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Review of the Moratorium on GM Canola

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Friends Of The Earth Australia Submission To The Review Panel Considering The Moratorium Of GM Canola In Victoria

This document represents the submission of Friends of the Earth Australia to the Review Panel considering the Review of the Moratorium on GM Canola in Victoria. Friends of the Earth Australia (FoEA) believe very strongly that the existing moratorium on the commercial planning of GM Canola in Victoria should be extended. Even when considering the limited scope for discussion of this issue on trade and economics as defined by the terms of reference, there is ample evidence to suggest the ban should be extended. This document will explore the trade and economic issues associated with the decision to renew or not renew the existing moratorium on GM Canola in Victoria. To keep the document concise, point form will be used in some cases to outline the main arguments. Where possible references have been provided and given additional time and resources, a more thorough, properly referenced report could be produced.

This submission is broken up into the following sections:

- Assess the economic impacts on Victoria of the moratorium on GM canola
- Assess the expected economic impacts of allowing the moratorium to expire
- Assess the expected economic impacts of extending the moratorium
- Recommend whether Government should allow the moratorium to expire or be extended

Assess the economic impacts on Victoria of the moratorium on GM canola

The comments below highlight the economic and trade benefits that Victoria (and Australia as a whole) has achieved by having the GM canola moratorium in place. Whilst there is a lack of specific data referring only to Victoria, in the case of the grains markets, we are really looking at an Australia wide approach and thus the case of the Australian context has been used to explore this issue.

Various sources indicate that Australia has historically and is currently obtaining a premium price for GM-free canola exports. For example in 2004 Japanese MAB statistics found a 5% premium was paid for Australian canola in comparison to GM Canadian canola[1]. Again in Japan, another analysis detected a 4% premium was established (Canada sourced GM canola 3,892 JPY/ton, Australian GM free Canola 4,048 JPY/ton)[2] and recently the Western Australian Agricultural Department reported a 10% price premium for exports into Europe as a result of Australia's GM-free status[3].

[1] Non-GM-Farmers., 2005, 'Canada versus Australia comparison', Network of Concerned Farmers, http://www.non-gm-farmers.com/news_details.asp?ID=2522
[2] MAFF., 2004, 'Trade statistics', Japan, http://www.maff.go.jp/toukei/sokuhou/data/yusyutugai2004/yusyutugai2004.xls
[3] Non-GM-Farmers., 2005, 'Canada versus Australia comparison', Network of Concerned Farmers, http://www.non-gm-farmers.com/news_details.asp?ID=2522

The following two points highlight the other side of coin, showing how premiums previously paid for conventional Canadian canola once fetched a premium, but that now that premium has been eroded after the introduction of GM canola. Prior to GM introduction, Canada received US $32.38/tonne premium over Australian canola between 1990-2000. Since January 2001 this altered and premiums have been lost and in many cases recently, Australia now receives a premium over Canadian prices[4].

A 2005, Graincorp Marketing Report stated that "Recent sales to China from Canada have been at a $US30 discount to current prices being bid in NSW. Canada is expected to be a keen seller throughout our marketing campaign as they attempt to reduce potential ending stocks."[5]

Assess the expected economic impacts of allowing the moratorium to expire

Assessing the expected economic impacts on allowing the moratorium to expire is a challenging task, especially in light of the limited reliable research that has been produced for the Australian context to date. In many cases Australia has had to rely on research and reports from:

- Canadian canola marketing and agricultural boards who are strongly in favour of GM canola. It is in the interest of these institutions that Australia adopt GM canola technology so that the existing price premiums and market access advantages we have been able to obtain to date are removed
- Biotechnology companies who are pushing and selling both the GM canola seed and herbicide products. These companies stand to gain millions of dollars in revenue by locking Australian farmers into their licensing agreements.

We are yet to see any detailed agro-economic study performed on the impact of removing the ban. Any such study would need to consider:

- the cost of all inputs. It is our understanding that Monsanto are yet to publicly release the cost of their GM Canola product, so it would be impossible for any such study to be conducted and provide any clear outcomes.
- the cost of educating farmers about issues of :
    - GM canola segregation,
    - contamination,
    - the need for new safety measures like buffer zones between crops
    - the need for a new and varied herbicide programs to control unwanted canola volunteers (canola plants to grow from seed left behind from previous years crops) and manage the anticipated incidence of herbicide residence is weeds prevalent in canola crops. For example, the OGTR report on Monsanto's application for the release of Roundup Ready canola states that "glyphosate has provided ineffective weed control because of Roundup Ready canola volunteers, even several years after the canola crop."[6], thus forcing farmers to change their standard practices when re-sowing a crop during its next rotation.

[4] Non-GM-Farmers., 2004, 'Higher prices for non-GM canola', Network of Concerned farmers http://www.non-gm-farmers.com/news_details.asp?ID=1220

[5] Non-GM-Farmers., 2004, 'Higher prices for non-GM canola', Network of Concerned farmers http://www.non-gm-farmers.com/news_details.asp?ID=1220

[6] OGTR., 2003, 'General Release of Roundup Ready canola (Brassica napus) in Australia', Office of the Gene Technology Regulator, http://www.ogtr.gov.au/rtf/ir/dir020finalrarmp.rtf

- the reliability and elasticity of the price of inputs. What guarantees do we have that the price of glyphosate (Monsanto) or glyphosate ammonium (Bayer) based herbicides will not increase in the future due to a market pressures, supply constraints, increased input and manufacturing costs due to increased petrochemical prices?
- The cost of segregating GM and non-GM canola along the whole supply chain from seed provision, sowing and harvesting (using machinery by contract planters sowing both GM and non-GM canola), transport by trucks to silos, transport by rail and trucks from silos to ports and processing plants; and finally from ports onto ships for export. The figures currently provided lack the backing of assumptions made in their assertions and level of confidence in prediction.

  The ability to segregate canola in itself is questionable given evidence from Canada, where almost all grain must now be sold as GM canola regardless of its original genetic make-up. A study at the University of Manitoba proved that GMO and non-GMO crops do not co-exist. A Western Australian government report backs these findings[7]. In Canada the study found that "Canada, farmers began to complain about the appearance of volunteer glyphosate herbicide tolerant canola in their fields, even when they had not intentionally sown glyphosate tolerant canola"[8] Further, the study states "The high level of adventitious presence of unintended transgenes in pedigreed certified seed lots was disturbing because it showed that stringent seed production segregation systems were not sufficient to prevent significant transgene movement". In other words, despite best efforts at segregation, it failed. More proof is found in a study conducted by Agriculture Canada where it stated that 'almost every canola field planted with conventional seed will contain some genetically modified plants'[9]. The problems and costs associated with controlling GM canola volunteers in Australia is anticipated to be higher that in Canada due to absence of subfreezing temperatures and snowfalls in Australia that have the ability to kill canola volunteers in Canada.[10]

- The cost of testing for canola grain contamination along the entire supply chain. This testing will be required if Australia is to have any hope of keeping its GM free canola export market. You don't need to look overseas for evidence of the need for testing. In Victoria in 2005 traces of GM canola (Bayer Crop Science's Topas) was found to have contaminated a canola consignment even though the commercial cultivation of crop is banned in Victoria[11]

- The cost to a conventional GM free canola farmer if GM canola contamination reaches the trigger point set by Bayer / Monsanto where they could then require the farmer to pay a

[7] Western Australia Legislative Council., 2003, 'WA government report of the Standing Committee on Environment and Public Affairs in relation to the Gene Technology Bill 2001 and the Gene Technology Amendment Bill 2001', http://www.aodgp.gov.au/internet/wcms/publishing.nsf/Content/5B0405E81EA52208CA257065007D842D/$File/wagov_wa_001.pdf

[8] Acker, R., 2005, 'Co-existence of GM and non-GM crops in Canada: current status and future direction' in 'Second International Conference on Co-existence between GM and non-GM based agricultural supply chains', http://www.gmcc05.com/pdf/GMCC05.pdf

[9] CBC new., 2002, 'GM canola spreading: Agriculture Canada report', http://www.cbc.ca/news/story/2002/06/27/gncanola020627.html

[10] Canadian Canola Council

[11] Non-GM-Farmers, 2005, 'AOF Contamination report', Network of Concerned Farmers, http://www.non-gm-farmers.com/news_details.asp?ID=2590

FULL royalty fee for the entire grain shipment for the use of the GM technology[12]. In 2003 ABARE estimated this fee could be has high as $15/ha. In 2005 Bayer Cropscience revealed estimates of costs to parliamentary enquiries Australian parliamentary enquiries $16/kg which is far above the price of conventional non-GM canola[13]

- The cost of liability insurance for crop contamination (if any insurer will cover this risk)

- The legal costs of the yet unassessed anticipated volume of new cases that will arise due to unintentional contamination of GM free conventional or organic canola. These costs can be interpreted as direct financial legal fee costs to be incurred by farmers and businesses involved in the canola supply chain as they defend themselves against law suits brought opon them by the GM seed companies for (unintentional) breech of licensing agreements. The well publicised Percy Schmeiser V's Monsanto case is evidence of the legal mess that can require untold cost sort out through the courts[14].

- The cost of additional documentation (in terms of time cost, inconvenience and compliance certification) along the entire supply canola supply chain.

- The cost of a consumer backlash against GM canola by overseas consumers. The need for our trading partners to clean up GM canola genetic pollution on their lands may have negative consequences on future market access or result in a consumer backlash against Australian goods, specifically canola based or agricultural productions. For example in Japan there have been many reported and verified cases of Monsanto and Bayer GM herbicide resistant canola plants growing at trade ports and in the open environment posing a risk to Japans GM free status[15] [16].

We have not seen any detailed 'what-if' analysis to determine the bottom economic line to a) farmers; b) consumers; c) exporters. Any 'what-if' analysis would need to consider:

- the impact of a major trading partner like Japan rejecting GM Canola imports in the near or long term future. Once GM canola is released commercially into the environment, it cannot be recalled. Victoria's decision, which will influence other Australian states, could have disastrous consequences in the future if our trading partners raise concerns about GM crops in the future. The damage could come about in terms of loss of access to markets (reduced volume) or reduced canola export prices.

- a challenge to and overturning of the recent WTO ruling that will force the European Union to accept GM imports[17]. Whilst the WTO is governed by 'rules', the rules allow a challenge to a decision based on legitimate terms under sanitary and phytosanitary measures or health measures if new scientific evidence is produced that show that GM canola crops pose a risk to a) the environment; b) human or animal health. With limited or

[12] Non-gm-farmers, 2005, 'Monsanto's GM Roundup Ready canola' Monsanto's GM Roundup Ready canola.htm, http://www.non-gm-farmers.com/news_details.asp?ID=2007
[13] Non-gm-farmers., 2005, 'Canada versus Australia comparison', Network of Concerned Farmers, http://www.non-gm-farmers.com/news_details.asp?ID=2522
[14] See http://www.percyschmeiser.com/
[15] http://www.greenpeace.org/international/press/reports/canola-report
[16] Third World Network., 2005, 'Third World Network Biosafety Information Service', http://www.twnside.org.sg/title2/service213.htm
[17] http://www.foodnavigator-usa.com/news/ng.asp?n=70983-wto-gm-safety , 'WTO GM food ruling ignores safety question', 10/3/2006

non-existent publicly available, independent peer reviewed long term studies on the environmental and health impacts of consuming GM canola, it is impossible to rule out any future findings that may result in justification for reinstating bans or restrictions GM canola crops in a WTO compliant manner, which would have a negative impact on Australian exports.

- new scientific findings. Every day there are new scientific findings in the field of genetics. There is always risk in placing trust in the unknown and yet when it comes to genetics, the unknown side of equation appears to get larger every day. A recent discovery brings into question how much we actually understand about the way genes interact and operate. The study finds that genes are a lot more complex than we think, that they don't just have simple single purposes and traits, causing scientists "to rethink some long-held views about what genes are and what they do."[18] It is impossible to calculate the potential financial cost of unknown risks of a technology with many scientific knowledge gaps.

Until a detailed agro-economic study that takes into account all available economic data and market information combined with possible outcomes from various positive and negative what-if scenarios is conducted and provides statistically significant results backed by a high degree of probability and confidence, then the existing GM Canola moratorium should not be lifted.

If the moratorium is allowed to expire and GM canola crops are planted in Victoria, then this will result in a removal of choice for many farmers. GM proponents argue that farmers should have the right to choose if they adopt GM technology or not, but we know from the Canadian canola experience that by introducing GM canola you are removing the choice of every other farmer in Victoria to be able to confidently grow and market conventional GM free canola. We know that once GM canola is released into the commercial environment, it cannot be recalled. The contamination of GM free canola by wind pollination, seed transport by birds and strong winds, or roadside spillage of GM grains along transport routes and human error at grain storage facilities will all lead to the GM canola contaminating all other conventional canola seed.

The economic cost of consumer backlash has not been considered in any reports to date. The findings of a recent survey conducted by Biotechnology Australia survey have been presented as evidence that resistance to GM foods in Australia is weakening. However, this survey has been criticized by several parties in its use of leading questions that make reference to the fact that GM crops can provide solutions to key environmental problems even though this GM technology does not yet exist[19]. One only needs to look at other results in this survey which finds that people have a higher willingness to eat organic and conventional foods in comparison with GM foods[20]. Making the results from the 2007 study appear out of line are another set of results from a study conducted in 2006 by Swinburne National Technology and Society Monitor. This study found that "only 30 per cent of 1,000 consumers surveyed last year were comfortable with genetically modifying plants for food"[21]. In other words 70% of respondents were not comfortable with eating GM food. Adding weight to the evidence of consumer resistance is another study performed by

[18] Caruso, D., 2007, 'New Findings: Consortium of Scientists Discover Major Glitch in Modern Gene Theory', New York Times,
[19] Bardon, J., 2007, 'Anger over pro GM public attitudes survey', ABC Rural Tasmania, http://www.abc.net.au/rural/tas/content/2006/s1985741.htm
[20] Phelps, B., 2007, 'Government Push Polls on GM crops and foods', Gene Ethics, http://www.geneethics.org/Portals/3/Ban%20review%20contact%20list.pdf
[21] Patton, D., 2006, 'Australian food firms urged to avoid GM canola', AP Food Technology, http://www.ap-foodtechnology.com/news/ng.asp?n=72521-cargill-greenpeace-canola-gm-unilever

Choice in which it finds "84% [of respondents] are concerned about eating genetically modified food" and "*72%* [of respondents] *try to look for foods that have not been genetically modified*"[22]. The above results all lead to one conclusion and that is that consumers do not want to eat GM foods and this includes GM canola oil and its other products.

Even farmers have concerns about GM crops. A study by Doug Shears from ICM Agribusiness also found that "71 per cent of farmers surveyed had concerns regarding the commercial release of GM canola", "67 per cent of farmers had significant concerns about the ability to market GM canola" and "80 per cent of farmers had significant concerns about the ability of GM and non-GM canola to co-exist".[23]

Australian Food manufacturers are also avoiding GM canola. In 2006 when a shipment of Canadian (GM) canola arrived in Australia, all the major food manufacturers including Goodman Fielder, Unilever, Woolworths and McDonalds refused to buy any of it and openly admitted to not buying any in the press. As a representative from Goodman Fielder said "It's a matter of what you're prepared to pay, and we believe that consumers are prepared to pay more for non-GM foods,". The question has to be asked that if Australian consumers do not want to eat GM canola and food manufacturers don't want to buy GM canola, then who is going to buy it? The cost to Australian farmers from the rejection of GM canola by Australian consumers and manufacturers is sure to high.

The comments below will help dispel some of the myths that have been used to promote the economic benefits of lifting the GM canola ban in Victoria. Firstly an increased yield is often incorrectly associated with GM canola crops. Anticipated yield gains resulting in increased farm income promoted by GM canola proponents needs to be questioned in light of a review by the network of concerned farmers that found that 'Canadian yields did not increase as GM canola was introduced' and that there is no evidence that yields increased by 40% as promoted. The limited Roundup Ready canola trials performed by Monsanto resulted in yields lower than the national average when trials were performed in Australia. The yield penalty associated with post emergent glyphosate was examined in 'The Scientist' magazine, finding that glyphosate lodges in the meristems and affects reproduction, therefore reducing yields. Until recently removed, the best yield reported on Monsanto's website was 1.055 tonne/ha which is 17% below the national average[24]. In addition to this, a Canadian study conducted by Fulton and Keyowski found Roundup Ready canola delivered lower yields of around 7.5 percent[25]. Even the US Department of Agriculture has admitted in 2006 that GM crop yields are not greater than those of conventional crops[26].

Any yield improvements reported by GM canola proponents are not due to the GM properties of the crop, but due to the hybrid vigour associated with vigour of the F1 generation of the seed. This is confirmed by Bayer in an explanation to the OGTR "It is important to note that the hybrid vigour displayed in F1 RF x MS hybrids is not a function of the genetic modification but is a result

[22] Choice., 2003, 'GM: Labelling survey 2003', Choice Magazine, http://www.choice.com.au/viewArticle.aspx?id=103976&catId=100406&tid=100008&p=1&title=GM%3a+Labelling+survey+2003+(archived)

[23] Tucker., 2003, 'Gene Technology Bill 2002', Legislative Assembly for the ACT: 2003 Week 9 Hansard (26 August), http://www.hansard.act.gov.au/hansard/2003/week09/3207.htm

[24] Non-GM-Farmers, 2005, 'Monsanto's GM Roundup Ready canola' Monsanto's GM Roundup Ready canola.htm, http://www.non-gm-farmers.com/news_details.asp?ID=2007

[25] Non-GM-Farmers, 2005, 'Monsanto's GM Roundup Ready canola' Monsanto's GM Roundup Ready canola.htm, http://www.non-gm-farmers.com/news_details.asp?ID=2007

[26] Freese, B., 2006, 'Genetically Modified Crops Still Not Performing', Center for Food Safety, Washington

of the breeding of the two genetically distinct parents.[27]" Therefore the same increased yields (and any economic benefits) could be produced by non-GM hybrid varieties of canola crops. Any yield increases documented are often obtained by comparing current GM hybrid yields with those of a 1993 non-hybrid, non-GM variety. Another way GM canola yield results can be misleading is through the application of additional volumes of fertiliser. "The Canadian Canola Council reported an increase in fertiliser use in GM crops which would certainly have influenced yields in paddock performance"[28]

The GM seed companies are 'bundling' the desirable traits of increased yield from hybrid seeds with the traits of GM technology to try to sell the GM technology as the solution to obtain higher yields and higher economic return for farmers. There is even evidence to suggest that the standard post emergent application of herbicide on a GM canola crop will actually decrease hybrid vigour as the chemicals do still have some negative consequences on the crops performance. "Australian data indicates that the vigour exhibited by [Bayer] Invigor [GM] hybrids falls within the range of vigour exhibited by conventional hybrid and open pollinated (inbred) varieties of canola currently grown commercially. Invigor hybrid [GM] canola displayed approximately 15% greater vigour than a conventional open pollinated variety, but 20% less vigour than a conventional hybrid variety (data supplied by Aventis)."[29]

Even the Australian Productivity Commission concluded that with regards to the on-farm benefits of GM canola "small yield results for herbicide-tolerant canola, averaging only about 1 per cent, and little evidence of cost reductions"[30]

Economic benefits promoted by the new traits of GM crops being able to tolerate Australian climatic extreme must also be questioned in light of OGTR risk assessment "... Monsanto has indicated that results of field trials in Australia and commercial release in other countries, show no differences between Roundup Ready canola and conventional canola in ability to resist drought, heat and frost."[31]

GM canola proponents disregard that there will be any negative economic impact as a result of weeds becoming resistant to glyphosate herbicide. Currently glyphosate is a cheap and effective means of controlling many weeds in Australia, but even based on conservative OGTR findings, "the introduction of glyphosate tolerant canola into the zero tillage cropping system currently used in Australia would significantly increase the rate at which glyphosate resistance evolves compared to rotations incorporating conventional canola varieties"[32]. The report goes on to further state that two initial herbicide applications might be required (double knockdown with glyphosate and paraquat), followed by a high crop seeding rates during sowing and the removal of weed seeds at harvest. In some cases there will be other effective weed management options, but these may come at a premium price compared to glyphosate and result in the need to mix several chemicals

[27] Non-gm-farmers, 2005, 'Bayer Cropscience's GM Invigor canola', http://www.non-gm-farmers.com/news_details.asp?ID=1992
[28] Non-GM-Farmers., 2005, 'Canada versus Australia comparison', Network of Concerned Farmers, http://www.non-gm-farmers.com/news_details.asp?ID=2522
[29] Non-gm-farmers, 2005, 'Bayer Cropscience's GM Invigor canola', http://www.non-gm-farmers.com/news_details.asp?ID=1992
[30] Stone, S., Matysek, A., Dolling, A., 2002, 'Modelling possible impacts of GMO crops on Australian trade' Australian Productivity Commission, Commonwealth of Australia
[31] OGTR., 2003, 'General Release of Roundup Ready canola (Brassica napus) in Australia', Office of the Gene Technology Regulator, http://www.ogtr.gov.au/rtf/ir/dir020finalrarmp.rtf
[32] OGTR., 2003, 'General Release of Roundup Ready canola (Brassica napus) in Australia', Office of the Gene Technology Regulator, http://www.ogtr.gov.au/rtf/ir/dir020finalrarmp.rtf

together to achieve the desired result. It may even require several herbicide applications. For example, the farmer may not know that they have glyphosate resistant weeds (or canola) on their property until they spray using glyphosate. After they find the weed is resistant to glyphosate, they will then need to reapply another herbicide to kill the weeds, resulting in extra time cost and additional herbicide and fuel input costs.

In addition to the increased costs from glyphosate resistant weeds is the cost of controlling canola that becomes resistant to more than one type of herbicide. As the Canola Council of Canada states, "in a few cases, growers have found canola volunteers with multiple resistance to herbicides"[33], so it is possible for a GM canola plant to become resistant to more than one herbicide, creating more headaches and potential costs for farmers. If we think long term and were to accept the GM canola technology is the way of the future, then it is not unrealistic to vision other GM canola products with resistance to other herbicides on the market. What will the economic cost be to farmers who are forced to attempt to control GM canola volunteers that are resistant to several of the most common herbicides?

The lack of independence (in terms of funding and close industry associations) and peer review on existing studies proclaiming the benefits of growing GM canola crops in Australia raises questions about the credibility of the arguments put forward by the industry and government bodies producing these materials. The question needs to be asked. 'in whose economic interest are these groups considering the consequences of the introduction of GM canola? Is it the conventional or organic canola farmer or is it the agrochemical companies who stand to make millions from seed royalties and increased use of their brand named herbicides.

Assess the expected economic impacts of extending the moratorium

The existing economic and trade benefits obtained by having the existing GM canola moratorium would continue into the future if the moratorium was renewed. The increase in consumption of organic produce and the consumer rejection of genetically modified food (where consumers are informed through correct labelling) provides future arguments for extending the existing moratorium. If Australia it to be able to successfully take advantage of the future market access opportunities and price premiums, then it must remain free of GM canola. Whilst Canada appears to have found a market for its GM canola, it is important to distinguish between the end-use of the product. The use of GM free Australian canola used for human consumption will raise higher sensitivities than GM Canadian canola used for industry or animal products. Conventional Canadian farmers were receiving a $77 premium for high oil, non-GM canola but the additional segregation costs required to keep their canola separate from the GM verities took away much of this premium[34]. A similar fate will await Victoria canola growers if the ban is lifted.

In 2003, Max Foster from ABARE stated with reference to canola export prices that "There is some evidence that the gap between Canadian and Australian canola prices has narrowed in recent years which is consistent with improved demand for non–GM canola"[35] This statement gives further weight to economic benefits of keeping the moratorium. Extending the moratorium will enable Australia to keep its 'clean and green' image. It will enable Australian organic farmers to

[33] Canola Council of Canada, 2005, 'Canola Facts: Why Growers Choose GM Canola', http://www.canola-council.org/facts_gmo.html

[34] Non-GM-Farmers., 2005, 'Canada versus Australia comparison', Network of Concerned Farmers, http://www.non-gm-farmers.com/news_details.asp?ID=2522

[35] Foster, M., 2003, 'GM Canola What are its economics under Australian conditions', Grains Research and Development Corporation, http://www.grdc.com.au/GRDC/Bookshop/CMAttachments/abare_gm_canola_2003.pdf

keep and expand their niche organic markets and reduce our exposure to the risk of losing market share to countries who grow GM free canola.

The following extracts have been lifted from the updated 2003 'Report Of The Standing Committee On Environment And Public Affairs In Relation To The Gene Technology Bill 2001 And The Gene Technology Amendment Bill 2001'. These statements provide further evidence of the economic and trade benefits of renewing the existing moratorium. The following statement indicates that Australia's reputation for being 'clean and green' is at risk if the GM ban is lifted. This may impact market access in sensitive countries like Japan. "There was unanimity across the board that Australia currently has a 'clean and green image' in all of the countries surveyed. Japanese respondents were overwhelmingly of the view that the growing of genetically modified crops in Australia would affect its 'clean and green image'." Further, in relation to Japan, the report states "Australia was able to secure greater market access because it was producing non-GM canola.", The risk of losing market access is also stated "The Department's (WA Department of Agriculture) assessment on the international marketability of GM canola concluded that 10 per cent of WA's canola markets would be at risk of being lost should WA choose to adopt GM canola."

Later in the report, there is more evidence of potential for a price premium for GM-free canola "The Committee notes that price premiums for non-GM grain exports are achievable in non-GM markets. For example, in Japan a labelled non-GM canola oil from Australian canola in 2001 sold at about a 34 per cent premium compared to the nation brand canola". The report also includes a quote from George Kailis, a prominent Western Australian businessman who stated "The Japanese Consumer Union et al has a paying membership of approximately 30 million consumers and is the largest consumer union in the world. The JCU has asked Australian farmers not to plant GMO's, because even though the Government is accepting GMOs into Japan, for whatever trade reasons, the consumers do not want it". The report also quotes from an ABARE 2003 report that states "It is easier to trade non-GM canola in the current market environment than it is to trade GM canola."

One of the first of Australia's exports markets to suffer will to countries currently receiving organic canola shipments from Australia. Even ABARE admits this in their analysis on the impacts of GM canola on organic producers.[36] Whilst the percentage of organic trade is small, judging by current positive trends, it is a market with a large future potential. The ABARE study strains to find any benefits of the introduction of GM canola for organic growers. The report states that if organic farmers are to adhere to our strict organic NASAA and BFA standards, then the "the potential impacts of approved GM canola on organic canola are that meeting a zero tolerance criteria may be costly or impossible for some producers". Whist some 'risks' are raised that could result in additional costs to organic farmers, nowhere in the report are any costs calculated to a dollar figures amount per kg or seed produced or per hectare of land sown.

Recommend whether Government should allow the moratorium to expire or be extended

Friends of the Earth Australia strongly believe that the existing moratorium on the commercial growing of GM canola should be extended until 2013 and beyond. The existing benefits enjoyed by Australian farmers compared with the additional risks and costs associated with removing the GM canola ban provide a strong case for renewing the moratorium. Australian consumers don't

[36] Apted, S., Mazur, K., 2007, 'Potential impacts from the introduction of GM canola on organic farming in Australia', ABARE, http://www.abareconomics.com/publications_html/crops/crops_07/organic_farm.pdf

want to eat GM canola and Australian manufacturers don't want to buy it. International market access will be more difficult and existing price premiums will be lost. The arguments presented above lead to the conclusion that the moratorium should be continued. By applying the precautionary principle to Australia's important canola trade and market access, we hope that the review committee will come to a similar conclusion.