



Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngaherehere



CODEX ad hoc Task Force on International Regulations and Standards for Foods Derived from Biotechnology

Findings from SNAP workshops to capture inputs from:

- **Consumers**
- **Producers, Manufacturers,
Marketers and Retailers**
- **Researchers**

February 2000

Content source: with the exception of minor identified commentary by the facilitating consultants, the information in this document is entirely the responses made by participants from interested public groups and from the food industries. Whilst sponsored by MAF, no part of this document has been developed by MAF itself, and no part of this document necessarily reflects MAF's policy position on any aspect of the foods from biotechnology debate.

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INTERNATIONAL REGULATION AND STANDARDS FOR FOODS DERIVED FROM BIOTECHNOLOGY

Executive Summary

Background:

In July 1999, the Codex Alimentarius Commission, the international food standards body, agreed to establish an international Ad Hoc Intergovernmental Task Force on foods derived from biotechnology (hereafter referred to as the Task Force). The Task Force will be chaired and hosted by Japan. The Task Force aims to develop standards, guidelines or recommendations, as appropriate, for foods derived from biotechnology or traits introduced into foods by biotechnology, on the basis of scientific evidence, risk analysis and having regard, where appropriate, to other legitimate factors relevant to the health of consumers and the promotion of fair practices in the food trade.

Briefing Guideline

The statutes of Codex restrict its work to the development of food standards, codes of practice and guidelines.

Codex deals specifically with the effects on people of the food they consume, but not with wider issues such as the effects of agricultural production on the environment.

Request for views

MAF sought the views of interested parties on the criteria and principles that should form the basis of any international standards or guidelines in this area.

Process

Martech Consulting Group was invited to facilitate two workshops using its *Stakeholder Needs Analysis Programme* technique (SNAP). This paper provides background information on some of the key issues pertinent to the development of international standards for foods derived from biotechnology.

This document

This document captures

- the close to 500 observations raised by
- 34 participants from three categories
 - Consumers
 - Producers, Manufacturers, Marketers and Retailers
 - Research
- at twin workshops in Auckland and Wellington during February 2000.
- Government representatives sat in as observers in each workshop so as to be able to follow the debate and make first-hand interpretations of issues as they were raised by participants.



Findings – listed in prioritised order

1. Trusted food testing and system

(Vote score 70)

At the Auckland workshop, this subject was dominated by Researchers :

- *A call for an international consensus conference to set food safety standards which are globally adopted*
- *Acceptable testing standards*
- *Food safety – from number of perspectives*

Curiously, whilst participants were clear that ‘trust’ was what it was all about, only one observation in the 35 Strategic Importance items under this heading, combining both workshops, included the word ‘trust’:

- *Lack of trust in regulatory bodies and Governments* Consumers

Trusted testing prior to release was a major heading from the Wellington group with the following two examples illustrating this theme:

- *Clear and rigorous testing regime before products can be sold to consumers -* Producers / Manufacturers / Marketers / Retailers
- *Independent verification that testing is sound -* Research

2. Consumer education and participation

(Vote score 62)

On this subject, Producers / Manufacturers / Marketers / Retailers had a common stance:

- *Individual consumers given the choice over what they eat i.e. labelling*
- *Giving the consumer the ability to decide*
- *Science more understandable*
- *Improved flow of information*

But Consumers emphasised one aspect:

- *Money to fund impartial information*
- *Education*
- *Comprehensive information available*

This was different to the stance taken by Research:

- *Biotech foods are recognised for their benefits*

The following comment probably holds the key to a more balanced understanding of the issues:

- *Ability to listen and take on board the differences / work through difference → agreement -* Consumers

This view was supported, but expressed differently, by a Research participant:

- *Establishment of forum whereby all interested groups could discuss the pros and cons of developments in GM Foods before marketing.*

In the Wellington group, who identified the title of *Consumer education and participation*, the need for balanced listening and the role of farmers producing the foods came out clearly. The following examples came from the Producers / Manufacturers / Marketers / Retailers subgroup:

- *Consumers need better understanding of farming – to know what they can ask for*
- *Acceptance of the general public that biotechnology has a place in NZ society*
- *All groups involved. Must listen to each other.*
- *We have some common goals – let’s identify them*



- *Co-operation of parties is essential*
- *All views are equally valid*

3. Communications and consumer information

(Vote score 62)

Researchers offered the following points about 'Information Resources':

- *Evidence based science for biotech foods is accessible and transparent*
- *Much expanded databases of composition / allergens / toxic components*

The need for a 'Balanced Role' by media is summed up in the following two observations:

- *Balanced representation of both sides - Consumers*
- *Consumer confidence enhanced by media co-operation to avoid sensationalism - Research*

Under the highest scoring heading of the Wellington Group, *Trusted consumer information – including labelling*, the following observations from Producers / Manufacturers / Marketers / Retailers are examples of their opinion:

- *Consumers understand labelling, and recognise costs associated with such labelling*
- *Consumers must be able to make an informed choice*
- *Benefits to and understanding by consumers of the labelling regime outweighs the costs*
- *Labelling regulations that are practical*
- *Labelling requirements which include a 'threshold' limit*
- *A realistic labelling regulation*
- *Accepted audit trail*
- *Use of range of communication channels – not just labelling*
- *Acknowledgement of a persons right to freely choose what to eat*
- *Logical and rational labelling regime – clear regulation*

4. International trade impacts

(Vote score 32)

Under the heading of *Necessity for international co-operation and trade*, the following examples came from Wellington participants:

- *Recognition that this an international issue that NZ can not deal with alone - Consumers*

Producers / Manufacturers / Marketers / Retailers:

- *Clear measurable benefits of technology have been shown since its introduction*
- *Freer agricultural trade has been key to effective food safety*
- *International co-operation has underpinned safe food*
- *New Zealand's competitiveness in international markets*
- *Use of biotechnology means NZ is competitive globally*
- *Regulation protected safety but didn't add unreasonable cost - Research*

5. Risk and return issues

(Vote score 32)

Observations under this heading were dominated by Producers / Manufacturers / Marketers / Retailers participants with the following examples:

- *Clear identification of risks and return*
- *Clarity of safety issues in R&D*



- *Compliance cost must not outweigh benefit*
- *Commitment to standards which scientifically assess risk*
- *Regulation and standards based on sound science*
- *Commitment to research to facilitate risk assessment*
- *Acceptance of reasonable risk*
- *Risk is an inherent part of life*
- *Risk requirement so everybody had confidence in the result*
- *Net health and economic benefit*
- *Public acceptance of risk assessment principles*

6. Clear regulations

(Vote score 32)

The following three different views indicate the spread of view on this subject:

- *All organic product labelled and verified by third party* - Consumers
- *Clear, easily followed regulations limited ambiguity* - Producers / Manufacturers / Marketers / Retailers
- *Labelling restricted to major issues not comprehensive* - Research

7. GM versus organics

(Vote score 24)

A number of Consumers, possibly reflecting the make up of the participant group, focussed on a particular stance:

- *GE food not required in an organic nation*
- *No benefit to consumers; GE foods made redundant*
- *No GE / GMO imports into New Zealand*
- *No more GE!*
- *\$\$\$ placed into organic systems research / education / tech. transfer*

This position is clearly at variance with the following input from a Research participant:

- *Acceptance that GM crops per se not at odds with organic movement.*

8. Environmental health concerns

(Vote score 14)

This heading came out of the Wellington participant group, and the following observations illustrate the diversity of views on this issue:

- *Growing realisation that unadulterated (good) food is essential for health* - Consumers
- *GE is found to have produced super weeds; decimated insects; and exasperated loss of biodiversity* - Consumers
- *Good health and good environment ... good business* - Producers / Manufacturers / Marketers / Retailers
- *Consumer involvement through whole bio-production chain* - Producers / Manufacturers / Marketers / Retailers
- *Biotech that showed environmental benefits, improved safety (e.g. reduced allergens), direct and indirect consumer benefits adopted* - Research

9. Cultural and related issues

(Vote score 10)

This subject polled only one seventh of the top ranking issue, and is well summed up by the following comment:

- *Food regulations respect cultural and religious beliefs* Research



Participants' final comments

As a final step in the workshop process, participants were asked for their summary guidelines. The Auckland workshop group provided the following:

1. *Need effective forms of monitoring GM food regulations.*
2. *Look for international co-operation for testing. This will depend on an international acceptance of tests.*
3. *Funding for complementary research – at present it is much easier for economic based R&D to find sponsors.*
4. *Participation needs financial support if it is to be comprehensive. Many groups do not have the financial resources to take part in decision making with respect to GM food regulations and guidelines.*
5. *New Zealand is a food exporter with a high proportion of exports based on agriculture and fishing. There is a need to recognise the impact of these exports on the economy, when establishing GM food regulations and guidelines.*

From the Wellington workshop, one theme came through consistently:

- the need for Trust in the processes

Consultant's Observations

The two consultants who facilitated the twin workshops have made the following list of key points as they see them:

1. Participants had reservations about concepts such as 'equivalence', 'substantially equivalent' and 'substantially different'.
2. There was much debate about the availability of adequate tests – with a spread of views.
3. There was recognition that non-GM foods are not always extensively tested.
4. The word 'evidence' might be more acceptable than the words 'sound science'.
5. An observation made was that the boundary line between food and medicines will become more indistinct over time.
6. The lack of consumer confidence in science re GM foods, where the knowledge base is imperfect, was mentioned frequently.
7. There is a risk of the consumers being 'overawed' by the large body of information re GM foods.
8. Workshop discussions implied Codex regulations and guidelines should also focus on the food product, not the process under which the food was produced.

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1. Background

In July 1999, the Codex Alimentarius Commission, the international food standards body, agreed to establish an international Ad Hoc Intergovernmental Task Force on foods derived from biotechnology (hereafter referred to as the Task Force). The Task Force will be chaired and hosted by Japan. The Task Force aims to develop standards, guidelines or recommendations, as appropriate, for foods derived from biotechnology or traits introduced into foods by biotechnology, on the basis of scientific evidence, risk analysis and having regard, where appropriate, to other legitimate factors relevant to the health of consumers and the promotion of fair practices in the food trade.

Purpose of the Workshops

The Ad Hoc Task Force on Foods Derived from Biotechnology provides New Zealand and other members of Codex the opportunity to forge international agreement on the essential principles that should govern the regulation of new types of foods. The challenge for Codex will be to construct standards or guidelines that deliver a consistent outcome but are flexible enough to allow countries to implement according to domestic needs.

Participation

MAF Policy Division of the *New Zealand Ministry of Agriculture and Forestry* sought the views of interested parties on the criteria and principles that should form the basis of any international standards or guidelines in this area.

Martech Consulting Group was invited to facilitate two workshops using its *Stakeholder Needs Analysis Programme* technique (SNAP) to which MAF invited a wide range of organisations to participate. The workshops were free to participants and those who took up the invitation are listed in Appendix 3 at pages 43 and 44.

Thirty four participants from three categories

- Consumers
- Producers, Manufacturers, Marketers and Retailers
- Research

Participated in twin workshops in held Auckland and Wellington during February 2000. Government representatives sat in as observers in each workshop so as to be able to follow the debate and make first-hand interpretations of issues as they were raised by participants.



2. Briefing Guideline – as provided to participants

“The statutes of Codex restrict its work to the development of food standards, codes of practice and guidelines.

Codex deals specifically with the effects on people of the food they consume, but not with wider issues such as the effects of agricultural production on the environment.

The work of the Codex Task Force is expected to focus on developing standards or guidelines on the safety of foods derived from biotechnology. We would like you to assist by:

- (a) defining as you see the situation the most important safety and related issues that should be the basis for any standards/guidelines developed, and also
- (b) how you see these issues being addressed by Codex.”

3. Process and Layout of this document

The SNAP workshop process centres upon two base themes:

- (a) Determination of the **immediate issues** that the participants saw as important and to be taken into consideration in any framework for the development of regulations and standards for foods derived from biotechnology. The premise in this is that if the factors cited are ignored, they could pre-empt actions for the success of future regulations and standards. As items are cited, these are noted on flip charts which now form the first section of the detailed workshop findings – see appendices 1 and 2 at pages 12 and 26.

After discussion, each participant is asked to provide an anonymous list of their observations. Scores were attributed according to the number of times an item was cited by participants. The full list of items raised is included in the appendices pages of workshop details – see pages 21 and 37.

- (b) In the second segment of the workshop, the participants were asked to identify the **important strategic issues** that they saw as important for a future improved situation. These items were arrived at after participants were asked to build a mental picture of a future position as part of their vision for safety standards in foods from biotechnology by Year 2020.

Ranking was determined by a simple vote wherein participants were asked to vote on the top ranked items, with the highest ranking being given approximately half of the total vote value each had. The purpose in this is to focus attention upon the items that are seen to be of the greatest importance. The full list of items cited as of strategic importance in achieving their 2020 visions are listed in pages of the appendices of workshop details – see pages 16 and 31.

As we believe emphasis should be upon how the future should be addressed, the order of presentation in the document is to first show the items that are seen to be important to the future, and then follow these by showing the



immediate issues. In some instances the limitations are a mirror of a future strategic objective.

In total, participants raised close to 500 observations that have now been consolidated down to the nine *Strategic Importance* items and ten *Immediate Issues*. These are displayed in the two bar charts on the following pages. The tables on pages 8 to 10 show the detailed headings from each workshop. All participants had the same number of voting points in arriving at the 'final vote' scores and 'total mentions' scores.

By reference to the detailed findings, each heading can be tracked back to individual observations.

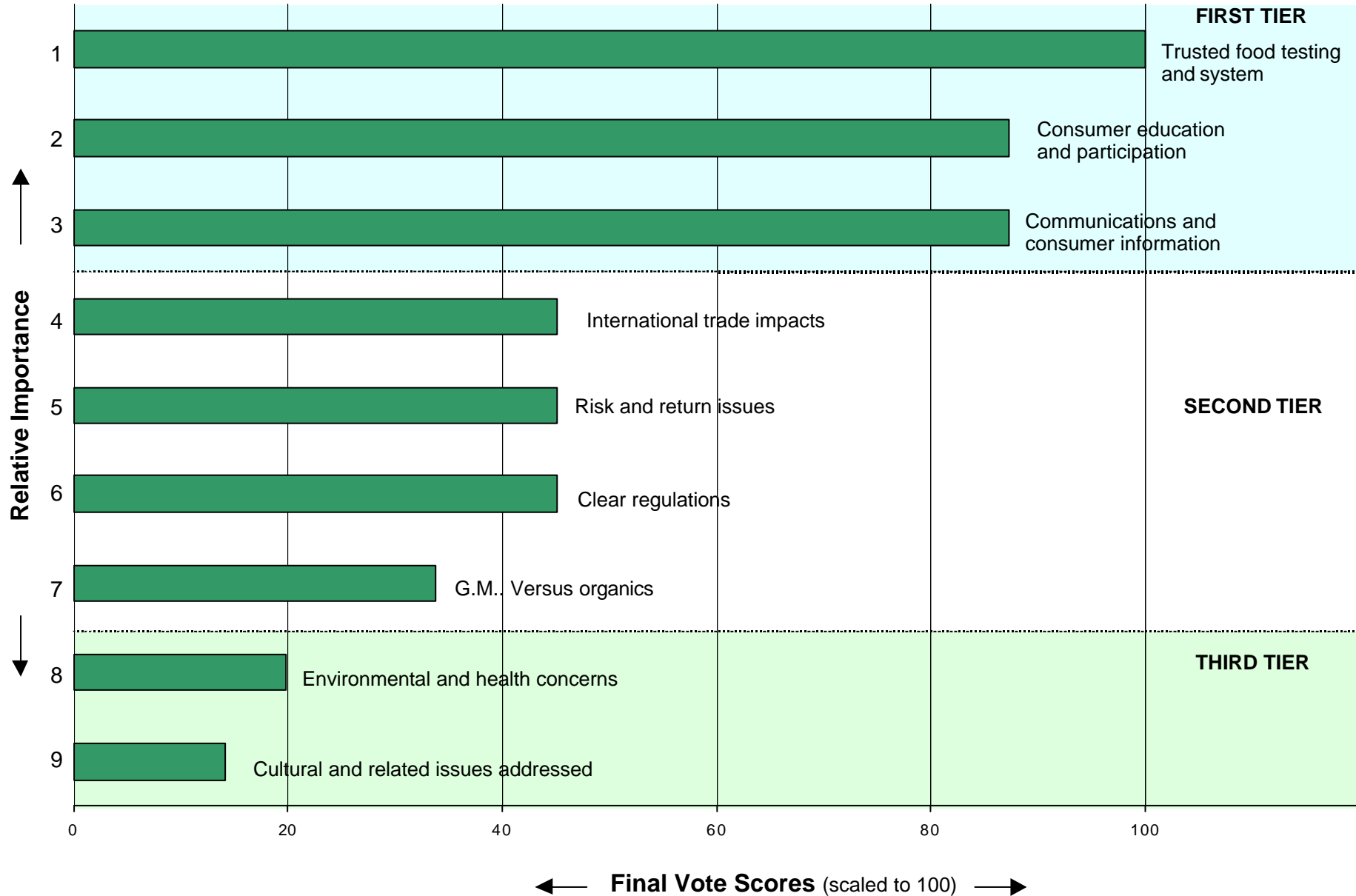
The intention of the Pareto chart (follows the two bar charts) is to illustrate how addressing six of the ten 'immediate issues' will meet over 80 percent of the total listed.

As a final step, the participants were asked to share their views as to how they might go about achieving the top scoring Strategic Importance Issues. This section follows the summary of the main findings – see heading #6 on page 10. The majority of these final observations came from the Auckland workshop as a time constraint prevented a similar level of input from the Wellington participants. Notwithstanding this difference, a key observation is made from the Wellington participants.

International Regulations and Standards for Foods Derived from Biotechnology

SNAP workshops for MAF Policy,
Auckland & Wellington, NZ, February 2000

Strategic Importance Issues

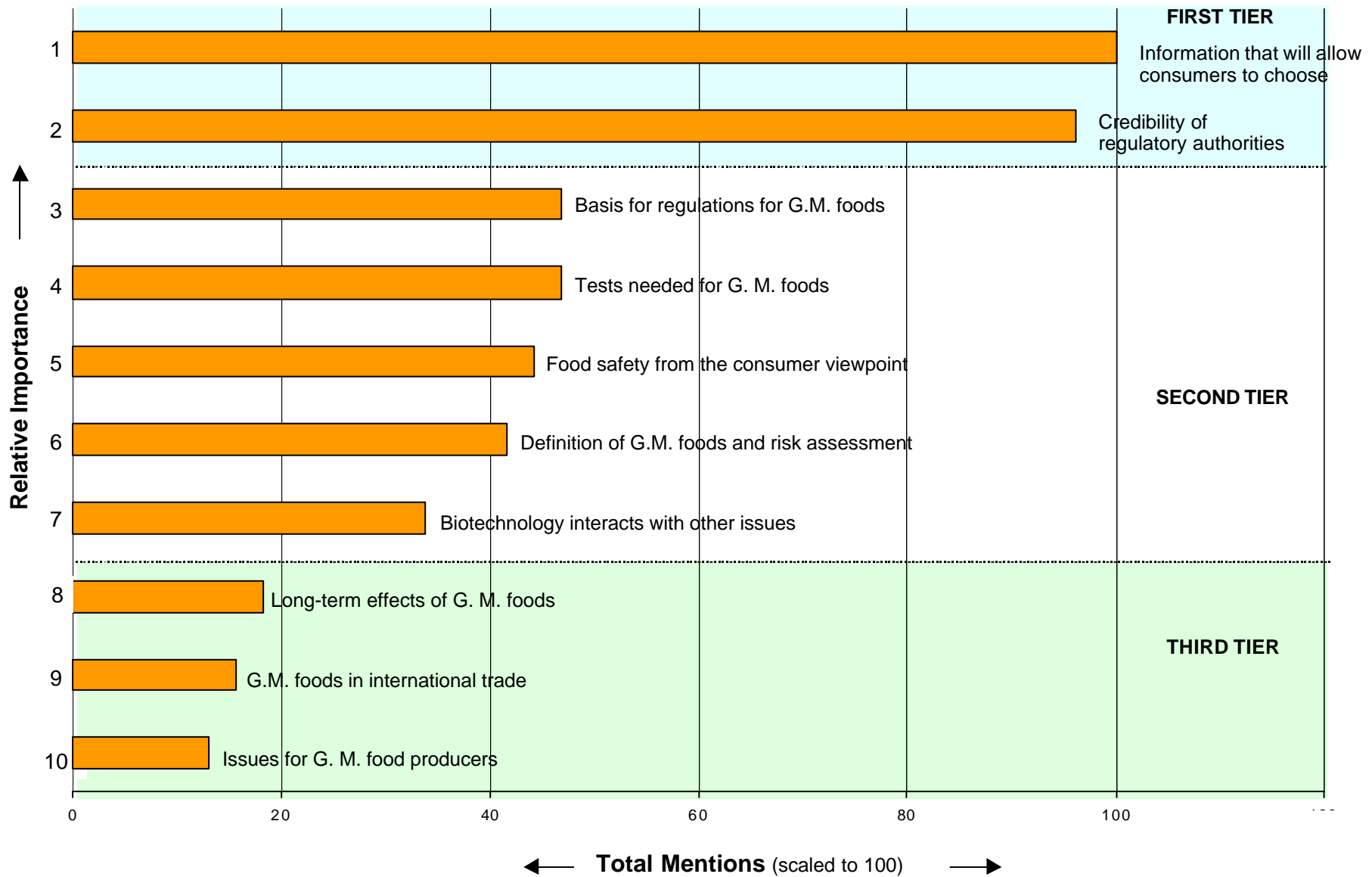


International Regulations and Standards for Foods Derived from Biotechnology



SNAP workshops for MAF Policy,
Auckland & Wellington, NZ, February 2000

Immediate Issues

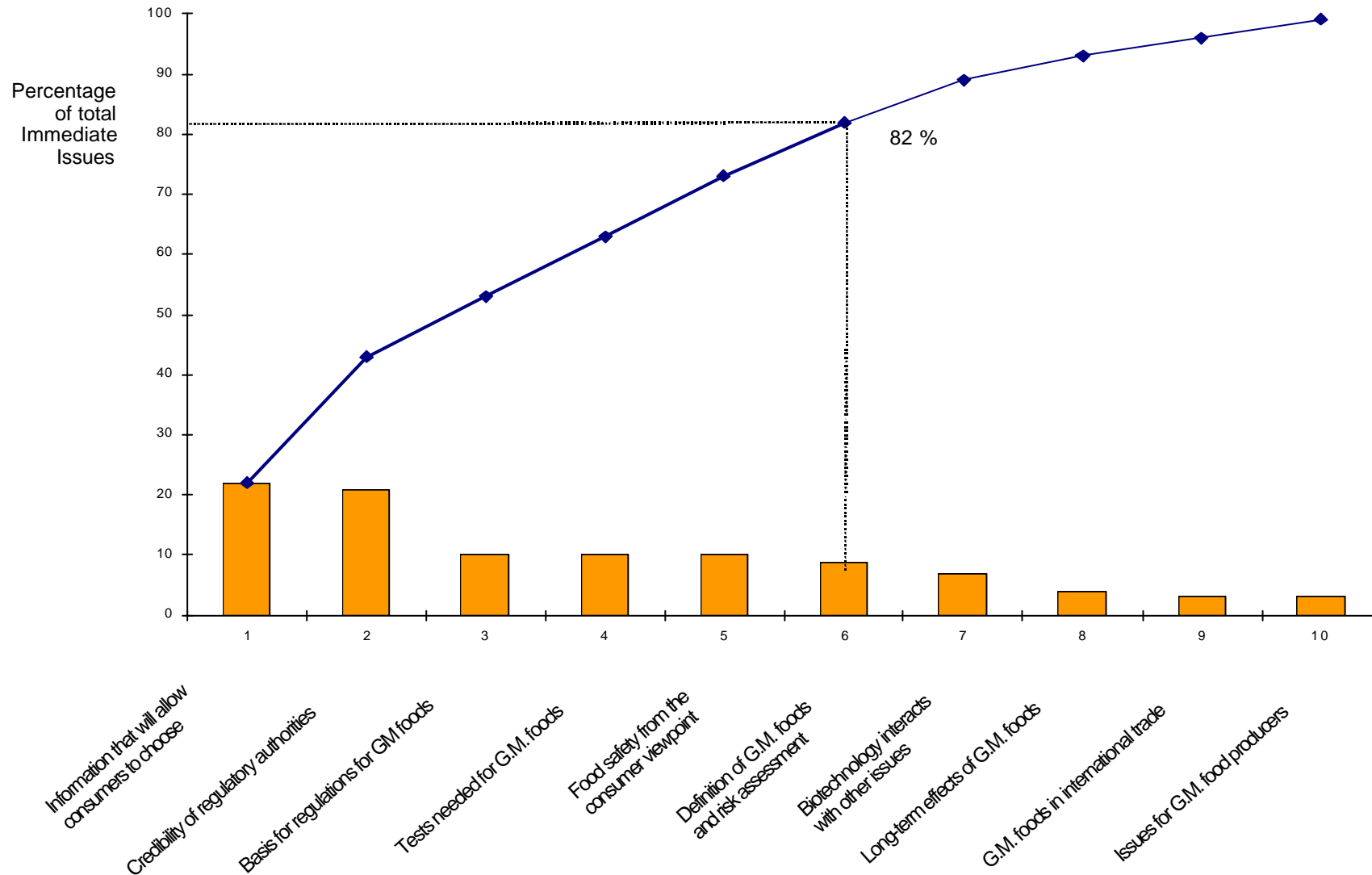


International Regulations and Standards for Foods Derived from Biotechnology



SNAP workshops for MAF Policy,
Auckland & Wellington, NZ, February 2000

Immediate Issues - Pareto chart



Strategic Importance Issues Combined Auckland & Wellington Workshops

	Final Vote Scores	Auckland Group	Wellington Group	
1. Trusted food testing and system				70
Food safety testing		34		
Trusted testing prior to release			22	
Trust in system			14	
2. Consumer education and participation				62
Consumer education and participation			22	
Learning and on-going education		16		
Balance of individual choice			16	
Consumer participation in decision making		8		
3. Communications and consumer information				62
Trusted consumer information – including labelling			48	
Information resource		8		
Balanced role of media		6		
4. International trade impacts				32
Necessity for international co-operation and trade			18	
Market diversity and opportunities		14		
5. Risk and return issues				32
Trusted risk and return			28	
Liability / responsibility			4	
6. Clear regulations				32
Regulations which are clear and well communicated		24		
Accepted and understood definition for GM food			6	
7. G. M. versus Organics				24
Organics versus G.M.			12	
G.E. free New Zealand and organic increases by Year 2020		12		
G.M. crops and organic crops can co-exist		0		
8. Environmental and health concerns				14
Environmental and health concerns			14	
9. Cultural and related issues addressed				10
Cultural, religious and philosophical issues to be addressed		10		



Immediate Issues

Combined Auckland & Wellington Workshops

	Mentions		
	Auckland Group	Wellington Group	
1. Information that will allow consumers to choose			38
Workable labelling for consumer choice		14	
Provision of information to consumers – incl. labelling	8		
Need for communication with consumers on factual issues re GM foods		12	
Education of consumers	4		
2. Credibility of regulatory authorities			37
Lack of/ doubt in confidence in systems / authorities		14	
Credibility of regulatory authorities, including Codex.	12		
Preserving each individual nation's freedom		5	
Need balanced public relations effort	4		
An early need for GM food regulations		2	
3. Basis for regulations for GM foods			18
Role of science with respect to GM foods	5		
Cost of compliance should be taken into consideration		5	
Basis for regulations to be practical, valid and robust		4	
Lack of agreement on equivalence		4	
4. Tests needed for GM foods			18
Tests needed for GM foods		10	
Appropriate basis for testing GM foods.	8		
5. Food safety from the consumer viewpoint			17
Food safety from the consumer viewpoint	9		
Will consumers have confidence in GE food safety standards?	5		
Concern with GE foods highlights lack of knowledge of all foods	2		
Food safety should concentrate on the products not the processes	1		



6. Definition of GM foods and risk assessment		16
. Need to define risks		13
Food / medicine boundary line requirement.		2
Need to manage risk	1	
7. Biotechnology interacts with other issues		13
Other issues impact on GM food regulation	9	
Biotechnology interacts with other issues		4
8. Long-term effects of GM foods		7
Question of long term effects of GM foods.		5
Long term effects of GM foods	2	
9. GM foods in international trade		6
International trade – significance of a GM food policy	3	
Trade impact of GM food guidelines		3
10. Issues for GM food producers		5
Contribution of GM relative to conventional breeding	3	
Recognition of worth of existing New Zealand systems.		1
Liability and responsibility		1



6. End comments from participants

As a final step in the workshop process, participants were asked for their summary guidelines. The Auckland workshop group provided the following:

1. *Need effective forms of monitoring GM food regulations.*
2. *Look for international co-operation for testing. This will depend on an international acceptance of tests.*
3. *Funding for complementary research – at present it is much easier for economic based R&D to find sponsors.*
4. *Participation needs financial support if it is to be comprehensive. Many groups do not have the financial resources to take part in decision making with respect to GM food regulations and guidelines.*
5. *New Zealand is a food exporter with a high proportion of exports based on agriculture and fishing. There is a need to recognise the impact of these exports on the economy, when establishing GM food regulations and guidelines.*

From the Wellington workshop, one theme came through consistently;

- the need for Trust in the processes

7. Consultants' observations

The two consultants who facilitated the twin workshops have made the following list of key points as they see them:

1. Many participants expressed reservations about the use of **concepts such as 'equivalence', 'substantially equivalent' and 'substantially different'**. Consumers may not have confidence in those judging the 'equivalence' or otherwise of foods.
2. There was **debate about the availability of adequate tests** to determine whether a food had been genetically modified or produced by a genetically modified organism. The spread of views ranged from those with full confidence in the tests to those who held that GM foods cannot be identified using present tests. Intermediary users of the test information (Producers, Manufacturers, Marketers and Retailers) appeared more confident of the tests than the scientists.
3. There was a recognition that **non-GM foods are not always extensively tested** before being released in the market. This recognition implies, but the observation was not explicitly stated, that a consistent approach to food testing is desirable
4. The suggestion that the word **'evidence'** (possibly with a relevant qualification) might be more acceptable than the words **'sound science'** when describing the basis for Codex regulations and guidelines.
5. The observation that the **boundary line between food and medicines** will become more indistinct over time is worth noting.



6. The **lack of consumer confidence in science** and scientists in the field of GM foods, where the knowledge base is imperfect, was frequently mentioned.
7. The observation was made that there is a risk of the **consumers being 'overawed' by the large body information** and the widely differing viewpoints available with respect to GM foods.
8. Workshop discussions focussed on the food products, implying that Codex regulations and guidelines should also **focus on the food product, not the process** under which the food was produced.



Auckland Workshop Group

Appendix 1

Immediate Issues

- listed by group during the opening discussion- in the order in which the points were raised .

1. Primary issue – must be able to consume GM food without adverse health effects.
2. People have different food and diet needs – these need to be recognised by the regulations.
3. Consumer information must be available.
4. 'Normal' is difficult to define.
5. 'Normal' is a reference point – decide on risk subsequently.
6. Regulatory agencies must have credibility and be seen so!
7. Regulatory agencies must have the confidence of the consumers.
8. Countries using Codex standards may not have their own national standards.
9. What are the food trends? Politics of foods.
10. Where are we going with food?
11. May be issues to consider outside Codex's regulatory role.
12. Some issues lie outside the Codex activities that are a part of this discussion, eg. labelling, concern with food safety, people's perceptions.
13. Must provide consumer with information – must allow trade.
14. Must set objectives – Codex has these objectives – (viz. meet food safety requirements and enable trade in food)
15. Workshop must move on.
16. Lack appropriate tests for GM foods – inadequate information on food composition.
17. 'Equivalence' – concept is difficult to handle in practice – lack of knowledge of 'normal' and 'equivalent' food.
18. Adequate tests for GM foods are available.
19. GM modifications may change levels of components within a food but not change the actual components within a food.
20. EU has a testing laboratory in Ireland. Using PCR testing.
21. Allergenic problems are not dose sensitive.



22. The growing environment impacts on the quality of the food.
23. How do we look at food production holistically?
24. We can affect what Codex does.
25. Consumer sees international mechanisms of regulation as big and unwieldy – lack faith in process.
26. Need to be proactive and tell New Zealand representatives to Codex what we need.
27. Codex may need to look at better communication.
28. Codex has a perceived bias towards food manufacturers.
29. Average consumer hasn't heard about Codex. Need to trust ERMA, ANZFAC etc.
30. Scientists often on back foot when offering explanations.
31. May need a direct link between producer and consumer without regulations.
32. Developers of GM foods have done poor promotions.
33. Information from opponents of GM foods not always accurate. Consumers are confused.
34. Use or non-use of GM foods – depends on marketing perceptions.
35. Need to base standards on sound science.
36. Must provide information to the consumer.
37. Standards must not be used to inhibit food trade.
38. Adequate and comprehensive tests for GM foods are not available.
39. Adequate tests for GM foods are available.
40. Codex has a role to encourage appropriate levels of testing.
41. Soybeans had ten years of testing before use.
42. Difficult to test refined foods.
43. Some non-GM foods released do not have extensive testing, e.g. nectarines, potatoes.
44. Current tests may give a false sense of security.
45. Are there adequate tools to deal with GM foods?
46. Where is the 'sound science' on which to base decisions?
47. Could substitute the word 'evidence' for the words 'sound science'.



Strategic Importance Issues

AUCKLAND WORKSHOP

		(Initial mentions)	Final Vote Score
FIRST TIER			
1.	Food safety testing	(16)	34
2.	Regulations which are clear and well communicated	(10)	24
SECOND TIER			
3.	Learning and on-going education	(14)	16
4.	Market diversity and opportunities	(15)	14
5.	G.E. free New Zealand and organic increases by Year 2020	(8)	12
6.	Cultural, religious and philosophical issues to be addressed	(5)	10
THIRD TIER			
7.	Consumer participation in decision making	(9)	8
8.	Information resource	(4)	8
9.	Balanced role of media	(5)	6
10.	G.M. crops and organic crops can co-exist	(1)	0



FIRST TIER

Food safety testing

Final Vote Score 34
(Mentions)

16)

Consumers

- Safety assurance
- Security in food safety
- Precautionary principle upheld; 'risk assessment' as the back burner

Producers / Manufacturers / Marketers / Retailers

- Infallible test developed to ensure the safety of GMFs
- A safety testing regime acceptable to all groups
- Faith in food
- Testing took into account as many environmental factors as it was financially possible

Research

- Food evaluated for health and safety on basis of food value
- International co-operation in testing regimes avoids costly duplication
- Champion a call for an international consensus conference to set food safety standards which are globally adopted
- Wide-ranging sensitive and specific testing protocols
- Establish international centres of excellence in GE food safety testing
- Acceptable testing standards
- Common international standards for GM foods
- Food safety – from number of perspectives
- Better understanding on basis of allergenicity and hence better tests.

Regulations which are clear and well communicated

Final Vote Score 24
(Mentions 10)

Consumers

- All organic product labelled and verified by third party
- Food regulations need to incorporate ethical, cultural and environmental aspects of production
- Substantial equivalence fails to include long-term health effects
- Substantial equivalence is not scientifically supported

Producers / Manufacturers / Marketers / Retailers

- Regulations largely replaced by self assessment of risk
- Clear, easily followed regulations limited ambiguity

Research

- Labelling restricted to major issues not comprehensive
- Acceptance of international or Trans-Tasman regulations
- Elimination of subjective restrictions
- New Zealand develops a concise regulatory framework and develop a harmonised process for community group interaction and decision making
- Set international standards on labelling to be adopted by all countries



SECOND TIER

Learning and on-going education	Final Vote Score 16
	(Mentions 14)

Consumers

- Money to fund impartial information
- Education
- Education
- Comprehensive information available

Producers / Manufacturers / Marketers / Retailers

- Consumer information about GMFs readily available (new technologies made this possible e.g. bar codes information computers in supermarkets)
- Individual consumers given the choice over what they eat i.e. labelling
- Development of an effective education and communication strategy about GMFs
- Knowledge by most people of their health risk
- Open communication along the food chain
- Giving the consumer the ability to decide
- Science more understandable
- Improved flow of information

Research

- Biotech foods are recognised for their benefits
- Food labelling is key to consumer confidence

Market diversity and opportunities	Final Vote Score 14
	(Mentions 15)

Consumers

- Exporters get saturated with opportunities as GE Free / Organic Eco-Nation status explodes
- Market niche opportunities
- Govt. undertakes medium term 20 year plan in creating an Environment for the future
- Freedom of choice
- Greater demand for organic and spray free
- Regionally driven organic food supply feeds local demands and co-operates with National level
- Food regulations need to support the primary relationship between grower and consumer
- Working together: economic clout
- Economy booms as global demand for organics escalates – tourist numbers sore – restrictions ...
- NZ gets world-wide acclaim as leaders in restrictive land management

Producers / Manufacturers / Marketers / Retailers

- Designer foods for different consumer sectors Producers have rights to produce for their perceived consumer

Research

- Growers and manufacturers accept some GM foods as marketable



G.E. free New Zealand and organic increases by Year 2020	Final Vote Score 12
	(Mentions 8)

Consumers

- GE food not required in an organic nation
- No benefit to consumers; GE foods made redundant
- No GE / GMO imports into New Zealand
- No more GE!
- \$\$s placed into organic systems research / education / tech. Transfer
- GE abandoned in favour NZ being an Organic Eco-Nation by 2020
- Accept GE technology as premature and limit its use to observation

Producers / Manufacturers / Marketers / Retailers

- Multinational companies less influential

Research

Cultural, religious and philosophical issues to be addressed	Final Vote Score 10
	(Mentions 5)

Consumers

- Acknowledge a sense of broader social responsibility
- Cultural religious philosophical Consumer the key to acceptance long term
- Food regulations to support the needs of the consumer

Producers / Manufacturers / Marketers / Retailers**Research**

- Food regulations respect cultural and religious beliefs
- Respect for diversity of food needs and wants

THIRD TIER

Consumer participation in decision making	Final Vote Score 8
	(Mentions 9)

Consumers

- Working together for common good. Co-operation.
- Between groups. Agreement
- Secondary food industry members are just that
- Active involvement in decision making
- Ability to listen and take on board the differences / work through difference → agreement
- Greater involvement and participation of public.

Producers / Manufacturers / Marketers / Retailers

- The general public felt like their opinion had been heard
- Consensus of opinion on New Zealand's GM stance

Research

- Establishment of forum whereby all interested groups could discuss the pros and cons of developments in GM Foods before marketing.



Information resource	Final Vote Score 8
	(Mentions 4)

Research

- Evidence based science for biotech foods is accessible and transparent
- Much expanded databases of composition / allergens / toxic components
- Provide a web based information centre that provides consumers, scientists, regulators with the latest information on GE foods.
- Establish a database on the composition of all common foods. Information to be freely available.

Balanced role of media	Final Vote Score 6
	(Mentions 5)

Consumers

- Balanced representation of both sides

Producers / Manufacturers / Marketers / Retailers

- Media generated consumer fear

Research

- Information that meets needs of consumers
- Consumer confidence enhanced by media co-operation to avoid sensationalism
- Balanced media information

G.M. crops and organic crops can co-exist	Final Vote Score 0
	(Mentions 1)

Research

- Acceptance that GM crops per se not at odds with organic movement.



Immediate Issues

AUCKLAND WORKSHOP

Mentions

FIRST TIER		
1.	Credibility of regulatory authorities, including Codex	12
2.	Other issues impact on GE regulation	9
3.	Food safety from the consumer viewpoint	9
4.	Appropriate basis for testing GE foods	8
5.	Provision of information to consumers – incl. labelling	8
SECOND TIER		
6.	Role of science with respect to GM foods	5
7.	Will consumers have confidence in GE food safety standards?	5
8.	Need balanced public relations efforts	4
9.	Education of consumers	4
THIRD TIER		
10.	Trade impact of GE food guidelines	3
11.	Contribution of GM relative to conventional breeding	3
12.	Long term effects of GE foods	2
13.	Concern with GE foods highlights lack of knowledge of all foods	2
14.	Need to manage risk	1



FIRST TIER

Credibility of regulatory authorities, including Codex

Mentions 19

Consumers

- Health: GE has had a pretty bad track record from its earliest products, e.g. rBGH, the food supplement l-tryptophan. This was not discussed and neither were the current concerns over anti-biotic resistance genes used in the GE process.
- Due to poor representation many consumers mistrust all regulators and agencies – consider they lack credibility. Very difficult to build this credibility.
- Consumer confidence in regulatory bodies / processes is lacking.
- Trustworthy regulation that is open / transparent.
- This leads to perception of doubtful credibility. We are permitted to see only one side of the coin. Therefore, the consumer lacks confidence / distrust in regulatory agencies.
- Credibility issues: World Health Organisation has greatest influence at Codex – the track record has seen tremendous influence of industry – both as a participant and as government adviser. Also domination of Northern industrial countries at the expense of the Southern countries. So with influence of the food industry (which has seen tremendous consolidation, Seed → inputs → production & sales) how much credence and trust can we have in the standards put forward by Codex. GT was quoted as the sole consumer input – this is problematic in itself.

Producers / Manufacturers / Marketers / Retailers

- Confidence in regulatory bodies
- Given the contentious nature of the GMF debate, the agency regulating GMF's must be credible and have the confidence of consumers.

Research

- Establishing credibility in regulation setting
- GM foods must be safe for the vast majority of consumers – regulatory system through ANZFA and Codex appears satisfactory.
- Common standards on food legislation of GM foods. Codex standards need to be lined up with ANZFA standards.
- Government needs to manage the GE debate in a way that will provide direction and enhance consumer confidence.

Other issues impact on GE regulation

Mentions 9

Consumers

- Regulations. Should consider broader social and ideological implications making labelling and identification of products accountable / sensitive to these issues.
- Industrialisation of food as a function outside the influence of the people who consume it.
- Inability to see food in its holistic nature soil (environment) ↔ food ↔ people
- Lack of evidence which includes cultural, ethical, moral and scientific as 'part of' the standards.
- Environmental impacts of the food produced through GMO / GE basis.



- Inability of science and risk analysis to adequately portray ethical, cultural and social aspects of food which impinge on health and safety as a function of mental, as well as physical health and safety.
- Ethics, customs: Codex cannot be solely based on 'science' and be subservient to trade. People's cultural and religious concerns have to be given concerted concern.
- Codex processes severely constrained, by failure to encompass the wider debate surrounding food – especially cultural, ethical, societal, environment and freedom of choice.

Producers / Manufacturers / Marketers / Retailers

Research

- Consideration of personal issues (e.g. religious considerations) which will require labelling.

Food safety from the consumer viewpoint

Mentions 9

Consumers

- Need, therefore, for Codex standard setting to go beyond the limitations of science in determining health and safety.
- Essential priority of Codex standards is to protect consumers' health and safety. Trade and manufacturing needs are secondary to this.
- Essential the Codex system is able to reflect consumer needs in a manner that enables growers to fulfil those needs.

Producers / Manufacturers / Marketers / Retailers

- How we measure this consumer safety, i.e. science / evidence of.
- GM food safety will always be difficult to prove safe alongside conventional foods because it is a younger industry.
- Health and safety should be the prime objective of the setting a standard for GMFs.

Research

- Safety – no health adverse effects on people in normal health (physical health)
- Consumer safety e.g. allergens have not been transferred in the process of genetic modification.
- Views of consumer organisations must be heard but must not hold undue sway particularly when biased or subjective rather than objective constituents (?)

Appropriate basis for testing GE foods

Mentions 8

Consumers

- Testing methodology for detecting GE foods. At present too many unknowns plus GE changes are "unseen" in foods presented to the consumers – difficult issue to address.
- Methodology needs to take into account the precautionary principle.

Producers / Manufacturers / Marketers / Retailers

- Verification – methods – conformance.
- Health and safety must be based on sound science (evidence).



Research

- Testing for safety of GM foods has been latterly satisfactory for the vast majority of consumers using the substantial equivalence principle.
- Establishing an appropriate basis for GE food testing.
- Testing of GM foods. Complex – is there a universal standard which is acceptable?
- Establishment of testing procedures (including Agenda Item 4 – Codex) which are objective and robust.

Provision of information to consumers – incl. labelling

Mentions 8

Consumers

- Scientific analysis does not insure the safety of foods derived from biotechnology – many unknown actors – premature application of biotechnology to foods makes regulation for safety and labelling key issues.
- ‘Substantial equivalence’ is a term poorly used at present. It assumes ‘minor’ changes result in things being ‘the same’ or thereabouts.
- Labelling criteria.

Producers / Manufacturers / Marketers / Retailers

- Provision of information that enables consumers to make food choices must be provided for within the standard.
- Consumer information. Labelling. Both sides of the story. Evidence.
- Any standard that us established for GMFs must be accompanied with consumer information (given the contentious and complex nature of the debate)

Research

- Dissemination of information about standards and safety tests.
- GM foods must be a reliable source of healthy foods for the vast majority of consumers. Potential allergenicity (e.g.) must be a clear labelling issue.

SECOND TIER

Role of science with respect to GM foods

Mentions 5

Consumers

- The evidence often presented is biased (on both sides). And science is seen as the holder of the answers.
- Inability of current science to provide surety of safety of GM food particularly in the long-term.
- GE foods ‘emotive’ issues are given media attention whereas sound science principles always on back foot when allowed to be presented.

Producers / Manufacturers / Marketers / Retailers

- Media generated consumer fears can not be rejected by “scientific proof”.

Research

- Food science has been brought into disrepute by lack of good public relations.



Will consumers have confidence in GE food safety standards?	Mentions	5
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Consumers

- Consumer distrust = consumer rejection.

Producers / Manufacturers / Marketers / Retailers

- How much notice will consumers take of Codex standards?
- Proof of safety costs. Who pays and will it necessarily add to the consumers feeling OK about the food they eat?
- Limited consensus of what to believe. Essential to positive go forward action.
- Certain groups have distinct paranoia of who to believe (which organisations are telling the truth).

Research

Need balanced public relations efforts	Mentions	4
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Consumers

- A perception that the global companies with control of technology not presenting the 'true' story to consumers.

Producers / Manufacturers / Marketers / Retailers

- Poor communication by agencies over who and what they represent, i.e. consumers have really only seen one side of the coin.

Research

- Public awareness – more balanced picture needs to be conveyed by the media and interested parties. Consumer is very confused at present.
- GM foods have been a public relations disaster for most food manufacturers and they (together with regulatory agencies) must make a major effort to rectify this.

Education of consumers	Mentions	4
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Consumers

- Consumer understanding of the whole technology (e.g. allergenicity issues) in regards to how GE foods tested as equivalent to standard foods.
- Consumer – lack of sound information education on these issues at the behest of vested interest / commercial return organisations. Impartial education – in lay terms – is lacking.

Producers / Manufacturers / Marketers / Retailers

- Consumer safety for the common person to go by.

Research

- Education – educating the consumer on the safety issues associated with GE foods.



THIRD TIER

Trade impact of GE food guidelines

Mentions 3

Consumers

Producers / Manufacturers / Marketers / Retailers

- New Zealand exporters need to know Codex will be the international reference point.
- The standard must not be a filter on trade.

Research

- Lack of appropriate safety guidelines will negatively impact on the international trade in GE foods.

Contribution of GM relative to conventional breeding

Mentions 3

Consumers

Producers / Manufacturers / Marketers / Retailers

- Practicality: How do we manage / control the growth in GE technology, the supply of raw materials and the consumption of consumer goods.
- Degree of GM. Gene manipulation versus selective breeding.
- Benchmarking. Conventional versus GE.

Research

Long-term effects of GE foods

Mentions 2

Consumers

- Food safety – new technology with unknown long term effects. Assessment based on commercial / vested interests. Research – who or what organisation anywhere in the world is funded to test possible negative effects.
- No testing process is ever all encompassing or infallible. The long-term effects of these foods are still unknown. Scientists themselves are in disagreement and many are extremely concerned that we are not looking for the right effects instead of putting full faith in company sponsored scientists – just how much does the profit motive compromise safety testing? Again the rBGH (?) case in Canada is a cautionary example.

Producers / Manufacturers / Marketers / Retailers

Research



Concern with GE foods highlights lack of knowledge of all foods	Mentions	2
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Consumers

- Methodology – GE technology raises issues of how little we know about our “typical” food supply. Therefore, unknown + unknown + panic!

Producers / Manufacturers / Marketers / Retailers

Research

- Composition of food is poorly understood. More effort is needed in analysing food so that “food safety” is placed on a sound scientific footing.

Need to manage risk	Mentions	1
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Consumers

Producers / Manufacturers / Marketers / Retailers

- Issue that man cannot know everything and trust everything. We need effective management of risk.

Research

Immediate Issues

- listed by group during the opening discussion- in the order in which the points were raised .

1. Anything that passes through a GE process ought to be labelled.
2. If 'new' protein or similar product created (not previously encountered by humans) in food → allergy risk.
3. Growing pesticide resistant crops (due to GE) – can lead to more spray being used with resultant higher residue levels on crops.
4. GE introduced pesticide resistance is internal to the crop – could produce a 'toxin' in the food.
5. Need thorough testing of GE foods – use animals in testing.
6. GE interests have driven GE foods.
7. Who makes up Codex? How independent is Codex?
8. Tests of long-term effects of GE foods are inadequate.
9. Codex is made up of 160 +countries.
10. How are Codex panels set up? Who is on these panels?
11. Agree – need to look at risks.
12. Pesticide resistance allows growers to reduce the use of chemicals.
13. Pesticide resistance in crops allow farmers to use less sprays and these are more environmentally friendly.
14. Food safety issue – need to know residue levels on crop – if any.
15. Need to scientifically determine whether spray levels are safe.
16. What is acceptable level of risk? Society needs to decide this level within a food context.
17. Reasonable risk – must be a sensible level – must have public confidence.
18. Too soon for international standards – allow countries to determine their own levels of risk in the interim – present knowledge is inadequate for setting international standards.
19. Regulations should not be available as instruments for World Trade organisation debates.

20. Perception of food safety is important – cultural issues to be considered – labelling must provide information on which to base cultural and religious decisions.
21. Need independent tests of GE foods.
22. Where is the boundary line between food and medicine? Line will blur over time.
23. Suggest minimum standards internationally – tighten standards on individual country basis.
24. New Zealand must participate in international fora. – juggernaut has started.
25. Mix of sound and unreliable information available. – Need a New Zealand forum to provide information with credibility.
26. New Zealand must participate in the process – want to avoid embargoes.
27. Confusion over 'equivalence' concept.
28. 'Substantially different' products are to be labelled.
29. More severe standards may become non-tariff barriers.
30. Codex may restrict use of food types, eg. herbs become prescriptive.
31. World Trade Organisation is a good broker – not a rogue organisation.
32. Codex participation is voluntary.
33. Need an in-depth inquiry on GE to sort fact from fiction.
34. There are problems with alternative pesticides, eg. atrazine will reside in the soil for significant periods and can move down into the ground water.
35. Issue of 'substantial equivalence' – this is an untested hypothesis which is based on compositional analysis – need long-term studies in order to determine 'equivalence'.
36. Example of artificial 'mango' flavour that was assumed to be 'equivalent' to natural flavour – but artificial product impacted on childrens' health.
37. GE issues are developing quickly – but Codex response is slower.
38. Food safety issues area wider than GE food.
39. Choice – consumer needs information to be able to make choices.
40. Use 'Substantial equivalence' reduces options for choice.
41. Need funds to expand knowledge of GE foods.
42. Trust factor – history of reassurances by scientists – losing credibility - because breakdowns have occurred. Future performance has to be better.
43. Introduction of GM foods to consumers has not been open.



44. Loss of faith in science.
45. Governing bodies have not listened to consumers.
46. ANZFA has been lobbied by most groups and from many perspectives.
47. Consumers are 'resource-poor' when lobbying.
48. Lack of confidence in 'system' is of concern to groups of all perspectives.
49. Unnecessary regulations - a risk.
50. Do costs of compliance outweigh benefits? Who measures the benefits?
51. Regulations have to be measurable – not voluntary claims.
52. Anything that has been through GM needs to be identified.
53. GE foods – lowest common denominator – universally exposed – need to apply precautionary principle.
54. If GE is so good – use this claim to market the products.
55. Using GE to add vitamins etc. to crops → loses biodiversity.
56. Slow decision making to get labelling established has been a problem.
57. GE technology has raced ahead of controls.
58. Cannot quantify 'fear' of GE foods – will be difficult to allay fears.
59. New methods of risk assessment are now available – will pinpoint areas of disagreement.
60. Communication in terms of risk needs to be improved – Statements by Regulatory Authorities are not sacrosanct.
61. Risk that consumers are 'overawed' by the information that is available.



Strategic Importance Issues

WELLINGTON WORKSHOP

		(Initial mentions)	Final Vote Score
FIRST TIER			
1.	Trusted consumer information – including labelling	(21)	48
2.	Trusted risk and return	(19)	28
SECOND TIER			
3.	Trusted testing prior to release	(9)	22
4.	Consumer education and participation	(21)	22
5.	Necessity for international co-operation and trade	(10)	18
6.	Balance of individual choice	(9)	16
7.	Environmental and health concerns	(9)	14
8.	Trust in system	(7)	14
THIRD TIER			
9.	Organics versus G.E.	(7)	12
10.	Accepted and understood definition for GE food.	(5)	6
11.	Liability / responsibility	(2)	4

FIRST TIER

Trusted consumer information – including labelling	Final Vote Score 48
	(Mentions 21)

Consumers

- World-wide consumer demand for full and clear labelling of GE food / additives / ingredients
- Accurate labels essential
- Any food or component that has been through a GE process must be labelled
- Categorise GE 'safe' and label e.g. equivalent / new protein / pesticide inside
- Labelling of any GMO or GE derived product. 100 % Simple and cost effective by 2005
- Labelling information on food gives consumers the choice to decide

Producers / Manufacturers / Marketers / Retailers

- Enabling consumer choice
- Active risk communication by regulatory bodies and increased supply of information by marketers to ensure consumer confidence
- Consumers understand labelling, and recognise costs associated with such labelling
- Consumers must be able to make an informed choice
- Benefits to and understanding by consumers of the labelling regime outweighs the costs
- Labelling regs. which are practical
- Labelling requirements which include a 'threshold' limit
- A realistic labelling regulation
- Accepted audit trail
- Traceability of GE foods is vital to assess whether risk assessment really works
- Use of range of communication channels – not just labelling
- Acknowledgement of a person's right to freely choose what to eat
- Logical and rational labelling regime – clear regulation

Research

- Food labelling and access to reliable consumer information
- Food labelling of GE foods

Trusted risk and return	Final Vote Score 28
	(Mentions 19)

Consumers**Producers / Manufacturers / Marketers / Retailers**

- Clear identification of risks and return
- Clarity of safety issues in R&D
- Compliance cost must not outweigh benefit
- Commitment to standards which scientifically assess risk
- Regulation and standards based on sound science
- Key issues identified for standards
- Science coping with determining risk
- Commitment to research to facilitate risk assessment
- Acceptance of reasonable risk

- New risks are created when we depart from foods we are adapted to eat
- Agreement on audit processes
- Risk is an inherent part of life
- Enforceable, testable
- Risk requirement so everybody had confidence in the result
- Net health and economic benefit
- Transparency – put the risk evaluation on the internet
- Public acceptance of risk assessment principles

Research

- Regulations and standards at national level
- Regulation based on scientific risk assessment

SECOND TIER

Trusted testing prior to release

Final Vote Score 22
(Mentions 9)

Consumers

- Health analysis. Questions reduced nutritional value. Questions increased foreign chemicals
- Independent testing re-evaluate *safe* food
- Independent tests are carries out (time?)

Producers / Manufacturers / Marketers / Retailers

- Pool of world's best scientists working on safety issues
- Foods with inherent medical attributes are common
- Results from long-term health studies
- Clear and rigorous testing regime before products can be sold to consumers
- Science education
 - better public knowledge
 - better understanding of their own limits by scientists

Research

- Independent verification that testing is sound

Consumer education and participation

Final Vote Score 22
(Mentions 21)

Consumers

- Problems with biotech food starts to be openly and publicly acknowledged
- Increased information leads to more (not less) distrust of GE foods
- Public enquiry before regulations discussed
- Forums for two-way discussions help understanding
- Independent sources of information recognising the unknowns given to everyone
- Recognition that things may change as knowledge increases
- Glasnost

Producers / Manufacturers / Marketers / Retailers

- Consumers need better understanding of farming – to know what they can ask for

- Informed debate has taken place on the ethical use of biotechnology
- Acceptance of the general public that biotechnology has a place in NZ society
- Full understanding of the human genome structure
- Consumer education Communication
 - what is being done
 - by whom, when, why
- Education of the GM issues
- All groups involved. Must listen to each other.
- We have some common goals – let's identify them
- Well informed public
- “Biotechnology is seen as boring”
- Co-operation of parties is essential
- All views are equally valid

Research

- Recognition that all groups have a common goal of food safety
- Reasonable and rational public debate supported by all groups

Necessity for international co-operation and trade	Final Vote Score 18
	(Mentions 10)

Consumers

- Recognition that this an international issue that NZ can not deal with alone
- Economic advantage analysis: Question – good for NZ export? Question – good for sales in NZ?

Producers / Manufacturers / Marketers / Retailers

- Clear measurable benefits of technology have been shown since its introduction
- Freer agricultural trade has been key to effective food safety
- International co-operation has underpinned safe food
- Realisation the world faced at least third world famine
- Individuals and countries need to retain high levels of autonomy on GE
- New Zealand's competitiveness in international markets
- Use of biotechnology means NZ is competitive globally

Research

- Regulation protected safety but didn't add unreasonable cost

Balance of individual choice	Final Vote Score 16
	(Mentions 9)

Consumers

- Recognition in the uncertainty in the science and the significantly greater risks GE carries. Application of precautionary policy

Producers / Manufacturers / Marketers / Retailers

- Respect for individual right to social and cultural self determination
- Consumer choice is paramount
- Those who don't want to eat GE foods have a right not to
- GE of food not controlled by multinationals any more
- Total consumer focus

- Consumers have a wide diversity of views on biotech
- Consumers need to become willing to pay for quality food
- Producers free to apply technology as they choose, providing appropriate environmental and safety controls exist e.g. ERMA

Research

Environmental and health concerns	Final Vote Score 14
	(Mentions 9)

Consumers

- GE is found to increase allergies, asthma, etc.
- Patenting of staple crops is illegal
- Growing realisation that unadulterated (good) food is essential for health
- GE is found to have produced super weeds; decimated insects; and exasperated loss of biodiversity

Producers / Manufacturers / Marketers / Retailers

- First world economic collapse through diminished resources – land and inputs
- Multivariate
 - safety and health
 - economic
 - environmental
 - cultural
- Good health and good environment – ‘ailism’ – good business
- Consumer involvement through whole bio-production chain

Research

- Biotech that showed environmental benefits, improved safety (e.g. reduced allergens), direct and indirect consumer benefits adopted.

Trust in system	Final Vote Score 14
	(Mentions 7)

Consumers

- Lack of trust in regulatory bodies and Governments

Producers / Manufacturers / Marketers / Retailers

- Clear objective essential
- Consumers must have confidence in the system
- Regulatory authority with credibility and national profile
- Politicians have been kept away from making food safety decisions
- Science based and a-political

Research

- Team work of scientist, consumers and governing authorities

THIRD TIER

Organics versus G.E.	Final Vote Score 12
	(Mentions 7)

Consumers

- Funding for non commercial GE based research
- Some people believe GE food will never be safe. 'Gut-feeling' or disturbed wairua
- Ban unsafe additives / GE chemicals
- Resources used sustainably for organic agriculture
- NZ would be a GE free nation (in food and environment)

Producers / Manufacturers / Marketers / Retailers

- Acceptance by the general public that GE has no place in our food or environment
- Greater public funding for organics versus GE.

Research

Accepted and understood definition for GE food.	Final Vote Score 6
	(Mentions 5)

Consumers**Producers / Manufacturers / Marketers / Retailers**

- Clearly understood of what GM foods are
- Biotechnology definition and education – it became a school subject

Research

Liability / responsibility	Final Vote Score 4
	(Mentions 2)

Consumers

- The company that creates the new organism is liable (for mistakes)
- Legal repercussions if labelling information is incorrect

Producers / Manufacturers / Marketers / Retailers**Research**



Immediate Issues

WELLINGTON WORKSHOP

	Mentions
FIRST TIER	
1. Lack of/ doubt in confidence in systems / authorities.	14
2. Workable labelling for consumer choice	14
3. Need to define risks	13
4. Need for communication with consumers on factual issues re foods from biotechnology	12
5. Test needed for GM foods	10
SECOND TIER	
6. Preserving each individual nation's freedom	5
7. Question of long term effects of GM foods.	5
8. Cost of compliance should be taken into consideration	5
9. Basis for regulations to be practical, valid and robust	4
10. Lack of agreement on equivalence	4
11. Biotechnology interacts with other issues	4
THIRD TIER	
12. International trade – significance of a GE policy	3
13. Food / medicine boundary line requirement.	2
14. An early need for regulations	2
15. Liability and responsibility	1
16. Recognition of worth of existing New Zealand systems.	1
17. Food safety should concentrate on the products not the processes	1

FIRST TIER

Lack of/ doubt in confidence in systems / authorities.

Mentions 14

Consumers

- Lack of confidence and trust in regulatory authorities and science.
- Slow down. Public inquiry needed – GE has been dominated by commercial interests.
- Consumers have lost faith in the governing bodies etc.
- GE interest has been commercially driven (not needed) e.g. patenting.
- How are Codex panels set up? Who is on these panels? Can we trust them? (I have read that they are heavily industry loaded.)
- Need in depth public inquiry to listen to the wide range of concerns. Need a real independent body listening to us. (not IBAC —too biased).
- Codex itself should be examined for impartiality to commercial pressures etc.
- Codex and ANSFA need to re-establish trust by admitting past failures and rescinding permits for substances since shown to be harmful. Trust also based on new behaviour with respect to testing GE foods.

Producers / Manufacturers / Marketers / Retailers

- Lack of confidence in 'system' is of concern to groups of all persons. Question: whose role is this - are regulatory bodies in the business of public education?
- Much is said about "consumers want this and that" – what evidence is there that this is so. Are the concerns a "vocal minority"?
- Loss of confidence in science, resulting in confusion between those who retain confidence and those who do not. (Caused by (a) poor education of scientists, (b) transference to science of faith previously given to religion.)
- The mistrust of authorities and science with regard to biotechnology.
- Lack of confidence: in the "system" (Government, business, Codex, science, WTO) - in the products.
- Re-establishing confidence in NZ regulatory systems,

Research

Workable labelling for consumer choice

Mentions 14

Consumers

- Unless absolute labelling of GE processed food is instigated, peoples right to choose to boycott food and send clear messages will not be realised.
- Need categorisation of GE foods: what exactly is in the food not necessarily the plant (new protein, pesticide, herbicide, fungicide) and information on this available on labels.
- Any food or additive or processing aid, which is the result of, or has been part of a GE process, should be labelled as such. Consumers are demanding choice.
- Anything that has been through a GE process needs to be labelled.
- Labelling is absolutely essential – so consumers can identify which foods have had GE processing and can make a choice.

Producers / Manufacturers / Marketers / Retailers

- At a national level, NZ needs mandatory labelling both for personal choice and to permit epidemiological studies to trace effects in the future.
- Slow decision-making to get labelling established has been a problem.
- Accepted labelling standards.
- Labelling regulations must be workable – again not reliant on honesty.
- Informed choice/labelling. Labelling must confer useful information to the consumer to assist making an informed choice without being unhelpful costly/onerous and allowing countries to unfairly block trade.
- Testing / labelling of GE foods.
- Labelling must be effective and informative to enable consumer choice.
- “Substantially different’ is to be labelled.

Research

- Anything, which goes through GE process, ought to be labelled. The origin of the DNA needs to be labelled.

Need to define risks

Mentions

13

Consumers

- The lack of absolutes (in terms of safety) is frightening for consumers.

Producers / Manufacturers / Marketers / Retailers

- Definition of acceptable risk from GE.
- Risk that consumer is ‘overawed’ by information available.
- What is an acceptable level of risk – society needs to discuss.
- Focus on the risk not the process. For example, a gene inserted from one apple into another apple should not be subject to any greater controls than that controlling traditional breeding where the resulting risk would be seen to be the same.
- Need to look at risks. Need to decide what level of risk is acceptable/reasonable. Consumers must be educated that there is never zero risk, even with ‘conventional foods’.
- Inability to define/quantify the consumer fears precisely. Hence problem in defining testing regimes and standards.
- Difficulty of balancing fear of unknown against quantifiable benefits.
- What is acceptable level of risk? Gaining a wide understanding of the nature of risk assessment so that it is realised that there can never be a guarantee of no risk.
- Need for risk assessment. – Open (transparent) – Assumptions to be made clear.
- The manufacturer is always painted as the ‘bad’ guy – this assumes risk to past investment etc. is not a consideration.
- Food safety is the key concern. Any standard must have this as its core objective. “must know versus need to know”.

Research

- Risk must be reasonable and in the context of food risks in general. No such things as no risk.

Need for communication with consumers on factual issues re foods from biotechnology	Mentions	12
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Consumers

- Clarity of communication of issues of risk associated with GE - consumers confused and frightened by the lack of clear answers.
- Facts need to be sorted from hype and fiction about benefits of GE foods.

Producers / Manufacturers / Marketers / Retailers

- Need for communication on issue.
- Education and communication on the risks of biotechnology with regards to food safety.
- Education of facts needs to be communicated how?
- Establishment of credible forum(s) for factual information about biotechnology / food.
- Consumer education of biotechnology including GE – in lay terms.
- Regulatory bodies need to develop and communicate profile of credible risk assessors to industry, consumer organisations and consumers – as the FDA in USA.
- Informed choice must be available to consumers. To be informed consumers must have balanced information. Communication becomes the key.
- Peoples understanding of biotechnology and its' connection with food safety. "Perception versus fact".
- Communication of what GE/biotechnology is and is not.

Research

- Consumer information should be available – communication of risk assessment, i.e. labelling should be allowed not necessarily compulsion.

Test needed for GM foods	Mentions	10
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Consumers

- Testing is secondary:
 - (1) Is there a real benefit to farmers – same as other growing pattern.
 - (2) Test perception of public – is this safe in terms of economics for country.
 - (3) WTO view on what we do.
 - (4) Test of residues of sprays are increased.
- Testing has to be independent, long term, animal and human. Has to be complete and adequate. Cannot accept 'assumed equivalent'.
- More testing over time needed on selected crops.
- The scientific assessment tools available to determine safety are too juvenile and inadequately researched to be of real use at this point.

Producers / Manufacturers / Marketers / Retailers

- A scientifically based regulatory response including labelling regulations ASAP.
- Need to determine methods to test GM products so that 'GM' status is not based on honesty, but can be provable.
- Proposed CODEX standards on foods derived from biotechnology must be based on sound science.
- Loss of sources of objective advice – due to loss of independent researchers not required to "relevant" or to "sell" their research projects.
- Test regime has to be seen to be rigorous for new GM products.

Research

- Food safety issue: Need to know the residue level on crop to ensure the safety of food.

SECOND TIER

Preserving each individual nation's freedom

Mentions 5

Consumers

- Codex will unduly influence New Zealand's and Australia's right to implement more strict labelling guidelines. World Trade Organisation may use against us as a non-tariff trade barrier issue.

Producers / Manufacturers / Marketers / Retailers

- Communicating what Codex is and what role sovereign regulatory bodies play in the international context.
- Codex standards provide a basic platform for food standards. Each country is still able to introduce its own standards in addition.
- Any international agreement must preserve individual nation's freedom to adopt the highest standards they choose, without review in international tribunals.

Research

- New Zealand needs to participate in Codex meeting involved in developing International standards for foods derived from biotechnology and then needs to develop its own standards.

Question of long term effects of GM foods.

Mentions 5

Consumers

- Tests of long-term effects of GE foods are inadequate. This includes effects on the environment.
- Engineering vitamins etc. with food – risky experiments not knowing effect on wide population with different metabolic make-ups.
- Long-term effects of GE food on people not known – cancer takes years to surface often.

Producers / Manufacturers / Marketers / Retailers

- GE foods require long period of assessment c/f. tobacco. Public protection is needed until complete.
- Long-term effects on health.

Research

Cost of compliance should be taken into consideration	Mentions	5
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Consumers

Producers / Manufacturers / Marketers / Retailers

- Must consider the cost/benefit of labelling GM foods.
- Balancing costs of regulation with benefits (an of no regulation, e.g. labelling of substantially equivalent with benefits)
- Regulation: If a proposed regulation adds nothing to food safety then it must not be imposed. Cost of compliance must not outweigh benefit.
- Do the costs of compliance outweigh the benefits / will the consumer understand the labelling regime etc. / understand the technology enough to make an informed choice.
- Maintaining policy of using risk analysis to deal with safety issues relating to food.

Research

Basis for regulations to be practical, valid and robust	Mentions	4
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- Can regulations keep up with the speed of change and progress in biotechnology – the science is moving faster than this.
- To come up with a practical workable regulation. Clearly identifying a definition of GM and GM free.
- There is a need for a valid and robust study before GE food comes to the market.
- Regulation needs to be practical. If they contribute nothing or little to food safety they will only add cost for no or little benefit. Based on science.

Lack of agreement on equivalence	Mentions	4
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Consumers

- Issue of substantial equivalence is an untested and arbitrary hypothesis. Based on compositional analysis.
- A transposed protein can cause allergens and toxicity.

Producers / Manufacturers / Marketers / Retailers

- The concept of substantial equivalence and the model being built on it is not good science. This includes the risk management built on it.
- Lack of agreement on equivalence.

Research

Biotechnology interacts with other issues	Mentions	4
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Consumers

- Lack of recognition of cultural safety issues.
- It is wrong to tamper with the genetic blueprint – particularly crossing species barriers.
- Environmental issues are safety issues – what is the risk of spreading to other crops and plants (e.g. weeds)

Producers / Manufacturers / Marketers / Retailers

- The inability to divorce food safety from the other issues surrounding biotechnology. E.g. the environment.

Research

THIRD TIER

International trade – significance of a GE policy	Mentions	3
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Consumers

Producers / Manufacturers / Marketers / Retailers

- Ensuring New Zealand's future as a food supplier in world markets.
- New Zealand must be involved in international fora such as Codex – New Zealand is a trader of food (mostly going to other countries) and agreements such as Codex will affect us whether we are involved or not.

Research

- International standards are necessary.

Food / medicine boundary line requirement.	Mentions	2
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Consumers

- Food / medicine boundary may become blurred but medicine is not for whole [population. Food needs even more testing than medicine.

Producers / Manufacturers / Marketers / Retailers

- Where is the boundary line between food and medicine? The opponents of GE technology with regard to food production seem accepting of these technologies in medicine. This boundary line will be increasingly blurred over time.

Research

An early need for regulations	Mentions	2
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Consumers

- Slowness of regulatory process leaves consumers feeling they are not protected.

Producers / Manufacturers / Marketers / Retailers

- Guidelines need to be in place quickly – we are already trading internationally – the current vacuum of regulations does not help.

Research

Liability and responsibility

Mentions 1

Consumers

- Who's liable if something goes wrong?

Producers / Manufacturers / Marketers / Retailers

Research

Recognition of worth of existing New Zealand systems.

Mentions 1

Consumers

Producers / Manufacturers / Marketers / Retailers

- The existing regulatory environment – ERMA and ANZFA forms the most robust regulatory environment for GE in the world. This must be preserved and respected by the likes of Codex.

Research

Food safety should concentrate on the products not the processes

Mentions 1

Consumers

Producers / Manufacturers / Marketers / Retailers

Research

- Food safety should concentrate on the products not the processes

Workshop Participants

Appendix 3

Wellington Workshop Group

22 February 2000

Consumers

Celia Murphy	Consumers Institute
Willi Borst	Nelson Environment Centre
Rich Wernham	Safe Food Campaign
Patricia Holborrow	Open Forum for Health
Kay Weir	Pacific Institute for Resource Management
Mary Anne Howard-Clarke	GE Free New Zealand (<i>formerly</i> Revolt Against Genetic Engineering)

Producers/manufacturers/marketers/retailers

John Albertson	Retail & Wholesale Merchants Association
Fiona Gavriel	National Association of Retail Grocers
Peter Ensor	Fruitfed, Vegfed and Berryfed
David Wright	Biodynamic Farming and Gardening Association
Joan Wright	NZ Dairy Board
Karen Sparrow	NZ Dairy Board
Sam McIvor	Meat NZ
Frances Clement	NZ Pork Industry Board
Doug King	ENZA
Maxine Yuile	Federated Farmers
Malcolm Bailey	NZ Trade Ambassador, Federated Farmers
John Miller	Meat Industry Association of NZ

Research

Nelofar Athar	Crop & Food Research
William Rolleston	Life Sciences Network

Observers from Government Agencies

Liz McDonald	Ministry of Commerce
S. (Raj) Rajasekar	MAF Policy
Fiona Duncan	MAF Policy
Graeme King	MAF Policy
Carol Barnao	MAF Food Assurance Authority
Carole Inkster	Ministry of Health
Georgina Roberts	Te Puni Kokiri
Vanessa King	Australia New Zealand Food Authority (ANZFA)



Auckland Workshop Group

21 February 2000

Consumers

Sue Wakelin	NZ National Council of Women
Brendan Hoare	Soil and Health Association
Meril Watts	Soil and Health Association
Rosanne Bush	GE Free New Zealand (<i>formerly</i> Revolt Against Genetic Engineering)
Helen Krippner	ex NZDB (contract to NZDB)

Producers/manufacturers/marketers/retailers

Tim Ferris	Poultry Industry Association
Brenda Cuttress	NZ Grocery Marketers Association
Michael Johns	Directus International
Howard Dixon	Federated Farmers
Ian Willis	

Research

Lyn Gillanders	Therapeutic Database, Auckland Hospital
Alannah Steeper	Therapeutic Database, Auckland Hospital
John Birkbeck	NZ Nutrition Foundation
John Shaw	HortResearch

Observers from Government Agencies

S. (Raj) Rajasekar	MAF Policy
Fiona Duncan	MAF Policy
Graeme King	MAF Policy
Geoff Sanderson	Ministry of Commerce
Mark Talbot	Ministry of Foreign Affairs and Trade
Bob Boyd	Ministry of Health