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4 July 2011

Dr Vanessa Findlay Biosecurity Australia GPO Box 858 CANBERRA ACT 2601

Submission re NZ apples

Dear Dr Findlay,

Please find attached a submission by Orchard Services to Biosecurity Australia re the Draft report for the non-regulated analysis of existing policy for apple from New Zealand.

I can be contacted at the above numbers if more information is required.

Yours sincerely,

Stephen Tancred

Agronomic advice and on-farm monitoring • Land use studies and property assessment •

Contract research and development •

GLP Accredited residue studies -Litigation services -



Submission bv **Orchard Services** to **Biosecurity Australia** re the Draft report for the non-regulated analysis of existing policy for apple from New Zealand. Prepared by: Mr Stephen J. Tancred CPAg., PG Dip. Ag. St., B. Ag. Sc. (Hons), MAIAST, Grad Cert Mngmt Signed Stephen Tancred. Dated: Monday, 4th July 2011. SERVICES 36 Short Street Stanthorpe, Queensland 4380. ACN 078 920 377, ABN 35 082 134 565.

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Submission Summary I have read the *Draft report for the non-regulated analysis of existing policy for apples from New Zealand, May 2011* and consider the proposed amendments to the current import conditions to be inadequate. I make six submissions regarding the Draft Report and the proposals for fruit importation, namely;

- 1. An inappropriate tool is being used to affect Australia's appropriate level of protection (ALOP).
- 2. Use of anecdotal evidence.
- 3. The science is 'not all in' for the most critical part of the risk assessment.
- 4. There is not full transparency regarding the tools being used to protect the Australian industry.
- 5. The IFP program regarding fire blight treatment is voluntary for NZ apple growers.
- 6. Despite the best efforts and guidance from the IFP manual, export inspections and certifications, some export infestation failures do occur in NZ.

At the very least the protocols being proposed should be expanded to ensure the IFP manual is being fully implemented and that orchard blocks where fruit is being sourced from do not have visible symptoms of fire blight.

Introduction I am a senior horticultural consultant based in Stanthorpe, Queensland. I have experience in many aspects of fruit research and had tens years service with the Queensland Department of Primary Industries (now DEEDI). I have worked as a horticultural consultant for seventeen years am the principal of the private consulting firm Orchard Services. I have experience in both the practical and research aspects of fruit pest and disease control and have seen fire blight first hand in New Zealand, Italy, Germany and the USA. I attended both the ISHS 10th International Workshop on Fire Blight in Bologna, Italy in 2004 and the 9th Workshop in Napier, New Zealand, in 2001. My curriculum vitae is attached as Appendix 1.

As an interested professional I have actively followed the NZ, USA and Chinese apple importation application process since 1995 and have previously made submissions to Biosecurity Australia in September 2008, June 2004 and December 2000 and to the Senate Inquiry in February 2001.

1. An inappropriate tool is being used to affect Australia's appropriate level of protection (ALOP).

The tool being used by Biosecurity Australia to ensure exported fruit are not infected with high levels of the fire blight bacteria is the NZ apple industries Integrated Fruit Production (IFP) program. It was not developed as a quarantine tool and is not used as such by NZ growers. It is a production system that has "standard commercial practices for production of export grade fruit". It is designed to produce high quality fruit, with low chemical residues, suitable for transport to and consumption in another country. These standard production practices are not designed to produce apples that do not carry the fire blight disease.

Fire blight is an endemic organism that is always present in the orchards of countries that have the disease, and only expresses as a disease when suitable weather conditions exist for infection and development. The standard production practices are designed to minimize the impact on tree health and productivity when these suitable weather conditions occur, not to ensure the organism is prevented from infecting or eradicated from fruit.

2. Use of anecdotal evidence.

Some of the knowledge of management of fire blight described in the BA Draft Report is based on anecdotal material provided by NZ orchard managers. This may not be the most independent source of information.

The anecdotal evidence also appears to contradict the stated IFP manual aims. The second paragraph on page 23 in the Draft Report outlines how the IFP manual recommends orchard inspections and removal of diseased wood. The fourth paragraph on page 23 describes how some NZ orchard managers don't follow these recommendations and still produce and export fruit. The reason to remove diseased wood is to reduce inoculum levels. It follows that non removal would not reduce inoculum levels and fruit produced from these orchards may have a greater chance of carrying the disease than if the IFP recommendations were followed.

3. The science is 'not all in' for the most critical part of the risk assessment.

The calculation of the overall probability (prob.) of entry, establishment and spread of fire blight (PEES) is calculated as Extremely Low (Table 4.2 on page 67 of the Draft Report).

However for such an outcome this equation relies on the prob. of entry as being Extremely Low. The prob. of entry is based on the prob. of importation X prob. of distribution. The Draft Report rates the prob. of importation as moderate and the prob. of distribution as Extremely Low.

Thus the 'weak link' in the argument for the protagonists of the non-importation argument is the prob. of distribution as Extremely Low.

If the prob. of distribution were rated as Very Low then the overall PEES would be Very Low and A Very Low PEES combined with a High consequence would result in a Low Risk (Table 2.5 on page 12 of Draft Report). A Low Risk would be an unacceptable ALOP for Australia and would require additional safeguards to be in place before fruit was imported.

The Draft Report provides 'dot point' summaries of the current body of scientific knowledge on the fire blight disease with respect to the various components of PEES. For each step of PEES there is information supporting both sides of the argument. These have been interpreted and weighed up by BA and their advisors to derive a probability for each step.

Reading of these dot points with respect to the prob. of distribution reveals 39 referenced works that could be interpreted as supporting the low-risk-of-distribution argument and 13 referenced works that could be interpreted as supporting the high-risk-of-importation argument. The other referenced works are background information on apples, the biology of bacteria, orcharding practices etc. On balance the evidence points to one side of the argument, but is not necessarily overwhelming. Crudely summarized; 13 high-risk-of- distribution arguments is less than 39 low-risk arguments and led to the rating as a Extremely Low. A more conservative approach and/or additional scientific information may very well have led to a rating of Very Low

The moderate rating of the prob. of importation is based on information pertaining to arrival of the bacteria on the calyx of apples. My reading of the dot points that specifically relate to calyx importation reveals 16 referenced works that could be interpreted as supporting the low-risk-of-importation argument and 18 referenced works that could be interpreted as supporting the high-risk-of- importation argument. Crudely summarized; 18 high-risk-of- importation arguments is greater than 16 low-risk arguments and led to the rating as a moderate risk.

Given that most scientific research regarding the fire blight disease is focused on controlling the disease once it had entered a country rather than investigating the likely pathways of entry to a country, it is unlikely that 'all the science is in' on the various components of PEES. Quarantine decision makers are often faced with such situations and have to make judgments.

My submission is that the absence of further science, and if the doctrine of a conservative approach to quarantine is adhered to, then the rating of the probability of distribution as Extremely Low is not clear cut and a re-rating to Very Low could have been used. This would have factored into the calculation of PEES to provide an overall outcome of a Low Risk, which is above Australia's ALOP.

4. There is not full transparency regarding the tools being used to protect the Australian industry

The full details of the NZ IFP program and manual are not revealed in the Draft Report. I consider this unacceptable considering the high level of transparency that has prevailed for nearly two decades for the development of import protocols and procedures by the Australian Government agencies, a Senate inquiry, a WTO hearing and numerous calls for information and submissions, the conducting of workshops, considerations by technical panels and the breadth of expert opinions sought.

Australian scientists, orchardists and consumers deserve to know how imported produce is grown by our nearest developed-world neighbor.

5. The IFP program regarding fire blight treatment is voluntary for NZ apple growers.

From what information is revealed in the Draft Report regarding the IFP program, the treatment of fire blight to reduce inoculum levels in orchards and on fruit is voluntary.

The IFP program advises NZ growers when infection periods occur based on weather conditions and tree phenology and 'guidance' is given to orchard managers regarding treatment. It is an optional system with respect to fire blight treatment; it is non prescriptive or backed by any regulatory measures. Additionally the removal of visually infected plant material in summer and winter is 'recommended' by the IFP manual, which is again non prescriptive or regulatory

6. Despite the best efforts and guidance from the IFP manual, export inspections and certifications, some export infestation failures do occur in NZ.

As good as the safeguards are for production of fruit free from pests in New Zealand, mistakes can and do happen.

In June 2008 apples harvested from Hawke's Bay orchards were found to have live insects infesting fruit when inspected in China. Subsequently four exporters were suspended from exporting fruit to China. The fruit had been certified by authorities as being free of insects. The insects were woolly apple aphids (*Eriosoma lanigerum*) that are typically 1 to 2mm in size. To get to such a situation the IFP system would have had failures in both the field and packing facility systems.

If a pest that can be readily seen by the naked eye can breach quarantine then what safeguards are there that the IFP system whose aim is "management of fire blight focuses on reducing inoculum levels" is being followed if fire blight is invisible when residing on the calyces of an apple?

To be robust the system that allows the importation of apples must involve orchard inspections by independent quarantine officials to ensure that the IFP recommendations are being followed and there are no visible signs of fire blight in export orchard blocks.

APPENDIX 1 Stephen Tancred's Curriculum Vitae

Personal Details

Name: Stephen James Tancred.

Gender: Male.	Nationality: Australian.
Date of Birth: 17th June 1961.	
Address: 36 Short Street, Stanthorpe, 4380,	Australia.
Phone: 07 4681 2931 or 0407 762 888	Fax: 07 4681 4274
Email: <u>stephen@orchardservices.com.au</u>	Web: orchardservices.com.au
Family Status: Married with three children,	aged 19, 21 & 23.

Personal Interests: Rotary International, rugby union, reading, church/school activities.

Country Experience: New Zealand, USA, Canada, South Africa, Italy, Germany, Austria, UK, Tanzania and Fiji.

Capability Summary

Stephen Tancred is a senior horticultural consultant based in Stanthorpe, Queensland, Australia, servicing the temperate horticultural industry. Stephen had nearly ten years experience with the Queensland Department of Primary Industries where he provided research and advisory services to fruit and vegetable growers. He has a Bachelor of Agricultural Science (Hons) (1983) and a Postgraduate Diploma in Agricultural Studies (1993) from the University of Queensland. He received a Graduate Certificate in Management from the University of New England in 2002. He is a Certified Practising Agriculturalist, is a Qualified Person under the Plant Breeders Rights Act and has consulted privately for seventeen years in the field of horticulture. He has many scientific and advisory publications to his credit and has travelled both in Australia and overseas, working on and researching horticultural projects. Stephen's main focus is temperate fruit (apples, pears, stonefruit, grapes) but he has a working competence in vegetables (brassicas, lettuce, tomatoes/capsicums etc) and also has some experience with avocados, citrus, mangos, bananas, berries, macadamias and pecans. Stephen operates his own consulting firm, Orchard Services, which specialises in orchard and tree crops. Orchard Services has a full-time staff of three and has a wide range of clients around Australia and is regularly involved in co-operative projects with the Queensland Department of Primary Industries and HAL. Orchard Services provides a comprehensive range of consulting services to promote the development of profitable and sustainable farming. Stephen has an extensive network of industry contacts and is recognised as an Australian temperate fruit expert.

Key Qualifications

Bachelor of Agricultural Science (Hons), University of Queensland, 1983. Majors in crop and pasture science and agricultural extension.

Post-graduate Diploma in Agricultural Studies, University of Queensland, 1993. Studies in plant breeding, variety improvement and genetic engineering.

Graduate Certificate in Management, University of New England, 2002. Studies in marketing, business management, accounting and politics.

Employment History

May 1997 – 2011. Senior Horticultural Consultant & principal of Orchard Services.

Clients include primary producers, Horticultural Australia Limited (HAL), Queensland Department of Primary Industries, Apple and Pear Australia Limited (APAL), Australian Fresh Fruit Company (AFFCO), Queensland Rural Adjustment Authority, AgroFresh, Landmark, Fruits of Batlow, Rabobank, Extenday NZ, Chiquita Brands South Pacific, Sumitomo Australia, Bayer CropScience, Syngenta, DuPont, CropCare, BASF, Dow AgroSciences, Nufarm Australia, Bioglobal, EE Muir & Sons and IK Caldwell.

Providing a wide range of commercial consulting services to producers and industry including;

- ⇒ Contract research and extension for HAL. Projects; team leader in district codling moth control project, collaborator in a QDPI project on Alternaria control in apples, collaborator in Tasmanian project on woolly apple aphid control.
- \Rightarrow Contract research for major agrochemical firms developing efficacy and residue packages for the registration of new agricultural chemicals.
- ⇒ Integrated pest management services provided to Queensland's leading temperate fruit growers
- \Rightarrow Writing and publishing producer advisory newsletters and books, and industry journal articles.
- \Rightarrow Assisting producers with whole-of-farm plans and developing quality assurance programs.
- \Rightarrow Using soil and leaf testing to develop plant nutrition programs for producers.
- \Rightarrow Providing irrigation advice based on soil moisture monitoring.
- \Rightarrow Providing on-farm horticultural advice and telephone advisory services.
- \Rightarrow Developing and delivering technology transfer training for producers and industry workers.
- \Rightarrow Producing farm business plans for producers, banks and investors.
- \Rightarrow Assisting with industry benchmarking.
- \Rightarrow Conducting property purchase evaluations
- \Rightarrow Acting as an expert witness for litigation.
- \Rightarrow Preparing feasibility studies on new projects and horticultural investment.

June 1995 - May 1997. Senior Horticultural Consultant with Macro Agricultural Consultants, based in Stanthorpe. The Macro team of 10 independent agricultural experts consulting in horticulture, field crops and livestock in south-east Queensland.

1990 - June 1995. Research Horticulturist, Queensland Department of Primary Industries, based at Applethorpe. Leader of the apple variety improvement programme, co-operative research on pesticide reduction, orchard design/tree-training/rootstocks, integrated pest management, fruit thinning & apple chilling.

1988 - 1990. Horticultural Consultant. Principal of Orchard Services. Provided advice and services on production, post-harvest, marketing, farm management and new orchard development.

1984 - 1988. Extension Horticulturist, Queensland Department of Primary Industries, based at Stanthorpe. As part of a team of four extension officers provided a horticultural advisory service to 600 tree fruit, vine and vegetable producers.

1983 - 1984. Research Assistant, CSIRO Cunningham Laboratories, St. Lucia. Worked on soil-plant interactions in tropical field crops.

Research Publications

Improving apple and pear varieties in Australia, HRDC review by J.N. Cummins, 1992. Edited by S.J. Tancred.

New varieties on the drawing board and beyond. Australian Apple & Pear Growers technical conference, Adelaide, August 1992, Invited keynote speaker.

PVR Variety Public Notice, GB 63-43 Apple in *Plant Varieties Journal*, 1993, 6:15-24 by S. J. Tancred and A. G. Zeppa.

Thirty-seven apple varieties of Australian origin, in *Fruit Varieties Journal*, 1994, 48:118-25, by S. J. Tancred, A. G. Zeppa and J. N. Cummins.

The use of the PCR-RAPD technique in improving the plant variety rights description of a new Queensland apple cultivar, in *Australian Journal of Experimental Agriculture*, 1994, 34:665-667, by S. J. Tancred, A. G. Zeppa and G. C. Graham.

Comparison of field and glasshouse tests in screening of apple breeding progeny for resistance to black spot, (*Venturia inaequalis*), **in Queensland from 1985 to 1994**, in *Australasian Plant Pathology*, 1995, 24:243-248, by J. B. Heaton, S. R. Dullahide, S. J. Tancred, A. G. Zeppa and A. D. McWaters.

Advancement of the Australian disease resistant apple breeding program in cooperation with USA programs, in *Fruit Varieties Journal*, 1995, 49:152-157, By S. J. Tancred, J. N. Cummins, S. R, Dullahide, A. G. Zeppa and J. B. Heaton.

Four Australian apple cultivars with polygenic resistance to black spot, *in New Zealand Journal of Crop and Horticultural Science*, 1995, 23:267-271, by S. J. Tancred, J. B. Heaton, A. G. Zeppa and S. R Dullahide.

Heritability and patterns of inheritance of the ripening date of apples, in *HortScience*, 1995, 30:325-328 by S. J. Tancred, A. G. Zeppa, M. Cooper and J. K. Stringer.

Successful control of Codling Moth in apple orchards in Queensland using pheromone mating disruption. First National Conference of the Australian Society for Horticultural Science, Sydney Oct 1991

Disease management for apple black spot. First National Conference of the Australian Society for Horticultural Science, Sydney Oct 1991.

Professional Associations

Australian Institute of Agricultural Science and Technology member since 1983.

Australian Society of Horticultural Science member since the Society's formation in 1990.

A Certified Practising Agriculturist since the scheme's inception 1993.

A Qualified Person for the purposes of PBR with the Australian Plant Breeders Office.

Crop Consultants Queensland member.

Trained and accredited in the Incitec-Pivot Nutrient Advantage Advice crop nutrition program.

Deputy chair of the Stanthorpe Community Reference Panel for providing advice to the Queensland Government regarding the Border Rivers Water Resource Plan.

Technical member of the APAL taskforce on PQ issues relating to importation of apples into Australia.

Major Publications, Seminars, Conferences and Field Days

Major Advisory Publications

- June 2001 Horticultural Production and Water Use in the Stanthorpe Shire, produced for Stanthorpe Shire Council.
- Understanding and managing soils in the Stanthorpe and Rosenthal region. Dept of Natural Resources, 1997. Authored horticultural chapters.
- Stanthorpe Shire Vegetation Management Options, 1996. Community consultation report for Stanthorpe Shire Council and Landcare.
- National workshop on the implementation of integrated pest and disease management of pomefruit, Workshop Report, Stanthorpe 1996 by S.R. Dullahide and S. J. Tancred.
- Editor 1987 and 1995 Queensland Deciduous Fruit Spray Schedules.
- > Publisher and editor 1998 and 2001 Queensland Deciduous Fruit Spray Schedule.
- Author of a DPI farmnote series on apple tree nutrition, 1986 and 1991.

Major grower seminars organised

- > 1997 Orchard Services IAMA Apple Growers Production Seminar.
- 1993 Stanthorpe Apple Growers Workshop
- > 1991 Early Apple Fruit Varieties Evenings
- > 1990 The Consumer is Your Future Seminar
- > 1985 Stanthorpe Apple Seminar

Major field days organised

- > 1994 Alternative plant protection methods for apples.
- > 1987 Conducted a series of field days and farm walks developing hail netting.
- > 1986 Ran fruit industry development meetings to promote better post-harvest practices.

Major presentations delivered

- Managing apple trees under netting. Presentation at Australian Fresh Fruit Company (AFFCO) field day, Narre Warren June 2010.
- Optimising harvest maturity. Apple and Pear Australia (APAL) 2012 Future Orchard presentations in WA, SA, Vic and Tas January 2009.
- Protecting fruit from key pests. Australian Fresh Fruit Company Expo (AFFCO) Shepparton 30th May 2008.
- Regalis use in Australian apple orchards for the short, medium and long term. Apple and Pear Australia (APAL) national conference, Sydney, 24th august 2007.
- Regalis the first year's commercial experience. Australian Fresh Fruit Company (AFFCO) Expo Shepparton June 2006.
- Improved apple and stonefuit production. Australian Fresh Fruit Company Expo Shepparton 30th May 2006.
- New varieties on the drawing board and beyond. Australian Apple & Pear Growers national conference, Adelaide, August 1992.

Professional Travel

- Technical visit to Dow AgroScience's New Plymouth fruit research station, New Zealand. February 2010.
- Two day vocational visit to Pukekohe district, New Zealand. Hosted by Alpha Research, April 2008.
- Three day vocational visit to Purdue University, Indiana, USA. Hosted by Professor Jules Janick, November 2007.
- Four day vocational visit to Bolzano in northern Italy. Hosted by local horticultural advisor's organisation, August 2007.
- Participant in two week Australian volunteer aid project at St Jude's School Tanzania as representative of Rotary Club of Stanthorpe, July 2007
- Participant in two week Australian volunteer aid project in Fiji as representative of Rotary Club of Stanthorpe, June 2006.
- Three day vocational visit to Kent, UK. Hosted by horticulturalist from Adrian Scripps Ltd, November 2006.
- > Team leader for a six week Rotary Group Study Exchange to Austria in May-June 2005.
- Attended 10th International Workshop on Fire Blight, in Bologna, Italy, on behalf of the Australian Apple and Pear Limited, July 2004.
- Apple/wine grape industry study tour Southern Germany, northern Italy and France, July 2003: two week study of production and research. Engaged by BASF to attend tour with 12 horticulturalists as Australian apple industry specialist.
- Attended 9th International Workshop on Fire Blight, in Napier New Zealand, on behalf of the Australian Apple and Pear Growers Association, 8-12th October 2001.
- Italian apple industry study tour, July 2001: one week study of production, research and extension in the South Tyrol district of northern Italy.
- South African Novartis Forum member April 2000; 10 day personal development, professional training and study tour with 22 Australian and NZ agriculturists.
- New Zealand seminar, Feb. 2000; Syngenta fungicide technical discussions & market development.
- South Africa and USA; two week study tour inspecting temperate fruit production and marketing methods, August-Sept. 1998.
- USA and Canada; six week assignment in the USA east and west coast's and British Colombia apple districts working on HRDC plant breeding project, April-May 1993.
- New Zealand; ten-day tour of the apple production and research areas, April 1991.
- Frequent visits to Tasmania, NSW, Victoria, South Australia and Western Australia for professional meetings, field days and to visit research stations and client orchards.