

**Genetic Modification:
Public Awareness & Knowledge Benchmark Survey**

November 2001

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Prepared for: Ministry for the Environment

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EXECUTIVE SUMMARY

This “benchmark” survey of a nationally representative sample of n=603 New Zealanders, 15 years plus, was undertaken to assist the Ministry for the Environment with the development of a public information campaign on genetic modification.

In the development of this campaign, we believe the following results should be taken into account.

Extent of interest in genetic modification

- ⇒ Just over one half of the sample (53%) claimed to be informed about genetic modification, while almost the other half (43%) admitted to being uninformed. Most of those who claimed to be informed believed they were “just informed”.
- ⇒ Against this background, almost 80% claimed they wanted to find out more about genetic modification and how it is controlled in New Zealand. Almost one half claimed they wanted to find out “a lot” more.

Audiences for the public information campaign

- ⇒ The demographic profile of those people who want to find out more about genetic modification is similar to the total sample in general (i.e. the population). In fact, the only difference between this group and those not interested in finding out more about genetic modification, is that there is a tendency for them to have pre-school and school-aged children in their household.

Key messages for the public information campaign

- ⇒ Overall, most people would like to know more about the possible risks of genetic modification (26%), the level of use of genetic modification in New Zealand (20%), and the use of genetic modification in food or products for human consumption (19%).
- ⇒ In comparison, 20% would like to know more about the possible benefits of using genetic modification and 14% how genetic modification is controlled.
- ⇒ In terms of people’s knowledge about current controls on genetic modification in New Zealand, it should be noted that just under two thirds (64%) claimed there are controls. Thirteen percent (13%) gave an emphatic “no” and 23% didn’t know.
- ⇒ In terms of communicating key messages, it is important to note the following:
 - Misconceptions about the current use of genetic modification. For example, 55% believed it was used “a lot” or “somewhat” in terms of commercial crops.
 - Approximately one-third (35%) were not aware of the Royal Commission.

Expected sources of information

- ⇒ Government departments in general (42%), and to a lesser extent, scientific organisations (15%), are the expected sources of information about genetic modification.
- ⇒ Specific mention was made of the Ministry of Health (11%) and the Ministry for the Environment (7%).

Key mediums for the public information campaign

- ⇒ Almost one half (41%) claimed that a household mailer was their most preferred medium to receive information about genetic modification. This was significantly ahead of television (26%) and newspapers (18%).
- ⇒ The results suggest that radio, magazines, retail outlets, web sites and meetings/hui should be used as secondary mediums.

INTRODUCTION & OBJECTIVES

The Royal Commission on Genetic Modification

The New Zealand Government set up the Royal Commission on Genetic Modification in May 2000. The chief objective of this Commission was to inquire into and report on the strategic options available to enable New Zealand to address genetic modification in the present and for the future. It was also empowered to recommend any changes in the legislative, regulatory, policy or institutional arrangements for addressing genetic modification technologies and products in New Zealand.

The commissioners formally reported their findings to the Government on the 27th July 2001. The Government stated that it would respond to the recommendations made by the Royal Commission on Genetic Modification within three months of receiving its report (i.e. by 31 October 2001). The Ministry for the Environment has responsibility for leading the inter-departmental process of advising the Government on the implications of the Commission's recommendations and how these could be implemented.

Importantly, the Ministry is also **responsible for informing the general public** of the Government's decisions, how these decisions will be implemented, monitored/managed, and what they mean in terms of everyday life.

Public information campaign

The Government has advised the Ministry for the Environment that it wishes it to undertake a **public information campaign** in November, as soon as its decisions have been announced by the Prime Minister. Broadly speaking, the Ministry's communication objectives will be:

- To communicate with the **widest possible number of New Zealanders** (given budgetary and media constraints), including important sub-groups of interest (e.g. Māori).
- To communicate the **Government's decisions as clearly (comprehensibly) as possible** (given the general public's current knowledge, misconceptions and interest in the subject).
- To communicate the practical implications of the Government's decisions in terms of **everyday life** (e.g. that consumers will have choices).

In planning the public information campaign, the Ministry for the Environment needs to know what is the "communication environment" in which it will be launching its campaign. Armed with this information, it will be able to **refine** its approach to meet the communication objectives outlined in the previous section.

Additionally, the Ministry wishes to have an objective base of information that allows it to **evaluate** how successful its campaign has been against these objectives. If necessary, this will help it to advise Government of the need to continue the campaign in some form beyond November.

Research objectives

Given these objectives, the research objectives may be stated as follows:

- To identify the extent of the task that faces the Ministry for the Environment's public information campaign on genetic modification. More specifically: whether changes in awareness, knowledge and perceptions have occurred as a result of the Royal Commission on Genetic Modification, since the Commission's general public survey in March-April 2001.
- To identify the key areas of information that may need to be focused on in the Ministry for the Environment's public information campaign. Additionally, to identify sub-groups of the population which may need to be targeted in particular, and the most appropriate channels of communication to use.
- To measure changes in the awareness and knowledge of the general public as a result of the Ministry for the Environment's public information campaign on genetic modification.
- To identify issues which may need to be addressed with further communication activity, moving forward.

THIS REPORT

BRC has recommended a research approach based on the completion of **two surveys** of the general public¹:

1. A “benchmark” survey conducted **prior to** the commencement of the public information campaign (i.e. by 31 October); the results for which will be used to inform the Ministry for the Environment’s campaign and to provide a baseline against which to consider the results.
2. A second survey (i.e. a “monitor”), conducted **at the end/towards the end** of the campaign period (i.e. early in December).

This report presents the results of the “benchmark” survey. It was conducted with a total sample of n=603, selected to be **nationally representative of all New Zealanders**, 15 years plus². Māori were over-sampled in order to ensure their results could be examined with confidence. Interviewing was conducted by telephone between **18 and 28 October 2001**.

Only statistically significant results and differences are commented on. Where possible, comparisons have also been provided with the results to the Royal Commission on Genetic Modification’s Public Opinion Survey (March-April 2001, BRC Marketing & Social Research).

Full methodological details, are provided in an appendix to this report. The appendix also contains full survey results by the following demographic variables: gender, age, region, rural/urban location, and educational status.

¹ Refer to BRC proposal, *Informing the general public about the Government’s decisions relating to genetic modification* (10 October 2001).

² Results based on this total sample of respondents are subject to a maximum margin of error of plus or minus 5.0% at the 95% confidence level.

KEY FINDINGS

Awareness & understanding of Genetic Modification

In order to determine whether genetic modification was a “top-of-mind” issue for New Zealanders, the interview began with respondents being asked the following question:

Q3: “First of all, in your opinion, what issues are of greatest importance to New Zealand’s future? These could be social, cultural, economic or environmental issues, for example. Anything else?”

All issues mentioned were recorded as a matter of course. However, if respondents did not mention genetic modification or genetic engineering in response to the above question, they were asked directly if they had heard of these terms:

Q3a: “Have you heard of the term genetic modification?”

If respondents claimed they had not heard of the term genetic modification, they were then prompted on the term “genetic engineering” and asked if they had heard of this term.

Q3b: “It is also sometimes known as “genetic engineering”.

If respondents were aware of the terms genetic modification or genetic engineering on an unprompted or prompted basis, they were then asked to define what the term³ meant to them:

Q4: “If you had to describe to a friend what genetic modification or genetic engineering means, what would you say to them?”

Rather than recording verbatim what respondents said, respondents’ definitions were coded into a series of response categories. These categories were based on the range of responses we obtained from the Royal Commission’s public opinion survey (BRC Marketing & Social Research, March/April 2001).

Key findings are as follows:

- Very few respondents (4%) identified genetic engineering/genetic modification as an issue of importance to New Zealand’s future on a completely unprompted basis.

There were no significant differences between Māori and non Māori or between the MFE “benchmark” survey and the Royal Commission’s survey in terms of identification of genetic modification/genetic engineering (or any other issue) as an issue or importance.

- After prompting, most respondents (98%) claimed they had heard of the terms genetic modification or genetic engineering (81% had heard of the term “genetic modification” while 17% had not heard of the term genetic modification, but had heard of the term “genetic engineering”). Two percent (2%) claimed they were not aware of either term.

Again, in terms of prompted awareness of the term genetic modification or genetic engineering there were no significant differences between Māori and

³ Respondents were asked to define whatever term (i.e. genetic modification or genetic engineering) they recognised or mentioned first.

non Māori. Furthermore there were no significant differences between the MFE “benchmark” survey and the Royal Commission’s survey in this regard.

- Around a third of respondents⁴ (32%) claimed that genetic modification involved “altering the genetic structure of cells or manipulating the DNA of things”, while 17% identified that it involved “taking genetic material from one thing and putting into another”. A sizeable proportion (25%) believed that genetic modification was “altering a (natural) thing/creating something manmade”.

Non Māori were significantly more likely than Māori to report that genetic modification involved “altering the genetic structure of cells” (33% c.f. 24%). Conversely, Māori were significantly more likely than non Māori to claim genetic modification meant “playing with nature/playing with God” (16% c.f. 9% respectively).

With two exceptions, there were no significant differences between the descriptions given by respondents in the MFE “benchmark” survey and the Royal Commission’s survey. Respondents in the MFE “benchmark” survey were significantly more likely to describe genetic modification/genetic engineering as “altering a (natural) thing/creating something manmade” (25% c.f. 19% for the Royal Commission’s survey) and to describe it as “taking genetic material from one thing and putting it into another” (17% c.f. 4%).

Table 1: Total unprompted mention of genetic modification as an issue of importance to New Zealand’s future

Q3. In your opinion, what issues are of greatest importance to New Zealand’s future? Anything else?

	<i>Royal Commission Survey Total sample n=1153 %</i>	<i>MFE Benchmark Total sample n=603 %</i>	<i>MFE Benchmark Māori Sub sample n=301 %</i>	<i>MFE Benchmark Non Māori Sub sample n=302 %</i>
Genetic modification	2	2	1	2
Genetic engineering	2	2	2	3
The economy in general	40	40	36	40
Health in general	24	30	31	29
Education in general	29	29	35	28
The environment	7	6	3	6
Race relations	15	13	19	13
Other	54	55	53	55
Refused	0	0	0	0
Don’t know	5	4	6	4
Total	**	**	**	**

Note: Components may not always add to 100% due to multiple response.

⁴ Those respondents who were aware of genetic modification/genetic engineering on an unprompted or prompted basis.

Table 2: Prompted mention of the term “genetic modification” or “genetic engineering”

Q3a/b. Have you heard of the term genetic modification? It is also sometimes known as “genetic engineering”.

	<i>Royal Commission Survey Sub sample n=1 128** %</i>	MFE Benchmark Sub sample n=580* %	MFE Benchmark Māori Sub sample n=292* %	MFE Benchmark Non Māori Sub sample n=288* %
Yes, heard of genetic modification	89	81	78	82
Yes, heard of genetic engineering	7	17	18	17
Don't know/no awareness	5	2	4	2
Total	100	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had unprompted awareness of genetic modification or genetic engineering (Q3).

**The figures for the Royal Commission are based on calculations of Q2 and Q2a (prompted awareness of genetic modification and genetic engineering) from the Royal Commission's public opinion survey.

Table 3: Definition of genetic modification/genetic engineering

Q4. If you had to describe to a friend what genetic modification/genetic engineering means, what would you say to them?

	Royal Commission Survey Sub sample n=1093* %	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Altering the genetic structure of cells etc/manipulating dna of things	29	32	24	33
Altering a (natural) thing/creating something manmade	19	25	25	25
Making something taste/look better	12**	9	8	9
Playing with nature/playing God	12	10	16	9
Taking genetic material from one thing and putting into another	4	17	16	17
Improving something	na	10	9	10
General approval comment	na	2	3	2
Cloning/Dolly	4	2	5	2
General disapproval	4	12	10	13
Other	5	22	24	22
Answer not given/don't know	12	4	7	4
Total	**	**	**	**

Note: Components may not always add to 100% due to multiple response.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

**For the Royal Commission's survey, this category also includes responses referring to "improving something".

Becoming informed about genetic modification

To find out how informed respondents⁵ felt about genetic modification and what they believed were the main ways in which they had learnt about the subject, the following questions were asked:

Q5: "Overall, how informed do you believe you are at present about genetic modification?"

Q6: "What is the main way you have learnt about genetic modification/genetic engineering?"

Key findings are as follows:

- Just over half of respondents (53%) claimed to be informed about genetic modification to some extent, although only 10% claimed to be "very informed" as opposed to "just informed" (43%). A substantial proportion of respondents claimed to be uninformed (43%). Māori were significantly less likely to claim they were informed compared with non Māori (42% c.f. 54% respectively).

Respondents in the MFE "benchmark" survey were significantly **more** likely to claim they felt uninformed ("just uninformed" or "very uninformed") about genetic modification than respondents in the Royal Commission's survey (43% c.f. 36% respectively).

- Most respondents claimed the main ways in which they had found out about genetic modification was through the media. Two thirds of respondents mentioned television (69%), newspapers (66%), while 23% claimed they had learnt about genetic modification through radio. The same proportion (23%) claimed they had learnt about the subject through magazines.

It is noteworthy that no respondents mentioned the Royal Commission on Genetic Modification or Government departments as one of the main ways in which they had learnt about genetic modification.

Non Māori were significantly more likely than Māori to claim that the main ways in which they learnt about genetic modification/genetic engineering was through written media (67% claimed one of the main ways they learnt about the subject through newspapers c.f. 55% of Māori; 25% of non Māori mentioned "magazines" c.f. 11% of Māori). Conversely, a greater number of Māori, than non Māori reported visual/auditory mediums (e.g. radio and television) as the main ways in which they learnt about genetic modification.

⁵ Those respondents who were aware of genetic modification/genetic engineering on an unprompted or prompted basis.

Table 28: Level of personal informedness about genetic modification

Q5. Overall, how informed do you believe you are at present about genetic modification?

	Royal Commission Survey Sub sample n=1093* %	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Very informed	7	10	8	10
Just informed	50	43	34	44
Neither	6	3	2	4
Just uninformed	23	27	30	26
Very uninformed	13	16	24	16
Don't know	1	1	1	1
Total	100	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 4: Main way respondents have learnt about genetic modification

Q6. What is the main way that you have learnt about genetic modification/genetic engineering? Any other ways?

	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Television	69	75	68
Newspapers	66	55	67
Radio	23	25	23
Magazines	23	11	25
Friends and colleagues	9	12	9
Websites and the Internet generally	7	4	7
General word of mouth	6	9	6
University or other educational institution	5	4	5
Anti genetic modification group	3	3	3
Iwi and whanau/family	2	4	1
Business or industry organisations	2	0	3
I work in this or a related area	2	1	2
Pro genetic modification group	1	0	1
Scientific institution	1	1	1
Royal Commission on Genetic Modification mentioned	0	0	0
Government department	0	0	0
Other	13	15	13
None/not applicable	1	1	1
Don't know	0	0	0
Total	**	**	**

Note: Components may not always add to 100% due to multiple response.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Opinions about the use of genetic modification

In order to establish whether respondents believed genetic modification was already used in New Zealand, they were asked the following question:

Q14: "To what extent do you believe genetic modification is already used in New Zealand in the following areas? As I read each area, please tell me if it's a lot, somewhat, a little, or not at all?"

The eight areas or categories in question were: commercial crops, farm animals, pest control, processed foods, medicines and vaccines, research using plants, research using animals, and medical research.

This section also focussed on a number of questions relating to respondents' understanding of the controls on the use of genetic modification and relatedly, their understanding of what a field test is and the level of control of field tests in New Zealand:

Q15: "Are there currently any controls on the use of genetic modification in New Zealand?"

Q16: "Which controls are you aware of?"

Q16a: "And are you aware of the following (controls)...?"

Q17. The term "field test" is sometimes used in relation to genetic modification. In your own words, can you please describe what a field test is?

Q17a: "Do you believe that there are currently strict controls on field tests, few controls or no controls whatsoever?"

To put into context respondents'⁶ opinions about whether genetic modification is being used in New Zealand in various key areas, we have also included in this section the results to a question which examines how relevant respondents believe it is to New Zealand's future to use genetic modification.

Q7: "How important do you believe it is to New Zealand's future to use genetic modification/genetic engineering?"

Key findings are as follows:

- More than 50% of respondents claimed genetic modification was currently being practised in New Zealand in all eight areas surveyed. Highest ranked were research using plants (77% "a lot" or "somewhat"), medicines and vaccines (66%), and medical research (64%). Fifty five percent (55%) of respondents claimed genetic modification was being used "a lot" or "somewhat" in commercial crops.

There were no significant differences between Māori and non Māori except in regard to perceived use of genetic modification in commercial crops (67% of Māori claimed genetic modification was being used "a lot" or "somewhat" in commercial crops c.f. 54% of non Maori).

Compared to the Royal Commission's survey, respondents in the MFE "benchmark" survey were significantly **less** likely to claim that genetic

⁶ Those respondents who were aware of genetic modification/genetic engineering on an unprompted or prompted basis.

modification was being used “a lot” or “somewhat” in all of the areas except for two (research using plants and medicines and vaccines). The largest differences between the two groups occurred for commercial crops (55% in the MFE “benchmark” survey claimed this was being used “a lot” or “somewhat” c.f. 68% of respondents in the Royal Commission’s survey) pest control (54% and 65% respectively) medical research (64% c.f. 72%) and processed foods (60% c.f. 68%).

The only area where respondents in the MFE “benchmark” survey were significantly **more** likely to claim genetic modification was being used “a lot” or “somewhat” was in farm animals (53% c.f. 43% for the Royal Commission’s survey).

- Nearly two thirds of respondents (64%) believed there were currently controls on the use of genetic modification in New Zealand (16% claimed there weren’t any controls, 27% said they didn’t know). Non Māori were significantly more likely to claim there were controls (66% c.f. 47% of Māori).
- When asked what controls they were aware of, 15% of respondents mentioned on an unprompted basis that *all proposals to use genetic modification must have approval*. Eleven percent (11%) of respondents claimed that there were *labelling requirements for genetically modified food* and the same proportion mentioned there were *controls on field tests*. Māori were significantly **more** likely than non Māori to note that there were *labelling requirements for genetically modified food* (22% c.f. 10% of non Māori).

After being prompted with those controls they had not mentioned on an unprompted basis, more than 50% of respondents claimed they were aware of each of these, with the exception of *a moratorium on field tests and releases* (47%). Respondents were most aware of *labelling requirements for genetically modified food* (70%) followed by *all proposals to use genetic modification must have approval* (64%), *controls on field tests* (62%), *controls on living things that have been genetically modified* (62%) and *controls on laboratory research* (57%).

Non Māori were more inclined than Māori to claim there were controls. Non Māori were significantly **more** likely to believe there were controls in place for *controls on field tests* (63% c.f. 51%) and *a moratorium on field tests and releases* (48% c.f. 37%).

- When asked to define what a field test was, the most commonly mentioned response was that it involved very generally, the testing/trial of something in a field or monitoring something that was growing (25%):

“The planting of crops that have been genetically modified to see how they develop, and the monitoring of them.”

“(It is) where they grow plants in a field and use genetic engineering to see if they can get a better plant.”

“A trial run on a small area, on whatever they’re testing, to find out whether it’s worked or not.”

Other respondents correctly identified that a field test was not something undertaken in a laboratory, but rather undertaken outside that context in the “real world” (19%):

“A trial of something they’ve come up with to see if it’s viable, what its impact is – they test it in the environment it’s going to be involved with, to see how the new product interacts with the environment.”

“Going out in the community and testing something in real life situation as opposed to in a laboratory.”

A further 11% claimed that field tests were tests that took place under controlled circumstances, while (4%) specifically defined a field test as a test on a living thing in a natural (as opposed to laboratory) environment under controlled circumstances. Seventeen percent (17%) of respondents claimed they did not know what a field test was.

Māori were significantly more likely than non Māori to claim that they did not know what a field test was (30% claimed they didn’t know, c.f. 16% of Non Māori).

Those who were claimed they knew what a field test was were asked what level of controls they believed were in place for field tests. Just under half (47%) claimed there were “strict controls”, while 41% believed there were “few controls”. (3% claimed there were “no controls whatsoever” and 7% didn’t know). Once again, non Māori were **more** likely to claim there were “strict controls on field tests” than Māori (48% c.f. 37%).

- Forty one percent (41%) claimed that it was important (“just important” or “very important”) to New Zealand’s future to use genetic modification, while a greater number (43%) claimed it was unimportant (“just unimportant” or “very unimportant”).

Non Māori were significantly **more** likely than Māori to claim it was important to New Zealand’s future to use genetic modification (42% c.f. 31% respectively). Over half of Māori (51%) claimed it was unimportant.

Significantly fewer respondents in the Ministry for the Environment’s “benchmark” survey claimed that it was important to New Zealand’s future to use genetic modification, than with the Royal Commission’s public opinion survey (51% of respondents in that survey believed it was important).

Table 5: Extent to which genetic modification is already being used in New Zealand

Q14. To what extent do you believe genetic modification/genetic engineering is already used in New Zealand in the following areas? As I read each area, please tell me if it's a lot, somewhat, a little, or not at all?

	Royal Commission Survey Sub sample n=1093* %	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Medical research				
A lot	43	37	44	36
Somewhat	29	27	19	28
A little	17	17	15	17
Not at all	3	3	3	3
Don't know	8	16	19	16
Total	100	100	100	100
Research using animals				
A lot	34	31	42	29
Somewhat	33	29	24	30
A little	24	22	20	23
Not at all	4	4	3	4
Don't know	5	14	10	15
Total	100	100	100	100
Research using plants				
A lot	52	48	59	46
Somewhat	27	29	16	31
A little	14	14	11	14
Not at all	1	0	1	0
Don't know	6	9	12	9
Total	100	100	100	100
Medicines and vaccines				
A lot	40	40	42	40
Somewhat	22	26	18	27
A little	17	12	15	12
Not at all	5	2	5	2
Don't know	16	19	20	20
Total	100	100	100	100
Processed foods				
A lot	38	32	43	31
Somewhat	30	28	23	29
A little	24	23	18	24
Not at all	4	4	5	3
Don't know	5	13	11	14
Total	100	100	100	100

Continued

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 6: Extent to which genetic modification is already being used in New Zealand (continued)

Q14. To what extent do you believe genetic modification/genetic engineering is already used in New Zealand in the following areas? As I read each area, please tell me if it's a lot, somewhat, a little, or not at all?

	Royal Commission Survey Sub sample n=1093* %	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Commercial crops				
A lot	36	24	42	22
Somewhat	32	31	25	32
A little	24	24	18	25
Not at all	3	7	3	7
Don't know	4	14	13	14
Total	100	100	100	100
Farm animals				
A lot	16	24	32	23
Somewhat	27	29	27	29
A little	38	27	24	27
Not at all	13	7	6	7
Don't know	7	13	11	13
Total	100	100	100	100
Pest control				
A lot	40	31	36	31
Somewhat	25	23	21	23
A little	18	20	16	20
Not at all	6	5	6	4
Don't know	12	21	22	22
Total	100	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 7: Awareness of whether there are controls on genetic modification in New Zealand

Q15. Are there currently any controls on the use of genetic modification in New Zealand?

	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Yes	64	47	66
No	13	21	12
Don't know	23	32	22
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 8: Unprompted awareness of which controls are in place

Q16. Which controls are you aware of? Anything else?

	MFE Benchmark Sub sample n=332* %	MFE Benchmark Māori Sub sample n=137* %	MFE Benchmark Non Māori Sub sample n=195* %
All proposals to use genetic modification must have approval	15	9	16
Controls on field tests	11	5	11
Labelling requirements for genetically modified food	11	22	10
Controls on laboratory research	9	6	9
Controls on living things that are genetically modified	9	7	9
A moratorium on field tests and releases	8	5	8
ERMA/Ethical controls	4	3	4
Controls on gm in animals	4	3	4
Controls on gm in humans	3	2	3
Government controls	3	6	3
Controls on gm in food	3	1	3
Others	10	9	10
Refused	0	0	0
Don't know	27	32	26
None	7	7	6
Total	**	**	**

Note: Components may not always add to 100% due to multiple response.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who said there not any controls on genetic modification in New Zealand (or did not know) at Q15.

Table 9: Prompted awareness of which controls are in place

Q16a. And are you aware of the following...?

	MFE Benchmark Sub sample n=332* %	MFE Benchmark Māori Sub sample n=137* %	MFE Benchmark Non Māori Sub sample n=195* %
Labelling requirements for genetically modified food	70	63	71
All proposals to use genetic modification must have approval	64	69	63
Controls on laboratory research	57	48	58
Controls on field tests	62	51	63
Controls on living things that are genetically modified	62	56	62
A moratorium on field tests and releases	47	37	48
No awareness after prompting	5	5	5
Total	**	**	**

Note: Components may not always add to 100% due to multiple response.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who said there not any controls on genetic modification in New Zealand (or did not know) at Q15.

Table 10: Respondent's description of a "field test"

Q17. The term "field test" is sometimes used in relation to genetic modification. In your own words, can you please describe what a field test is?

	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Testing in a field/testing something	25	24	25
Testing something outside the lab/out of the lab and in the field	19	8	21
Testing something under controlled circumstances	11	6	12
Testing a modified object against a control	7	5	7
Testing a living thing in a natural environment under controlled conditions	4	2	4
Other	17	25	16
Don't know	17	30	16
Total	**	**	**

Note: Total may exceed 100% because of multiple response.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 11: Belief about whether there are controls on field tests at present

Q17a. *And do you believe that there are currently...?*

	MFE Benchmark Sub sample n=447* %	MFE Benchmark Māori Sub sample n=199* %	MFE Benchmark Non Māori Sub sample n=248* %
Strict controls on field tests	47	37	48
Few controls	41	41	41
No controls whatsoever	3	8	3
Depends	1	1	1
Don't know	7	12	7
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and those respondents who said they didn't know what a field test was at Q17.

Table 12: Importance of genetic modification to New Zealand's future

Q7. And how important do you believe it is to New Zealand's future to use genetic modification/genetic engineering?

	<i>Royal Commission Survey Sub sample n=1093* %</i>	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Very important	18	21	13	22
Just important	33	20	18	20
Neither	6	8	5	8
Just unimportant	19	20	22	19
Very unimportant	18	24	29	23
Don't know	6	8	11	7
Total	100	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Becoming more informed about Genetic Modification

In order to establish what respondents⁷ information requirements were in relation to genetic modification (i.e. if they wanted to know more about it and what they would like to know more about) the following questions were asked:

Q18: *“To what extent would you like to find out more about genetic modification/genetic engineering and how it is controlled in New Zealand?”*

Q19: *“What in particular would you like to know more about?”*

And secondly, the physical source and medium through which they would like to receive this further information:

Q20: *“From which people or organisations would you expect to get this information?”*

Q21: *“Would you read or listen to this information if it was available... on TV...on the radio..?”*

Q21a: *“And which one of these would be best for you?”*

Key findings are as follows:

- Of those respondents who were aware of the term genetic modification, 78% claimed they would like to find out more about genetic modification and how it is controlled in New Zealand.

That is, when asked the extent to which they would like to find out more about genetic modification, 47% of respondents claimed they would like to find out more “a lot” while 31% said they would “somewhat” like to find out more about the subject.

Thirteen percent (13%) answered “a little” while 7% claimed they would “not at all” like to find out more about genetic modification.

There were no significant differences between Māori and non Māori in terms of the extent to which they wanted to find out more about genetic modification/genetic engineering and how it is controlled in New Zealand.

- When asked specifically about what they would like to find out more about, a quarter of respondents (26%) stated that they would like to find out more about the possible risks associated with the use of genetic modification (as against the 20% who said they would like to know more about the possible benefits of genetic modification).

Twenty percent (20%) of respondents stated they would like to know more about the level of use of genetic modification in New Zealand while 19% of respondents specifically wanted to find out more about the use of genetic modification in food or products for human consumption (e.g. medicines).

Generally, Māori and non Māori wanted to find out more about the same broad areas when asked in particular they would like to know more about. However, Māori were significantly **more** likely than non Māori to want to know

⁷ Those respondents who were aware of genetic modification/genetic engineering on an unprompted or prompted basis.

more about the possible risks associated with genetic modification (33% volunteered that they would like to know more about this, c.f.25% of non Māori).

- In terms of expected sources of information about genetic modification, most reported they would expect information from a government department. In this regard, 7% of respondents specifically identified the Ministry for the Environment and 11% the Ministry of Health. Over a third (42%) claimed in general that they would expect information to come from a Government department.

While both Māori and non Māori expected to source this information from the broadly the same organisations, Māori were significantly more likely to claim they expected to get information from the Ministry of Health (20% c.f. 10% of non Māori).

- With regard to the ways respondents would expect to access this information, 88% claimed they would read or listen to information if it was available on TV. Also highly ranked were household mailers (85%), newspapers (83%) the radio (60%) and magazines (53%).

There were few differences between Māori and non Māori although Māori were more likely to identify meetings or hui than non Māori (49% c.f. 27%).

- When asked what their single preferred information medium would be, respondents reported this was a household mailer (41%), as against television (26%) and newspapers (18%).

There were few differences between Māori and non Māori. Household mailers, television and newspapers were identified as the most preferred medium by both groups.

Table 13: Extent to which respondents would like to find out more about genetic modification

Q18. To what extent would you like to find out more about genetic modification/genetic engineering and how it is controlled in New Zealand? Would it be...?

	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
A lot	47	49	47
Somewhat	31	28	32
A little	13	14	13
Not at all	7	8	7
Don't know	1	1	1
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 14: Areas respondents would like to know more aboutQ19. *What in particular would you like to know more about? Anything else?*

	MFE Benchmark Sub sample n=536* %	MFE Benchmark Māori Sub sample n=263* %	MFE Benchmark Non Māori Sub sample n=273* %
Possible risks of using gm	26	33	25
Possible benefits	20	23	20
The level of use of gm in NZ	20	20	17
The use of gm in food	19	21	18
How gm modification is controlled	14	14	14
Steps taken/to be taken to protect consumers	13	11	14
I would like to know more about it in general	12	11	12
Which genetically modified things might be released	8	11	8
How field tests are conducted in NZ	6	3	6
Who will be responsible for monitoring/enforcing the use of genetic modification in New Zealand	6	7	6
What genetic modification involves, how it works, why is it done?	4	7	4
The use of gm on animals	3	5	3
Who will be responsible for considering new proposals	1	1	1
How rigorous the proposal consideration process will be	1	1	1
How can I have my say on gm proposals	1	1	1
What other countries are doing about genetic modification	1	0	1
Māori/Treaty of Waitangi issues on genetic modification	0	1	0
Others	20	21	20
None/nothing in particular	5	3	5
Don't know	0	0	0
Total	**	**	**

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and those respondents who said "not at all" or "don't know" when asked if they would like to know more about genetic modification and how it is controlled in New Zealand (Q18).

Table 15: Expectations as to where this information would come from

Q20. From which people or organisations would you expect to get this information? Any other people or organisations?

	MFE Benchmark Sub sample n=536* %	MFE Benchmark Māori Sub sample n=263* %	MFE Benchmark Non Māori Sub sample n=273* %
Other Government department	42	42	42
Scientific organisation	15	17	14
The media	13	17	13
Ministry of Health	11	20	10
The Government in general	11	8	12
Those doing the research/those growing modified crops	10	7	10
University or other educational institution	9	6	9
The Green Party	8	4	8
Ministry for the Environment	7	9	7
Business or industry organisation	6	2	6
Manufacturers	6	5	6
Retailers	3	6	2
Doctors/medical profession	3	3	3
Greenpeace	3	3	2
Royal Commission on Genetic modification	2	1	2
Libraries	1	4	1
Citizens Advice Bureau/Consumers Institute	1	3	1
Friends and colleagues	0	0	0
Family/whanau/iwi	0	1	0
Others	19	14	20
None/not applicable	0	1	0
Refused	0	0	0
Don't know	5	5	5
Total	**	**	**

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and those respondents who said "not at all" or "don't know" when asked if they would like to know more about genetic modification and how it is controlled in New Zealand (Q18).

Table 16: All mentioned ways in which respondents would like to access this information

Q21. And would you read or listen to this information if it was available..?

	MFE Benchmark Sub sample n=536* %	MFE Benchmark Māori Sub sample n=263* %	MFE Benchmark Non Māori Sub sample n=273* %
On TV	88	87	89
Household mailer	85	81	88
In newspapers	83	84	82
On the radio	60	58	60
In magazines	53	54	52
In shops	43	50	42
On a web site	41	39	42
At meetings or hui	30	49	27
Other	4	4	4
None/don't want to read/listen to any information on genetic modification	0	0	0
Refused	0	0	0
Don't know	0	0	0
Total	**	**	**

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and those respondents who said "not at all" or "don't know" when asked if they would like to know more about genetic modification and how it is controlled in New Zealand (Q18).

Table 17: Preferred way in which respondents would like information

Q21a. And which one of these would be best for you?

	MFE Benchmark Sub sample n=536* %	MFE Benchmark Māori Sub sample n=263* %	MFE Benchmark Non Māori Sub sample n=273* %
Household mailer	41	38	41
On TV	26	30	26
In newspapers	18	14	19
In magazines	4	4	3
On a web site	4	4	4
On the radio	3	2	3
In shops	1	0	1
At meetings or hui	0	4	0
Other	2	4	1
None/don't want to read/listen to any information on genetic modification	0	0	0
Refused	0	0	0
Don't know	0	0	0
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and those respondents who said "not at all" or "don't know" when asked if they would like to know more about genetic modification and how it is controlled in New Zealand (Q18).

Awareness & knowledge of the Royal Commission on Genetic Modification

In order to determine respondents'⁸ awareness and knowledge of the Royal Commission on Genetic Modification, three areas of questioning were focussed on. Firstly, in order to establish if respondents knew about the Royal Commission and the broad direction of its recommendations, the following five questions were asked:

Q8: *“Are you aware that there was a Royal Commission on Genetic Modification?”*

Q8a: *“Who set up the Royal Commission?”*

Q9: *“Has the Commission reported its recommendations?”*

Q10: *“What in general has the Royal Commission recommended?”*

Those respondents who were unable to specify what the Royal Commission had recommended were told what its major recommendation was and were asked if they were aware of this:

Q11: *“The Royal Commission on Genetic Modification presented its recommendations to Government on 27 July 2001. Its major recommendation was for New Zealand to take a middle of the road approach to genetic modification. That is, its major conclusion was that New Zealand should keep its options open, by not turning its back on potential advantages of genetic modification, but at the same time moving forward with caution, minimising and managing risks. Were you aware of this recommendation?”*

Secondly, to establish if respondents felt more informed about genetic modification as a result of the Royal Commission process, the following questions were asked:

Q9a: *“How informed do you believe you are about the Royal Commission’s recommendations?”*

Q12: *“Do you consider yourself more or less informed about genetic modification as a result of the Commission’s work?”*

Finally, in order to find out if respondents’ views had been modified after learning of the Commission’s recommendations, the following question was asked:

Q13: *“And have you, in any way, changed your views on genetic modification as a result of the Royal Commission’s work?”*

⁸ Those respondents who were aware of genetic modification/genetic engineering on an unprompted or prompted basis.

Key findings are as follows:

- Two thirds of respondents (65%) claimed they were aware that there was a Royal Commission on Genetic Modification (35% were not aware there was one). Māori were significantly less aware there was a Royal Commission on Genetic Modification than non Māori (46% claimed they knew there had been a Commission, c.f. 68% of non Māori).

Of those who were aware there was a Commission, just under half (46%) correctly answered that the New Zealand Government had been responsible for setting it up. There were no significant differences between Māori and non Māori in this regard.

Of those who were aware there was a Commission, 61% correctly answered that the Commission had reported its recommendations. Again, there were no significant differences between Māori and non Māori respondents.

Those who were aware of the Commission and who knew it had reported its recommendations were asked to describe in general the recommendations of the Commission. Most commonly mentioned were the Commission's main findings from their report. Just over a third (37%) reported that the Commission had recommended "New Zealand should move forward carefully on genetic modification, minimising and managing risks". Twenty percent (20%) reported the Commission had advocated that New Zealand should keep its options open about genetic modification and 12% claimed the Commission had recommended that New Zealand not turn its back on potential advantages of genetic modification. In terms of specific recommendations, 13% mentioned that the Commission had recommended that field trials should continue to go ahead.

There were no significant differences between Māori and non Māori in terms of awareness of these recommendations.

- When those who were not aware of any of the Commission's three main recommendations outlined above were prompted on its main finding, 58% claimed they were aware.
- Sixty percent (60%) of respondents claimed they were "informed" about the Royal Commission's recommendations. There were no significant differences between Māori and non Māori respondents.
- Those who were aware of the Royal Commission were asked if they felt more or less informed as a result of the Commission's work. Forty percent (40%) said they felt "more informed" while 14% claimed they were "less informed". Forty three (43%) percent claimed their level of personal informedness was "the same". There were no significant differences between Māori and non Māori.
- The majority of respondents (88%) reported that they had not changed their views at all as a result of the Commission's work (4% claimed they were now "less in favour" of genetic modification, while 5% were now "more in favour"). Again there were no significant differences between Māori and non Māori respondents in this regard.

Table 18: Awareness of the Royal Commission on Genetic Modification

Q8. Are you aware that there was a Royal Commission on Genetic Modification?

	MFE Benchmark Sub sample n=586* %	MFE Benchmark Māori Sub sample n=289* %	MFE Benchmark Non Māori Sub sample n=297* %
Yes	65	46	68
No	33	53	31
Don't know	2	1	2
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b).

Table 19: Awareness of who set up the Royal Commission

Q8a. Who set up the Royal Commission?

	MFE Benchmark Sub sample n=329* %	MFE Benchmark Māori Sub sample n=130* %	MFE Benchmark Non Māori Sub sample n=199* %
New Zealand Government	46	38	47
Other	5	4	6
Don't know	48	58	48
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8).

Table 20: Knowledge of the Royal Commission having reported its recommendations

Q9. Has the Commission reported its recommendations?

	MFE Benchmark Sub sample n=329* %	MFE Benchmark Māori Sub sample n=130* %	MFE Benchmark Non Māori Sub sample n=199* %
Yes	61	54	62
No	13	10	14
Don't know	25	35	25
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8).

Table 21: Unprompted awareness of the Royal Commission's recommendations

Q10. What in general has the Royal Commission recommended? Anything else?

	MFE Benchmark Sub sample n=192* %	MFE Benchmark Māori Sub sample n=70* %	MFE Benchmark Non Māori Sub sample n=122* %
New Zealand should move forward carefully on genetic modification, managing and minimising risks	37	38	37
That New Zealand should keep its options open about genetic modification	20	18	20
That New Zealand should not turn its back on potential advantages of genetic modification	12	11	12
Field trials should continue to go ahead/not a total ban on gm	13	10	14
A moratorium on genetic modification	5	0	5
Buffer zones between genetically modified crops and other crops	3	3	2
Research should be allowed to go ahead	2	3	2
That gm should not go ahead	2	1	2
Voluntary labelling for gm free food	1	3	1
Legislative controls for genetic modification	1	1	1
That the Bioethics Council be established	0	1	1
Establishment of a parliamentary commissioner on Biotechnology	0	0	0
The Biotechnology strategy	0	0	0
A new category of approval, conditional release, be added to the Hazardous Substances and New Organisms Act (1996)	0	1	0
Strengthening the Act to give effect to the Treaty	0	0	0
Other	9	12	9
None	0	3	0
Don't know	19	24	18
Refused	0	2	0
Total	**	**	**

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8) and who were not aware the Royal Commission had reported its recommendations (Q8a).

Table 22: Prompted awareness of the Royal Commission's main recommendation

Q11. *The Royal Commission on Genetic Modification presented its recommendations to the Government on 27 July 2001. Its major recommendation was for New Zealand to take a "middle of the road" approach to genetic modification. That is, its major conclusion was that New Zealand should keep its options open, by not turning its back on potential advantages of genetic modification, but at the same time moving forward with caution, minimising and managing risks. Were you aware of this recommendation?*

	MFE Benchmark Sub sample n=228* %	MFE Benchmark Māori Sub sample n=96* %	MFE Benchmark Non Māori Sub sample n=132* %
Yes	58	55	58
No	37	41	37
Don't know	5	5	5
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8) and excludes those who were aware of any of the Royal Commission's three main recommendations at Q10.

Table 23: Level of personal informedness about the Royal Commission's recommendations

Q9a. *How informed do you believe you are about the Royal Commission's recommendations?*

	MFE Benchmark Sub sample n=192* %	MFE Benchmark Māori Sub sample n=70* %	MFE Benchmark Non Māori Sub sample n=122* %
Very informed	8	5	8
Just informed	52	48	53
Neither	3	6	2
Just uninformed	25	27	24
Very uninformed	13	14	13
Don't know	0	0	0
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8) and who were not aware the Royal Commission had reported its recommendations (Q8a).

Table 24: Feeling more informed as a result of the Royal Commission's work

Q12. Do you consider yourself more informed or less informed about genetic modification as a result of the Commission's work?

	MFE Benchmark Sub sample n=329* %	MFE Benchmark Māori Sub sample n=130* %	MFE Benchmark Non Māori Sub sample n=199* %
More informed	40	44	40
Less informed	14	18	14
The same	43	37	44
Don't know	2	2	2
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8).

Table 25: Changed views as a result of the Royal Commission's work

Q13. *And have you, in any way, changed your views on genetic modification/genetic engineering as a result of the Royal Commission's work? (If yes, probe direction of change)*

	MFE Benchmark Sub sample n=329* %	MFE Benchmark Māori Sub sample n=130* %	MFE Benchmark Non Māori Sub sample n=199* %
Yes, less favour	4	6	4
Yes, more in favour	5	4	5
Yes, a bit of both	3	6	2
No change	88	84	88
Don't know	1	1	0
Total	100	100	100

Note: Components may not always add to 100% exactly because of rounding.

*Note: Excludes respondents who had no awareness of genetic modification or genetic engineering (Q3/Q3a/b) and who were not aware that there had been a Royal Commission on Genetic Modification (Q8).