

G A Young & Sons
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Senate Standing Committees on Rural and Regional Affairs and Transport
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

Dear Sir

Re: The proposed importation of potatoes from New Zealand

We thank you for the opportunity to raise our concerns regarding the proposed importation of potatoes from New Zealand.

G A Young & Sons is a potato growing business based in Kalangadoo, South Australia. In addition to growing in excess of 400 ha of processing and certified seed potatoes per year we also run cattle as our two main lines of business. We currently employ eleven full time staff and up to an additional ten casual workers throughout the year. G A Young & Sons is also a member of the South East Potato Growers Association.

As part of our interest in this matter we have made a submission to The Department of Agriculture, Fisheries and Forestry in response to their *Draft report for the review of import conditions for fresh potatoes for processing from New Zealand*, a copy of which is attached as part of our submission to this inquiry. As indicated by the terms of reference of this inquiry one of the major concerns in this proposal was its reliance on the *Final pest risk analysis report for "Candidatus Liberibacter psyllaourous" in fresh fruit, potato tubers, nursery stock and its vector the tomato-potato psyllid* which was published in 2009.

As noted in our submission we are extremely concerned as to the weight and reliance the review has on the final pest risk analysis. As the *Candidatus Liberibacter psyllaourous* bacteria is a relatively new pest, we are disturbed that a document which is considerably out of date has been used as conclusive evidence in the review. Further we are confused as to how a pest risk analysis could be finalised given the recent development of this disease and a lack of understanding of how it may be transferred.

We feel that an evidence based response to our concerns and the concerns of the entire industry is warranted to ensure that this proposal is properly considered.

Yours faithfully

Ross Young

Managing Director
GA Young & Sons

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Submission to the Department of Agriculture, Fisheries and Forestry
In response to the draft report for the review of import conditions for fresh
potatoes for processing from New Zealand

September 2012

G A Young & Sons submission re NZ potato imports, September 2012

G A Young & Sons is a family farming business based in Kalangadoo, South Australia with agricultural properties located within the South East of South Australia and the Wimmera of Victoria.

The business produces processing potatoes, certified seed potatoes and cattle as its main enterprises. As a business G A Young and Sons has been growing potatoes for over 45 years and the business is currently owned and run by the family's second and third generations. We employ eleven full time staff and up to an additional ten casual staff throughout the year.

In recent years we have been growing in excess of 400 ha of potatoes per year which amounts to approximately 15% of the total potatoes grown within the region.

G A Young & Sons opposes the conclusion of the "Draft review of imports of fresh potatoes into Australia from New Zealand" by the Department of Agriculture, Fisheries and Forestry ("DAFF"), 3 July 2012 ("the review") that fresh potatoes from New Zealand should be allowed to be imported into Australia under certain conditions. We do not consider the conditions proposed in the review to be adequate to protect Australia from serious threat of new and existing pests and diseases which could be imported from New Zealand.

Our opposition is based on the lack of evidence supplied in the report and concerns over many of the pests and diseases found in New Zealand that have not been reported in Australia, or reported in a very limited area.

Lack of evidence and detail in the review

The review outlines areas of concern that have been considered during the review process. While it provides very limited details of what exactly has been considered it does not indicate how the consideration has been used to support the opinion. Without any evidence of the consideration, it is not possible to fully analyse or effectively draw attention to some possible scientific, technical or other gaps in the data (due to the lack of data provided) or identify misinterpretations or errors within the report.

As outlined above there are many questions raised by this report which must be addressed prior to allowing fresh potatoes to be imported from New Zealand. The review has stated several times that the issues have been considered but no evidence is given. The DAFF has called for scientific, evidence based arguments and we do not understand how this expectation was not applied to this review.

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An example of this is in the section discussing risk management measures. The review states that the containers will be sealed to prevent pests entering Australia. The following paragraph however states that the container doors can be opened to vent the load but that the doors must be shut prior to being moved off the wharf. However we consider the assumption that this would prevent potential pests or pathogens from entering Australia to be incorrect, as vectors such as insect, rodents and people may access the potatoes and subsequently access Australia, potentially carrying pests or pathogens ashore. This section also provides no evidence as to how these measures would be effective in preventing pests and diseases from entering Australia.

Threat of Pest and Diseases being Imported into Australia

The review identifies (21) pests and diseases as being “associated with the import pathway and being of quarantine concern to Australia”, however only 5 of the listed pests and diseases are discussed. It seems a significant oversight has occurred in not even mentioning the other 16 pests and diseases and this is a substantial gap in the data included in the review. Considering this obvious omission, one has to wonder if the list of 21 identified pests and diseases is indeed complete.

The review states that “The phytosanitary requirements for potatoes imported for processing from New Zealand have been developed to prevent the quarantine pests listed in section 3... from being introduced into Australia”, however there is no indication as to what requirements assist in the prevention of what pest.

Zebra Chip - “*Candidatus Liberibacter solanacearum*” (Ca. L. solanacearum) and *Bactericera cockerelli* (tomato-potato psyllid)

The review cites the Biosecurity Australia’s 2009 Final pest risk analysis report for “*Candidatus Liberibacter psyllaurosus*” in fresh fruit, potato tubers, nursery stock and its vector the tomato-potato psyllid” (PRA) as conclusive evidence that Ca. L. solanacearum (also known as Ca L psyllaurosus) cannot access Australia if “transport, processing and waste disposal [is] managed under appropriate quarantine conditions”. This appears to be a greatly flawed conclusion as the PRA was published in 2009 when little was known about the zebra chip disease. While much research has been done in the past few years it is clear there is still much not known about it.

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The review notes the disease-vector complex associated with the zebra chip and asserts that the disease can only be transmitted from plant to plant through the psyllid vector. Pitman et al (2011), a reference cited in the review, reports in their introduction that the role of seed tuber transmission in the spread of *Ca. L. solanacearum* is unknown, and that the bacterium has been transmitted to potato plants by grafting (Secor et al. 2009). Pitman et al. (2011) also showed that *Ca. L. solanacearum* could be transmitted from mother tubers to progeny tubers. The work done by Pitman et al. (2011) was especially concerning as they observed that the daughter tubers infected with *Ca. L. solanacearum* were not always symptomatic of the zebra chip disease. Thus it is unknown whether it is possible that tuber transmission could play a role in the pathogen's life cycle by providing a source for the acquisition of *Ca. L. solanacearum* by the psyllid as well as assisting in the movement of the disease to other regions. Further the risk of *Ca. L. solanacearum* entering Australia may not only be increased but may also go undetected.

We do note that the observations described by Pitman et al. (2011) are different to those found in studies in the United States (Berry et al. 2011) where tubers infected with the bacteria failed to be viable as seed. Again this is concerning as it shows that the science has not been confirmed or understood.

The review fails to acknowledge that it is not yet understood how the *Ca. L. solanacearum* is transmitted to potato by the psyllid and Buchman et al. (2011) asserts that "Development of effective management strategies for ZC (zebra chip) will not be realized until transmission biology is better understood."

No mention is made of the possibility of other organisms existing in the disease complex. Liefting et al. (2009) detected *Candidatus Phytoplasma australiense* in potatoes showing symptoms. It has been suggested that the presence of certain phytoplasma may cause some of the symptoms associated with the zebra chip disease (Secor et al. 2006). This suggests that the disease could be even more complex than suggested in the review.

However one of the most concerning things regarding the potential threat of the zebra chip disease is that New Zealand was not able to identify how the tomato-potato psyllid (*Bactericera cockerelli*), the vector carrier, entered the country (Teulon et al. 2009).

After considering the literature we reject the notion that as long as the tomato-potato psyllid is not imported into Australia the threat of the Zebra Chip disease is mitigated.

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Conclusion

Our investigation into the review has found us unsatisfied by the evidence of consideration of the risks associated with the import of fresh potatoes from New Zealand. More scientific evidence is needed to show that the risks have been adequately considered and appropriately mitigated.

We are concerned that there has been no review and update to Biosecurity Australia's Final pest risk analysis report for "Candidatus Liberibacter psyllaourous" (2009) given the disease was quite new when the report was published, and that much research has been done in the past few years.

We remain unconvinced that the importation of fresh New Zealand potatoes can be done without seriously risking the importation of a range of foreign pests and diseases.

Yours faithfully

Ross Young

Managing Director
GA Young & Sons

References

Berry N, Thompson S, Taylor N, Wright P, Shah F, Walker M, Beard S, Jorgensen N, Butler R, Thompson S, Scott I, Pitman AR. (2011) *The Impact of Ca. Liberibacter Infected Seed Tubers on Potato Production in New Zealand*. Proceedings of the 11th Annual 2011 Zebra Chip Reporting Session 189-193

Biosecurity Australia (2009) *Final pest risk analysis report for “Candidatus Liberibacter psyllaourous” in fresh fruit, potato tubers, nursery stock and its vector the tomato-potato psyllid*. Biosecurity Australia, Canberra.

Buchman, JL, Sengoda VG, Munyaeza JE (2011) *Vector Transmission Efficiency of Liberibacter by Bactericera cockerelli (Hemiptera: Trioziade) in Zebra Chip Potato Disease: Effects of Psyllid Life Stages and Inoculation Access Period*. Journal of Economic Entomology, 104(5): 1486-1495

Pitman AR, Drayton GM, Kraberger SJ, Genet RA, Scott IAW (2011) *Tuber transmission of ‘Candidatus Liberibacter solanacearum’ and its association with zebra chip on potato in New Zealand*. European Journal of Plant Pathology 129: 389-398.

Secor GA, Lee IM, Bottner KD, Rivera-Varas V, Gudmestad NC (2006) *First report of a defect of processing potatoes in Texas and Nebraska associated with a new phytoplasma*. Plant Disease 90: 377–377.

Secor GA, Rivera VV, Abad JA, Lee LM, Clover GRG, Liefing LW, Li X, De Boer SH (2009) *Association of ‘Candidatus Liberibacter solanacearum’ with zebra chip disease of potato established by graft and psyllid transmission, electron microscopy, and PCR*. Plant Disease 93: 574–583.

Teulon DAJ., Workman PJ, Thomas KL, Nielsen M-C (2009) *“Bactericera cockerelli: Incursion, dispersal and current distribution on vegetable crops in New Zealand”*. New Zealand Plant Protection 62: 136-144