Office of the Director-General

Queensland Government

Reference: 02282/09

Department of
Primary Industries and Fisheries

23 MAR 2009

Dr Colin Grant
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Dear Dr Grant

Biosecurity Australia Advice 2009/01 – 'Draft import risk analysis report for fresh apple fruit from the People's Republic of China'

I refer to the *Draft import risk analysis report for fresh apple fruit from the People's Republic of China* (draft IRA report) and your request for comments by 23 March 2009. The draft IRA report proposes that the importation of fresh apple fruit from China be permitted subject to specific quarantine measures.

The Department of Primary Industries and Fisheries (DPI&F) notes that Biosecurity Australia has identified 18 quarantine pests of apple fruit that require risk mitigation measures to reduce the risks to an acceptable level. The draft IRA report proposes a combination of risk management measures and operational systems to ensure the phytosanitary status of consignments.

The DPI&F has reviewed the draft IRA report and has made a number of recommendations as detailed in the attached document.

Thank you for the opportunity to comment on the draft IRA report. DPI&F will appreciate receiving a response on how the issues raised are to be addressed in any further review leading to the finalisation of this IRA.

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If you require any further information regarding this matter, please do not hesitate to contact Marcelle O'Brien on telephone 07 3239 3472 or email marcelle.o'brien@dpi.qld.gov.au.

Yours sincerely

Robert Setter
Director-General
Att

Queensland Government
Department of Primary Industries and Fisheries

Department of Primary Industries and Fisheries' response to the *Draft import risk analysis report for fresh apple fruit from the People's Republic of China*

Biosecurity Australia Advice 2009/01

March 2009

3.1 Assumptions used to estimate unrestricted risk

The Department of Primary Industries and Fisheries (DPI&F) acknowledges Biosecurity Australia's comments regarding fire blight. DPI&F remains concerned that the importation of apples from China creates a high-risk pathway for the entry of the fire blight pathogen, *Erwinia amylovora*, into Australia. DPI&F requests feedback in the future relating to proposed verification visits by Biosecurity Australia (BA) to nominated provinces to confirm that China remains free of fire blight.

4.3 Apricot weevil – *Rhynchites auratus*

4.3.4 Probability of spread

It is stated in the draft IRA report that endosulfan is registered for use on apples in Australia. This is the current status of endosulfan, however, it should be noted that the intention is to phase out the use of this chemical in Australia.

Pirimiphos-methyl is not registered for use on apples in Australia. Hence, significant research would be required prior to this pesticide being registered by the Australian Pesticide and Veterinary Medicines Authority (APVMA) for use in the event of an apricot weevil incursion in Australia.

Recommendation: That if the APVMA cannot assure BA that registration of pirimiphos-methyl for use as a control of *R. auratus* will be approved, then consideration of this chemical treatment should be removed from the draft IRA report.

4.17 Japanese apple rust – *Gymnosporangium yamadae*

4.17.2 Probability of entry

Probability of importation, Point 5, p.117:

Basidiospores 'will germinate only if a thin film of water is present on the fruit surface...'

Comment: This situation is very likely as fruit are brought up to room temperature, thus providing ideal conditions for spore germination.
Probability of distribution

The draft IRA report does not adequately take into account the fact that most packing houses in Australia are within, or very close to, apple orchards, increasing the probability of distribution.

Recommendation: That the 'Probability of distribution' of *G. yamadae* has been underestimated and should be increased to 'high'. As a consequence, the 'Probability of entry' of *G. yamadae* should be increased to 'moderate'.

4.17.5 Overall probability of entry, establishment and spread

Recommendation: That the 'Overall probability of entry, establishment and spread' of *G. yamadae* should be increased to 'moderate' as a consequence of the increase of 'Probability of entry' to 'moderate'.

4.18 Marssonina blotch – *Diplocarpon mali*

4.18.2 Probability of entry

Probability of distribution

Recommendation: Greater consideration should be given to the likelihood of infected, unsaleable fruit being disposed of into orchards at the back of packing sheds, where there are suitable host plants.

4.18.3 Probability of establishment

In reference to the statement (p.123) "The occurrence of suitable temperature and moisture conditions for spore germination and infection in some parts of Australia . . .", Queensland has climatic conditions that would be highly conducive for germination and infection, making the risk much higher than for the southern states. Queensland has significantly more than a "limited number" of host plants.

Recommendation: That 'Probability of establishment' of *D. mali* in Queensland be estimated as 'high' due to the suitability of the climate for disease germination and infection and availability of host plants.

4.18.4 Probability of spread

D. mali has a much higher risk of spread in Queensland than in the southern states due to the warmer, wetter climate. In addition, large volumes of leaf litter are carried over from season to season in Queensland orchards due to the very dry, cold winters. This leaf litter substantially increases the risk of spread in Queensland by maintaining relatively high levels of inoculum between seasons.

In addition, it is common practice to dispose of waste fruit by spreading it on the orchard floor and mulching it in using a slasher. This would be a very effective means of spreading inoculum from infected waste fruit in to the canopy of the trees and, at some times of the year, directly onto fruit.

Orchard sanitation by pruning and other labour intensive methods is very expensive and usually uneconomical in Australia. The effectiveness of these methods in Australia is also questionable due to the transient nature of seasonal workforces that are not highly trained e.g. in Queensland most growers rely on backpackers.

Recommendation: That 'Probability of spread' of *D. mali* in Queensland be estimated as 'high'.

4.19 Apple brown rot – *Monilinia fructigena*

4.19.3 Probability of establishment

The draft IRA report states that some parts of Australia have suitable conditions for spore germination and infection by the brown rot pathogen *M. fructigena*. DPI&F considers that all apple-producing regions in Australia would have a significant problem with brown rot should it become established in Australia. This is evidenced by the fact that apple growing areas also have stone fruit, and a recent survey of Australian stone fruit growers showed that brown rot (caused by *Monilinia fructicola* and *M. laxa*) was the disease that they had most difficulty controlling (Hetherington 2005).

Recommendation: That brown rot be considered as likely to be a significant problem in all apple-producing regions in Australia should it become established in Australia.

4.19.6 Consequences

Eradication, control etc.

The draft IRA report states that any attempt to eradicate *M. fructigena* would be difficult and costly. This is an understatement; especially as *M. fructigena* also infects stone fruit and would be impossible to differentiate from *M. fructicola* and *M. laxa* under field conditions. Therefore, eradication would have to encompass all three *Monilinia* species from apples, stone fruit and pears.

Recommendation: Further consideration be given to the wider implications of attempting to eradicate *M. fructigena* should there be an incursion.

Domestic trade

Recommendation: Further consideration be given to the effects of *M. fructigena* on the stone fruit and pear industries as trade restrictions would be placed on both these industries in addition to the apple industry.

4.20 European canker – *Neonectria ditissima* (formerly *Nectria galligena* and synonymous with *Neonectria galligena*)

Recommendation: It would have been useful to have included recent nomenclatural changes for this pathogen and to have provided a complete list of recently used synonyms. In particular:

- the name change from *Nectria galligena* to *Neonectria galligena* (Rossman *et al.* 1999)
- the determination that *Neonectria galligena* is the same as *Neonectria ditissima* (Castlebury *et al.* 2006).

4.21 Apple blotch – *Phyllosticta arbutifolia*

4.21.3 Probability of establishment

A point should be added to this section:

- The location of packing houses and disposal of unsaleable fruit in production areas increases the likelihood of pathogen entry and establishment in apple orchards.

Recommendation: That the 'Probability of establishment' of *P. arbutifolia* in Queensland be estimated as 'high' due to the suitability of the climate for disease establishment and availability of host plants.

4.24 Apple scar skin and apple dapple – *Apple scar skin viroid* (ASSVd)

4.24.3 Probability of establishment

The draft IRA report states that "Apple seeds normally only germinate after moist winter chilling and apple trees are unlikely to grow from discarded seed in northern Australia". The roadside verges of the Granite Belt in Queensland are lined with volunteer apples and pears, which are a considerable problem for local growers as they provide sources of inoculum for a range of endemic diseases.

Recommendation: That apple-producing areas of Queensland are not discounted when estimating probability of establishment of pests and diseases of apples.

4.24.4 Probability of spread

ASSVd is transmitted by seed (Hadidi *et al.* 1991), therefore increasing the risk of spread.

Recommendation: That 'Probability of spread' of ASSVd be estimated as 'low', not 'very low'.

4.24.5 Overall probability of entry, establishment and spread

Recommendation: That the 'Overall probability of entry, establishment and spread' should be increased to 'low' as a consequence of the increase of the 'Probability of spread' to 'low'.

5.2.1 Management of *Bactrocera dorsalis*

There is no mention of insecticide disinfestation treatments for Oriental fruit fly. While the question of residues in fruit makes physical disinfestation preferred, dipping and flood spraying with dimethoate are suitable disinfestation treatments for Queensland fruit fly.

Recommendation: Further consideration be given to disinfestation treatments for Oriental fruit fly.

5.2.4 Management of pathogens

According to the draft IRA report, China currently does not use disinfection treatments in their packing house water. Without chlorination of the water, the risks of entry of most of the pathogens reviewed in this draft IRA report would be greater through fruit harbouring viable inoculum, e.g in the calyx.

Recommendation: Disinfection treatments outlined on p 170 are essential.

References for inclusion in the draft IRA report

Castlebury LA, Rossman AY and Hyten AS 2006. Phylogenetic relationships of *Neonectria cylindrocarpon* on *Fagus* in North America. *Canadian Journal of Botany* 84: 1417-1433.

Eckert JW, Ogawa JM 1988. The chemical control of post-harvest diseases: deciduous fruits, berries, vegetables and root/tuber crops. *Annual Review of Phytopathology* 26: 433-469.

Hetherington SD 2005. Integrated Pest and Disease Management for Australian Summerfruit. The State of New South Wales, NSW Department of Primary Industries: Orange, NSW, Australia.

Huang J, Wu Y, Zhi H and Rozelle S 2008. Small holder incomes, food safety and producing, and marketing China's fruit. *Review of Agricultural Economics (Boston)* 30: 469-479.

Rossman AY, Samuels GJ, Rogerson CT and Lowen R 1999. Genera of Bionectriaceae, Hypocreaceae and Nectriaceae (Hypocreales, Ascomycetes). In 'Studies in Mycology' pp. 1-248 pp. (Centraalbureau voor Schimmelcultures (CBS): Baarn Netherlands).

General comments

Errors were found in the following references cited in the IRA.

Incorrect reference (journal is wrong):

Kim HR, Lee SH, Lee DH, Kim JS and Park JW (2006) Transmission of *Apple scar skin viroid* by grafting, using contaminated pruning equipment, and planting infected seeds. *Plant Pathology* **22**, 63-67.

Correct reference should be:

Kim HR, Lee SH, Lee DH, Kim JS and Park JW (2006) Transmission of *Apple scar skin viroid* by grafting, using contaminated pruning equipment, and planting infected seeds. *The Plant Pathology Journal* **22** (1), 63-67.

Incorrect reference (wrong year, the conference was in 2003, but the proceedings were published in 2004):

Sharma JN, Sharma A and Sharma P (2003) Outbreak of *Marssonina* blotch in warmer climates causing premature leaf fall problem of apple and its management. *Acta Horticulturae* **662**, 405-409.

Correct reference should be:

Sharma JN, Sharma A and Sharma P (2004) Outbreak of *Marssonina* blotch in warmer climates causing premature leaf fall problem of apple and its management. *Acta Horticulturae* **662**, 405-409.