

Submission to the Inquiry into Mechanisms for Compensation for Economic Loss to Farmers in Western Australia caused by Contamination by Genetically Modified Material.

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Submission date: 16th February 2018

This is not a confidential submission.

Executive Summary

This submission addresses issues relating to the Inquiry's specified subject of the Inquiry being undertaken by the Environment and Public Affairs Committee: Mechanisms for Compensation for Economic Loss to Farmers in Western Australia caused by Contamination by Genetically Modified Material.

The Greens (WA) support a resilient agricultural sector and support farmers to remain on the land and earn a healthy return on their produce. Our 2017 Agriculture policy states that

Western Australia's rural communities are essential to our food security, economy and cultural identity. The Greens (WA) recognise the important role farmers play and also recognise that many farmers and pastoralists are practising sustainable farming. However, more needs to be done to support their work (2017b).

I support the substance of *Petition No. 010 Petition to compensate GM-free farmers if economically affected by GM contamination*, and would endorse legislation that successfully reflects the substance of its recommendations.

Recommendations

- 1) Develop legislation that reflects the substance of the argument and recommendations of **Petition No. 010: *Petition to compensate GM-free farmers if economically affected by GM contamination***, as outlined in this submission.
- 2) Note that in relation to accepted levels of tolerance of GM contamination in international markets such as the EU, the 0.9% labelling *threshold does not refer to an overall tolerance level of on-farm contamination, but to the adventitious and technically unavoidable presence of*

GMOs. In other words, 0.9% adventitious tolerance may not be applicable when poor management practices that are technically avoidable lead to GM contamination. This point is likely to be the subject of intense debate in courts of law, and means that a tolerance level of 0.9% cannot be assumed to apply. Furthermore, the FAO notes that ‘there is no international agreement defining or quantifying "low level" (of contamination), therefore the interpretation varies from country to country. In many countries it is interpreted as any level at which detection is possible. Western Australian farmers must be able to guarantee 0% GM contamination of their produce.

- 3) Consider the merits of broader **package of measures** that covers GM-free (and possibly all farmers) from financial losses due to others’ mismanagement, and preferably helps to avoid them in the first place. This could include alternative dispute resolution and insurance. It could also be extended to cover the financial impacts on farmers of climate change and other environment stresses.
 - a) **Alternative dispute resolution (ADR)** is a way of resolving civil disputes without having to have a trial in court. A specialist farmer ADR service could be a very useful service, with or without the other measures discussed in this submission, for farming communities where GM and non-GM crops are grown.
 - b) **Insurance:** Support for farmers to take up insurance against losses specifically due to GM contamination could be considered as a complement to farmer compensation legislation, or an expansion of Multi-peril insurance to include financial loss caused by GM incursion (in addition to climate change and other environmental impacts). Insurance on its own would be an insufficient safeguard but it may have a place in a suite of approaches.
- 4) Undertake **participatory democracy process** to determine policy around GM crops and sustainable agriculture more generally. This should involve a demographically representative cross-section of Western Australian citizens and relevant stakeholders in an informed deliberation, since this is such an important, contentious issue of importance to the community.

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1. Introduction

The Greens (WA) argue that genetic engineering offers the potential for enormous good. For instance, the Greens (WA) support human biomedical genetic engineering research that is conducted in accordance with scientific principles and appropriate ethical principles¹. However genetic engineering also carries the risk of enormous harm and therefore should be treated with caution. The Greens (WA) argue that the Precautionary Principle² should be applied to the production and use of Genetically Modified Organisms (GMOs), and that there should be no adverse impact on non-GE producers or consumers resulting from the use or consumption of GMOs.

The Greens (WA) oppose transgenic and animal genetic engineering and the release into the environment of genetically engineered micro-organisms, since the genetic engineering industry has failed to demonstrate that it is operating safely and ethically in these areas.

However, notwithstanding the Greens (WA) overarching policy position, discussion of which is beyond the scope of this paper, this submission addresses the need for a mechanism to compensate farmers who suffer financial loss due to GM contamination³. This submission makes recommendations for consideration that relate to protecting and enhancing growers' democratic right to farm in Western Australia in relation to GM contamination, and possibly more broadly⁴. This is particularly important since most farmers in Western Australia are GM-free, including conventional and organic farmers.

2. Background

The Greens (WA) GM policy (Greens WA 2017a) states that protections against adverse impacts of genetic engineering are needed that are properly monitored and any breaches prosecuted with appropriate and effective penalties. Mechanisms for compensation for economic loss to farmers should also be considered, and support for this proposal was indicated in Petition No. 010, *Petition to compensate GM-free farmers if economically affected by GM contamination* that I tabled in 2017.

The petition called attention to the majority of WA farmers who do not grow genetically modified (GM) crops and are currently vulnerable to significant economic loss should their crops be contaminated by GM material. It called for the WA Government to introduce Farmer Protection Legislation to compensate any non-GM farmer who suffers economic loss from GM contamination. This is necessary because, as the Department of Agriculture and Food WA (DAFWA – now in the

¹ Biotechnology's potential usefulness extends beyond genetic modification applications. In 2003, the then head of FAO's agriculture department argued that "Perhaps the greatest potential of biotechnologies does not come from genetically modified organisms (GMOs), but from genetic markers, genomics and proteomics which can complement conventional breeding strategies and enhance their efficiency (see <http://www.fao.org/english/newsroom/news/2003/13960-en.html> for more information).

² The precautionary principle...has four central components: taking preventive action in the face of uncertainty; shifting the burden of proof to the proponents of an activity; exploring a wide range of alternatives to possibly harmful actions; and increasing public participation in decision making (Kreibel et al. 2001).

³ The term "contamination" will need careful definition if it is included in any legislation. For instance, in the well-known Marsh-Baxter case, Justice Martin found no definition of the term "contamination" in the relevant organic standards and no authority to decertify anything other than a specific product or by-product.

⁴ "Right to farm" legislation exists in other jurisdictions such as NSW (see NSW DPI 2015 for example). While the general principle of democratic fairness and freedom of choice inherent in such legislation is appealing, it may have to be defined specifically to suit Western Australian context, and may not be directly transferrable without adaptation.

Department of Primary Industries and Regional Development) themselves acknowledged ‘...it is possible to have processes in place to minimise these events, (however) **it is not possible to eliminate them**’ (emphasis added) (DAFWA, 2015). Furthermore, the Gene Technology Act 2000 predominantly considers environmental, and health and safety issues. It does not consider the economic losses farmers may suffer due to GM contamination.

DAFWA advocates the coexistence of different production systems through mutual tolerance and states that this is everyone’s responsibility:

Western Australian growers have the choice to use a wide range of production systems to generate products that meet their customer specifications. To support coexistence, growers need to consider their system and implement risk management strategies to minimise any potential negative impacts to other growers (DAFWA, 2015).

DAFWA notes that ‘Certified organic, biodynamic, non-GM and GM production systems all have specific requirements...To assist in managing various systems that may be within close proximity, growers should discuss individual production system requirements with their neighbours’. The State Government provides a proforma coexistence letter that farmers can use to help them initiate a discussion with their neighbours (DAFWA, 2015).

However, while DAFWA’s recommendations for neighbours to cooperatively manage different production systems are sensible as far as they go, farmers are not required to follow them and they cannot be enforced (DAFWA, 2015). Anecdotally, farmers have told me that many of them are unwilling to “rock the boat” by pursuing such negotiations, or to complain to a neighbouring GM farmer about GM plants encroaching on their land. Many do not feel comfortable about speaking out about their concerns about GM crops. DAFWA’s approach does not resolve these problems. GM-free farmers are left with no alternative but to turn to common law to resolve insoluble disputes, or to suffer financial losses in silence. This lack of open dialogue within farming communities also suggests the need for participatory democracy processes in which all farmers have an equal chance to contribute.

2.1. Common law?

The court case involving Kojonup farmers Steve Marsh and Michael Baxter, in which it was decided that a farmer (Michael Baxter) growing a genetically modified crop was not liable for economic loss suffered by his neighbour’s loss of organic certification when “GM” seeds escaped and established on his neighbour’s (Steve Marsh’s) farm’ (Lala and Marx, 2015), demonstrates the need for dispute resolution to avoid expensive legal cases, and for a mechanism that helps to avoid dispute in the first place. Steve Marsh sought \$80,000 in compensation for lost income.

Various lawyers have analysed the Marsh-Baxter case, since it was novel and significant, and note the difficulty in using common law to deal with these sorts of disputes. For instance, one law firm noted that ‘The case highlights the difficulties faced by claimants in recovering damages for pure economic loss in this complex area of tort law’ (emphasis added) (Lala and Marx, 2015). This law firm explains that:

Negligence claims for pure economic loss are treated differently to other negligence claims in Australian law. Courts have been generally reluctant to expand the scope of a duty of care in the absence of property damage or physical loss for fear of exposing defendants to indeterminate liability.

Analysis of whether a defendant owes a duty to avoid causing pure economic loss is not straightforward. Outside the established categories where relief has been allowed there is no

“test” or general principle for determining the question of duty in novel cases. The inquiry as to whether a duty of care owes to protect against pure economic loss usually considers foreseeability of harm, the “salient features” of the relationship between the parties, and vulnerability. While this case largely turns on its facts, the approach of the majority is consistent with the leading authorities in the area and illustrates that recovery of damages in negligence for pure economic loss remains a challenge for claimants (emphasis added) (Lala and Marx, 2015).

The legal, emotional and financial damage of common law court cases can be severe for all parties involved, and detrimental to the rural communities they live in. It would be preferable to develop policy and legislation that enabled members of farming communities to work together to solve issues rather than be forced to endure divisive litigation.

2.2. GM use in Western Australia

Currently, WA farmers can grow genetically modified (GM) canola. Following the repeal of the *Genetically Modified Crops Free Areas Act 2003* in 2016, WA growers can now grow Gene Technology Regulator licenced commercial GM crop varieties without the need for a WA exemption order (DPIRD 2017a). Cotton and canola are the only GM crops grown commercially in Western Australia at the moment (DPIRD, 2017b). The majority of Western Australian canola farmers are GM-free, including organic and conventional farmers. In Western Australia in 2015, for example, 337,527 hectares were planted to GM canola, which was 30% of the total area planted to canola (Croplife, 2018).

While the Greens (WA) argue that the *Genetically Modified Crops Free Areas Act 2003* should be reinstated, particularly since it was repealed without due diligence, satisfactory research, without sufficient analysis of the effect on overseas markets, and without involving consumers collaboratively in the decision. It is nonetheless imperative that appropriate protection is provided for GM-free growers as soon as possible, so that they can confidently exercise their democratic right to farm as they see fit.

Weed control

Weed control, and associated production increases and cost reductions, is the main aim cited for using GM crops in WA. However there is concern about the likelihood that GM canola will increase the level of herbicide (specifically glyphosate) tolerance in weeds. In fact, Monsanto’s technology development manager in 2014, Tony May, was quoted as saying ‘Australia’s (slow) uptake was because there was a greater herbicide resistance problem, particularly in Western Australia, so growers made decisions based on agronomic factors’ (Bowling, 2014).

A number of farmers and other concerned citizens have expressed concern about this issue to me. It has happened before in WA, with the chemical Hoegrass in the 1970s, for example: ‘Hoegrass was a rye-grass controller in wheat that was seen as a miracle chemical and was used extensively throughout the agricultural regions. Rye-grass is a very adaptive plant and the annual rye-grass in Western Australia was able to develop a resistance’ (Western Australia, 2016).

GM canola can itself be a weed in the wrong place, threatening native bushland or growing on street verges in local government jurisdictions. A 2016 study conducted by University of Western Australia (UWA) plant biologists Dr Roberto Busi and Professor Stephen Powles investigated GM canola plant survival rates on metropolitan road verges, particularly around grain delivery sites in Forrestfield, WA. The study finds that due to GM canola grain spillages in the area where road verges were maintained using only glyphosate to control weeds, transgenic glyphosate-resistant canola has flourished on the verges (Fulwood, 2016). The study suggests that a herbicide mix must now be used stop the persistence of GM canola growing on verge sides.

As pointed out by The Hon. Darren West MLC (Labor) in 2016, while arguing against the repeal of the Genetically Modified Crops Free Areas Act 2003 (Western Australia, 2016):

Most shipments are in the order of 40 000 to 50 000 tonnes per shipment...the premium and the penalty has been as high as \$78 for non-GM canola. Working on \$78, the highest point that that penalty has been in 2016, on a 50 000-tonne shipment—of which several leave Western Australia—if that shipment contains conventional canola, that has a premium for Western Australia of \$3.9 million and about a \$2.5 million premium at today’s premium or penalty for genetically modified canola, which is \$50 a tonne.

Therefore...every time a shipment leaves Western Australia, it brings considerably less money into the state. It is not produced at a lower cost, and it is not an increase in productivity”. By selling shiploads of cheap grain, we are actually decreasing productivity, not increasing it. It can be argued that in subsequent seasons, better weed control will result in better wheat profitability...but producing shiploads of food at a discount of \$3.9 million per shipload will not increase agricultural productivity.

2.3. Organic Farming

Most GM-free farmers in Western Australia are conventional farmers, however there is a small number of organic farmers who seek access to lucrative markets, and it is vital that their right to do so is protected.

Across Australia “The organics industry is small but growing rapidly: “Despite the fact that the organic industry was ranked the third fastest growing industry in Australia in 2013–14 (IBISWorld, 2014a), and has been reported to have achieved continuous double digit growth in organic sales since 2010, the total organic industry is less than 1% of the conventional food and beverage industry” (see Table 1 below) (O’Mahony and Lobo, 2017).

Table 1
The value chain components of organic versus conventional in 2013-14.

Value Chain	Organic		Conventional		% organic versus conventional
	A\$m	% organic market	A\$m	% conventional market	
Production	570	28%	45,546	27%	0.80%
Processing	1187	60%	100,548	62%	0.80%
Export	340	20%	38,464	21%	1.13%
Import	216	12%	13,327	11%	0.62%
Retail	1355	80%	142,969	79%	1.05%
Industry value	1973	100%	159,421	100%	0.80%
(Production + Processing + Import)					
Industry value	1695	100%	181,433	100%	1.07%
(Export + Retail)					

Source: Organic data obtained in this research and conventional data adapted from DAFF (2013).

The total value of the (Australian) organic industry for the financial year 2013–2014 was estimated to exceed \$ 1.695 bn. In 2014, dairy products had the highest sales reported by the organic value adders (i.e., wholesalers, retailers, manufacturers and processors). This was followed by meat, and then fruit and vegetables (O’Mahony and Lobo, 2017).

This expanding industry must be supported by policy and legislation that rigorously ensures its ability to access international markets, in the context of changing regulations regarding GM food in countries around the world, and the need to be able to supply produce that is guaranteed to be completely free of GM contamination.

2.4. The market drivers – the financial risk of GM contamination

Internationally many countries have bans on growing GM crops, and many also ban GM imports. In 2015 for instance, ‘more than half the 28 countries in the European Union (EU), including Germany and France...decided to ban their farmers from growing genetically modified crops. Several regions, including Northern Ireland, Scotland and Wales...also joined the movement’ (Coghlan, 2015). Arguably, the decision had ‘little impact on farmers on a practical level because there has long been a de facto ban on growing GM crops in most of the countries that are opting out’ (Coghlan, 2015).

The European Union

has in place a comprehensive and strict legal regime on genetically modified organisms (GMOs), food and feed made from GMOs, and food/feed consisting or containing GMOs. The EU's legislation and policy on GMOs, based on the precautionary principle enshrined in EU and international legislation, is designed to prevent any adverse effects on the environment and the health and safety of humans and animals, and it reflects concerns expressed by skeptical consumers, farmers, and environmentalists (Library of Congress, 2015).

The fact that many countries have a ban on growing GM crops and many have a ban on importing GM produce, means that Australian farmers must be able to reliably supply GM-free to those markets, in order to secure a premium price for GM-free produce. It is essential that Western Australia has the capacity to guarantee 0% GM contamination of GM-free produce in order to be able to access international markets, and respond to changing market opportunities. This is simply good business sense.

A ban on GM would guarantee this. In South Australia, of course, the Greens secured securing legislation to extend the moratorium on growing genetically modified crops until September 2025. The ban had been due to expire on September 1, 2019. South Australian Greens leader Mark Parnell explained that ‘there are a lot of farmers in South Australia who are nervous about the (GM) technology, and what the marketing evidence shows is that there is a price premium for not growing GM crops’ (Neindorf and McCarthy, 2017a).

However in the absence of a ban, a package of measures - with a farmer protection fund as a centrepiece - should be developed to ensure that Western Australia can reliably supply GM-free produce to global markets, and has a reputation for being able to do so. Reputation counts in the market.

2.4.1. Adventitious tolerance

In Western Australia there has been some debate about the internationally acceptable level of tolerance for adventitious presence of GMOs in food and feed. This key point about tolerance needs clarification. A figure of 0.9% is often cited as the accepted level of tolerance for GMO contamination, however, the ‘0.9% labelling threshold does not refer to an overall tolerance level of on-farm contamination, but to the adventitious and technically unavoidable presence of GMOs’ (emphasis added):

When GMOs are found in minute amounts in conventional food due to their adventitious or technically unavoidable presence during cultivation, harvest, or transport, the food is not subject to labelling provided that the amount present is less than 0.9%.

The traceability or labelling requirements do not apply when there are traces of GMOs of no higher than 0.9%, and the traces of GMOs are “adventitious or technically unavoidable” (Papademetriou, 2014, n.p.).

In other words, 0.9% adventitious tolerance may not be applicable when poor management practices that are technically avoidable lead to GM contamination. This point is likely to be the subject of intense debate in courts of law, and means that it cannot be assumed that the tolerance level of 0.9% inevitably applies in Europe, for example.

Furthermore, a NASAA representative explained to me that although European Organic Regulations permit 0.9% adventitious tolerance before labelling is required, many member states stipulate 0% adventitious tolerance and will not accept produce that has any contamination at all. Effectively, therefore, WA growers must be able to achieve 0% adventitious tolerance if they are to be guaranteed access to lucrative European (and other) markets.

Internationally, there is no commonly accepted level of GM contamination. A survey run by the Food and Agriculture Organization of the United Nations (FAO 2014) showed that ‘25 countries blocked imports after finding traces of GMOs’. Importantly, the FAO notes that ‘there is no international agreement defining or quantifying “low level” (of contamination), therefore the interpretation varies from country to country. In many countries it is interpreted as any level at which detection is possible i.e. very low trace levels while in other countries case-by-case decisions are taken on what level is acceptable’.

This suggests the need for the Western Australian Government to provide policy and legislation that enables GM-free farmers to achieve 0% GM contamination.

2.4.2. Consumer preference

Studies show that farmers can obtain a premium for growing GM-free crops, including conventionally grown and organic crops, because of the level of consumer preference for GM-free food. In 2017, market researchers asked 23,000 consumers online in 17 countries how important certain factors are to them when deciding what to eat or drink. Nearly half of consumers rate “low sugar or sugar-free” and “free from GMO ingredients” as very or extremely important, when deciding what to eat or drink (GfK, 2017).

Research from the University of South Australia shows that China, one of our biggest markets, has a fragmented but rapidly growing market for ‘naturally healthy’ food, including GM-free food, and sees an opportunity over the long term for Australia to position itself as a provider of safe food (University of Adelaide Centre for Global Food and Resources Research, 2016). Professor Alice Woodhead, an expert in value adding in food supply chains, argues that ‘the Australian grains industry will have to factor in different attitudes towards genetically modified crops in different export destinations’ (Heard, 2017). The research Professor Woodhead co-authored showed that in 2002, 73-80% of consumers in Beijing indicated good support for GM food, but by 2006, the situation had changed to the point that 60% of customers were neutral or unwilling to buy GM food (Heard, 2017).

University of Adelaide research showed that consumer attitudes to genetically modified foods are complex and dependent on a combination of factors that include: 1) level of knowledge about GMOs, 2) perceptions of the inherent risks and benefits of GM foods, 3) trust in governing bodies

that approve GM foods, and 4) consumers' attitudes towards food as part of their overall health regime (University of Adelaide Centre for Global Food and Resources Research, 2016).

Consumers have good reason to avoid risks associated with GM food, and elect to buy organic or conventionally farmed GM-free food. GM foods have been found to have adverse health effects on its consumers in a number of international studies, while organic foods have been found to have lower levels of pesticide residues and better nutrition value. For example:

- A review published in the *Journal of Food Science and Technology* found various cases of GM foods causing the transfer of antibiotic resistance, toxicity, and allergenicity (Bawa and Anilakumar, 2013).
- A study published in the *Journal of Organic Systems* examined various United States government databases and found significant correlations between the increasing use of glyphosate, GM crop growth and a strong increase of 22 diseases (Swanson et al., 2014).
- A study published by the *British Journal of Nutrition* found that organically grown crops have 48% lower levels of cadmium, which is a heavy metal known to cause common cancers and other health disorders, and a lower incidence of pesticide residues than the non-organic comparators across regions and production seasons. This research also found that organic foods are more nutritious since they contain 17% more key antioxidants and a higher percentage of essential vitamins and minerals (McCarty and DiNicolantonio, 2014).
- A study undertaken at King's College London on the composition of a genetically modified Roundup-resistant GMO corn variety, NK60, revealed that 'the GM transformation process results in profound compositional differences in NK603, demonstrating that this *GMO corn is not substantially equivalent to its non-GMO counterpart*' (emphasis added). The marked increase in putrescine and especially cadaverine is a concern since these substances are potentially toxic, being reported as enhancers of the effects of histamine, thus heightening allergic reactions and both have been implicated in the formation of carcinogenic nitrosamines with nitrite in meat products. Our results call for a more thorough evaluation of the safety of NK603 corn consumption on a long-term basis⁵ (Mesagne et al., 2016).

Therefore, it cannot be assumed that the proportion of consumers who avoid purchasing GM food will decrease in the near future – it may well increase.

Of course, markets can change and premiums cannot be guaranteed. There has recently been debate in the media about the level and consistency of premiums gained by South Australian GM-free canola growers, for instance (Neindorf and McCarthy, 2017b). However market variability simply reinforces the need to ensure protection of growers' right to farm, so that they can respond

⁵ In-depth analysis of types of proteins ("proteomics") and small biochemical molecules ("metabolomics") revealed major compositional differences between NK603 and its non-GMO parent. Recent technologies used to ascertain the molecular compositional profile of a system, such as transcriptomics, proteomics, metabolomics, epigenomics and mirnomics, collectively referred to as "omics technologies", are used extensively in basic and applied science. The results obtained show not only disturbances in energy utilisation and oxidative stress (damage to cells and tissues by reactive oxygen), but worryingly large increases in certain substances (polyamines). Polyamines found to be present in increased amounts in GMO NK603 corn include putrescine and cadaverine, which can produce various toxic effects. For example, they enhance the effects of histamine, thus heightening allergic reactions and both have been implicated in the formation of carcinogenic substances called nitrosamines. Overall, the findings of this study disprove industry and regulatory agency claims that NK603 is "substantially equivalent" to its non-GMO counterpart and suggest that a more thorough evaluation of the safety of consuming products derived from this GMO corn on a long term basis should be undertaken (Mesagne et al., 2016).

to market forces adequately and without being hampered by mismanagement beyond their control. When the prospect of premiums for GM-free food is high, farmers must be able to grow GM-free crops and sell to a global market in which buyers have confidence in Australia's capacity to reliably supply GM-free produce. The market risks of failing to do this are high:

Globally, the increased production of genetically modified crops...has led to a higher number of incidents of low levels of GMOs being detected in traded food and feed.

The incidents have led to trade disruptions between countries with shipments of grain, cereal and other crops being blocked by importing countries and destroyed or returned to the country of origin.

The trace amounts of GM crops become mixed with non-GM food and feed crops by accident during field production (for example, a field trial of a GM crop grown near a field of a non-GM crop), processing, packing, storage and transportation (FAO, 2014).

3. Mechanisms to protect farmers' rights

Ideally, policy and regulatory settings would minimise the need for litigation and simultaneously strengthen rural communities and enhance the resilience of the agro-ecological system (both of which are linked: see for example UNEP 2013).

It is extremely important that any mechanism intended to protect farmers' rights in Western Australia should pay due regard to the resilience of rural communities, the rapid development of biotechnology and science, and the importance of maintaining and enhancing the relationships between people in those communities. It should protect and enhance community relationships, through better mediation, conflict resolution and understanding of issues that underpin the right to farm. A number of possible mechanisms to protect and support farmers' rights are briefly described below.

3.1. Binding agreements

As noted, the State Government provides advice about how farmers growing GM and GM-free crops can co-exist and can create agreements. No legislation exists to ensure that such agreements are enforceable.

One possible option for reducing the scope for disputes between neighbouring farmers is legislation to make such agreements binding. There would need to be safeguards such as ensuring the parties have opportunity for independent legal advice before choosing to sign. Consideration would need to be given to the circumstances in which such agreements could be set aside, terminated or varied. The process for enforcement would also need to be considered, including what remedies (eg compensation, specific performance) would be available in the event of breach.

The concept of binding agreements already exists in this State, for example Binding Financial Agreements between couples intending to live together or marry. While context is obviously very different, the purpose of providing an alternative to court proceedings for parties who are not strangers is the same.

3.2. Compensation for GM-free farmers if economically affected by GM contamination

As a minimum, the Western Australian Government should introduce Farmer Protection Legislation to compensate any non-GM farmer who suffers economic loss from GM contamination. As explained, it is not possible to eliminate instances of GM contamination (DAFWA, 2015), and the use of common law is not an appropriate mechanism to deal with disputes about economic loss, since claimants face enormous difficulties in recovering damages for pure economic loss in the complex

area of tort law' and recovery of damages in negligence for pure economic loss remains a challenge for claimants (Lala and Marx, 2015).

I have received over 600 responses to an online petition about the Inquiry into Farmer Protection Legislation. The petition congratulates the Government for undertaking the inquiry and states:

It is vital that we aim at gaining legal recourse and compensation for all GM-Free Farmers economically disadvantaged by GM contamination in Western Australia.

GM crops are inherently risky to grow and control, segregation is impossible and contamination is inevitable. The burden for preventing contamination by genetically modified organisms falls solely upon GM-Free farmers to keep GMOs out of their paddocks, instead of GM farmers choosing genetically modified crops to keeping their GMOs in their paddocks.

We ask you to consider introducing Farmer Protection Legislation to ensure that GM-Free farmers can continue to grow the food that we want, without financial burden from GM contamination.

A farmer protection fund could provide a mechanism to mitigate the risks that farmers inevitably face where production systems coexist. This could ensure that farmers' livelihoods are not compromised by unfair risks that are beyond their control and increase consumer confidence in Western Australian produce. Of course, the policy detail would have to be developed cooperatively with stakeholders, but it could provide increased certainty to all Western Australian farmers if done well.

Various funding mechanisms have been suggested. In South Australia, the Greens have previously proposed the creation of a Farmer Protection Fund through imposing a levy of \$1 per kilogram on all GM seed sales. The fund would automatically pay out GM affected landholders for proven economic loss, extra costs or harm (Parnell 2014).

3.2.1. Principles for Farmer Protection Legislation

The Principles for Farmer Protection Legislation proposed by the petitioners are outlined below.

Objectives

- A Bill to establish a publicly managed fund, paid into by GM seed merchants, in order to compensate non-GM land holders for contamination by GM seed or other GM material.
- To strengthen the protection of non-genetically modified landholders (both organic and conventional, and including public land) from all forms of contamination by genetically modified organisms (GMOs).
- To strengthen monitoring and detection mechanisms in order to detect contamination early and reduce compensation costs.
- This includes, but is not limited to, making the existing guidelines mandatory.

Rationale

The Farmer Protection Legislation will replace sole reliance on common law remedies by:

- Establishing a Fund to allow simple and efficient compensation for losses suffered by non-GM landholders whose land is contaminated by GM crops, seed or other GM material;
- Making GM seed merchants responsible to compensate landholders when GM contamination occurs, by requiring GM seed merchants to pay a levy on seed sales into the Fund;

- Entitling farmers and other affected parties to rapidly and efficiently recover for any losses, extra costs or harm they suffer, without having to resort to the Common Law.

The Farmer Protection Fund

- The Government will establish a Fund to provide speedy, no-fault compensation in cases of GM contamination for purposes of cleaning up such contamination and compensating for economic loss or other harm;
- The Minister will appoint an independent Administrator to administer the fund;
- The Administrator will have broad investigative powers, including auditing financial records, inspecting properties and recommending enforcement action;
- The Administrator to make recommendations as needed to the Minister regarding any measures he or she believes would reduce the levels of contamination and therefore reduce the amount of the levy;
- The Fund will protect the right of all non-GM landholders to be free of GM contamination, at the limit of detection of the presence of a GM event;
- Non-GM landholders must be able to recover costs and losses related to all manner of contamination by GM seeds and crops, quickly and easily by lodging an application with the Administrator;
- Applicants for compensation funds would have to prove the presence of a GM event on their land or in their seeds or crops and provide a declaration that they did not plant or authorise the planting of the GM seed or crop;
- Funding for the compensation Fund will be annually levied on the GM seed merchants;
- The levy will be assessed per kilo of seed sold;
- All GM seed merchants must submit to the Administrator declarations on the amount of GM seed sold in a financial year, no later than the end of September following;
- The amount of the initial levy will be set in the regulations;
- The Administrator may from time to time recommend changes to the amount of the levy, to the Minister, taking into account the costs of previous GM contamination cases;
- If compensation claims exceed the value of the fund, the Administrator will request from the Minister that the levy in the subsequent year be raised in order to cover the cost of the shortfall;
- The Administrator may seek submissions from third parties regarding compensation and interested parties may appeal decisions under the Judicial Review Act.

Factors to use in determining compensation payments for contamination incidents

The Administrator will pay non-GM landholders compensation for actual economic loss or extra costs which must include:

- costs for detection and identification of GM seeds or plants;
- all GM contamination clean-up costs;
- lost profits;
- lost premiums on non-GM produce;
- reduced property values;
- compensation for time spent dealing with the contamination;
- harm, where harm includes unwanted GM contamination for the full duration of its impacts.

Note: The Administrator will determine an annual calculation for payable losses, extra costs and harm where continuing GM crop contamination occurs.

Definitions

- GM seed merchants - businesses licensed by the GM patent holders for the sale of GM seed, their agents, licensees, subsidiaries or contractors and any other legal entity that deals with the sale or other distribution of GM organisms ('dealing' is defined in the Gene Technology Act 2000).
- Non-GM landholders - any party occupying, owning or caring for land (including local or state government) where no-one intended that GM plants would be grown.
- Non-GM land - any land on which no-one intended to grow GM plants.

No-fault compensation funds in Western Australia

No-fault compensation funds are already recognised in Western Australian law, for example the Suitors Fund. The Suitors' Fund is a special purpose account that reimburses costs to litigants in circumstances specified in the Act, all of which are essentially circumstances where a litigant incurs legal costs through no fault of their own. It is funded from fees paid when proceedings are issued in court. (NB: There have been some issues with the adequacy of that amount that is now being remedied by a Bill currently before Parliament.) The context of the Suitors' Fund is of course very different from a Farmer Protection Fund, but the legislative mechanism offers some guidance as to how a Farmer Protection Fund might possibly operate.

3.3. Other mechanisms to protect GM-free and other farmers

When determining the precise parameters of mechanisms to protect GM-free farmers against financial losses from GM contamination from sources beyond their control, it is worth considering whether a broader approach to farmer protection and compensation might be suitable. A suite of policy and legislative tools could be developed, with the farmer compensation fund as a centrepiece. Tools could include Alternative Dispute Resolution (ADR) services, and multi-peril or other forms of insurance, for example⁶.

This suite of policy and legislative tools could also be expanded to protect all farmers from the impacts of climate change and other environmental stresses, particularly since these are likely to increase, with a corresponding ongoing pressure on governments to provide drought relief. Full consideration of this suggestion is beyond the scope of this submission, but it may be worth considering expanded "right to farm" legislation in future. Anecdotally, the feedback that I have received from various stakeholders, including GM farmers and organic and other GM-free farmers, indicates that this proposal has some merit, but further investigation is required.

As things stand, we could come to consensus about GMOs in Western Australia that everyone could live with, and still not have a sustainable agro-ecological⁷ system. A better systems approach to agriculture and the policy and legislative frameworks that shape it is urgently needed.

⁷ Agroecology is the study of ecological processes applied to agricultural production systems. The prefix agro-refers to agriculture. Bringing ecological principles to bear in agroecosystems can suggest novel management approaches that would not otherwise be considered.

A number of possible mechanisms to protect farmer' rights are briefly described in the sections below. It is not an exhaustive list, and all suggestions would require further investigation.

3.3.1. Farmer Protection Legislation - Strict Liability

Strict liability (whether of the grower, licence holder or patent holder) is another option for dealing with some of the current difficulties associated with litigating these matters in court.

The Australian Greens propose that legal liability for adverse effects arising from planting, harvesting, distribution, sale of GMOs should lie with growers using GMO and licence holders (n.d.).

Strict liability is an existing legal concept that is associated with products and activities that are inherently dangerous to others in some way, such as defective products, certain animals, producing using or disposing of dangerous things like radiation, chemicals or explosives.

Where there is strict liability, the matter is still determinable by a court, but the plaintiff does not have to prove that the defendant did anything careless or culpable. The plaintiff still needs to prove that they have suffered harm which was caused by the defendant's product/activity.

The argument for strict liability to apply to GM is based on the recognition that it is not possible to eliminate GM contamination. The risk of contamination can be minimised but it cannot be removed.

A number of farmers and community members have expressed concern to me about their interpretation of the contracts that growers must sign with Monsanto to grow GM canola. They argue that the implications are that farmers assume all liability for health, environmental or economic risk while Monsanto is exempt, and that the contract clearly states disputes are to be

Strict Liability in Oregon

“Oregon lawmakers are considering a bill that would let farmers sue companies that hold patents on genetically engineered seeds if crops grown from those seeds contaminate traditional or organic crops.

Genetically engineered crops also can escape their fields and become pests that are hard to eradicate – something that’s happened with Scotts’ genetically modified bentgrass, which now threatens Oregon’s billion-dollar grass seed industry.

House Bill 2739 would allow landowners to seek three times actual economic damages if GE organisms are present on their land without permission.

It also would allow individuals to sue the corporations if GE organisms are found on land owned or occupied by a public body, such as a park, in the area where they live.

Opponents of the bill said neighboring farmers should be able to work together voluntarily and collaboratively to solve those problems.

“Co-existence does and has worked in Oregon,” said Scott Dahlman, policy director for Oregonians for Food & Shelter.

Proponents said that doesn’t work when the farm next door is leased to a multinational corporation or farmers are bound by contracts with those corporations” (Loew, 2017).

dealt with by American law, not Australian law. Many of these critics advocate for the application of strict liability.

3.3.2. Alternative dispute resolution

Alternative dispute resolution (ADR) is a way of resolving civil disputes without having to have a trial in court. A specialist farmer ADR service could be a very useful service, with or without the other measures discussed in this submission, for farming communities where GM and non-GM crops are grown.

Negotiation, mediation and arbitration are all forms of ADR. When there is a dispute, ADR can be used by the parties to try and resolve the matter without having to contest it in court. If court proceedings have already been brought, the parties can use ADR to see whether they can settle the matter themselves instead of proceeding to trial and having the court resolve it for them.

ADR can be extremely useful as it is generally quicker, cheaper, less formal and less adversarial than court proceedings. In addition, agreements reached via negotiation or mediation can sometimes contain content reflecting what the parties feel is important in a way that would not be possible if the matter was determined via a trial.

ADR can be particularly useful for resolving disputes between parties who are not strangers and who will have an ongoing relationship of some kind. ADR has therefore long been used in family law

matters. Mediation is commonly used to help estranged parents cooperate in raising their children despite the end of their own relationship. The Federal government funds Family Dispute Resolution services to assist separating families to resolve their differences and focus on their children's needs. Arbitration is sometimes used as a way of resolving family law property and spousal/de facto maintenance matters. ADR has also been used in other kinds of disputes where the parties have an ongoing relationship. The Aboriginal Mediation Service for example addresses inter and intra family feuding matters.

The Magistrates Court, District Court and Supreme Court of Western Australia also all have mediation programs for civil disputes in those courts.

In the South West, the South West Community Legal Centre (formerly the Bunbury Community Legal Centre) is funded by Legal Aid WA to provide a general mediation service for family, neighbourhood, workplace and other civil matters.

Even if ADR does not resolve the whole dispute, it can sometimes reduce the scope of the dispute by resolving part of it.

ADR can fit into the present context in different ways.

The outcome of successful negotiation or mediation is an agreement.

If this happened in a court context, the agreement would probably be converted into consent court orders. This would make it enforceable. As all relevant courts already have mediation services, the main tasks would be to ensure that those services are easily accessible for farmers in rural areas, and that mediators are available who understand farming well enough to be able to help the parties to reach agreement.

Negotiation and mediation can also be used outside the court context, as an option to resolve a dispute and avoid court proceedings being brought. In this situation, there would need to be a way to make the agreement binding and enforceable. The parties would need access to independent legal advice before entering into an agreement and there would need to be a waiver of the non-GM farmer's right to go to court, to avoid multiple proceedings against the GM farmer. As in the case of Binding Agreements above, the question of whether and in what circumstances the agreement could later be set aside (or varied or terminated, if the agreement operates into the future as well as resolving the dispute at hand) would also need to be considered.

The outcome of arbitration is a decision that determines the dispute. Again, this would need to be binding so it could be enforced, and again arbitrators would need to be accessible to farmers in rural areas and would need to understand the farming context. Again too, it would need to be clear that the right to sue in court is waived, to avoid multiple proceedings. Consideration would also need to be given to whether and in what circumstances the arbitrator's decision would be able to be appealed.

In fact, Western Australia has previously had an Agricultural Disputes Board that could have been a useful mechanism for resolving GM disputes between farmers. The Greens opposed the repeal of the Agricultural Disputes Agricultural Practices (Disputes) Act 1995 because they saw the Board's potential in this regard, and as a way to avoid dispute in the first place. During the debate in 2011 the Hon. Giz Watson MLC pointed out that the Hon. Monty House MLA's argued for the Act to be passed in 1995, stating:

To investigate and recommend appropriate action for Western Australia, the Legislative Assembly of this Parliament established a select committee in October 1989. The major function of this committee was to examine a private member's Bill, introduced in that year, as a means of addressing the right to farm issues in this State. In its report, tabled in November 1991, the committee recommended that rural/urban conflict be viewed in two contexts: A need to provide a means of attempting resolution of the conflict itself, and a means of resolving the primary cause of the conflict, considered to be related to land use planning issues (Western Australia, 2011).

In 2010, The Hon. Giz Watson MLC suggested that 'rather than looking at repealing the Agricultural Practices (Disputes) Board, the Parliament should expand its functions to deal with some of the land use conflicts in the South West of the state' (Western Australia, 2011), which could include disputes over GM contamination. The argument is still relevant today.

3.3.4 Insurance

Insurance can possibly play a role as part of a package of measures. I am aware that some GM-free farmers support the use of insurance against GM contamination. Others have expressed concerns about the prospect of having to go through a drawn-out process of making a claim, or that insurance companies are unlikely to pay out for claims relating to GM contamination. Insurance could be cost prohibitive to smaller farming operations. Another suggestion is that all GMO farmers should be required to take out compulsory insurance for against the effect of contamination on non-GMO properties and crops.

An alternative or complementary approach to single issue insurance for GM contamination alone could be an expansion of Multi-peril insurance to include financial loss caused by GM contamination. Multi-Peril Crop Insurance (MPCI) is a risk management tool grain farmers can use to insure their businesses against the risk of possible crop losses and reduced income streams caused by a range of weather events' (Grain Central, 2017). As Keogh explains:

Australia has one of the riskiest environments in the world for farming, and governments and the farm sector have struggled for over one hundred years to develop a sensible set of policy measures that optimise the ability of farmers to manage adverse seasonal conditions. Policy responses have ranged from a 'do nothing' approach in the early years of the previous century (with predictable darwinian impacts on farm businesses and regional communities) to a set of policy measures by the end of the twentieth century that effectively meant governments were constantly handing out money and discouraging farmers from drought preparedness. Unlike international jurisdictions, a viable farm multi-peril insurance market has never developed in Australia, despite or perhaps because Australian climatic conditions are much more variable than is the case in other developed nations.

One suggested approach that appears to have some promise is for the Australian Government to offer a 150% tax deduction on the cost of premiums paid for accredited farm multi-peril insurance policies, supported by an agreement by all state and territory governments to waive stamp duty on such insurance policies. The 150% tax deduction could potentially have a relatively low cost for the national government, as any revenue loss would be offset in drought years through farmers having income (from insurance policy payouts) on which tax would be payable. At the same time, this income would flow through to regional communities, which typically suffer economic downturns as a consequence of serious drought, and hence impose additional social welfare costs on the government. Similarly, state governments are likely to gain some potential benefits (in the form of more stable economic activity in regional communities) which will offset the loss of stamp duty revenue (Keogh, 2017).

To date, Australia has not developed a multi-peril insurance market. Federal and State Governments could both play a role in developing this if it is a suitable option (the Federal Government currently has a Managing Farm Risk Management Program which offers a \$2500 rebate for advice and assessments to help farmers prepare and apply for a new insurance policy) (Grain Central, 2017).

3.3.5 Participatory democracy is needed to develop policy

The diversity of opinion relating to GM policy in general and specific responses such as the use of insurance, suggests that a more collaborative approach to GM policy development and implementation is urgently needed. This should include a demographically representative cross-section of Western Australian citizens and relevant stakeholders who engage in informed and influential deliberations. The use of GMs is an issue of public interest, and is of great concern to many Western Australians for a variety of reasons. This is particularly important given the rapid development of new biotechnology, and the need to ensure that the public can consider its ethical implications so that policy keeps pace with science and technology.

4. Recommendations

1. Develop legislation that reflects the substance of the argument and recommendations of **Petition No. 010: *Petition to compensate GM-free farmers if economically affected by GM contamination***, as outlined in this submission.
2. Note that in relation to accepted levels of tolerance of GM contamination in international markets such as the EU, the 0.9% labelling *threshold does not refer to an overall tolerance level of on-farm contamination, but to the adventitious and technically unavoidable presence of GMOs*. In other words, 0.9% adventitious tolerance may not be applicable when poor management practices that are technically avoidable lead to GM contamination. This point is likely to be the subject of intense debate in courts of law, and means that a tolerance level of 0.9% cannot be assumed to apply. Furthermore, the FAO notes that 'there is no international agreement defining or quantifying "low level" (of contamination), therefore the interpretation varies from country to country. In many countries it is interpreted as any level at which detection is possible. Western Australian farmers must be able to guarantee 0% GM contamination of their produce.
3. Consider the merits of a **package of measures** that covers GM-free farmers (and possibly all farmers) from financial losses due to mismanagement, and preferably helps to avoid disputes completely. This could include alternative dispute resolution and insurance. It could also be extended to cover the financial impacts on farmers of climate change and other environment stresses.
 - 3.1. **Alternative dispute resolution (ADR)** is a way of resolving civil disputes without having to have a trial in court. A specialist farmer ADR service could be a very useful service, with or without the other measures discussed in this submission, for farming communities where GM and non-GM crops are grown.
 - 3.2. **Insurance:** Support for farmers to take up insurance against losses specifically due to GM contamination could be considered as a complement to farmer compensation legislation, or an expansion of Multi-peril insurance to include financial loss caused by GM incursion (in addition to climate change and other environmental impacts). Insurance on its own would be an insufficient safeguard but it may have a place in a suite of approaches.

4. Undertake **participatory democracy process** to determine policy around GM crops and sustainable agriculture more generally. This should involve a demographically representative cross-section of Western Australian citizens and relevant stakeholders in an informed deliberation, since this is such an important, contentious issue of importance to the community.

A handwritten signature in black ink, appearing to be 'Burr', written in a cursive style.

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