

Submission Cover Sheet

Review of the Moratorium on GM Canola

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Attachments Submitted with this Submission:

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SUBMISSION TO THE GENETICALLY MODIFIED CANOLA REVIEW PANEL

The current moratorium has, in my opinion, been of benefit to Victoria because it has allowed the State to learn from the introduction of GM Canola in other countries.

Glyphosate [N-(phosphonomethyl)glycine] - resistant crops (GRCs) include canola (*Brassica napus* L.), maize (*Zea mays* L.), and soybean [*Glycine max* (L.) Merr.] and have been commercialised and are grown to varying degrees in North America and Europe.

The GM Canola proposed for release in Victoria by Bayer and Monsanto has been developed in the USA and presumes the use of Glyphosate that has been produced according to the formula used in the original patent. This works well in the USA and Canada where the provenance of the Glyphosate can be relied upon.

Judging by the export data produced by the Chinese government, a large amount of the Glyphosate used in Australia is sourced from China where, there were at last count, at least 11 different factories that all use different formulations usually driven by cost constraints and profit targets. There is zero quality control on inputs in China so it is reasonable to expect that the product imported into Australia may have an entirely different impact either on the plant and or the environment or both.

I am not sure that the OGTR is aware of this issue, and I have little confidence that they would become involved even if they understood the potential implications.

Until the exact specification of glyphosate used on Australian farms can be guaranteed there should be no relaxation of the moratorium

However, should the Review Panel decide to lift the moratorium on the introduction of Genetically Modified Canola, then I would respectfully suggest that the Panel recommend the following conditions precedent:

1. AN ENDURING ENVIRONMENTAL DUE PERFORMANCE WARRANTY.

The two Corporate entities, Bayer and Monsanto provide an enduring environmental due performance warranty to the Victorian Government in the following form:

- 1.1 An individual \$A 20 million Bond lodged with the Victorian State Treasury either in cash or as a Bank Guarantee.
- 1.2 An open ended, enduring Corporate due performance guarantee that was signed under seal by the respective company and by the Directors individually.

This warranty would be used to ensure that the GM Canola promoted by the individual companies performed exactly to the specification laid down by the company.

The putting into place of this warranty in the first instance would be seen by all parties to this debate as an act of good faith on the part of Bayer and Monsanto and a firm indication that they stand by the claims made for their products.

At this time it is known that at least three weed species have evolved resistance to glyphosate in GRCs. There is no understanding of how native Australian grasses and plants that are sometimes classed as weeds will adapt to glyphosate. This lack of understanding is the result of a failure by the proponents to carry out arms length peer reviewed research.

If in the future, evidence emerged that the resistance traits had been transferred to weeds such as Wild Raddish (*Raphanus raphanistrum*), Patersons Curse (*Echium plantagineum*), Barley Grass (*Critision* spp) or other similar plants then the economic impact of this transfer of the resistance trait would be put back to the companies.

If in the fullness of time, it emerges that GM Canola is impacting the export Honey industry then the economic cost of this impact would be put back to the companies.

Whilst it is recognised that both Bayer and Monsanto claim that any unforeseen environmental effects of GM Canola are covered by common law rights, the recent experience in Victoria with the BAT case indicates that large foreign multinational are very capable of implementing policies to negate common law remedies.

As a matter of historical importance, the Victorian Government supported and endorsed the use of Dieldrin in Victorian Agriculture (especially the potato sector) and when the full impact of this chemical was exposed the economic impact was carried by the farmers with little if any recourse to the Government or the chemical manufacturers/promoters. There are major tracts of highly fertile farmland in Victoria that still cannot be farmed because of this chemical.

2. CUMULATIVE EFFECTS STUDY.

2.1 A full cumulative effects study as per the process developed by the US Council on Environmental Quality (CEQ) should be carried out by an internationally accredited agency that has no prior history of working for or with the two proponents.

2.2 This study should, in particular, focus on the risk of Glyphosate resistance transgenes being linked to transgenes that may impart fitness benefits outside of agriculture (e.g insect resistance) and thus impact natural ecosystems. I understand that no work has been done on this issue in Australia and that American research data has been transposed for Australia.

There is little commonality between American and Australian soil and above ground flora and fauna.

If no fatal flaws are discovered during this process (and I doubt that this will be the case) then the process can progress to section 3.

3. ECONOMIC IMPACT STUDY.

3.1 A Economic Impact Study (Positive and Negative) would then be carried out at arms length preferably by the economics department of a major Victorian University. Once this study is complete and demonstrates a positive economic impact then the process can progress to Section 4.

4. A FULL ENVIRONMENTAL EFFECTS STUDY (EES).

Once the Environmental Due Performance warranty has been put in place, the Cumulative Effects study and the Economic Study have been completed the Victorian Government would need to implement a full EES on the proposed introduction of GM Canola. Because of pre-existing conflicts in the Victorian Government the EES would need to be established in the following manner:

4.1 The Panel to be headed by a retired Supreme Court or County Court Judge.

4.2 The scope of work to be written by retired CSIRO and NRE Scientists.

4.3 The technical report consultants to be the relevant departments in Victorian Universities.

4.4 The proponents to pay the cost of the studies to the trust account administered by the Panel Chairperson.

4.5 A open public hearing process with all contributors giving evidence under oath. The normal rules of evidence are to apply to this process.

4.6 A binding agreement to be provided by the Victorian Government that the Panels report will be adopted in its entirety.

Like any other major development in Victoria, a full EES is required to make sure that all the issues with the introduction of GM Canola are properly explored by a truly independent and transparent review process. Recently EES enquiries have been held for the Bay dredging proposal, a proposed toxic waste dump, the expansion of a major quarry and a proposal to develop parkland for housing.

The long term economic impacts on Victorian farmers if the introduction of GM Canola does not have the economic benefits that are claimed by its two proponents would far outweigh the impacts of any other proposal in Victoria that has been examined in an EES process.

It is interesting to note that neither China or the EU have adopted these GM modified product to date. Every spare metre of farmland in China that can grow Canola does grow Canola and the Chinese willingness to adopt technology would indicate that if the economic advantages were at the level claimed by Bayer and Monsanto then the product should have been adopted, why has this not happened?

5. TERMINATION RESOURCE.

Should all four previous tasks indicate that there should be no restriction on the introduction of GM Canola into Victoria then the final provision would be that a Termination Resource be established and paid for by the two proponents.

Termination Resource stocks are somewhat like military reserve stores - they may never be needed but they are critical if you do.

In this case there is a very valid argument that once GM Canola was introduced into Victoria and the commercial benefits were being realised as claimed by the two proponents, that there would be a run down in non GM seed stores to the point that if an unexpected side effect of GM Canola emerged then there would insufficient available non GM seed stock available to re-start the Canola industry in a timely manner if at all.

6. OTHER COMMENTS.

6.1 It is interesting to note that there is already a global shortage of Glyphosate and it is apparent that there may be a reluctance on the part of lending institutions to fund more capacity in this area because of a well founded uncertainty that the emergence of Glyphosate resistance in weeds may make this extra capacity redundant well before it has paid back its debt.

6.2 The internet based contemporaneous data is indicating that there are serious commercial marketing issues with GM products even in the home of GM products the USA. A range of clippings on this issue are attached in Attachment "A".

6.4 Whilst it is outside the scope of this enquiry, there are serious issues emerging with BT rootworm trait products (US EPA Event MIR 604). For more information on this important issue see references 13-17.

7. REFERENCES.

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11. Potential Persistence of Transgenes: Seed Performance of Transgenic Canola and Wild Cross Canola Hybrids - Ecological Applications, Volume 8 (4) 1180-1195.
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14. Ecological Impacts of GM Cotton on Soil Diversity - *CSIRO Land and Water* August 2004.
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