide no benefits or advantages at all and 11% are unsure; 29% quoted 'improved efficiency/higher yields' as the major benefit of GM foods (US8) • *2000* – 32% quoted 'safety/health concerns/allergies' and 29% quoted 'impact unknown/experimental' as the main risks associated with GM foods; 14% were unsure of risks (US8) • *October 1999* – 11% of people strongly agree that they would buy a GM food if it were more

	United States (Voluntary Labelling)	Canada (Voluntary Labelling)
		nutritious than other food; 53% agree; 25% disagree; 6% strongly disagree; 5% don't know (CA9) • *October 1999* – 10% of people strongly agree that they would buy a GM food if it costs less than other food; 37% agree; 36% disagree; 11% strongly disagree; 6% don't know (CA9) • *2000* – 95% want to be able to buy non-GM foods and 71% are willing to pay more to get them (CA8)
2. Major issues explored regarding the labelling of GM foods		
2.1 Do consumers think GM foods should be labelled / Support labelling regime in their country	**2001-2003** • *2003* – 92% of Americans said that the Federal Government should require labels on biotech foods (US3)* • *April 2003* – 2% said they'd like to see GE information on food labels **(unprompted)** (US2) • *April 2003* – 62% support; 24% oppose; 8% neither support or oppose; 6% don't know (US2) • *March 2003* – 83% said USA should introduce new labelling system for GM foods; 16% said no need; 1% don't know (CA1) • *March 2003* – 76% said the government should pass legislation for mandatory labelling of GM foods; 23% support voluntary labelling; 1% don't know (CA1) • *August 2002* – 59% support; 25% oppose; 7% neither support or oppose; 8% don't know (US2) • *August 2002* – 1% said they'd like to see GE information on food labels **(unprompted)** (US2) • *November 2001* – 90% of Americans said GE foods should have special labels (US5) • *September 2001* – 1% said they'd like to see GE information on food labels **(unprompted)** (US2) • *June 2001 –* 93% of Americans say the Federal government should require labels saying whether food has been genetically modified or bioengineered (US5) • *March 2001* – 75% of Americans say its important to them to know whether a food product contains GM ingredients (US5) • *January 2001* – 2% said they'd like to see GM food labelling on products **(unprompted)** (US2) • *January 2001* – 70% support; 24% oppose; 3% neither support or oppose; 3% don't know (US2) • *September 2001* – 57% support; 27% oppose; 8% neither support or oppose; 8% don't know (US2) **1998 – 2000** • *June 2000 –* 86% of Americans think that the government should require the labelling of all packaged and other food products stating that they include corn; soy or other products which have come from GM crops (US5)* • *May 2000* – 69% support; 28% oppose; 0% neither support or oppose, 3%don't know (US2) • *March 2000* – 86% of Americans want labels on GM foods (US5) • *February 2000 –* 79% of Americans said it should not be legal to sell GM fruits and vegetables without special labels (US5) • *January 2000* – 81% of Americans think the government should require GM food products to be labelled (US5) • *Oct 1999* – 69% support; 26% oppose; 0% neither support or oppose; 5%don't know (US2) • *September 1999* – 92% of Americans support legal requirements that all GM foods be labelled (US5) • *September 1999* – Almost 70% of Americans think the U.S government should require more extensive labelling of ingredients in GM food (US5)	**2001-2003** • *March 2003* – 85% said Canada should introduce new labelling system for GM foods; 15% said no need; 1% don't know (CA1)* • *March 2003* – 79% said government should pass legislation for mandatory labelling of GM foods; 21% support voluntary labelling; 0% don't know (CA1) • *October 2002* – 85% said Canada should introduce a new labelling system for GM foods; 14% said no need; 1% don't know (CA2) • *October 2003* – 69% said government should pass legislation for mandatory labelling of GM foods; 29% support voluntary labelling; 3% don't know (CA2) • *March 2002* – 84% said Canada should introduce a new labelling system for GM foods; 15% said no need; 1% don't know (CA3) **1998-2000** • *2000* – 95% want GE foods to be labelled (CA8)* • *October 2000* – 54% of Canadians think that food product labels contain the right amount of information; an additional 6% believe there is too much information on food product labels; 39% say there is not enough information on food product labels **(unprompted)** (CA9)

	United States (Voluntary Labelling)	Canada (Voluntary Labelling)
	• *Feb 1999* - 78% support; 19% oppose; 0% neither support or oppose; 3% don't know (US2) (US2) • *January 1999* – 81% of American consumers believe GE food should be labelled (US5) **1995-1997** • *February 1997 –* 93% of Americans agree that GE foods should be labelled as such (73% strongly agree) (US5) • *March 1997* – 78% support; 20% oppose; 0% neither support or oppose; 2% don't know (US2)	
2.2 Consumers use of GM labels in purchasing decisions	**2001-2003** • *April 2001* – Only 53% of those surveyed indicated they would actually take the time to look for fruits and vegetables labelled as not being GM, but only 48% of respondents said they would be less likely to purchase GM fruits and vegetables while 37% said labelling would not make a difference to purchasing decision; 11% said they would be more likely to buy GM products while 4% were not sure; 45% expressed a willingness to pay more for non GM foods (US7)	
2.3 Are consumers less likely to buy foods that are labelled GM?	**2001-2003** • *2003* – 55% said they would avoid foods carrying a Biotech label (US3) • *June 2001* – 57% less likely; 5% more likely (US6) **1998-2000** • *January 1999 –* 58% say that if GE foods were labelled they would avoid purchasing them (US5) • *February 1997 –* 25% say they would be likely to avoid labelled GE foods (US5)	**2001-2003** • *October 2002* – 20% of consumers said they would continue to buy a labelled GM product; 27% said they'd buy it but find out more; 37% said they would not buy it until they found out more; 15% said they would never buy it again; 1% don't know (CA2) • *October 2002* – 35% of consumers would continue to buy GM food if the label indicated it was approved by Health Canada; 24% said they would buy it but find out more; 28% said they would not buy it until they found out more, 12% said they would never buy it again; 1% don't know (CA2) • *October 2002* – due to segregation of crops, a labelling regime is likely to increase overall cost of food by 10% - 58% said it was worth paying more; 36% said it was not worth paying more; 5% don't know (CA2) • *March 2002* – 23% of consumers said they would continue to buy a labelled GM product; 31% said they would buy it but find out more; 33% would not buy it until they found out more; 12% said they would never buy it again; 2% don't know (CA3) • *March 2001* – 30% of consumers said they would continue to buy a labelled GM product; 31% said they would buy it but find out more; 27% would not buy it until they found out more; 11% said they would never buy it again; 1% don't know (CA5) • *March 2002* – due to segregation of crops, a labelling regime is likely to increase overall cost of food by 10% - 55% said it was worth paying more; 41% said it was not worth paying more; 4% don't know (CA3)

TABLE 3 – Public Attitudes to the Labelling and Acceptance of GM Foods

	European Union (Mandatory labelling)	UK (Mandatory labelling – EU Regs.)
1. Major issues explored regarding public awareness and attitudes to biotechnology and GM foods		
1.1 Do consumers think GM is a food safety related concern?	**1998-2000** • *2000* – Over half of respondents in France and Germany see the issue of GM foods in a health and safety context (US8)	**1998-2000** • *May 2002* - 57% of respondents have concerns about the use of GM in food production; 5% don't know; 39% are not concerned. Of those that had concerns, 21% of respondents said that 'lack of information on GM/don't know enough about GM' was their concern; 21% said that we should not tamper with nature and 14% said not enough research has been done; 10% said that are concerned with effects on health (UK2) • *2000* – 39% of respondents in the UK see the issue of GM foods in a health and safety context (US8)
1.2 Consumer awareness of availability of GM food products	(The surveys sourced do not examined this issue)	• *May 2002* - Only 1/3 were aware that there were GM foods or ingredients currently on sale (UK2)
1.3 Perception of GM Foods • **the acceptability of the use of biotechnology in food production** • **GM foods – safe/unsafe** • **types of GM foods that consumers would buy/eat or type of genetic modification that is acceptable for foods?**	**2001-2003** • *July 2002* – 66% of Europeans support the use of Biotechnology to develop new drugs but only 16% support GM foods (EU3) • *July 2002* – 11% of people said they would continue to buy a food product they regularly purchased if they noticed GM ingredients listed; 16% said they would buy it but find out more; 27% said they would not buy until they found out more; 31% said they would never buy it; 15% don't know (EU3)* • *September 2001* – 15% of people said they would continue to buy a food product they regularly purchased if they noticed GM ingredients listed, 21% said they would buy it but find out more; 23% said they would not buy it until they found out more; 38% said they would never buy it; 3% don't know (EU3) • *2002* – Hypothetically speaking, about 47% of Europeans would not buy GM food if it contained less pesticide residue; about 48% would not buy GM foods if environmentally more friendly; about 47% would not buy GM foods if they tasted better; about 65% would not buy GM if it contained less fat; 66% would not buy GM if it was cheaper (EU1) • *2002* – 45% of Italians would not buy GM food if widely available whilst 45% said they'd possibly buy GM food; 43% of Norwegians would not buy GM food if widely available whilst 44% said they'd possibly buy GM food; 45% of Britons would not buy GM foods if widely available whilst 40% said they'd possibly buy GM foods (EU2) • *2002* – Compared to other applications of biotechnology such as genetic testing and cloning human cells, GM foods are perceived as less useful, more risky, less morally acceptable, and not to be encouraged (EU1) • *2002* – 50% support GM foods; 50% opposed (EU1) • *2001* - 85.9% want to know more about GM foods before eating it and 85.8% said they should only be introduced if it is scientifically proven that they are harmless (EU4) • *2001* – 70.9% of respondents out rightly reject GM foods (EU4) • *2001* – 33.1% agreed that dangers of GM foods have been exaggerated by the media but 44.3% disagreed with this statement (EU4) • *2001* – 54.8% believe that GM food presents particular dangers; 30.6% don't know (EU4) • *2001* – 59.4% agreed that GM foods could have a negative effect on the environment but 28.7% have no opinion (EU4) **1998-2000** • *2000* – 71% of respondents in France and 73% of respondents in Germany feel negative toward GM foods (US8) • *2000* – 45% of respondents in France and 32% of respondents in Germany expect GM foods to provide no benefits or advantages at all and 12% for both countries are unsure, whilst the 20% of respondents in France quoted 'improved efficiency/higher yields' as the	**2001-2003** • *June 2003* – 46% of respondents oppose GM foods; 14% support GM foods; 33% are undecided (UK1) • *February 2003* – 56% of respondents oppose GM foods; 14% support GM foods and 25% are undecided (UK1) • *May 2002* – 32% said that food produced from a GM plant is acceptable; 30% said that food produced using GM bacteria is acceptable; 30% said that food produced using a GM yeast is acceptable; 13% said that GM fish is acceptable; 11% said that GM animals are acceptable (UK2) • *May 2002* – 64% of respondents have a level of concern about eating GM foods without knowing it; 22% are neutral; 12% are not concerned; 2% don't know (UK2) • *May 2002* – 39% of respondents said they would choose GM food if less chemicals were used to produce it; 38% said they would choose a GM food if it was contaminated with less food poisoning bacteria; 36% said they would choose GM food that contained lower levels of chemicals found in foods reputed to be harmful for health; 35% said they would choose GM food with higher vitamin content; 31% said they would choose GM food that is cheaper; 30% said they would choose GM food that lasted longer; 26% said they would choose GM food with improved flavour; 20% said they would choose GM food that gives a higher yield; 18% said they would choose GM food that contained higher levels of chemicals found in food reputed to be beneficial for health; 6% don't know; 25% for none of these already stated (UK2) • *May 2002* – 45% of respondents try to avoid GM foods and ingredients; 33% neutral; 19% don't try to avoid; 2% don't know (UK2) • *May 2002* – 50% of respondents said that the use of GM could be beneficial for food production; 14% said there are no benefits for food production; 36% don't know (UK2) • *May 2002* – 43% of respondents said higher yield could be a benefit of GM to food production; 21% said that a benefit is that GM food can be developed to last longer; 21% said there are benefits to developing countries (UK2) • *May 2002* – Neutral language leads to higher levels of support e.g. 50% of people in the UK say they would support using biotechnology for 'food production' (EU3) • *April 2002* – 51% would never or prefer not to eat GM foods; 43% don't mind, or would prefer to eat or would always eat GM foods (EU3) • *2002* – 45% of Britons would not buy GM foods if widely available whilst 40% said they'd possibly buy GM foods (EU2)* • *November 2001* – 55% won't buy GM foods, 39% don't try to avoid it (US4) **1998-2000** • *December 2000* – 43% of Britons are concerned about GM foods (ranked 6th with food

	European Union (Mandatory labelling)	UK (Mandatory labelling – EU Regs.)
	major benefit of GM foods - similarly 22% of Germans also held this view (US8) • *2000* – 37% of respondents in France and 35% of respondents in Germany quoted 'safety/health concerns/allergies' and 26% (France) and 25% (Germany) quoted 'impact unknown/experimental' as the main risks associated with GM foods, whilst 16% (France) and 14% (Germany) were unsure of risks (US8)	poisoning & BSE number 1& 2 with 63% & 61% respectively) (UK3) • *December 2000* – 37% of people that said GM foods was a concern to them also said it affected their eating habits a lot; 36% said a little; 26% not at all (UK3) • *2000* – 58% of respondents in the UK feel negative toward GM foods (US8) • *2000* – 34% of respondents in the UK expect GM foods to provide no benefits or advantages at all and 18% are unsure; 21% quoted 'improved efficiency/higher yields' as the major benefit of GM foods (US8) • *2000* – 18% quoted 'safety/health concerns/allergies' and 38% quoted 'impact unknown/experimental' as the main risks associated with GM foods; 16% were unsure of risks (US8) • *June 1998* – 58% of respondents oppose GM foods; 22% support GM foods; 15% are undecided (UK1) • *December 1996* – 50% of respondents oppose GM foods; 31% support; 16% are undecided (UK1)
2. Major issues explored regarding the labelling of GM foods		
2.1 Do consumers think GM foods should be labelled / Support labelling regime in their country	• *July 2002* – most people favour the labelling of GM crops (fruits, vegetables, grains) and foods regardless of the stage of processing (95% in both cases) (EU3)* • *2002* – over 90% of people in Italy, Norway and the UK believe that labels should state if food or ingredients have been genetically modified (EU2) • *2002* – approximately 88% of Italians and Britons believe that processed food derived from GM crops should be labelled; 78% of Norwegians also believe this should be the case (EU2) • *2002* – Around 90% of people in Italy, Norway and the UK believe that GM and non-GM crops should be kept separate at all stages of processing (EU2) • *September 2001* - 93%think Gm food labelling be required for prepared foods and 95% for crops (fruits, vegetables, grain) (EU3) • *2001* – 94.6% of Europeans want to have the right to choose GM foods (EU4) **1998-2000** • *March 2000 –* 95% of Europeans agreed to the statement about GM food 'I want to have the right to choose' (EU3)*	**2001-2003** • *May 2002* – 94% of respondents said that foods containing GM ingredients should be labelled as such; 4% said no; 3% don't know (UK2)* • *May 2002 –* 87% said the foods with undetectable GM ingredients (i.e. higher refined foods) should be labelled as GM; 10% said no; 3% don't know (UK2) • *May 2002 –* 58% of respondents said that only foods which have not been made using a GM ingredient and have not come into contact with GM material at any point in their production should be labelled as GM-free; 19% said food that have been made using a GM ingredient but which have been processed and do not contain any detectable trace of GM in the final product should be labelled GM-Free; 12% said foods which contain 1% GM ingredients detectable in the end product; 12% said foods that contain 0.5% of GM ingredients detectable in the end product (UK2) • *April 2002* – 76% of British consumers believe that labelling should be compulsory for all products with GM ingredients; 11% say that labelling should only be compulsory when GM ingredients go above a certain level (not specified); 6% say labelling should not be compulsory (EU3) • *2002* – 96% of Britons believe that labels should state if food or ingredients have been genetically modified (EU2) • *2002* – 88% of Britons believe that processed food derived from GM crops should be labelled (EU2) • *2002* – 90% of people in the UK believe that GM and non-GM crops should be kept separate at all stages of processing (EU2)
2.2 Consumers use of GM food labelling in purchasing decisions	(The surveys sourced do not examine this issue)	**1998-2000** • *December 2000* – 25% of Briton look for GM/non-GM origin on food labels (ranked 6th behind best before/use by date, cooking /storage instructions, amount of fat and amount of sugar) (UK3)
2.3 Are consumers less likely to buy foods that are labelled GM?	(The surveys sourced do not examine this issue)	**2001-2003** • *May 2002* – 54% of respondents said they would be prepared to pay more for a product that was labelled GM-free; 42% said no; 4% said don't know (UK2)

TABLE 4 – Public Attitudes to the Labelling and Acceptance of GM Foods

	China, Indonesia and Philippines	Japan / Hong Kong
1. Major issues explored regarding public awareness and attitudes to biotechnology and GM foods		
1.1 Do consumers think GM is a food safety related concern?	**2001-2003** • *February 2002* –Biotechnology was not spontaneously mentioned as a food related concern (CIP1)	**1998-2000** • *December 2000* – 82.5% or people in Hong Kong have heard of GM food; 17.5% have not heard (HK1) • *2000* – Over half of respondents in Japan see the issue of GM foods in a health and safety context (US8) • *2000* – 82% of respondents in Japan feel negative toward GM foods (US8) • *2000* – 13% of respondents in Japan expect GM foods to provide no benefits or advantages at all; 5% are unsure; 50% quoted 'improved efficiency/higher yields' as the major benefit of GM foods (US8) • *2000* – 37% of Japanese quoted 'safety/health concerns/allergies' and 41% quoted 'impact unknown/experimental' as the main risks associated with GM foods, 50% also concerned about 'virus/mutations' whilst 6% were unsure of risks (US8)
1.2 Consumer awareness of availability of GM food products	**2001-2003** • *February 2002* – 72% of Indonesians reported they believed they had eaten food containing GM ingredients; 55% in China; 58% in the Philippines (CIP1) • *February 2002* – 9% of Indonesians believed they had not eaten food with GM ingredients; 13% in China; 15% in the Philippines (CIP1)	(The surveys sourced do not examine this issue)
1.3 Perception of GM Foods • **the acceptability of the use of biotechnology in food production** • **GM foods – safe/unsafe** • **types of GM foods that consumers would buy/eat or type of genetic modification that is acceptable for foods?**	**2001-2003** • *August 2002* – About 40% of Chinese urban consumers may buy GM foods based on general and basic information on GM foods (without dramatic reports on disasters and/or serious damage caused by GM food consumption) regardless of their prior knowledge (C1) • *August 2002* – About 20% of Chinese consumers thought that GM foods were unsafe and would not buy them; 30-50% of consumers had not made up their minds on GM foods and their purchasing decisions might be influenced by future information (C1)* • *August 2002* – The characteristics of GM foods with special benefits to consumers (such as nutritional enhancements) were more acceptable to consumers (47.5% will buy) than the pest resistant characteristics that primarily benefits food producers (33% will buy) (C1) • *February 2002* – When shown a list of food factors, only 19% of respondents considered biotechnology or GM foods to be their most food related concern (CIP1) • *February 2002* – No single disadvantage of GM food spontaneously mentioned by respondents that stood out prominently. Those mentioned most frequently were, 'may cause side effects' (12%); 'technology too expensive for farmers' (10%); 'more chemicals harmful to body' (11%) (CIP1) • *February 2002* – Only 14% of Indonesians reported that they had taken action in the last 6 months to avoid or seek out GM foods; 7% in Philippines; 4% in China (CIP1) • *February 2002* – 89% of Chinese respondents said they would either definitely or would probably try a GM corn snack if offered whilst 11% said they would probably or definitely would not try it; 94% of Indonesian respondents said they would either definitely or probably try a GM corn snack if offered whilst 6% said they would either probably or definitely not try it; 83% of Indonesian respondents said they would either definitely or probably try a GM corn snack if offered whilst 15% said they would either probably or definitely not try it (CIP1) • *February 2002*- 55% of Chinese believe that GM foods would deliver benefits in the next 5 years, 5% said no and 40% don't know; 83% of Indonesians believe GM foods would provide benefits in the next five years, 45% said no and 13% don't know; 60% of Filipinos believe GM foods would provide benefits in the next five years, 23% said no and 17% don't know (CIP1) • *February 2002*- Unprompted benefits cited by respondents were, 'improved eating quality' (86% of Indonesians); 'improved nutrition' (77% of Chinese and 41% of Filipinos), 'improved shelf life' (57% of Indonesians, but only 21% Chinese, 18% Filipinos) (CIP1) • *February 2002* – 88% of all respondents said they would be very or quite likely to buy corn	**1998-2000** • *December 2000* – 34.6% of people in Hong Kong would buy GM foods; 50.5% would not; 7.9% said it depends on situation; 7.0% don't know (HK1)*

	China, Indonesia and Philippines	Japan / Hong Kong
	or tomatoes genetically modified **to taste better or fresher** (CIP1) • *February 2002* – 90% of all respondents said they would be very or quite likely to buy corn or tomatoes genetically modified **to be protected from insect damage and required fewer pesticide applications** (CIP1) • *February 2002* – 94% of all respondents said they would be very or quite likely to buy corn or tomatoes genetically modified **to have higher nutritional value such as more vitamins or less saturated fats** (CIP1) • *February 2002* – 92% of all respondents said they would be very or quite likely to buy corn or tomatoes genetically modified **to minimise damage to the environment and the earths natural resources** (CIP1) • *February 2002* – 90% of all respondents said they would be very or quite likely to buy corn or tomatoes genetically modified to **make it cheaper, but also because they cost less for the farmer to produce** (CIP1)	
2. Major issues explored regarding the labelling of GM foods		
2.1 Do consumers think GM foods should be labelled / Support labelling regime in their country	**2001-2003** • *August 2002* – 95% of Chinese support labelling of GM foods (C1)* • *February 2002* – None of those interviewed in China, Indonesia and Philippines suggested labelling for the presence of GM ingredients as an additional item to be included on labels **(unprompted)** (CIP1)	**1998-2000** • *December 2000* – 97.7% of people in Hong Kong agree that GM foods should be labelled (HK1)*
2.2 Consumers use of GM food labelling in purchasing decisions	**2001-2003** • *February 2002* – Only 2% of Chinese check the label for GM ingredients, 7% in Indonesia and 3% in Philippines (CIP1)	(The surveys sourced do not examine this issue)
2.3 Are consumers less likely to buy foods that are labelled GM?	(No surveys sourced examined this issue)	**1998-2000** • *December 2000* – 46.3% of people in Hong Kong said they would be willing to pay more for labelled GM foods; 26.5% not willing; 27.2% don't know/depends (HK1)

* Indicates that survey results were used for figures 10.1 and 10.2 in body of the report.

Reference Grid

Australia (TABLE 1)	New Zealand (TABLE 1)	United States (TABLE 2)	Canada (TABLE 2)
A1 – Australian Consumers' Association 2003 *Media Release: Consumers Say GM labels Aren't Good Enough*, http://www.choice.com.au/goArticle.aspx?id=103976&p=1 (data collected September 2003, selected sample – CHOICE online members, n=645) A2 – FSANZ 2003, *Food Labelling Issues: Quantitative Research with Consumers, NFO Donovan Research Report*, FSANZ, Canberra www.foodstandards.gov.au (data collected September 2002, random sample, door-to door interviews, n=1940 aged 18+ in metropolitan cities in Australia and New Zealand) A3 – Greenpeace (unpub), *Australian Attitudes to Genetic Engineering, Survey by Taylor Nelson Sofres*, (data collected April 2002, random sample, telephone interviews, n=1001 aged 16+) A4 – Owen, K. Louviere, J. Clarke, J. 2002, *The Potential Impact on Agricultural Procedures of Responses to GM Products,* Rural Industries Research and Development Corporation, Canberra. (survey of 1008 consumers across mainland metropolitan Australia) A5 – Biotechnology Australia 2002, *Media Release: Survey shows more Australians would eat GM Food Despite Concerns,* http://www.biotechnology.gov.au/content/controlfiles/display_details.cfm?ObjectID=443164A1-7F7B-410C-BD068DA14499A560 (data collected January 2002 and May 2000, survey conducted by Quantum Market research involving over 500 telephone interviews, replicated the survey conducted in May 2000) A6 – Biotechnology Australia (upub 2001), *Community Survey in Tasmania, a Myriad Consultancy Survey*, Biotechnology Australia, Canberra (data collected May 2001, random selection, phone questionnaire, n=407 aged18+ in Tasmania) A7- Biotechnology Australia 2001, *Biotechnology Public Awareness Survey Final Report*, *Milward Brown Australia Research Study,* Biotechnology Australia, Canberra (data collected 2001, research conducted by Milward Brown Australia, random sample, CATI (computer aided telephone interviewing) survey of 1001 people aged 18+)	NZ1 – Small, B. 2003, *Consumer Attitudes to GM Changing, Survey Finds*, www.lifesciencenetwork.com (data collected from two random postal surveys of the New Zealand public in 2001 and 2003, over 2650 surveys were collected) NZ2 – New Zealand Food Safety Authority 2002, *Consumer Use of Food Labels, A Report By Consumers' Institute for NZFSA*, NZFSA, Wellington (data collected August 2002, questionnaire mailed out to randomly selected 'Consumer' magazine subscribers, 5366 responses received) NZ3 – Gamble, J. & Gunson, A. 2001, The New Zealand Public's Attitudes Regarding GM Foods: May & October 2001 – Full report (telephone interviews, 404 people interviewed in May, 400 people interviewed in October) NZ4 – Small B.H., Wilson J.A., Pedersen J.A. and Parminter T.G. 2002, *Genetic Engineering and the Public: Attitudes, Beliefs, Ethics and Cows*, Proceedings of the New Zealand Society of Animal Production 62: 179-182 (data collected May 2001, postal survey, n=1682) NZ5 – Gamble, J. Muggleston, S. Hedderley, D. Parminter, T. Richardson-Harman, N. 2000, *Genetic Engineering: The Public's Point of View,* The Horticulture & Food Research Institute of New Zealand, Auckland (random selection, n=908) NZ6 - Ministry of Health 1999, *Media Release: Genetically Modified Food Labelling Decision in Line with Consultation Results,* http://www.moh.govt.nz/moh.nsf/7004be0c19a98f8a4c25692e007bf833/8908632c1a1759d84c2567c3002ca1ca?OpenDocument (submissions to a discussion document which asked seven questions regarding the labelling of GM foods, a total of 5713 submissions were received) US4 - Roy Morgan Research Poll 2003, *In Australia, UK, Most try to Avoid Genetically Modified Foods; New Zealanders and Americans Divided,* www.roymorgan.com (**Australia** – interviews conducted April 2002 - March 2003, n=25612 aged 14+, **New Zealand** – interviews conducted May 2002 - April 2003, n=12927 aged 14+, **USA** – interviews conducted March 2002 - August 2002, n=5099 aged 14+, **UK** – interviews conducted May 2001 - November 2001, n=1100 aged 14+)	US1 – The Pew Initiative on Food and Biotechnology 2003, *Public Sentiment about Genetically Modified Foods* http://pewagbiotech.org/research/2003update/ (data collected August 2003 and January 2001, phone interviews, n=1000) US2 - IFIC 2003, *U.S. Consumer Attitudes Toward Food Biotechnology International* 'www.ific.org (covers results of 8 surveys conducted in March 1997 through to April 2003, approximately 1000 telephones interviews were conducted for each survey) US3 – ABC News 2003, *Poll: Most in US Would Shun Labelled Biotech Foods,* www.abc.news.go.com (data collected 2003, random sample, telephone interview, n=1024) US4 - Roy Morgan Research Poll 2003, *In Australia, UK, Most try to Avoid Genetically Modified Foods; New Zealanders and Americans Divided,* www.roymorgan.com (**Australia** – interviews conducted April 2002 - March 2003, n=25612 aged 14+, **New Zealand** – interviews conducted May 2002 - April 2003, n=12927 aged 14+, **USA** – interviews conducted March 2002 - August 2002, n=5099 aged 14+, **UK** – interviews conducted May 2001 - November 2001, n=1100 aged 14+) US5 – The Center of Food Safety 2002, *Compilation and Analysis of Public Opinion Polls on Genetically Engineered (GE) Foods (Updated February 1, 2002),* www.centerforfoodsafety.org/facts&issues/polls.html (various surveys/polls cited, data collected November 2001 – February 1995) US6 - ABC News Poll 2001, www.abcnews.go.com (data collected June 2001) US7 – Hallman, W.K., Adelaja, A.O., Schilling, B.J. and Lang, J.T. 2002, *Public Perceptions of Genetically Modified Foods – Americans know not what they eat,* Food Policy Institute, Rutgers, The State University of New Jersey (data collected April 2001, random selection, telephone interviews (computer-assisted telephone interviews (CATI) system), n=1203) US8 – Angus Reid Group 2000, *New Thoughts for Food: Consumer Reaction to Biotechnology in Foods*, www.ipos-reid.com (data collected in 2000, n=2001 adults in USA and	CA1 – Government of Canada 2003, *Public Opinion Research into Biotechnology Issues in the United States and Canada, Eight Wave* of *Research By Pollara Research and Earnscliffe Research and Communications*, Government of Canada, Ontario (data collected in March 2003, telephone survey, random sample, 1000 Americans and 600 Canadians) CA2 - Government of Canada 2002, *Public Opinion Research into Biotechnology Issues, Seventh Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario (data collected in October 2002, telephone survey, random sample, n=1200) CA3 - Government of Canada 2002, *Public Opinion Research into Biotechnology Issues, Sixth Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario (data collected in March 2002, telephone survey, random sample, n=1200) CA4 – Government of Canada 2001, *Public Opinion Research into Biotechnology Issues, Fifth Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario (data collected in September 2001, telephone survey, random sample, n=1200)) CA5 - Government of Canada 2001, *Public Opinion Research into Biotechnology Issues, Fourth Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario (data collected in March 2001, telephone survey, random sample, n=1200) CA6 – Government of Canada 2000, *Public Opinion Research into Biotechnology Issues, Third Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario (data collected September 2000 telephone survey, random sample, n=1202) CA7 - Government of Canada 2000, *Public Opinion Research into Biotechnology Issues, Second Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario

Australia (TABLE 1)	New Zealand (TABLE 1)	United States (TABLE 2)	Canada (TABLE 2)
A8 – Market Attitudes Research Services 2001, *2001 Global Food issues Monitor: Australia*, MARS, Sydney (data collected February 2001, random sample, telephone interviews, n=1000 aged 18+) A9 – Biotechnology Australia 2000, *Media Release: Consumers after Choice on GM foods, not rejecting GM foods*, http://www.biotechnology.gov.au/content/controlfiles/display_details.cfm?ObjectID=443164A1-7F7B-410C-BD068DA14499A560 (survey conducted nationwide by Quantum Market Research) A10 – Biotechnology Australia 1999, Public Attitudes Towards Biotechnology, Yann, Campbell, Hoare and Wheeler Research Study', www.biotechnology.gov.au/library/content_library/BA_pYCHW.pdf (data collected 1999, quantitative national survey by telephone of three groups – general public (1203 respondents), teachers (304), and farmers (201)) US4 - Roy Morgan Research Poll 2003, *In Australia, UK, Most try to Avoid Genetically Modified Foods; New Zealanders and Americans Divided,* www.roymorgan.com (**Australia** – interviews conducted April 2002 - March 2003, n=25612 aged 14+, **New Zealand** – interviews conducted May 2002 - April 2003, n=12927 aged 14+, **USA** – interviews conducted March 2002 - August 2002, n=5099 aged 14+, **UK** – interviews conducted may 2001 - November 2001, n=1100 aged 14+) US8 – Angus Reid Group 2000, *New Thoughts for Food: Consumer Reaction to Biotechnology in Foods'*, www.ipos-reid.com (data collected in 2000, n=2001 adults in USA and Canada, and n=3000 in another six countries)		Canada, and n=3000 in another six countries) CA1 – Government of Canada 2003, *Public Opinion Research into Biotechnology Issues in the United States and Canada, Eight Wave of Research by Pollara Research and Earnscliffe Research and Communications*, Government of Canada, Ontario (data collected in March 2003, telephone survey, random sample, 1000 Americans and 600 Canadians)	(data collected February 2000 telephone survey, random sample, n=1000) CA8 – Council of Canadians 2000, *Press Release: National Poll and Cross-country Protest Demonstrate Consumers Won't be Fooled by GE Foods*, www.biotech-info/canadian_poll.html (data collected in 2000, national poll conducted by Environics research Group, telephone interviews, n=902) CA9 - Government of Canada 2000, *Public Opinion Research into Biotechnology Issues, First Wave of Research by Pollara Research and Earncliffe Research and Communications*, Government of Canada, Ontario (data collected October 1999, telephone survey, random sample, n=1515) US8 – Angus Reid Group 2000, *New Thoughts for Food: Consumer Reaction to Biotechnology in Foods*, www.ipos-reid.com (data collected in 2000, n=2001 adults in USA and Canada, and n=3000 in another six countries)

European Union (TABLE 3)	UK (TABLE 3)	China, Indonesia and Philippines (TABLE 4)	Japan / Hong Kong (TABLE 4)
EU1 – Gaskell, G., Allum, N., Stares, S. 2003, *Eurobarometer 58.0 - Europeans and Biotechnology in 2002* , European Commission, http://europa.eu.int/comm/public_opinion/archives/eb/ebs_177_en.pdf (Each Standard Eurobarometer survey is carried out in each member country – there are 17 sample areas. Each sample area contains a number of interviews. The target is 1000 per sample area except for Northern Ireland (300) and Luxembourg (600))	US4 - Roy Morgan Research 2003, *In Australia, UK, Most try to Avoid Genetically Modified Foods; New Zealanders and Americans Divided,* www.roymorgan.com (**Australia** – interviews conducted April 2002 - March 2003, n=25612 aged 14+, **New Zealand** – interviews conducted May 2002 - April 2003, n=12927 aged 14+, **USA** – interviews conducted March 2002 - August 2002, n=5099 aged 14+, **UK** – interviews conducted may 2001 - November 2001, n=1100 aged 14+)	C1 – Zhong, F., Marchant, M., Ding, Y. and Lu, K. 2002, *GM Foods: A Nanjing Case Study of Chinese Consumers Awareness and Potential Attitudes*, www.agbioforum.org/v5n4/v5n4a02 (data collected July and August 2002, random sample, telephone interviews, n=480 valid interviews)	HK1 - Food and Environment Hygiene Department 2001, *Report on Food Safety Survey*, www.fehd.hk/publications/text/foodsurvey/index.html (data collected December 2000, public survey conducted by Mercado Solutions (Asia) Limited, telephone interviews, n=2017)
EU2 – Institute of Food Research 2002, *Public Preferences for Labelling of GM Food,* http://www.ifr.bbsrc.ac.uk (data collected 2002, questionnaire conducted, 402 Italians, 315 Norwegians and 416 English were surveyed)	UK 1 – MORI 2003, *Press Release: GM Food Opposition Continues,* www.mori.com/polls/2003/gmfood.shtml (Includes results of polls conducted in December 1996 n=1003 aged 15+, June 1998 n=950 aged 15+, February 2003 n=2141 aged15+ and July 2003 n=1958 aged 15+)	CIP2 – Asian Food Information Centre 2003, *Consumer Perception of Food Biotechnology in Asia* http://www.afic.org/ (data collected in China, Indonesia, and Philippines February 2002, street interviews, n=600, (200 in metro Manila and 200 in metro Jakarta, 67 in Beijing, 67 Shanghai, 66 Guangzhou)	US8 – Angus Reid Group 2000, *New Thoughts for Food: Consumer Reaction to Biotechnology in Foods*, www.ipos-reid.com (data collected in 2000, n=2001 adults in USA and Canada, and n=3000 in another six countries)
EU3 – Agricultural Biotechnology In Europe 2003, *European views on Agricultural Biotechnology – An Overview of Public Opinion,* http://abeeurope.dynamicweb.dk/images/files/abe_issues_paper_7.pdf (various studies cited, data collected September 2002 – November 1999)	UK 2 – Consumers' Association 2002, *GM Dilemmas – Consumer and Genetically Modified Foods,* www.which.net/campaigns/food/gm/index.html (quantitative data collected May 2002, questions included in the BMRB's ACCESS Face-to-Face Omnibus Survey, n=998 aged 15+)		
EU4 – European Union 2000, *Europeans, Science and Technology, Main Results of Eurobarometer 55.2,* *http://europa.eu.int/comm/research/press/2001/pr0612en-results.pdf* (data collected 2001, questionnaire, n=16029)	UK3 – Taylor Nelson Sofres (TNS) 2001, *Consumer Attitudes to Food Standards prepared for COI communications and Food Standards Agency*, TNS. (data collected December 2000, face-to face interviews with respondents, n=3153 made up of 1017 (UK), 729 (Wales), 707 (Scotland), 699 Northern Ireland)		
US8 – Angus Reid Group 2000, *New Thoughts for Food: Consumer Reaction to Biotechnology in Foods*, www.ipos-reid.com (data collected in 2000, n=2001 adults in USA and Canada, and n=3000 in another six countries)	EU2 – Institute of Food Research 2002, *Public Preferences for Labelling of GM Food* http://www.ifr.bbsrc.ac.uk data collected 2002, questionnaire conducted, 402 Italians, 315 Norwegians and 416 English were surveyed)		
	US8 – Angus Reid Group 2000, *New Thoughts for Food: Consumer Reaction to Biotechnology in Foods*, www.ipos-reid.com (data collected in 2000, n=2001 adults in USA and Canada, and n=3000 in another six countries)		

APPENDIX G

The Development of a Codex Standard for the Labelling of GM Foods

Summary of Developments – Provided by the Chairperson of CCFL

22nd Session (April 1993). The CCFL agreed that work on the labelling aspects of biotechnology be considered in light of recommendations by the Codex Commission. The CCFL requested the United States to prepare a discussion paper for consideration at the next session.

23rd Session (October 1994). The committee considered the discussion paper prepared by the United States. The paper identified a number of issues as areas where further elaboration and comments should be sought. During these initial discussions, countries either favoured mandatory labelling only for the introduction of any potential health or safety concerns to food products, or advocated that labelling be required under all circumstances. Some countries thought that it was too early to determine particular rules for products obtained thought biotechnology. They felt that labelling should be required only when the food or ingredient differed significantly from its traditional equivalent or if safety concerns were involved, such as the introduction of an allergen.

24th Session (May 1996). Delegations and observers requested that all food products prepared with the assistance of biotechnology be subjected to mandatory comprehensive labelling. They reasoned that consumers should be able to make choices based on several considerations, including food origin, production method, agronomic practices, and personal values. Some observers also suggested that the public be notified, through labelling, of specific concerns relative to safety, nutrition, and food composition. It was further suggested that these concerns be the subject of scientific evaluation. The European Union (EU) stated that taking a position on such matters would be premature, as member countries were still reviewing their respective situations. Canada indicated that its policy regarding the labelling of biotechnology-derived foods was still being developed. Noting the lack of consensus, the CCFL agreed to seek guidance from the Codex executive committee on how labelling guidelines might be established.

25th Session (April 1997). A draft guidelines document, based on recommendations by the Codex executive committee, was introduced for discussion. The executive committee proposed that foods that are not equivalent to existing non-biotech foods with respect to composition, nutritional value, or intended use, should be labelled. In order to identify issues and provide direction to the Codex executive committee, the CCFL agreed to solicit comments from Codex member governments. A review comprising these comments was released in February 1998.

26th Session (May 1998). The draft guideline document was again discussed. The proposal for labelling foods that are non-equivalent to existing foods, based on composition, nutritional value, or intended use, remained intact. This session provided an opportunity for Codex members to comment on whether all genetically modified foods, or foods that contain genetically modified material, should be labelled. The CCFL facilitated constructive

discussion among Codex members. This time, progress was made in refining the definition of products obtained through biotechnology with the exception of food products that are non-equivalent compositionally, nutritionally, or in their intended use. Several European countries, along with India, expressed a preference for the mandatory method of production labelling for all biotechnologically derived foods. Canada, the United States, Australia, New Zealand, Peru, and Brazil supported the labelling of foods based on safety, composition, intended use, and nutrition, which was consistent with their respective labelling laws. The CCFL agreed to forward to the commission for adoption at step five, the definitions related to biotechnology, and to return all other sections of the proposed draft for further consideration.

27th Session (April 1999). The CCFL considered a rewrite of the proposed draft recommendations (based on the draft guidelines document) and established an Ad Hoc Working Group for this purpose. Canada was selected to coordinate and chair the group which comprised representatives from 23 member countries, the EU and nine international non-governmental organisations. The Committee also recommended that a smaller drafting group (consisting of Japan, Brazil, the U.S., Australia, Canada, and two representatives from EU) be formed within the Working Group to "hold the pen." The approach was that the smaller drafting group would write the document and circulate it to the working group for review and comment. The final draft of the recommendations were to be discussed at the CCFL meeting in May 2000. The drafting group reviewed and revised the texts for the definition of biotechnology-derived foods. The following two labelling options were also reviewed and revised by the drafting group:

a. Labelling of foods where nutritional value, composition and intended use of the foods derived from biotechnology are no longer equivalent to the corresponding existing food

b. Labelling requirements for the identification of all foods derived from biotechnology.

28th Session (May 2000). Recognizing the diversity of opinions among member countries, the CCFL engaged in lengthy debate and decided to return the proposed draft for further consideration. The CCFL also agreed that the Working Group would continue its deliberations to combine the two options into a *Codex Guideline,* in light of the proposal from member countries, and to circulate it for consideration by the next session. The Working Group was also asked to table a paper on key issues and questions associated with the labelling of these foods. Three new members (South Africa, Thailand, and India) were added to the drafting group, which met in India in late October 2000. At that meeting some additional options were developed for consideration during the May 2001 29th Plenary Session.

29th Session (May 2001). Consistency regarding the definition of terms became the major topic of debate when the committee met in Ottawa. Two substantive matters were considered with respect to food biotechnology labelling. In the first instance, the committee agreed to use the definition of "modern biotechnology" adopted by the Cartegena Protocol[5] and moved the

[5] The Protocol seeks to protect biological diversity from potential risks that may be posed by living modified organisms (LMOs) resulting from modern biotechnology. It establishes an advance informed agreement (AIA) procedure for ensuring that countries are provided with prior written notification and information necessary to make informed decisions before agreeing to the first import of LMOs that are to be intentionally introduced into the environment (www.biodiv.org/biosafety/ratification.asp).

definitions to stage eight for decision. The committee, however, was not able to proceed further with its consideration of the *Guidelines for the Labelling of Foods and Food Ingredients Obtained through Certain Techniques of Genetic Modification/Genetic Engineering,* and returned the current text to step three for further comments. The following terms were agreed upon:

1. *Food and food ingredients obtained through certain techniques of genetic modification/genetic engineering* means food and food ingredients composed of or containing genetically modified/engineered organisms obtained through modern biotechnology, or food and food ingredients produced from, but not containing genetically modified/engineered organisms obtained through modern biotechnology.

2. *Organism* means any biological entity capable of replication, reproduction or of transferring genetic material

3. *Genetically modified/engineered organism* means an organism in which the genetic material has been changed through modern biotechnology in a way that does not occur naturally by multiplication and/or natural recombination.

4. *Modern biotechnology* means the application of

    a. In vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and the direct injection of nucleic acid into cells or organelles, or

    b. Fusion of cells beyond the taxonomic family, which overcome natural physiological, reproductive or recombination barriers and which are not techniques used in traditional breeding and selection.

The CCFL agreed to forward the definitions to Step 8 for adoption by the CAC in 2001. However, due to the lack of consensus on the appropriate terminology for the definitions, CAC agreed to return the text to Step 6.

30th Session (May 2002). The definition of terms was again a major issue during this session. Many delegations and observer organisations supported the term "genetically modified/engineered" because this terminology is more familiar to consumers, stressing the importance to use familiar terminology for the purpose of labelling. On the other hand, many other delegations and observers supported "Modern Biotechnology" in order to maintain consistency with other Codex texts and with other internationally agreed texts such as the Cartegena Protocol. Some of these delegations stressed that "Modern Biotechnology" was more understandable to the consumers in their countries. After a first round of exchange of opinions, the Delegation from Spain, speaking on behalf of the member states of the European Union, expressed its willingness to compromise by accepting "Modern Biotechnology" on the condition that the terminology used in the definition did not affect the terminology used in the actual labelling. The delegation proposed to add a footnote for this purpose. Other Delegations proposed modifications to the footnote suggested by Spain. After much discussion, the committee could not reach a consensus and decided to return the current text of the Draft Definitions, with the addition of the footnote proposed by the Delegation of Spain, to Step 6 for further comments and discussion in the next session.

The Committee continued its discussion from the previous Session (i.e. session 29th) on the Proposed Draft Guidelines. After section by section discussion of the document, no consensus was reached on several important points. Recognising this, the Committee agreed to return the Proposed Draft Guidelines, as amended at the present session, to Step 3 for further comments and consideration at the next session.

31st Session (April – May 2003). Given the difficulty the Committee had been facing in reaching consensus on the GM labelling of food issue, a proposal raised by the Chairperson to establish a smaller Advisory Working Group to develop options for management of the Draft Recommendations and Draft Guidelines was supported at the 31st Session. It was agreed that the Group would meet between sessions as required and the summary of discussions as well as proposals submitted to the Group be circulated to all Codex members. The Working Group comprises the following member countries:

- Argentina
- Australia
- Barbados
- Bolivia
- Brazil
- Canada
- China
- Egypt
- France
- India
- Indonesia
- Japan
- Kenya
- Korea
- Mexico
- Netherlands
- New Zealand
- Norway
- Sweden
- Switzerland
- South Africa
- USA
- EU

Bearing in mind the above decision, it was agreed to retain the Draft Definition and proposed Draft Guideline at Step 7 and 4 respectively, until further discussions take place at the next session of the Committee.

CCFL Chairpersons Advisory Working Group (29-30 October 2003). The meeting was attended by 18 Country delegations including Australia. The participants were not to examine or discuss the existing Codex text (at steps 4 and 7), but to consider options for progressing this item within the CCFL. Of the options identified, only one was considered in detail. This proposed to retain a single text, and within this to separate mandatory labelling requirements and further optional labelling. There was also a explicit recognition among members that any optional labelling would need to be consistent with WTO requirements under the SPS and TBT agreements. The outcome of this working group will be placed before the CCFL, which will need to consider the way forward in plenary at their next meeting.