



appendix 3

Outcomes of Consultation: Submissions from the Public

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3.14 Summary of analysis of Public Submissions

Background

This report has summarised the views of 10,861 submitters around the topics outlined in the Warrant. As outlined in “Introduction to the analysis of Public Submissions”, the Warrant requires the Commissioners to report to Government on two principal matters: the strategic options available to New Zealand to address, now and in the future, genetic modification, genetically modified organisms, and products; and desirable changes to the current legislative, regulatory, policy and institutional arrangements for addressing these technologies.

The Commission is also required to report on a range of relevant matters that cover the use of genetic modification in New Zealand, liability, intellectual property, the Treaty of Waitangi, relevant global developments, opportunities from use or avoidance of genetic modification and the main areas of public interest. Submitters’ views have been presented around these Warrant items.

That the report is structured around the Warrant items does not mean that public submitters presented their views according to the Warrant structure. A lack of detailed attention to the Warrant could be attributed to a range of reasons. The format of the Warrant may not have been entirely clear to all submitters, given a degree of overlap they may have seen in some of the topics mentioned. Submitters may not have seen the Warrant and/or any of the advice put out by the Commission regarding preferred or suggested submission format. Submitters may have been familiar only with the submission guides provided by organisations other than the Commission. Usually these covered two matters addressed in the Warrant: strategic options, and risks and benefits. Submitters may also have wanted to make general comments only: many made broad statements about their opposition to genetic modification and/or the risks involved, without any reference to the Warrant.

Rarely did public submitters express specific views about all matters set out in the Warrant, possibly because of a mix of the reasons outlined above. Any summarising of public submitters’ views according to the Warrant items is, therefore, somewhat

arbitrary, although necessary for reporting purposes. The topic areas they were most likely to address in a substantial way were (i) how New Zealand should respond to genetic modification (generally how to keep it out), (ii) human health, environmental and economic matters, and cultural and ethical concerns, (iii) the risks associated with genetic modification and (iv) changes needed to limit or control genetic modification use. These topic areas more or less coincided with four Warrant items:

- Warrant items (1) and (m): strategic outcomes and options
- Warrant item (j): areas of public interest
- Warrant item (c): risks
- Warrant item (2): legislative changes.

Other matters covered in the Warrant were seldom referred to in detail. It was extremely uncommon for public submitters to address issues, with more than a passing comment, from an international perspective, or to write about strategic issues (given their almost wholesale rejection of genetic modification use), liability issues and the Treaty. Thus the least-addressed Warrant items included:

- Warrant item (l): international implications
- Warrant item (k): strategic issues
- Warrant item (h): global developments
- Warrant item (e): liability
- Warrant item (g): Treaty of Waitangi
- Warrant item (d): international obligations.

The main themes with reference to the Warrant items are summarised in the next sub-section and reflect public submitters' overwhelming opposition to genetic modification.

Discussions of the main themes that emerged with respect to Warrant items need to be considered in this light. Public submitters were relatively absolute in their views, with only very small proportions prepared to consider genetic modification use, benefits or exceptions to a general ban on all genetic modification applications. Table 3.21 shows the distribution of public submitters' views, when they have made substantial comment that coincided with matters set out in the Warrant. Other reference may also have been given to these matters, but in a more cursory way.

**Table 3.21 Substantial comment against Warrant items
(n = 10,861)**

Warrant items	Number	%
Warrant item (j): areas of public interest	6991	64.4
Warrant item (c): risks	5580	51.4
Warrant item (m): strategic outcomes	5320	49.0
Warrant item 2: legislative changes	2549	23.5
Warrant item 1: strategic options	2521	23.2
Warrant item (l): opportunities	2141	19.7
Warrant item (b): uncertainty	506	4.7
Warrant item (n): adequacy of statutory/regulatory processes	365	3.4
Warrant item (f): intellectual property	224	2.1
Warrant item (a): uses	197	1.8
Warrant item (k): strategic issues	112	1.0
Warrant item (i): international implications	97	0.9
Warrant item (h): global developments	84	0.8
Warrant item (e): liability	95	0.9
Warrant item (g): Treaty	69	0.6
Warrant item (d): international obligations	59	0.5

Main themes against Warrant items

The main themes are summarised under headings consistent with section titles. These titles are usually consistent with matters laid out in the Warrant but, as in “Strategic outcomes, issues and options”, may reflect a combination of Warrant items. The headings are:

- strategic outcomes, issues and options
- statutory and regulatory system
- use of genetic modification, genetically modified organisms and products
- evidence and uncertainty
- risks and benefits
- international obligations
- liability
- intellectual property
- Treaty of Waitangi
- global developments
- opportunities from use or avoidance
- main areas of public interest.

Strategic outcomes, issues and options

In general, the strategic outcomes sought by public submitters were premised on genetic modification avoidance. Thus, desired health outcomes were often expressed in relation to avoidance of genetic modification. In addition to general health outcomes, submitters sought freedom from the impacts they associated with genetic modification use, such as allergies. Similarly, for environmental outcomes, submitters sought retention of what they described as the current “pure environment”. For them, environmental outcomes were synonymous with genetic modification avoidance. However, submitters did not suggest that desired economic outcomes would be achieved simply by way of genetic modification avoidance. Achievement of economic outcomes would also require development of organic production.

Strategic issues focused on choice, risk and risk management, and acceptability. Submitters emphasised the importance of freedom of choice and consent, which they equated with human rights and sovereignty. The most commonly discussed strategic issue was risk and risk management. Most submitters considered the risks of genetic modification too poorly understood, risk assessment techniques too underdeveloped and unreliable and risks potentially too large to even consider risk

management. For submitters, therefore, the only responsible response to genetic modification, therefore, must be avoidance, but with continued attention to improving decision-making approaches. For the small proportion of public submitters who discussed the possibility of genetic modification use, the degree of genetic modification acceptance is primarily dependent upon ethical and cultural considerations, although other factors such as potential benefits may have bearing. Usually, the ethical and cultural considerations identified signalled the non-acceptability of genetic modification.

Given most public submitters' rejection of genetic modification, the range of strategic options they identified to address genetic modification in New Zealand was fairly narrow. Most submitters (9695 in total) made some reference to how New Zealand should respond to genetic modification. Most of these suggested some variation of wholesale avoidance of genetic modification, perhaps with some limited and selected uses, usually in the health area. Only small numbers of submitters suggested options that would include wide application of genetic modification and most of these acknowledged the need for a strong regulatory framework. For most submitters, any consideration of risk assessment and risk management options was irrelevant given their rejection of any use. However, while stressing their preference for absolute avoidance, some submitters identified minimum standards or actions to protect themselves and the environment in the case of limited use of genetic modification. Thus, they stressed the importance of labelling, a cautious approach to any approvals and the continuation of the current moratorium.

Statutory and regulatory system

Few public submitters commented on specific aspects of the statutory and regulatory system, including its adequacy and operational problems, probably because they were not familiar with either the HSNO Act or the work of ERMA. However, many commented on improvements, usually from a more generic perspective. Most commonly, they wanted legislation that could be used to bar or limit use of genetic modification and require stringent labelling, particularly for food. When improvements were desired of decision-making processes, submitters seldom specifically referred to ERMA. The most common suggestion related to an adoption of some form of the precautionary principle to guide decision-making.

Use of genetic modification, genetically modified organisms and products

Public submitters' perceptions about genetic modification activity in New Zealand and overseas were consistent with their greatest fears. Most often the uses they

identified related to food production, other crops and research into farming production. Although health was the area in which submitters were more likely to consider some limited use as acceptable, few indicated awareness of current application in the health area.

Evidence and uncertainty

Although public submitters seldom specifically addressed the issue as outlined in the Warrant, issues around uncertainty permeated their comments. In general, they felt that the risks associated with genetic modification were potentially huge (and irreversible) and pointed to past technological disasters as evidence that they could be fairly certain that genetic modification-based disasters would occur. They also cited insurance companies' reluctance to insure against genetic modification-based impacts as evidence of the technology's inherent risk. In addition, submitters stressed the inherently uncertain and unstable nature of the technology. They believed that the probable environmental, economic, social and health costs of genetic modification activity would fall on the public. Public submitters were also extremely sceptical about claims of genetic modification safety and the benefits of genetic modification. They discounted scientists' and producers' claims of genetic modification safety and potential benefits because of what submitters saw as vested interests, demonstrated lack of trustworthiness and their current inability to demonstrate absolute safety.

Risks and benefits

Given public submitters' strong opposition to genetic modification, it is not surprising that they were more likely to identify risks associated with genetic modification use and benefits associated with genetic modification avoidance. Often submitters' descriptions of the risks of genetic modification use and benefits of genetic modification avoidance contained passionate language. Thus, submitters anticipated risks ranging from non-specific environmental, social and/or economic disaster to more specific impacts, particularly relating to health and environment, but also relating to the economic opportunity costs of rejecting an organic future. The identified benefits of genetic modification avoidance mostly centred around major economic growth based on New Zealand becoming a leader in organic production.

Submitters also identified a range of benefits from genetic modification use, for instance relating to health treatments and environmental enhancement. However, they did not consider the benefits sufficient to justify the risks.

International obligations

Few public submitters commented on international obligations. Of the few who did, their view was that no previously entered international agreements should compromise New Zealand's ability to make decisions about genetic modification in the country's own interest. Indeed, they considered any international attempt to limit New Zealand's internal policy-making as an affront to New Zealanders' sovereignty. Therefore, they believed that New Zealand has no international obligations. Some further commented that various international agreements needed to be renegotiated to reflect public attitudes to genetic modification. Some also took the opportunity to comment on the lack of public input into current international agreements and recommended that this lack of consultation be reversed in the future.

Liability

It was also unusual for public submitters to comment on liability issues. They were more likely to comment on responsibility, although they also noted the importance of ensuring that those responsible should also be liable. Submitters pointed out inherent qualities of genetic modification technologies that made it difficult to attribute responsibility including the lack of predictability and diffuseness of impacts and their long-term nature. However, they also stressed the need to continue to improve mechanisms for risk assessment.

While public submitters acknowledged current difficulties involved in attributing liability, they were extremely clear about who should be liable. They argued strongly for the "polluter-pays" principle and rejected any suggestion that the state should be liable. They equated state liability with public cost-bearing. They also noted the reluctance of insurance companies to provide coverage to producers and identified compulsory liability insurance as one mechanism, along with options such as bonds, to ensure decision-making and genetic modification applications take better account of public interest.

Intellectual property

Intellectual property was another area that attracted little public comment. One of the strongest messages from the few who commented was that any concept of ownership of the "code of life" was abhorrent. People also opposed patenting for cultural and economic reasons. Some people were anxious about potential loss of Maori control over traditional knowledge and use of indigenous flora and fauna if patents were established, for instance on new genetically modified organisms. Others were concerned about increasing multinational control over animal and

plant life forms in general and subsistence crops in developing nations in particular. Submitters felt that intellectual property mechanisms could only benefit multinationals and would further strengthen their monopoly control.

Treaty of Waitangi

The greatest concern of the few public submitters who commented about Maori issues in general was the incompatibility of genetic modification with tikanga. Some also commented on Government's breaching of the Treaty of Waitangi, but usually in passing rather than with further qualifying comment. The submissions presented in te reo Maori were more likely to address broad issues such as banning genetic modification than detailed comment on the Treaty, conflicts with tikanga and other specifically focused on Maori issues.

Global developments

Globalisation was explicitly identified by public submitters as an undesirable global development. They considered that genetic modification use would exacerbate that process because it would further increase the control that multinationals have. They also saw this trend as the basis for current pressurising of New Zealand into conforming to the rest of the world. Some submitters suggested that New Zealand should run against the trend and become a maverick and organic world leader.

Public submitters were convinced that the demand for organic food is large and growing, particularly in Europe. This global trend signals the advantages for New Zealand of avoidance of genetic modification and the opportunity costs of use of genetic modification. Such a global demand, coupled with increasing genetic modification use elsewhere, means that New Zealand is one of the few countries that could meet this demand.

Opportunities from use or avoidance

One theme that permeated public submissions was the economic opportunities available to New Zealand from avoidance of genetic modification. These economic opportunities centred around New Zealand gaining competitive advantage from becoming a major non-genetic modification and organic producer and, to a lesser extent, a world leader in organic research and development. Other health and environmental opportunities would also flow from genetic modification avoidance. Conversely, submitters emphasised the opportunity costs of use of genetic modification. The major cost would be the forgoing of opportunities related to organic and non-genetic modification production. A minority of submitters

acknowledged the potential opportunities of genetic modification use, particularly in the health area. However, while some considered these opportunities worthwhile enough to consider some genetic modification use, most submitters still argued that they were insufficient to expose the country to risks of genetic modification. Some submitters also acknowledged economic opportunities from genetic modification use, but saw these captured by multinationals and providing a basis for their further control of the New Zealand economy.

Main areas of public interest

The main areas of public interest centred on risks associated with use of genetic modification, which submitters often described as unknown and potentially catastrophic. These risks related to the environment, public health, food safety and, given the likely benefit-capture by multinationals, New Zealand’s economic and political sovereignty. In the absence of choice about genetic modification application, submitters also saw their personal sovereignty as threatened.

Submitters’ anxiety was heightened by their belief that risk assessment is still an underdeveloped area of endeavour, yet scientists and genetic modification producers continue to claim that the new technology is safe and that the risks are predictable and manageable. As Table 3.22 shows, environmental, health and economic issues were the next most commonly identified areas of substantial comment.

Further, submitters believed that the ethical and cultural implications of use of genetic modification, which they felt outweigh economic considerations, continue to be overlooked or undervalued in decision-making processes.

Table 3.22 Topics of substantial comment (n = 10,861)

Topics	Number	%
Risk, risk assessment and risk management	5675	52.3
Environmental issues	4885	45.0
Health issues	3373	31.1
Economic issues	1802	16.6
Ethical issues	1257	11.6
Regulatory/regulation issues	1045	9.6
Social issues	970	8.9
Spiritual issues	243	2.2
Cultural issues – Maori	154	1.4
Intellectual property	114	1.0
Liability issues	68	0.6
Treaty of Waitangi issues	58	0.5
Cultural issues – other	56	0.5
Insurance and underwriting	20	0.2

Multiple response