



appendix 2

Outcomes of Consultation: Submissions  
from Interested Persons

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## 3.2 Strategic options

### Introduction

Nearly three-quarters of the total number of submitters with Interested Person status (78) commented on strategic options as a component of the three Warrant items (items (1), (k) and (m)) dealing with strategy. The main sectoral focus of these submitters was the economic and productive sector (41 submitters).

The stance of most of these submitters was predominantly in support of genetic modification technology. Fifty submitters were assessed as being ‘strongly for’, or ‘tending to be for’, genetic modification, and 24 as being ‘strongly against’, or ‘tending to be against’, genetic modification. Four submitters were assessed as being ‘neither for nor against’ genetic modification.

This Warrant item elicited two general types of responses:

- submitters who perceived strategic options available to New Zealand in terms of using biotechnology to achieve specific business or industry outcomes
- submitters who saw New Zealand’s options in terms of measures to reduce risk from application of this technology.

Most supporters of industry-based use of genetic modification technology tended to advance strategic options in terms of favourable business outcomes. They highlighted the potential for improvement in competitiveness, innovation and research and development through use of this technology. Achievement of business objectives was promoted as the best strategic option for New Zealand. These submitters essentially equated best business practices with best outcome for New Zealand as a whole. This group of submitters tended to emanate from industry networks and associations (21 submitters), research organisations (14), other advocacy network and associations (14 submitters) and private companies (seven submitters).

The other main group of submitters on this Warrant item generally had concerns about (or strong opposition to) genetic modification. They tended to advance strategic options that would reduce the level of risk to New Zealand. Their preferred strategic options were to ban or delay the widespread use of such

technology in New Zealand. These submitters usually came from consumer networks and associations, Maori and religious groups.

Implicit in both types of response (ie, suggesting strategic options to achieve industry goals or options to reduce risk) was the underlying attitude toward the use of genetic modification technology. The ‘stance’ evident in submitters’ comments was the common thread evident in all types of comments on strategic options. The continuum of attitudes to the technology, in effect, formed the basis of the range of strategic options that submitters saw as being available to New Zealand.

### Continuum of attitude toward genetic modification

The continuum of attitude toward genetic modification spanned a wide range. At one end were those submitters who supported most, or all, aspects of genetic modification technology within a minimalist regulatory framework. At the other end were those submitters who were against any use of genetic modification technology in New Zealand. Middle-ground positions included submitters who supported case-by-case assessment of genetic modification, those who wanted a continuation of the current moratorium and those who wanted New Zealand to be free of genetic modification technology except for a limited and selected range of uses.

Taking into account the overall position apparent from the full text of submissions from all Interested Persons, an overall stance was apparent for 78 submitters. (For the remainder of submitters a clear and unequivocal position could not be determined.) The main groupings (and numbers) of these 78 submitters were identified as clustered around five positions:

- accepted most or all aspects of genetic modification (27 submitters)
- supported a system of case-by-case assessment of each application for use of this technology (10 submitters)
- wanted the current voluntary moratorium extended (15 submitters)
- wanted New Zealand to be “GM-free” except for limited and selected uses (17 submitters)
- wanted no genetic modification technology, no genetically modified organisms or products (nine submitters).

The following sections discuss the various specific strategic options advocated by submitters under the two broad headings:

- strategic options to achieve industry goals
- strategic options to reduce risk.

## Strategic options to achieve industry goals

In response to identifying the strategic options available to New Zealand in addressing genetic modification technology, most submitters advanced options focusing on the achievement of various industry goals and objectives. Industry objectives included measures to sustain and improve New Zealand's productive capacity, to increase its competitiveness and to ensure its place in the international knowledge economy. Most submitters felt that New Zealand's interests would best be served by using genetic modification technology to meet these objectives. A minority felt that such objectives were best met by avoiding the use of such technology. In short, most submitters felt that New Zealand's best strategic options were the 'best' business options.

Genetic modification techniques were generally viewed as an essential and integral tool in achieving business outcomes. Although submitters advanced these goals as strategic 'options', many comments were more in line with discussion of 'outcomes'. Several comments dealt with strategic issues (ie, the questions that arise in pursuing certain outcomes). The comments provided therefore anticipated some of the discussion in the following sections on strategic 'outcomes' and strategic 'issues'. These views are referenced in both sections.

Most submitters saw New Zealand's overall wellbeing as being dependent on its ability to sustain a competitive and innovative knowledge-based economy drawing on current strengths in the productive sector. New Zealand's productive capacity, its research capability and global reputation were frequent themes in many comments.

The comments below are typical of the views advocating overall business goals such as competitiveness, innovation and the knowledge-based industries as key strategies for New Zealand.

### Competitiveness and innovation

Meat New Zealand [IP31] argued that New Zealand should have a strategic option "consistent with the need to enhance sustainable competitiveness in the international economy". Biotenz [IP25] and Crop and Food Research [IP4] argued similarly, advocating that "New Zealand should choose an option that supports its strategic aims to be a globally competitive knowledge economy founded on the biological industries".

The role of New Zealand's Royal Commission on Genetic Modification in reporting to Government was seen to present a "unique" opportunity to deliver wide-ranging benefits. New Zealand Agritech [IP73] argued that the Commission

had “the opportunity to lead the world with the development of the first national strategy to manage and use GMOs to improve our international competitiveness, to protect our fragile fauna and flora and provide substantial benefits to humanity”. Several submitters stressed the close interlinking of innovation and competitiveness. Meat New Zealand [IP31] noted: “Innovation drives competition and is one of the very significant issues surrounding global development.” It stressed the importance of being able to constantly adapt products to meet shifts in consumer preferences and lifestyle changes. New Zealand Grocery Marketers Association [IP54] made similar points arguing that:

New Zealand cannot and should not quarantine itself from the use of gene technology. To do so would disadvantage the competitiveness and economic vitality of the industry.

New Zealand Dairy Board [IP67] maintained that New Zealand’s current and future standard of living was “overwhelmingly dependent” on biological products that exceeded 60% of New Zealand’s export earnings. It argued that there were “no other exports growing rapidly enough to reduce that dependence” and that this required New Zealand “maintaining and enhancing the competitiveness in biological industries [which are] our only major source of international competitive advantage”. The Board saw New Zealand’s only viable option with respect to genetic modification, if it were to maintain its competitiveness, would be “to ensure that the responsible use of GM is permitted”.

### Research and development and the knowledge-based economy

The importance of New Zealand retaining its research capability and place in the international knowledge economy was stressed by a number of submitters representing farming, biotechnology, medical research and university interests. They reinforced the importance of New Zealand’s global credentials, seeing the option of avoiding genetic modification technology as compromising New Zealand’s research and academic reputation.

Rural Women New Zealand [IP52] stressed the importance of New Zealand maintaining its position in the “international knowledge economy through supporting continued GM research” especially “in agricultural export markets through ... leading edge science ... and leading edge food safety and environmental risk management systems”.

New Zealand Dairy Board [IP67] posed two questions:

- ... does New Zealand choose ... to abandon the strategy of pursuing the “knowledge economy” by ceasing to be involved in the GM revolution ...?
- ... does New Zealand choose to adopt a policy which will enable it to maintain and improve

the competitiveness of its core industries, and to capture for all New Zealanders the benefits of the “knowledge economy”?

The Board concluded that New Zealand “must pursue the use of GM in agriculture” as a key aspect of its pursuit of the knowledge economy.

New Zealand universities gave particular emphasis to their role in New Zealand’s pursuit of a successful knowledge-based economy. For example, Lincoln University [IP8] argued that “a University can only survive in a global market if it generates new knowledge, utilises new technologies and delivers outcomes in its field of expertise”. The University said that it “must be involved in genetic modification in its educational and research programmes, to ensure it remains globally competitive”. University of Otago [IP19] maintained that avoidance of genetic modification technology “would seriously compromise the university’s ability to deliver teaching and research of an internationally satisfactory standard”.

Submitters engaged in medical research advanced similar arguments. Researched Medicines Industry Association of New Zealand [IP55] viewed biotechnology industries as being critical to New Zealand’s overall benefit. In an accompanying witness brief, it maintained:

Biotechnology industries — with their emphasis on research and development, skills development, technological innovation, and activities that target the high value end of the market spectrum — are important to New Zealand’s future economic and social wellbeing.

The option of limiting the use of genetic technology was seen to have deleterious effects. AgResearch [IP13] stated its belief that a strategy based on halting or restricting this technology “would have serious adverse implications for New Zealand science and consequently the nation’s future economic, social and environmental wellbeing”.

### “GM-free” nation

Although most submitters who put forward specific industry goals as the best strategic options for New Zealand were generally in support of using genetic modification technology, several submitters argued the converse. The latter felt that nationwide industry goals would be best achieved by avoiding genetic modification. Most of these submitters saw benefits in New Zealand’s potential as an organic ‘haven’. These views are discussed below (see “Prohibiting the use of genetic modification technology”).

# Strategic options to reduce risk

Submitters who opposed, or expressed reluctance about New Zealand’s adoption of genetic modification techniques often cited “risks” as a reason. Fears about the “safety” of genetic modification, particularly its impact on the environment, were the most commonly expressed concern. Strategic options available to New Zealand recommended by these submitters included:

- prohibiting the use of genetic modification technology
- extending the existing moratorium or delaying any decision until risks are better understood
- undertaking formal assessment of the risks involved.

Indicative of the level and type of concern for future strategic directions were the following stances. These stances generally give a clear indication of each submitter’s position on the continuum of opinion on genetic modification.

## Prohibiting the use of genetic modification technology

Several submitters advanced “GM-free” status for New Zealand. Submitters tended either to emphasise the benefits of a single-minded proactive policy for New Zealand to be “GM free”, or to emphasise the risks involved in widespread use of this technology. Several submitters, however, stressed both the advantages of actively promoting “GM-free” status and the negative effects of allowing the use of genetic modification in New Zealand.

Submitters stressing the positive aspects of New Zealand identifying itself as “GM free” saw virtue in New Zealand promoting itself as the first country to be totally free of the use of genetic modification by choice.

For example, Green Party of Aotearoa/New Zealand [IP83] felt New Zealand should become “the first consciously GE Free nation”. It argued that this “would be a major boost to our food exports” because such a policy would “profile New Zealand as a nation which had chosen to base its prosperity on sustainability, a sound understanding of ecological principles and respect for people and other life forms”.

Also typical of this position were the views of the Canterbury Commercial Organics Group [IP65]. It argued that New Zealand’s adoption of a “high-tech GE-free-agriculture, ‘knowledge economy’ future will ensure this country a much more secure, sustainable, successful and prosperous future than will ... the GE version”. It maintained that New Zealand’s geographical isolation gave it “an opportunity to remain GM free and to develop the certified organic industry to take advantage of the expanding export opportunity”.

Other comments from submitters stressed the risks involved with genetic modification technology. Representative of these views were the following comments:

- “New Zealand must maintain her GE-free status. This is because there are so many unknowns about the technology and our considered opinion is that it is inherently dangerous.” (Physicians and Scientists for Responsible Genetics New Zealand [IP107])

Some submitters argued especially for the prohibition or restriction of genetically modified organisms because of the implications for the environment and agriculture. Comments included:

- Place “an immediate and indefinite ban on genetically engineered organisms in our food and our environment” (GE Free New Zealand (RAGE) in Food and Environment [IP63]).
- Sustain a “strategic vision” for “an ecologically sustainable Aotearoa New Zealand” which involved “a GE-Free environment, banning all releases of genetically engineered organisms into the environment” (Greenpeace New Zealand [IP82]).
- “Only ... a complete and permanent ban of GM foods” and “a ban on genetic engineering” will protect “the future of our agricultural economy and the health and safety of the nation” (Soil and Health Association [IP97]).
- Apply “the precautionary principle to Genetic Engineering technology and ban all trials and releases of GE crops until it can be proven that they are safe” (Northland Conservation Board [IP68]).
- Have “no field release of GMOs in the New Zealand environment because this is an unproven technology with unknown long term potential irreversible side-effects” (Royal Forest and Bird Protection Society of New Zealand [IP79]).
- “The principal strategic option” should be that “New Zealand’s natural and agricultural environment be kept free of genetically modified organisms” (Bio Dynamic Farming and Gardening Association in New Zealand [IP61]).

## Extending existing moratorium/delaying decision on use of genetic modification

Several submitters supported extension of the current voluntary moratorium and other recommendations to delay any irrevocable decision on the use of genetic modification. This view came from a variety of quarters, especially environmental and Maori organisations and beekeepers. Views supporting an extension of the moratorium, or other delays in New Zealand’s use of genetic modification



technology, focused on general concerns as well as particular issues for food and the environment.

Typical of general comments were the views of the following two submitters:

- Strategic options “should be defined by the kind of future that we want for New Zealand. ... There are widely recognised risks in adopting GM technologies. ... New Zealand has the opportunity to deliberately defer from the global trend and take a more measured response” (Sustainable Futures Trust [IP51]).
- “A fully legislated moratorium, would give New Zealand time to have a wide ranging and comprehensive discussion on our options before any irreversible steps are taken” (Environment and Conservation Organisations of New Zealand [IP102]).

Submitter views focusing on the environment included:

- Impose a “10 year moratorium on all field tests or general release of genetically modified organisms” so that New Zealand can “move away from conventional chemical agri-technology industry and fully adopt organic production by 2005” (Maori Congress [IP103]).
- Introduce ‘a fully legislated moratorium, until there is definitive proof of its [genetic modification technology] safety’ because a “GE Free New Zealand” is “the only option to allow the full protection of the biosphere and all organisms presently residing within it” (Nelson GE Free Awareness Group [IP100]).
- New Zealand should “legislate to create a permanent GM Commission ... responsible for ... the maintenance and review of a Moratorium on open-environment research and scientific and commercial activity with GM organisms” (National Beekeepers Association of New Zealand, Poverty Bay Branch [IP62]).

Submitters’ views specifically addressing food included:

- To “delay commercial release of GM food until the extent of the negative consumer attitude can be seen and the producer benefits become more apparent” (New Zealand Council of Trade Unions [IP95]).

### Undertaking formal assessment of risk

Several submitters with safety concerns proposed formal, independent testing and assessment of risks. For example, Comvita New Zealand [IP74] felt that New

Zealand policy needed to achieve the following:

- a) Support fundamental research to develop precision and predictability in gene expression and gene transfer;
- b) Develop a world-class independent testing regime, using evidence-based risk analysis and the precautionary principle, to ensure the safety of any GM organisms that may potentially be released into the New Zealand environment.
- c) Prohibit the release of GM plants for commercial production in New Zealand for the foreseeable future, and at least until there is general public acceptance that policy objectives a) and b) have been met.

Specific research to assess impacts in various industries and sectors was also recommended as a strategic option. For example, New Zealand Worm Federation [IP94] recommended conduct of “appropriate research” on “the effects of genetically modified organisms on soil microbial and worm health” and “the effect of genetically engineered crops’ residues on the microbial action of the soil” before endorsement of “genetic modification of agricultural products in New Zealand”.