CropLife AUSTRALIA

*Representing **the best** of the plant science industry*

CropLife Submission to Growing Tasmanian Agriculture - Research, Development & Extension for 2050

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1 INTRODUCTION

CropLife Australia (CropLife) is the national peak industry organisation representing the agricultural chemical and biotechnology (plant science) sector in Australia. CropLife represents the innovators, developers, manufacturers and formulators of crop protection and agricultural biotechnology products.

The plant science industry provides products to protect crops against pests, weeds and diseases, as well as developing crop biotechnologies that are key to the nation's agricultural productivity, sustainability and food security. The plant science industry is worth more than $18 billion a year to the Australian economy and directly employs thousands of people across the country. CropLife Australia is a member of CropLife Asia and part of the CropLife International Federation of 91 CropLife national associations globally.

CropLife welcomes the opportunity to make a submission to the Tasmanian Government's Green Paper *Growing Tasmanian Agriculture – Research, Development and Extension for 2050*. CropLife's submission responds to Section 1 of the Green Paper concerning contemporary agricultural RD&E systems that could benefit Tasmanian agriculture.

CropLife's submission highlights that over the past 14 years, Tasmania's agricultural sector has suffered a net loss of $4 million per year due to a moratorium on genetically modified organisms (GMOs) that has provided little tangible benefit to the state in return[1].

Fourteen years of evidence shows that the moratorium has only managed to hurt the state's economy and has failed to give local growers an advantage in domestic and global markets. GM and non-GM crops are now grown successfully side-by-side in Australia and in more than 25 countries worldwide. Many other countries and regions have examined the potential for GMO-free marketing and almost all have concluded that any potential benefits do not outweigh the costs.

The moratorium also ignores the mounting evidence of the environmental benefits of GM crops. Globally, since 1996 GM crop plantings have conserved biodiversity by saving more than 430-million acres of land from being placed in agricultural production.[2] Crop biotechnology is an important tool helping farmers become more sustainable by allowing them to produce more using less natural resources.

Tasmania's island state image is an asset to the state's economy. The GMO moratorium, purportedly put in place to protect this image, has turned out to be an extremely costly investment that has delivered no measurable return to Tasmania's economic standing or competitiveness.

1 Macquarie Franklin 2012, *Market advantage of Tasmania's GMO-free Status*, Devonport, Tasmania

2 ISAAA. 2016. Global Status of Commercialized Biotech/GM Crops: 2016. ISAAA Brief No. 52. ISAAA: Ithaca, NY

The world's population is predicted to increase to 9.7 billion by 2050, requiring an increase in global food production of 70 per cent. Providing enough food in the context of production constraints, volatile consumption patterns and a changing climate will be an unprecedented scientific, economic and public policy challenge. The situation provides an opportunity for the Tasmanian agricultural sector to both assist in the global food security effort and to profit from increased demand for their agricultural products. By having the option to adopt innovative farming practices, such as the sustainable and efficient use of crop biotechnology products, the Tasmanian farming sector will be able to produce more with less, strengthening both the sector itself and the regional communities that rely on it.

GM crops currently under development in Australia will help Tasmanian farmers to combat environmental stresses such as drought, acid soils and salinity, which are being caused by climatic changes and previous non-sustainable farming practices. There is also significant Australian research into GM traits that will bring health benefits to Tasmanian consumers, such as healthier starches and oils modified to be lower in saturated fats and with improved cooking qualities.

CropLife supports the ability of farmers to be able to plant those GM crops approved by the Gene Technology Regulator and not be further restricted by non-science based regulation. CropLife urges the Tasmanian Government to put political considerations aside and consider what is best for Tasmanian farmers and the Tasmanian agricultural industry. CropLife questions why Tasmanian growers are being penalised to promote a 'clean green' image that would still be maintained and arguably enhanced without a GMO moratorium[3].

CropLife's submission addresses the following questions relevant to Section 1 of the Green Paper:

- What needs to happen to grow Tasmanian agricultural RD&E?
- Are there new and emerging opportunities in agricultural RD&E that could benefit Tasmania?
- What impact has Tasmanian government policy had on agricultural RD&E?

[3] For a qualitative case study that examines the impact of the hypothetical introduction of GMOs on New Zealand's "clean green" marketing image, see Knight JG, Clark A and Mather DW (2013) 'Potential damage of GM crops to the country image of the producing country' *GM Crops and Food* 4:3, 1-7.

2 WHAT NEEDS TO HAPPEN TO GROW TASMANIAN AGRICULTURAL RD&E?

The release in 2012 of the Macquarie Franklin report to investigate market, economic, social and environmental issues relating to Tasmania's GMO free status[4], demonstrated the GMO moratorium has been a trade and marketing disadvantage for Tasmania's primary industries, and significantly stifled Tasmanian RD&E into agricultural biotechnology. The Macquarie Franklin report found:

- The non-GM canola seed industry was the only industry in Tasmania at the time that had achieved tangible (quantifiable) benefits from Tasmania's GMO-free moratorium. This is, however, more than offset by the inability to be able to grow GM canola.
- The market disadvantage created by Tasmania's GMO-free status is currently producing a net loss of around $4 million per annum at the farm gate. This represents $56 million of lost opportunity over the last 14 years.
- The ability to supply non-GM canola to Japan has been reported as one of the major benefits of Tasmania's GMO-free status. However, other Australian regions where GM and non-GM crops coexist also supply this niche segment of the market. It was also found that this market was small and sporadic in nature.
- Price premiums in world canola for non-GM canola are either small or non-existent.
- Less than 5 per cent of the food and agricultural sector use Tasmania's GMO-free status to support their brand image and there is no evidence to suggest they derive a tangible benefit from so doing.
- The current market advantage that can be gained from the specific promotion of Tasmania's GMO-free status is likely to be very limited.

The consultant's report also assessed the impact of the Tasmanian moratorium against the four goals of Tasmania's Economic Development Plan. Maintaining the GMO moratorium in Tasmania is inconsistent with both the state's clean and green image, and economic development goals. The authors found:

Goal 1 - To support and grow businesses in Tasmania

Except for the canola industry, Tasmania's GMO-free status has had little impact on the growth of businesses in Tasmania to date. While there are several companies that have increased business in Tasmania utilising the GMO moratorium to grow and sell non-GM products, the loss to other companies from losing a GM canola seed business has had a greater negative impact on business in Tasmania.

Goal 2 - To maximise Tasmania's economic potential in key sectors

The sectors of the food industry in Tasmania currently identified for significant growth are dairy, salmon and soft fruit. None of these derive benefit from Tasmania's GMO-free status. The competitiveness of Tasmanian milk production may be negatively impacted by Tasmanian dairy

4 Macquarie Franklin 2012, *Op. Cit*.

farmers' inability to grow improved pasture species or grains. The capacity for industry to meet forecast milk demand would therefore be reduced.

Goal 3 - To improve the social and environmental sustainability of the economy

The GMO moratorium has not to date had a significant impact on agriculture in Tasmania so it has had little ability to improve either social or environmental sustainability of the economy.

Goal 4 - To support and grow communities within regions

Agriculture and food processing are two of the largest employment sectors in rural and regional communities across Tasmania. Growth in these sectors contributes greatly to growth in regional communities. The GMO moratorium has not impacted greatly on communities in regional Tasmania to date.

The report found that over 80 per cent of food products originating in Tasmania are sold within Australia, a market that is not focused on GMO issues. An increase in marketing of the GMO moratorium to the Australian market will not achieve growth in the agricultural and food sectors that support growth in communities and regions.

The findings of the Macquarie Franklin report clearly and unequivocally demonstrate that having a GMO moratorium is completely inappropriate for Tasmania. Tasmania's GMO moratorium has stifled Tasmanian RD&E into agricultural biotechnology to the extent whereby it is the only state in all of Australia in which no GM crop field trials are being undertaken. Tasmania is no longer only at risk if becoming an agricultural RD&E museum; Tasmania **is** an agricultural RD&E museum.

To grow Tasmanian agricultural RD&E, the State Government needs to immediately repeal the *Genetically Modified Organisms Control Act 2004* (Tas). Repealing the Tasmanian GMO moratorium will clear the way for investment in RD&E of new agricultural biotechnologies in the state and send the right message to Tasmania's trading partners that Tasmania is 'open for business'. Currently, investors in agricultural biotechnology RD&E do not even give Tasmania a backwards glance as they invest their RD&E dollars in the progressive regulatory environments of mainland Australia.

3 ARE THERE NEW OR EMERGING OPPORTUNITIES IN AGRICULTURAL RD&E THAT COULD BENEFIT TASMANIA'S PRIMARY INDUSTRIES?

As a direct result of the GMO moratorium, Tasmania has missed out on 14 years of opportunity to maximise the benefits of agricultural RD&E in the state.

GM crops have been widely grown in Australia and around the world for more than 20 years[5]. During this period, the technology has provided significant economic, agronomic and environmental benefits to Australian farmers and citizens, excluding those in Tasmania.

Australian cotton and canola farmers have gained $1.37 billion worth of extra income and produced an additional 226,000 tonnes of canola that would otherwise not have been produced if conventional technology had been used. Tasmanian farmers have missed out on their share of these economic and agronomic benefits[6].

This technology has enabled Australian farmers to reduce their use of insecticides and herbicides by 22 million kilograms of active ingredient, equal to a 26 per cent improvement in the environmental impact associated with pesticide use in these two crops. Tasmanian farmers have missed out on these environmental benefits[7].

Improving the sustainable use of pesticides on GM crops has also resulted in a saving of nearly 27 million litres of fuel use and 71.5 million kilograms less carbon dioxide being released in the atmosphere. Tasmanian farmers have also been denied these environmental benefits[8].

The most appropriate current GM crop suited to Tasmanian farming systems is GM herbicide tolerant canola. Tasmanian growers are already growing non-GM herbicide tolerant canola varieties (such as Triazine Tolerant and Clearfield) and the addition of GM varieties will simply be an extra tool in their weed control toolbox. Australia's Gene Technology Regulator has concluded that approved GM herbicide tolerant canola varieties pose no greater risks to human health or the environment than their conventionally bred herbicide tolerant counterparts.

The agronomic benefits of GM (when compared to non-GM) herbicide tolerant canola include increasing the options for in-crop weed control, allowing herbicide rotations that address the risk of herbicide resistant weeds developing and increasing the yield in subsequent cereal crops, which could be adversely affected by herbicide carry over from the herbicides used in non-GM herbicide tolerant crops (triazines and imidazolinones).

5 Brookes G (2016) Adoption and Impact of GM crops in Australia: 20 years' experience. Report prepared for CropLife Australia Ltd, Canberra, May.

6 Brookes G (2016) *Ibid.*

7 Brookes G (2016) *Ibid.*

8 Brookes G (2016) *Ibid.*

The control of insect pests and weeds is a significant cost for Tasmanian farmers. While insect resistant GM cotton is not suitable for Tasmania, GM herbicide tolerant canola is a new tool that Tasmanian farmers could use as part of an Integrated Weed Management program to improve the sustainability of weed control options in Tasmania.

GM crops currently under research and development in Australia will help Tasmanian farmers to combat environmental stresses such as drought, acid soils and salinity, which are being caused by changes in climatic conditions and previous non-sustainable farming practices. There is also considerable Australian research into GM traits that will bring health benefits to Tasmanian consumers, such as healthier starches and cooking oils modified to be lower in saturated fats and with improved cooking qualities.

4 WHAT IMPACT HAS TASMANIAN GOVERNMENT POLICY HAD ON AGRICULTURAL RD&E?

Commercial production of transgenic crops is only authorised when environmental and consumer safety has been thoroughly demonstrated. In Australia, The Gene Technology Regulator is responsible for approving any dealings with GMOs. Food Standards Australia New Zealand (FSANZ) is required to approve any GM food ingredient and the Australian Pesticides and Veterinary Medicines Authority (APVMA) regulates those GM crops with inbuilt pest protection. The GM canola and GM cotton crops that are grown commercially in Australia have passed these regulatory assessments.

The *Gene Technology Act 2000* (Cth) was intended to establish a national system of regulating GMOs. Despite this intention, most states implemented legislation to address 'marketing concerns' that are neither consistent nor transparent. This unclear path to market was well demonstrated in 2003 when the Office of the Gene Technology Regulator approved GM canola for commercial release and all the canola growing states implemented politically motivated moratoria on commercial cultivation of this crop. This led to years of delays, which reduced the management options for Australian farmers and created real uncertainty about the future of GM crops in Australia. State bans also cost food producers and consumers, with one analysis concluding that nationally, the bans on GM canola cultivation cost $157 million per annum[9].

The Tasmanian Government has maintained a moratorium on commercial release of genetically modified organisms to the environment since 2001. Tasmania introduced the *Genetically Modified Organisms Control Act* 2004 (Tas) to provide for the whole or any part of Tasmania to be declared a genetically modified organism free area for marketing purposes. Despite subsequent reviews, this intervention means that there remains no clear path to market for the developers of GM crops in Tasmania, even when licence applicants have satisfied the requirements of the Commonwealth *Gene Technology Act 2000* and it has been clearly demonstrated in other states that effects on trade are not only negligible, but in fact non-existent.

In Australia, GM crops are intensively studied and rigorously regulated. All regulation should be commensurate with the associated risk, cost and benefit to the community. CropLife supports the continued use of science-based risk assessment as the basis for sensible decision making. It is a key principle of good governance that governments should only intervene in a market where there is demonstrated market failure. State government moratoria on commercial production of GM crops, however, have never identified any such failings.

The regulation of GM crops by state governments creates uncertainty that acts as a major disincentive for private investment and as a brake on technological innovation in the sector. This uncertainty is exacerbated by the fact that the moratorium legislation is often written so that it prevents the Minister from granting a licence unless certain conditions are met. It does not,

9 Norton R.M., Roush, R.T., (2007) Canola and Australian Farming Systems 2003-2007.

however, compel the Minister to grant a licence if an application meets these same conditions. Thus, there remains a very real possibility that a company would invest significantly in bringing a technology to market in Australia with data to address all the federal and state regulations and still be unable to sell its product commercially.

This sort of significant disincentive to private investment in Australian agricultural biotechnology RD&E is counter-productive if Tasmania and indeed the rest of the nation, wishes to have a modern, sustainable and profitable agriculture sector in the future. Perhaps ironically, this situation is also a large threat to the otherwise highly successful public investments by some state governments in developing GM crops.

The failure to implement a consistent national regulatory scheme has created crippling uncertainty for the agricultural biotechnology RD&E sector in Tasmania and completely undermined the effective regulation of GM crops. Both issues need to be addressed if Tasmanian agricultural RD&E is to return productivity and profitability growth to Tasmanian agriculture.

The Parliament of Tasmania should recognise that evidence to date has demonstrated that GM crops do not pose any unique risks to human health and the environment, nor to trade and marketing of Tasmania's primary produce, and consequently the Tasmanian moratorium on these crops is not commensurate with the risk, but is a major barrier to private sector investment in agricultural RD&E.

5 CONCLUSION

Maintaining the productivity, profitability and innovativeness of agricultural production systems by increasing investment in agricultural RD&E will not be achieved by limiting the options for farmers to manage their businesses. Each individual farm faces specific challenges in terms of climate, soil type, farming system, demography and economy. These circumstances all have an impact upon the choices available to farmers to manage their farms. For example, the challenges faced by a wine grape grower in the Tamar Valley will be different to a broadacre grains farmer in another part of the state.

There is a wide variety of farming systems and circumstances throughout Tasmania. Well targeted investment in agricultural RD&E will enable farmers to make management choices and decisions that best suit their individual circumstances. For some farmers, this may mean adopting organic production systems to leverage high-value specialty markets. For other farmers, this may mean adopting innovative new agricultural chemical products or genetically modified crops for agronomic and environmental purposes. Coexistence of different farming systems is the key.

Ultimately, it is farmers that best understand the pressures faced by a farm. Regulatory RD&E policy in Tasmania to support productive, profitable and innovative agriculture must continue to allow farmers to make decisions in the best interests of their own business. This will mean allowing farmers to adopt any one of a range of farming systems, or a combination of them.

Over 14 years, there has been no evidence that the Tasmanian GMO moratorium has caused anything but a trade and marketing disadvantage to the state. Tasmania's primary production sector is being significantly disadvantaged through the denial of access to the newest and most innovative agricultural technologies. Technologies that not only could help the profitability of Tasmanian farmers but also allow them to farm more sustainably, which in turn would only enhance Tasmania's 'clean and green' marketing profile.

The evidence of the benefit of GM crops is both overwhelming and indisputable. It demonstrates that GM crops could offer all the agronomic, economic, environmental, social, trade and marketing benefits that are sought by Tasmanian primary producers.

CropLife strongly recommends that the Tasmanian *Genetically Modified Organisms Control Act 2004* be repealed as a matter of urgency. Fourteen years of evidence shows that the moratorium has only managed to hurt the state's economy and has failed to give local growers a demonstrable advantage in domestic and global markets. Furthermore, there is no evidence to suggest that this ongoing economic loss is likely to change were the GMO moratorium to be maintained indefinitely.

It is time for the Tasmanian Government to put science first and recognise the unequivocal benefits that GM crops are bringing to farmers in New South Wales, Queensland, Victoria and Western Australia, that are being denied to Tasmanian growers, not because of science-based facts and evidence, but because of partisan politics and an outdated view of 'Brand Tasmania'.