



**Submission to Food Standards Australia New Zealand on
Application A1085 for the Inclusion of Lucerne KK179 in
Standard 1.5.2 – Food Derived from Gene Technology**

19 November 2013

ABOUT ORGANIC DAIRY FARMERS AUSTRALIA

Organic Dairy Farmers Australia (ODFA) is a co-operative of dairy farmers who have a commitment to excellence in dairy farming, utilising substantiated and innovative methods that prioritise taste, environmental protection and sustainability.

Founded in 2002, ODFA provides leadership and infrastructure for its organic and biodynamic dairy farmer members. ODFA supplies more than two thirds of all organic milk produced in Australia. In addition to domestic sales, ODFA supplies milk and dairy ingredients to companies overseas, who carry the ODFA logo as a mark of quality and integrity.

All ODFA farmers are certified organic, which means that they are audited and comply with the standards imposed by the National Association for Sustainable Agriculture, Australia (NASAA). No pesticides, chemical fertilisers or genetically modified organisms (GMOs) are used. Instead, cows feed on a diverse mix of herbs and grasses that grow naturally, uncontaminated by chemicals and GMOs. In addition, milking cows are not treated with antibiotics or hormones, but natural medicines. ODFA is committed to the long-term health and sustainability of farmland. ODFA farmers strive to improve their soil, investing heavily in maintaining and developing soil fertility and plant diversity. This commitment is premised on ODFA's conviction that, with better soil health, plants grow better, animals are healthier, food tastes better, and ultimately, people are healthier.

EXECUTIVE SUMMARY

ODFA strongly opposes the inclusion of Lucerne KK179 in *Standard 1.5.2 – Food Derived from Gene Technology* as proposed in Application A1085 (the Application).

ODFA is concerned that the current Australian regulatory structure does not provide adequate risk assessment of the nutritional, biological and ecological safety of genetically modified organisms (GMOs).

ODFA believes that the safeguards available to protect organic and conventional farmers are wholly inadequate in the face of GMO contamination risks. ODFA also believes that the current regulatory system fails to protect consumers' right to choose non-GMO contaminated products.

ODFA believes that the cultivation of GMOs in Australia poses a ruinous risk to the organic industry, consumer choice and potentially to the health and wellbeing of Australians. In addition to this ODFA is gravely concerned about the mounting evidence of volunteer and feral populations of GMOs in countries that have never cultivated GMOs, but merely authorised them for importation (as the Application proposes).

ODFA opposes the Application for the following reasons:

1. The known and unknown risks to human health and safety, including the health of livestock, and the impacts on biological and ecological diversity and environmental health.
2. The serious threat posed to the Australian organic industry and in particular to access to key international export markets.
3. The risks posed to consumers' right to choose GMO-free products, as has eventuated in the United States.
4. The majority of international community does not accept Lucerne KK179 and ODFA considers this dominant position is the relevant international food standard.
5. The costs of allowing the Application significantly outweigh the potential benefits.

For these reasons, ODFA urges FSANZ to reject the Application.

Recommendation: Option 2 – Reject Application

RISKS TO PUBLIC HEALTH & SAFETY

GMOs have created significant controversy since their introduction primarily due to consumer concerns regarding potential health risks of genetic manipulation. The science of GMO safety is unresolved, with no irrefutable science to support the safety of GMOs or to demonstrate health risks of GMOs existing to date. ODFA wishes to emphasise that the absence of evidence is not evidence of absence, as was stated by Administrative Appeals Tribunal when affirming FSANZ's decision to vary *Standard 1.5.1* to include Tonalin CLA.¹ The Tribunal emphasised in that case there was "insufficient evidence to reach an unequivocal conclusion" as to the safety of Tonalin CLA, and ODFA considers that the same is true of Lucerne KK179.

The Application acknowledges that Lucerne cultivated in the United States is subject to restrictions that distinguish between Lucerne grown for animal feed and Lucerne grown for human consumption. The reason for this distinction is because of the potential for chemical residue known or suspected to be unsafe for human consumption. Some of the chemicals used in non-organic Lucerne cultivation include Bifenthrin, a potential carcinogen and endocrine disruptor, Disulfoton, classified as Extremely Hazardous by the World Health Organisation (WHO), Haloxypop, a probable carcinogen classified as Moderately Hazardous by the WHO, and Omethoate, a potential endocrine disruptor classified as Highly Hazardous by the WHO.² ODFA believes that FSANZ erred in failing to address the risks to human health posed by chemical residues in Lucerne KK179.

The Application confirms that Monsanto intends to cross-breed Lucerne KK179 with Lucerne J101 and J163, but has provided no evidence as to the safety or risks of these combined traits. ODFA considers that the relevant international standards, such as those articulated in Regulation (EC) No 1829/2003, require a safety assessment of the combined traits when GM traits are stacked. The best scientific evidence suggests that if GM traits are stacked further agronomic, morphological and compositional studies on the GM stacked event should be completed in order to identify potential adverse effects that might result from interbreeding of GM crops.³ ODFA believes that in failing to assess the safety of the combination of Lucerne KK179 and Lucerne J101 and J163 FSANZ failed to properly assess the public health and safety implications of the Application.

ODFA believes that FSANZ erred in failing to address the safety of animal feed or animals fed with Lucerne KK179. The *FSANZ Safety Assessment of Genetically Modified Foods Guidance Document*⁴ states that "The practice of only allowing animals with known and acceptable health status to enter the human food supply is an essential step to ensuring safe food."⁵ It is noted that the Applicant identifies that in 2007 the European Food Safety Authority concluded that a number of scientific studies found that recombinant DNA consumed by livestock had not been substantially detected in tissues, fluids or edible products from those animals. This obscures the fact that a number of peer-reviewed scientific studies have found recombinant DNA in the blood, tissue and, of particular concern to ODFA, the milk of animals fed GMOs.⁶ In 2010, Italian researchers conducted a study wherein female goats were fed a diet inclusive

¹ *Axiome Pty Ltd v FSANZ* [2012] AATA 551.

² J. Immig (2010) *A list of Australia's most dangerous pesticides*. World Wildlife Federation.

³ A. De Schrijvera et al (2007) Risk assessment of GM stacked events obtained from crosses between GM events. *Trends in Food Science & Technology*, 18: 101–109.

⁴ FSANZ (2007) *Safety Assessment of Genetically Modified Foods: Guidance Document*.

⁵ *Ibid*, p 16.

⁶ OECD (2003) *Considerations for the Safety Assessment of Animal Feedstuffs Derived from Genetically Modified Plants*. Series on the Safety of Novel Foods and Feeds, No. 9.

of GM soybean.⁷ The researchers found significant transgenic DNA fragments in the milk of the goats, and also in the organs of the nursing kids of those goats. This research demonstrates that gene transfer through milk is possible. It is the latest in a growing body of evidence.⁸ The OECD has highlighted the importance of considering the effects of GMOs on livestock when assessing the potential impact on human health and safety.⁹ Specifically, the OECD stressed that an assessment of GM animal feed must take into account any risks to the animal consuming the feed, as well as any indirect risks to humans from consumption of the animal products.¹⁰ For example, the health implications for dairy cattle of consuming Lucerne KK179 will likely be more substantial than for humans given the quantity of consumption. Cows consume approximately 2.5-3% of their weight of dry matter per day; for instance, a dairy cow weighing 300 kg would eat about 9 kg of dry Lucerne every day.¹¹ Additionally, the impacts on dairy cattle of consuming Lucerne KK179 have not been assessed despite the fact that hay from Lucerne KK179 harvested later in the season will have a lower energy-level and crude protein percentage than conventional Lucerne hay.¹²

The ODFA is not aware of any scientific studies assessing the impacts on human health of consuming milk or meat products made from livestock fed Lucerne KK179. ODFA is concerned that should FSANZ approve the Application Australian consumers will be the unwitting subjects of this assessment, the consequences of which are unknown but may nonetheless be grave.

The cultivation of GM crops has resulted in a dramatic increase in use of the herbicide glyphosate.¹³ Since the introduction of GM crops in the United States there has been a 50-fold increase in allowable glyphosate residues on certain crops.¹⁴ The application of chemicals to Lucerne is of particular concern, as acknowledged by the Application. A recent study of dairy cows in Denmark demonstrated negative effects from glyphosate consumption and was suggestive of the potential cytotoxicity of glyphosate to livestock.¹⁵ ODFA is concerned about these results and the potential implications not just for animal health and welfare, but also for the safety of humans who consume animal products. ODFA therefore considers that FSANZ should not approve the Application in the light of the potentially serious consequences of these findings.

ODFA believes that FSANZ erred in failing to address the environmental impacts of the introduction of Lucerne KK179 into Australia. ODFA strongly believes that any effective assessment of human health and safety cannot justifiably ignore environmental risks as it is

⁷ R. Tudisco et al (2010) Fate of transgenic DNA and evaluation of metabolic effects in goats fed genetically modified soybean and in their offspring. *Animal*, 4: 1662-1671.

⁸ R. Sharma et al (2006) *Journal of Agricultural and Food Chemistry*, 54: 1699-1709; R. Mazza (2005) Assessing the transfer of genetically modified DNA from feed to animal tissues. *Transgenic Research*, 14: 775-784. (For several additional studies please see References.)

⁹ OECD (2003) *Considerations for the Safety Assessment of Animal Feedstuffs Derived from Genetically Modified Plants*. Series on the Safety of Novel Foods and Feeds, No. 9.

¹⁰ Ibid.

¹¹ National Lucerne Trust (2013) *Grazing*.

¹² NSW Department of Primary Industries, *Understanding the dairy cow and her feed*, p 1.29.

¹³ J.A. Heinemann et al (2013) Sustainability and innovation in staple crop production in the US Midwest. *International Journal of Agricultural Sustainability*; CBAN (2013) *Request for Environmental Assessment of Genetically Engineered Roundup Ready Alfalfa*, p 7.

¹⁴ CBAN (2013) *Request for Environmental Assessment of Genetically Engineered Roundup Ready Alfalfa*, p 8.

¹⁵ M. Kruger et al (2013) Field Investigations of Glyphosate in Urine in Danish Dairy Cows. *Journal of Environmental & Analytical Toxicology*, 3(5): 186.

now widely accepted that environmental health is essential to human health and safety.¹⁶ In 1986 the World Health Organisation's Ottawa Charter for Health Promotion recognised the inextricable connection between human health and environmental health.¹⁷ ODFA therefore believes that in failing to assess the potential environmental risks of the introduction of Lucerne KK179 into Australia FSANZ failed to satisfy its primary objective of protecting human health and safety. ODFA therefore calls on FSANZ to reject the Application in the absence of a comprehensive assessment of the potential environmental risks of the introduction of Lucerne KK179 into Australia.

GM crops were first commercialised in the mid 1990s, and since that time reports of the adventitious presence of GMOs have exponentially increased.¹⁸ During this time it has been demonstrated that when GM crops are grown the movement of GM traits beyond their intended destinations should be expected and that this risk increases with the scale of production.¹⁹ Of particular concern in relation to the Application is recent scientific research which has demonstrated that this wide-scale distribution of GM traits into the environment occurs not only in regions where GM crops are cultivated, but also in areas where GMOs are imported.²⁰ The experience thus far has led scientists to conclude that the spread of GMOs into the broader agricultural supply chain is likely irreversible.²¹ This is of particular concern in relation to Lucerne which is a very hardy species with a biology and ecology particularly favourable to persistence and long-distance gene-flow.²²

There are two methods by which GMOs are dispersed into the environment: seeds and pollen. ODFA is concerned that the Application has failed to identify with any specificity the form in which Lucerne KK179 may take when imported to Australia. In this regard, ODFA considers that any form that includes viable seeds or pollen poses serious and unnecessary risks to Australia's biodiversity, and to the Australian organic and dairy industries.

The Application indicates that Lucerne KK179 may be primarily introduced into Australia as livestock feed, either in the form of hay or meal or meal pellets. Lucerne hay is typically harvested when 10 percent of the Lucerne field has flowered. After that, it may be harvested a further four times, with intervals of approximately 30 days between harvests.²³ The first cutting of Lucerne may not contain many/any seeds, but by the third or fourth cutting the plants are likely to have had sufficient time to produce seeds. ODFA notes that the Application identifies the sole purported benefit of Lucerne KK179 to be the ability for farmers to delay harvest of the Lucerne crop. On this basis alone, the likelihood of viable seed being

¹⁶ Australian Department of Health, *Overview of Environmental Health*; U.N. CESCR (2000) General Comment 14, U.N. Doc. E/C.12/2000/4. *Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights*.

¹⁷ WHO (1986) *Ottawa Charter for Health Promotion*.

¹⁸ N. Ellstrand, N. (2012) 'Over a decade of crop transgenes out-of-place' in Chris Wozniak and Alan McHughen (eds), *Regulation of Agricultural Biotechnology: The United States and Canada*.

¹⁹ M. Marvier & R.C. Van Acker (2005) Can crop transgenes be kept on a leash? *Frontiers in Ecology and the Environment*, 3(2): 93.

²⁰ T. Nishizawa et al (2009) Monitoring the occurrence of genetically modified oilseed rape growing along a Japanese roadside: 3 year observations. *Environmental Biosafety Research*, 8: 33-44; N. Schoenenberger, N. & L. D'Andrea (2012) Surveying the occurrence of spontaneous glyphosate-tolerant genetically engineered *Brassica napus* L. (Brassicaceae) along Swiss railways. *Environmental Sciences Europe*, 24: 23. (For several additional papers please see References.)

²¹ M. Marvier & R.C. Van Acker (2005) Can crop transgenes be kept on a leash? *Frontiers in Ecology and the Environment*, 3(2): 93; H. Booker & E. Lamb (2011) Quantification of low-level genetically modified (GM) seed presence in large seed lots. *Seed Science Research*, 21(4):315.

²² M.V. Bagavathiannan & R.C. Van Acker (2009). The biology and ecology of feral alfalfa (*Medicago sativa* L.) and its implications for novel trait confinement in North America. *Critical Reviews in Plant Sciences*, 28, 69-87.

²³ S.K. Barnhart (2010) *When to make first spring cut of alfalfa and mixed alfalfa/grass*. Iowa State University.

included in hay bales is higher for Lucerne KK179 than for conventional non-genetically modified Lucerne. Lucerne seeds are small (1-2mm) and can also lie dormant for several years,²⁴ meaning that hay bales that are harvested and sold much later may still contain viable seeds. ODFA is concerned that the import of Lucerne KK179 as livestock feed into Australia, particularly in a hay form, and transported to farms in regions of Australia could result in the growth of feral Lucerne with GM traits. Of even greater concern is FSANZ's suggestion that Lucerne KK179 will predominantly enter Australia in seed form which would make the development of feral populations an almost certainty as the evidence from Japan and Europe indicates.²⁵

Forages such as Lucerne are the backbone of organic farming.²⁶ This is particularly true for the organic dairy industry. There are significant economic and environmental benefits of growing Lucerne, including its low use of water, ability to lower salinity in the soil, and improve soil quality in particular by increasing nitrogen levels, all of which assist with improving yields both in pasture but also in subsequent crops.²⁷ In addition, Lucerne has broader reaching benefits through carbon sequestration.²⁸

It is essential to the survival of organic dairy farms that farms do not become contaminated by volunteer or feral populations of GMOs, including Lucerne KK179. It is essential to the continued growth of the Australian organic dairy industry that feed can be purchased with assurance that it is GMO-free and pasture can be grown without risk of contamination. The introduction of Lucerne KK179 into Australia poses a serious and detrimental risk to organic farmers, particularly organic dairy farmers.

The biology and ecology of Lucerne make the likelihood of spread of GM traits very high, if not inevitable. There are several ways that Lucerne KK179 can contaminate non-GM Lucerne and these can be divided into three broad categories: seed escape, pollinator-mediated contamination, and contamination through feral and volunteer Lucerne.²⁹

Seed escape can occur through contamination in purchased seed, spillage during planting, harvest and transport, cleaning equipment, hay transport, dormant seed, animal vectors, and volunteers.³⁰ These risks are common across most plant species, and contamination via these methods has been widely demonstrated in GM canola.³¹

The establishment of feral and volunteer Lucerne increases the risk of spreading GMOs. The biology and ecology of Lucerne favours its persistence in unmanaged habitats.³² Studies in

²⁴ D. Undersander et al (2011) *Alfalfa Germination and Growth*. The University of Wisconsin.

²⁵ T. Nishizawa et al (2009) Monitoring the occurrence of genetically modified oilseed rape growing along a Japanese roadside: 3 year observations. *Environmental Biosafety Research*, 8: 33-44; N. Schoenenberger & L. D'Andrea (2012) Surveying the occurrence of subspontaneous glyphosate-tolerant genetically engineered *Brassica napus* L. (Brassicaceae) along Swiss railways. *Environmental Sciences Europe*, 24: 23. (For several additional papers please see References.)

²⁶ E.A. Clarke (2009) 'Forages in Organic Crop-Livestock Systems' in Charles Francis (ed), *Organic Farming: The Ecological System* 106.

²⁷ W. McDonald (2003) *Lucerne for pasture and fodder*. NSW Agriculture.

²⁸ K. Delate et al (2013) The Long-Term Agroecological Research (LTAR) Experiment Supports Organic Yields, Soil Quality, and Economic Performance in Iowa. *Crop Management*.

²⁹ M.V. Bagavathiannan & R.C. Van Acker, *The Feral Nature of Alfalfa and Implications for the Co-existence of Genetically Modified (GM) and Non-GM Alfalfa* (2009); CBAN (2013) *The Inevitability of Contamination from GM Alfalfa Release in Ontario*, p 5.

³⁰ CBAN (2013) *The Inevitability of Contamination from GM Alfalfa Release in Ontario*, p 5 – 6.

³¹ L. Friesen et al (2003) Evidence of contamination of pedigree canola (*Brassica napus*) seedlots in Western Canada with genetically engineered herbicide resistance traits. *Agronomy Journal*, 95.

³² CBAN (2013) *The Inevitability of Contamination from GM Alfalfa Release in Ontario*, p 9.

Western Canada have shown that Lucerne produces persistent and hardy feral populations which act as a 'bridge' facilitating long-distance gene flow within farming regions.³³ The risk posed by volunteer Lucerne is heightened because farmers are not generally concerned if volunteer Lucerne plants grow in hay or pasture fields and because the plants cannot be removed by hand due to the nature of their root system.³⁴

PROMOTION OF INTERNATIONALLY COMPETITIVE FOOD INDUSTRY

Australia has the largest area of certified organic land in the world, with more than 11,199,577 hectares certified.³⁵ The international organic industry is growing at a rapid rate and within Australia organic farming is one of the country's best performing industries over the past five years.³⁶ In 2013, the organic industry is worth \$655.3 million to the Australian economy, nearly double what it was just 6 years ago.³⁷ This accelerated growth is anticipated to continue into the next five years (and beyond), driven by strong demand in both the domestic and export markets.³⁸

In the international market place Australian has capitalised on its "clean and green reputation."³⁹ The introduction into Australia of GM crops through cultivation or contamination poses the single largest threat to the Australian organic industry, and in particular to export markets. This is because the majority of the countries in the world, and in particular those countries to which Australia exports organic products, have prohibitions or severe restrictions on GMOs in response to consumer demand. The primary exception to this position among Australia's export markets for organic products is the United States, by far the world's largest cultivator of GM crops.⁴⁰ As a result of widespread contamination of organic farms from GMOs, the United States has taken the unprecedented step of lowering organic standards to significantly below international standards.⁴¹ This has had a negative impact on the United States access to export markets for organic and other non-GM products.⁴²

Both within Australia and worldwide, the consensus position of the organic industry is one of zero-tolerance of GMOs. It is intrinsic to the concept of zero-tolerance that, regardless of whether the GMO contamination is intentional or unintentional, it will not be tolerated. Organic certification in Australia is co-regulated by government and industry. The Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) (formerly the Australian Quarantine Inspection Service) administers the *National Standard for Organic & Bio-Dynamic Produce* (the National Standard). Currently there are seven organisations accredited by DAFF to provide organic inspection and certification services for the purposes of export. ODFA farmers are all certified organic by one of these organisations. A certificate from an accredited certifier verifies that the method of production (whether it be primary

³³ M.V. Bagavathiannan & R.C. Van Acker (2009) The biology and ecology of feral alfalfa (*medicago sativa* L.) and its implications for novel trait confinement in North America. *Plant Sciences* 28: 69.

³⁴ CBAN (2013) *The Inevitability of Contamination from GM Alfalfa Release in Ontario*, p 9 - 10.

³⁵ Biological Farmers of Australia Ltd (2012) *Australian Organic Market Report 2012*, p 18.

³⁶ E. Witham (2013) Cultivating revenue: Organic produce is rapidly gaining popularity with consumers. *IBISWorld Industry Report X0013 Organic Farming in Australia*, p 4.

³⁷ Ibid, p 34.

³⁸ Ibid, p 4.

³⁹ Ibid, p 8.

⁴⁰ C. James, C. (2012) *Global Status of Commercialized Biotech/GM Crops: 2012*. International Service for the Acquisition of Agri-biotech Applications.

⁴¹ USDA (2011) *Policy Memorandum: Genetically Modified Organisms*.

⁴² C. Gillam (2013) USDA weighing what to do in case of GMO alfalfa contamination. *Reuters*; UK Department for Environment, Food & Rural Affairs (2013) *Organic produce: how to become an importer*.

production or a secondary process including packaging) has been carried out in accordance with the National Standard. DAFF routinely audits each accredited organisation to ensure that its systems of certification are consistent with the National Standard. In addition to the domestic standards, there are two sets of international umbrella standards regarding organic production and processing: the *IFOAM Norms for Organic Production and Processing* (the IFOAM Norms) and the *Codex Alimentarius Guidelines for the Production, Labeling, and Marketing of Organically Produced Foods* (the Codex Guidelines). All of these organic standards express a principle of zero-tolerance for GMOs. For example, the National Standard prohibits the use of GMOs⁴³ and states that organic products should be free from GMO contamination.⁴⁴ The NASAA Organic Standard prohibits the growing of GMOs on an organic farm⁴⁵ and states that organic certification will be withdrawn if NASAA considers that there is an unacceptable risk of contamination.⁴⁶ Of particular relevance to ODFA, the NASAA Organic Standard expressly prohibits GMOs in livestock feed or given in 'any way' to farm animals.⁴⁷ Likewise, the Codex Guidelines do not permit GMOs⁴⁸ and prohibit livestock to be fed with feed containing GMOs.⁴⁹ The IFOAM Norms also prohibit the use of GMOs and GMO derivatives.⁵⁰

Australia's adherence to these organic standards has contributed to the success of the country's organic exports, particularly to the European market. As a result of Australia's consistency with international organic standards, DAFF has an equivalency agreement with the European Union making it one of the most accessible export markets for Australian organic farmers.⁵¹ In addition to the threshold requirements of the EU regulations (such as Regulations EC No 1829/2003 and EC No 834/2007), Australian organic products must also comply with the individual laws and organic standards operating in the importing EU member state. In most cases these organic certification standards have GMO tolerances significantly lower than the EU Regulations. Finland, for example, has legislation that states a zero tolerance for GMO products⁵². Germany has a nationally mandated GMO-free logo which can be used on products that have less than 0.1% GMO content.⁵³ The same threshold applies in France, and, although not legislated, in Austria.⁵⁴ A threshold of 0.1% is the European articulation of zero tolerance for GMOs, as this reflects the quantification limit of current analytical methods.⁵⁵ The United Kingdom's application of the principle of zero-tolerance is the same as Australia's. For example, the *Organic Farmers & Growers Ltd Organic Standards & Certification Manual*, states that "OF&G expects there to be no GMO contamination,

⁴³ AQIS (2009) *National Standard for Organic and Biodynamic Produce*, s 3.3.1.

⁴⁴ Ibid, s 3.3.

⁴⁵ NASAA (2012) *NASAA Organic Standard*, s 3.2.3.

⁴⁶ Ibid, s 3.2.9.

⁴⁷ Ibid, s 7.22.4.

⁴⁸ WHO & Food and Agriculture Organisation of the UN (2007) *Codex Alimentarius Guidelines for the Production, Labeling, and Marketing of Organically Produced Foods*, p 4.

⁴⁹ Ibid, p 20 & 21.

⁵⁰ IFOAM (2012) *The IFOAM Norms for Organic Production and Processing*, s 2.3.1.

⁵¹ E. Witham (2013) Cultivating revenue: Organic produce is rapidly gaining popularity with consumers. *IBISWorld Industry Report X0013 Organic Farming in Australia*, p 17.

⁵² ENSA (2013) *Position paper on GMO and GMO-free labelling*.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ European Commission Joint Research Centre (2012) *Scenarios for co-existence of genetically modified, conventional and organic crops in European agriculture*, p 2.

adventitious or intentional, of any organic or part organic product” and expressly states that livestock fed GMOs in any quantity will be decertified.⁵⁶

At this time, Australia has access to these very profitable and rapidly growing⁵⁷ export markets because the Australian organic industry can assure our trade partners that Australian organic produce and products are GMO-free. The introduction of GMOs into Australia puts the organic export market at risk. Australian dairy farmers need to be able to access organic feed for their livestock to be able to farm organically. Australia and New Zealand are the only pasture based dairy production countries in the world and this point of difference is crucial in the heavily subsidised global market place.⁵⁸ For the most part, organic livestock are fed on organic pasture, but in times of drought access to organic feed and hay to supplement pasture is needed. The shortage of organic feed and hay in Australia has been recognised as one of the factors limiting the availability of organic livestock.⁵⁹ ODFA is concerned about the importation of animal feed containing Lucerne KK179 and the potential for organic farmers to be without alternative options to feed their livestock in the event of serious shortage of organic feed.

CONSUMER CHOICE & CONSUMER CONCERNS

Increasing numbers of consumers are choosing organic products every year.⁶⁰ The key driver of this increasing demand is consumer concerns about health.⁶¹ In fact, four of the five leading benefits of organic products perceived by consumers reflect a preference for organic food because of what they do not contain: chemicals, additives, hormones/antibiotics, and GMOs.⁶² At the same time, the second largest barrier consumers identify for purchasing organic products is concerns about trusting that a product is in fact organic, and therefore free of these substances.⁶³ In this respect, consumers show a marked preference and confidence in organic products produced in Australia.⁶⁴ Some studies show that Australian consumers are less confident consuming products from animals fed with GM feed than consuming food containing a small amount of GM ingredients.⁶⁵

When consumers choose an organic product most are doing so because they are seeking to avoid GMOs. Certainty that organic products do not contain GMOs is essential to consumer confidence. Organic farming is an industry that has developed in response to consumer demand. Consumers do not distinguish between the accidental or intentional presence of these undesirable substances in organic farming. However, it is not just organic consumers that seek to avoid GMOs, 52% of Australians won't buy GM food if they can avoid it.⁶⁶ ODFA believes that it is FSANZ's responsibility to ensure consumers can avoid GMOs if they so

⁵⁶ Organic Farmers & Growers Ltd (2013) *Organic Standards & Certification Manual*, s 5.11.03.

⁵⁷ E. Witham (2013) Cultivating revenue: Organic produce is rapidly gaining popularity with consumers. *IBISWorld Industry Report X0013 Organic Farming in Australia*, p 17.

⁵⁸ Victorian Department of Environment and Primary Industries (2013) *Dairy*.

⁵⁹ E. Witham (2013) Cultivating revenue: Organic produce is rapidly gaining popularity with consumers. *IBISWorld Industry Report X0013 Organic Farming in Australia*, p 7.

⁶⁰ Ibid.

⁶¹ Ibid, p 5.

⁶² Biological Farmers of Australia Ltd (2012) *Australian Organic Market Report 2012*, p 68.

⁶³ Ibid, p 76.

⁶⁴ Ibid, p 81.

⁶⁵ E. Ansell & E. McGinn (2009) *GM Stockfeed in Australia: economic issues for producers and consumers*, prepared for DAFF, p 3.

⁶⁶ Roy Morgan (2011) *State of the Nation*.

choose. Facilitating genuine consumer choice requires FSANZ to inform consumers about the presence of GMOs in food, regardless of whether that presence is intended or unintended. The organic industry provides consumers with an important choice, and any threat to the Australian organic industry is consequently a threat to consumer choice.

Additionally, FSANZ is required to provide adequate information to consumers to enable them to make informed decisions. ODFA believes that until such time as FSANZ is able to provide information to consumers about the health risks or proven safety of Lucerne KK179 when consumed by humans, as well as when consumed by livestock whose products are then consumed by humans, the Application should not be approved.

INTERNATIONAL FOOD STANDARDS

In developing a variation to the Standards, such as that sought by the Application, FSANZ must have regard to the promotion of consistency between domestic and international food standards.⁶⁷ In this respect the Federal Court of Australia has indicated that acceptance by a handful of individual countries of a food standard that is not widely accepted internationally, does not fall within the meaning of "international food standards."⁶⁸ The Application indicates that similar applications have been submitted in only four other countries, the United States, Canada, Korea and Japan. ODFA is of the view that the acceptance or rejection of these applications in this small number of countries is not indicative of an international food standard but instead reveals that the overwhelming majority of countries do not accept the importation of Lucerne KK179. In fact, GM Lucerne of any strain is only authorised for import in eight countries globally. ODFA regrets that Australia is one of those countries. Notably the key European market prohibits the import of all types of GM Lucerne.

Of the countries that have accepted a similar application to the Application, it is relevant to note that the basis for the evaluation of such applications is in some cases substantially different to the objectives that FSANZ is bound.⁶⁹ When developing or reviewing food regulatory measures, FSANZ's objectives are to ensure public health and safety, support the provision of adequate information enabling consumers to make informed decisions, and to limit misleading and deceptive conduct. However, in the United States, for example, the decision to deregulate Lucerne KK179 was based instead on a consideration of whether event Lucerne KK179 is a 'plant pest', or is believed to be one.⁷⁰ This is a substantially different basis for deregulation than the factors that FSANZ is required to take into consideration, and is much narrower in scope. Consequently this is not a persuasive authority for developing a variation to the Standards, and cannot be considered an "international food standard".

POTENTIAL COSTS

ODFA believes that in weighing the potential costs of accepting the Application against the direct and indirect benefits to the community FSANZ has failed to have regard to a number of relevant factors. ODFA calls on FSANZ to re-examine the section 29 considerations inclusive of the following:

<u>Consumers:</u>	Increased costs to organic and non-GM farmers resulting from segregation measures.
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⁶⁷ FSANZ Act 1991 s 18(2)(b).

⁶⁸ *National Food Authority v Scotch Whisky Association* [1995] FCA 1205.

⁶⁹ FSANZ Act 1991 s18(1).

⁷⁰ United States Code of Federal Regulations, Biotechnology Permits, title 7, sec. 340.

Increase in the costs of domestically produced organic and other GM-free products as a result of increased segregation costs and potential decrease in the availability of non-GM animal feed.

Safety concerns relating to the increased consumption of chemicals applied to Lucerne KK179 over conventional varieties.

No safety assessment has been done on the combination of Lucerne KK179 traits with Lucerne J101 and J163 and in the absence of this no safety can be assumed.

No safety assessment has been done on the animal products produced from livestock that consume Lucerne KK179 and in the absence of this no safety can be assumed.

Makes it more difficult for consumers seeking to avoid GM foods, which is the majority of consumers.

Potential increase in price of GM-free Lucerne.

Possible restriction in the availability of imported Lucerne products that do not contain Lucerne KK179.

Government:

Potential disruption to trade with major trading parties including the EU who prohibit Lucerne KK179.

An increasingly permissive position in relation to GMOs will have negative impacts on Australia's "clean and green" reputation, a reputation that is essential to two of Australia's most important industries: agriculture and tourism.

Industry:

Exporters of Lucerne products could be negatively impacted if trade partners continue to avoid GMOs.

Exporters of organic products, in particular dairy and livestock products, could be negatively impacted, particular in core markets such as the EU and Japan.

In addition, ODFA considers that FSANZ should disregard the following irrelevant considerations:

Consumers:

ODFA does not consider that the "broader availability of imported Lucerne products" is a relevant consideration having regarded to the Application's stated position that there is no intention to import Lucerne KK179.

Government:

ODFA does not consider that FSANZ's assumption that declining to accept the Application would conflict with Australia's WTO responsibilities is warranted in the circumstances where the overwhelming majority of WTO members have not accepted the Application.

Industry:

ODFA considers that although any WTO challenge has the potential to impact adversely on the food industry it also has the potential to have a

positive impact on the food industry, including by reinforcing Australia's "clean and green" reputation, providing greater certainty regarding Australia's trade obligations, and creating consumer confidence and confidence in export markets that Australian food products are of the highest standard. In light of these competing "potential" impacts of a "potential" WTO challenge, ODFA considers FSANZ erred in having regard to this consideration.

Based on the above considerations, in addition to those identified by FSANZ which have not been addressed above, ODFA believes that the potential costs of the variation outweigh the potential benefits. Specifically, for each benefit FSANZ has identified (ie for importers) ODFA has identified a corresponding cost (ie for exporters), and in addition to these ODFA has identified significant further costs.

OPTION 2 – REJECT APPLICATION

The amendment to *Standard 1.5.2* proposed by the Application may impact negatively on public health and safety, is likely to result in decreased consumer knowledge and confidence, and may have wide-ranging negative effects on the Australian export food market.

Conversely, the Application does not claim there will be any benefit to Australians from the inclusion of Lucerne KK179 in *Standard 1.5.2*. Instead, the Application makes baseless suggestions that Australia must accept the Application to avoid legal or economic retaliation. ODFA does not believe these considerations to be a valid basis for accepting the Application.

ODFA strongly believes that serving the objective of human health and safety, including the health of livestock, and the impacts on biological and ecological diversity and environmental health favours rejecting the Application.

ODFA strongly believes that promoting the international competitiveness of Australia's food industry, and in particular the rapidly growing organic industry favours rejecting the Application.

ODFA strongly believes that the risks of the irreversible saturation of the Australian agricultural and food industries with GMOs precluding consumers' ability to choose GMO-free products favours rejecting the Application.

ODFA strongly believes that the relevant international food standard favours rejecting the Application.

ODFA strongly believes that a weighing of all relevant costs and all relevant benefits of inclusion of Lucerne KK179 in *Standard 1.5.2* favours rejecting the Application.

ODFA urges FSANZ choose Option 2 and reject the Application.

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