

GREENPEACE

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GE Corn Cover Up Continues



Introduction

Questions continue to be raised about the role the Government and its agencies played in the “corngate” incident revealed in Nicky Hager’s book *Seeds of Distrust*, on 10 July 2002.

Greenpeace has analysed the allegations in the book, the papers released by the Government and the media statements made since the book was released. After studying all the available information, we have no doubt that corn contaminated by a genetically engineered (GE) variety, was planted in New Zealand. The Government knew about the contamination at the time, covered up the incident and continues the cover up now.

The following pages outline the evidence that leads us to this conclusion. The first section details the evidence regarding whether or not contamination occurred. The second section shows how the Government covered up the incident.

It should be noted that Greenpeace is an independent, non-party political organisation that has campaigned on the issue of GE since 1992. Greenpeace’s concerns regarding GE are based on the inherent, irreversible risks the technology poses to the environment.

You can download the Clarkie’s Corn Cover-up label at:

www.greenpeace.org.nz/coverup

Section 1: Was the corn contaminated with GE?

MYTHS and FACTS

1. MYTH – Final tests were inconclusive.

FACT – Final tests confirmed that the corn had GE contamination of less than 0.5%.

EVIDENCE –

Lead scientists from ERMA considered the corn was contaminated after the final test results had come in by 5 December, 2000.

Dr Hannah's report from the 5 December 2000 states,
"... with a considerable degree of confidence it can be concluded the Novartis sweet corn ... has less than 0.5% GM contamination."

Dr Hannah never concluded that the corn was not contaminated, only that the level of contamination came under the Government's then allowable threshold of 0.5%.

The Government still acknowledged that the corn was contaminated in January 2001, as the Prime Minister's office, MAF, ERMA and the Ministry for Environment were still considering crop destruction at this time.¹

In a memo from Dr Oliver Sutherland and Lindie Nelson, Deputy Chair ERMA to the ERMA Board on 15 January 2001 they state in relation to the GE corn release:

'Since we know that the Novartis sweet corn is contaminated, is it acceptable that it should remain in the ground?'
and *'... it is a very substantial number of completely uncontrolled GM plants now growing in the field.'*ⁱⁱ

These statements are based on Dr Hannah's report, 5 December 2000. Bas Walker confirmed on 12 July 2002, that Dr Hannah's report was *"the final scientific comment"* (Myth 2 below).

Evidence from the 400 pages released by the Government on Friday 12 July show that the GeneScan laboratory considered the corn to be contaminated. In a letter to Novartis received by the 5th December they state:

"Our experiences in qualitative testing leads us to believe the samples received contain trace amounts of GM sweet corn".

Independent scientists have examined the evidence so far supplied publicly and also reached the conclusion that the corn was contaminated. Associate Professor Peter Wills, University of Auckland stated on Wednesday 17 July, 2002 that:

"...there is not proper scientific basis for categorical claims (such as those emanating from the Prime Minister and Minister for the Environment) that corn from Lot NC9114 was not contaminated with genetically engineered Bt11 kernels".

2. MYTH - Further tests were conducted.

FACT – No further tests were conducted after the 5 December, 2000.

EVIDENCE –

Dr Donald Hannah, Manager Science and Research (ERMA) prepared advice for the Government on 5 December 2000.ⁱⁱⁱ

Mr Bas Walker stated on 'Checkpoint', National Radio, Friday 12 July, 2002, that Dr Donald Hannah considered the full range of test results when he made his report to Government, and stated "*there was no other written analysis of the test beyond [Donald Hannah's] memorandum*" and confirmed there was no further testing. Mr Walker also confirmed that Dr Hannah's report was "*the final scientific comment*".

Tests run on the corn

Table 1 details the tests conducted on the corn to determine the presence of GE contamination. Initial tests were performed on the seeds before they left the USA. Two rounds of tests were then run on the seeds after they arrived in New Zealand. The first tests were run by Cedenco on 2 November 2000. The Government then initiated a second round of tests and results were returned by the 24 November 2000. A final letter from GeneScan summarising their results was sent on the 5 December. These were the final tests conducted on the seeds and formed the basis for all conclusions drawn regarding the 2000 contamination status of the seeds.

Table 1: Tests run on Lot NC9114 sweet corn seeds

Date	Source	Laboratory	Results	Comments
August 2000	Novartis	USA	-	
November 2, 2000 - results known	Cedenco Mixture of open & unopened bags ¹	Crop & Food	+	Cedenco notified the Government and Novartis
November 24, 2000 – results known	Cedenco Different bags, same lot, all closed ¹	Crop & Food GeneScan USA	- - No result available	
November 24, 2000 – results known. Last known letter from GeneScan, 5 December 2000.	Cedenco (5 samples to each lab)	Crop & Food GeneScan	- x 5 samples + x 3 samples (2 samples: no result available)	One +ve sample from unopened bag: therefore couldn't have had soil contamination (others were opened or combined bags)
November 24, 2000	Heinz Watties	Crop & Food	No result available	
November 24, 2000	Talleys	Crop & Food	No result available	
November 24, 2000	Seed Distributors	Crop & Food	No result available	

Crop and Food Laboratory, Lincoln, NZ
GeneScan Laboratory, Melbourne, Australia

3. MYTH – Samples from the final round of tests were all negative to GE.

FACT – Final round of tests returned on the 24 November 2000 had a mix of positive and negative results.

EVIDENCE –

The diagram of the tests conducted drawn by an official involved in the issue^{iv} clearly shows that the tests from GeneScan returned three positive results for GE contamination. Samples were sent to GeneScan in the second round of testing initiated by the Government. These results were returned by the 24 November 2000 and a letter was sent discussing the findings on 5th December.

The reason for getting some negative readings in other samples is because the GE contamination is at low levels and the testing accuracies are not 100%, according to the GeneScan letter on the 5 December. This means it is not always easy to find the contamination even though it exists.

The GE contamination would also be spread unevenly through the whole shipload. There would be some pockets of contamination, and areas of no contamination that would return negative results. Some negative and some positive results would be expected and the occurrence of some negatives does not rule out the presence of GE contamination in other samples.

4. MYTH - The samples that registered positive to GE were due to soil contamination.

FACT – The final assessment of all of the results considered and dismissed the possibility of dirty samples creating “false positives”. Also, at least one sample that registered positive for GE was from an unopened seed bag and could not have been contaminated by soil.

EVIDENCE –

Allegations have been made that the positive results from Crop and Food were due to soil contamination. However in a logged conversation between Crop and Food and ERMA representatives on 15 November 2000, laboratory representative Dr Gail Timmerman ruled out the possibility of soil contamination. The logged note states:

“Crop and Food did not notice any soil remaining on washed sample. Would perhaps need a lot of bacteria in the washed sample to give a false positive signal. So assume that the result is not due to contaminations by bacteria.”^v

Dr Hannah looked at the positive test results and determined that lab error or dirty samples resulting in ‘false positives’ was unlikely because the labs ran identical tests on ‘controls’ (on seeds known to be GE free). The controls registered negative while the Lot NC9114 seeds registered positive^{vi}.

Three samples were sent to GeneScan during the second round of testing^{vii}. One of these was from an unopened bag and so could not have been contaminated by soil.

Some results from other unopened bags have not been revealed. The results from the sample sent to the USA during the second round of testing was also from an unopened bag. No results have been supplied for this sample.

5. MYTH – Positive results were due to “false” positives

FACT – The possibility of “false” positives was considered and dismissed in the final analysis of all the results in Dr Hannah’s advice to the Government. The most statistically sound tests registered positives, and separate laboratories registered positives. No further tests were conducted to justify a theory that the positives were “false”.

EVIDENCE –

Dr Hannah looked at the positive test results and determined that lab error resulting in ‘false positives’ was unlikely because the labs ran identical tests on ‘controls’ (seeds known to be GE free). The controls registered negative while the Lot NC9114 seeds registered positive. He also concluded that the contaminant was likely to be a GE variety Bt11^{viii}.

The GeneScan lab results are likely to be the most reliable. Their samples were 100 times the size of the samples sent to Crop and Food. An important limit on the technical ability of reliably detecting GE contamination is sample size. The larger the sample the more statistically reliable it is. Three of the known results from GeneScan were positive. These were the largest size and therefore most reliable.

Positive test results were recorded from at least two separate laboratories from the range of results currently available to the public: Crop and Food (from the Cedenco sample on the 5th November 2000) and GeneScan (final round of tests, 24 November 2000). It is unlikely that positive results from two separate laboratories could all be “false positives”.

If there was any uncertainty surrounding the test results (eg. that the positives were “false”), then further tests would have been required to be able to categorically dismiss the positives registered as “false”. No such tests were conducted and so Dr Hannah’s conclusion based on all the tests that were conducted, still stands: the corn was contaminated with GE material.

Further evidence that the corn was contaminated

Two types of chemicals indicate the presence of GE in a sample: the “on” switch for an engineered gene (promoter), and the “off” switch (terminator). The presence of either indicates GE.

Four samples tested positive for the terminator found in the GE corn Bt11. The promoter or “on” switch called 35S was expected to be found in the samples if the GE corn was Bt11. However the presence of 35S can be difficult and can yield unstable results. This has been widely discussed in scientific literature. Therefore the absence of 35S does not rule out GE contamination, if the terminator (nos) has been found.

Section 2: Was there a cover up?

The Government knew that the corn was contaminated and covered up the incident in four ways by:

- denying that the corn was contaminated with GE
- creating a threshold for GE contamination that made the GE contamination “legal”
- confusing the interpretation of the science
- establishing a public relations plan to counter public concern if the evidence ever came to light.

Policy change to allow a cover up

1. MYTH - A tolerance threshold of 0.5% for GE contamination was never Government policy.

FACT – Cabinet papers confirm that a 0.5% threshold level was created and existed until July 2001 when zero tolerance was reinstated.

EVIDENCE –

The cabinet paper from Marian Hobbs presented on 11 December 2000 stated *“Ministers are advised that for purely practical reasons, the system would have to be set up in relation to a very low but nevertheless explicit level of allowable inadvertent contamination. The present interim proposal is for a maximum of 0.5% contamination in sweet corn”*^{ix}.

If a tolerance threshold of 0.5% was never Government policy, why did Bas Walker, the head of ERMA and other senior members of ERMA believe until at least late February that it was and that it represented a significant change in Government policy?^x

And why is there no record of anyone correcting the apparently openly mistake?

The Cabinet paper on 11 December 2000 clearly articulates how the threshold allowed the Government to cover up the incident:

*“an interim system for inspection is being developed for sweet corn in New Zealand based on obtaining a high level of assurance (99%) that any contamination is less than 0.5%; and that information on present sweet corn seed imports is that, **against these parameters**, there is no reliable evidence for concern about GM contamination.”*

The key phrase here is “against these parameters”. By changing the definition of contamination to being any level above 0.5%, the Government was able to justify allowing the plants to remain in the ground. They shifted the goal posts to suit their political needs at the time.

By 25 January 2001, Government officials identified that the threshold was illegal saying:

“As currently worded there is no doubt that the interim protocol [allowable threshold] is completely illegal.”^{xi}

Therefore prior to the next growing season in 2001/02, the rules changed again. This time the threshold of 0.5% allowable contamination was replaced with a number to describe how accurate the tests are.

This means that the tests have to be set up so that there is a 99% guarantee that they can find contamination of 0.5% or more. The bigger the sample size, the bigger the statistical guarantee that the answer that you've got is the right one.

The 99% guarantee of finding contamination of 0.5% or more was still inadequate. “A stricter testing regime would be technically feasible” according to Jill White, Chair of ERMA.^{xii} Larger sample sizes would allow detection of 0.1% contamination. The Government's testing regime is much weaker than it could be.

Fudging the science – misinterpreting the conclusions

The Government represented the results regarding GE contamination as inconclusive. However final tests confirmed that the corn had GE contamination of less than 0.5%, as already discussed in Section 1 (Myth 1, page 1).

1. MYTH – GE contamination, if it existed, was below detectable levels and further testing would not provide further certainty.

FACT - Final tests confirmed that the corn had GE contamination of less than 0.5% and further tests were unlikely to change this conclusion.

EVIDENCE –

Dr Hannah's report confirmed the presence of GE contamination (for full discussion see page 2, Myth 1, “Was the corn GE contaminated?”). He stated; “*further sampling is unlikely to change this conclusion*”. This conclusion was misinterpreted in the Cabinet paper 11 December as “*further sampling and testing is unlikely to change [the] conclusion*” that there was no “*reliably detectable*” contamination at all.

Public relations and calculated ‘spin’

2. MYTH – The government was open about the contamination at the time.

FACT – The government planned and implemented a PR exercise to avoid public concern.

EVIDENCE –

- i. Initial meeting between Government, regulatory bodies and industry:

The companies' first request was that the issue remain secret at least until a course of action had been agreed. If or when it became public, they urged that they use the word ‘maize’ rather than ‘sweet corn’ in any government press releases, so as not to raise public concerns about food. They also urged that the negative-sounding word ‘contamination’ be avoided. A word like ‘intermingling’ was preferred.^{xiii}

ii. Industry public relations firm lobbies the Government to spin the announcement:

The seed company Novartis' public relations advisor, Norrey Simmons, had inappropriate influence on how the Government delivered information about the contamination to the public.

In an email to Kathy McNeill from the Ministry for Environment, Ms Simmons says:

"We have taken the liberty of drafting an updated statement that diverts the debate from the corn issue to a more generic issue of recognising the need to develop a practical protocol."

iii. A calculated spin on the 'public announcement' of contamination:

A press conference by Marian Hobbs, Minister for the Environment, was originally planned to reveal information about the contaminated corn. However the Communications section at the Ministry for Environment recommended against a press conference as it:

"gives the issue a level of significance which we probably don't need and second the Minister could rapidly get out of her depth with questions."^{xiv}

Marian Hobbs' Press Secretary then decided to only put out a press release and advise the media that the Minister would be available for questions rather than risk *"boosting [the] significance"* of the announcement with a press conference.^{xv}

iv. The Q and A from Ministry for the Environment on the announcement:

The Question and Answer sheet on sweet corn went through multiple drafts. An early draft had said; *'In essence some of the tests have shown the presence of a genetic sequence which is strongly indicative of a genetic modification.'*

A week later it had been changed to; *'If genetically modified material was present at all, it was unlikely to be more than 0.04% of this.'*

However, the draft given to Marian Hobbs was; *'If genetically modified material was present at all in that shipment, the amount present was below the level that could be reliably detected.'*^{xvi}

Marian Hobbs had a range of answers prepared for her, depending on how hard she was pushed or whether the journalist had some information from elsewhere. For instance:

There were three answers prepared for the question - *'Where are these crops growing?'* ranging from revealing the facts, to denying that she knew.

- 1 *In a number of regions of New Zealand. I suggest you talk to the industry spokesperson, Peter Silcock.*
- 2 *There are plantings in East Coast, Hawkes Bay and Marlborough.*
- 3 *I do not know the actual sites where these crops are growing.'*

The 'song sheet' said "testing every seed means grinding up and destroying ability to grow".

According to the transcript, Hobbs said on Radio New Zealand's midday rural news: 'you can never say anything is totally GE free, unless you were to test every seed and, therefore, nothing to plant, because when you test the seed you destroy it [laughs]'.

v. Vague press release:

Marian Hobbs' press release on the 19th December 2000 carefully couches the information regarding the contamination in terms to avoid provoking public concern. It was buried five paragraphs into the release, put out in the week before Christmas 2000 (19th December), six weeks after the initial warnings. She uses the "fudged" science and states that:

"Although initial testing suggested there might be minute traces of GM content, a more detailed evaluation concluded with a high degree of confidence that, if present at all, the GM material was at levels below that which can be reliably detected."

Anyone reading this information without detailed knowledge of the results of the tests and Dr Hannah's conclusions would have little grounds to believe that GE corn was released. The spin worked and the incident slipped by without notice.

3. MYTH – The government came clean after *Seeds of Distrust* was published, by releasing all the information necessary.

FACT – The Government has not released all the evidence. The test results from GeneScan that showed positive results were not included in the 400 pages released on Friday 12th July, 2002.

EVIDENCE –

The Government released 400 pages of evidence on 12 July to "clarify" the situation. However they selectively revealed evidence and only supplied the reports of the negative tests. Both the report received from GeneScan by 5 December 2000, and the qualitative tests that recorded positive for GE contamination are not available for public scrutiny.

The GeneScan letter suggested that further tests were to be conducted using more sophisticated techniques called "Quantification by Online-PCR".

Where these tests conducted and if so what were the results?

Were the results supplied to Novartis and did they pass them on to the Government?

4. MYTH – There was never any denial of contamination – it just wasn't statistically significant.

FACT – There have been a number of contradictory statements made since *Seeds of Distrust* was released.

EVIDENCE –

Statements made on Friday 12 July, 2002 by Bas Walker the head of ERMA was that “*at no stage have we said categorically there was no contamination.*”

Helen Clark on Checkpoint on National Radio on 10th July stated “*there was no GM proven in the seeds*”. She also stated in the Dominion Post on 11th July “*extensive testing could not find any evidence of GM presence in those plants*”.

Marian Hobbs press release on Wednesday 10th July states, “*It cannot be claimed therefore that GM material was released ...*” and she maintained that position on 3 News on Thursday 11 July.

Conclusions

1. The seeds were contaminated and the Government knew about it.

Evidence:

- Dr Hannah's report to the Government confirmed the presence of GE on 5 December 2000
- False positives and soil contamination were considered and ruled out by Dr Hannah in his report. Soil contamination was ruled out by GeneScan in their letter 5 December letter.
- If there was confusion, why were no further tests conducted? The Precautionary Principle should have been instigated if there was uncertainty. If the science was uncertain, the seeds shouldn't have been planted out.

2. The Government covered it up at the time by:

- Denying the presence of GE contamination
- Changing the threshold to accommodate a level of contamination
- Confusing the science
- Using public relations spin

3. The Government is continuing the cover up now by:

- Denying the contamination existed by relying on their misinterpretation of the conclusions that they used at the time that contamination was below detectable levels.
- Perpetuating confusion over thresholds and detectable levels of contamination.
- Using the same PR lines that they developed for use at the time.
- The tests that recorded positive for GE contamination are not available for public scrutiny.

ⁱ Email between MAF, MFE, ERMA and the Prime Minister's office, 12 January 2001, released by the Government on Friday 12 July, 2002.

ⁱⁱ *GM Contamination of seed*, a confidential memo from Lindie Nelson and Oliver Sutherland to Jill White, John Maasland, Tony Haggerty, Colin Mantell, Helen Hughes, Prue Kapua, Leatrice Welsh and Bas Walker, 15 January 2001.

ⁱⁱⁱ *Evaluation of information received for Novartis Jubilee sweetcorn lot NC9114*, Donald Hannah, Manager Science and Research, ERMA, 5 December, 2000.

^{iv} Hand drawn diagram by an official involved in the issue, records the results of GE testing, released by the Government on Friday 12 July 2002.

^v *Potential GM contamination of imported sweet corn seed: Crop & Food test results, File Loge: Conversation with Gail Timmerman Crop & Food, Wednesday 15 November 2000*, released by the Government on Friday 12 July 2002.

^{vi} *Evaluation of information received for Novartis Jubilee sweetcorn lot NC9114*, Donald Hannah, Manager Science and Research, ERMA, 5 December, 2000.

^{vii} Hand drawn diagram by an official involved in the issue, records the results of GE testing, released by the Government on Friday 12 July 2002.

^{viii} *Evaluation of information received for Novartis Jubilee sweetcorn lot NC9114*, Donald Hannah, Manager Science and Research, ERMA, 5 December, 2000.

^{ix} *Possible contamination of imported seed with genetically modified material*, 11 December 2000, Paper to Cabinet from the Office of the Minister for the Environment and Minister of Biosecurity, Hon Marian L Hobbs.

^x Bas Walker, letter to Pete Hodgson, 27 February 2001

^{xi} Internal Government email, Thursday 25 January 2001, released by the Government on Friday 12 July, 2002.

^{xii} Correspondence to Marian Hobbs from Jill White, 10 July 2001, released by the Government on Friday 12 July, 2002.

^{xiii} *Seeds of Distrust*, Nicky Hager, p40.

^{xiv} Email between the Communications Manager, Ministry for Environment to the Press Secretary and the office of Hon Marian Hobbs, 12 December 2000, released by the Government on Friday 12 July, 2002.

^{xv} Ibid.

^{xvi} Ministry for the Environment, confidential question and answer sheet on the incident, 30 November 2000, 8 December 2000 and 15 December 2000.