Senate Rural and Regional Affairs and Transport References Committee

Written Questions on Notice – Wednesday, 24 October 2012
CANBERRA, ACT

Inquiry into the proposed importation of potatoes from New Zealand

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Additional Questions on Notice for AUSVEG

1. Can you give an example of where DAFF processes have resulted in disease coming into Australia?

2. Can you please expand on comments made in your submission that DAFF has not demonstrated the extent to which secondary risk compounds overall risk?

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Additional Questions on Notice for AUSVEG

1. Can you give an example of where DAFF processes have resulted in disease coming into Australia?

Response to request taken on notice:

One example of a disease entering Australia through a DAFF commercially approved pathway was PSTVd (potato viral disease in tomato seeds). This disease attacks all varieties and spreads rapidly. It causes severe crop losses.

2. Can you please expand on comments made in your submission that DAFF has not demonstrated the extent to which secondary risk compounds overall risk?

Response to request taken on notice:

With respect to secondary risk there are two parts to the answer. There are numerous hosts for psyllids including nursery plants (other than the Solanaceace i.e. the potato family) and solanaceous fruit, such as tomatoes, capsicums, tamarillos and eggplant. To what extent does the importation of these plants add to the overall risk of introducing the psyllid and also potentially the Liberibacter into Australia? I have seen no overall assessment. Secondly and related to the above, we note that DAFF sees the spread of Liberibacter as improbable in the absence of the insect host. Thus, in assessing a complex, we are relying on keeping out the psyllid as the important control point. Clearly the first issue relates to the second.

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Inquiry into the proposed importation of potatoes from New Zealand

Additional Questions on Notice for the Department of Agriculture, Fisheries and Forestry

1. In what way is Zebra Chip Disease like PCN and black wart, what characteristics do they share?

2. What plans does DAFF have to protect Australian potato trade agreements if there was an outbreak of Zebra Chip Disease?

3. In its submission, Potatoes South Australia Inc. said the arrival of Western Flower thrips "was a biosecurity breach and the Australian potato industry continues to pay for it. The level of protection was not appropriate". What does the Department make of these claims?

4. The Department will not allow the retail sale of fresh potatoes from New Zealand because it accepts the biosecurity risk for Zebra Chip Disease is too great. The fresh potatoes will still have to come into the country in order to be processed. Why does DAFF not concede this action alone is a biosecurity risk?

5. In its submission, Potatoes Tasmania noted the life-cycle of a psyllid can be up to 80 days, making it feasible it could travel to Australia as an egg, then hatch and find a plant to colonise. Does DAFF accept this could be a possibility? If so, how might growers protect against such a development?

6. Would DAFF consider doing research to assess if psyllids can lay eggs on tubers, rather than leaves and stems, and if eggs can be transported in soil left on tubers?

7. The value of the Ballarat area's farm gate potato production is $21 million and the industry employs about 1000 people. How does DAFF assess the risk for business if New Zealand potatoes were allowed into Australia? What is the methodology of the risk estimation matrix, specifically the quantification of "consequence"?

8. How has DAFF addressed the potential risk of Zebra Chip Disease possibly being transmitted via seed?

9. Can you please describe the Hazard Analysis Critical Control Point procedures? What other industries use this procedure to monitor risk?

10. Are the diseases found on New Zealand potatoes including common scab, powdery scab, virus Y and Erwinia found on Australian potatoes?

11. Has there been an updated assessment of PCN since 1983?

12. What would DAFF do if there was an outbreak of PCN *G.pallida* in Victoria as a result of importing fresh New Zealand potatoes for processing?

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Inquiry into the proposed importation of potatoes from New Zealand

Additional Questions on Notice for the Department of Agriculture, Fisheries and Forestry

1. In what way is Zebra Chip Disease like PCN and black wart, what characteristics do they share?

DAFF response
Zebra chip disease is caused by the bacterium, '*Candidatus* liberibacter solanacearum', a single celled organism. Zebra chip bacteria are obligate parasites that reside in the phloem cells of host plants. PCN species considered in the current review of import conditions (*Globodera pallida* and *Globodera rostochiensis*) are nematodes that are multi-cellular round worms. Black wart (*Synchytrium endobioticum*) is a fungus. These three species are taxonomically distinct and are not closely related. They are biologically dissimilar with different modes of host association, infection, reproduction and disease symptoms. Points of similarity are only broad and include the ability infect/infest potato plants and that they are all quarantine pests for Australia (or parts of Australia).

2. What plans does DAFF have to protect Australian potato trade agreements if there was an outbreak of Zebra Chip Disease?

DAFF response
Australia has the Emergency Plant Pest Response Deed (the Deed) to manage pest incursions. The Deed covers the management and funding of responses to Emergency Plant Pest (EPP) incidents. Under the Deed, both the vector (*Bactericera cockerelli*) and the pathogen ('*Candidatus* Liberibacter *solancaearum*') of the zebra chip complex have been categorised as EPPs and if they were detected in Australia, a response to that incursion would be governed by the Deed. For further information refer to Plant Health Australia website: http://www.planthealthaustralia.com.au/go/phau/epprd

To support the early detection of zebra chip disease (caused by '*Candidatus* liberibacter solanacearum') and its psyllid vector (*Bactericera cockerelli*), DAFF has supported the production of national diagnostic manuals for both of these pests. In addition, Tasmania's Institute of Agriculture has also implemented a monitoring program in 2011 across eastern Australia to provide an early warning system for psyllid incursions. DAFF has contributed to the funding of this work through Horticulture Australia Limited.

3. In its submission, Potatoes South Australia Inc. said the arrival of Western Flower thrips "was a biosecurity breach and the Australian potato industry continues to pay for it. The level of protection was not appropriate". What does the Department make of these claims.

DAFF response
There has been an understanding for a long time that zero-risk is not attainable. In 1979, the Senate Standing Committee on Natural Resources stressed that there is no such thing as a zero-risk quarantine policy, and it believed that Australia's approach should be better described as 'scientific evaluation of acceptable risk'. Australia's appropriate level of

protection is set by the Australian Government with the agreement of Australian states and territories. The appropriate level of protection was endorsed at the Primary Industry Ministerial Council on 2 May 2002. Australia's ALOP is represented as '*providing a high level of sanitary and phytosanitary protection aimed at reducing risk to a very low level, but not zero*'[1]. In May 2007, the then Federal Minister for Agriculture released the Future Harvest report[2] that re-affirmed Australia's ALOP is set at 'very low'.

Western flower thrips (*Frankliniella occidentalis*) were first detected in Western Australia in May 1993 and then in Queensland (October 1993) and New South Wales (November 1993) and domestic quarantine restrictions were put in place. However, in December 1993, surveys confirmed the wide distribution and high population levels of western flower thrips in NSW and quarantine restrictions within that state were removed. Later, western flower thrips were found in Tasmania and South Australia in 1995 and Victoria in 1996.

Measures were in place at the international border to manage the risk of this pest associated with imported commodities. Western flower thrips are considered to have been transported around the world by nursery stock[3]. However, measures for nursery stock include treatment for insects (e.g. methyl bromide fumigation) and growth in a post entry quarantine facility.

The incursion pathway into Australia for western flower thrips could not be confirmed. However, at the time it was recognised that western flower thrips spreads naturally over vast distances on wind currents and may be carried on many materials including travellers' clothing.

4. The Department will not allow the retail sale of fresh potatoes from New Zealand because it accepts the biosecurity risk for Zebra Chip Disease is too great. The fresh potatoes will still have to come into the country in order to be processed. Why does DAFF not concede this action alone is a biosecurity risk?

DAFF response

The measures recommended in the *Draft report for the review of import conditions for fresh potatoes for processing from New Zealand (2012)* ensure the import pathway for such potatoes will be highly regulated (under quarantine control) to manage identified potential risk.

5. In its submission, Potatoes Tasmania noted the life-cycle of a psyllid can be up to 80 days, making it feasible it could travel to Australia as an egg, then hatch and find a plant to colonise. Does DAFF accept this could be a possibility? If so, how might growers protect against such a development?

DAFF response

The tomato potato psyllid (*Bactericera cockerelli*) has been studied for over 100 years and has only been recorded to be associated with above-ground fresh plant material, and it has a very strong preference for leaves, particularly new growth for egg laying. A national diagnostic manual for the detection of the tomato potato psyllid, supported by DAFF and written by an Australian researcher, discusses the biology and association of the tomato

[1] See Annex 3 Import Risk Analysis Handbook 2011.

[2] See p15 of Future Harvest: The way ahead for Australian Agriculture and food.

[3] Kirk and Terry (2003) The spread of western flower thrips *Frankliniella occidentalis* (Pergande). *Agricultural and Forest Entomology* 5: 301–310.

potato psyllid with fresh host material[4]. Eggs are laid on the surface of host material and are attached to the host by a thin and fragile stalk. If eggs were associated with export potatoes, the recommended measures of washing or brushing and inspection would manage this contamination. If the eggs survived these measures, the juvenile tomato potato psyllid requires growing plant material for development, and imported potatoes will be processed and waste will be treated in a quarantine approved manner. Taking into account the biology of the psyllid and the multi-tiered measures to be applied, it is considered that the risk associated with the proposed import of potatoes for processing will be appropriately managed.

6. Would DAFF consider doing research to assess if psyllids can lay eggs on tubers, rather than leaves and stems, and if eggs can be transported in soil left on tubers?

DAFF response
The association of psyllid eggs with the leaves and stems of host material is well known. Psyllid eggs are not known to be associated with potato tubers (see answer to question 5) or soil. DAFF has recommended measures that manage any potential pathway for the tomato potato psyllid on potatoes for processing.

7. The value of the Ballarat area's farm gate potato production is $21 million and the industry employs about 1000 people. How does DAFF assess the risk for business if New Zealand potatoes were allowed into Australia? What is the methodology of the risk estimation matrix, specifically the quantification of "consequence"?

DAFF response
DAFF has considered the consequences of zebra chip disease in the *Final pest risk analysis report for* "Candidatus *Liberibacter psyllaurous" in fresh fruit, potato tubers, nursery stock and its vector the tomato-potato psyllid* and the consequences were rated as 'high' (see section 5.5). The method of assessing consequences by DAFF is described in section 2 of that report and is based on the *International Standard for Phytosanitary Measures (ISPM) 11: Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*. Section 2.3 of ISPM 11 details the type of consequences considered in quarantine risk assessments. The effect of a pest on the crop of concern can be used to assess consequences.

8. How has DAFF addressed the potential risk of Zebra Chip Disease possibly being transmitted via seed?

DAFF response
Different import pathways are typically assessed using separate risk assessment processes. Until a pathway has been assessed, and conditions established, trade cannot commence. The current review of import conditions only considers potatoes for processing. Seed transmission was first considered in the *Final pest risk analysis report for* "Candidatus *Liberibacter psyllaurous" in fresh fruit, potato tubers, nursery stock and its vector the tomato-potato psyllid (2009).* It is now being considered separately in the draft report on the *Review of policy: importation of potato (*Solanum tuberosum*) propagative material into Australia* that

[4] Yen and Burckhardt (2012) Diagnostic Protocol for the detection of the Tomato Potato Psyllid, Bactericera cockerelli (Šulc). DAFF.

was released in April 2012 for stakeholder consultation. This report considers the risk of zebra chip transmission associated with true seed and seed tubers for planting.

9. Can you please describe the Hazard Analysis Critical Control Point procedures? What other industries use this procedure to monitor risk?

DAFF response
Hazard Analysis and Critical Control Point (HACCP) is a process that identifies specific hazards and proposes measures for their control at critical control points to ensure the safety of food. HACCP can be applied throughout the food chain from primary production to final consumption and its implementation should be guided by scientific evidence of risks to human health. For further information on HACCP refer to the Food and Agriculture Organization of the United Nations[5]. Import risk assessment and the implementation of control measures at critical points in the potential pest risk pathway is a form of HACCP. Various analogous approaches are used in various industry sectors.

10. Are the diseases found on New Zealand potatoes including common scab, powdery scab, virus Y and Erwinia found on Australian potatoes?

DAFF response
Common scab is caused by *Streptomyces scabiei* and this species is present in Australia on potatoes.

Powdery scab is caused by *Spongospora subterranea* and this species is present in Australia on potatoes.

Strains of Potato Virus Y are present in Australia on potatoes.

Erwinia species (=*Pectobacterium*) that infect potatoes are present in Australia.

11. Has there been an updated assessment of PCN since 1983?

DAFF response
DAFF has considered PCN species (*Globodera pallida* and *Globodera rostochiensis*) in the *Review of policy: importation of potato (*Solanum tuberosum*) propagative material into Australia.* This draft report was released for stakeholder comment in April 2012.

The Victorian Department of Primary Industries conducted a risk assessment for PCN[6] in 2008. That risk assessment used DAFF's risk assessment methodology and supports the movement of potatoes from PCN infested areas to non-infested areas in Victoria subject to measures.

12. What would DAFF do if there was an outbreak of PCN *G.pallida* in Victoria as a result of importing fresh New Zealand potatoes for processing?

[5] http://www.fao.org/docrep/005/Y1579E/y1579e03.htm
[6] Washington, Duthie, Collins, Hansen, Walker, Kumar, Crump (2008) Pest risk Analysis – Golden potato cyst nematode movement from infested areas in Australia to non-infested areas. DPI Victoria.

DAFF response

If an outbreak of *G. pallida* occurred in Victoria, or elsewhere in Australia, the Emergency Plant Pest Response Deed would provide guidance on how to manage the pest incursion (see answer to question 2).

If there was evidence that the incursion was linked to the import of produce on a regulated pathway, DAFF would immediately invoke a meeting of the Consultative Committee for Emergency Plant Pests (CCEPP) to discuss appropriate action, including suspension of imports, invocation of the Emergency Plant Pest Response Deed, and a review of the import pathway biosecurity control measures.