Tasmania GMO Moratorium Review

Submission by David Armstrong.

22 April 2019

The invitation to respond to the GMO review is appreciated, and I make the following comments.

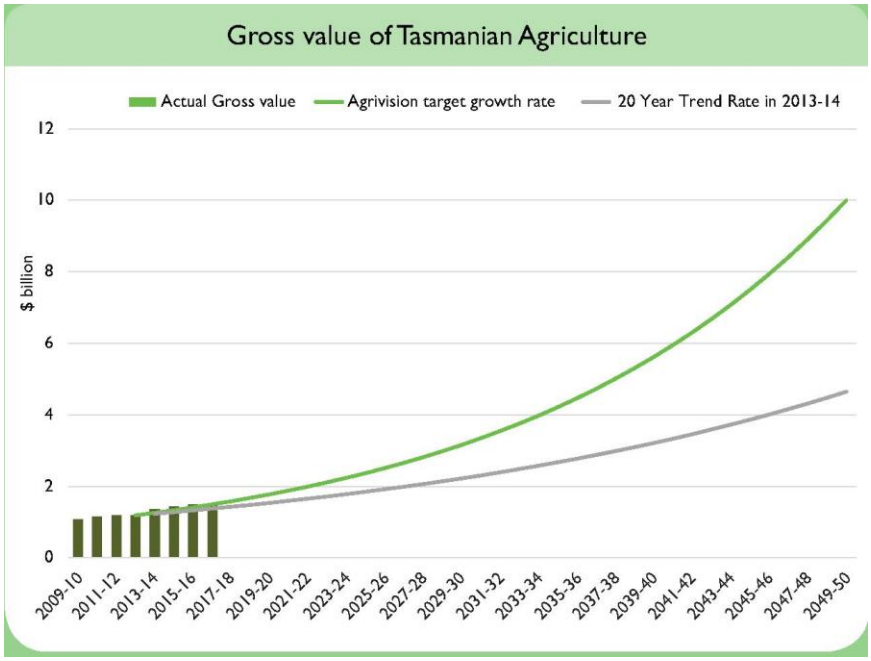
Forward in the Issues Paper

In the Forward to the Issues Paper the Minister for Primary Industries and Water states that the moratorium "has served us very well, enabling market access and advantages that are the envy of other jurisdictions".

This claim is completely without objective supporting evidence. It is not consistent with a reasonable expectation that the review would be independent of political influence, and that a decision about the moratorium would be based on evidence. The only objective evidence on the impacts of the moratorium is that in the 2013 Macquarie Franklin report which indicated that agriculture in Tasmania had been disadvantaged by the moratorium to that time.

Growing the value of agriculture to $10b by 2050

The Tasmania Government's vision is to increase the value of agriculture in Tasmanian to $10b by 2050. The is an ambitious target. Its' achievement would hugely contribute to prosperity in the State. This will require an annual growth rate of approximately 6%. The following graph was presented by Nicola Morris at the International Farm Management Association 22nd Congress in Launceston, 3-8 March 2019 and is reproduced with her permission. The current growth rate is well below the Gvernment's aspiration.



Growth in the value of agriculture of the magnitude envisaged in the government's vision will only be possible through momentous change. In my opinion it will certainly require new and innovative technologies, including the use of GMO's. It will require very significant growth in the productivity of a relatively small group of farming activities, particularly dairying, red meat (beef and lambs), vegetables, berries, cherries and wine grapes.

Those opposed to GMOs claim marketing advantages and a price premium for Tasmanian produce, yet clear objective evidence supporting this claim is not available. The price premiums, if any, are certainly marginal; if the premiums were significant then there would be evidence to support the claim.

The growth in value to the extent envisaged in the Agrivision 2050 will not be achievable through possible premiums for GMO-free produce.

Research interstate indicates that more productive GM rye grass varieties could soon be available. These varieties could very significantly increase the productivity of the dairy and red meat industries in Tasmania. Use of GMO ryegrass would clearly preclude promotion of the State as GMO-free, but the impact of that on the price or volume of non-GMO produce is uncertain. It would mean that our produce would not automatically be differentiated from Victorian produce, for example, where GMOs are not restricted other than by the national laws and regulations. At worst, Tasmania could loose a premium or marketing advantage.

My expectation is that the added income resulting from higher productivity of GMO rye grass would more than offset the claimed (but not proven) benefits of the State's GMO-free status.

There is good evidence of some of the benefits of GMO's in South Australia. The Independent Review of the South Australian GM Food Crop Moratorium by Kym Anderson (March 2019)[1] notes that "the adoption of GM crops typically leads to less rather than more use of farm chemicals, and the risk of herbicide resistance in key weeds can be reduced by alternating between different crop varieties (Finding 3.5)."

Anderson notes further that "apart from one qualified exception, no evidence is provided in those pro-moratorium submissions that would support a view that any current price premium or market access for non-GM South Australian crops would be diminished if GM food crops were allowed to be grown in the state on condition of careful segregation. A qualified exception has to do with Kangaroo Island."

"Evidently, segregation and identity preservation are sufficiently robust that the EU does not discriminate between Australian states in sourcing non-GM canola. That is, data on canola exports from Australian states to the European Union do not support the view that South Australians enjoy better access in EU non-GM grain markets (Finding 3.1)."

"A recent study submitted to the Review found average prices of wheat, barley and canola in South Australia were no higher than those in Victoria or Western Australia where GM crops are allowed. That is, the only data provided in submissions on prices of grain in South Australia versus grain in

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1 https://pir.sa.gov.au/__data/assets/pdf_file/0006/339225/Independent_Review_of_the_South_Australian_GM_Food_Crop_Moratorium.pdf

neighbouring states suggest that since 2012 there has been no premium for grain from South Australia despite it being the only mainland state with a GM crop moratorium. (Finding 3.2)."

"That is, the experience of GM canola production and marketing in other mainland states over the past decade reveals that segregation and identity preservation protocols and practice codes can and do ensure the successful coexistence of GM and non-GM crops in Australia (Finding 3.3)."

Co-existence

Co-existence allows for growers in a State or region to produce either GMO or non-GM varieties. In that regulatory environment, the issues of relevance are:

1. The potential for contamination of non-GM produce with GM produce.
2. The technical and practical issues associated with co-existence.
3. The loss of the State or region's identity as an area completely free of GMOs.

Contamination limits. The current allowable limit of adventitious contamination of non-GM produce in Tasmania is 0.01% (i.e. 1 seed in 10,000). This is completely unreasonable in that it is inconsistent with other Australian mainland states (1%) and for example Europe (0.9%), and testing to establish the GM-free status would require expensive and exceptionally precise testing to measure such low levels of contamination.

Practical issues. In a practical sense co-existence would certainly be possible. Co-existence for canola is working in Western Australia (see the Anderson report). The Organic industry claims that organic production is growing in Australia; it is co-existing with GM production in the mainland states (except South Australia).

There are systems in place for co-existence for other products produced in Tasmania, for example segregation of vegetable seed crops where separation distances are necessary (managed by the industry and growers without Government involvement).

In my opinion co-existence in Tasmania would be possible with appropriate management; co-existence would not preclude the production of GM-free produce in Tasmania.

Tasmania's marketing image. Would Tasmania's Brand be significantly damaged if GMO's were allowed in the State? Allowing GMOs would require processors and marketers claiming GM-free status for their produce would require them to provide evidence supporting that claim. This would be possible.

Professor Jonathan West, 2009 Australian Innovation Research Centre
University of Tasmania

In 2009 Professor West published "An Innovation Strategy for Tasmania - A New Vision for Economic Development". Amongst many other words, Professor West recommended Tasmania should "Remove its ban on GMO crops, at least initially for non-human-food crops. While some argue that Tasmania gains a marketing advantage from prohibiting genetically modified foods, any such advantage is slight, if it exists at all, and it is difficult to imagine Tasmania becoming a leading innovator in the food sector if it effectively bans the most powerful technology for innovation in this sector ever invented. Scientifically, the ban makes little sense—all foods are 'genetically modified'

from their ‘natural’ form, by the use of certain techniques (such as forced selective breeding) rather than others (deliberate gene insertion). At the very least, Tasmania should lift the prohibition on GM crops not for human food use, such as pharmaceutical plants and animal fodder. As time passes, Tasmania’s disadvantage will only escalate if it opts out of this dynamic field of technology. Furthermore, maintaining a ban on GMOs conflicts with the government’s commitment to reduce Tasmania’s output of greenhouse gases. Fertiliser and pesticides are both products of fossil fuels, and their use would be substantially reduced by genetic modification techniques in crops.”

In my opinion Professor West’s opinion is even more appropriate now that it was in 2009.

Conclusions

In my opinion the moratorium should be discontinued if we are to achieve the growth in the value of agriculture that Professor West indicates is possible, and meet the Agrivision target.

Government investment should focus on developing systems and protocols that allow co-existence so that Tasmania can enjoy the productivity growth that will result from the use of GMOs, while retaining the potential for GMO-free produce to be marketed.