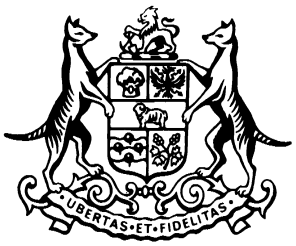

2008

Parliament of Tasmania

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

Members of the Committee

Mr *Kim Booth* MP
Hon *Greg Hall* MLC
Hon *Sue Napier* MP
Hon *Ruth Forrest* MLC
Hon *David Llewellyn* MP (Chair)
Hon *Lin Thorp* MLC

Table of Contents

Executive Summary

Plant, animal and microbial breeding, regardless of how it is accomplished, typically involves generating genetic diversity, selecting superior genotypes from it and multiplying those for commercial release and distribution.

The key difference between classical breeding and breeding involving gene technology lies in the way genetic diversity is achieved. Whereas classical breeding generates variety from sexual crossing between members of the same species or near relatives, gene technology allows particular DNA sequences (transgenes) from any plant, animal, microbial or synthetic source to be inserted directly into the nuclear DNA of a recipient cell. This is known as transformation. Other modern techniques that do not rely on sexual crossing also produce genetic variation (eg. DNA mutation induced by radiation, chemicals or through cell culture) however, these do not involve introducing foreign DNA. Therefore, the defining feature of gene technology is that it facilitates incorporation into a host genome of a far wider range of genetic material than previously possible.

Gene technology in primary industries is a controversial topic in Australia. Whilst some other states have decided to allow genetically modified (GM) crops within their jurisdictions, Tasmania has to date gone against this trend in maintaining a GM moratorium.

The Committee received evidence in relation to the potential advantages and disadvantages of allowing or not allowing the use of genetically modified material in food or non-food crops.

One of the most frequently mentioned themes was the international marketing advantage enjoyed by many Tasmanian products. Many of those opposed to the use of GM material warned of the damage that lifting the moratorium would cause to the State's reputation as a producer of clean, high-quality foodstuffs.

Another key theme that emerged from the written and verbal submissions, and one which also attracted very divergent views, was the potential environmental advantages and disadvantages of allowing the use of GM material. The proponents and supporters of gene technology pointed to the potential for less use of chemicals in agriculture. However, the claimed environmental advantages of GM material were disputed by opponents, arguing that the use of GM crops actually led to a greater environmental impact in the longer term.

The third key theme concerned the impact that GM material would have on human health if it were approved for use in Tasmania. The vast majority of submissions from those opposed raised concerns about its implications for human health and the lack of testing undertaken to prove that such material was safe for human consumption, either directly or through the extended food chain. Others took a different view, arguing that GM foods are probably safer than conventional foods because they undergo so much more scrutiny.

In considering the unintended presence of GM material in non-GM crops and seed supplies, there were three main points at issue. The first was the feasibility of

keeping non-GM crops completely free of GM material, the second was the co-existence of GM and non-GM crops within local growing areas and within Tasmania in general, and finally, what level of GM material presence would be acceptable in non-GM crops if complete separation were not possible.

The use of stock feed comprising or derived from GM plants was also an issue investigated by the Committee. Tasmania is a net importer of stock feed and the decision by Victoria and New South Wales to allow the growing of GM crops will have an impact on the ability of the stock industry in this State to source GM-free feed.

According to some witnesses, the need for Tasmania to import substantial amounts of grain and the Adventitious Presence levels accepted elsewhere has the potential to create problems for the local primary industry sector. However, the Department of Primary Industries and Water suggested that it would be possible, even under the existing arrangements, to allow imports of GM grain or contaminated grain where the gene material had been devitalised and was no longer a threat as GM organism.

A further issue raised with the Committee was the need to address the logistics and costs of a separation system that would be required should Tasmania ever proceed with approving genetically modified crops.

Given the evidence presented, the Committee has recommended that the prohibition on the release of GMO food crops to the Tasmanian environment for commercial purposes be extended and reviewed after five years.

In addition, a zero tolerance for viable GMO contamination in imported canola and grain seed, as well as a prohibition on imported animal feed containing viable GMOs, has been recommended.

The Committee has also stressed the importance of labelling, by recommending that the State Government advocate for improved labelling and use of vendor declarations for animal feed; and also to collaborate with relevant authorities to determine whether current arrangements in Australia for labelling GM foods can be amended to better address ongoing consumer concern and to enable epidemiological research.

Parliament House, Hobart **David Llewellyn MP**
28 August 2008 **Chairman**

Recommendations

The Committee recommends that :

Term of Reference 1

1. The prohibition on the release of GMO food crops to the Tasmanian environment for commercial purposes should be extended and reviewed after five (5) years.

2. Following any future review of the moratorium that recommended a change to allow the production of GMO products, consideration be given to a transition period of certainty for non-GMO producers.

3. The release into the environment for commercial purposes of non-food GM plants that are approved by the Office of the Gene Technology Regulator should be prohibited unless authorised under Tasmania's *Genetically Modified Organisms Control Act 2004*. Authorisation will be subject to assessment of likelihood of GMO escape to the broader environment, other crops, or human or animal food supplies and conditions as required.

4. The Department of Primary Industries and Water investigate the potential for GMO-free seed production for canola, temperate pasture and forage species and other crop species in collaboration with Tasmanian and Australian mainland plant breeders, the Tasmanian Farmers' and Graziers' Association, the Tasmanian Institute of Agricultural Research and other primary industry stakeholders.

5. The Tasmanian Government and the Brand Tasmania Council Inc. fund by 2009 a Brand Tasmania strategy to promote and identify Tasmanian food and crops as GMO free to actively leverage market advantage.

6. The Department of Primary Industries and Water continue to collaborate with relevant national and international experts to investigate whether current assessment methods for GMOs and food derived from GMOs can be improved to address recurring health and safety questions. The Tasmanian Government undertake to present any specific proposal for improvement to the Gene Technology Ministerial Council or Food Regulation Ministerial Council as appropriate, for consideration.

7. The Tasmanian Government join with the Western Australian and South Australian Governments to facilitate and fund ongoing research involving independent scientific trials to determine the human health and safety of GM food crops.

8. The State Government calls on the Australian Government to implement a dedicated long term national surveillance system for the potential health effects of GM foods.

9. The State Government lobby the Australian Government to ensure that Food Standards Australia New Zealand (FSANZ) adopts a more stringent risk strategy by requiring human safety testing for GM foods similar to that required for the introduction of new pharmaceutical products.

Term of Reference 2

10. The current zero tolerance for viable GMO contamination in imported canola seed and grain should be maintained and the same approach applied to other imported grains, seeds and plant products, if these are also likely to be contaminated with viable GM material.

11. The Department of Primary Industries and Water monitor arrangements for coexistence between GM and non-GM canola and other crops on the Australian mainland, particularly in regard to levels of GMO contamination to ensure that measures taken to safeguard Tasmania's GM free status remain appropriate to the changing risk environment.

12. The Government invite dialogue with scientists, producers and marketers, to examine the full spectrum of issues related to these disciplines when considering specific proposals for researching GM plants.

13. Improved bio security systems and resources must be developed and implemented as a matter of priority.

14. The Department of Primary Industries and Water monitor and analyse mainland and overseas experiences with the introduction and consequences of gene technology in agricultural production systems. This will include biosecurity measures, facilities, equipment and resources that would be needed to ensure segregation of GM and non- GM along the entire supply chain from import to export in this State, should future reviews change the GMO free status.

15. The Department of Primary Industries and Water should continue to assist landholders affected by Grace canola GMO contamination to eradicate residual GM seed and prevent spread of GM material off-site, commensurate with risk and with least possible disruption to normal farming activity.

16. The Department of Primary Industries and Water should monitor court decisions in Australia and overseas, regarding GMO contamination and if necessary review Tasmanian administrative and legislative arrangements, in light of those decisions.

Term of Reference 3

17. The prohibition on imported animal feed containing viable GMOs continue, unless that feed is authorised by permit under the *Genetically Modified Organisms Control Act 2004* to be processed in Tasmania to a non-viable state in an approved facility, prior to use. The prohibition encompass grain, grain mixes, fodder and any other plant product used for animal nutrition.

18. While the Tasmanian Government continue to encourage livestock producers to avoid use of feed derived from GM plants by, for example, sourcing from mainland jurisdictions that maintain a GM crop moratorium, the ban should not extend to imported animal feed containing non-viable GM material.

19. The Department of Primary Industries and Water investigate options for improved labelling or use of vendor declarations for animal feed, to better safeguard livestock producer choice and enhance animal product traceability and identity preservation. Potential for a national scheme capable of identifying animal feed as either containing viable GMOs, containing non-viable GM material, not containing GM material, or as product that may contain viable GMOs or product that may contain non-viable GM material, should be examined in the first instance.

Term of Reference 4

20. Management of former GM canola trial sites continue to be regulated under the *Genetically Modified Organisms Control Act 2004* to eradicate residual GM seed and prevent spread of GM material off-site. The Department of Primary Industries and Water continue its cooperative approach with affected farmers and the biotechnology companies responsible for the trials, to ensure compliance with site management plans and progression towards site sign-off with least possible disruption to normal farming activity.

Term of Reference 5

21. Research involving dealings in contained facilities with GMOs relevant to primary industries that are approved by the Office of the Gene Technology Regulator, may be authorised under the *Genetically Modified Organisms Control Act 2004*. Authorisation will be subject to Department of Primary Industries and Water assessment of likelihood of GMO entry to the environment, or human or animal food supplies and conditions as required.

22. Open-air trials of GM food plants continue to be prohibited in Tasmania.

23. Open-air trials of non-food GM plants that are approved by the Office of the Gene Technology Regulator be prohibited unless authorised under the *Genetically Modified Organisms Control Act 2004*. Authorisation will be subject to Department of Primary Industries and Water assessment of the likelihood of GMO entry to the environment, or human or animal food supplies and conditions as required.

24. The Department of Primary Industries and Water and the Department of Economic Development undertake ongoing research into the economic impacts and market consequences of the use or non-use of gene technology in the agricultural sector with at least a biennial report to Parliament.

Term of Reference 6

25. The Department of Primary Industries and Water collaborate with relevant Australian State and Territory, national and international authorities to

investigate whether current arrangements in Australia for labelling GM foods can be amended to better address ongoing consumer concern about the ability to discriminate between GM food and non-GM food. The Tasmanian Government strongly advocate for consistent labelling through FSANZ.

26. The importation and use of GM amenity grasses, ornamental plants, plantation trees, fish or invertebrates for purposes other than research continue to be prohibited in Tasmania, irrespective of approval by the Office of the Gene Technology Regulator.

27. The importation and use of GM animal vaccines and GM micro-organisms for bioremediation or biological control that are approved by the Office of the Gene Technology Regulator, be prohibited unless authorised under the *Genetically Modified Organisms Control Act 2004*. Authorisation will be subject to Department of Primary Industries and Water assessment of likelihood of GMO entry to the environment or human or animal food supplies and conditions as required.

28. The importation and use of live GM micro-organisms to generate food processing aids or food additives be prohibited in Tasmania irrespective of approval by the Office of the Gene Technology Regulator. The Tasmanian Government should discourage use of food processing aids and additives derived from GMOs, when suitable non-GM alternatives are available. The use of GM micro-organisms for food processing should be prohibited if the GMO remains viable in the final product, irrespective of approval by the Office of Gene Technology Regulator.

Term of Reference 7

29. The Tasmanian Government continue its active participation in the national scheme for gene technology regulation to protect Tasmania's policy position and enhance the operation of the scheme nationwide.

Term of Reference 8

30. The Department of Primary Industries and Water continue to administer the *Genetically Modified Organisms Control Act 2004* on behalf of the Tasmanian Government and continue to coordinate a consistent, collaborate, whole-of-government approach to the use of gene technology in primary industries via the Gene Technology Interdepartmental Committee.

31. The *Genetically Modified Organisms Control Act 2004* be amended to take into account recommendations in this Report.

32. The Tasmanian Government and the Office of the Chief Scientist undertake public education initiatives to inform the community about gene technology.

Introduction

1.1 APPOINTMENT AND TERMS OF REFERENCE

On Thursday, 5 July 2007 the House of Assembly and the Legislative Council agreed to the establishment of a Joint Select Committee in the following terms –

"That a Joint Select Committee be appointed with power to send for persons and papers, with leave to sit during any adjournment of either House and with leave to adjourn from place to place to inquire into and report upon —

The most appropriate and effective policy position on use of gene technology in primary industries that best serves the future market interests of Tasmania, having regard to —

1. The potential advantages and disadvantages of allowing or not allowing the use of genetically modified (GM) material in food and non-food crops;

2. Unintended presence of GM material in non-GM crops and seed supplies;

3. Use of stock feed comprising or derived from GM plants;

4. Management of former GM canola trial sites;

5. Agricultural research and development involving GMOs;

6. Domestic and international gene technology trends and policy developments involving plant, animal and bacterial GMOs;

7. Tasmania's participation in the national scheme for gene technology regulation;

8. Administration of the policy; and

9. Any other matters incidental thereto".

The Committee comprised three Members of the House of Assembly and three Members of the Legislative Council – Mr Kim Booth MP, Ms Ruth Forrest MLC, Mr Greg Hall MLC, Mr David Llewellyn MP, Mrs Sue Napier MP and Mrs Lin Thorp MLC.

In supporting the motion to establish the Committee, Mrs Napier MP stated:

> …we must ensure that we assess the market as to the advantages and disadvantages of being GMO-free in this State given the opportunities that might arise from technology, particularly in terms of food products that can, for example, tackle cancer and other conditions, whether it is for our own community or for the world.[1]

[1] Napier, Hon Sue, MHA, Hansard, 5 July 2007.

1.2 PROCEEDINGS

The Committee called for evidence in advertisements placed in the three daily newspapers. In addition invitations were sent to key stakeholder groups and individuals.

The Committee received 1179 responses to its invitation for written submissions. Of these responses, 964 were identically-worded emails from individuals residing in Japan, Germany and Canada. The remaining 115 submissions came from individuals and organisations based in Australia. A significant number of the latter were also identically-worded emails or were copies of submissions that had been presented to inquiries established in other States of Australia. It is important to note that these inquiries in other jurisdictions did not have the same Terms of Reference as this Committee. For example, some submissions received by the Committee had previously been presented to the GM Canola Review Panel in Victoria and specifically addressed the growing of that crop in that State. As a result it was not always possible to relate them to the specific matters before this Committee, although they were taken into consideration wherever possible.

After initial consideration of the written submissions, the Committee invited a number of individuals and organisations to provide further evidence in person and be questioned by Members of the Committee. The Committee held public hearings in Devonport, Launceston and Hobart and also received evidence via phone link interstate and overseas. Witnesses ranged from emerging and eminent scientists, representatives from major stakeholders and interest groups to interested individuals.

The following pages discuss the evidence, as it relates to each Term of Reference, presented in these written and verbal submissions.

The Committee met on sixteen occasions. The Minutes of such meetings are set out in Attachment 4.

The witnesses are listed in Attachment 1. Written submissions received are listed in Attachment 2. Documents received into evidence are listed in Attachment 3.

Background

The Tasmanian Government first released its Gene Technology Policy concerning the use of gene technology in Tasmanian primary industries in July 2001. This policy was based on the recommendations of the Parliamentary Joint Select Committee on Gene Technology, which included the establishment of a two year moratorium on the commercial release of genetically modified (GM) crops in Tasmania. This policy was to be reviewed prior to July 2003.

As a result of the review, the Tasmanian Government decided to extend the moratorium on the commercial release of GM animals, and GM crops as currently prescribed under the Tasmanian *Plant Quarantine Act 1997*, until June 2008. Provisions for research trials using GM non-food crops will continue to be strictly enforced. Research associated with GM food crops is not allowed in the open environment and is only permitted within appropriately accredited facilities. A moratorium on the commercial release of GM animals also applies.

The following chronology outlines the main events since the February 2003 review :

2003	Gazettal of ban on GMOs under Plant Quarantine Act 19997 to extend moratorium
16 November 2004	*Genetically Modified Organisms Control Act* receives Royal Assent. Allowed for Tasmania to be declared a region for the purpose of banning GMOs.
15 November 2005	*Genetically Modified Organisms Control (GMO-free Area) Order 2005* (S.R. 2005, No. 126) – the whole of Tasmania is declared to be a GMO-free area.
May 2007	Statutory Review of *Gene Technology Act 2001*.
6 June 2007	Genetically Modified Organisms Control Amendment Bill 2007 introduced into House of Assembly.
18 June 2007	Public comment period on Statutory Review of *Gene Technology Act 2001* closes.
5 July 2007	Establishment of Joint Select Committee on Gene Technology in Primary Industries.
1 May 2008	Date by which review must be Tabled in both Houses of Parliament.
30 June 2008	End date for current moratorium under 2003 Plant Quarantine ban, related to expiry of *Genetically Modified Organisms Control Act 2004.*
15 November 2009	Expiry date for *Genetically Modified Organisms Control Act 2004.*

Advantages and Disadvantages

Chapter 1

The potential advantages and disadvantages of allowing or not allowing the use of genetically modified (GM) material in food or non-food crops.

Widely divergent views, some based on assertion rather than hard evidence, were presented to the Committee in relation to this Term of Reference. A number of matters were raised on both sides of the debate, but some key common themes emerged.

One of the most frequently mentioned was the international marketing advantage enjoyed by many Tasmanian products. Many of those opposed to the use of GM material warned of the damage that lifting the moratorium would cause to the State's reputation as a producer of clean, high-quality foodstuffs.

Mr Richard Pearson was one who expressed this view in his written submission to the Committee.

> This development risks yet further erosion of Tasmania's clean green image … Tasmania has an opportunity to stress its differences by being a GM free producer … To allow GM crops, and that includes trees, is to close yet another economic opportunity in Tasmania's uniqueness.[2]

A similar view was put by Ms Fay Wilson, of Scamander: "To tamper with the very food we eat is not an option. It is unethical, dangerous and may be the final blow to Tasmania's 'clean green' image."[3]

Ms Prudence Barrett, of Maydena, noted that:

> Tasmania produces some of the world's finest foods and this demand for Tasmania's fine foods is based on quality and safety. Tasmania has a growing organic industry and trends show a world wide movement towards organic foods. …. There needs to be considerable more research done on GM foods to prove that they are safe before allowing even trail [sic] sites into the state with the risk of jeopardising Tasmania's food safety and image.[4]

The potential negative impact on Tasmania's organic food production sector was highlighted in the submission from the Organic Coalition of Tasmania. It noted that higher costs would be incurred if the use of GM material was allowed, as well as "potential loss of certification, loss of market access and 30-50% price premiums …" In addition, there would be "Damage to the Tasmanian Brand image, and a disincentive for the growing investment in organic food and farming in Tasmania."[5]

---

[2] R. Pearson, Submission JSC/GT72
[3] F. Wilson, Submission JSC/GT66.
[4] P. Barrett, Submission JSC/GT61.
[5] C. Landon-Lane, Organic Coalition of Tasmania, Submission JSC/GT75.

Certified organic farmer, Ms Julie Page, presented a similar view: "Tasmania is well placed to maintain its GM free status due to its physical separation from the mainland. Tasmania can retain its 'clean, green' image by remaining GM free."[6]

A background paper provided by Mr Phillip Tattersall, of Soil Tech Research, went further by suggesting that:

> Declaring a GM free policy for Tasmania … offers benefits of assured markets and premiums for all agricultural and food producers, not just those who are organic. It will highlight and further improve our clean green image and is very much in keeping with the vision of the Tasmanian Food Industry Action Plan … .[7]

This position was supported in verbal evidence given to the Committee by Mr Andrew Thompson, Managing Director of Tasmanian Feedlot Pty Ltd.

> With that, Tasmania being an island State, I think gives us an opportunity to differentiate ourselves from the rest of Australia and possibly the rest of the world in terms of clean, green and GM-free food production. …. That ties in with this Japanese philosophy that we have always been able to market our product using Tasmania's clean, green image and coming from an island State that has a natural barrier that enhances that.[8]

Tasmanian Feedlot Pty Ltd, which is owned by a Japanese parent company, exports Tasmanian grain-fed beef to Japan worth more than $40 million a year to the State's economy.

When asked what the impact would be on his business if Tasmania decided to allow the use of GM material, Mr Thompson replied:

> That really does concern me because of the impact on business. I think our Japanese parent company and their customers would be very, very concerned. …. It reduces the brand, yes. I do not think it would close us down … but it does take an edge off the amount we produce now.[9]

North-West Coast vegetable grower, Mr Ben Wilson, also gave evidence along the same lines.

> At the moment, with the moratorium in place, we have a real point of difference over other countries that have accepted GM material into their production systems. We also have a perception, internationally, as being clean and green. This perception could be damaged if we lift our moratorium and affect negatively our ability to export vegetables.[10]

Later in his verbal evidence, Mr Wilson reiterated this point in response to a question from the Committee.

---

[6] J. Page, Submission JSC/GT70.
[7] *Towards a GM Free Tasmania*, p. 8, attachment to Submission JSC/GT60, P. Tattersall.
[8] A. Thompson, Tasmanian Feedlot Pty Ltd, *Transcript of Evidence*, 20 February 2008, p. 28.
[9] A. Thompson, ibid, p. 31.
[10] B Wilson, *Transcript of Evidence*, 19 February 2008, p. 25.

> I mentioned before the perception of Tasmania as being clean and green - and I use the word 'perception' - but our international customers see that and they accept it and I think it would be a shame to lose it. I think it is valuable to us.[11]

Currently, about one per cent of Tasmania's agricultural production is organic, however, there is certainly potential for this grow. In 2005 there was more than $9 million worth of organic production.[12]

Dr Tony McCall, from the School of Government at the University of Tasmania, told the Committee that he believed Tasmania 'must differentiate our product around consumption trends, not production targets.'[13]

> Marketing an agrifood product at regional level where quality control, support for local growers and short food miles are driving consumer trends, is where the growth is in agrifood trends across all developed nations including Australia, Europe and the United States. This is the area we need to target in order to secure Tasmania's competitive advantage in agrifood production. Being non-GMO will differentiate our product from the pack of commodity producers driven by productive considerations that should not be the driving force for strategic decision-making in Tasmania.[14]

Dr McCall used the example of Tuscany to illustrate this point, noting that 'its competitive advantages have been driven entirely by provenance-based branding, because we recognise it as a universal brand, which is linked to the locality.'[15] On the basis of this example he believed that Tasmania's branding needed to go beyond just a GE-free tick to 'a more substantive Tasmanian brand that identifies us and links our landscape and sense of identity to our product.'[16] He also highlighted the importance of labelling in achieving this marketing advantage, suggesting that 'if we want to export our product, we are going to have to label as effectively and in as great detail as the European Union is proposing.'[17]

At least one supporter of allowing the use of GM material partially conceded the point about the potential marketing advantage in Tasmania being seen as GM-free.

While giving evidence to the Committee, Mr Buz Green, the Chief Executive of Serve-Ag Pty Ltd, responded to a question by saying:

> … I would support a moratorium, if we could quantify that taking a position did give us an opportunity with our brand to promote a Tasmanian product and gain value in the national global market where we could really get economic benefit from it. But that is the issue.[18]

---

[11] B. Wilson, ibid, p. 28.
[12] Department of Primary Industries and Water, *Industry Profile* – www.dpiw.tas.gov.au accessed 26/8/08.
[13] T. McCall, University of Tasmania, *Transcript of Evidence*, 21 February 2008, p. 40.
[14] T. McCall, ibid., p. 39.
[15] T. McCall, ibid., p. 40.
[16] T. McCall, ibid., p. 41.
[17] T. McCall, ibid., p. 42.
[18] B. Green, Serve-Ag Pty Ltd, *Transcript of Evidence*, 20 February 2008, p. 6.

In response to a further question, Mr Green said that "if we are going to take out that position, we need to be sure that our non-GM brand will give us the premium and the value to compete in that situation."[19]

However, others, including primary producers, saw clear commercial and marketing opportunities for Tasmania if the use of GM material were to be allowed.

Northern Midlands farmer, Mr Ian MacKinnon, outlined some of the opportunities he could see if Tasmania allowed the use of GM material.

> I see Tasmania over time moving away from bulk commodity crops to smaller niche crops and when I say niche crops, I am thinking in terms of the future – biofactories, biocrops – but not as a producer so much of the ingredients out of those, like the alkaloid poppy industry, but more as a seed producer of both these new biofactory crops that will come via GM, but also the conventional crops. So I see us moving, because we are such a small economy and small agricultural economy, away from some of our traditional areas into much more specialised areas.[20]

This view of one Tasmanian farmer was shared by the Tasmanian Farmers and Graziers Association (TFGA), both in its written submission and in verbal evidence given by its President, Mr Roger Swain.

In its written submission the TFGA listed a number of potential advantages from allowing the use of GM material, including reduced production inputs and environmental footprint, improved production outputs, lower costs, higher yields and improved product quality.[21]

However, the submission also acknowledged the potential for a negative impact on GM free markets.

> GM crops currently offer Tasmanian farmers real on farm benefits and developments in the pipeline suggest that this be even more the case in future. However, there is no doubt that some markets for Tasmanian agriculture, specifically in relation to food products, do demand GM free product, and these are sensitive to any suggestion of "contamination" of that product by GM material.[22]

Despite this caveat, the TFGA "strongly" recommended allowing the case-by-case approval of the use of GM material in Tasmania.[23]

When appearing before the Committee, the TFGA President, Mr Roger Swain, reiterated the advantages and opportunities to be gained from allowing the use of GM material.

> If Tasmanian agriculture is to continue to thrive in very competitive markets, individual farm enterprises must be able to benefit from improvements in production technology and emerging market

[19] B. Green, ibid, p. 9.
[20] I. MacKinnon, *Transcript of Evidence*, 21 February 2008, p. 26.
[21] Tasmanian Farmers and Graziers Association, *Submission to the Tasmanian Parliamentary Joint Select Committee Inquiry into Gene Technology in Primary Industries*, (October 2007), Submission JSC/GT97, p. 9.
[22] TFGA, Submission JSC/GT97, ibid, p. 10.
[23] TFGA, Submission JSC/GT97, ibid, p. 15.

> opportunities. In particular, they need to be able to take advantage of technology which will allow them to reduce production costs, improve product quality and increase product options. Gene technology offers the prospect of significant improvements in productivity, cost control, product quality and product options.[24]

For one other specialist primary producer in Tasmania, the ability to use GM material was strategically important so that emerging technical advances could protect current market advantages.

Mr Brian Hartnett, the Managing Director of Tasmanian Alkaloids Pty Ltd (one of three pharmaceutical poppy processors in the State), told the Committee:

> I guess the point with GM is that according to our usual pattern, we need to know we can invest in these things so that in decades to come there is a possibility that we will be able to use those things commercially if we need to, if there is a significant advantage, or in order to fight back against the competition. …. If the competition in other countries is working on GM and come up with something, any time, they could put us out of business. … Our main thought is that we should strategically be prepared, that if somebody else is able to do it and put us out of business, we should be able to use the technology.[25]

Another key theme that emerged from the written and verbal submissions presented to the Committee, and one which also attracted very divergent views, was the potential environmental advantages and disadvantages of allowing the use of GM material.

The proponents and supporters of gene technology pointed to the potential for less use of chemicals in agriculture.

In his written submission Mr David Ford, Chief Executive Officer of Impact Fertilisers, pointed to lower pesticide, fungicide and herbicide use as a result of the genetic modification of plant varieties.[26]

Appearing before the committee, Mr Ford said:

> There are significant savings both economically and environmentally from a farmers perspective. So if they can reduce the amount of fungicide damage to a wheat crop or something then, one you will increase the yield and, two, you will save on herbicide, fungicide or insecticide inputs. Environmentally, my personal view is that it gives a much better outcome because you lower that part of it and you still keep the yield.[27]

The written submission from Bayer CropScience Pty Ltd, a company that has developed GM canola and cotton varieties for use in Australia, listed several environmental benefits from allowing the use of GM material.

---

[24] R. Swain, Tasmanian Farmers and Graziers Association, *Transcript of Evidence*, 21 February 2008, pp. 1-2.
[25] B. Hartnett, Tasmanian Alkaloids Pty Ltd, *Transcript of Evidence*, 19 February 2008, pp. 48-49.
[26] D. Ford, Impact Fertilisers Pty Ltd, Submission JSC/GT35, p. 2.
[27] D. Ford, Impact Fertilisers Pty Ltd, *Transcript of Evidence*, 17 March 2008, p. 6

In particular it pointed to less use of pesticides: "In Canada, the move to herbicide tolerant canola varieties has meant less total herbicides applied (in the order of 1,500 to 6,000 tonnes less herbicide used from 1997 to 2000."[28]

The Regulatory Affairs Manager for Bayer CropScience Pty Ltd, Mr Kay Khoo, told the Committee that "benefits include things like yield improvement, reduction in pesticide use and reduction in input costs."[29]

He pointed specifically to the reduction in the use of insecticide since the GM cotton variety known as Bt cotton was first used in Australia.

> Bt cotton was introduced in Australia in 1995 and progressively throughout the years the number of sprays have gone down. When BT cotton was first introduced it had only one single gene and later two genes were introduced which meant better control of insect pests and it also delayed insects' resistance. With the introduction of two genes the level of insecticide use in cotton growing has dropped even further to I think maybe 60 per cent, and it has continued.[30]

The written submission from CSIRO Agribusiness provided detailed evidence to support this contention in relation to the Australian cotton industry.

In relation to pesticide use, the CSIRO submission reported that "Bollgard® II, a CSIRO-developed genetically modified (GM) cotton now available for Australian cotton growers, has reduced pesticide use by 80 per cent compared with conventional varieties … ."[31]

A similar outcome was reported for insecticide use, to the extent that submission concluded that "CSIRO research has shown that there is a reduction of 64 per cent in the environmental impact of growing Bollgard® II cotton when compared to conventional cotton grown in the same year (Knox *et al*., 2006).[32]

The CSIRO submission also predicted similar quantifiable outcomes would be achieved if GM canola were approved for use in Australia.

> If TT [triazine tolerant] canola were completely replaced by GM types, the reduction of 1280 tonnes of triazine would represent a 20 per cent reduction in the total use of triazine herbicides, which is estimated by Radcliffe (2002) to be in the order of 6000 tonnes. In the Australian context it is likely that the introduction of GM canola would see a reduction in the environmental impact associated with the use of herbicides on herbicide-tolerant canola. This is because the GM canola types are used with herbicides that are less persistent and toxic than triazines.[33]

---

[28] *Submission to the Joint Select Committee into gene technology in primary industries (Tasmania)*, Bayer CropScience Pty. Ltd: Melbourne (16 October 2007), p. 7.
[29] K. Khoo, Bayer CropScience Pty Ltd, *Transcript of Evidence*, 19 March 2008, p. 14.
[30] K. Khoo, *Transcript of Evidence*, ibid., p. 20.
[31] "Attachment 1: Examples of CSIRO technology under development", *CSIRO's Perspectives on the State and Territory GM Crop Moratoria*, CSIRO Agribusiness: Canberra (August 2007), pp 18-19.
[32] "Attachment 1: Examples of CSIRO technology under development", ibid., p. 19.
[33] *CSIRO's Perspectives on the State and Territory GM Crop Moratoria*, CSIRO Agribusiness: Canberra (August 2007), p. 13.

The Deputy Chief, CSIRO Plant Industry (CSIRO Agribusiness), Dr Thomas Higgins, said the benefits from the current use of existing GM crops worldwide had been environmental, rather than in terms of increased yield.

> I think it is really in environmental management that the benefits have been accrued. That is why the farmers like to use them …. managing weed control and fewer applications of insecticide.[34]

However, the claimed environmental advantages of GM material were disputed by those opponents of allowing the use of GM material who provided evidence to the Committee.

For example, Senator Christine Milne told the Committee that the use of GM crops actually led to a greater environmental impact in the longer term.

> The issue in terms of the use of herbicides is the argument that the GE companies have used, that they can reduce the herbicide regime by going with herbicide-resistant and therefore supposedly reduce the herbicide load into the environment and contamination of groundwater and all of your components in the ecological system. But what has been demonstrated is that that is not what happens. First of all you end up using more Roundup than before and then that Roundup has to be combined with the triazines again because of resistance that develops. So you end up with a greater load into the environment in the longer term. That has been the experience in the U.S.[35]

This view was shared by Mr Jeffrey Smith, the Executive Director of the Institute for Responsible Technology, who also gave evidence in person to the Committee.

> When it [herbicide-tolerant crops] was first introduced in the United States there was a reduction in herbicide use over the first two years. It was mixed over the next three years and then it started to increase, and its increase has accelerated. One of the main reasons for the increase is herbicide-tolerant weeds.[36]

This challenge to the suggestion that GM crops resulted in less environmental harm also came from representatives of Environment Tasmania Inc., who gave verbal evidence to the Committee.

The Convenor of Environment Tasmania, Dr Phil Pullinger, told the committee that "there is increasing evidence that use of GE crops that are developed to be pesticide-resistant actually increases the use of pesticides."[37]

> We know that use of crops that are genetically engineered to be herbicide-tolerant, insect- or virus-resistant can result in increased weediness of wild relatives, development of resistance among the actual crop, and negative impacts on animal populations through reduced food availability or toxicity

[34] T. J. Higgins, CSIRO Plant Industry (CSIRO Agribusiness), *Transcript of Evidence*, 18 March 2008, p. 43.
[35] C. Milne, Senator for Tasmania, *Transcript of Evidence*, 5 March 2008, pp. 10-11.
[36] J. Smith, Institute for Responsible Technology, *Transcript of Evidence*, 16 November 2007, p. 8.
[37] P. Pullinger, Environment Tasmania Inc., *Transcript of Evidence*, 18 March 2008, p. 2.

> to non-target species, which was something picked up in the UK field scale trials.[38]

Dr Pullinger went on to say that the level of environmental harm being caused by GM material is difficult to quantify.

> The problem is that we have very little understanding of whether or not the use of GE crops elsewhere has so far resulted in ecosystem level or population level problems. There is no ecosystem level monitoring of commercial use of GE crops but we do have early studies, which are limited, which show evidence of environmental harm.[39]

Evidence presented by long-time Canadian canola grower, Mr Percy Schmeiser, via an international telephone link was even more forthright about this issue.

> At the beginning the farmers were told – not only by the companies but also by our Government – that with the introduction of GMOs you would have increased yields, you would use fewer chemicals and it, the food, would be more nutritious. That turned out to be completely false. …. So the corporations no longer say that anymore in North America or in Canada; all they say now is that GMOs are a better way for farmers to control weeds.[40]

The third key theme to emerge from the evidence presented to the Committee concerned the impact that GM material would have on human health if it were approved for use in Tasmania.

The vast majority of submissions from those opposed to the use of GM material raised concerns about its implications for human health and the lack of adequate testing undertaken to prove that such material was safe for human consumption, either directly or through the extended food chain.

Foremost among these was Mr Jeffrey Smith, the Executive Director of the Institute for Responsible Technology. A significant proportion of the detailed verbal submission to the Committee by Mr Smith focussed on this issue.

He concluded his outline of the health risks posed by GM crops by calling for them to be banned.

> Their approvals are based on superficial studies by industry that are often rigged to avoid finding problems and disproved or untested assumptions. This is what we are up against. These five categories [of health risk] represent most of the reasons that GM crops can go wrong, not all of them, and yet the evaluations here and around the world are incompetent to even identify most of the problems. From a medical standpoint there is sufficient evidence, in my opinion, to ban these products.[41]

Epidemiologist Dr Judy Carman of the Institute of Health and Environmental Research Inc., told the Committee that those working in her field "specialise in risk assessment of human health. …. We like evidence-based measurement."[42]

---

[38] P. Pullinger, *Transcript of Evidence*, ibid., p. 2.
[39] P. Pullinger, *Transcript of Evidence*, ibid., p. 3.
[40] P. Schmeiser, *Transcript of Evidence*, 17 March 2008, p. 33.
[41] J. Smith, *Transcript of Evidence*, op.cit., p. 12.
[42] J. Carman, Institute of Health and Environmental Research Inc., *Transcript of Evidence*, 19 March 2008, p. 41.

Her view of the evidence about the safety of GM soy for human consumption was scathing: "Looking at the evidence that it is safe to eat is frankly pathetic … The evidence is of extremely poor and dubious quality."[43]

She went further in questioning the safety of GM material for human consumption.

> So the things that are crucial to the public's mind – is it going to give me cancer, is it going to harm my children in-utero or whatever; is it going to cause fertility problems; is it going to cause allergies? – are not being answered by the safety assessment process.[44]

In her written submission to the Committee, Dr Carman also pointed to "a great number of unknowns" in relation to the health impacts of GM material, especially GM canola.

> There are therefore a great number of unknowns yet to be evaluated in the safety of GM canola, and some evidence of adverse effects. That no-one has yet found adverse effects in people is not reassuring, because no-one has yet done any human experiments or looked in human disease surveillance systems for evidence of harm. Indeed, animal safety experiments have not been done thoroughly enough yet to determine what to go look for in human surveillance systems (Carman 2004). In fact, much of the safety assessments done on GM crops that regulators conduct in various countries are based more on assumption than hard scientific fact.[45]

It should also be noted that Dr Carman has "… received some funding from the Western Australian Government to do some animal feeding studies. …These are the first, long-term independent safety assessments that actually measure human health end-points".[46]

Medical practitioner, Dr Alison Bleaney, representing the Public Health Association of Australia, expressed similar misgivings when she appeared before the Committee.

> GM crops are definitely not safe. The really big problem is that the regulatory framework that was introduced in an attempt to ensure their safety is in fact flawed. …. there have been almost no credible studies on GM and food safety. There has only been one systemic investigation of GM food that has ever been carried out in the world and that showed that there were growth defects in the stomach and small intestine of young rats that were not fully accounted for by the transgene product. ... It was the actual process of how these genetic modifications were made and so that this may be a general effect of all GM foods and this has not been followed up.[47]

Other respondents have questioned the validity of this research.

---

[43] J. Carman, *Transcript of Evidence*, ibid., p. 41.
[44] J. Carman, *Transcript of Evidence*, ibid., p. 45.
[45] J. Carman, *Submission to the Tasmanian Government on the review of the moratorium against the growing of GM crops*, Institute of Health and Environmental Research Inc.: Kensington Park, (August 2007), p. 10
[46] J. Carman, *Transcript of Evidence*, op.cit., p. 46.
[47] A. Bleaney, Public Health Association of Australia, *Transcript of Evidence*, 20 February 2008, pp. 2 & 3.

Dr Bleaney also told the Committee that the health risks were a more serious issue for children exposed to GM material: "The other problem is that GM foods are far more dangerous for children than for adults. Children are more susceptible to the toxins, the allergens and the attrition of pollens than adults …."[48]

Dr Jack Heinemann, Professor of Biological Sciences at the University of Canterbury in New Zealand, suggested that labelling was also an issue to be considered in conjunction with testing and food safety.

> The adequacy of testing begs heavily on our ability to know who has been eating it and who hasn't, in what combinations and under what conditions, so inadequacy of labelling will contribute to the ambiguity of testing for potential health impacts. We can't separate that from another issue, which is the fact that we're dealing with food safety hazards that have always been difficult to test for but may be unique or at least amplified by using these technologies at the scale at which they're being used.[49]

Mr Alex Schaap told the Committee that:

> There are certain labelling requirements. The difficulty we have with the labelling requirements is that the current legislative arrangement involves two pertinent factors: one is the National Food Agreement and the other is the Mutual Recognition Act. It is really not possible for Tasmania to impose labelling requirements different from other jurisdictions in relation to food. Therefore clarifying matters of GM content in labelling requires a national approach. At the moment it is not clear to me that labelling alone would ensure for a consumer that the products they are consuming don't contain GM.[50]

Others who made written and verbal submissions to the Committee took a different position on GM food safety.

The Deputy Chief, CSIRO Plant Industry (CSIRO Agribusiness), Dr Thomas Higgins, said in response to a question from the Committee:

> Yes, I think it is probably true to say that they are probably safer than conventional foods because they undergo so much more scrutiny. That is not to say that our foods are not safe; our conventionally-bred foods are also very safe. …. I think foods made from GM plants are as safe as those made from conventionally-bred plants as well.[51]

Mr Scott Carpenter, representing AusBiotech (the umbrella organisation for the biotechnology sector in Australia), told the Committee that "GM food is tested more rigorously than conventional food. …. It is much more."[52]

He also pointed out to the Committee that:

---

[48] A. Bleaney, *Transcript of Evidence*, ibid., p. 3.
[49] Heinemann, Dr Jack, Professor of Biological Sciences at the University of Canterbury in New Zealand, *Transcript of Meeting*, 7 May 2008, p. 3.
[50] A. Schaap, Department of Primary Industry (Tas.), *Transcript of Evidence*, 18 March 2008, p. 29.
[51] T. J. Higgins, *Transcript of Evidence*, op.cit., p. 42.
[52] S. Carpenter, AusBiotech, *Transcript of Evidence*, 19 March 2008, p. 64.

> Studies specifically on human testing are rarely done with foods, unless you're going to make a nutraceutical claim. That is irrespective of whether it is gene technology or for conventional breeding, and irrespective of whether it is crossing closely related species or from within the same species.[53]

Mr Carpenter used the example of "bush foods" to illustrate this point.

> As has been indicated earlier, conventional foods are not tested to that same rigour. For example, there's a push at the moment for bush foods, but we don't have any long-term health studies looking at bush food.[54]

Australia's Chief Scientist, Dr Jim Peacock, made a similar point to the Committee in relation to the health and safety issues related to GM material.

> I know I sound like a very pro-GM person but I am trying to give you a balanced view and to argue very strongly that anything that is being introduced into the market has to be thoroughly tested and I am convinced that we have an excellent regulatory regime in Australia. With regard to the long-term effects, I did a back-of-the-envelope calculation some years ago about how many billions of meals have been produced from 12 years of growth of GM food crops and I must do that again. There is no indication that it is any riskier than normal food. In fact, it gets more testing than conventional food.[55]

It should be noted that this 'billions of meals' claim by Dr Peacock was specifically challenged in subsequent verbal evidence presented to the Committee by Mr Scott Kinnear:

> I have heard the statement repeated many times that billions of meals have been fed to Americans, hundreds of millions of Americans have been eating these foods for 10 years, and there's no evidence of harm. …. The implication of that statement is that there has been some monitoring of those hundreds of millions of Americans who have eaten those billions of meals and that there's been deliberate surveillance looking to see whether there is a link between the consumption of those GM foods and those billions of meals and harm or disease in those hundreds of millions of people. …. There have been no studies done to look at whether the consumption of those meals has caused harm, there are no surveillance systems established anywhere in the world, so there is no scientific basis for making that claim.[56]

---

[53] S. Carpenter, *Transcript of Evidence*, ibid., p. 60.
[54] S. Carpenter, *Transcript of Evidence*, ibid., p. 59.
[55] J Peacock, The Chief Scientist (Australia), *Transcript of Evidence*, 18 March 2008, p. 79.
[56] S. Kinnear, *Transcript of Evidence*, 19 March 2008, op cit., p. 3.

Unintended Presence of GM Material

Unintended presence of GM material in non-GM crops and seed supplies.

Again, this Term of Reference attracted widely divergent views and opinions, with three related main points at issue. The first was the feasibility of keeping non-GM crops completely free of GM material, the second was the "co-existence" of GM and non-GM crops within local growing areas and within Tasmania in general, and finally, what level of GM material presence would be acceptable in non-GM crops if complete separation were not possible.

Agricultural contractor, Mr Greg McDonald, responded to a Committee question on the issue of harvesting, contamination and co-existence by saying:

> As contractors, if you are in a paddock that has ragwort in it, you will spend two or three hours cleaning the thing out. If that were imposed on us to genetically modified canola, it would be a pain, but we do it now with bad thistles or ragwort. You have to clean the machine down. There are pea harvesters and they are very particular about washing down. …. If you were going to spend two hours washing a machine down or cleaning a machine down somebody is going to have to pay for it.[57]

Fellow contractor Mr Doug French, Chairman of Agricultural Contractors of Tasmania Association, also addressed this issue.

> As contractors we are faced with a similar problem with different varieties of grass seed and we spend a lot of time in cleaning them down because of their main purchase of the grass seed licence for Heritage Seeds and Pacific Seeds. If we are producing a perennial grass seed they take a very small tolerance of annuals in it, so we have to be very careful we have lifted our game considerably there in the last four or five years. …. I reckon that now 90 per cent of the serious contractors are carrying a fairly extensive air compressor system for cleaning their machines down. But there is little point in cleaning them down if you put it into a truck that has had a variety of things in it and not been cleaned out.[58]

The Manager of Roberts Ltd, Mr Rob Winter, was also questioned about this issue. He told the Committee:

> The present nil tolerance approach is, we believe, already untenable and will continue to be more problematic. In terms of grain supply, world trade in grains is now based on a tolerance of cross-contamination of 0.9 per cent. This is also the case for all States in Australia except Tasmania. Nil tolerance makes it problematic and more expensive to supply our grain to the industries. …. If for instance canola is the only [GM] crop that was continued to be grown, the canola grain would still go through the same terminals and facilities as all other cereal and grains that would potentially come to Tasmania. So there could be contaminant in there. We have to

[57] G. McDonald, *Transcript of Evidence*, op.cit., pp. 13-14.
[58] D. French, *Transcript of Evidence*, op.cit., pp. 14 & 15.

> work on what is the practical threshold to enable us to have access to the grain that is in the system.[59]

Canola grower Juliette McFarlane, representing the Network of Concerned Farmers, told the Committee that the additional costs imposed on non-GM farmers would be considerable as a result of contamination issues.

> For us, the biggest problem as we see it would be an impost of extra costs for us and therefore our income would be reduced. We think that we will lose markets; we certainly will not get the premiums and the market access we are currently getting.[60]

Ms McFarlane explained to the Committee that the problem of contamination would be of little concern to those growing GM crops but would be a major issue for others.

> It also puts considerable amount of stress and extra expense onto grain harvesters and windrowers …. Transport – all of that stuff. There are extra clean-down times for all of those people, and that expense will get passed on to the non-GM growers, not to the GM growers. All of that is very problematic, and from the word go it seemed to us that the GM grower should take some responsibility and have their own closed supply chain from paddock straight to port, or whatever. But to put it though an existing supply chain that is scattered all over New South Wales and Victoria, I can't see it working very well at all.[61]

Another farmer, Mr Ben Wilson, from North-West Tasmania, also expressed his reservations about whether or not it would be possible for GM and non-Gm crops to co-exist in Tasmania.

> Initially, you might be able to introduce GMO canola and in the first few years you would probably be able to keep it within a paddock or within the farming boundaries, but when those harvesters come in and move to the next site, be it 5 or 10 kilometres down the road, unless you pull the machine completely apart, there is no way you are going to get all the canola oil seed out of that machine and you will transfer some of it down the road. I think, largely, it would be impractical to run a system of GM-free and allow GM for that reason.[62]

In his evidence to the Committee, Mr Alex Schaap (General Manager, BioSecurity and Product Integrity, Tasmanian Department of Primary Industry) outlined the measures in place to deal with contamination issues, particularly in relation to imports.

> That import requirement reflects the current policy position in that we are saying that all GMO organisms are prohibited, with the exception of those that are otherwise authorised under the Act. We do not accept any threshold of contamination. So we have a zero adventitious presence

---

[59] R. Winter, *Transcript of Evidence*, op.cit., pp. 16 & 20.
[60] J. McFarlane, Network of Concerned Farmers, *Transcript of Evidence*, 17 March 2008, p. 38.
[61] J. McFarlane, *Transcript of Evidence*, ibid., p. 41.
[62] B. Wilson, *Transcript of Evidence*, op.cit., p. 31

> tolerance … whereas the Mainland States have all agreed to adopt thresholds for contamination with GM material. The effect of our import requirement is quite demanding upon people trading in canola.[63]

As with evidence from other witnesses, Mr Schaap also drew attention to the potential for contamination from harvesting and transporting of crops.

> … even a shipment of wheat often turns out to be effectively a mixed grain import because it does have contaminants. That contaminant is typically sourced from the harvesting operation itself. Weeds and volunteer plants are being harvested along with the crop and sometimes the seed contamination is close enough so that you get seeds being harvested. You can also have contamination through the supply chain in terms of silos or trucks or containers.[64]

He also noted that, with expected increased production of GM in Victoria and New South Wales, there would be a need to review and re-focus procedures at the quarantine barrier.

> … I think the inevitable consequence of that will be that we will have to amend our import requirements over time. For example, if the most immediate issue, canola, becomes very much more widespread in terms of GM production, we will have to look at changing our import requirements in relation to feed grain and it may well be that we will have to test for the presence of canola seed. Given the difficulty in detecting canola seed, we might well have to make rules in relation to seeds of brassicas in general and prohibit those as contaminants of feed grain or, as I mentioned earlier, require that any shipments with brassica seed contamination be sent for processing and devitalising.[65]

Some witnesses also pointed to the potential for GM crops to contaminate non-GM crops of the same variety through means other than harvesting, transportation and storage.

For example, in its written submission, Tasmanian poppy processor GlaxoSmithKline Australia advised that 'the control of wild poppy growth is problematic in Tasmania, and as the seed is so small it is easily spread by wind, machinery, livestock, foot and vehicle traffic.'[66]

The company also expressed concern about the potential for crop contamination through cross-pollination by honey bees.

> Clearly the issue of cross-pollination is one that should be taken very seriously, and Tasmania currently has no strategies in place to prevent cross-pollination events between GM and non-GM crops. This has ramifications for the growth of vegetable and flower crops in Tasmania and

---

[63] A. Schaap, Department of Primary Industry (Tas.), *Transcript of Evidence*, 18 March 2008, p. 23.
[64] A. Schaap, *Transcript of Evidence*, ibid., p. 24.
[65] A. Schaap, *Transcript of Evidence*, ibid., p. 25.
[66] *Submission for Review of Tasmanian GM Moratorium 2007*, GlaxoSmithKline Australia: Latrobe (2007), Submission JSC/GT79, p. 7.

> also for identity preservation of currently existing non-GM varieties of poppy.[67]

Seed producer, Mr Peter Coxhead, from North-East Tasmania, expressed similar concerns in his written submission.

> Insects are the primary vehicle for pollination in Crucifera crops with wind as a secondary source. …. Crosses can occur, albeit more rarely across a wide range of wild and cultivated species of brassicas. …. The risk of crossing is not just generational but is extended, in that as the seed inevitably disperses through such means as farm and contractor equipment, trucking, birds, rodents, etc, the pollen from a single rogue plant has the potential for damaging many acres of field. …. For the specialty seed industry, any seed crop contamination equals devastating loss.[68]

[67] GlaxoSmithKline Australia, Submission JSC/GT79, ibid., p. 7.
[68] P. Coxhead, *Covering Letter*, Submission JSC/GT98, p. 1.

Use of Stock Feed from GM Plants

Chapter 3

Use of stock feed comprising or derived from GM plants.

As many witnesses addressing this term of reference pointed out, Tasmania is a net importer of stock feed and the decision by Victoria and New South Wales to allow the growing of GM canola will have an impact on the ability of the stock industry in this State to source GM-free feed.

The situation was summarised by Mr Rob Winter, Manager of Roberts Seed and Grain, in his written submission to the Committee.

> Estimates at present put Tasmanian cereal production at between 65,000 and 110,000 tonnes. In 2006-7, these figures were however not achieved due to a series of severe frosts in October of 2006. Feed grain and malt cereal use rates in Tasmania has [sic] climbed to be in the range of 220,000 to 300,000 tonnes per year. Our grain-using industries therefore need substantial supplementation with imported grain. This significant shortfall needs to be sourced from somewhere, usually the eastern seaboard of mainland Australia.[69]

This submission went on to note that in March 2007 the European Union adopted a 0.9% Adventitious Presence (AP) [i.e. unintended contamination] of GM material, while Japan currently has 5% AP thresholds for approved GM events. In Australia, all States except Tasmania have agreed to an AP threshold level of 0.9% for canola grain. In relation to Tasmania's AP limits, Mr Winter says:

> At present Tasmania has a policy of nil GM in any part of our production systems. The limit of sensitivity for testing for GM events in seeds and grains is 0.1%. Therefore a figure of nil% tolerance is not practical.[70]

In his view, the need for Tasmania to import substantial amounts of grain and the AP levels accepted elsewhere has the potential to create problems for the local primary industry sector.

> If in fact a number of other Australian states do adopt GM cropping and/or GM grains are increasingly approved for import into Australia, a mechanism for offering segregation of GM from GM free grains has been developed under the GRDC's [Grain Research and Development Corporation] Single Vision Grains Australia process. … it is estimated that having segregated GM and GM free production and supply systems is achievable and would require 4-6% increase in costs. Note however, that under this basis, GM free for canola grain means AP levels of 0.9%.[71]

Mr Winter then goes on to recommend adopting of this AP level.

---

[69] R. Winter, Submission JSC/GT62, p. 2.
[70] Winter, Submission JSC/GT62, p. 3.
[71] Ibid.

> If we are to have access to supply of GM free grain, then the threshold for AP should be the same as for the international trade, being 0.9%. Many current significant Tasmanian agriculture industries will not be practical unless Tasmania agrees to adoption of the same levels of AP as standard in the trade of grain.[72]

The Tasmanian Farmers and Graziers Association (TFGA) expressed a similar view in its written submission.

> Adventitious presence in grain imports from the mainland will be unavoidable if mainland states remove current moratoria on GM crops. At the same time Tasmania is a significant net importer of grains for multiple uses, any loss of the ability to import from the mainland will be to the considerable detriment to Tasmanian grazing and processing industries. …. A question that arises is whether the relevant customers for meat insist on zero adventitious presence of GM material in otherwise GM free feed, or whether some threshold level above zero would be acceptable.[73]

In verbal evidence, Mr Roger Swain, the President of the TFGA, emphasised the problem his organisation saw for Tasmania and its primary producers.

> Tasmania will have difficulty sustaining a claim that it is totally GMO-free in future, given changes in GM policy interstate and our reliance on grain imports … We must understand that in this State grain is imported from the mainland for the preparation of animal feeds across a range of industries as a normal activity. It is not something we do as [sic] spec; it is a normal activity. Feedlots, the dairy industry, piggeries and poultry – all the intensive industries use an enormous amount of grain and, quite simply, we can't grow enough in the State to meet those needs.[74]

Northern Midlands farmer Mr Ian MacKinnon also focussed on these farming practicalities.

> The problem I see coming if we remain GE-free is that 200,000 tonnes of grain came into Tasmania last year. I am not sure how, from a quarantine point of view given that New South Wales and Victoria have moved to GM, we are going to deal with that in a sensible way. It can be dealt with but whether it is economically sensible, whether it can be managed in a logistical sense day-today, I have real fears about the practicality of that and I think that is an issue that will impact on the dairy industry, impact on our intensive animal industries – pig and poultry industries – and extensive agriculture.[75]

Mr MacKinnon went on to relate his general concerns to his own on-farm experience.

> I do not always produce enough grain to feed my sheep and I have to buy grain and actually buy mill pellets to get around the seaweed problem. So

---

[72] Ibid.
[73] Tasmanian Farmers and Graziers Association, *Submission to the Tasmanian parliamentary Joint Select Committee into gene Technology in Primary Industries*, October 2007, Submission JSC/GT97, p. 11.
[74] Swain, *Transcript of Evidence*, op.cit., p. 5.
[75] MacKinnon, *Transcript of Evidence*, op.cit., p. 26.

> even in mill grain that is going to come in and processed pellets you are still going to, I believe, have a difficulty even with processed food. This ain't simple. This is a real dilemma. It is not a reason to suddenly go GM necessarily but it is something that you are going to have to get your minds around and I do not have an answer for it.[76]

However, Tasmania Feedlot Pty Ltd, which imports two thirds of its feed grain requirements, "strongly opposes any relaxation of the current moratorium on the use of GM material in Tasmania."[77]

The Managing Director of the company, Mr Andrew Thompson, acknowledged the importing of grain was an issue, but believed any problems could be overcome.

> That one is a problem and I do not really know the answer to it. I have given a lot of long hard thought to that. I have discussed with mainland grain brokers as to what the options might be and because it is very early days with GM grain production – it has not happened yet – even in thinking about it, no-one quite knows what their reaction will be. A couple of brokers I have spoken to have suggested that there will be non-GM grain available throughout Australia. There will probably be a cost associated with that grain relative to GM grain, but I think we will seek that out as best we can. We still have to produce an economical beef product. I think the stipulation from our Japanese customer is high enough and important enough that we would convince them to probably pay more to cover that extra cost.[78]

The Tasmanian Department of Primary Industry gave evidence to the Committee that it would be possible, even under the existing arrangements, to allow imports of GM grain or contaminated grain where the gene material had been devitalised and was no longer a threat as GM organism.

The Department's General Manager of Biosecurity and Product Integrity, Mr Alex Schaap, told the Committee that:

> The relevant consideration with the current policy setting is whether the seed continues to be viable and capable of generating a living GM organism. The presence or absence of the GM DNA isn't the issue from the point of view of the quarantine barrier.[79]

Mr Schaap said that the use of processed or treated feed had happened in the past and that the additional cost was not excessive.

> Most of those intensive industries have demonstrated in the past at least a capacity to make use of processed feed, to use lower-grade grains and to have those devitalised, milled, pelletised, or heat-treated for use. That does cost them but, as I said earlier, they appear to be able to sustain

[76] MacKinnon, op.cit.
[77] A. Thompson, Tasmania Feedlot Pty Ltd, Submission JSC/GT78, 15 October 2007, p. 2.
[78] Thompson, *Transcript of Evidence*, op.cit., p, 29.
[79] A. Schaap, *Transcript of Evidence*, op.cit., p. 28.

> that. I imagine that would depend a lot, though, on what the base price for grains happens to be at the time.

Earlier in his evidence, Mr Schaap addressed the specific issue of cost in response to a question about the impact of processing the feed grain in some to devitalise the GM organism.

> I don't think it would preclude the use of those products for feed, but it will certainly raise the price of those products and it will certainly therefore change the usage patterns of those products. For those intensive industries that really have no choice, we will see that translated into the price charged to the consumer. Whether you would see that being so evident in more occasional users, I couldn't say. It would depend very much on how much the price increase was. For people who are importing feed grain for supplementary feeding of broad-acre livestock, I would be surprised if it made a dramatic difference to their total production costs.[80]

[80] Schaap, op.cit., p. 24.

Management of Former GM Trial Sites

Chapter 4

In the late 1990s and 2000, 57 field trials of canola genetically modified for herbicide tolerance to either glyphosate or glufosinate ammonium took place at a number of Tasmanian properties. The trials were conducted by Monsanto and Aventis (now Bayer CropScience) under contractual arrangements with land owners. One of the sites was at the Cressy Research Station operated by the Tasmanian Department of Primary Industries and Water.

As a result of the 2001 decision by the Tasmanian Government to pursue a GMO-free path for primary industries, no further trials have taken place since then. However, given the nature of canola seed and its propensity to persist in the soil for several years, a strict inspection and management regime was put in place to deal with the potential for the GM canola to "escape" from the former trial sites. A small number of GM canola escapes are known to have occurred over the ten-year history of the former GM trial sites, but all have been eliminated. None have been detected since the 2005/06 growing season.

A more detailed Background Paper on this issue, prepared by the Tasmanian Department of Primary Industries and Water, is attached to this Report at Attachment 1.

Only a handful of witnesses addressed this issue in the evidence, both written and verbal, given to the Committee.

Mr Buz Green, Chief Executive of Serve-Ag Pty Ltd, told the Committee that his company was currently growing non-GM canola and is required to certify that their crops are totally GM-free.

> Strictly speaking, Tasmania is not GM-free at this point in time in relation the trials that were conducted here maybe up to 10 years ago now. There are still volunteer plants emerging and those sites are being monitored. I believe those previous trial sites are controlled but we are maintaining segregation during the growing of the crops to ensure that we can maintain that purity of the lines that we are growing, and without exception to date we have been successful with that …. So it can be done.[81]

In response to a question from the Committee about the former trial sites in Tasmania, Mr Kay Khoo, representing Bayer CropScience, said:

> Even if you get one plant coming up after 10 years it is not good enough for Tasmania because they have a zero-tolerance policy. It is not so much that you can't control them; it is just the strict standard that Tasmania requires. Also with regard to the trials in Tasmania, in the early days we took advice from the regulatory authorities who told us to deep-bury the seed. That has been part of the problem; some of the seed has been deep-buried and now they are coming up. We have learnt a lot since

[81] B Green, *Transcript of Evidence*, op.cit., p. 4

> those days. Now we don't bury the seed at all; we leave them on the surface. They germinate, we spray them out and the site is cleaned within two or three years.[82]

Mr Khoo had earlier outlined his company's position on the former trial sites.

> On the management of former canola trial sites, we have had some trial sites in Tasmania and we have really managed those past trial sites continually for many years now. When we did it, it was all under permit and we could do the trials in Australia. Then the Act was introduced retrospectively and we had to manage these trial sites retrospectively. Although our contract with farmers had expired, we continue to help those farmers to manage those past trial sites and we continue to work with DPI on those sites. Our commitment to helping Tasmanian farmers is taken very seriously and we continue to provide support on these past trial sites. To date we have carried the greater burden for complying to that system …[83]

The Gene Technology Regulator, Ms Elizabeth Flynn, also gave evidence to the Committee on this issue.

> In relation to the older field trials in Tasmania, I really would like to highlight the fact that they occurred prior to the regulatory system coming in and there is no doubt in my mind that the rigour of the management of the trials has increased under the regulatory system, no doubt at all. …. Also, under the regulatory system, of course, we now have inspectors and we go and inspect the trial during and after the trial and there are certain conditions before the site is signed off and can be returned or rehabilitated to normal use.[84]

Others who gave evidence had a completely different perspective on the former trial sites in Tasmania.

Tasmanian Senator Christine Milne, in arguing 'that, on environmental grounds, we ought not to be lifting the ban' told the Committee that:

> We have had the experience in Tasmania of trials where there was persistent and on-going contamination. It has taken a lot of effort, as you would be very well aware – I do not have to go into that – to try to overcome that problem.[85]

North-West Coast farmer, Ms Ute Mueller, said there had been carelessness in the way the trials were conducted in Tasmania and that 'it had devastating results for the State.'[86]

---

[82] K. Khoo, *Transcript of Evidence*, op.cit., pp. 24-25.
[83] Ibid., p. 18.
[84] E. Flynn, Head of the Regulatory Practice and Compliance Branch of the office of the Gene Technology Regulator, *Transcript of Evidence*, 7 May 2008, p. 41.
[85] C. Milne, *Transcript of Evidence*, op.cit., p. 2.
[86] U. Mueller, *Transcript of Evidence*, op.cit., p. 5.

> It happened in the State before the industry was regulated. It was Mr Buz Green from SERVE-AG who did it on behalf of two GE companies. I don't want to say that he had instructions to be as messy as he could be but he actually was, instruction or not. …. I think he was very careless. …. It was also at a time when he didn't know what the technology was really capable of so maybe he was just a bit careless.[87]

Another Tasmanian farmer, Geraldine de Burgh-Day, also mentioned Mr Green, saying that 'with a drug you stop taking it but with pollen, bees, volunteer plants coming on, it is another matter. How many [years] is it since we had the trials in Tasmania? As Buz Green says, we are still coming across volunteers.'[88]

[87] Ibid.
[88] G. de Burgh-Day, *Transcript of Evidence*, 20 February 2008, p. 18.

Agricultural research and developments **Chapter 5**

As with the previous Term of Reference, only a limited number of witnesses gave evidence directly about agricultural research and developments involving GMOs.

The Deputy Chief, CSIRO Plant Industry, at CSIRO Agribusiness, Dr T. J. Higgins, told the Committee that:

> … there is a strong need for research and development to help meet the challenges of rising food prices, which I have already mentioned, increased food demand that I have already mentioned, rising input costs and the need to reduce the environmental footprint of a steadily increasing population and the agriculture that is needed to support that population, both nationally and internationally. So agricultural research and development is facing scientists in research and development … and of course we are also faced with the trend – the public/private tension – with respect to funding for research and development and to ask who pays. There is a big argument about that.[89]

However, Dr Higgins also made the point that there were opportunities in the research and development area as well.

> There have been major advances over the last 20 years in genetics and management of crops and animals and there is a highly committed work force, I think, in this area. Despite the fact that it might be reducing in size, it is highly committed and very well qualified. …. In terms of international trends, Tasmania, as part of the national and global economy, will continue to be influenced by international trends where governments and corporations are investing heavily in modern technologies, including GM. …. We now have much more knowledge of genetics and how to enhance our crops and animals for better productivity and healthier products.[90]

Australia's Chief scientist, Dr Jim Peacock, told the Committee that 'without the new technology I think by this time the [cotton] industry would have crashed because of the resistance the pests had built up to the available insecticides.'[91]

He also gave some insight into the research and development being carried out in Australia and its potential for the future.

> We do a lot of fundamental work on how genes work, because one of the major positives about the development of DNA technologies, genomic and proteomics – the study of proteins – and so on, is that we now have a much better understanding of how a plant develops and how it functions in the environment. …. One of the things that can be done, and we have achieved already in cotton, is to modify the complement of fatty acids in the seed oil. For example, we have cotton plants now that have a high

[89] T. Higgins, *Transcript of Evidence*, op.cit., p. 35.
[90] Ibid.
[91] J. Peacock, *Transcript of Evidence*, op.cit., p. 68.

> oleic fatty-acid content …. the high oleic oil has certain health and nutrition positives. … what we are very interested in doing – and we have been involved in studies – is producing long-chain omega 3 fatty acids in seed oils. These are the so-called fish oils which are clearly of much benefit for cardiovascular health and a number of other health characteristics.[92]

Mr Brian Hartnett, representing Tasmanian poppy processor Tasmanian Alkaloids Pty Ltd, told the Committee that his company was investing in GM research in order to ensure it could match its global competitors.

> We have a collaboration with CSIRO – excellent scientists who have done some very good work based in Canberra – and we have invested in special facilities in Westbury that are contained facilities and we have bred a herbicide-resistant which we are not allowed to grow and which we no longer have because we are not allowed to, but we could do that again if we wanted to. It was approved by the Office of the Gene Technology Regulator in Canberra as a safe thing to do but it is not allowed in Tasmania. …. So we feel that we are in fact restricted in our ability to utilise modern science for the biotech industry and that this restriction is really an artificial thing and that it should be taken off us …[93]

Representatives of another Tasmanian poppy processor, GlaxoSmithKline, also expressed support for gene technology research, noting that 'the costs of failing to capture the potential benefits of gene technology could be extremely high.' The company also expressed support for the trialling of GM poppy crops, 'but only if strict regulations were in place addressing' a number of important issues. These included health and safety concerns of consumers and customers of Tasmanian agricultural products; strict regulatory guidelines to minimise environmental impacts; and, appropriate facilities and equipment to ensure segregation of GM and non-GM poppy seed and capsule material along the entire supply chain.[94]

In response to a follow-up question from the Committee, the company's Research and Field Manager, Dr Mike Doyle, 'would not answer yes or no' about whether it supported the continuation of the current moratorium on GM material.[95]

> What we would support is the opportunity to undertake trials. I am certainly not saying at this stage that commercial production is something that we would support because we need to address these issues, but certainly we would like to see the opportunity to trial GM poppies under circumstances that don't cause us – our company and our industry and the Tasmanian agricultural industry – problems in the future. They are quite extensive things that need to be considered about how you control the planting, harvesting and cartage equipment that is physically used to transport this material; and how you control pollen transfer and gene transfer.[96]

---

[92] Peacock, op.cit., pp. 71-72.
[93] B. Hartnett, *Transcript of Evidence*, op.cit., p. 49.
[94] C. Walker, GlaxoSmithKline, *Transcript of Evidence*, 19 February 2008, p. 36.
[95] M .Doyle, GlaxoSmithKline, *Transcript of Evidence*, 19 February 2008, p. 37.
[96] M .Doyle, ibid.

Agricultural scientist, and former director of Agriculture, Mr Peter Fountain, provided the Committee with details of research and development being undertaken worldwide, beginning with GMOs already approved for release:

> Although there are only five crops that at the moment are released - mostly cotton and canola, and you can shove in carnations if you want to – the summary of licences that are out there at the moment is interesting. For cotton there are 32; for canola there are six; for sugar cane there are three; wheat, three; poppies, two; pineapple, two; a vaccine for bovine herpes – that's interesting; cholera, a fowl vaccine; grapes; Indian mustard – and the we just run down, papaya, roses, white clover and the rest of it. They are the ones with the licences, authorising intentional release of GMOs in the environment within Australia.[97]

He then provided details of those GMOs that are awaiting licences and the areas he believed should attract research and development interest for the future.

> Again there are current licence applications under consideration – wheat and barley, one; bananas, two; wheat, one; cotton, two; rye grass and tall fescue and flour. These show that it is not a dead situation. What is happening in the world at the moment is a revolution …. What is really happening is that there's a movement all the time to look at what we can do within agriculture. …. There is a review here by the G8 plus five countries. They are looking at bioenergy, which is really looking at climate change, energy security, which of course is looking at biofuels – biofuels at the moment are roughly 20 per cent of the world's supply of fuels – and food security and sustainable development. …. What we have to do in fact is look to how we can go forward in all these things – climate change and the rest of it.[98]

In his evidence to the Committee by phone-link, Dr Jack Heinemann, Professor of Biological Sciences at the University of Canterbury in New Zealand, expressed caution in relation to the benefits that could be expected to flow to agriculture from biotechnology, on the basis of his recent involvement with the UNFAO and an ISTAD report of which he was the lead author.

> That report suggests that there will be no single technology that agriculture can rely on to be both sustainable and also productive over the next 50 years and beyond. …. So technologies such as conventional breeding and other conventional biotechnologies, as opposed to modern biotechnologies that includes … genetically modified organisms, have a proven track record and a proven acceptability in the larger markets. Modern biotechnologies, on the other hand, have not, at least in the 10 years under which they have been primarily in private hands, delivered on sustainability goals or on yield types of goals.[99]

---

[97] P. Fountain, *Transcript of Evidence*, 18 March 2008, p. 14.
[98] Fountain, op.cit., pp. 14-15.
[99] J. Heinemann, *Transcript of Evidence*, 7 May 2008, pp. 1-2.

A further note of caution was expressed by another witness who appeared before the Committee. Tasmanian organic farmer, Ms Geraldine De Burgh-Day, told the Committee:

> I think we have profoundly lost the plot as a species and we have got ourselves ito some deep trouble on this planet. I think we have a direction and a lifestyle that is soon going to have a very awful wind-down. …. I don't believe it is helpful to be investigating DNA, the building block of life, when we really have no idea about what life is. …. We do not need genetic engineering to enhance the health of broccoli; we stop poisoning it and we grow it in soil that has balanced nutrients …. We have got the answers; we do not need genetic engineering, but we have to stop and think about what we are doing right now. …. I do not believe that we need to go down the road of messing with DNA. I think it is a profound mistake for our species to do so because we might end up having something quite unexpected that comes out.[100]

[100] G. De Burgh-Day, *Transcript of Evidence*, 20 February 2008, pp. 19-21.

Trends and Policy Developments

Chapter 6

Domestic and international gene technology trends and policy developments involving plant, animal and bacterial GMOs.

Professor Don Chalmers, the Chair of the Gene Technology Ethics Committee within the Office of the Gene Technology Regulator, provided evidence in person to the Committee on developments in gene technology policy issues and trends.

> I think the [Gene Technology Ethics] Committee has already had an impact in two ways on the national debate. One, there was a substantial rewriting of the risk analysis framework, which actually tried to extend the concept of risk from the scientific to the very things which I think this committee will be looking at: what are the risks socially and what are the risks to the community. …. I think the second is that we've made a very modest step by producing a national framework for the ethics of gene technology. This is essentially setting down some principles which can perhaps guide proper informed debate on the way forward because, apart from the science, there are some very clear issues in this State. One of them has been a decision to prefer the idea of clean and green because it has been seen as something which might be very much in this State's interest.[101]

Another view of the future was presented by Professor Mark Tester, from Australian Centre for Plant Functional Genomics Pty Ltd.

> GM provides all sorts of opportunities for the Australian farmer and consumer, not to mention the Australian exporter. I think it would be a pity to introduce hurdles that are much higher for some applications of th GM technology when the end product is not substantively different to that being generated by, for example, mutagenesis breeding or conventional breeding. I think it would be a real pity to put in some extra hurdles for some applications of GM. …. I think we should be asking different questions for those types of GM crops compared to the GM crops that are just messing around with altering plant genes within plants.[102]

Senator Christine Milne told the Committee that she believed advances in biotechnology and traditional cross-breeding were beginning to match the claimed advantages of genetic modification.

> The other thing to consider is that biotechnology and the study of biotechnology have advanced so quickly that traditional forms of crossbreeding can now be accelerated. You can tag the genes through that process. Whereas before it might take you eight years to cross plant varieties to get your new variety, now you can reduce that to about three years. That is what it takes also to get a genetically modified product. I

[101] D. Chalmers, Chair, Gene Technology Ethics Committee, *Transcript of Evidence*, 7 May 2008 p. 29.
[102] M. Tester, Australian centre for Plant Functional Genomics Pty Ltd

> would argue that genetic modification has already been overtaken by the use of biotechnology with traditional forms of research and science.[103]

In his verbal evidence to the Committee, Tasmanian farmer, Mr Ian Mackinnon, suggested that agriculture was on the verge of a revolution because of genetic modification.

> I think the next step change is going to be … the introduction of what I describe as the quiet revolution in agriculture, and that is the introduction of moving genes out of wild varieties and add other varieties in that can be disease resistant, drought tolerant and those sorts of things, the varieties that have all the quality characteristics that we need for breadmaking or whatever it is you're trying to do. We are in a unique position; we are sitting in a position where this is going to carry us for probably 70 or 80 years – this revolution in how we manage genes and the knowledge we have about them.[104]

Dr Thomas Higgins, from CSIRO Plant Industry, gave evidence that, in his view, emerging international trends would dictate the direction that Tasmania, and Australia, would follow in the years ahead.

> In terms of international trends, Tasmania, as part of the national and global economy, will continue to be influenced by international trends where governments and corporations are investing heavily in modern technologies, including GM. There are scientific advances in biology that build on the Human Genome Project including plant genome projects that came to fruition a couple of years after the Human genome project. We now have much better knowledge of genetics and how to enhance our crops and animals for better productivity and healthier products. The international trend is to deploy this knowledge to make farmers in those countries more competitive. It is our belief that Australia needs to be a leading part of the international trend towards greater competitiveness and production sustainability.[105]

Mr Jeffrey Smith, a US-based opponent of genetically modified food and food products, gave evidence to the Committee that a looming change in consumer buying behaviour would result in the food industry turning its back on GM material.

> We believe that this shift in consumer buying behaviour, which we anticipate will happen over the next 18 months, will be sufficient to hit the tipping point so that the rest of the food industry realises, 'Oh, we're losing millions of customers now – we are losing market share. We gain nothing from using GMOs. There is no more vitamin content, no shelf-life increase, no perceived benefit for consumers whatsoever.' We believe that the tipping point will be achieved in the United States so that within about two years the food industry will commit to removing genetically engineered ingredients.[106]

---

[103] C. Milne, *Transcript of Evidence*, op.cit., p. 4.
[104] I. MacKinnon, *Transcript of Evidence*, op.cit., p. 27.
[105] T. J. Higgins, Transcript of Evidence, op.cit., p. 35.
[106] J. Smith, *Transcript of Evidence*, op.cit., p. 2

At the other end of the scale, Mr Kay Khoo, representing biotechnology company Bayer CropScience, said that there needed to be active Government support of genetic research, along with the trend for tighter regulation of GM crops.

> Biotechnology is undoubtedly crucial to the future of Australia economically. In view of this, we think there should be incentives and encouragement for industry to invest in all forms of innovative biotechnology. … On domestic and international trends, the trend is I think to adopt GM technologies in more and more countries. We see this with the increasing acreage devoted to GM crops every year. Governments worldwide are also becoming more stringent with the regulation of GM crops. So on one hand we are increasing our production but on the other we are also making sure that the new GM products that come onto the market are very stringently assessed.[107]

Mr Scott Carpenter, representing Ausbiotech – an organisation representing the biotechnology sector in Australia, also gave evidence to the Committee that the trend domestically and internationally was toward increasing take-up of GMOs.

> Regarding domestic and international trends, GMO crops have experienced a rapid adoption over the last 10 years in many regulated environments such as Australia. That also includes the US, Europe, south-east Asia, northern Asia, and South Africa. Applications of GMOs in human health, animal health, industrial processes and environmental activities have increased both locally and globally. Although GM crops have been negatively impacted by the State moratorium, the OGTR web site provides a good indication of the strong adoption of the technology and non-crop applications. Bodies such as Codex are looking at ways to harmonise global regulatory systems and it is fair to say that the policy development is focussed more on human environmental health and safety rather than market access. In this regard, Australia has very experienced and robust regulatory systems in the form of the AGTR, FSANZ, APVMA and the TGA.[108]

[107] K. Khoo, *Transcript of Evidence*, op.cit., p. 18.
[108] S. Carpenter, *Transcript of Evidence*, op.cit., p. 57.

National Gene Technology Regulation

Chapter 7

Tasmania's participation in the national scheme for gene technology regulation.

Limited evidence was presented to the Committee on this specific issue, although the office of the Gene Technology Regulator, a national body supported by Commonwealth, State and Territory Governments, was mentioned many times.

The Executive Director of Gene Ethics, Mr Robert Phelps, appeared before the Committee and gave evidence that 'as a party to the national scheme, this committee and the Government of Tasmania should go into bat very strongly for labelling.'[109]

He went on:

> Three things to wind up quickly. Firstly, please convene the Gene Technology Ministerial council; it is the appropriate forum, it is there and it is not doing its job. Tasmania, like the others, is a member. Secondly, Tasmania should take a lead role in trying to get better labelling laws. Thirdly, please have a genuinely scientific system based on standards and benchmarks for the Office of Gene Technology Regulator and Food Standards Australia New Zealand so that we really do apply good science, real science which is mandated and the parameters which are known by everybody in advance. Those are the things that we think are most crucial in improving the national system of regulation.[110]

Mr Kay Khoo, from Bayer CropScience, told the Committee that his company was looking for more national uniformity in regulations.

> On Tasmania's participation in a national system, we think we need a uniform national system of regulations as this will reduce costs, duplication and the lack of uniformity. It is imperative for Tasmania to work with the Commonwealth and other States to have one unified system, as we have today for human health and environment. If we could also have uniformity on market regulations that would be good.[111]

Mr Scott Carpenter presented a similar theme.

> With regard to Tasmania's participation in the national scheme for gene technology regulation, it is our position that Tasmania should reaffirm its commitment to the national scheme and provide certainty to researchers and companies wanting to develop applications for gene technology. …. We believe that we should have a single Federal regulatory system for gene technology in Australia.[112]

---

[109] R. Phelps, Executive Director of Gene Ethics, *Transcript of Evidence*, 17 March 2008, p. 20.
[110] Ibid., p. 21.
[111] K. Khoo, *Transcript of Evidence*, op.cit., p. 19.
[112] S. Carpenter, *Transcript of Evidence*, op.cit., pp. 57-58.

Administration of Policy

Chapter 8

Administration of the policy; and any other matters incidental thereto.

Responsibility for the administration of the Tasmanian Government's policy on GM material rests with the Department of Primary Industries and Water (DPIW).

Very little evidence was presented to the Committee specifically related to this matter.

One person who did address the issue was Mr Scott Carpenter, who indicated an organisational preference to minimise "… any unwarranted regulatory burden on campanies and researcher."[113] He then went on to make the point that "… it is generally accepted that the broader community does not fully understand the science involved in GM. It is not surprising, therefore, that the fear of the unknown has prevented general acceptance of GM crops in the past."[114]

This latter point was also raised by Mr Buzz Green, although he went further by suggesting that education should be part of the administration of the State Government's policy.

> At the end of the day, I believe that the market position on GM is driven by fear and it is driven by fear that is generated by opponents of the technology. It is natural for humans to be conservative in this regard, but I think at the end of the day a lot of the reasons for that fear will be mitigated as people realise and understand that there are some real benefits for them and the environment through the technology. …. Certainly I think if we are taking a stand in this area on the GM one, this Government should be taking a position, as it concluded from the original review in 2001, to educate the public about the issues in relation to GM food. How far should any government go in that regard, I don't know. This State Government, if it is taking a stand in relation to GM, I think has a responsibility to educate the public.[115]

[113] S. Carpenter, *Transcript of Evidence*, op.cit., p. 58.
[114] Ibid.
[115] B. Green, *Transcript of Evidence*, op.cit., pp. 2 & 8.

List of References

Attachment 1: Examples of CSIRO technology under development*", CSIRO's Perspectives on the State and Territory GM Crop Moratoria*, CSIRO Agribusiness: Canberra (August 2007)

Barrett, P, Submission JSC/GT61

Bleaney, A, Public Health Association of Australia, *Transcript of Evidence*, 20 February 2008

Carman, J, Institute of Health and Environmental Research Inc., *Transcript of Evidence*, 19 March 2008

Carmen, J, *Submission to the Tasmanian Government on the review of the moratorium against the growing of GM crops*, Institute of Health and Environmental Research Inc; Kensington Park, (August 2007)

Carpenter, S, AusBiotech, *Transcript of Evidence*, 19 March 2008

Chalmers, D, Chair, Gene Technology Ethics Committee, Transcript of Evidence, 7 May 2008

Coxhead, P, Covering Letter, Submission JSC/GT98

de Burgh-Day G, *Transcript of Evidence*, 20 February 2008

Department of Primary Industries and Water – *Industry Profile*, www.dpiw.tas.gov.au

Doyle, M, GlaxoSmithKline, *Transcript of Evidence*, 19 February 2008

Flynn, E, Head of the Regulatory Practice and Compliance Branch of the Office of the Gene Technology Regulator, *Transcript of Evidence*, 7 May 2008

Ford, D, Impact Fertilisers Pty Ltd, Submission JSC/GT35

Ford, D, Impact Fertilisers Pty Ltd, *Transcript of Evidence*, 17 March 2008

Fountain, P, *Transcript of Evidence*, 18 March 2008

French, D, Transcript of Evidence

Green, B, Serve-Ag Pty Ltd, *Transcript of Evidence*, 20 February 2008

Hartnett, B, Tasmanian Alkaloids Pty Ltd, *Transcript of Evidence*, 19 February 2008

Heinemann, Dr Jack, Professor of Biological Sciences at the University of Canterbury in New Zealand, *Transcript of Meeting*, 7 May 2008

Higgins, T J, CSIRO Plant Industry (CSIRO Agribusiness), *Transcript of Evidence*, 18 March 2008

Khoo, K, Bayer CropScience Pty Ltd, *Transcript of Evidence*, 19 March 2008

Kinnear, S, *Transcript of Evidence*, 19 March 2008

Landon-Lane, C, Organic Coalition of Tasmania, Submission JSC/GT75

MacKinnon, I, *Transcript of Evidence*, 21 February 2008

McCall, T, University of Tasmania, *Transcript of Evidence*, 21 February 2008

McDonald, G, Transcript of Evidence

McFarlane, J, Network of Concerned Farmers, *Transcript of Evidence*, 17 March 2008

Milne, C, Senator of Tasmania, *Transcript of Evidence*, 5 March 2008

Mueller, U, Transcript of Evidence

Napier, Hon Sue, MHA, Hansard, 5 July 2007

Page, J, Submission JSC/GT70

Peacock, J, The Chief Scientist (Australia), *Transcript of Evidence*, 18 March 2008

Pearson, R, Submission JSC/GT72

Phelps, R, Executive Director of Gene Ethics, *Transcript of Evidence*, 17 March 2008

Pullinger, P, Environment Tasmanian Inc., *Transcript of Evidence*, 18 March 2008

Schaap, A, Department of Primary Industry (Tas.), *Transcript of Evidence*, 18 March 2008

Schmeiser, P, *Transcript of Evidence*, 17 March 2008

Smith, J, Institute for Responsible Technology, *Transcript of Evidence*, 16 November 2007

Submission for Review of Tasmanian GM Moratorium 2007, GlaxoSmithKline Australia: Latrobe (2007) Submission JSC/GT79

Submission to the Joint Select Committee Inquiry into Gene Technology in Primary Industries (Tasmania), Bayer CropScience Pty Ltd Melbourne (16 October 2007)

Swain, R, Tasmanian Farmers and Graziers Association, *Transcript of Evidence*, 21 February 2008

Tasmanian Farmers and Graziers Association, *Submission to the Tasmanian Parliamentary Joint Select Committee Inquiry into Gene Technology in Primary Industries*, (October 2007), Submission JSC/GT97

Tester, M, Australian centre for Plant Functional Genomics Pty Ltd

Thompson, A, Tasmanian Feedlot Pty Ltd, Submission JSC/GT78, 15 October 2007

Thompson, A, Tasmanian Feedlot Pty Ltd, *Transcript of Evidence*, 20 February 2008,

Towards a GM Free Tasmania, p. 8, attachment to Submission JSC/GT60, Tattersall, P.

Walker, C, GlaxoSmithKline, *Transcript of Evidence*, 19 February 2008

Wilson, B, *Transcript of Evidence*, 19 February 2008

Wilson, F, Submission JSC/GT66

Winter, R, Submission JSC/GT62

Winter, R, Transcript of Evidence

Background Paper — Attachment 1

SUBJECT: **Response to Parliamentary Committee request for brief on escapee canola**

PRESENT POSITION:

- Canola (*Brassica napus*) that has been genetically modified currently occurs, or is likely to occur, in the Tasmanian environment in two managed contexts. It is present on sites at which GM canola was trialed prior to the introduction of the current policy, and is likely to be present on sites where conventional 'Grace' canola, discovered in 2005 to be contaminated with GM material, has been grown. In both cases, persistence of GM canola to the present day is a consequence of the long-lived nature of canola seed generally.
- The Department of Primary Industries and Water administers the management of ex-trial sites and Grace sites with the object of eliminating GM canola and preventing its spread while allowing normal farming practice to continue as far as possible. Management includes cultivation to encourage canola seed germination followed by spray-out, preventing transfer of GM canola material off-site via farm hygiene, regular audit and surveillance and contingencies for eradication in the event of transfer off -site.
- At present and to the best of the DPIW's knowledge based on survey work, GM canola does not occur outside either former trial sites or Grace sites.
- A further situation in which GM canola may come to be present in the Tasmanian environment is via animal feed. While certainly a possibility, risks associated with this path are considered low at this time.
- This brief outlines the history and management of former GM-canola trial sites and Grace sites and provides comment on the matter of GM canola escapes from those sites, and potential for GM canola dissemination in imported animal feed.

BACKGROUND:

FORMER GENETICALLY MODIFIED CANOLA TRIAL SITES

In the late 1990s and 2000, 57 field trials of canola genetically modified for herbicide tolerance to either glyphosate or glufosinate ammonium took place at a number of Tasmanian properties. Canola tolerant to glufosinate ammonium had also been modified for improved vigour as part of a hybrid breeding system. The trials were conducted by Monsanto and Aventis (now Bayer CropScience) under contractual arrangements with land owners. The Tasmanian Government was generally aware of the trials since one of the sites was at the DPIW's Cressy Research Station.

The trials occurred at a time of flux in gene technology administration and control in Australia. Developments in the types of GMOs that could be constructed, increasing

potential for commercial application and rising community concern combined to effect shifts in and between the science, business and politics of gene technology. It became clear that voluntary compliance mechanisms in place in Australia for a quarter of a century were no longer adequate for tackling fundamental but complex questions about how gene technology should be managed. In response, State, Territory and Commonwealth Governments embarked upon development of a risk-based approach to regulating dealings with GMOs in Australia, the principle object being to limit threats to human health and safety, and the environment. The transition from a voluntary to a mandatory national system was completed 21 June 2001 when the *Gene Technology Act 2000* and *Gene Technology Regulations 2001* came into force.

This, along with the Tasmanian Government's 2001 decision to pursue a GMO-free path for primary industries and the fact that canola seed can persist in the soil for several years, affected management of sites used to trial GM canola on two counts. First, applications for commercial release of the trialed GM canola were made and Commonwealth involvement in post-trial site management declined and then ceased once licences were issued on the basis of negligible human health and safety, and environmental risk. Second, the Tasmanian Government, consistent with its new *Gene Technology Policy – Gene Technology and Primary Industries, 2001* (the policy), began to develop management arrangements for the former trial sites attuned to its marketing-oriented policy objectives, and independent of the national system.

The question of GM canola escape arises at various times through the changing management history of the trial sites. The event that is sometimes referred to as the first 'escape' from former trial sites relates to detection of maturing GM plants on several sites in February 2001. It is worth clarifying outcomes of post-trial site audits conducted by the Interim Office of the Gene Technology Regulator (IOGTR), under the voluntary system at that time. These inspections, also attended by then DPIWE staff, revealed flowering GM canola at 21 sites, some of which had in the order of thousands of plants at various stages of growth, mostly flowering but including up to seed pod development. This represented non-compliance of a magnitude sufficient to trigger formal investigations.

IOGTR confirmed both Monsanto and Aventis had breached requirements to prevent GM canola volunteers reaching the flowering stage. However the Genetic Manipulation Advisory Committee (GMAC), responsible for assessing risks of gene technology to human health and the environment at that time, found negligible likelihood of gene flow off-site from the volunteer GM canola to other canola, weedy relatives (eg. wild radish) and non-brassica crops, and to soil micro-organisms. Similarly, likelihood of GM canola seed dissemination off-site was considered negligible because it was being actively managed, mostly by roguing that commenced shortly after the breaches were detected.

Despite these conclusions, GMAC determined that further remedial action was appropriate. This included strengthening post-trial monitoring arrangements, and a gene flow study to verify the risk estimate by testing whether pollen had moved from the GM plants to related weeds around the non-compliant sites. Gene flow of this kind qualifies as off-site dissemination of GM material.

The study by Agronico P/L was modest and involved spray-out tests of brassica weeds potentially affected by GM pollen flow in the vicinity of two of the non-compliant sites. The weeds were sprayed with the herbicides Roundup® (containing glyphosate) and Basta (containing glufosinate ammonium) to which tolerance could be expected if gene flow had occurred. Conclusions were not able to be drawn for the Roundup® test because of the low number of brassica weeds near the site. No tolerance was detected in weeds sprayed with Basta. The results of this study became available in late 2002 by which time the mandatory system had commenced and the IOGTR became the OGTR. OGTR concluded that on the basis of the study results, strengthened post-trial the monitoring arrangements were no longer required. By end 2003, OGTR had issued licences for commercial release of the types of GM canola planted at the trial sites and its post-trial monitoring activities drew to a close. Today, OGTR does not undertake any management of former trial sites in Tasmania.

When the Tasmanian policy was finalised, Government initiated independent discussion about management of former trial sites with the companies and affected farmers. It was initially agreed that generic management principles for former trial sites implemented at the national level, would be used to guide Tasmania's approach to removing GM canola from those sites.

However, by 2003 it was apparent that management of former trial sites could be further strengthened. The DPIWE, affected farmers and the two companies agreed to implement a site-specific approach, complementary to generic management principles previously adopted. Over approximately 18 months and in the same period that the *Genetically Modified Organisms Control Act 2004* (the Act) was being prepared, DPIWE drafted management plans for each of the former trial sites in conjunction with farmers and the companies. The management plans form part of permits issued under the Act in 2005 to the two companies, requiring each former trial site to be managed for GM canola eradication. It was necessary to issue these permits so that the landowners and companies could continue to control GM canola without being in breach of the new laws which prohibit all unauthorised dealings with GMOs. Compliance with site management plans by the companies and affected farmers is mandatory.

The site management plans have three objectives. The first is that GM canola seeds must be progressively eliminated from each site to a point where there is a high level of confidence that none are left. This is achieved using techniques to promote germination of canola seed, followed by destruction of seedlings before maturity. Such techniques typically take into account crop choice, cultivation and herbicide strategies. The second objective is that viable canola material must be prevented from leaving the former trial site. Hence site management plans also incorporate appropriate hygiene requirements for land owners, agricultural contractors and others who have dealings at the site that may result in GM seed dissemination. The third objective takes into account the particular situation of former trial site owners, that being their participation in the trials occurred prior to the policy. The third objective is that normal farming practice will be maintained as much as possible, in the course of GM canola eradication. Farmers, within broad limits, make cropping and broadleaf weed management choices, which are assessed and, if consistent with the GM canola eradication objective, approved by the DPIW.

A critical part of the management arrangements for former trial sites, and given this now occurs under permit, is the audit system by which DPIW checks compliance with

site management plans, including that GM canola dissemination off-site does not occur.

The first audit of all sites occurred in October 2001 and to date, a total of 19 have been conducted. Audits usually take place in late February, May and October each year to coincide with periods during which volunteer canola plants are most likely to be detected, ie. after soil disturbance resulting from cultivation or other forms of ground working and, when temperature and soil moisture are conductive to germination. GM canola is still being detected. For example, in May this year volunteer plants at various stages of development were found at 12 sites. Several sites are under pasture or in other situations that had not involved soil disturbance, largely due to drought. These sites can be expected to have a dormant GM canola seed reserve that will not germinate until soil disturbance occurs at a time when temperature and soil moisture conditions are suitable.

In the course of auditing, the DPIW also checks the property area surrounding each former trial site, and private and public roadsides in the vicinity of the sites.

Since DPIW audits began, one instance of off-site GM canola dissemination to another area of the same property on which a trial site occurs has been recorded. The canola was sprayed out prior to flowering and additional volunteers have not been observed for 5 years.

In late 2002, several canola plants were detected by DPIWE and Bayer CropScience along roadsides in the vicinity of former trial sites in the north-east of the state, in the course of site inspections. These were tested for GM material using field kits and several plants returned a positive result. The reason for occurrence was not established but it is possible spillage from trucks that transported the harvested trial site canola may have occurred. All canola plants were sprayed and killed before seed set. Monitoring and testing of roadside canola along those roads continues but GM plants have not been found since. One further instance of roadside GM canola was detected in the Perth area in season 2005/06. All plants were pulled prior to flowering and no further GM canola has been found in that area.

The audit program also informs the process for releasing sites from management under permit, known as site sign-off. Potential for GM canola to leave former trial sites can also be considered in this context.

A decision to release a site from permit is only made when the DPIW is satisfied evidence indicates, with a high level of confidence, eradication of GM canola has been achieved. In September 2006, three sites were signed off from permit. GM canola had not been observed during audit for several years, and to validate these observations, two additional soil disturbances were undertaken at those sites, six months apart under temperature and soil moisture conditions conducive to canola seed germination. Intensive monthly audits after both disturbances and over 12 months did not locate any GM canola volunteers. Accordingly, the DPIW considered the likelihood of residual seed remaining at those sites was so low as to no longer warrant a compliance burden. A further site was released from permit this year, having also satisfied sign-off criteria.

It is important to note that the long-lived nature of canola seed means zero canola seed presence after permit sign-off cannot be guaranteed. However, there is also a

need to end the compliance burden in a reasonable period if risks are proven to have been reduced to very low levels. Nonetheless, the possibility however low, of GM canola seed remaining at those sites after permit release causes concern, not only in regard to policy maintenance, but also to land owners whose status and obligations once sign-off has occurred and the companies are out of the picture, requires confirmation.

The DPIW intends to address this situation by implementing the exemption system created by recent amendments to the Act. The exemption issued to owners of former trial sites that have been released from permit will make clear those people do not contravene the Act in regard to residual (but unlikely) GM canola despite the permit having been surrendered, and provided they report suspect plants. The exemption is not intended to preclude other regulatory action, if required. The DPIW will also conduct occasional checks at signed-off sites to validate its assessments, and if any problems arise which cannot be addressed using cooperative, non-regulatory measures, the option of issuing a new permit to the land owner remains.

In summary, a small number of GM canola escapes are known to have occurred over the ten-year history of former GM canola trial sites, but all have been eliminated. Further, the likelihood of GM canola persisting at those sites after permit surrender, and subsequently disseminating, while very low, will be managed nonetheless via the exemption system, and not ignored. Overall, and although challenging, clearance of GM canola from former GM trial sites remains plausible. The DPIW highlights the generally high level of cooperation from affected farmers in achieving this object.

CONTAMINATION OF GRACE CANOLA WITH GM MATERIAL

Testing on the Australian mainland in 2005 revealed contamination of conventional canola seed with GM material, otherwise known as unintended or adventitious presence, occurring at a time when no GM canola was being grown commercially due to state moratoria. Two varieties of canola grown in Tasmania were implicated.

Mainland tests showed the Pioneer canola line 45C75 to be contaminated with GM material conferring resistance to glyphosate (Roundup®). All lots of 45C75 in Tasmania were traced and subject to spray-out tests to check for GMO contamination. None was detected.

However, similar tests conducted on canola variety Grace confirmed contamination with GM material that confers tolerance to glufosinate ammonium. The contamination rate was around 0.8 to 1.0 GM seed per 1000 non-GM seeds (0.1%). The type of GM material found in Grace was approved by the OGTR in 2003 on the basis of its assessment of negligible threat to human health and safety, and the environment. Food Standards Australia and New Zealand (FSANZ) had also approved it on food safety grounds. Therefore, neither OGTR, FSANZ or any other national agency involved in gene technology regulation had a clear mandate to respond to the incident, although the OGTR agreed to investigate. It was unable to explain the contamination, and while it did not find compelling evidence to support allegations that Tasmania was the source, human error in Tasmania was identified as a possible cause. In any case and apart from the OGTR investigation, the matter was dealt with at the State and Territory level.

Mainland jurisdictions adopted industry-recommended thresholds for GM contamination in canola seed (0.5%) and grain (0.9%) so that large scale Grace harvests could proceed. However, Tasmania elected not to tolerate any level of GMO contamination in Grace. This translated to several actions to prevent GM canola dissemination to the environment as a result of contamination of conventional stocks.

The importation of canola seed and grain was quickly prohibited unless accompanied by certification showing zero GM material at a highly sensitive level of testing designed to detect one GM seed in 10 000 non-GM seeds (0.01%). To ease the transition to these arrangements and to secure clean seed for season 2006/07, the DPIW tested two commercial seed lines suited to Tasmanian conditions for GM material. These lines were cleared and permitted entry without importers incurring GM test costs that year. All subsequent imports of canola seed for sowing have arrived with the required evidence of freedom from GM material, mitigating against further release of GM seed to the environment via this path.

At the same time, DPIW initiated a cooperative, coordinated risk management program involving everyone in the Grace production 'chain' in Tasmania including merchants, growers, contractors and Tasmanian end-users. The program included allowing Grace canola crops to be harvested under supervision and specifying the use of the harvested grain. Given the low levels of GM presence and because seed had already formed by the time the contamination was confirmed, crop destruction was discounted as an option because it would not have produced any risk management benefit over and above allowing the harvest to continue in a managed fashion. The two more important risks were GM seed taken off-site in the harvest or attached to harvest machinery, and GM seed left at Grace sites after harvest.

The first of these was managed by directing all harvested Grace to processing facilities in secure trucks. None of the Grace harvest was allowed to be retained on-farm or used for animal feed. Unsown seed was also collected and destroyed. The DPIW also supervised the harvest at each Grace site according to a strict hygiene protocol. 21 inspections of machinery and trucks used to harvest and cart Grace canola were made over the harvest period. Farmers and contractors were reimbursed for costs of the extra hygiene requirements. DPIW also conducted sampling and testing of canola occurring on roadsides in the vicinity of Grace sites in 2006/07 to validate load security arrangements for Grace the harvest. All populations returned negative results for GM material.

The risk of GM seed remaining in paddocks was addressed by identifying all sites at which Grace was grown since its commercial release in 1999/2000. About a dozen properties are affected, located in the Northern Midlands and Fingal Valley areas. As these farmers came to deal with GM canola through no fault of their own, and because the level of GMO risk is lower than that of the former GM canola trial site situation, they were not issued permits for eradication under the Act. Rather, management is being undertaken in a cooperative manner, and commensurate with the level of risk.

However, over the last year some Grace farmers have, understandably, sought clarification about their status and obligations under the Act. It is intended that this will be addressed via the new exemption system, designed to cater for situations involving GM contamination in seed. In the first instance each Grace grower will be

granted an exemption from authorisation requirements provided he or she complies with a site management plan, similar to the management plans devised for former GM canola trial sites, but taking into account the lower level of risk. This formalises the current arrangements and will not be a significant departure from them in practice. When the DPIW is satisfied Grace canola (and hence possible GM material) is eliminated from the site, a further exemption will be issued which only requires reporting of suspect plants in the very unlikely event they occur. As with the former trial site owners, exemptions to Grace farmers will not rule out further regulatory action if required, and the DPIW will continue to conduct occasional checks.

In summary, no GM canola escapes are known to have occurred from sites at which Grace canola has been planted. The likelihood of GM canola persisting at those sites after an appropriate period of management and subsequently disseminating, is extremely low but will be managed via the exemption system, and not ignored. Overall, clearance of GM canola from Grace sites is expected to occur in 2-4 years. The DPIW again notes the high level of cooperation by farmers, contractors and others affected by this contamination incident.

ANIMAL FEED AS A PATH FOR GM CANOLA INTRODUCTION

Animal feed containing viable GM material either deliberately or as a result of a contamination event provides a potential pathway for dissemination of GM canola into the Tasmanian environment, primarily via paddock feeding. To the DPIW's best knowledge, this has not occurred. Canola that has been crushed into feed meal is no longer viable and does not present a threat in terms of spread to the environment.

The risk in relation to animal feed is currently managed as described, via a mandatory test requirement for imported whole canola seed and grain. Import documents are checked prior to release at the barrier and so far one failure to comply with the requirement has occurred. In August 2006, a 60 tonne consignment of canola grain intended for animal feed arrived without a certificate indicating freedom from GM material. This consignment was held pending test results that returned positive, causing the consignment to be reshipped to the mainland.

The incident was reported in relevant national fora but received limited interest. No follow-up occurred to the DPIW's knowledge. This is perhaps surprising as this event demonstrates yet again that GM contamination of conventional canola crops has occurred even though the commercial cultivation of GM canola is not permitted in any State where canola is grown.

Whole canola grain is also sometimes imported as a component of animal feed mixes. The August finding notwithstanding, the likelihood of that canola being GM is considered sufficiently low at this time such that the test requirement is not enforced for feed mixes. Further, the DPIW is mindful of drought pressure on animal feed prices and availability.

More broadly, drought is causing suppliers to source animal feed, including whole canola grain, from overseas. Imports of viable grain that may be GM are prohibited entry to Australia unless the OGTR issues a licence. Earlier this year a NSW company was granted a licence to import and process Canadian canola that may have contained GM material, for oil and stock feed. This canola was not permitted be

released as whole, unprocessed grains, meaning any that found its way to Tasmania as meal would not have been viable.

In summary, GM canola has not entered the Tasmanian environment via the animal feed path to the DPIW's knowledge. The risk of this is being managed via import conditions, and is considered relatively low at this time.

GENERAL MANAGER
BIOSECURITY AND PRODUCT INTEGRITY DIVISION

Date: 14 November 2007

List of Witnesses — Attachment 2

Agricultural Contractors of Tasmania
Bleaney, Dr Alison
Brent, Dr Paul
Carman, Dr Judy
Carpenter, Mr Scott
Chalmers, Prof Don
Coxhead, Mr Peter
Damen, Mr and Mrs Lauran
De Burgh-Day, Mr Paul
De Burgh-Day, Mrs Geraldine
Flynn, Ms Elizabeth
Ford, Mr David
Fountain, Mr Peter
Francis, Mr John
Gibbs, Prof Adrian
GlaxoSmithKline
Hartnett, Mr Brian
Heinemann, Dr Jack
Higgins, Dr T J
Khoo, Mr Kay
Kinnear, Mr Scott
Mackinnon, Mr Ian
McCall, Dr Tony
McFarlane, Ms Juliette
Milne, Senator Christine
Mueller, Ms Ute
Oldaker, Mr John
Peacock, Dr Jim
Pengilley, Mr Keith
Phelps, Mr Bob
Pullinger, Dr Phil
Rossiter, Mr Jim
Serve-Ag Pty Ltd

Schapp, Mr Alex

Schmeiser, Mr Percy

Smith, Mr Jeffrey

Tasmanian Farmers and Graziers Association

Tasmanian Poppy Growers Association Inc

Tester, Prof Mark

Thompson, Mr Andrew

Weaver, Mr Tony

Wilson, Mr Ben

Winter, Mr Rob

Written Submissions taken into evidence — Attachment 3

Agricultural Contractors of Tasmania
AusBiotech
Australian Centre for Plant Functional Genomics Pty Ltd
Bayer CropScience, BioScience
Biological Farmers of Australia Co Op Ltd
Bleaney, Dr Alison
Carman, Dr Judy
Chalmers, Prof Don
Coxhead, Mr Peter
CSIRO Agribusiness
Damon, Lauran
de Burgh-Day, Mr Paul
Department of Primary Industries and Water
Food Standards Australia New Zealand
Fountain, Mr Peter
Francis, Mr John
Gene Ethics
Gibbs, Professor Adrian
GlaxoSmithKline Australia
Heinemann, Dr Jack
Impact Fertilisers Pty Ltd
McCall, Dr Tony
Milne, Senator Christine
Mr Ian MacKinnon & Keith & Georgina Pengilley
Mueller, Mr Ute
Network of Concerned Farmers
Office of the Gene Technology Regulator
Oldaker, Mr John
Organic Coalition of Tasmania Inc
Peacock, Dr Jim, The Chief Scientist
Roberts Limited – Seed and Grain Centre
Schmeiser, Mr Percy
SERVE-AG Pty Ltd

Smith, Mr Jeffrey

Tasmania Feedlot Pty Ltd

Tasmanian Alkaloids Pty Ltd

Tasmanian Farmers & Graziers Association

Tasmanian Poppy Growers Association Inc

Weaver, Mr Tony

Wilson, Mr Ben

46 copy submissions from Australia

964 copy submissions from Japan, Germany and Canada

Documents taken into evidence — Attachment 4

Additional information from Jeanette Cooper x 2

Briefing Note from the Department of Primary Industries and Water regarding escapee canola

The Documented Health Risks of Genetically Engineered Foods, by Jeffrey Smith

Biotechnology and Dairy Farming

Additional Comments to the Select Committee on Gene Technology in Primary Industries – Ben Wilson, 18 February 2008

Update on Gene Technology Science in Primary Industries, Cindy Hanson, Principal Scientific Adviser (Biosecurity), Department of Primary Industries and Water

Expanded Written Submission

France says to extend GMO ban unless proven safe – email

Letter in Support of Poland's GMO Free Status – 28 January 2008

Seeds of Destruction

"Doomsday Seed Vault" in the Arctic

Pesticide Action Network Updates Service

Further Action Against Pro-GM Abuse of Science and Scientists

Support French Scientist Telling the Truth About GMOs

Organic Cuba without Fossil Fuels

Drug Enforcement Administration – Authorised Sources of Narcotic Raw Materials – US

IUCN Resolutions (2)

Guardian Article

Information on resistance to GM crops

"The Independent Science Panel on GM Final Report" By the Institute of Science in Society, Spring 2004

The Case for a GM-Free Sustainable World", drafted by Mae-Wan Ho and Lim Li Ching, 15 June 2003

Press Release – Farmers to sue farmers

Press Release – GM canola will cause economic loss to canola farmers of over $143 million

Powerpoint presentation

GM canola bans: unresolved threshold issues

DNA in GM Food and Feed by Dr Mae-Wan-Ho

"Determination of DNA traces in rapeseed oil", Z Lebensm Unters Forsch A (1998) 206, pp. 237-242, Maja Hellebrand, Marion Nagy, Jörg-Thomas Mörsel

"Detection of genetically modified DNA sequences in milk from The Italian market", International Journal of Hygiene and Environmental Health 209 (2006), pp. 81-88

"Non-GM plant DNA is spread through the bodies of animals we eat", http://www.ncbi.nlm.nih.gov/pubmed/15453677?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum

"Dietary DNA in blood and organs of Atlantic Salmon (*Salmo salar* L.)", Eur Food Res Technol (2005) 221, pp. 1-8

"Detection of Transgenic and Endogenous Plant DNA in Digesta and Tissues of Sheep and Pigs Fed Roundup Ready Canola Meal", Journal of Agricultural and Food Chemistry (2006) 54, pp. 1699-1709

"Long term feeding of Bt-corn – a ten-generation study with quails", Archives of Animal Nutrition, December 2005; 59(6), pp. 449-451

"The coming Famine", Julian Cribb & Associates Discussion Paper, January 2008

"Applications of plant gene technology", CSIRO Plant Industry 2005

Gene Ethics Briefing for the Tasmanian Gene Technology in Primary Industries Review March 17, 2008

Standard 1.5.2 – Food produced using Gene Technology

Letter dated 11 March 2008 from Jeanette Cooper providing additional information

Confidential document

Australian Academy of Science – Statement on Gene Technology and GM Plants

Food Standards Australia New Zealand - Safety Assessment of Genetically Modified Foods – Guidance Document - Updated September 2007

Email dated 14 March 2008 from Will Tucker, Office of the Gene Technology Regulator (the Regulator), Canberra containing information of GMOs approved by the Gene Technology Regulator for dealings involving intentional release (DIR) of a GMO into the environment

Summary of panel discussion from the Food Standards Workshop, June 2007

Media release from ABARE Economics, 2 March 2007

GM Plant Production: the proponents' view

List of References

"Determination of DNA traces in rapeseed oil", Z Lebensm Unters Forsch A (1998) 206, pp. 237-242, Maja Hellebrand, Marion Nagy, Jörg-Thomas Mörsel

"Detection of Transgenic and Endogenous Plant DNA in Digesta and Tissues of Sheep and Pigs Fed Roundup Ready Canola Meal", Journal of Agricultural and Food Chemistry (2006) 54, pp. 1699-1709

"Detection of genetically modified DNA sequences in milk from The Italian market", International Journal of Hygiene and Environmental Health 209 (2006), pp. 81-88

"Toxicity Studies of Genetically Modified Plants: A Review of the Published Literature", Critical Reviews in Food Science and Nutrition 47 (2007), pp. 721-733

"Genetically Modified Foods", Public Health Association of Australia Inc (103).

"Transgenic Expression of Bean α-Amylase Inhibitor in Peas Results in Altered Structure and Immunogenicity", Journal of Agricultural and Food Chemistry, 2005, 53, pp. 9023-9030

Microchimerism – An Investigative Frontier in Autoimmunity and Transplantation, JAMA, March 3, 2004, Vol 291, No 9, pp. 1127-1131

ABC Bush Telegraph 6 March 2008 – Partial Transcript and Notes on Peacock's claims.

Letter to the Prime Minister from Peter Fenwick, Fenwick's Real Estate, South Australia

Biological Farmers of Australia – Article - GM Watch, January 8 2008 'Straight to the Source'

Briefing note regarding conflict of interest on Regulation Committee (Elizabeth Flynn)

Reviews by International Food Technology Society and others (Paul Brent)

Email sent 19 March 2008 from Scott Kinnear, Board Member and Spokesperson, Biological Farmers of Australia Co Op Ltd attaching the full letter to the Prime Minister from Peter Fenwick

Email sent 19 March 2008 from Scott Kinnear, Board Member and Spokesperson, Biological Farmers of Australia Co Op Ltd attaching a News Article – "Wales set to ban GM crops"

Email sent Thursday, 20 March 2008 from Sophie Underwood, Campaigns and Constituents Officer, Office of Senator Christine Milne with attached documents: "Those Against the Commercialisation of GM Crops" and "GM Contamination Register Report 2007"

Powerpoint Presentation – Agricultural Industry

Email sent 19 March 2008 from John Francis correcting an error of fact in verbal evidence presented to the Committee on Tuesday, 18 March 2008

Email sent 26 March 2008 from Natalie Whiteley, Office of the Chief Scientist providing the following additional information:

A study concerning wild radishes and GM canola, including the risk factors included in the study: http://www.ogtr.gov.au/rtf/ir/dir021finalrarmp2.rtf

Mr Max Foster's presentation on GM crops at the ABARE Outlook Conference on 4 March 2008: http://www.abareconomics.com/outlook/files/day_1/Foster_Biotechnology.ppt

"Lack of Peer Pressure", Dr Henry Miller, The Guardian, 6 March 2008

Email sent 10 April 2008 from Dr Judy Carman attaching a chapter - "Is GM Food Safe to Eat?", Recoding Nature: Critical Perspectives on Genetic Engineering, Dr Judy Carman, February 2004

New Genetics, Food and Agriculture: Scientific Discoveries – Societal Dilemmas

Safety Assessment of Genetically Modified Foods

News and Views Article – Can we stop transgenes from taking a walk on the wild side?

Risk and consequences of gene flow from herbicide-resistant crops: canola (brassica napus L) as a case study

Copy of Submission to the Tasmanian Government, Australian Centre for Plant and Functional Genomics Pty Ltd

Email from Greg Hall dated 2 June 2008 regarding Newspaper clipping re food labelling and ABC Radio National Ockham's Razor transcript

Additional information from Elizabeth Flynn, Acting Gene Technology Regulator

Top Chefs say no to GM foods

Government of Western Australia Media Release - 'WA Government calls for a halt to GM food approvals'

DEPARTMENTAL DOCUMENTS

Email sent Friday, 25 January 2008 from Fran Murrell on behalf of MADGE regarding GM canola health tests need urgent review

Letter dated 19 December 2007 from Peter McGee, Secretary, Australian Labor Party Moonah Branch requesting that an officer from the Department address a meeting at ALP Moonah regarding the case for; and the case against; GM cropping.

Letter dated 14 January from Helen Gee complimenting the Minister for his continued strong stand against the introduction of genetically engineered crops in Tasmania and enclosing an article "Genetically Engineered Crops", Environment SA Vol. 9, No. 2 2002.

Letter from Frances Somers, Secretary, Huon Branch urging the Minister to maintain GE free status

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 11 JULY 2007

The Committee met at 1.17 pm in Committee Room No. 1, Parliament House, Hobart.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms Forrest	Mr Booth (phone)
	Mr Hall	Mr Llewellyn
	Ms Thorp	Mrs Napier (phone)

Order of Parliament

The Order of the Parliament appointing the Committee dated 6 July 2007, having been circulated, was taken as read.

Election of Chairman

Mr Llewellyn was elected Chairman and took the Chair.

Business

Resolved : That –

(a) The Standing Orders of the Legislative Council be adopted for the proceedings of the Committee.

(b) Witnesses be heard under Statutory Declaration.

(c) Advertisements be inserted in the early general news pages of the three daily Tasmanian newspapers and the Tasmanian Country on Saturday, 14 July 2007 and that receipt of written submissions be conditioned for closure on Friday, 19 October 2007.

(d) The draft advertisement be agreed to.

(e) The Secretary send invitations to those that gave evidence to the previous Committee on Gene Technology and that Members provide the Secretary with any further suggestions.

(f) Dr Bryan Stait or Ms Alison Harper attend meetings of the Committee as Research Officers.

Other Business

Resolved –

That the Chairman organise a press release for circulation to the three daily Tasmanian newspapers and all regional newspapers; and also an interview on the Country Hour.

At 1.51 pm the Committee adjourned until 1.00 pm on Tuesday, 28 August 2007.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 31 OCTOBER 2007

The Committee met at 1.13 pm in Committee Room No. 2, Parliament House, Hobart.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms Forrest	Mr Booth
	Mr Hall	Mr Llewellyn
	Ms Thorp	Mrs Napier

Confirmation of Minutes :

The Minutes of the meeting held on Wednesday, 11 July 2007 were confirmed as a true and accurate record.

Correspondence :

Resolved, That the following correspondence be received –

Letter dated 14 August 2007 from Premier Paul Lennon to the Hon Ian Macfarlane MP regarding the strategy for a review of the State and Territory Genetically Modified (GM) Mortatoria.

Documents Received :

Resolved, That the following documents be received –

Additional information from Jeanette Cooper (54) x 2

Submissions and Requests to Present Verbal Evidence :

Resolved, That the following submissions and requests be received –

1 Mrs Frances and Mr John Coll
2 Mrs Irene Brown
3 Mr Stafford Ray
4 Mr Jim Harris
5 Copy Submissions – Japan
6 Copy Submissions – Australia
7 Ms Lurline McCulloch
8 Mr Rod Broadby
9 Dr Leslie Cannold
10 Mr Peter and Mrs Kathie Strickland
11 Ms Joanne van Ravenswaaij
12 Mr Don Lazzaro
13 Dr Alison Bleaney OBE
14 Ms Mairi Neil
15 Mr Bob Healy
16 Ms Samantha Dunn
17 Mr Mark McDougall
18 Mrs Andrea Buckley
19 Mr Brett Hedger
20 Mr and Mrs Ian McNicol, et al
21 Ms Yolande Vaz
22 Ms Cherie Haslam
23 Ms Genna Charylo
24 Ms Genevieve O'Connell
25 Original Foods
26 Ms Robyn Grant
27 Mr Andrew Pengelly
28 Ms Marion Edwards
29 Ms Tamara Griffiths
30 Mr Dallas Kinnear
31 Friends of the Earth Australia
32 Mr Arthur Bowman
33 Ms Sue Bond
34 Ms Vanessa Errol
35 Impact Fertilisers Pty Ltd
36 Mr R Davies
37 Mr Greg Flanagan
38 Mr Joe Siegel
39 Copy Submissions – Australia 2
40 Mr Rick Calitz
41 Ms Tania Kanavas
42 Gene Ethics
43 Ms Donella Peters
44 Ms Kate Tenni
45 Australian Grain Industry
46 Network of Concerned Farmers
47 Mr John Harvey
48 MADGE
49 Australian Seed Federation
50 Milawa Mustards Pty Ltd
51 Mr Mitchell Harper

52 Glenorchy ALP
53 Mr Les Harris
54 Ms Jeanette Cooper
55 Cabonne Council
56 Mr John Oldaker
57 Mr Clive Lindop
58 Mr Peter Fountain
59 Biotechnology Australia
60 SoilTech Research
61 Ms Prudence Barratt
62 Roberts Limited – Seed and Grain Centre
63 Mr Dave Abbott
64 Mr Ute Mueller
65 Mr John Casburn
66 Ms Fay Wilson
67 Croplife Australia
68 Mr John and Mrs Margaret Matfin
69 Agricultural Contractors of Tasmania
70 Ms Julie Page
71 Mr Richard Davis
72 Mr Richard Pearson
73 Ms Olivia Rundle
74 Tasmanian Alkaloids Pty Ltd
75 Organic Coalition of Tasmania Inc
76 Ms Catharine Errey
77 Mr Phil Harrington
78 Tasmania Feedlot Pty Ltd
79 GlaxoSmithKline Australia
80 Mr John Paull
81 Tasmanian Organic-Dynamic Producers Inc
82 Mr Tony Weaver
83 Mr John Francis
84 Permaculture Association of Tasmania Inc
85 Mr John Hayward
86 Mr Ben Wilson
87 CSIRO Agribusiness
88 SERVE-AG Pty Ltd
89 Tasmanian Poppy Growers Association Inc
90 Pioneer Hi-Bred Australia Pty Limited
91 Bayer CropScience
92 Mr A P Fawcett
93 Mr Ian MacKinnon & Keith & Georgina Pengilley
94 Ms Liz Smith
95 Ms Anne Layton-Bennett & Mr John Donnachy
96 Ms Fiona Gipters
97 Tasmanian Farmers & Graziers Association
98 Mr Peter Coxhead
99 Ms Helen Hutchinson
100 Mr Edmund Pickering
101 Ms Sharon Moore
102 Senator Christine Milne

103 Dr Judy Carman

Future Program :

The Committee discussed its future program.

Resolved, That -

- Public hearings be held in the North and North West during the week commencing 18 February 2008 and that further hearings be held in the South in March 2008.

- All those providing submissions be advised of the hearing dates.

Other Business

Resolved, That the Secretary request –

- The Food Industry Council for the latest research in relation to marketing aspects of gene technology.
- Brand Tasmania for information regarding the impact of gene technology on Tasmania's 'clean green' label.
- The Department of Primary Industries for background information/history and the current situation relating to the escapee canola.
- The Department of Primary Industries for an update of the scientific evidence in the 2001 Joint Select Committee report, and suggest professional scientific contacts if further information is required.

At 2.00 pm the Committee adjourned until 9.00 am on Friday, 16 November 2007.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

FRIDAY, 16 NOVEMBER 2007

The Committee met at 9.15 pm in Committee Room No. 1, Parliament House, Hobart.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms *Thorp*	Mr *Booth*
		Mr *Llewellyn*
		Mrs *Napier*

In Attendance : Mr Scott Kinnear
Dr Bryan Stait (Research Assistant)
Mrs Sue McLeod (Secretary)

Apologies : Ms *Forrest*
Mr *Hall*

Public Hearing :

JEFFREY SMITH was called, made the Statutory Declaration and was examined.

Ms *Thorp* withdrew.

The witness withdrew.

At 11.15 am the Committee adjourned until a date to be determined.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 21 NOVEMBER 2007

The Committee met at 1.04 pm in Committee Room No. 1, Parliament House, Hobart.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms Forrest	Mr Booth
	Mr Hall	Mr Llewellyn
	Ms Thorp	

Confirmation of Minutes :

The Minutes of the meetings held on Wednesday, 31 October and Friday, 16 November 2007 were confirmed as a true and accurate record.

Correspondence :

Resolved, That the following correspondence be received –

- Email dated 6 November from Greg Hall MLC requesting Agrifood Awareness Australia be invited to present verbal evidence and that the CSIRO course be made available to Members to attend.
- Letter dated 14 November from Brand Tasmania regarding views on the impact of gene technology on the Tasmania Brand (as requested)

Departmental Submissions :

Resolved, That the following documents be tabled –

(1) Sue Graham
(2) Mrs J Herrera
(3) Graeme Ewing, Joshua Rowland, Ann Cole, Christine Materia
(4) Biological Farmers of Australia
(5) 423 Copy Letters
(6) Goodman Fielder

Mrs *Napier* took her place.

Submissions and Requests to Present Verbal Evidence :

Resolved, That the following submissions and requests be received –

(104) AusBiotech
(105) Dr Tony McCall
(106) Australian Dairy Industry Council
(107) Paul de Burgh-Day

Documents :

Resolved, That the following documents be tabled –

- Briefing Note from the Department of Primary Industries and Water regarding escapee canola (as requested)
- The Documented Health Risks of Genetically Engineered Foods, by Jeffrey Smith (108)

Other Business :

The Secretary advised the Committee that –

- A complaint had been received that TFGA had published their submission to the Committee on the TFGA website.
- She had requested TFGA to remove it and they had.
- A further complaint had been received that a press release providing details of TFGA's submission to the Committee was on the TFGA website.
- The Secretary had phoned TFGA and requested the press release be removed, and provided the relevant Standing Orders preventing the release of such a document.
- To date the press release has not been removed from the TFGA website.

The Committee was further advised that the publication of the document was a breach of Parliamentary Privilege as Legislative Council Standing Order No. 200 prevents the publishing of any evidence or documents prior to the Committee reporting.

Resolved, That the *Chair* write to the TFGA advising of the breach of Parliamentary Privilege and requesting that the press release be removed from the website, and that if it was not removed the Committee would consider not accepting the TFGA submission into evidence.

The Committee also considered the request from Mr *Hall* regarding the CSIRO Course for Policy Makers.

Resolved, That the Secretary inquire as to dates and availability of training for Members who wish to attend the Course. Mrs *Napier*, Ms *Thorp*, Ms *Forrest* and Mr *Hall* indicated their wish to attend. The Secretary to advise Members accordingly.

At 1.22 pm the Committee adjourned until Monday, 18 February 2008.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

TUESDAY, 19 FEBRUARY 2008

The Committee met at 11.20 am in the Council Chamber, Devonport City Council.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Booth*
	Mr *Hall*	Mr *Llewellyn*
	Ms *Thorp*	Mrs *Napier*

In Attendance : Mrs Sue McLeod (Secretary)

Confirmation of Minutes :

The Minutes of the meeting held on Wednesday, 21 November 2007 were confirmed as a true and accurate record.

Submissions :

Resolved, That the following submission be received -

(109) Robin Tripp

Correspondence :

Resolved, That the following correspondence be received -

- Letter dated 29 November 2007 from Dr Bruce Williams, Chief Executive Officer, Tasmanian Farmers & Graziers Association advising the TFGA has removed the media release from its website.

- Letter dated 30 November 2007 from John Francis advising of his interest in presenting verbal evidence to the Committee.

- Letter dated 7 January 2008 from Steven Kons LLB MP, Acting Minister for Economic Development and Resources advising that the Australian Government's Biotechnology Public Awareness Manager, Dr Craig Cormick, will be visiting the state to present the findings of the 2007 'Community Attitudes to Biotechnology Report on Food and Agriculture Applications'.

Resolved, That a meeting with Dr Craig Cormick be arranged.

- Email dated 13 February 2008 from Cath Hughes, on behalf of Kim Booth MP regarding potential witnesses.

Resolved, That a meeting by phone be arranged for Monday, 25 February if possible.

Document Received :

Resolved, That the following document be received -

- Update on Gene Technology Science in Primary Industries, Cindy Hanson, Principal Scientific Adviser (Biosecurity), Department of Primary Industries and Water.

Other Business :

- ***Resolved,*** That Cindy Hanson from the Department of Primary Industries be appointed as Scientific Adviser to the Committee.

- Mr Hall raised concerns about the Minister being Chairman of the Committee. Discussion took place.

- Cindy Hanson briefed the Committee in relation to the Update on Gene Technology Science in Primary Industries.

The Committee suspended at 12.15 pm.
The Committee resumed at 12.25 pm.

Public Hearings :

MS UTE MUELLER was called, made the Statutory Declaration and was examined.

The witness withdrew.

The Committee suspended at 1.07 pm.
The Committee resumed at 2.03 pm.

MR DOUG FRENCH AND MR GREG McDONALD, on behalf of Agricultural Contractors of Tasmania were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

MR BEN WILSON was called, made the Statutory Declaration and was examined.

The witness withdrew.

The Committee suspended at 3.23 pm.
The Committee resumed at 3.48 pm.

DR MIKE DOYLE AND MS CAROL WALKER, on behalf of GlaxoSmithKline were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

MR BRIAN HARTNETT, on behalf of Tasmanian Alkaloids Pty Ltd was called, made the Statutory Declaration and was examined.

The witness withdrew.

Tabled Documents :

- Biotechnology and Dairy Farming (69)
- Additional Comments to the Select Committee on Gene Technology in Primary Industries – Ben Wilson, 18 February 2008 (86)

At 5.08 pm the Committee adjourned until Wednesday, 20 February 2008.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 20 FEBRUARY 2008

The Committee met at 9.01 am in the Council Chamber, Devonport City Council.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Booth*
	Mr *Hall*	Mr *Llewellyn*
	Ms *Thorp*	

In Attendance : Mrs Sue McLeod (Secretary)
Ms Cindy Hanson (Scientific Adviser)

Public Hearings :

MR BUZ GREEN, on behalf of Serve-Ag Pty Ltd was called, made the Statutory Declaration and was examined.

Mrs *Napier* took her place at 9.11 am.

The witness withdrew.

MR PAUL AND MRS GERALDINE DE BURGH-DAY were called, made the Statutory Declaration and were examined.

MRS GERALDINE DE BURGH-DAY, on behalf of Tasmanian Organic-Dynamic Producers Inc was called and was examined.

The witnesses withdrew.

MR AND MRS LAURAN DAMEN were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

MRS GERALDINE DE BURGH DAY was recalled and gave further evidence.

The witness withdrew.

Documents Tabled :

- Expanded Written Submission (107)
- France says to extend GMO ban unless proven safe – email (107)
- Letter in Support of Poland's GMO Free Status – 28 January 2008 (107)
- Seeds of Destruction (107)
- "Doomsday Seed Vault" in the Arctic (107)
- Pesticide Action Network Updates Service (107)
- Further Action Against Pro-GM Abuse of Science and Scientists (107)
- Support French Scientist Telling the Truth About GMOs (107)
- Organic Cuba without Fossil Fuels (107)

The Committee suspended at 11.40 am.

The Committee resumed at 2.45 pm in the Conference room, Public Buildings, 53 St John Street, Launceston.

DR ALISON BLEANEY was called, made the Statutory Declaration and was examined.

The witness withdrew.

MR ROB WINTER, on behalf of Roberts Ltd was called, made the Statutory Declaration and was examined.

The witness withdrew.

MR ANDREW THOMPSON, on behalf of Tasmanian Feedlot Pty Ltd was called, made the Statutory Declaration and was examined.

The witness withdrew.

At 5.20 pm the Committee adjourned until Thursday, 21 February 2008.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

THURSDAY, 21 FEBRUARY 2008

The Committee met at 8.54 am in the Conference Room, Public Buildings, 53 St John Street, Launceston.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	
	Mr *Hall*	Mr *Llewellyn*
	Ms *Thorp*	Mrs *Napier*

In Attendance : Mrs Sue McLeod (Secretary)
Ms Cindy Hanson (Scientific Adviser)

Cindy Hanson briefed the Committee further in relation to the Update on Gene Technology Science in Primary Industries.

Mr Booth took his place at 8.58 am.

The Committee suspended at 9.45 am.
The Committee resumed at 9.47 am.

Public Hearings :

MR ROGER SWAIN, MR ASHLEY BASTOCK AND MR IAN WHYTE, on behalf of Tasmanian Farmers and Graziers Association were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

The Committee suspended at 10.41 am.
The Committee resumed at 10.48 am.

MR LYNDLEY CHOPPING AND MR KEITH RICE, on behalf of the Tasmanian Poppy Growers Association Inc were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

MR IAN MACKINNON AND MR KEITH PENGILLEY were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

The Committee suspended at 1.03 pm.
The Committee resumed at 2.00 pm.

DR TONY McCALL was called, made the Statutory Declaration and was examined.

The witness withdrew.

MR PETER COXHEAD was called, made the Statutory Declaration and was examined.

The witness withdrew.

Tabled Documents :

- Drug Enforcement Administration – Authorised Sources of Narcotic Raw Materials – US (89)

Other Business :

The Committee requested further information regarding –

- The viability of poppies and canola and spreading by insects and wind (pollen) – Scientific Adviser to provide.
- Gene technology in France.
- Market Analysis – to be provided by TFGA

The Committee also requested Mr Alex Schaap from the Department of Primary Industries be requested to provide verbal evidence in relation to quarantine issues.

At 3.18 pm the Committee adjourned until a date to be confirmed.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 5 MARCH 2008

The Committee met at 1.09 pm in Committee Room No. 2, Parliament House, Hobart.

Members Present :	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Booth*
	Mr *Hall*	Mr *Llewellyn*

Ms *Thorp*

In Attendance : Mrs Sue McLeod (Secretary)
Ms Cindy Hanson (Scientific Adviser)
Ms Julie Thompson (Minutes Secretary)
Mr Bryan Stait (Research Officer)

Order of Parliament

The Order of the Parliament re-appointing the Committee dated 5 March 2008, having been circulated, was taken as read.

Election of the Chair :

Mr *Llewellyn* was elected Chair and took the Chair.
Ms *Forrest* was elected Deputy Chair.

Confirmation of Minutes :

The Minutes of the meetings held on Tuesday, 19 February, Wednesday, 20 February and Thursday, 21 February 2008 were confirmed as a true and accurate record.

Correspondence :

Resolved, That the following correspondence be received -

- Letter dated 22 February 2008 from Keith Rice, Chief Executive, Tasmanian Poppy Growers Association Inc advising TPGA does not support the verbal evidence of GlaxoSmithKline if their evidence was supporting the continuation of the moratorium. (89)

- Letter dated 22 February 2008 from Dr Phill Pulllinger, Convenor, Environment Tasmania regarding their support for the Tasmanian Government to continue their anti-GMO stance and also requesting an opportunity to make a submission or representation to the Committee.

Submission :

Resolved, That the following submission be received –

(111) Biological Farmers of Australia Co Op Ltd

Additional Information :

Resolved, That the following additional information be received –

- Information on resistance to GM crops (13).
- "The Independent Science Panel on GM Final Report" by the Institute of Science in Society, Spring 2004 (13).

- "The Case for a GM-Free Sustainable World", drafted by Mae-Wan Ho and Lim Li Ching, 15 June 2003 (13).

Other Business :

The Committee discussed its future program.

Resolved, That the following witnesses be requested to give evidence –

- Mr Alex Schaap re quarantine issues
- Mr Percy Schmeiser
- Gene Technology Regulator
- Environment Tasmania
- Chief Scientist

The Committee agreed to attend the CSIRO Gene Technology Course on Friday, 11 April 2008. The Committee Secretary was requested to check whether the Course could start at 9 am.

Public Hearings :

SENATOR CHRISTINE MILNE was called, made the Statutory Declaration and was examined.

Mrs *Napier took her place.*

Ms Thorp withdrew.

The witness withdrew.

Tabled Documents :

IUCN Resolutions (2) (102)
Guardian Article (102)

At 2.13 pm the Committee adjourned until Monday, 17 March 2008.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

MONDAY, 17 MARCH 2008

The Committee met at 1.55 pm in Committee Room No. 2, Parliament House, Hobart.

Members Present : ***Legislative Council*** ***House of Assembly***

Ms *Forrest*	Mr *Booth*
Ms *Thorp*	Mr *Llewellyn*
	Mrs *Napier*

In Attendance : Mrs Sue McLeod (Secretary)
Ms Cindy Hanson (Scientific Adviser)
Ms Julie Thompson (Minutes Secretary)

Confirmation of Minutes :

The Minutes of the meeting held on Wednesday, 5 March 2008 were confirmed as a true and accurate record.

Departmental Documents :

Resolved, That the following departmental documents be received -

- Email sent Friday, 25 January 2008 from Fran Murrell on behalf of MADGE regarding GM canola health tests need urgent review.
- Letter dated 19 December 2007 from Peter McGee, Secretary, Australian Labor Party Moonah Branch requesting that an officer from the Department address a meeting at ALP Moonah regarding the case for; and the case against; GM cropping.
- Letter dated 14 January from Helen Gee complimenting the Minister for his continued strong stand against the introduction of genetically engineered crops in Tasmania and enclosing an article "Genetically Engineered Crops", Environment SA Vol. 9, No. 2 2002.
- Letter from Frances Somers, Secretary, Huon Branch urging the Minister to maintain GE free status.

Additional Information :

Resolved, That the following additional information be received –

- Letter dated 11 March 2008 from Jeanette Cooper providing additional information (54).
- Letter dated 7 March 2008 from Roger Swain, President, Tasmanian Farmers and Graziers Association providing statistical information as requested (97).
- Email sent 14 March 2008 from Cassy O'Connor regarding companies/producers who back a continuation of the moratorium on GMOs as requested (102).

Possible Witness :

Resolved, That Dr Jack Heinemann be requested to give evidence via phone-link.

Public Hearings :

DAVID FORD, Chief Executive Officer, Impact Fertilisers Pty Ltd (35) was called, made the Statutory Declaration and was examined.

The witness withdrew.

BOB PHELPS, Executive Director, Gene Ethics (42) was called, made the Statutory Declaration and was examined.

Tabled Documents :

- GM canola bans: unresolved threshold issues (42).
- DNA in GM Food and Feed by Dr Mae-Wan-Ho (42).
- "Determination of DNA traces in rapeseed oil", Z Lebensm Unters Forsch A (1998) 206, pp. 237-242, Maja Hellebrand, Marion Nagy, Jörg-Thomas Mörsel (42).
- "Detection of genetically modified DNA sequences in milk from The Italian market", International Journal of Hygiene and Environmental Health 209 (2006), pp. 81-88 (42).
- "Non-GM plant DNA is spread through the bodies of animals we eat", http://www.ncbi.nlm.nih.gov/pubmed/15453677?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum (42).
- "Dietary DNA in blood and organs of Atlantic Salmon (*Salmo salar* L.)", Eur Food Res Technol (2005) 221, pp. 1-8 (42).
- "Detection of Transgenic and Endogenous Plant DNA in Digesta and Tissues of Sheep and Pigs Fed Roundup Ready Canola Meal", Journal of Agricultural and Food Chemistry (2006) 54, pp. 1699-1709 (42).
- "Long term feeding of Bt-corn – a ten-generation study with quails", Archives of Animal Nutrition, December 2005; 59(6), pp. 449-451 (42).
- "The coming Famine", Julian Cribb & Associates Discussion Paper, January 2008 (42).
- "Applications of plant gene technology", CSIRO Plant Industry 2005 (42).
- Gene Ethics Briefing for the Tasmanian Gene Technology in Primary Industries Review March 17, 2008 (42)
- Standard 1.5.2 – Food produced using Gene Technology (42)

The witness withdrew.

The committee suspended at 3.42 pm.
The committee resumed at 3.48 pm.

Public Hearings continued :

PERCY SCHMEISER (112) met with the Committee via phone-link.

Ms *Thorp* withdrew at 4.18 pm.

JULIETTE McFARLANE, Canola Grower, Network of Concerned Farmers (46) was called, made the Statutory Declaration and was examined.

Mr *Hall* took his place at 4.58 pm.

Tabled Documents :

- Press Release – Farmers to sue farmers (46).

- Press Release – GM canola will cause economic loss to canola farmers of over $143 million (46).
- Powerpoint presentation (46).

The witness withdrew.

At 5.18 pm the Committee adjourned until Tuesday, 18 March 2008 at 9.45 am.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

TUESDAY 18 MARCH 2008

The Committee met at 10.02 am in Committee Room No. 2, Parliament House, Hobart.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest* (Deputy Chair)	Mr *Booth*
	Mr *Hall*	Mrs *Napier*
	Ms *Thorp*	
Apologies:	Mr *Llewellyn*	
In Attendance:	Mrs Sue McLeod (Secretary)	
	Ms Cindy Hanson (Scientific Adviser)	
	Mrs Jill Mann/Ms Julie Thompson (Minutes Secretary)	

Public Hearings:

DR PHIL PULLINGER, Convenor, MR SIMON BRANIGAN, Deputy Chair, Environment Tasmania Inc. and MS GEORGIA MILLER, Friends of the Earth were called, made the Statutory Declaration and were examined.

The witnesses withdrew.

Mr PETER FOUNTAIN (58) was called, made the Statutory Declaration and was examined.

Tabled Documents:

- Confidential document (58).
- Australian Academy of Science – Statement on Gene Technology and GM Plants (58).
- Food Standards Australia New Zealand - Safety Assessment of Genetically Modified Foods – Guidance Document - Updated September 2007 (58).

- Email dated 14 March 2008 from Will Tucker, Office of the Gene Technology Regulator (the Regulator), Canberra containing information of GMOs approved by the Gene Technology Regulator for dealings involving intentional release (DIR) of a GMO into the environment (58).
- Summary of panel discussion from the Food Standards Workshop, June 2007 (58).
- Media release from ABARE Economics, 2 March 2007 (58)

The witness withdrew.

The Committee suspended at 11.35 am.
The Committee resumed at 11.40 am.

Mrs *Napier* withdrew at 11.40 am.

Public Hearings continued:

Mr ALEX SCHAAP, General Manager Biosecurity and Product Integrity, Department of Primary Industries and Water was called, made the Statutory Declaration and was examined.

Mrs *Napier* took her place at 11.50 am.

The witness withdrew.

DR T J HIGGINS, Deputy Chief, CSIRO Plant Industry, CSIRO Agribusiness (87) was called, made the Statutory Declaration and was examined.

The witness withdrew.

The Committee suspended at 1.06 pm.
The Committee resumed at 2.10 pm.

Public Hearings continued:

MR JIM ROSSITER, Convenor, Organic Coalition of Tasmania Inc (75) was called, made the Statutory Declaration and was examined.

Mr *Booth* took his place at 2.16 pm.

Ms *Thorp* withdrew at 2.56 pm.

The witness withdrew.

MR JOHN FRANCIS (83) was called, made the Statutory Declaration and was examined.

Ms *Thorp* took her place at 3.06 pm.

The witness withdrew.

Confirmation of Minutes:

The Minutes of the meeting held on Monday, 17 March 2008 were confirmed as a true and accurate record.

Future Program :

The Committee discussed its future program.

Resolved, That the following witnesses be requested to give evidence –

- Professor Adrian Gibbs
- Dr Jack Heinemann
- Functional Plant Genomics Centre
- Gene Technology Regulator
- Don Chalmers

The Committee suspended at 3.47 pm.
The Committee resumed at 4.31 pm.

Public Hearings continued :

DR JIM PEACOCK, The Chief Scientist met with the Committee via phone-link.

Mrs *Napier* withdrew at 5.18 pm.

Mrs *Napier* took her place 5.29 pm.

At 5.35 pm the Committee adjourned until Wednesday 19 March 2008 at 8.50 am.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY 19 MARCH 2008

The Committee met at 9.56 am in Committee Room No. 2, Parliament House, Hobart.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest* (Deputy Chair)	Mr *Booth*
	Mr *Hall*	
	Ms *Thorp*	

Apologies: Mr *Llewellyn*

In Attendance: Mrs Sue McLeod (Secretary)
Ms Cindy Hanson (Scientific Adviser)
Mrs Jill Mann/Ms Julie Thompson

(Minutes Secretary)

Confirmation of Minutes:

The Minutes of the meeting held on Tuesday, 18 March 2008 were confirmed as a true and accurate record.

Future Program:

The Committee discussed a future hearing date.

Mrs *Napier* took her place at 9.05 am.

Resolved, That the Committee meet on Wednesday 7 May 2008 at 10.30 am.

Public Hearings:

Mr SCOTT KINNEAR, Board Member and Spokesperson, Biological Farmers of Australia Co Op Ltd (111) was called, made the Statutory Declaration and was examined.

Tabled Documents:

- ABC Bush Telegraph 6 March 2008 - Partial Transcript and Notes on Peacock's claims (111).
- Letter to the Prime Minister from Peter Fenwick, Fenwick's Real Estate, South Australia (111).
- Biological Farmers of Australia – Article - GM Watch, January 8 2008 'Straight to the Source' (http://www.organicconsumers.org./articles/article_9572,cfm (111).

The witness withdrew.

Mr KAY KHOO, Regulatory, Public and Government Affairs Manager BioScience, Bayer CropScience (91) was called, made the Statutory Declaration and was examined.

The witness withdrew.

The Committee suspended at 10.45 am.
The Committee resumed at 10.57 am.

Public Hearings continued:

Mr JOHN OLDAKER (56) was called, made the Statutory Declaration and was examined.

Ms *Thorp* withdrew at 11.10 am
Ms *Thorp* took her place at 11.20 am.

The witness withdrew.

DR JUDY CARMAN (103) was called, made the Statutory Declaration and was examined.

Tabled Documents:

- "Determination of DNA traces in rapeseed oil", Z Lebensm Unters Forsch A (1998) 206, pp. 237-242, Maja Hellebrand, Marion Nagy, Jörg-Thomas Mörsel (103).
- "Detection of Transgenic and Endogenous Plant DNA in Digesta and Tissues of Sheep and Pigs Fed Roundup Ready Canola Meal", Journal of Agricultural and Food Chemistry (2006) 54, pp. 1699-1709 (103).
- "Detection of genetically modified DNA sequences in milk from The Italian market", International Journal of Hygiene and Environmental Health 209 (2006), pp. 81-88 (103).
- "Toxicity Studies of Genetically Modified Plants: A Review of the Published Literature", Critical Reviews in Food Science and Nutrition 47 (2007), pp. 721-733 (103).
- "Genetically Modified Foods", Public Health Association of Australia Inc (103).
- "Transgenic Expression of Bean α-Amylase Inhibitor in Peas Results in Altered Structure and Immunogenicity", Journal of Agricultural and Food Chemistry, 2005, 53, pp. 9023-9030 (103).
- Microchimerism – An Investigative Frontier in Autoimmunity and Transplantation, JAMA, March 3, 2004, Vol 291, No 9, pp. 1127-1131 (103).

The witness withdrew.

Mr SCOTT CARPENTER, Program Manager, Agricultural, Environmental and Industrial Biotechnology, AusBiotech (104) was called, made the Statutory Declaration and was examined.

Ms *Thorp* withdrew at 1.07 pm.

The witness withdrew.

The Committee suspended at 1.23 pm.
The Committee resumed at 2.09 pm.

Public Hearings continued:

MR TONY WEAVER (82) was called, made the Statutory Declaration and was examined.

Tabled Document:

- GM Plant Production: the proponents' view (82)
- List of References (82)

Mrs *Napier* took her place at 2.14 pm.

The witness withdrew.

At 3.05 pm the Committee adjourned until Wednesday, 7 May 2008 at 10.30 am.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY 7 MAY 2008

The Committee met at 10.40 am in Committee Room No. 2, Parliament House, Hobart.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Llewellyn* (Chair)
	Mr *Hall*	Mr *Booth*
	Ms *Thorp*	*Mrs Napier*

In Attendance: Mrs Sue McLeod (Secretary)
Ms Cindy Hanson (Scientific Adviser)
Mrs Jill Mann/Ms Allison Waddington
(Minutes Secretary)

Confirmation of Minutes:

The Minutes of the meeting held on Wednesday, 19 March 2008 were confirmed as a true and accurate record.

Correspondence:

Resolved, That the following correspondence be received -

- Letter dated 26 March 2008 from John Hamilton and Jean Taylor advising of their concerns regarding the possible ending of the moratorium on growing genetically modified crops in Tasmania.
- Letter dated 7 April 2008 from Dr Sue Meek, Gene Technology Regulator advising of her inability to attend the public hearing due to her resignation and advising Ms Elizabeth Flynn will attend in her place.
- Email sent 10 April 2008 from John Fladun, General Counsel, Food Standards Australia New Zealand advising FSANZ's Chief Scientist, Paul Brent is available to present verbal evidence via phone-link.
- Email sent 2 April 2008 from Bob Phelps, Gene Ethics regarding GM canola.
- Letter dated 18 April 2008 from Melanie Fisher, A/G Chief Executive Officer, Food Standards Australia New Zealand regarding Dr Paul Brent giving evidence to Committee.

- Email to Greg Hall MLC sent 8 April 2008 from Dr Tony Fist, Manager, Agricultural Research and Development regarding poppy paper.

Additional Information:

Resolved, That the following additional information be received –

- Email sent 19 March 2008 from Scott Kinnear, Board Member and Spokesperson, Biological Farmers of Australia Co Op Ltd attaching the full letter to the Prime Minister from Peter Fenwick (111).
- Email sent 19 March 2008 from Scott Kinnear, Board Member and Spokesperson, Biological Farmers of Australia Co Op Ltd attaching a News Article – "Wales set to ban GM crops" (111).
- Email sent Thursday, 20 March 2008 from Sophie Underwood, Campaigns and Constituents Officer, Office of Senator Christine Milne with attached documents: "Those Against the Commercialisation of GM Crops" and "GM Contamination Register Report 2007" (102).
- Powerpoint Presentation – Agricultural Industry (35).
- Email sent 19 March 2008 from John Francis correcting an error of fact in verbal evidence presented to the Committee on Tuesday, 18 March 2008.
- Email sent 26 March 2008 from Natalie Whiteley, Office of the Chief Scientist providing the following additional information:
  - A study concerning wild radishes and GM canola, including the risk factors included in the study: http://www.ogtr.gov.au/rtf/ir/dir021finalrarmp2.rtf (115)
  - Mr Max Foster's presentation on GM crops at the ABARE Outlook Conference on 4 March 2008: http://www.abareconomics.com/outlook/files/day_1/Foster_Biotechnology.ppt (115)
- "Lack of Peer Pressure", Dr Henry Miller, The Guardian, 6 March 2008 (115).
- Email sent 10 April 2008 from Dr Judy Carman attaching a chapter - "Is GM Food Safe to Eat?", Recoding Nature: Critical Perspectives on Genetic Engineering, Dr Judy Carman, February 2004 (103).
- New Genetics, Food and Agriculture: Scientific Discoveries – Societal Dilemmas (119)
- Safety Assessment of Genetically Modified Foods (119)
- News and Views Article – Can we stop transgenes from taking a walk on the wild side? (119)
- Risk and consequences of gene flow from herbicide-resistant crops: canola (brassica napus L) as a case study (119)
- Copy of Submission to the Tasmanian Government, Australian Centre for Plant and Functional Genomics Pty Ltd (120).

Public Hearings:

Dr JACK HEINEMANN , Director, INBI, University of Canterbury – via phone-link – was called and was examined.

The witness withdrew.

Professor ADRIAN GIBBS – via phone-link - was called and was examined.

The witness withdrew.

The Committee suspended at 12.10 pm.
The Committee resumed at 12.17 pm.

Public Hearings continued:

Professor MARK TESTER, Australian Centre for Plant Functional Genomics Pty Ltd – *via* phone-link - was called and was examined.

Ms *Thorp* took her place at 12.27 pm.

The witness withdrew.

The Committee suspended at 1.00 pm.
The Committee resumed at 2.05 pm.

Public Hearings continued:

Professor DON CHALMERS, University of Tasmania, was called, made the Statutory Declaration and was examined.

Mr Booth took his place at 2.15 pm.

The witness withdrew.

Ms ELIZABETH FLYNN, Head of the Regulatory Practice and Compliance Branch, Office of the Gene Technology Regulator, was called, made the Statutory Declaration and was examined.

Mr Hall withdrew at 3.28 pm
Mr Hall took his place at 3.41 pm

The witness withdrew.

The Committee suspended at 3.43 pm.
The Committee resumed at 3.55 pm.

Public Hearings continued:

Dr PAUL BRENT, Chief Scientist, Food Standards Australia New Zealand – via phone-link - was called and was examined.

The witness withdrew.

Additional Information Requested:

- Briefing Note regarding conflict of interest on Regulation Committee (Elizabeth Flynn)
- Reviews by International Food Technology Society and others (Paul Brent)

Next Meeting

Resolved, that –

- the Committee meet on the following dates:

  1 pm on Thursday 29 May 2008;
  1 pm on Wednesday 11 June 2008; and
  1 pm on Wednesday 18 June 2008.

- Members provide draft recommendations to the Secretary prior to 29 May.

Adjournment

At 4.55 pm the Committee adjourned until Thursday 29 May 2008 at 1 pm.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

THURSDAY, 29 MAY 2008

The Committee met at 1.22 pm in Committee Room No. 2, Parliament House, Hobart.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest (phone-link up)*	Mr *Llewellyn* (Chair)
	Mr *Hall (phone link-up)*	*Mrs Napier*
	Ms *Thorp (phone link-up)*	
In Attendance:	Mrs Sue McLeod (Secretary)	
	Ms Allison Waddington (Minutes Secretary)	

Confirmation of Minutes:

The Minutes of the meeting held on Wednesday, 7 May 2008 were confirmed as a true and accurate record.

Correspondence:

Resolved, That the following correspondence be received –

- Letter dated 20 May 2008 from Paul de Burgh-Day, enclosing a DVD "The World According to Monsanto"

Draft Report:

The Committee considered Draft Report (as at 23 May 2008). The Secretary is to provide a further draft including amendments/additions in **bold** for the next meeting.

At 2.20 pm the Committee adjourned until Wednesday 18 June 2008 at 1.00 pm.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 18 JUNE 2008

The Committee met at 1.13 pm in Committee Room No. 3, Parliament House, Hobart.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Llewellyn* (Chair)
	Mr *Hall*	*Mrs Napier*
		Mr Booth
Apologies:	Ms *Thorp*	
In Attendance:	Mrs Sue McLeod (Secretary)	
	Ms Allison Waddington (Minutes Secretary)	

Confirmation of Minutes:

The Minutes of the meeting held on Thursday, 29 May 2008 were confirmed as a true and accurate record.

Documents Received:

Resolved, That the following documents be received –

- Email from Greg Hall dated 2 June 2008 regarding Newspaper clipping re food labelling and ABC Radio National Ockham's Razor transcript
- Additional information from Elizabeth Flynn, Acting Gene Technology Regulator (116)
- Top Chefs say no to GM foods
- Government of Western Australia Media Release - 'WA Government calls for a halt to GM food approvals'

Draft Report:

The Committee considered the recommendations in the Draft Report (as at 12 June 2008), as follows :

1. Agree to extend the moratorium, but further consideration required relating to the period applying.
2. More information requested in relation to the Act – Chair to provide
3. Agreed to with minor amendment
4. Amended – further consideration required
5. Agreed to with minor amendment

    5a (Sue Napier) Agreed to
    5b (Sue Napier) Agreed to with minor amendment
    5c (Sue Napier) Agreed to

6. Further consideration required – see also 6 (Sue Napier)
7. Agreed to

GH1 Agreed to with amendment
GH2 Not agreed to
GH3 Further consideration required – see also Sue Napier's

Other Business:

Resolved, That the Chairman move a motion in Parliament to extend the Committee's reporting date to the end of August 2008.

At 2.28 pm the Committee adjourned until a date to be determined.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

FRIDAY, 22 AUGUST 2008

The Committee met at 9.18 am in the Conference Room, 4th Floor, Henty House, One Civic Square, Launceston.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Llewellyn* (Chair)
	Mr *Hall*	*Mrs Napier*
	Ms *Thorp*	

In Attendance: Mrs Sue McLeod (Secretary)

Business:

Mr *Hall* asked the *Chairman* for details of the process following the tabling of the Committee's report. The *Chairman* advised the Committee that, prior to November 2009, an amendment bill would be required to be presented to the Parliament to extend Clause 36 (sunset clause) of the *Genetically Modified Organisms Control Act 2004.*

Confirmation of Minutes:

The Minutes of the meeting held on Wednesday, 18 June 2008 were confirmed as a true and accurate record.

Mr *Booth* took his place at 9.45 am.

Draft Report:

The Committee considered the recommendations in the Draft Report (as at 8 August 2008) as follows :

Term of Reference 1

1. Mr *Booth* voted that the moratorium continue indefinitely, and if that not accepted 10 years with a 5 year certainty period. Mr *Llewellyn* and Ms *Thorp* voted to continue the moratorium indefinitely.

Agreed to the original recommendation with amendment to extend and review after 5 years (plus new transition recommendation).

New Recommendation agreed to

Following any future review of the moratorium that recommended a change to allow the production of GMO products, consideration be given to a transition period of certainty for non-GMO producers.

2. Agreed to without amendment.

   Mrs *Napier* moved to insert after "non-food GM plants" the words "such as poppies". Mr *Hall* agreed with the amendment. Other Members voted "No".

3. Agreed to with minor amendment.
4. The *Chairman's* wording was agreed to with minor amendment. Mr *Hall* voted against the wording.

The Committee suspended at 10.53 am.
The Committee resumed at 10.58 am.

Draft Report:

Further consideration of recommendations, as follows :

5. Agreed to
6. The *Chairman's* wording was agreed to with minor amendment.

7. Agreed to
8. Agreed to

Term of Reference 2

9. Agreed to. Mrs *Napier* and Mr *Hall* argued against the recommendation and preferred to use the Australian Standards.
10. Agreed to
11. Agreed to

GH and SN recommendation combined and agreed to.

12. Agreed to
13. Agreed to

SN withdrawn

Term of Reference 3

10. Agreed to
11. Agreed to
12. Agreed to

Term of Reference 4

13. Agreed to

Term of Reference 5

14. Agreed to

GH withdrawn

15. Agreed to
16. Agreed to

GH Agreed to with amendment

SN withdrawn

Term of Reference 6

17. Agreed to with amendment
18. Agreed to
19. Agreed to
20. *Chairman* to check

Term of Reference 7

21. Agreed to

Term of Reference 8

22. Agreed to
23. Agreed to with amendment

RF Agreed to with amendment

Next Meeting:

The Committee agreed to meet next Wednesday, 27 August at 1.45 pm via phone link to finalise the report.
At 12.29 pm the Committee adjourned until Wednesday, 27 August 2008.

JOINT SELECT COMMITTEE

GENE TECHNOLOGY IN PRIMARY INDUSTRIES

MINUTES OF MEETING

WEDNESDAY, 27 AUGUST 2008

The Committee met at 1.50 pm in Committee Room No. 3, Parliament House, Hobart and via phone link to the Albert Hall, Launceston.

Members Present:	***Legislative Council***	***House of Assembly***
	Ms *Forrest*	Mr *Llewellyn* (Chair)
	Mr *Hall*	*Mr Booth*
	Ms *Thorp*	*Mrs Napier*

In Attendance: Mrs Sue McLeod (Secretary)
Mrs Allison Waddington (Assistant)

Confirmation of Minutes:

The Minutes of the meeting held on Friday, 22 August 2008 were confirmed as a true and accurate record.

Final Draft Report:

The Committee considered Final Draft Report (as at 27 August 2008).

Resolved, That the Final Report be agreed to and Tabled in both Houses tomorrow (Thursday).

Other Business:

The Committee considered the draft media release.

Resolved, That the media release be agreed to with amendment.

At 2.03 pm the Committee adjourned *sine die*.