Submission ("Interested Person") Form 1

1. Contact Information (Not for Publication)

Name and Address of Submitter

This should be the name of the organisation accorded "interested person" status

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Postal Address	Response
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Contact Person for the Submission (if different from the name of the submitter)

This person should have sufficient knowledge of the submission to be able and available to respond to queries from the Commission

This may be the name of Counsel representing the "interested person"

Name	**Susie Lees**
Position	
Postal Address	as above
Courier Address	Response
Phone	Response
Fax	Response
Email	Response

1. Confidential Information (Not for Publication)

Confidential Information

Please indicate whether or not your submission contains any confidential information

No

Please provide an explanation for any sections of the submission that you wish to remain confidential to the Commission

These sections should be removed from the body of the submission and provided as a separate document marked CONFIDENTIAL

Confidential information should follow the same format as the submission

Clear reference to the existence of confidential information should be included in the body of the submission

Response

1. Submission Description (Not for Publication)

Submission Description

Please provide a *descriptive title* for the submission of no more than 255 characters (including spaces)

The statement will be used as a long title in the Commission's information management system

Nelson GE Awareness Group, a public advocacy group started after Genetic Engineering began having detrimental effects on the health/environment of New Zealand, GE crops sown and GE foods put in supermarkets lacking both labels and long term testing.

Witness Brief Form 2

Royal Commission on Genetic Modification

(For Publication)

Name of Organisation/Person accorded "Interested Person" Status

Nelson GE Free Awareness Group

Submission Executive Summary

Executive Summary

Provide an overarching summary of your submission and recommendations made [in respect of items (1) and (2) of the Warrant]. The Executive Summary should be no more than **3** pages in length

Please note that individual section summaries will be required and therefore the Executive Summary should focus on summarising the issues addressed in the submission and provide cross references to the sections in which the issues are covered rather than summarising the substantive content

1. In 1970s the first plants were patented, the Asilomar Declaration called for, scientists requiring a moratorium to be placed on genetic engineering until appropriate legislation had been put in place. However, by the end of the decade the US Supreme Court ruled that microorganisms could be patented, and the age of biotechnology had begun in earnest. Working away in laboratories worldwide, scientists played with the manipulation of genes.

2. The peoples of New Zealand are being offered a technology that promises undreamt of solutions to the problems that beset the peoples of this planet in the 21st C. These problems have been caused in the main by previous technologies and the demand for continued growth in economies. So far none of those GE promises have become reality, rather the reverse, they threaten our existence in ways previously unthinkable since the crossing of the species barrier. The social and environmental ramifications are huge.

3. The companies controlling this technology have huge resources built up in the main by their production of chemicals, many of which will impact on the environment indefinitely. These companies are involved in the construction and development of laws of ownership, domination of world markets and spread of this technology. The patenting of life forms is based on the assumption that nature can be controlled and life owned because it has been constructed. Society has not been consulted on the patenting of life.

4. What chance does the ordinary member of public have to review the manipulation of laws, national, international and global and regulations that govern both food and environmental standards in regard to the use of GE. The public are manipulated by misleading advertising from the biotech companies promulgating the perceived 'potential' to 'feed the world.' Recently Steven Smith Novartis withdrew this promise saying 'If anyone tells you that GM is going to feed the world tell him it is not. To feed the world takes political and financial will, it's not about production and distribution, it may produce more for less and create more food but it won't feed the world.' *The Ecologist September 2000*

5. Seeking public acceptance for a dangerous technology, which treats lifeforms as owned products (focusing on primary products eg. food and timber) The government assisting with funding for this biased advertising and a refusal to label foods produced by this technology has left the public reeling. 4 years since the first commercial planting and 3 years since the first products hit the supermarket shelves, what do we find? Labelling denied, people have been forced against their better judgement to eat these genetically engineered products since many basic foodstuffs are imported from the US where millions of acres of contaminated crops are now grown. Having no choice of refusal the growing of GE crops has been proliferating.

6. Now, US farmers who hurriedly adopted this unproven technology are finding themselves in extremely difficult circumstances, since consumers world wide have been rejecting these GE products. Segregation assured as the way forward has not worked, as a result the US food supply is now contaminated with a GE product Starlink corn, that was never passed for human consumption. *The operators of grain elevators…have never before had to deal with crops that must be kept so vigilantly apart, requiring constant dismantling and cleaning of equipment. Boston globe. 26.9.00*

7. Earlier this year 30,000 acres in Europe was contaminated by GE canola, horizontal gene transfer was found to have occurred between micro-organisms in the bee stomach and canola pollen, threatening our pollinators and thus our ecosystem. In the light of indisputable evidence of harm and irresponsibility, genetic engineering in our food and environment should be immediately halted and a global moratorium on genetic engineering instigated. *80% of all the world's crops depend on insects, primarily bees and butterflies for their pollination. No bugs, no crop. Boston globe. 26.9.00*

8. Nelson GE Free Awareness Group (GE Free Nelson) is a public advocacy group that was started in Nelson after genetically engineered imported foods were introduced into supermarkets and genetically engineered crop trials were initiated and began to have detrimental effects on the environment of New Zealand. We represent over 7000 people and over 100 businesses who have signed petitions over the last 1 ¼ years to both the Nelson and Tasman District councils requesting Genetic Engineering Free status.

9. Two main concerns were stated :

   unlabelled GE foods and components risking human health.

   horizontal gene transfer and pollen drift causing irreparable damage to the environment

   Ref. The use of Cauliflower mosaic virus. Prof. Joseph Cummins.

   Aug 3.1994 and Dr. Mae Wan Ho Dream or Nightmare, Gateway Books.

   GE canola pollution in Europe, Nelson Mail 18.5.00

10. In our submission we aim to ensure that the position of the consumer and members of the public is put forward, with particular regard to the residents of Nelson, who, in their specific geographic region are subject to and involved in, specific forestry, agricultural and recreational pursuits, both for business and pleasure.

11. It is also important to note here that again due to geographical location, Nelson has a strong community identity, which also results in a desire to support local endeavours.

12. In light of the fact that the Foundation for Research, Science and Technology recently stated that internationally, more than 2500 companies were spending about $NZ8 billion a year on developing 2200 products with some form of genetic modification, we feel it is essential to put forward a submission to the Royal Commission on behalf of the thousands of people in the Nelson and Tasman District who have expressed grave concerns about the safety of this new technology of genetic engineering.

13. Dr. Mae Wan Ho a geneticist at that time and now opponent of genetic engineering states 'Now, in the 1990s, the risks from genetic manipulation have become much greater. Genetic engineering techniques are ten times faster and more powerful. The new breed of genetically engineered organisms (or transgenics) which are deliberately released on a large scale are designed to be ecologically vigorous and, therefore, potentially much more hazardous than the genetically crippled microorganisms which were engineered for contained use in the laboratory in the 1970s. Where is the voice of science now? The scientists say it is for the politicians and the public to decide. Of course, the public should decide, but this does not absolve the scientists from their special responsibility as both citizens and scientists.'P20 Genetic engineering- Dream or Nightmare.

14. The main points of our submission aim to reflect a number of areas of concern some of which we have identified as relevant to both the citizens of Nelson and the future prosperity of the area.

    Consumers and food products

    ERMA/ANZFA regulation and legislation.

    Organic production / quality agricultural exports

    Tourism

    Forestry and Stewardship Certification schemes

    Fish

    Ethics

Witness Brief Form 2

Royal Commission on Genetic Modification

Witness Briefs Attached

Witness Briefs

Provide a numbered list of the names and positions of witnesses from whom briefs are attached, including an indication as to whether or not you intend to present the witness at the formal hearings

Witness briefs must be provided to the Commission with your submission

Witness briefs should be prepared on Form 2

Steven Druker - Executive Director- Alliance for Bio - Integrity

Sol Morgan - Co-ordinator Golden Bay Seed Exchange, and Golden Bay Community Gardens

Joe Rifici - Nelson citizen

Roland Dallas - Co-Director of Dovedale Foods

Allan Addison Saipe - Chef and Owner Grape Escape Café and Wine Bar

Witness Brief Form 2

Royal Commission on Genetic Modification

Submission by Section (as specified in the matters set out in the Warrant)

Submission by Section

Submissions are to be structured in line with the matters specified in the Warrant and the sections numbered accordingly

Each section should stand alone, and include a Section Summary, identifying the issues addressed in the section

Submissions may address all or only some of the sections (as specified in the Warrant). However section numbers should be retained, for example, if a submission addresses matters (a), (c) and (e), the sections shall be numbered (a), (c), and (e), rather than a, b, and c

Submissions may, within each section, adopt a sub-section approach using different headings; however, each paragraph should be consecutively numbered

Section A Recommendations

The Warrant has set the Commission the task of receiving representations upon, inquiring into, investigating, and reporting on the items set out in Section A (1) and (2) below

Section A (1)

A (1) the strategic options available to enable New Zealand to address, now and in the future, genetic modification, genetically modified organisms, and products

Section A (1) Summary

Section A1

15. **The strategic options available to New Zealand we believe are as follows**:

GE Free New Zealand, no use of this technology, products or related services.

The introduction of a fully legislated moratorium, until there is definitive proof of its safety. Burden of proof to rest with company or institute developing.

The full and complete labelling of any food produced using any part of this technology to allow full choice. This would include animal feed and manipulation of animals used for food by any genetic process. This labelling should enable ethical choices, and be inclusive of packaging.

No Genetic Engineering trials to be undertaken except in strict laboratory containment. No field trials.

Allow Genetic Engineering technology to be introduced.

16. Nelson GE Free Awareness Group considers the first option to be the only option to allow the full protection of the biosphere and ALL organisms presently residing within it. The last option will result in contamination and pollution of the 'genetic purity' of present species of plants and animals in the New Zealand environment. We would consider this a potential disaster to the economy, spiritual integrity and sovereignty of New Zealand. We see a positive global role for New Zealand / Aotearoa as protected a Genetic Engineering Free heritage environment of both scientific and economic value.

A (1)

17. **Consideration of the strategic options.** GE Free Nelson believes that to ensure a sustainable continuation of the food supply, it is necessary to ensure a GE Free status is enjoyed by New Zealand, at present envied by many farmers and ordinary people throughout the world. We believe there are positive social, economic and environmental gains from retaining our relatively GE Free status. We believe this will benefit the long term health of the population.

18. **Fully legislated moratorium –** GE Free Nelson believes a complete ban on Genetic Engineering trials and crop releases and a fully legislated moratorium would give full protection to conventionally produced quality agricultural products, presently produced, seed stock and organic production.

19. The NZ Life Sciences Network recently published the following statement in their business plan advocating 'support from the Network and other member for: 1) advocacy/education for members of parliament, 2)applications for Minister for Environment for field trials/tests during moratorium, 3)media relations. Surely this illustrates their total disregard for a voluntary moratorium.

20. A moratorium would continue to allow guaranteed GE Free produce to obtain premium prices on a world market where organic production still cannot meet a demand caused by GE crops. Trading advantages would result.

21. Already we see companies such as Advanta wanting to produce GE Free seed in New Zealand, (this company were responsible for the contamination of over 30,000 acres in Europe this year), the competitive advantages of being able to offer uncontaminated agricultural land far outweigh the unproven benefits of Genetic Engineering. Maintaining GE Free status would allow us major competitive advantages, making us the seed bank of the world. *Anger over GM botch-up. Nelson Mail18.5.00*

22. Biotech company Advanta have recently moved their seed production to New Zealand, in an attempt to maintain GE-free purity and avoid further contamination.
Kees Noome, Advanta when asked to confirm the above stated, "They have moved the production to New Zealand. Obviously they considered that the safest spot in the world to produce canola in the present situation. I hope you can confirm this is a good decision or are there GMO rape varieties grown in New Zealand after all?"

23. Unfortunately trial crops of canola in the South Island have already resulted in resistant weeds, resulting from genetic drift.

24. Genetically engineered crops have been proven to lead to extensive contamination: of seed stocks by accidental and/or intentional contamination, in the field from pollen drift, and now at the mills. *See Dominion 27.10.00*

25. Much of the grain production in the US and Canada can no longer be guaranteed GE Free as a result of the hasty and extensive introduction of patented crops into the agricultural community. Recently, Genetics ID vice president Jeffrey Smith told *New Scientist* that twelve out of 20 maize samples from North America contained up to 1% of GE material. *21.10.00. Kelloggs forced to shut down plant.*

26. The high incidence of GE herbicide and pesticide resistant crops results in high chemical residues in the soil. There is no proof of less herbicide being applied to crops as a result of herbicide resistant traits, in fact the opposite has been cited.

27. Agricultural and horticultural products of New Zealand continue to be purchased by overseas markets, their preference due to their longstanding reputation as high quality, and safe foods. Not only European, but also North American and SE Asian markets are now looking for non GE produce. *Dominion 27.8.99 Exports to Japan. 9 years ago the first organic production began, now Heinz Watties Australasia are growing around 2,500 ha of organic vegetables. Driven by strong demand from Japan's desire for 'safe healthy food'. Certified organic produce especially from New Zeaalnd is considered by the Japaneseto be clean, green and trustworthy and the ultimate safe food.Sales of organic also go to NZ, Australia, N.America and Europe.*

28. Whilst we appreciate the research and development that has gone into the production of genetically engineered crops, should a fully legislated moratorium be put in place, it is our belief that with the reintroduction of traditional breeding techniques and good husbandry our agricultural standing would be maintained and even improved. We believe that sustainable systems are those promoted by organics, and that these produce food in a safe and environmentally sensitive way which benefits the entire ecosystem.

29. We acknowledge that under an organic system there may not be similar monocrop yields as are evident in Genetic Engineering systems, but maintain that systems involving more traditional farming methods not only lead to more agricultural employment in rural regions, but also resulting in a healthy local economy, and stronger communities. A greater variety in seed stock, increasing diversity and thus putting the food chain at less risk is also maintained.

30. The potential benefits have been identified and explored in Dr Hugh Campbell's submission to IBAC *'No First Release?' 3.3.2000*

31. Tasmania has a moratorium in force, by order under the states' Plant Quarantine Act, this prevents open Genetic Engineering field trials. In an action similar to Tasmania's use of its quarantine laws to ban the importation of raw salmon, Tasmania defies the federal government and the World Trade Organisation.

    While Tasmania's stance on salmon has been heavily criticised by federal government, Canberra has made no attempt to overturn it by either legislation or court action.

The full and complete labelling of all genetically engineered ingredients-

32. A UK survey on the ethics of modern food production found that 85% of people feel big multinational companies have too much power over what we eat. *The Ecologist Vol30.No6 Sept 2000*

33. No food has as yet been enhanced by genetic engineering, benefits have been solely to the agrichemical companies. (these recently affected by a drop in confidence, and thus share prices) Through the sales of proprietary patented brands of herbicides and seeds modified to be resistant to them as well as those modified resistant to insects which have advantaged the farmer for a short time until the insects have built up a resistance to the toxins. *B.E Tabashnik, 'Evolution of Resistance to Bacillus thuringiensis', Annual Review of Entomology,Vol39 1994 pp47-49.ISB News Report , December 1999. www.plant.uoguelph.ca/riskcomm/plabt-ag.htm*

34. As a result of the increase in the amounts of spray used on a crop that is herbicide tolerant, major biotech companies have also been involved in lobbying regulatory bodies such as Codex Alimentarius to change the allowable herbicide residues in food. They have been increased 200x from 0.01mg per kilo to 20 mg per kilo.

35. Evidence that Round-Up causes Non Hodgkins lymphoma has also been found. *Journal of the American Cancer Society15.3.99*

36. Agricultural and horticultural products of New Zealand continue to be popular, purchased by overseas markets due to their longstanding reputation as high quality, and safe foods. This is partly due to the isolation of New Zealand and the fact it is an island. Not only European, but also North American and SE Asian markets are now looking for non GE produce. *Organic export figures http://www.cropchoice.com*
    Non-GMO Status Helps Spur 77% Boost in New Zealand Exports. New Zealand Organic Producers Export Association says organic exports are skyrocketing from the small island country. The Association reports a 77% rise in just the last year.

    For the one year period ending this June, the Kiwis exported over US $25 million in organic food. Mainly fruit; but also processed foods, meat, and fresh vegetables. Those are big numbers for a small country, especially considering that five years ago the organic export market was worth less than US $5 million.

New Zealand's big new buyers are Europe and the US. Europe more than doubled its purchases in the last year. The United States bought only a half million dollars worth of Kiwi organic food in 1998-99; but this year the figure shot up almost sevenfold to US 3.5 million dollars.

The market for organic, non-GMO fruit is especially strong. The figures only include certified organic crops.

New Zealand farmers are decidedly against biotech. A recent study conducted by Lincoln University found that 78% of Kiwi farmers have no intention to use GMOs (if they were available).

37. Organic food has also been found to be healthier. A study carried out by Univ. of Copenhagen and funded by the UK Soil Association food was found to have higher levels of nutrients. The study indicated that industrial agricultural practices were having a detrimental effect on the nutritional value of conventional produce. An analysis of USDA data from the Kushi Inst. Of Becket, Mass. from 1975-1997 found calcium levels in vegetables had declined 27%, iron levels 37%, VitA 21% and potassium 14%. A 1999 study by the Univ. of Wisconsin found overuse of nitrogen to have aged the equivalent of 5,000 years. *Ref Organic View v.1n17* *www.purefood.org/organic view.htm*

38. The main reason for increase in demand from the US and Europe is growing awareness of genetic engineering technology and the products thereof. In a recent Time magazine poll 81% of respondents want GE food to be labelled. In a recent survey by Massey University of NZ shoppers found that out of 417 people canvassed, only 1% would choose "GM only" foods given the choice. GM Free was their preference.

39. A recent UMR insight poll showed over two-thirds of New Zealanders are concerned about GE food. However, not only is the Government ready to break their election promise to label all GE foods, they are now taking a position on labelling which is even weaker that the previous government took last year at the ANZFA meeting. Last year's agreement would have covered ALL GE food ingredients.

40. With full labelling of food the consumer would have a choice not only on the type of food but also the production method. If one reviews the surveys of consumer views over the last few years it is apparent that customers would choose GE Free food in preference to GE food and therefore it would no longer be profitable for farmers to grow GE crops.

41. Many raw products and manufactured foods are imported from all over the world, including the U.S into New Zealand. Unfortunately, these undoubtedly contain GE food, particularly soy, maize, canola and cotton.

42. The biotech industry has produced studies evaluating the safety of GE food but these are often based on short studies on rats. For a person who may be eating and drinking GE

ingredients at every meal for years on end, the results may well be very different.

43. Unable to assess these long term impacts, the rapid introduction of GE foods into our diets has resulted in the burden of proof resting with the public to prove that they have been affected by these novel foods. But which one? Du Ponts' Mr Holland stated "No illness, no problems that can be traced to GM foods" at the RCI hearing 16.10.2000. The long term effects are unknown, clinical testing of humans has not been undertaken.

44. Others say there is no credible evidence that GM food is less healthful than products made from traditionally hybrid seeds and that the US Food and Drug Admin, US Dept of Agriculture and Environmental Protective Agency have all done exhaustive research into their safety and have found we are not at risk from GM food. This is however a misinformed view based on information promulgated by biotechnology companies. The FDA have been guilty of ignoring their own scientists, and Monsanto employees have been employed both by government departments and regulatory agencies. *See Revolving door*

45. "In 1999 it became apparent that the FDA had declared GM foods to be safe in the face of disagreement from its own experts. Internal reports and memoranda disclosed that FDA scientists repeatedly cautioned that foods produced through recombinant DNA technology produced counterparts and that this input was consistently disregarded by the bureaucrats who crafted the agency's policy." *The Ecologist Vol30.No6 Sept 2000*

46. Food poisoning in the US has increased exponentially, despite the US boast of having the safest food supply in the world, statistics reported from the US Centre for Disease Control (CDC) show that 76 million Americans suffer food poisoning each year and about 5,000 die from it. The new CDC analysis also estimates that 325,000 people are hospitalised annually for food-related illnesses.

47. Particularly startling is the new CDC numbers on food poisonings, twice as high as its most recent analysis, which put the figure at 33 million. Could this reflect three years' of GE food consumption? We just don't know. Organic View, v.1 n.14, 28 Sep 1999 www.cdc.gov/od/oc/media/pressrel/r990917

48. Millions of bushels of US corn, unapproved for human consumption have been recalled. ConAgra Foods, one of America's biggest foods companies, said it's temporarily stopped operations because of fears it may have received the same GE corn that sparked nation-wide recalls of taco-shell brands.

49. Recent events show Starlink corn, unapproved for human consumption due to unknown effects on health of novel proteins in the food, has contaminated many food products since being mixed at the mill. This proves segregation, so widely held as a solution to contamination, to be impossible. *EPA statement on Starlink corn www.biotech-info.net/S_J_statement.html.12,10.00*

50. **Long term clinical tests were not carried out before the foodstuffs were put on the market, and most research data supplied by biotech companies for their products is as yet not published in scientific papers, independently assessed or peer reviewed. Toxins are present in genetically engineered foods and novel proteins that have never before been consumed. Antibiotic resistance has also been cited as a major public health threat from genetically engineered foodstuffs. The future effects are unknown and without proper scientific risk analysis and long term testing, untraceable.**

51. UK medical journal the Lancet last year published Dr. Arpad Puztai studies, which involved feeding rats GE potatoes. Damage to their immune systems and cell damage was noted. *Lancet.15.10.99*

52. Antibiotic resistance described as one of the biggest threats to 21C medicine has been of great concern to the British Medical Authority. Expert advice received in 1995 warned that an antibiotic resistance gene inserted into maize was so powerful it could degrade an antibiotic in the human gut in 10 minutes. Ampicillin is used to treat salmonella, meningitis,and bronchitis. Antibiotic resistance genes used as markers genes are still currently used in GE products and as a result present in food products. *Independent on Sunday.6.6.99*

53. Farmworkers working with genetically engineered maize in France were found to have antibiotic resistant bacteria in their mouths and throats.

54. A 50% increase in Soy allergy has also become evident in recent years, begging the question why this formerly safe food could suddenly be resulting in a massively increased incidence of allergies. A 10-14% decrease in phytoestrogens has also been noted in GE soy. *York Nutritional Laboratories*, *Increases in Soy Allergy.*

55. Not only is soy milk becoming increasingly denatured, cows milk is too. With the insertion of synthetic copies of human genes into cattle so they will secrete the gene in their milk, the recently approved and controversial application by AgResearch uses human DNA. The DNA for the AgResearch experiment came from a DNA library owned by a company in the United States. DNA used in the experiment is a synthetic copy, made in bacteria, of human DNA. Whose DNA is it? This question raises huge ethical issues.

56. In previous experimentation, elsewhere the DNA of a Danish woman was used in the cloning of sheep without her knowledge, she was disgusted when informed. Breaches of human rights appear to be becoming commonplace.

No Genetic Engineering trials to be undertaken except in strict laboratory containment.

57. GE Free Nelson believes that GE trials even of low risk can never be completely contained, there is always the ‘Act of God’ to consider, earthquake, flood, typhoon, act of terrorism or intentional sabotage. Any of these could cause an unintentional release of GE material.

58. According to Prof Mae-Wan Ho, Biology Department, Open University, Walton Hall, U.K, "GM genetic material is not like ordinary genetic material... It is designed to cross all species barriers and to literally invade genomes...(It) includes aggressive gene-switches or promoters from viruses that make genes over-express continuously - something that never happens in healthy organisms".

59. E.coli and its plasmids has been consistently used by genetic engineers and although once merely a harmless gut bacteria, there are varieties now such as veritoxigenic e.coli that have caused many deaths as well as thousands of instances of serious illness around the world. A laboratory strain of E.coli K12 was introduced into sewage, went dormant and disappeared for 12 days, on reappearing it was discovered to have acquired a new plasmid for multi-drug resistance. Survival of crippled laboratory strains of bacteria originally identified in research by Dr. Beatrix Tappeser.

Allow Genetic Engineering technology to be introduced.

60. GE Free Nelson does not believe this to be a suitable option for New Zealand, our geographical position on the globe is isolated and our range of agricultural land so diverse as to allow a good range of plant and animal species to be maintained with a genetic purity pertinent to their own species.

61. Many countries and consumers have already objected to GE food and crops and individual products such as the Calgene tomato, and more recently the GE papaya. With the admission from biotech companies that there are no guarantees that genetic contamination will not occur, we feel the opinion of the people of New Zealand should be heard by conducting a binding referendum

Section A (2)

A (2) any changes considered desirable to the current legislative, regulatory, policy, or institutional arrangements for addressing, in New Zealand, genetic modification, genetically modified organisms, and products
Section A (2) Summary

62. What is in place to protect the public from the risks of Genetic engineering so far?

    Voluntary moratorium

    Animal Welfare Bill

    HSNO Act and ERMA

    Treaty of Waitangi (Te Tiriti)

    Biosecurity Act

Biosafety Protocol

Biodiversity

ANZFA and food standards

63. It is GE Free Nelson's belief that protection is not given to the public as a right in New Zealand and that local powers to protect community health and environment have been eroded to such an extent that even as a result of considerable public pressure there is no recourse available in present law that permits the public to be properly heard.

64. We believe that the onus erroneously shifting as it has from the corporate to the public to prove wrongdoing, will lead to further disintegration and disharmony worldwide due to a general disempowerment of the public to have any effect on the minimization of standards due to globalisation.

65. Let us review these laws to see if they protect us in any democratic way remembering of course the existence of the Magna Carta.

A (2)

66. At present we have a **voluntary moratorium** in place with exemptions . This is therefore unenforceable. These exemptions allow the continuation of field trials for medical use, to test new drugs and therapies; where there is a risk to New Zealand losing scientific inquiry knowledge or potential health, environmental or commercial benefits; or where the applicant can be seen to have invested heavily in the experimentation to date. So far no applications have been refused as a result of the voluntary moratorium, in fact the reverse is true, many more applications being put to ERMA now than previously. *New Zealand Gazette 22.6.00 Issue No. 67*

67. HSNO Act. The development of genetically modified human cell lines does not require an approval under the HSNO Act 1996. The definition of an *organism* in the HSNO Act explicitly *does not include a human being or a genetic structure derived from a human being.* This is also an ethical issue. B j (iv)

68. There is an **Animal Welfare Bill** (recently revised) that allows the denial of life in foetuses less than half fullterm, at that point full animal rights are instigated. Since wastage is huge in cloned animals pre-term, this automatically allows for wastage and destruction of substandard embryos allowing companies to report their ethical standards figures as much better than they are in reality. There is no bill in place that covers human cloning, as in other civilised countries.

69. Both animal and human rights standards are continually being eroded by research companies funded both by public taxes and overseas collaboration along with an intention

to harmonise standards through global corporate law such as the WTO.*25.6.99 The number of animals used in experimentation is now up by 40%. Fish are the most frequently used followed by sheep, cattle and mice. Only 32% were found to have no suffering. The biggest users are the CRI' s with 141,979 animals used, a 200% increase on the previous year, universities were next with 60,136 up by 30%.*

70. The **HSNO Act** purports to be effective in the regulation of Genetic Engineering experiments and field trials, but despite legislation to ensure safety and allow breaches of the Act to be prosecuted, no such prosecutions have been made in the face of widespread disregard for the law. In the event of the previous ERMA review where many institutions and universities (publicly-funded) were found to be carrying out unauthorised experimentation, no charges were brought. In the light of the serious implications, GE Free Nelson believes this to be sending a message of complicity /endorsement and tacit approval to both corporations, research centres and the public, which we believe could facilitate further breaches?

71. The regulatory agency, ERMA, and the enforcement body MAF are underfunded, they appear to have their hands tied as a result. The first report ever produced by ERMA on antibiotic resistance was only completed in the last few months. One of two suggested report projects, the other was on horizontal gene transfer, the most important environmental concern, there is no automatic funding for research, funding from central government depending on approval for specific projects being via bids.

72. It appears that at the outset of the HSNO Act and instigation of ERMA, there was little provision for risks to be researched and evaluated. The HSNO Act lacking the formulation of specific criteria for weighting and ultimately the proper assessing of trials by ERMA. Submitters, therefore, the only parties involved in presentation of risks before ERMA, since applicants research tended to minimise risk or submit studies whose outcome appeared to consistently establish risk as negligible or minimal.

73. GE Free Nelson advocates that ERMA procedure should not be relaxed and indeed its risk management process should in fact be strengthened, if it is to continue to be permitted to approve applications. So far despite evidence of risk becoming apparent after approval, no applications have been reviewed in light of fresh evidence and none have yet been refused.

74. Reassessment too, seems apparently to be a procedure subject to long time delays, allowing infection of the environment by this technology to continue unimpeded. On 14.8.99 it was reported that there were grounds to reassess 3 S. Island field tests after concerns that pollen or seed from at least 1 trial could have escaped. A negotiated and agreed monitoring programme appears still to be implemented over a year after identification of the problem.

75. In light of the views of the major biotech companies involved in these applications, it is our opinion that ERMA should not be made more independent, but that all Genetic

Engineering approval and risk analysis procedures should be strengthened and low risk research continue to be subject to enforced ERMA regulations.

76. We believe that **all** processing of applications should be paid for by the applicant and that applicants should also pay into a fund, enabling ERMA to contract independent analysis of risk and environmental impact research into the proposed application.

77. If Genetic Engineering trials are to continue GE Free Nelson feels that it is imperative to protect the populace and directives to enable public avoidance of trial sites by the introduction of mandatory warning signs on the fences of fields in which GE crops are being grown.

78. In light of recent events proving unwanted contamination of large tracts of precious and productive agricultural land and the human food supply we feel that the HSNO Act and all decisions of ERMA should be revisited to ensure that ERMA takes responsibility for its decisions and that a review of decisions can be made quickly and effectively.

79. Liability. ERMA is not liable for any of its decisions, the government during the last National term of office refused to accept responsibility for any negative effects of Genetic Engineering saying only the risks would be 'socialised'. GE Free Nelson considers it totally unacceptable that not only are the public expected to pay to legitimise field trials, so that major multinationals can charge our farmers via 'technology agreements'(Monsanto 26.10.00 RCI on GM); but that the public are also funding research in universities that will assist overseas projects (Lincoln University 26.10.00 RCI on GM); and after all that expected to foot the bill for any clean up operation that is likely to ensue.

80. **Treaty of Waitangi. Te Tiriti.** This treaty sets out that all the Maori taonga should be preserved for future generations for the foreseeable future. A consideration of the Te Tiriti is enshrined within the HSNO Act, iwi are often consulted by ERMA at hui around the country when applications for Genetic Engineering trials target their area. The applicant is often involved in these hui and are therefore able to negotiate with them independent of full public scrutiny. NGO participation has not as yet been an available option.

81. GE Free Nelson advocates that an Ethical Advisory board, to advise on ethical issues surrounding GE, be set up, to include representatives from minority groups, and all sectors, religious, cultural, economic, vegetarian, etc.

82. **Biosecurity Act.** The Pest Management strategy under the Biosecurity Act attempts to protect areas against pest invasion. Once again GE Free Nelson identifies that there are no specific controls in place with regard to GMO's. Inbuilt within the Act, Section 72, not only requires identification of the species, and to show potential or real impact but also to show that eradication is a viable economic option. Should there be widespread pollution from a GMO eradication would in all likelihood be impossible.

83. GE Free Nelson therefore identifies a need to put provision in place to keep GMO out on a local level. At present impossible to implement under the Act, GE Free Nelson suggests an amendment to the Act, which would allow the regions to have more control of GMO's in their local environment, under a general clause which would obviate the identification at present demanded by the Act. This would allow for a greater democracy in local matters and therefore a wider degree of protection for its inhabitants.

84. Tasmania has a moratorium in force, by order under the states' Plant Quarantine Act, to prevent open Genetic Engineering field trials. Western Australia and Wales, are just two of the countries who have put restrictions on the growing of GE crops in May this year after the contamination by canola was announced. Many areas in the US are also stating a GE Free status.

85. Ratification of the **Montreal Biosafety Protocol**

86. Recently, a continued line of investigation with Advanta, Canada, aimed to ensure that only uncontaminated GE Free seed be imported to New Zealand, led to an assurance that the previous imported seed crop for multiplication had been GE Free. With overseas contamination becoming evident it is apparent that even imports of GE Free seed may well cause pollution should they be allowed to continue.

87. The British Government in May called for tighter international regulations and were due to start carrying out spotchecks on imported seed in June.

88. The Montreal Biosafety Protocol must be ratified to allow New Zealand to protect its agricultural production from viable GE seed and a strict regime of testing instigated at ports ensuring this is adhered to in order not to compromise New Zealand advantages for GE Free products. *Evening Post 4.5.00. GM seeds entering NZ illegally. ERMA fears genetically modified seeds and plants are entering New Zealand illegally….. ERMA wanted to make applications easier.* This should be prevented at all costs and strict rulings maintained.

89. The loss of New Zealand's indigenous biodiversity has been described in the *State of the Environment Report as* "New Zealand's most pervasive environmental problem" and the **International Convention of Biological Diversity** requires New Zealand to fulfil certain obligations.

90. *Stephen Halloy reported in Agricultural Science Sept/Oct 1996* 'Estimated extinction rates suggest we may be losing several species every day for the coming decades, estimates are between 3000-30,000 per year. If we continue at this rate by the middle of this century 25% of all species may be extinct.

91. Both New Zealand and Nelson have been identified as Biodiversity hotspots. However, New Zealand is still losing species faster than ever before. Biotechnology, it has been

suggested will add to the speed of this loss. GE Free Nelson believes this is yet another reason for the removal of GE organisms from our environment.

92. DNA from the tuatara, protected since 1895, earlier this year was reported *27.4.00 Nature* to have been taken for gene library collection, without either permission from ERMA or the local iwi by Otago University.

93. *WASHINGTON (Reuters) - Rare U.S. animals and wildlife could be threatened by transgenic fish and plants being developed in laboratories unless the federal government provides safeguards, a senior Interior Department official said. http://dailynews.yahoo.com/h/nm/20000504/sc/biotech_endangered_1.html*

94. **ANZFA**, this body making decisions for **Australian and New Zealand food standards**, frequently based on FDA decisions compromises New Zealand's rights as an independent sovereign nation. Voting rights allow for 7 votes on behalf of the 7 ministers of Health in Australia and only 1 vote for New Zealand effectively rendering it unheard. An option to leave ANZFA should in light of current events be exercised.

95. When ANZFA asked the public for submissions on GE foods last year a total of 5553 submissions were received. Around 500 submissions only were received by Australian counterparts showing awareness of New Zealanders to be high in comparison with the Australian perspective. *Full analysis:www.moh.govt.nz/gmf.html*

96. a)Genetically engineered foods are at present still on our supermarket shelves, unlabelled. ANZFA have been promising labelling now since December 1998 after strong opposition by the public to the introduction of genetically engineered foods into our supermarkets without their prior knowledge and approval.

97. This food has not undergone stringent testing, either long term on animals or any clinical trials to assess any possible health implications. The majority of testing to date has been carried out by the companies responsible for genetically engineering the crops to be resistant to pesticides, (which has cause resistance to build up in insects), or their specific patented brand of herbicide.(triple resistance-gene stacking has already been found to occur)

98. As a result lobbying at CODEX effectively lowered standards due to the implementation of revised safety standards on allowable herbicide residues (200 x previous limit)

99. GE Free Nelson believes a significant number of New Zealanders are aware of the issues surrounding GE foods and are not only sick to death of regulatory bodies showing reticence and continued delaying tactics preventing consumer choice, but of their apparent inability to understand the breadth of the issues. **Their refusal to allow credible labelling that allows the means of production (biotechnology) to be established as a reason for refusal of purchase indicating overt manipulation of the regulatory processes.**

100. GE Free Nelson advocates the New Zealand government withdraw from ANZFA policies and instigate their own regulations regarding foodstuffs in order to protect public health. GE Free Nelson also advocates that the government implement full and complete labelling of all foods involving either GE ingredients or a method of production involving genetic engineering.

101. *Melbourne Age Sunday 29 October 2000 By GEOFF STRONG*
Australia's food regulator has been accused of approving a range of genetically modified food products without adequate scientific testing.A group of scientists conducting a study for the Public Health Association of Australia examined the procedures surrounding the applications for release of three genetically modified foods: two corns and a canola given preliminary approval by the Australian and New Zealand Food Authority. All three were products from the US-based multinational food-science company Monsanto and were approved subject to endorsement by the Council of Australian and New Zealand Health Ministers. The scientists' report was submitted to the food authority last week and has also been sent to the health ministers. It points out that all of the assessments done by the authority were based on internal publications from Monsanto or from another US food company, Optimum Quality Grains. It claims none of the documents was published in scientific journals subject to peer review, the normal procedure for scrutinising scientific research.

102. GE Free Nelson is also aware that allowing producers and manufacturers to choose which food standards (New Zealand, Australia or ANZFA) are most applicable to their product will also lead to a watering down of standards and believe one strict regime should be implemented and enforced immediately.

103. GE Free Nelson suggests that the continuing erosion of food standards will affect public health in due course, and thus is a government responsibility. Health bills in the longterm could easily prove to be a major consideration. We require a consumer board to deal with and advise regulatory bodies to be set up to identify and advise on public concerns. An independent panel of consumers without vested interests should be set up to consider and advise, and their advice made a priority status.

104. The maintenance of ERMA and a board to cover food standards (ANZFA) are considered necessary, since although the issues of viable living seed for foodstuffs is effectively assessed separately by both bodies, they both deal with different aspects of this technology. Studies have been made to demonstrate consumer concerns over GM foods by many now. *Attached is a study completed by Nelson Environment Centre in 1998, many others are also available some such as the Hortresearch 3 year study by Joanna Gamble that has already been submitted.* All show consumers have a marked preference for GE Free food.

105. Review and summary: Take the case of the UK banning of hormone beef, resulting as it does in the 100 million pounds paid in tariffs to keep the product out in order to ensure food standards are met, these are solely implemented in an aim to protect the public health. Tariff regulations imposed on nation states result in loss of sovereignty and the public

being force fed a product they have no chance to refuse. Are the WTO liable for any health problems?

106. 'On 13 July, the European Commission proposed kick starting its stalled approval process. It plans to apply new rules governing the labelling and traceability of GM crops…….2 weeks later the US threatened the EU with a formal complaint to the WTO , on the grounds that labelling GM products is an unfair discrimination against US goods and a 'restraint of trade'. This is based on reports by the Food and Drugs Administration (FDA) which believes that GM food is so safe that there is no need to even mention to consumers the process by which it was grown.' *The Ecologist Vol30.No6 Sept 2000*

107. GE Free Nelson submits that a public information programme be implemented allowing a correct procedure where a properly balanced perspective allows equal weighting for environmental, spiritual, health and other viewpoints.

108. To date the consumer has been hit by Genepool found to be serving up biased information courtesy of Monsanto ($27,000 paid by Monsanto, the rest government funded) and the Grocers Board supported by the RSNZ, both aiming to seduce the customer with their persuasive deceit, into acceptance of GE food.

109. Public information via biotech companies in liaison with government and manufacturers promulgating benefits rather than risk and being economical with the truth have given up trying to convince the public they are here to save the world and now seek to win customer acceptance in other ways.

110. 'A $US50 million advertising campaign that draws comparisons between their products and advances in medical biotechnology' being the latest hook, Dow, Du Pont, Pharmacia, AstraZeneca, Aventis, BASF and Novartis hoping in a 3-5 year campaign to win over North American consumers. Nelson Mail 5.4.2000

111. So far in New Zealand, all public information has been corporate and government funded, to the detriment of a more complete overall understanding. Scant reference is made to the risks, now becoming all too common.

112. The public must be informed with correct statistics and facts governing genetic engineering rather than information on unproven benefits for the future as promoted by the perspective of government, regulatory bodies, manufacturers, biotech industries, and supported by the media.

113. After years of biotech companies propaganda stating that they can feed the world a recent quote by Steve Smith from Novartis in *The Ecologist Vol30.No6 Sept 2000* ***"If anyone tells you that GM is going to feed the world , tell him that its not. To feed the world takes political and financial will, it's not about production and distribution. It may produce more for less and create more food but it won't feed the world.'***

114. Producing more food for less expenditure is also a myth and is already resulting in over production. *See GMO talk Jim Riddle*

115. The fact that public information regarding the risks of genetic engineering often comes solely from unfunded public advocacy groups, environmental groups and consumer groups warning of the possible dangers and environmental impacts that have now proven to be correct, should be of grave concern. *Thomas Lovejoy, a specialist in environmentally sustainable development with the Smtihsonian Institution and the World Bank, stresses that genetically engineered crops do affect the environment adversely. Boston Globe 26.9.00*

116. Contamination of the food supply via Starlink corn 12.10.00. Ag BioTech InfoNet, items related to the important U.S. EPA meeting Oct. 18-20, 2000 on scientific issues relative to the reregistration of Bt plant pesticides. Substantive comments submitted/posted by Consumers Union/Consumer Policy Institute focus in detail on allergen issues in the news today because of StarLink developments; comments submitted/posted from Union of Concerned Scientists focus on the benefits assessments issued by EPA, raising serious doubts regarding their accuracy and completeness. These items can be accessed at -- www.ucusa.org
117. At the recent hearing of Aventis, a canola safety manager from Aventis, Saskatchewan declined to comment on Starlink maize (stating he was unfamiliar with the safety concerns of this product), during cross examination from Greenpeace. On the same day it was released in the US that Starlink corn contamination was widespread within the US food supply. *http://www.biotech-info.net/UCS_Benefits_text.pdf*

Suggestions for improved procedures regarding GMO's

118. GE Free Nelson recommends an indefinite and fully legislated moratorium be implemented on trial crops, Genetic Engineering experimentation and libraries of genetic material. In the absence of an indefinite fully legislated moratorium being implemented, the implementation of a fully legislated 5 year moratorium should be put in place.

119. Government initiatives in the absence of a fully legislated 5 year moratorium that GE Free Nelson advocates would be a total ban on terminator and traitor technology in New Zealand.

120. GE Free Nelson feels that whilst noting that government departments have an undeniable interest in these decisions, it appears that public interest is effectively ignored in deference to applicants and agencies demands. Before the RCI was announced Marian Hobbs stated- "Discussions between a number of Government agencies and those involved in possible field testing or release are in progress right now. When we are satisfied with the agreements the exact details of the moratorium will be publicly announced."

121. GE Free Nelson suggests the New Zealand government refuse to acknowledge international law on the patenting of life, all patents for genetically engineered life forms

approved in New Zealand immediately revoked as detrimental to public health-*see Luke Anderson's book – Genetic engineering, food, and our environment. Scribe 1999 "Incyte, US gene sequencing company has applied for patents on 1.2 million DNA fragments. Incyte are part of Pharmacia and Upjohn. Another company Myriad Genetics holding exclusive patents linked to breast and ovarian cancer is reported to have sent letters to a number of laboratories ordering them to stop screening women for these mutations."*

122. GE Free Nelson asks the New Zealand government on behalf of all the New Zealand public, to forbid the patenting and sale of any indigenous species of New Zealand flora and fauna and prevent genetic material from any such organisms being incorporated into other life forms and any research or genetic material from such organisms removed from sale on the international market.

123. GE Free Nelson suggests the instigation of a liability fund, into which all companies concerned with carrying out any biotechnology activities in the environment are legally bound to contribute (Spain has such a fund) With the absence of any insurance liability, presently refused by major insurers, the public should not be forced to pick up the tab of resulting 'accidents' caused by this technology. Should a liability fund not be forthcoming the introduction of producer liability could be a viable alternative.

124. Both ERMA and ANZFA would benefit from the inclusion of more representation from the public as previously suggested. Composition of ANZFA Board – 1. ANZFA Chairman Michael Mackellar 2. ANZFA Manager Standards Peter Liehe 3. Minister of Health Senator Grant Tambling 4. Managing Director Ian Lindenmayer 5. Chief scientist Dr. Marion Healy. You will notice that there are no consumers advocates on the board -just business men.

125. **GE Free Nelson would like the government to bring a complete ban on all imported foods.** It is our belief that the result would be in increased health to the nation, thereby avoiding increased public health costs.

126. Full independent scientific risk analysis should be integrated in any ERMA or ANZFA rulings.

127. ERMA ISBC regulations to be continued, tightened up and policed, and ALL breaches to be prosecuted. All previous Genetic Engineering trial approvals reassessed. New and improved evaluation procedures adopted if future risk is to be avoided.
Copies of risk analysis attached.

128. GE Free Nelson requests a binding referendum to cover 4 distinct areas and truly evaluate public opinion with clearly stated easy to understand questions. It is the peoples democratic right to say no to this technology.

Environment

Food

Medicine

Human cloning

129. A public referendum should be set up after appropriate public education.

Section B Relevant Matters

The Warrant has set the Commission the task of receiving representations upon, inquiring into, and investigating, the matters set out in Section B (a) – (n) below

Section B (a)

B (a) where, how, and for what purpose genetic modification, genetically modified organisms, and products are being used in New Zealand at present

Section B (a) Summary

130. Food, environment and medicine with ideas for many other products in all areas. Trial crops are being grown regardless of risks, products are being imported and incorporated into unlabelled food. Transgenic animals including 2,500 approx. of the promised 10,000 sheep with human genes in the Waikato, these sheep purported to be for medical use, are putting the New Zealand public at risk from cross species infections. Cattle with human genes are also soon to be born.

131. Forestry also has had applications approved by ERMA.

132. We do not know the specific approvals under the old IAG agreement but there were a large number of these, how much contamination has resulted from these has not been made evident.

133. Many medical applications involve gene technology, and genetically engineered food is available at every supermarket.

B (a)

134. An international environmental group said on 9.11.99 that a growing number of GE trees were being cultivated without reliable safeguards and called for a global moratorium on their release. Brussels The World Wide Fund for nature said there were insufficient regulations and inadequate research into the environmental effects of plants modified with this technology. “It is far too early to make a safe and effective contribution to the forest sector.”

135. GE Free Nelson feels the medical aspects, particularly the use of human genes in transgenic animals to be an extremely risky procedure. *Dr.Mae WanHo GE Dream or Nightmare "The cloning and 'pharming' of livestock , the creation of transgenic animals for xenotransplantation and to serve as animal models for human diseases are all scientifically flawed and morally unjustifiable. They also carry inherent hazards in facilitating cross-species infections and recombination of viral pathogens. These projects should not be allowed to continue without a full public review."*

Section B (b)

B (b) the evidence (including the scientific evidence), and the level of uncertainty, about the present and possible future use, in New Zealand, of genetic modification, genetically modified organisms, and products
Section B (b) Summary

136. b) GE Free Nelson being a public advocacy group continually comes into contact with a huge variety of public opinion. Majority opinion shows that people have a high level of uncertainty regarding this technology, believing it to be of uncertain and unproven benefit, since promised benefits appear not to be forthcoming. The most widely voiced concerns involve a level of uncertainty to a greater or lesser degree about the following:

137. A feeling that genetic engineering will NOT improve their lives/environment/food or that of others.

138. A concern that they do NOT have choice of food, since labelling has not been forthcoming.

139. Medical uses also have their problems.

140. Government, regulatory bodies and corporate bodies cannot be trusted to do the best thing for the population.

141. Genetic engineering is all about experimentation and has nothing to do with an effective sustainable future.

142. Concerns about dangerous medical applications such as xenotransplantations.

B (b)

A feeling that genetic engineering will NOT improve their lives/ environment/ food or that of others.

143. Des Moines, IA. October 27-A call for legislation to require labels on all genetically altered products, and a revaluation of public policy towards genetically altered life

forms. We need to devolve power from corporate agribusiness to the farmers and consumers who should rightfully control food production in this country." Ralph Nader

144. The worlds most powerful leaders labelled GE food alongside AIDS as one of the greatest threats facing the planet, agreeing a new global inquiry into the safety of GM foods at the G8 summit in Cologne. *The Observer 20.6.99*

145. A top grain company investigated by the FBI was found to have illegally sprayed GE organisms (ordered for correct disposal by the EPA) on to feed wheat for export to the UK between 1992 and 1995. Whether this feed could have had an effect on prion disease in cows is unknown. (Report from Michael Perelman)

146. The majority of people who talk to us about genetic engineering, are not at all happy with the situation as it stands today. They do not feel as though their concerns are being taken into consideration and will be acted upon. They are very concerned about their environment, many thousand already signing petitions asking the local council and national government to respond to their requests to protect Nelson and its surrounding area from a technology on which scientific opinion is still divided and highly controversial as well as confrontational.

147. Many are aware of the way that the technology is espoused as some kind of panacea to world ills and forced upon third world countries, many of whom are reacting against the introduction of the crops, e.g. burning of GE cotton in India. CARE provides food aid to 66.05 lakh "beneficiaries" distributed in the states of Andhra Pradesh, Bihar, Rajasthan, Orissa, Uttar Pradesh and West Bengal. The food includes corn-soya blend probably also contaminated by GM ingredients. Besides potential risks of food safety, this so-called food aid is culturally totally inappropriate. Policy documents admit that the corn-soya blend is "cooked with other food items such as jaggery and condiments to make food tasty and acceptable", which implies that otherwise the food aid is untasty and unacceptable.

148. Many people are also aware of the smear tactics used by corporations to damn opponents of the technology as well as those involved in educating the public on the risks. One such scientist was Arpad Puztai, accused of whistle blowing, Dr Shiv Copra helped expose the risks of BGH Bovine growth hormone to the public. A drug evaluator for Health Canada he was suspended without pay. Chopra was one of 200 Canadian Health scientists to speak out against the erosion of safety standards at Health Canada.

149. Over the past few years promotional campaigns have been fought worldwide by companies, some have been taken to court e.g. Monsanto charged in the UK with breaches against the British Advertising Standards for misleading advertising.5.4.2000 A coalition of the major biotech co.s Dow, Du Pont, Monsanto, Astra Zeneca , Aventis , Novartis and BASF are putting together an US$50 million advertising campaign to win public acceptance in the US.

150. **A concern that they do NOT have choice of food, since labelling has not been forthcoming.**As aforementioned labelling, although 'substantially modified' foods were agreed by ANZFA in July 1998 as requiring labelling, has still not materialised over 2 years later. At that time Agriculture Minister Lockwood Smith said ANZFA standards promised the 'highest level of safety assurance' with GE foods having to pass rigorous assessments before being sold to the public. We are now aware that regulations regarding GE foods are based on FDA approvals and often deemed inadequate.

151. Continued public opposition to the lowering of standards with regards to organic, non GE foods, has resulted in a public demand to keep standards high, US government attempts to include GMOs in organic standards failed after hundreds of thousands of public submissions.

152. As a result it appears that the onus may be shifted and put onto the smaller producers of organic and non GE foods to prove their produce does not have a GE composition. A ridiculous outcome further compromising the organic industry.

153. **Medical uses also have their problems.**

154. There is much proof that there are many problems in the medical applications of Genetic Engineering. Much as we would all like to believe that biotech solutions could be effective for all problems medical and otherwise, unfortunately this is not so.

155. In the United States, more than 80 genetically modified drugs are about to come onto the market. What stage in the approval process are these drugs at? Recently the approval of a flu drug Relenza, although being voted against 13- 4 by the FDA was given approval.

156. Drug advertising is prohibited in various parts of the world, in New Zealand, no such laws exist and often new drugs are regularly and routinely advertised on television by subtle PR companies whose emotional adverts create widescale demand.

157. When new developments in drugs are identified, these are often promoted in the media, often on the main news, again creating demands for products which may not have even been safety assessed or approved at that point. Eg Lyprinol.

158. Many drugs have serious side effects, the more cynical of those opponents to Genetic Engineering would suggest that pharmaceutical / biotech companies promote their drugs and food to create more ill health to ensure further profits later. Many drugs are produced to combat dysfunctional, addictive and disempowered behaviour and its associated diseases, when these may well be better addressed by remedying social problems.

159. Corporate promotion of drugs, appears to be rife amongst toady's health professionals. Health professionals, are invited to participate in conferences worldwide, they are given all expenses paid trips for themselves and their wives to different parts of the globe, where lobbied by drug companies they are exposed to persuasive corporate advertising.

160. The issue of vaccines has always been controversial, there are those who believe vaccines to actually undermine children's health, damaging brain and immune function, and are also linked to numerous other diseases. Dr. Godfrey, Bay of Plenty Environmental Health Clinic, says 'health authorities have conducted no proper studies with control groups to prove the benefit of the vaccines' and believes they impair the immune system.

161. Gulf War syndrome, affecting veterans of the 1991 conflict, is linked to the multiple vaccines given to the soldiers, according to British researchers. *19.5.00 Nelson Mail*

162. Gene therapy has also proved disastrous so far, the FDA investigating Jesse Gelsinger's death shut down all 7 pending trials at Pennsylvania's Inst. For Human Gene Therapy, after failure to follow numerous procedures. These included failing to tell patients the risks! Alerted when public reports emerged through the NIH, biotech companies have been calling for less disclosure to the NIH.

163. The medical use of gene therapy, the main reason given for collecting data from human DNA also now appears in doubt.

164. As Dr Richard Nicholson said in the *Bulletin of Medical Ethics*, "Ten years ago we were told that gene therapy was the greatest things since sliced bread. Today, its record stands at cures nil, deaths five, major adverse effects at least a thousand."

165. The DNA of New Zealander is stored in the pinprick blood samples taken by hospitals at birth for over 30 years, we do not know what use is being made of these resources. Gene libraries result, are these genes patented in one form or another? Could they be used to isolate genetic information, which could further impact on human rights giving insurance companies access to personal information which could be detrimental to the long term interests of the public. Both the Auckland council for civil liberties and the commissioner of the Privacy Commission have concerns over an apparent legal exemption in the Privacy Act

166. **Government, regulatory bodies and corporate bodies cannot be trusted to do the best thing for the population.**

167. Many people are really concerned that government does not appear to be making democratic decisions regarding genetic engineering. This is particularly in response to an ongoing refusal to ensure labelling is implemented. Unfortunately it has produced a good deal of scepticism. The increasingly complicated range of international laws and patents regarding GMO's and the products thereof make it increasingly difficult for the ordinary 'man in the street' to access.

168. If the government cannot take adequate responsibility for the health of the nation, regulatory bodies will make decisions as a result that may well reflect a similar perspective. As was the case last year, prior to the WTO meeting in Seattle, the EU put the precautionary principle in place to give priority to public health first, international

obligations taking second place as a result of this directive. GE Free Nelson would like to see the New Zealand government act in the same way to protect its citizens health.

169. **Genetic engineering is all about experimentation and has nothing to do with an effective sustainable future.**

170. Many people feel that to a certain degree they are 'unwitting guinea pigs in an experiment' being played out by big business in collusion with the government. Some feel it to be too late to even try to protect themselves, suggesting that environmental pollution caused by Genetic Engineering is inevitable. This clearly demonstrates the full extent of the disempowerment felt by many, at the way our lives are controlled by international laws unable to be accessed by any but the smallest majority.

171. Most people also feel that an organic future is far more sustainable than any involving genetic engineering. Their understanding of effective strategies to ensure continuation of safe food production in this country does not involve the wholesale adoption of genetic engineering.

172. **Concerns about dangerous medical applications such as xenotransplantations.**

173. Many people are extremely concerned about the use of animal organs for xenotransplantation and the possible impact of this on human health.

174. 'Western health authorities have imposed a moratorium on all xenotransplant surgery after a special study proved that viruses jump species.. Transplanting animal organs into humans could therefore trigger a global pandemic of deadly new diseases.' *The Ecologist Vol30.No6 Sept 2000*

175. Most find it difficult to equate the use of human DNA in animals with purported potential medical benefits and instead fear the mixing of human DNA may well result in cross species infections, the possibility and impact of which cannot yet be fully determined.

176. BSE – In Britain public health authorities are fearing a latent epidemic of CJD, they have started up a compensation scheme to care for people suffering from this disastrous illness which so far has killed 78 people. Death is often protracted over several years during which there is a rapid onset in inability to function and blindness. *Dominion 27.10.00*

177. **Genetically modified organisms** – The majority of the general public find the current field trials (both animal and plant) in New Zealand unacceptable.

178. The purely speculative nature of the applications does not engender confidence but merely anxiety surrounding the possibility of accidental genetic pollution via these trials. For example, most people consider a 'trial' of 10,000 transgenic sheep with human genes outrageous. PPL Therapeutics main reason to set up in New Zealand was because the regulations are lax and the land cheap (*Sunday Times 9.1.2000*) describing the cows with human genes. It would be safe to assume that the British public would never have allowed this type and size of trial in the UK.

179. Other trials that do not meet with the approval of the public of Nelson are the salmon and the pine tree trials.

180. **The GE salmon trial** was geographically the Genetic Engineering trial that to date stood to impact most on the health and environment of Nelson. This trial was approved under the old IAG rulings. *14.8.00 Nelson Mail In April the company conceded that fish bred in the trial had been spawned with larger heads than normal.ERMA stated that although they had complied with the voluntary requirements in 1994, it was unknown whether the trial complied with the new act.* Although Genetic Engineering activity has now ceased at King Salmon, it has not been confirmed whether any viable hereditary GE material has entered the wider environment.

181. In the *New Scientist 4.12.99 research from Purdue Univ. Indiana PNAS /Nov 23 ,1999 Vol.96/.24/13853* William Muir, discovered that could one GE fish be released or escape into the wild, extinction in the environment would be possible before long.

182. 'Fears for wild salmon unfounded,' said environment risk management authority, ERMA.. 'Overseas fears that salmon genetically engineered with a human growth gene could wipe out wild populations were unfounded in this country.*'7.12.99*

183. On 24.2.2000 Marion Hobbs was asked for assurance there had been no release of GE material from New Zealand King Salmon genetically engineered salmon. She could not give that assurance but stated that ERMA were responsible for ensuring adequate containment. However an ERMA paper of 4.8.99 released to the press stated "It is not clear whether the existing controls are sufficient to ensure that viable fish, eggs or sperm cannot escape from the trial site." .An ERMA response, to Green Party Official Information Act request, said ERMA files didn't provide an answer to the question on whether fish or eggs have escaped.
The agreement with King Salmon was made prior to ERMA's existence under a voluntary agreement with the IAG. ERMA may not be able to be held responsible for that agreement therefore, prompting Jeanette Fitzsimons's question which referred to the previous government who are responsible for any shortcomings.

184. On 23rd Feb 2000 Bas Walker, ERMA's CEO said that reassessment of King Salmon's experiment ensured its voluntary safeguards complied with new legal requirements. This trial under a voluntary agreement has never had to go through the full approval process of ERMA where public submissions produce research and new evidence of risks which may not have been previously considered. Without approval by this more strenuous process, any potential dangers are not raised, evaluated and properly assessed. ERMA often appear unaware of current research of the dangers of Genetic Engineering on our environment.

185. GE salmon were also found to have been disposed of at a local refuse dump. GE Free Nelson finds this wholly unacceptable and would suggest that rulings ensuring all transgenic animals be autoclaved should be imposed on companies carrying out this kind of experimentation.

186. New Zealand Salmon have now terminated their GE experimentation, GE Free Nelson would hope and expect any further experimentation to be avoided. Recently, 50,000 of their kebabs were eaten by the thousand at the Olympic games. To maintain consumer demand experimentation with GE fish should not be reconsidered in the future.

187. In recent communication with William Muir over GE salmon he made the following comments:

188. *'Environmental risk posed by biotechnology needs to be addressed by rigorous scientific testing, much like a new drug, before it hits the market. But, regulators need to be concerned not only with health risks, but also those to the environment.*
My research shows that natural selection can result in the extinction of species. It has been suggested by others that this process can occur naturally as a result of a conflict between viability and selection, and been hypothesized to have resulted in extinction of some species in evolutionary time. Thus it is not a new process, however, what the research does show it that Genetic Engineering can trigger such a process to take place. Attached is a copy of my paper, this should be sufficient evidence for the commission.'

189. In his report Muir found that larger, faster-growing biotech fish are more likely to succeed in mating than conventional fish. But the offspring of those biotech fish are genetically less well adapted to survive. Consequently, Muir believes, biotech fish could quickly decimate a fish population by their increased ability to produce damaged young. He was reported as saying "It really surprised me . I went into this thinking that transgenics are not a risk."

190. *Another comprehensive Greenpeace report from Canada outlined in detail in 1992 the danger of genetic pollution on the worlds ocean ecosystems.* This report would have been accessible to the previous government.

191. Recently in British Columbia, Canada over 32,000 farmed Atlantic salmon escaped into the wild. The pen belonged to the Norwegian based Solt Sea Farms (SSF),one of the worlds largest producers of Atlantic Salmon and trout with sales amounting to US$72.2 million in the first six months of 1999. *The Ecologist, Vol 30 NO7 October 2000.*

192. *The possibility of unpredictable environmental disruptions, similar to those caused when non native species invade ecosystems cannot be ruled out. US regulators interviewed in May could not point to any laws specifically governing the use or release of these salmon. A/F protein Inc. have as yet done no environmental impact studies identifying ecological risks.*

193. *The U.S. Food and Drug Administration is at present reviewing an application to sell GE salmon, a decision that will likely influence the fate of scores of other biotech animals being brought to life in dozens of similar labs around the world for humans to eat.*

194. *A/F Protein, an American-Canadian company says there is nothing mysterious about what it is doing, and has been unusually public about its efforts and plans. Some visitors*

received samples of the salmon – which looks and tastes the same as other farmed fish – but the Canadian government put a stop to that.

195. *"There are so many difficult questions raised by these fish, and we just don't know the answer to many of them," said Robert H. Devlin of Fisheries and Oceans Canada, who has also been raising and studying biotech salmon in British Columbia since the early 1990s. He said that research is underway worldwide to genetically modify at least 25 aquatic species, ranging from flounder and carp to lobster and shrimp.*

196. *"We need to know more about possible environmental impacts, since they could be substantial," he said. "There are real potential benefits here, but I haven't seen the scientific studies showing that the risk is under control."*

197. *The stakes are especially high in the case of the salmon because both wild Atlantic salmon and some species of Pacific salmon are depleted or even officially endangered – the result of decades of overfishing and habitat destruction. These wild fish now share many of the same waters as the millions of salmon growing in fish farms along the northern Atlantic and Pacific coasts, and many scientists are concerned about what might happen if the engineered salmon escape.*

198. *Salmon farmers and their organizations worldwide have also voiced strong opposition to the salmon, calling them the solution to a problem that does not exist. Of even greater concern, the salmon farmers worry that consumers won't want biotech fish, and their entire industry could be harmed as a result. October 17, 2000 Washington Post*

199. Ballast- the port of Nelson has many ships coming into port from around the world, the discharging of ballast tanks has already been blamed for some serious environmental problems and in the light of experimentation with marine species, we hope that GMOs will not be distributed around the ocean by this means

200. GE Free Nelson believes the only way forward to assure both the safety of fish as a foodstuff and the continuation of the genetic integrity of wild species in the wider environment is to avoid all experimentation and involvement with genetically engineered fish.

201. GE Free Nelson sees this as a commercial benefit in the long term, since people world wide are rejecting foodstuffs produced by this kind of technology.

Pine trees.

202. As with GE Free fish, GE Free Nelson sees many benefits of remaining with GE Free forestry. World demand for Forest Stewardship Council (FSC) products, (FSC demand Genetic Engineering is not involved in the growing of timber), are continuing to increase as customers become more aware and reject timber grown as a result of this new technology.

203. As yet although there are no significant premiums for FSC products - the key issue is access to markets that are now demanding FSC products. The FSC market in US and Europe for FSC products is now estimated to be over US$25 billion, with over 30,000 current product lines already FSC, the three largest 'do it yourself' store chains in the world, including Home Depot and Lowes, have a policy of a preference for FSC. The largest furniture retailer in the world, IKEA, has a similar policy, as do hundreds of other major corporates in the US and Europe. *Grant Rosoman, Forests Campaigner, Greenpeace Pacific. Visit FSC website www.fscoax.org*

204. *Experimentation with GE trees in the US to date. In North Carolina and Minnesota, experimental trees containing novel woody fibres can apparently be digested into pulp without the tons of toxic chemicals that today poison the rivers around paper mills. These trees and others are growing on scores of test plots around the world, part of a little-noted biotech revolution in forestry that experts predict will hit its commercial stride in the next five years.*

205. *Trees can live hundreds of times longer than the biotech food crops already on the market, critics note. That makes it difficult to predict the long-term impact of genetically altered trees on the countless species that depend on them, including the soil-dwelling fungi and microbes that are the foundation of the planet's terrestrial food chain. Biotech trees, to which scientists have added genes from bacteria, chickens and even humans, may well provide poor habitats for beneficial insects and birds, transforming biologically diverse woodlands into sterile forests.*

206. *Genes conferring resistance to leaf-chewing pests and chemical herbicides, which researchers are adding to tree DNA, may spread via windblown pollen to related tree species, creating woody weeds with unnatural advantages over their ancient cousins.*

207. *Increasing Production*
In the past 2 or so years, about half the 130 outdoor tests of genetically modified trees have got the go-ahead from the Agriculture Department's Animal and Plant Health Inspection Service (APHIS), which has primary responsibility for regulating bioengineered trees in the US. The first applications for permission to grow large commercial tracts of the new trees are expected to come around 2005.

208. *Dozens of additional outdoor tests are underway in at least 16 countries, notably Chile, Uruguay and Indonesia, according to the World Wide Fund of Britain, an environmental group that has called for tighter regulation of tree engineering and a global moratorium on commercial releases.*

209. *Many field tests now say simply "CBI," for "confidential business information," in the column that is supposed to describe which gene is being studied and which organism it came from.*

210. *Scientists are also learning how to block the growth of flowers, pine cones and seeds in trees to focus more of the plants' energy on wood fiber production and to keep novel packets of DNA from spreading to other trees--a concern of corporate patent lawyers who don't want to lose control of their proprietary genes.*

211. *The world's countries have pledged to reduce CO2 emissions under the terms of the pending Kyoto Protocol. Unable to achieve its goals, there is talk of creating a system of "carbon credits" that might allow countries with many CO2-gulping forests to sell their excess air-scrubbing capacity to nations falling short of their clean-air goals. This is supported by some oil and automotive industries, including Japan's Toyota Motor Corp., which has its own forest biotechnology program.*

212. *Low-lignin trees may prove especially vulnerable to insect infestation, which could harm surrounding forests. If low-lignin genes do spread, then surrounding trees might degrade faster than usual and deprive many species of the crucial habitat now afforded by slowly rotting wood.*

213. *Opponents also predict that plantations of fast-growing trees will require large amounts of water, fertilizer and pesticides, undercutting their usefulness as a hedge against global warming. They're asking whether genetically altered trees will cause allergies in people not usually bothered by tree pollen. And they wonder what will happen to the birds, insects and other wildlife that depend on tree pollen, nectar and seeds if scientists plant large expanses of sterile trees whose reproductive energies have been diverted to fuel extra growth.*

214. *Regulatory standards are not tough enough. The restrictions on outdoor testing of genetically modified trees are virtually identical to those already in place for annual crops. In most cases, growers must simply sign a statement promising they will follow general guidelines to protect the environment. "The current rules are not very stringent and are not well policed, and there are a lot of different risk issues that ought to be addressed thoroughly before these trees get commercialized," said Jane Rissler of the Union of Concerned Scientists.*

215. *Unfortunately, federal funding of experiments to assess risks of engineered trees is scant. Federal regulators say they are on top of the issue "USDA recognizes that there are environmental, scientific and other issues that need to be carefully considered and addressed before genetically engineered trees are used commercially," said Michael Schechtman, the agency's biotechnology coordinator. When the USDA receives its first request for commercial approval of a biotech tree, he said, it will be considered "in an open and public process." A special committee of the National Academy of Sciences to investigate the risks and benefits of biotech trees.*
Extracts from © 2000 The Washington Post Company, Aug 3rd 2000

216. Several GE tree trials have been permitted in New Zealand, both fruit and pine trees approved under the old IAG approvals and more recently Carter Holt Harvey got given approval to carry out GE pine tree research. At present changes to the corporate structure

in New Zealand in companies most involved in forestry are unclear. A venture set up between Westvaco, International Paper, Carter Holt Harvey, the FRI and Fletcher Forest is in doubt and rumours of a stand alone company being set up in its place may be a possibility.

217. The government backed, public sponsored FRI appears to be the main player in the GE trees stakes at the moment. On 20.8.99 a $500,000 3 year project was entered into with Chile to fight moths decimating the forest with advanced genetic engineering techniques to genetically engineer them to withstand the pine shoot tip moth.

218. GE Free Nelson believes that there is no future in genetically engineered pine trees and hope that, in order to ensure the protection of human health and the potentially damaging effects of GE pollen, as well as the protection of the environment and a guaranteed world market offered by the Forest Stewardship Council; genetically engineered trees must not be grown in New Zealand.

219. In Nelson surrounded as we are by 95 thousand hectares of pine trees, many people already suffer from allergies to a pollen that carpets everything for miles around including waterways.

220. GE Free Nelson therefore advocates that GE pine trees are not introduced into the Tasman/ Nelson district.

Section B (c)

B (c) the risks of, and the benefits to be derived from, the use or avoidance of genetic modification, genetically modified organisms, and products in New Zealand, including:
the groups of persons who are likely to be advantaged by each of those benefits
(ii) the groups of persons who are likely to be disadvantaged by each of those risks
Section B (c) Summary

Bc **Summary**

221. GE Free Nelson considers there to be no benefits of the use of biotechnology and products made thereof, to the large majority of the New Zealand population, their food supply and their environment. GE Free Nelson considers benefits will only be to those involved in the biotech industry and its associated industries.

222. GE Free Nelson considers there are considerable benefits to the public and environment of New Zealand in staying GE Free. There are also huge benefits for quality agricultural produce both organic and conventional. GE Free crops and seed would stand to gain from premiums in a progressively polluted world environment where segregation and isolation have not proven effective. *Dan McGuire of the American Corn Growers Assoc. stated*

"The increased cost for segregating GMO corn from non GMO corn will add another financial stress" Boston Globe 26.9.00

B (c)(i)

Groups of people likely to be advantaged by the use of Genetic Engineering (perceived benefits)

223. GE Free Nelson believes that any benefits relate solely to those businesses, and their employees directly involved in biotechnology issues.

224. GE Free Nelson believes that any benefits to the government are in the partial corporate financing of public research via institutes and universities.

225. GE Free Nelson believes that many benefits are to those who have a power of authority over public, corporate, patent and global law eg. lawyers, patent lawyers and regulatory agencies.

226. **Risks of avoidance of Genetic Engineering- NONE**

227. **People advantaged by the avoidance of Genetic Engineering**

ALL. Farming communities, organic farmers, public health and food supplies, honey producers, organic suppliers, environmental health, tourism services and tourists, the general public of New Zealand and by the provision of GE Free seed, medicine and food, people in the rest of the world.

228. Statement from Nelson City Super Value 69 Collingwood St Nelson. 28/10/00
"To Whom It May Concern, I am writing to express my support for the organic food industry. I own a supermarket in Nelson. During the past year we have studied Customer demands and their response to the introduction of organic foods. I am very pleased to report that we have received fantastic public support. This has seen a range of over 250 certified organic products reach the shelves of our supermarket in less than a year. We were so confident in the initial sales we budgeted several thousand dollars to promote and highlight the availability of certified organic product to the people of Nelson. I have personally received hundreds of verbal and written thankyou's for providing an option to choose between organic and non-organic foods.

229. Our organic sales for the first year are expected to reach 375k, this is from a very low base. I expect growth to continue as a lot more range becomes available. It is also interesting to note big industry names such as Heinz Wattie and Twinings bringing out organic product, I am sure other large food producers will follow. The Food town Supermarket chain in Auckland is now setting up organic sections in their stores. This is great news and shows New Zealanders demand the right to know they are eating safe and nutritious food. Yours Sincerely Mark A'Court Owner /Manager."

230. Statement from Jules Gray, Health 2000 " I have difficulty accepting that scientists can foretell the effects of genetic engineering on future generations."

231. Statement from Ray Cannell, Mountain Valley Honey, "Genetic engineering will impact on the whole of the ecosystem, these 'professional' scientists don't really know what they are doing. One little mistake and they will stuff it up – another problem for future generations to live with!"

232. *Aug.9.98 Independent Beekeeepers announced GE honey was being produced by default as bees came into contact with GE crops and pollen. Also stated 'Many GM strains have an antibiotic marker gene which could lead to extra antibiotic resistance.'* This in turn increases demand for New Zealand honey, present economic value NZ $8-10 million .See Hugh Campbell. No first release.

233. Aromatherapists, homeopathists and people working with flower essences and other natural medicines.Statement from Joan Luff , Member of New Zealand Council of Homeopaths. "I use both flower essences and standard homeopathic remedies that are plant based for my treatments. There is a major threat to the purity from genetic engineering, given that homeopathic remedies work on the principle of vibration/resonance of the plant with the individual. It is extremely important that the exact known resonance is maintained."

234. Statement from Tracey Phillips, Ancientessence, " As an aromatherapist, it is extremely hard to source good quality and pure essential oils. Aromatherapy oils work not only on the sense of smell but via a vibration, through absorption into the skin. Messing around with natural plants/flowers will change the structure of these oils molecular structure and could cause catastrophic effects on the body, not to mention the whole natural health industry. Their purity is essential."

Risks of use of Genetic Engineering Groups of people likely to be disadvantaged by the risks

235. GE Free Nelson believes there to be significant risks to the health of the environment and the public; farming community, agricultural exports and safe food; and all living organisms both in New Zealand and further afield.

236. GE Free Nelson believes there to be significant risks to the general public from the actions of multinationals and global laws regarding Genetic Engineering, these deny national sovereignty and promote control of the food supply.

237. GE Free Nelson believes there to be no gains to farmers by the growing of GE crops with consumer demand at an all time low, unwanted crops, if they realise the 'promised' yields will drive down already low prices.

238. GE Free Nelson believes there to be significant risks to society from biotechnology particularly the proliferation of biological weapons, pathogens and other invasive organisms.

239. GE Free Nelson believes there to be significant risks to the peoples of the world from the patenting of life forms, removing as it does our heritage from ownership by the peoples of this planet and reducing life forms to mere products to be controlled rather than in the stewardship of mankind.

240. GE Free Nelson believes there to be significant risks to all citizens and life forms judging by past record of new technologies to date.

B (c)(ii)

Groups of people likely to be disadvantaged by the use of Genetic Engineering

241. GE Free Nelson believes there to be no benefits of this technology to the general health of the public and future generations for the foreseeable future.

242. GE Free Nelson believes there to be no benefits of this technology to the environment and standards governing the preservation and sustainability thereof.

243. GE Free Nelson believes there to be no benefits of this technology to safe, healthy food and food standards legislation.

244. GE Free Nelson believes there to be no benefits of this technology to the overall and continued prosperity of New Zealand.

Groups of people likely to be advantaged by the risks (the perceived risks will benefit them, although a risk to all)

245. GE Free Nelson believes those advantaged by the risks of Genetic Engineering relate solely to those businesses, regulatory agencies and their employees directly involved in assessing the risks of biotechnology issues. More scientists at present losing their jobs if not involved in the biotech sector.

246. GE Free Nelson believes those advantaged by the risks to be the pharmaceutical companies, with many more sick searching for a cure and gene therapy patent holders eg. breast cancer screening

247. GE Free Nelson believes those advantaged by the risks will be those who ‘clean up’ after the event if biotechnology continues unchecked. We believe there to be significant risks to the public from the inappropriate use of bioremediation trials.

248. GE Free Nelson believes those advantaged by the risks to include those who wish to use biological warfare to advance their aims either warfare or terrorism.

Section B (d)

B (d) the international legal obligations of New Zealand in relation to genetic modification, genetically modified organisms, and products
Section B (d) Summary

249. **B (d)** GE Free Nelson believes it still possible to negotiate a position in relation to Genetic Engineering, and GE products, if we have the political will. The health and safety of all New Zealand citizens should be the first priority and take precedence over monetary gains.

250. GE Free Nelson also considers that at this time it is important to show solidarity with other countries aiming to protect their own interests in the face of increasing global control via the WTO rulings and other trade regulations.

B (d)

251. Response

Section B (e)

B (e) the liability issues involved, or likely to be involved, now or in the future, in relation to the use, in New Zealand, of genetic modification, genetically modified organisms, and products
Section B (e) Summary

252. **B (e) The liability issues** likely to be involved in the future can only be surmised. At present we have a situation in New Zealand where liability is neither assumed by the company, or the regulatory agency in the case of field trials leaving the New Zealand public to pick up the bill for any ensuing problems of genetic pollution.

253. GE Free Nelson considers that the onus should rest on all companies to prove the safety of their products. Companies should be forced to undertake a review of their practices, ethics and responsibility to wider society.

B (e)

254. Of the many laws covering Genetic Engineering issues, there are many that have loopholes which can be exploited and may prevent full liability ever being assumed by the corporate which causes the damage. In a climate of mergers and takeovers, and whilst companies are working with perceived profit and clever accounting, the public cannot be fully protected unless strict rulings covering liability issues be proposed and adopted. Insurance companies have refused to insure genetically engineered crops leaving the public with the problem of uncontrollable, uncontainable pervasive GMOs in our environment.

255. *"... you cannot recall a new form of life…It will survive you and your children and your children's children. An irreversible attack on the biosphere is something so unheard of, so unthinkable to previous generations, that I could only wish that mine had not been guilty of it." Erwin Chargaff, Biochemist.*

256. What figure can you put on the loss of life? How much life will we lose, or will become genetically bastardised? Nobody knows for sure, although with the reported incidences of genetic pollution so far after only 4 years of commercial production (first GE crops commercially grown in 1996), a computer model could no doubt get a rough idea based on the number of plants, animals and gene constructs released so far and number of organisms and foodstuffs impacted by these GE products. This could then be applied to the prospective 2200 products shortly to be put on the market by companies designing for designings' sake, with less and less regard for the laws of nature and any potential impact.

257. *'Fines up to now have in some cases been derisory. They have failed clearly to match the seriousness with which society now regards pollution.' Michael Meacher UK minister for the environment. The Ecologist Vol30.No6 Sept 2000*

258. Full environmental impact reports, funded by the company proposing any trial, should be mandatory for any application for GMO trials approved by ERMA.

259. GE Free Nelson believes it to be an ERMA responsibility to make the correct decisions for the protection of the New Zealand environment and believe that mandatory prosecution for breaches of unauthorised research and accidental releases be immediately implemented. How much public money is used to finance ERMA's decisions, the company concerned with the application should bear the full cost since GE Free Nelson considers GE trials merely set a precedent for future release applications. The use of $50,000 of taxpayers money to assist Monsanto implement its wheat trial application is wholly unacceptable.

260. Liability funds- these have been implemented in some countries to protect against possible environmental damage eg. Spain. However, companies suggesting price increases will automatically result, successfully manipulate public opinion against such funds.

261. A similar tax to the Tobin tax, to be paid into an international fund, on any patent being taken out by a company, patented crop grown or transgenic animal produced.

262. Since most corporations involved in food production appear to hide behind the fact that health impacts cannot be traced and therefore proven, it seems logical to suggest that full labelling of GE food products be implemented. An enforceable liability for companies producing GE products to ensure clear and detailed labelling is imperative. If they consider products so safe why are all producers and regulatory agencies so anxious to avoid labelling at all costs?

263. The liability issues arising from the medical uses of genetic engineering are immense and extremely varied. Human cloning and use of human DNA will involve as yet unidentified liability issues. Lawyers and corporates are at present making the rules, as the public trails along behind attempting to make sense of the 'legal ease' and at the same time suffering information overload trying to protect their democratic rights from total annihilation.

264. With 80 new products due for release in the US, pharmaceutical companies should find themselves liable for any adverse effects induced by the prescribed use of these drugs.

Genetically engineered tryptophan killed through over expression preventing the 'switching off' of serotonin production, tryptophan in nature helps the release of serotonin. Many people have been left permanently maimed as a result of using this product.

265. HIV was first observed in the late 70s, the time of the first GE experiments. Coincidentally for the first time in recorded history, HIV jumped species. Allegedly an undislosed company sponsored GE trials,it is believed by some that the HIV virus was chosen as a vector to cross the species barrier. *Healthy Options August 1999 Dr. Marina Orlova, biophysicist.*

266. Biotech companies continue to sing the praises of the success of GE insulin whilst 40,000 Australian diabetics and 10% of British diabetics suffer serious side effects often not realising their blood sugar is getting low and suffering unexpected hypos, a Swiss study has recently been carried out linking this problem with road accidents. deaths.http://members.tripod.com/diabetics_world/Synthetics *and*Accidents..htm

267. At least a jumbo jet load of people die every day from the side effects of conventional pharmaceuticals, the use of compounds derived from transgenic animals, along with gene therapy experimentation and xenotransplantation (should it continue) will undoubtedly result in further problems. … *Change of heart, William Novak.*

268. Company liability has, except in very few instances, (apart from recently with the tobacco industry) never accepted liability for any disasters pertaining to their products. It appears now that the government too as a promoter of this technology through FoRST grants to CRI's, Universities flagrantly disregards public concerns re. Genetic Engineering. Not only does it continue to assist corporate interests to achieve cheap research but also firmly places the liability in the hands of the government and thus the public who are paying for it now and could well end up paying in the future should the effects of Genetic Engineering be detrimental.

Section B (f)

B (f) the intellectual property issues involved, or likely to be involved, now or in the future, in relation to the use in New Zealand of genetic modification, genetically modified organisms, and products
Section B (f) Summary

B (f) **Intellectual property rights.**

269. GE Free Nelson believes lifeforms should not be patented, they should not be made available for ANYONE to own, they are our joint heritage. The symbiosis and organization of cells from different sources now proven, mitochondria having been established as developing from bacteria into cell mitochondria, We have a common cellular structure belying the fact that we are all genetically closer to many other species on this planet than we previously thought possible.

B (f)

270. Set by the precedent of a GE bacteria patented in 1980, patents on life forms last year reached a total of nearly 700, 56% of them American owned. This was before the human genome project.

271. New Zealand should take a stance against the manipulation and corporate control of genetic material and the patenting of life forms.

272. Take Vitamin A rice developed as it was by public sector world wide research, after 10 years and many thousands of dollars, this wonder rice was handed on a plate to the biotech co. Astra Zeneca. The rice was covered supposedly by 70 patents, when Rafi investigated the patents, they found only 12 were recognised in Vitamin A deficiency countries. Of the 12 they were owned by Astra Zeneca-1 Monsanto-1 Aventis-2 Du Pont-3 (apparently all identical) Of the 60 countries that suffer serious VAD, 35 recognise no patents.

273. Maori taonga have already been stolen, a Pohutukawa having been patented by a French company.

274. Medical issues involving property rights GE Free Nelson believes to be fraught with ethical and privacy issues. A few examples include the case of a US citizen with a rare cancer whose cells were stolen and researched without his permission the stem cell patent- *Luke Anderson P 90 Genetic Engineering Food and our environment.*

275. Finally what access has been or may in future be granted to medical researchers wishing to access the heel prick DNA data. The blood from heel pricks taken from newborns was first stored in 1969 and has been cited in murder cases in New Zealand.

276. Biopiracy should not be permitted in the 21st C, smacking as it does of corporate control, all patents on life forms should be recinded forthwith.

Section B (g)

B (g) the Crown's responsibilities under the Treaty of Waitangi in relation to genetic modification, genetically modified organisms, and products
Section B (g) Summary

B (g) **The Treaty Of Waitangi (Te Tiriti)**

277. GE Free Nelson considers that although it is an international premise that indigenous people have rights prior to those of any incoming population, the Crown appears to have had continual problems over the years with fulfilling its obligations. The case of genetic engineering in Aotearoa, is no exception.

278. Denying its responsibilities to future generations for the foreseeable future, the government appears to take very little interest in protecting water, plants, animals and the environment. The genealogy of Maori is threatened by corruption by genetic engineering.

279. GE Free Nelson believes the Crown should respect Maori and their beliefs in the mauri of taonga.

280. *"Whakapapa is the most essential cultural value that maintains the mauri of all living taonga." Jacqui Amohanga, A tangata whenua view on genetic engineering.*

B (g)

281. Response

Section B (h)

B (h) the global developments and issues that may influence the manner in which New Zealand may use, or limit the use of, genetic modification, genetically modified organisms, and products

Section B (h) Summary

B (h) **Global developments**

282. Set as a priority by government and economists, GE Free Nelson maintain there has been more proof that global developments are rapidly leading to global disaster and massive environmental damage and not to a more equable society. Undermining the third world by exploiting its natural resources and cheap labour, it now pushes untested and unregulated patented products and seeds onto unwitting farmers, consumers and the sick around the globe.

B (h)

283. B (h) Many overseas customers do not require food produced by these methods. 90% of Americans want GE food to be labelled. *The Boston Globe 26.9.00 Japan, the US's biggest customer is set to join some European nations next year in prohibiting the import of genetically modified crops.*

284. "Polling has shown that about 90 percent of the public supports labelling on genetically-engineered foods." Consumers have a right to know what they are buying when they go to the supermarket, and farmers have a right to know what they are planting in their fields," Nader told reporters. "Farmers were not even informed that StarLink had not been approved for human consumption until Aventis began contacting them in an attempt to insure that the corn was not mixed with shipments bound for use in food produced for humans. We need to devolve power from corporate agribusiness to the farmers and consumers who should rightfully control food production in this country."*Press Release OCTOBER 27, 2000*

285. Farmers are unhappy to grow genetically engineered corn and soya, since there is now a more limited market. Many people are boycotting genetically engineered products.

286. The hormone rBGH linked to prostate and breast cancer would have resulted in milk being boycotted by citizens (the Asia Pacific Pesticide Action Network) when last up for approval. *See The EcologistVol29 No4. July 1999 New Zealand dairy boycott.*

287. WTO-trade rulings, once in place require all countries to be in agreement in order to remove, this makes it extremely difficult if not impossible for rulings to be overturned.

Section B (i)

B (i) the opportunities that may be open to New Zealand from the use or avoidance of genetic modification, genetically modified organisms, and products
Section B (i) Summary

288. B (i) Continued production of GE Free seed, eventually restoring GE Free seed to other countries of the world.

289. Continued primary production of quality agricultural products, timber, and fish.

290. Maintained biodiversity throughout New Zealand particularly in identified plant diversity hotspots eg. NW Nelson.

291. To halt GE pollution giving New Zealand the status of control country, when other countries are genetically corrupted, New Zealand will still have preserved its fauna and flora for future generations.

292. Tourism. Continued growth in tourism, many tourists are looking for the clean green image.

B (i)

293. A 'knowledge economy' of ecologists and environmentalists, not genetic engineers, when wisdom is combined with knowledge, a more sustainable future is likely.

294. Sustainable agriculture, the corruption by genetic engineering should not be regarded as sustainable, it is not realistic to assume that such a new science with only 5 years experience of growing products in the field should be regarded as sustainable.

295. Healthy people animals and plants. Healthy land, water and air quote Anderton.15.10.00 Jim Anderton said 'New Zealand economy depends on exports, we have pure air, rainfall and clean soil.' 'We are producing the same as our competitors.' GE Free New Zealand believes our agricultural exports have huge advantages over our competitors, due to the perception of New Zealand as a clean, green country. Unfortunately the use of Genetic Engineering will quickly erode this advantage.

296. Certified organic could mean opportunities for New Zealand producers, opportunities for organic dairy products, fruit and vegetable and meat. Exports of vegetables from NZ $421 million with a projected growth to a billion over the next 10 years mostly to the US and Japan. NZ Dairy Board were last year reported to be spending $150 million dollars over the next 5 years to investigate the potential of biotechnology. Spending this money on conversion to organic instead could drastically improve profits for the dairy farmer.

297. Organic Products Export Group (Sept 1999) warned of irreversible, negative, environmental and economic consequences should New Zealand pursue the production of GE food.

298. Over half of NZ exports remain food based, exports of organic reaching $35 million in 1999 and estimated to reach $65 in 2001. The Fresh Fruit Co. of NZ quoted an expected premium of $18.28 per carton in 1999 for organic over approx $8.00 for conventionally produced. Domestic market has also increased to 432.5 million an increase of 165% since 1997. Primary production = 9 billion annually 45% of total exports. *Growing today Sept 2000*

299. NZ grass fed beef is internationally recognised for its superior nutrient content and leanness giving New Zealand an edge over their competitors. *8.99* Massey and AgResearch are purported to be assisting with organic research but introducing genetically manipulated animals eg. myostatin sheep will not improve sales

Section B (j)

B (j) the main areas of public interest in genetic modification, genetically modified organisms, and products, including those related to: human health (including biomedical, food safety, and consumer choice) environmental matters (including biodiversity, biosecurity issues, and the health of ecosystems) economic matters (including research and innovation, business development, primary production, and exports) **(iv)** cultural and ethical concerns
Section B (j) Summary

300. The general public are extremely concerned about genetic engineering and possible future impacts on their health, and environment, both for themselves and their families, children, grandchildren and greatgrandchildren. Surveys have been carried out which show that women and young people are most concerned about the possible implications of Genetic Engineering. Middle aged men have been found to be the least concerned. Concerns appear to be in direct proportion to the perception of the impact on their families and local area of the different areas in which this technology is utilised.

B (j)(i)

human health (including biomedical, food safety, and consumer choice)

301. GE Free Nelson maintains human health is of great concern to members of the general public. The No 1 concern to date has been the use of genetic engineering in food and lack of informative labelling to enable choice. They are aware that the structure of their basic food has been irrevocably tampered with, they know that the use of antibiotic resistant marker genes could spell out an increase in antibiotic resistance.

302. They understand that food is not genetically modified for their benefit but to benefit the agrichemical sector and farmers. They want consumer choice, and have been attempting to achieve this for the last 3 years, unfortunately the governments and regulatory bodies internationally have not been acknowledging their concerns.

303. Food safety is becoming even more of an issue, see CNC figures on food poisoning section A1.Why?

304. GE Free Nelson considers a lack of labelling ensures there is no choice, ensures the infected grain and products produced by this technology continue to reach the markets unimpeded, and ensures today's situation of mass contamination of food supplies and the environment. This has been forecast by environmentalists for several years now.

305. Many are extremely concerned over the lack of adequate testing carried out by the regulatory agencies and multinationals and the rapid introduction of foods from this technology reaching the supermarket. The public wish to preserve their health and understand that their consumption of safe, nutritional food is the best way to ensure continued health.

306. With a lack of health benefits from the government the onus is on the people to ensure their health is maintained realising that health costs of today can prove very expensive. Many buy organic food and/or grow their own if they can. Food has become a product, the nutritional content seems no longer to be important.

307. The biomedical uses of genetic engineering have not been proven and may well harbour tremendous risks of environmental pollution. The threat of retroviruses and cross species infections from transgenic animals using human genes far outweighs the purported benefits of GE medicine. The latent CJD problems facing the British public indicate the extent of the problems of cross species infections.

308. Individuals have the right not to be exposed to more pharmaceuticals or residues of these in the environment. The use of oestrogens has impacted not only fish populations but also on small girl children who begin to develop at the age of 3 and 4 in certain areas of the US.

309. Current medical texts tell us that only 1% of girls show signs of puberty, such as breast development and pubic hair before the age of eight. But a study *Paediatrics. April 1997* found that 1% of all girls now have one or both of them at age three. *The obscenity of accelerated child-development-The Ecologist Vol28.N0 3 May/June 1998*

310. There are also despite a perception of acceptance by big business, many people who are very wary of the introduction of Genetic Engineering in medicine. Purported to be the next major advance in medical science, many perceive it as another step backwards.

311. Feeling health to involve more than just popping the latest miracle cure touted by the drugs industry, they know intuitively that good health means more than that and disease is precisely as it states – a disharmony within the body. Nelson has the benefit of many alternative therapists and different viewpoints on health are therefore accessible to all.

312. Although major advances are being promulgated by medical science and biotech companies almost daily, the public are not all convinced. It is for this reason we have had the 8,000 or so signees to our petition.

B (j)(ii)

environmental matters (including biodiversity, biosecurity issues, and the health of ecosystems)

313. Issue No 2 is for most people is the environment, people in Nelson living as they do closely connected with their local environment, have more of an understanding of the potential impacts. This is another reason we have had the 8,000 or so signees to our petition.

314. Many people in Nelson are involved in local issues and industries many of which may well be impacted by genetic engineering and the spread of their products should they become unrestricted. The city and its environs have several key agricultural / environmental industries: fishing, forestry, fruit, organics, and tourism.

315. They are concerned with the health and biodiversity of the region, many are involved in environmental issues and attend meetings (both council and public) to ensure their concerns are heard.

316. Areas around Nelson (particularly around NW Nelson) have been identified as globally important sites of plant diversity, as has New Zealand itself. Threats to this biodiversity have been identified as : logging, mining, agriculture, introduced animals and invasive exotic species. This report from the World Wildlife Fund and IUCN the World Conservation Union of 1995 was prior to the rapid introduction of Genetic Engineering into our environment. Tourism has both a positive and negative impact on the area. *Centres of plant diversity. 1995 . Davi, S.D. Heywood, V.H and Hamilton, A.C. 1995*

317. 'A 1999 report states 'In addition to outright habitat destruction and the highly deleterious effects of alien species, there has been a general deterioration of many remaining natural ecosystems…. Many of New Zealand's surviving species are vulnerable or endangered. At least 1000 taxa of plants and animals native to New Zealand are now considered threatened. One third of New Zealand's endemic bird species have already gone extinct since the arrival of our species on the islands.' *Hotspots.Cemex*

318. The people of the Nelson region hope to preserve what biodiversity is left in their area and are trying to avoid more wholesale destruction via the 'exotic' species of products (GMOs) produced by genetic engineers.

319. Biosecurity issues (See A2) Importation of seeds-all seed to be adequately tested and an ability to establish liability assured.

320. Iowa State University has shown that pollen from one crop can travel at least six miles. Some US farmers have already stopped growing modified corn for fear of lawsuits over such contamination.20% less corn was grown in the US this year.40 million acres of modified crops were grown in 1999 around the world

B (j)(iii)

321. economic matters (including research and innovation, business development, primary production, and exports)

322. As in any other city in New Zealand, with the New Zealand and world economy in the state of flux, the future feels uncertain, resulting in great concern over how decisions made now will impact on our future. Obviously the community of Nelson is hoping, along with the rest of the country that the right decision will be made to protect their economic future, however it is important to remember that conventional business development is not the only factor in the equation, often it means thinking outside the square to gain advantages.

323. GE Free Nelson appreciates the need for research and innovation in primary production, indeed New Zealand has a long history of excellent research in the ecological, environmental and agricultural fields. This need still exists, but genetic engineering, a risky, untested science does not need to be used indiscriminately and funded above all other research to ensure future prosperity in these fields. Quite the reverse, people want produce from our clean, green land, besmirched though it may be by chemicals and genetic engineering, because they perceive it to be relatively unpolluted.

324. At present the government is putting very little funding into organics, it maintains the biotech companies, with research from CRI's and universities on which it spends public money to the tune of $35 million. Since we use only 2% of all edible foods currently, more research could effectively be used here.

325. GE Free Nelson believes it is arrogant to promote a 'knowledge economy' of biotechnology over and above all else, and that this denies the wisdom of the tried and tested means of improving stocks and maintaining diversity that has been practised by our forefathers over many centuries. For the likes of Monsanto to state ' they have a long history of genetic engineering' when such crops have only been grown for 5 years is farcical. These crops are in their infancy and have already proved their promiscuity (apparently 20 times more likely to outcross than normal varieties) to the detriment of farmers worldwide.

326. GE Free Nelson maintains clean green exports of GE Free primary produce and organics are the future and will guarantee premiums for New Zealand forestry, farmers, fish, honey and other crop and food products in all sectors.

327. We believe that the introduction of more innovative methods of production such as are described in Mae Wan Ho's book GE Dream or Nightmare P 243.In a small brewery spent grains grow mushrooms, then earthworm, these in turn fed to chickens. The water, used to cultivate Spirulina, then fed to fish. The chicken manure produces methane, thus the system is integral.

B (j)(iv)

cultural and ethical concerns

328. GE Free Nelson considers that genetic engineering is both culturally and ethically unsound, and acknowledge that many members of the public have cultural, ethical and spiritual concerns that are all too often dismissed as irrelevant.

329. In 1989 , 20% of the population controlled 82% of the world's wealth, the poorest fifth had only 1.4% . The consolidation of wealth and power into the hands of a very few rich individuals and multinational corporations is wiping out resources and polluting the environment at an uncontrollable rate.

330. Other concerns involve the exclusion of the public from ownership in this technology, due to the effect shareholders (a backlash against biotech means shareholders have voted to remove biotechnology products in some cases) have had on biotech companies. We now find Genesis recently floated on the stock market excluding public ownership by offering shares to business only. This is further prevention of 'potential profits' being used by and for the people. A news item on National radio on 27.10.00 stated Genesis and Agresearch to be consolidating the marketing of biotech products as soon as possible highlighting the threat of many more dangerous and untested products imminently finding their way to the market place.

331. "It is no accident that a culture bent on promoting capitalism and free enterprise should be obsessed with things rather than processes. The notion of 'gene banks' and 'genetic resources' make it plain that life, the process of being alive, as well as real organisms and diverse ecological communities, are all negated in favour of genes which can be grasped hold of, possessed, preserved and exploited as commodities." *Dr Mae Wan Ho- GE Dream or Nightmare.*

332. At the University of Otago during ERMA investigations researchers allegedly extracted tissue from the tuatara, to add to their gene library (bank) without permission of either ERMA or the local iwi. *27.4.00 Nature 404-915 (2000) Peter Pockley*. This is not the first time that scientists have needlessly experimented on tuatara, a protected species since 1895.

333. Carrying with us as we do the DNA of thousands of generations of parents, whose tribal respect for all life makes it easier to understand Abraham Maslow's 'hypothesis that human nature is good and instinctively seeks the divine, and that humans only become dysfunctional when they grow up in a sick culture which produces violent and damaged humans.' *Thom Hartmann - The last hours of ancient sunlight.*

334. *25.6.99 Animal welfare. The number of animals used in experimentation is now up by 40%. Only 32% were found to have no suffering. Cloning also results in huge amounts of wastage of foetuses.*

335. Is it ethical that the push for GE crops has come from the USDA, when 14,000 members of the American Corn Growers Assoc. last year proposed a list of 17 rules, the USDA did not respond. *" They made a decision up front that they would support biotechnology at all costs, and that is what they are doing." Gary Goldberg, Boston Globe 26.9.00*

Section B (k)

B (k) the key strategic issues drawing on ethical, cultural, environmental, social, and economic risks and benefits arising from the use of genetic modification, genetically modified organisms, and products
Section B (k) Summary
GE Free Nelson believe there are NO benefits from the use of genetic engineering technology or the products thereof, and believe there is overwhelming evidence of risk in all sectors described above.

Section B (l)

B (l) the international implications, in relation to both New Zealand's binding international obligations and New Zealand's foreign and trade policy, of any measures that New Zealand might take with regard to genetic modification, genetically modified organisms, and products, including the costs and risks associated with particular options
Section B (l) Summary
B (l)

336. GE Free Nelson believes New Zealand should retain its sovereignty at all times, we have a chance now to remove standards governing food from the domain and authority of Australia and should do so. The New Zealand public's food safety has been compromised for long enough and withdrawal from this detrimental alliance should be immediate.

337. The Precautionary Principle should be observed in all cases of genetic engineering and the use of all products of this technology. *Long labelled by the industry as reactionary, advocates realize that all stakeholders benefit from an open and democratic attempt to anticipate any undesirable social or financial surprises. The goal is to apply wisdom and judgement about the potential effects of a new technology before flooding the marketplace with the products of that technology. Worldwatch News Brief 17.2.00 www.worldwatch.org/alerts/000217.html*

338. Proper information should be given to the public and enough time allowed for proper public submission when agreements such as the recent Singapore agreement are considered.

339. Binding agreements on trade policy should not be entered into if they fail to place the premise of public health and safety as a priority.

340. There are many instances apart from genetic engineering where the WTO and other global laws stand to impact on the public and environment in extremely negative ways. A way forward needs to be found that allows countries to be in charge of their own future as regards health and the environment. Without this we will continue to see increased antagonism continually eroding an ordered society, with dire consequences for all.

Section B (m)

B (m) the range of strategic outcomes for the future application or avoidance of genetic modification, genetically modified organisms, and products in New Zealand
Section B (m) Summary

341. "Exempting life forms from the purview of patent laws in order to allow broader research and safety testing opportunities by academia and government.

342. Placing liability for harm on the owners or licensees of biotechnology patent rights in the event of damages caused by environmental release.

343. Labelling food containing any genetically altered ingredients" *see Ralph Nader recommendations*

344. GE Free New Zealand suggest a total and fully legislated moratorium and a GE Free New Zealand for the foreseeable future, there is great public support for a directive of this kind.

345. GE Free New Zealand suggest withdrawal of New Zealand from ANZFA as there is provision for us to regain our sovereignty in our decisions over food regulations. ANZFAThe Regulations Review Select Committee is at present receiving submissions on: Inquiry into regulation-making powers that authorise international treaties to override any provisions of New Zealand enactments.

346. Treaties, such as that for food regulations with Australia through ANZFA need to be removed. The Ministry of Health have an 'out' clause,and should now use it, despite the fact they may create a precedent. www.clerk.parliament.govt.nz.

347. GE Free Nelson maintain the outcomes from total avoidance of genetically engineered products to be cleaner environment and healthier population. This in turn would bring greater stability in our economy, increased green tourism and our export potential increasing with demand for GE Free products and seeds. A protection of the integrity of our species and products and prevention of further increases in new pathogens and genetic contamination, the greatest gift for future generations.

B (m)

Section B (n)

B (n) whether the statutory and regulatory processes controlling genetic modification, genetically modified organisms, and products in New Zealand are adequate to address the strategic outcomes that, in your opinion, are desirable, and whether any legislative, regulatory, policy, or other changes are needed to enable New Zealand to achieve these outcomes

Section B (n) Summary

348. GE Free Nelson believe NO statutory or regulatory processes at present in force are adequate and that changes need to be made to protect the public health and food supply, the environment, and all other issues mentioned in the submission. If the biotechnology companies, were members of a profession such as law, they would have been accused of gross misconduct. There is substantial and overwhelming evidence that no satisfactory processes for protection can be put in place and all genetically engineered organisms and the technology creating them should immediately be ceased forthwith, patents recinded and a global moratorium imposed indefinitely. Public consultation processes should be made fair and accessible, and a public referendum called whose decision would be binding.

349. Document incuded GMO tree