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Date: 23 March 2008

Dear Louise

SUBMISSION TO THE DRAFT IMPORT RISK ANALYSIS FOR FRESH APPLE FRUIT FROM CHINA

I refer to the Biosecurity Australia advice 2009/01 dated 21 January 2009 inviting comments and submissions on the draft import risk analysis (IRA) report for fresh apple fruit from the People's Republic of China.

The Department of Agriculture and Food, Western Australia (the Department) has reviewed the draft IRA. The Department's comments contained in Attachment 1 focus primarily on regional differences in pest status and risk, as these issues are unlikely to be considered in any depth by stakeholders outside of the State.

I trust that you will find the attached comments and suggestions useful. The Department will be able to consider supporting this IRA only after satisfactory resolution of concerns and issues raised in the attached document and those that arise from further discussion.

For any further information on the technical issues raised in this submission please contact Simone Tuten on (08) 9368 3434 or stuten@agric.wa.gov.au

Yours sincerely

Shashi Sharma
DIRECTOR PLANT BIOSECURITY

Att.

PLANT BIOSECURITY

**DEPARTMENT OF AGRICULTURE AND FOOD, WESTERN
AUSTRALIA SUBMISSION TO THE DRAFT IMPORT RISK ANALYSIS
(IRA) FOR FRESH APPLE FRUIT FROM THE PEOPLE'S REPUBLIC
OF CHINA**

GENERAL COMMENTS

The Department of Agriculture and Food, Western Australia (the Department) advised Biosecurity Australia on 24 March 2006 in a letter from the then Deputy Director General Rob Delane to the General Manager Plant Biosecurity Louise van Meurs that *'As the revised draft IRA does not recommend the entry of New Zealand apples into Western Australia, the Department of Agriculture Western Australia (the Department) has not considered the document in depth. However, should a situation arise in future resulting in a review of the prohibition, the Department will need to consider existing policy and this IRA in its entirety. The Department will not be able to support any proposal to import apples into Western Australia until all concerns and identified issues have been addressed.'* This position remains current.

The Department will not be able to support this draft IRA until the Department has considered existing policy and the New Zealand IRA in its entirety, and until all issues and concerns are satisfactorily resolved.

In this submission to the draft import risk analysis for the fresh apple fruit from the People's Republic of China (draft IRA) the Department provides comment and draws Biosecurity Australia's attention to scientific, technical and other gaps in the data, misinterpretations and errors as requested on page iii of the draft IRA. The Department has focused upon regional aspects of the draft IRA.

Guidelines for conducting pest risk analysis

The Department is concerned to note that Biosecurity Australia no longer refers to the guidelines for pest risk analysis BA (2001). This is more disturbing given the finding in the Beale report that *'Currently there are several sets of draft guidelines extant and being used by Biosecurity Australia to conduct various Import Risk Analyses. Conceivably, this could affect Biosecurity Australia's ability to be consistent across Import Risk Analyses. It almost inevitably adds to uncertainty about methodologies used.'* The Department urges Biosecurity Australia to release the guidelines for public viewing or at the very least issue a copy to state and territory government departments.

Existing commercial production practices

In determining the unrestricted risk, Biosecurity Australia bases the probability of entry on *'the existing commercial production, packaging and shipping practices of the exporting country'*, the draft IRA details the existing commercial production practices in section 3 and *'these practices are taken into consideration by Biosecurity Australia when estimating the probability of entry'*. This is consistent with ISPM 11 (FAO 2007c) and the Department supports this approach.

One step in the packing house procedures described in section 3 of the draft IRA is the cleaning and/or washing process. The draft IRA indicates that the packing house

cleans fruit 'according to the requirements of the importing country, either through a process of washing or a process involving the cleaning of each individual apple with a pressurised air gun and other tools'. Biosecurity Australia did not clearly stipulate whether washing and/or the use of pressurised air was considered when determining the unrestricted risk. The Department requests clarification on this matter as it was not made clear in the draft IRA as it could have an impact upon our review of the risk assessments and risk mitigation measures.

Consultation

The Department considers that its involvement in the assessment of pests of regional concern would be consistent with the IRA handbook (2007) where states and territories have a special role in policy development, flowing from their responsibilities for managing animal and plant health within Australia. There is a partnership approach to managing risks, both of the movement of product into Australia or for trade within Australia. The Commonwealth and states commitment to this is contained in the 1995 *Memorandum of Understanding (MOU) between the Commonwealth and States/Territories on Animal and Plant Quarantine Measures*. The partnership approach is particularly important in the IRA process, as close cooperation at all stages of an IRA is needed to ensure that information pertinent to a specific state or territory is appropriately considered in the national risk analysis.

The 2007 Handbook acknowledges and recognises the partnership approach in section 2.2.2 with the statement '*State and territory governments play a vital role in the quarantine continuum. Biosecurity Australia and PIAPH work in partnership with state and territory governments to address regional differences in pest and disease status and risk within Australia, and develop appropriate sanitary and phytosanitary measures to account for those differences. Australia's partnership approach to quarantine is supported by a formal Memorandum of Understanding that provides for consultation between Australian Government and the state and territory governments.*'

In light of this it was therefore expected that Biosecurity Australia would consult with state and territory agencies on regional pest status and risk issues, in accordance with step 4 (risk analysis and report preparation) of the IRA process, which states that '*Relevant state and territory government agencies will be consulted on regional pest and disease status and risk*'. Biosecurity Australia did not consult with this Department over regional risk (likelihoods of entry, establishment or spread and consequence) issues for apple scab, codling moth or any other regional pest in the preparation of the draft IRA. It is not clear why Biosecurity Australia did not meet this important step in the IRA process. However, it is acknowledged that there was consultation with this Department over the pest status (presence/absence in Western Australia and presence on the pathway) of regional quarantine pests.

Pre-clearance inspection

The Department requests confirmation that Biosecurity Australia is proposing that AQIS would inspect and verify pest freedom for regional pests prior to export under the pre-clearance arrangement and that information relating to regional pests would be provided to the Department on a regular basis.

Risk assessment

The draft IRA states '*The distribution of [a pest] with a commodity after arrival in Australia, its establishment and spread in Australia, and the consequences it may cause will be the same for any commodity in which the species is imported into Australia. Accordingly there is no need to re-assess these components.*' in relation to *Bactrocera dorsalis*, *Diaspidiotus ostreaeformis*, *Pseudococcus calceolariae*, *Cydia pomonella* and *Grapholita molesta*. The Department accepts Biosecurity Australia's statement relating to spread and consequences; however, the Department questions the validity of the statement for distribution (and establishment, in some cases, depending upon which definition of distribution is used by Biosecurity Australia). The Department suggests that the assumption that distribution will remain the same for any commodity in which a pest is imported into Australia is flawed, for the following reasons:

- The potential exists for differences in the likelihood of distribution for the same commodity if there are differences in pre-export and transport conditions. For example, consider the potential and opportunities for a pest to transfer to a suitable host from apples shipped as bulk apples and retail ready pre-packed apples. This distinction was recognised by Biosecurity Australia in the final IRA for the importation of apples from New Zealand. for example '*Disease initiation was considered in the context of imported packed fruit, as well as fruit exported to Australia in bulk bins with final grading and packing carried out in Australia.*' The final IRA for NZ apples considered the differences between these two modes of trade when estimating the number of infested fruit arriving at each utility point by exposure group combination (page 202 of the NZ IRA).
- The potential exists for differences in the likelihood of distribution for the same commodity from different source areas. Differences in pre-export and transport conditions may affect the ability of a pest to transfer to a suitable host, for example the potential effect of waxing on the capacity of a pest to transfer to a suitable host.
- The potential exists for differences in the likelihood of distribution for different commodities from the same source area. For example, consider the scenario where a quarantine pest is associated with both apples and stonefruit. All other things being equal apples may be transported under conditions of cold storage whereas stonefruit are not. In this scenario consider the situation where cold storage may not kill the pest but the pest is less active at low temperatures, as a result the capacity for the pest to transfer to a suitable host may be reduced along the distribution pathway. As stonefruit is not subjected to cold storage the pest may be more active and therefore the capacity to transfer to a suitable host may be greater along the distribution pathway.
- The potential exists for differences in the likelihood of distribution for different commodities from different source areas. For example, longer transportation duration may result in weaker but still viable pests which may have a reduced capacity to transfer to a suitable host, when compared with the same pest subjected to a shorter period in transportation to Australia.
- As a commodity is defined as '*a type of plant, plant product, or other article being moved for trade or other purpose*' (FAO 2007c) it is conceivable that pests may have a greater potential for distribution when associated with some commodities than others, for example, a pest associated with seed for sowing

may have a high likelihood of distribution as they are already associated with a host; however the same pest associated with fresh fruit may have a comparatively reduced likelihood of distribution.

Consistency

There are a number of inconsistencies between this draft IRA and other recent risk analyses conducted by Biosecurity Australia. Inconsistencies detract from stakeholder confidence in the document and create difficulties when attempting to make comparisons with other IRAs and existing policy. The inconsistencies include fundamental differences such as varying definitions. For example, there are several definitions in use by Biosecurity Australia for distribution such as:

- in the final NZ apple IRA distribution is defined as '*The initiating step for the distribution scenario is the release of imported apples from the port of entry, while the last step is the pest being distributed (as a result of the processing, sale or disposal of these apple fruit) in a viable state to an endangered area and subsequently being transferred to a suitable host.*'
- In the Philippine banana IRA defined as '*The distribution pathway describes the steps in the movement of bananas within Australia, from the time of their release at the border (see Section 5.2.8) until the disposal of their waste.*' in that IRA exposure that is '*The term 'exposure' means that the pest from an infected or infested banana's waste has come in contact with a susceptible host plant in a sufficient dose to have the potential to infect or infest it.*' was assessed separately from distribution.
- In the draft IRA for Unshu mandarin from Japan and this draft IRA distribution was defined as '*the probability that the pest will be distributed, as a result of the processing, sale or disposal of the commodity, in the PRA area and subsequently transfer to a susceptible part of a host.*'

It should be noted that ISPM 11 (FAO 2007c) includes probability of transfer to a suitable host as the end point of entry.

Other inconsistencies can be found between risk assessments within this draft IRA. These have been mentioned in the entomology and pathology sections of this submission.

General comments to specific sections

1.1. Australia's biosecurity policy framework

In the interests of transparency the Department suggests that in addition to the definition of pest in ISPM5 (FAO 2007b) given in the DIRA, the relevant portion of ISPM 2 (FAO 2007a) which states '*The understanding of the term "pests" includes organisms that are pests because they directly affect cultivated/managed or uncultivated/unmanaged plants, indirectly affect plants, or indirectly affect plants through effects on other organisms*' should be provided.

The Department requests clarification of the statement that '*... thereby threatening Australia's unique flora and fauna, as well as those agricultural industries that are relatively free from serious pests.*' It appears as though the emphasis of Australia's biosecurity policy is placed upon Australia's unique flora and fauna, is this the intention?

Furthermore, how are agricultural industries that are '*relatively free from serious pests*' determined? What is the definition of the term '*serious pests*'? Is any consideration given to agricultural industries which are not relatively free from serious pests? This aim appears to be more restrictive than the objective of Australia's biosecurity policies and risk management measures contained within the Import Risk Analysis Handbook which states the objective is '*... the prevention or control of the entry, establishment or spread of pests and diseases that could cause significant harm to people, animals, plants and other aspects of the environment.*' Which statement is correct? Is it the intention of the policy expressed in the draft IRA to also consider people and other aspects of the environment?

1.2.7. Contaminating pests

In the interest of transparency the Department suggests that Biosecurity Australia clearly state what the existing operational procedures by AQIS are and how they address the risk posed by contaminating pests.

1.2.8. Next steps

The Department notes that Biosecurity Australia may consult informally with stakeholders. The Department hopes Biosecurity Australia will consult with states and territories to resolve any outstanding issues in a mutually agreeable manner.

The Department notes that it is Biosecurity Australia's intention to consult with state and territory governments on the proposed outcomes of the IRA. However, the Department is disappointed to read that this will occur only after Biosecurity Australia has prepared a provisional final IRA report and after the ESG have made recommendations. The Department finds this unacceptable as it fails to reflect the partnership approach described in the 2007 handbook. The 2007 handbook states '*State and territory governments play a vital role in the quarantine continuum. Biosecurity Australia and PIAPH work in partnership with state and territory governments to address regional differences in pest and disease status and risk within Australia, and develop appropriate sanitary and phytosanitary measures to account for those differences. Australia's partnership approach to quarantine is supported by a formal Memorandum of Understanding that provided for consultation between the Australian Government and the state and territory governments.*'

2.1. Stage 1: Initiation

The draft IRA states '*For pests that had been considered by Biosecurity Australia in other risk assessments and for which import policies already exist, a judgement was made on the likelihood of entry of pests on the commodity and whether existing policy is adequate to manage the risks associated with its import. Where appropriate, the previous policy has been adopted.*' Whilst this approach appears to be consistent with ISPM 11 (FAO 2007c), the Department has several concerns regarding this approach. What are the criteria on which a judgement is made? Where Biosecurity Australia has deemed it inappropriate to adopt the previous policy, has the previous policy been reviewed and will stakeholders be informed? How is the impact of increasing volume and therefore potentially increased pest numbers entering Australia considered?

Pest loading

A broader issue in relation to pest risk is the actual number of pests present, rather than the proportion of pests. The actual number of pests present is important in determining the risk associated with a consignment (Cannon 1998). If no pests are detected in the sample the 600 unit methodology is only capable of determining that the proportion of the pests in a consignment is less than 0.5% with a 95% confidence.

For pests that can reproduce asexually it is reasonable to assume that the risk is proportional to the number of pests — double the pests, double the risk. The situation can be different for a pest that requires mating pairs. For a low prevalence of a well-dispersed pest, the chances of a mating pair is proportional to the square of the number of pests, and so the risk is also proportional to the square of the number of pests — double the pests, quadruple the risk (Cannon 1998). It therefore follows that with larger consignments the risk is greater because more pests are present than in smaller consignments.

For many quarantine situations it is the absolute number, not the proportion of pests in the consignment that is important in determining risk. This would suggest that it would be best to have the sample size proportional to the consignment size, if the risk per consignment is to be the same (Cannon 1998). Furthermore pests such as codling moth which has the ability for diapause and synchronised emergence the total number of infested fruit imported over a certain time is of significantly more importance than for most other arthropods.

How has the risk posed by the absolute number of pests in consignments, in particular those that are large, been considered?

It is this number of pests that can have a direct bearing on the risk. Clearly a 10,000 unit consignment that has a pest infestation level of 0.4% (40 infested units) potentially poses a lower risk than a container load of fruit where there could be around 150,000 units with the same infestation level (600 infested units). Clear explanation is needed to justify an inspection method that is based on detecting a proportion of pests in a lot.

2.2.1. Pest categorisation

The Department supports the pest categorisation process described in this section and recognises that the described process is consistent with ISPM 11 (FAO 2007c); however, Biosecurity Australia has not adhered to this process when conducting the pest categorisation. Within the pest categorisation in Appendix A, Biosecurity Australia has included elements of the probability of entry when determining the pathway association. For example, elements of the assessment of the probability of entry included in Appendix A of the draft as justification for the absence of a particular organism's absence from the commodity pathway include the pest management, cultural and commercial procedures applied at the place of origin (application of plant protection products, handling, culling, roguing, grading). Furthermore, it is a concern that Biosecurity Australia appears to have made the assumption of 100% efficiency in packing house procedures in eliminating several of organisms from the pathway.

The Department requests that these organisms be assessed as outlined according to ISPM 11 (FAO 2007c) and section 2.2.1 of the draft IRA. The Department understands that a similar approach was undertaken with the New Zealand apple IRA in determining the likelihood of pathway association but in this case such

instances were restricted to old singular records regarding an organism's association with the host plant and did not contravene the processes as outlined in ISPM 11 (FAO 2007c).

Table 1: Organism where justification for the absence from the apple fruit pathway is based on elements associated with the probability of entry

	Higher Classification	Scientific name
1.	Coleoptera: Scarabaeidae	<i>Popillia quadriguttata</i> (Fabricius, 1787)
2.	Coleoptera: Scarabaeidae	<i>Proagopertha lucidula</i> (Faldermann, 1835)
3.	Hemiptera: Alydidae	<i>Riptortus pedestris</i> (Fabricius, 1775)
4.	Hemiptera: Cicadellidae	<i>Arboridia apicalis</i> (Nawa 1913)
5.	Hemiptera: Cicadellidae	<i>Cicadella viridis</i> (Linnaeus, 1758)
6.	Hemiptera: Cicadellidae	<i>Empoasca flavescens</i> (Fabricius, 1794)
7.	Hemiptera: Cicadellidae	<i>Nephotettix cincticeps</i> (Uhler, 1896)
8.	Hemiptera: Miridae	<i>Lygus lucorum</i> Meyer-Dür, 1843
9.	Hemiptera: Pentatomidae	<i>Dolycoris baccarum</i> (Linnaeus, 1758)
10.	Hemiptera: Pentatomidae	<i>Halyomorpha halys</i> Stål, 1855
11.	Hemiptera: Pentatomidae	<i>Halyomorpha picus</i> (Fabricius, 1794)
12.	Hemiptera: Pentatomidae	<i>Homalogonia obtusa</i> (Walker, 1868)
13.	Hemiptera: Pentatomidae	<i>Nezara antennata</i> Scott, 1874
14.	Hemiptera: Pentatomidae	<i>Plautia stali</i> Scott, 1874
15.	Hemiptera: Urostylidae	<i>Urochela luteovaria</i> Distant, 1881
16.	Hymenoptera: Vespidae	<i>Vespa mandarina</i> Smith, 1852
17.	Lepidoptera: Arctiidae	<i>Amsacta lactinea</i> (Cramer, 1777)
18.	Lepidoptera: Lasiocapidae	<i>Gastropacha quercifolia</i> (Linnaeus, 1758)
19.	Lepidoptera: Lycaenidae	<i>Celastrina argiolus</i> (Linnaeus, 1758)
20.	Lepidoptera: Noctuidae	<i>Amphipyra pyramidea</i> (Linnaeus)
21.	Lepidoptera: Noctuidae	<i>Eudocima tyrannus</i> (Guenée, 1852)
22.	Lepidoptera: Noctuidae	<i>Oraesia excavata</i> (Butler, 1878)
23.	Lepidoptera: Psychidae	<i>Clania minuscula</i> Butler
24.	Lepidoptera: Tortricidae	<i>Pandemis heparana</i> (Denis & Schiffermüller, 1775)
25.	Orthoptera: Acrididae	<i>Nomadacris japonica</i> (Bolivar, 1898)
26.	Orthoptera: Bradyporidae	<i>Deracantha onos</i> (Pallas, 1772)
27.	Orthoptera: Gryllidae	<i>Loxoblemmus doenitzi</i> Stein, 1881

	Higher Classification	Scientific name
28.	Orthoptera: Gryllidae	<i>Teleogryllus mitratus</i> Burmeister, 1838
29.	Orthoptera: Tettigoniidae	<i>Gampsocleis ussuriensis</i> Adelung, 1910

2.2.2. Assessment of the probability of entry, establishment and spread.

Biosecurity Australia recognises that 'the overall likelihood of entry will increase as time passes and the overall volume of trade increases'; however, it is not clear how Biosecurity Australia has taken into consideration the cumulative effect of pests associated with multiple pathways. The Department requests Biosecurity Australia to clarify this process.

The Department accepts the statement made in the draft IRA that 'if there are substantial changes in the volume and nature of the trade in specific commodities then Biosecurity Australia has an obligation to review the risk analysis and, if necessary, provide updated policy advice.' However, the Department questions how Biosecurity Australia deals with pests associated with several commodities and pathways and how the increased number of those pests associated with new pathways or increased volume in existing pathways are dealt with.

2.2.3. Assessment of potential consequences

Combination methodology

The Department has previously raised issues relating to the assessment of consequences; however, these issues remain unresolved. The Department is willing to discuss this and other matters with Biosecurity Australia. The current methodology for assessing consequences appears to be susceptible to outliers, an example using the data presented in the draft IRA may be the best means of illustrating this point. Using the consequence determination values proposed by Biosecurity Australia Table 2 below provides a summary of the consequence ratings for quarantine pests considered in the draft IRA.

Table 2: Summary of quarantine pests from the draft IRA for apples from China

Pest Name	Consequences						
	Direct		Indirect				
	PLH	OE	EC	DT	IT	ENC	Overall
<i>Amphitetranychus viennensis</i>	E	B	D	D	D	B	M
<i>Cenopalpus pulcher</i>	E	B	D	D	D	B	M
<i>Rhynchites auratus</i>	E	A	C	D	D	B	M
<i>Rhynchites heros</i>	E	A	C	D	D	B	M

<i>Bactrocera dorsalis</i>	E	C	F	E	E	D	H
<i>Diaspidiotus ostreaeformis</i>	D	A	C	B	C	B	L
<i>Lopholeucaspis japonica</i>	D	B	D	C	C	B	L
<i>Phenacoccus aceris</i>	D	B	D	D	C	B	L
<i>Pseudococcus comstocki</i>	D	B	D	D	C	B	L
<i>Pseudococcus calceolariae</i>	D	A	C	B	B	B	L
<i>Adoxophyes orana</i>	E	B	E	D	D	B	M
<i>Carposina sasakii</i>	E	B	E	D	E	B	M
<i>Cydia pomonella</i>	D	A	E	B	D	B	M
<i>Euzophera pyriella</i>	E	B	D	D	D	B	M
<i>Grapholita inopinata</i>	E	B	D	D	D	B	M
<i>Grapholita molesta</i>	E	A	E	B	D	B	M
<i>Spilonota albicana</i>	E	B	D	D	D	B	M
<i>Diplocarpon mali</i>	E	A	D	D	E	B	M
<i>Gymnosporangium yamadae</i>	D	B	D	D	E	B	M
<i>Monilinia fructigena</i>	E	B	E	E	D	B	M
<i>Phyllosticta arbutifolia</i>	D	A	D	D	E	B	M
Sooty blotch and flyspeck complex	D	B	D	A	A	B	L
Apple scar skin viroid	D	A	D	D	D	A	L

However, if rudimentary quantitative figures are assigned, in the absence of monetary values, for each score (for example A=1, B=2 etc.) and the values summed as in Table 3, the results raise several interesting points for discussion. Initial points for consideration are discussed below:

- i. The current methodology appears susceptible to the influence of extreme values. For example, whilst the summed (cumulative) total for the consequence section for *Rhynchites auatus*, *Rhynchites heros*, *Phenacoccus aceris* and *Pseudococcus comstocki* all equate to 19, the consequence rating for *R. auatus* and *R. heros* using the IRA methodology was determined to be 'moderate' whilst the other pests were rated as 'low'. This resulted from the presence of an 'E' (=5) for *R. auatus* and *R. heros*; and
- ii. Another example occurs where eight species have a summed total of 21; seven of which were assessed in the draft IRA to be 'Moderate' yet one, *Lopholeucaspis japonica*, was determined to be 'Low'. *L. japonica* was determined to have a consequence rating of 'low' due to the absence of an 'E' (=5) in the consequence assessment.

The Department suggests the methodology used to calculate consequences may need to be reviewed.

Table 3: Quantitative summary of quarantine pests from the draft IRA for apples from China

Pest Name	Consequences							
	Direct		Indirect					
	PLH	OE	EC	DT	IT	ENC	Overall	Value
<i>Amphitetranynchus viennensis</i>	5	2	4	4	4	2	M	21
<i>Cenopalpus pulcher</i>	5	2	4	4	4	2	M	21
<i>Rhynchites auratus</i>	5	1	3	4	4	2	M	19
<i>Rhynchites heros</i>	5	1	3	4	4	2	M	19
<i>Bactrocera dorsalis</i>	5	3	6	5	5	4	H	28
<i>Diaspidiotus ostreaeformis</i>	4	1	3	2	3	2	L	15
<i>Lopholeucaspis japonica</i>	4	2	4	3	3	2	L	21
<i>Phenacoccus aceris</i>	4	2	4	4	3	2	L	19
<i>Pseudococcus comstocki</i>	4	2	4	4	3	2	L	19
<i>Pseudococcus calceolariae</i>	4	1	3	2	2	2	L	14

<i>Adoxophyes orana</i>	5	2	5	4	4	2	M	22
<i>Carposina sasakii</i>	5	2	5	4	5	2	M	23
<i>Cydia pomonella</i>	4	1	5	2	4	2	M	18
<i>Euzophera pyriella</i>	5	2	4	4	4	2	M	21
<i>Grapholita inopinata</i>	5	2	4	4	4	2	M	21
<i>Grapholita molesta</i>	5	1	5	2	4	2	M	20
<i>Spilonota albicana</i>	5	2	4	4	4	2	M	21
<i>Diplocarpon mali</i>	5	1	4	4	5	2	M	21
<i>Gymnosporangium yamadai</i>	4	2	4	4	5	2	M	21
<i>Monilinia fructigena</i>	5	2	5	5	4	2	M	23
<i>Phyllosticta arbutifolia</i>	4	1	4	4	5	2	M	20
Sooty blotch and flyspeck complex	4	2	4	1	1	2	L	14
<i>Apple scar skin viroid</i>	4	1	4	4	4	1	L	18

3.3.5. Post-harvest

The Department requests Biosecurity Australia to provide further details of all requirements orchards need to meet to be registered by CIQ.

3.3.6. Packing house

It is unclear whether washing and/or the use of pressurised air was considered when determining the unrestricted risk. The Department requests that Biosecurity Australia provides clarification.

When conducting the unrestricted risk assessments what length of time did Biosecurity Australia anticipate the apples would spend in transportation from China to Australia?

4. Pest risk assessments for quarantine pests

The Department accepts that Biosecurity Australia has clearly stated that some existing policies were developed before the introduction of the current risk assessment method.

The draft IRA states that there are some examples of existing policies where Biosecurity Australia has determined that '*there is no change to the risk ratings in previous assessments*' and have included apple scab as an example. The Department reiterates that it will be unable to accept the risk assessments where outstanding issues pertaining to the original existing policy remain unresolved. As always the Department is willing to discuss these matters with Biosecurity Australia with an aim of reaching a mutually agreeable resolution to any identified issues. With respect to quarantine pests where the existing policy is based upon the NZ apple IRA there are several unresolved issues. The Department's submission to the NZ apple IRA has been attached and includes unresolved issues (ATTACHMENT 2).

Editorial comments

Page 15 remove 'n' from Australian in '*Apples are produced commercially in six states of Australian*'.

Page 19 revise sentence '*... in the PRA area and subsequently transfer to a ...*'

Page 25 consider revising sentence from '*The conclusions from pest risk assessment are used to decide...*' to '*The conclusions from pest risk assessments are used to decide...*'

Page 27 insert a space between '*...Zeitner 2006*' and 'and'

Page 223 '*Pseudocercospora sp*' potential for being on the pathway is shaded incorrectly.

ENTOMOLOGY COMMENTS

Summary points

- 22 organisms associated with apple production in China have not been listed in the draft.
- Elements of the probability of entry have been included in determining the presence on the mature fruit pathway and have lead to the exclusion of 29 organisms.
- Lack of consistency between pest risk assessments
- Conflicting information presented within specific pest risk assessments.
- Concerns regarding area freedom proposals for *Bactrocera dorsalis*.

Comments regarding the pest list

A review of the scientific literature and online databases has established that 22 organisms have not been listed in the draft IRA or are of concern to Western Australia and are associated with apple fruit production in the People's Republic of China; these organisms are included in Table 4. The Department recognises that the draft IRA requires that an organism is present in China but not necessarily from the main apple production areas due to the lack of evidence of official control (for example, *Rhynchites auratus* and *Euzophera pyriella*) or effective official control (for example *Bactrocera dorsalis*). The Department has followed this direction when making the following comments.

Of the 22 organisms listed, 20 organisms are of potential quarantine concern to Western Australia. The Department requests that these 20 organisms be assessed to determine their quarantine status as outlined in ISPM 11 (FAO 2007c), that is '*A pest*

of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled' and that these pests be further assessed should they fulfil the requirements of a quarantine pest.

Table 4: Invertebrate species associated with apple production in China but not listed in Appendix A of the draft or have been listed and are of concern to Western Australia.

	Scientific name	Reference	Comment
1.	<i>Aculus schlechtendali</i> (Nalepa, 1891) [Acarina: Eriophyidae]	Li & Cai (1996)	Recorded from WA
2.	<i>Anoplophora nobilis</i> (Ganglbauer) [Coleoptera: Cerambycidae]	Shang <i>et al.</i> (2000)	Not recorded from WA
3.	<i>Anthribus niveovariegatus</i> (Reolofs) [Coleoptera: Anthribidae]	Deng (1985)	Not recorded from WA
4.	<i>Argyresthia assimilis</i> [Lepidoptera: Yponomeutidae]	Sun & Ma (1999)	Not recorded from WA
5.	<i>Ceroplastes floridensis</i> Comstock, 1881 [Hemiptera: Coccidae]	BA (2009)	Not recorded from WA
6.	<i>Chilocorus rubidus</i> Hope [Coleoptera: Coccinellidae]	Li (1988)	Not recorded from WA
7.	<i>Didesmococcus koreanus</i> Borchsenius, 1955 [Hemiptera: Coccidae]	Zhang <i>et al.</i> (2001)	Not recorded from WA
8.	<i>Eotetranychus pruni</i> (Oudemans, 1931) [Acarina: Tetranychidae]	Deng <i>et al.</i> (1990)	Not recorded from WA
9.	<i>Eotetranychus</i> sp. [Acarina: Tetranychidae]	Chai <i>et al.</i> (1990)	Many species not recorded from WA
10.	<i>Ericerus pela</i> (Chavannes, 1848) [Hemiptera: Coccidae]	Deng (1985)	Not recorded from WA
11.	<i>Eulecanium excrescens</i> (Ferris, 1920) [Hemiptera: Coccidae]	Deng (1985)	Not recorded from WA
12.	<i>Hishimonus sellatus</i> Uhler [Hemiptera: Cicadellidae]	Sun <i>et al.</i> (1988)	Not recorded from WA
13.	<i>Metabolus flavescens</i> Brenske [Coleoptera: Scarabaeidae]	Yang (1991)	Not recorded from WA
14.	<i>Galendromus occidentalis</i> (Nesbitt, 1951) [Acarina: Phytoseiidae] as <i>Metaseiulus occidentalis</i>	Deng <i>et al.</i> (1990)	Recorded from WA
15.	<i>Orthosia incerta</i> Hufnagel 1767 [Lepidoptera: Noctuidae]	Ma & Cui (1985)	Not recorded from WA
16.	<i>Gametis forticula kotoensis</i> Nomura, 1959 [Coleoptera: Cetoniidae] as <i>Oxycetonia jucunda</i>	Li <i>et al.</i> (2005)	Not recorded from WA
17.	<i>Parlatoria yanyuanensis</i> Tang, 1984 [Hemiptera: Diaspididae]	Lu & Wu (1988)	Not recorded from WA
18.	<i>Proagopertha lucidula</i> Fald. [Coleoptera: Scarabaeidae]	Li <i>et al.</i> (2005)	Not recorded from WA

	Scientific name	Reference	Comment
19.	<i>Pyramidotettix mali</i> Yang [Hemiptera: Cicadellidae]	Li (1988)	Not recorded from WA
20.	<i>Pyramidotettix minuta</i> sp. n. [Hemiptera: Cicadellidae]	Yang (1965)	Not recorded from WA
21.	<i>Tarsonemus confusus</i> Ewing [Acarina: Tarsonemidae]	Hao <i>et al.</i> (2007)	Not recorded from WA
22.	<i>Zeuzera coffeae</i> Nietner 1861 [Lepidoptera: Cossidae]	Tang <i>et al.</i> (1980)	Not recorded from WA

Comments regarding the Pest Categorisation process

The Department is concerned that the pest categorisation has not been undertaken according to international standards as set out in ISPM 11 (FAO 2007c). Although section 2.1. of the draft IRA correctly identifies the procedures for undertaking the pest categorisation process in accordance with ISPM 11 (FAO 2007c), the process undertaken in Appendix A of the draft IRA includes a process of determining if the pest is likely to be associated with mature, fresh harvested fruit which appears not to follow the process described in section 2.1 of the draft IRA and is not consistent with ISPM 11 (FAO 2007c).

The concern the Department has with the approach taken in Appendix 2 of the draft IRA is that for some organisms (Table 5), the draft IRA establishes a particular organism's absence on the pathway with elements of the pest risk assessment process; namely the assessment of the probability of entry. Elements of the assessment of the probability of entry included in Appendix A of the draft IRA as justification for the absence of a particular organism's absence from the commodity pathway include the pest management, cultural and commercial procedures applied at the place of origin (application of plant protection products, handling, culling, roguing, grading). Also of concern is the assumption of 100% efficiency in packing house procedures to eliminating several of these organisms.

The Department requests that these organisms be assessed as outlined according to ISPM 11 (FAO 2007c). The Department understands that a similar approach was undertaken with the New Zealand Apple IRA in determining the likelihood of being present on the mature fruit pathway but in this case such instances were restricted to old singular records regarding an organism associated with the host plant and did not contravene the processes as outlined in ISPM 11 (FAO 2007c).

Table 5: Organisms where justification for the absence from the apple fruit pathway is based on elements associated with the probability of entry

	Higher Classification	Scientific name
1.	Coleoptera: Scarabaeidae	<i>Popillia quadriguttata</i> (Fabricius, 1787)
2.	Coleoptera: Scarabaeidae	<i>Proagopertha lucidula</i> (Faldermann, 1835)
3.	Hemiptera: Alydidae	<i>Riptortus pedestris</i> (Fabricius, 1775)
4.	Hemiptera: Cicadellidae	<i>Arboridia apicalis</i> (Nawa 1913)
5.	Hemiptera: Cicadellidae	<i>Cicadella viridis</i> (Linnaeus, 1758)

6.	Hemiptera: Cicadellidae	<i>Empoasca flavescens</i> (Fabricius, 1794)
7.	Hemiptera: Cicadellidae	<i>Nephotettix cincticeps</i> (Uhler, 1896)
8.	Hemiptera: Miridae	<i>Lygus lucorum</i> Meyer-Dür, 1843
9.	Hemiptera: Pentatomidae	<i>Dolycoris baccarum</i> (Linnaeus, 1758)
10.	Hemiptera: Pentatomidae	<i>Halyomorpha halys</i> Stål, 1855
11.	Hemiptera: Pentatomidae	<i>Halyomorpha picus</i> (Fabricius, 1794)
12.	Hemiptera: Pentatomidae	<i>Homalogonia obtusa</i> (Walker, 1868)
13.	Hemiptera: Pentatomidae	<i>Nezara antennata</i> Scott, 1874
14.	Hemiptera: Pentatomidae	<i>Plautia stali</i> Scott, 1874
15.	Hemiptera: Urostylidae	<i>Urochela luteovaria</i> Distant, 1881
16.	Hymenoptera: Vespidae	<i>Vespa mandarina</i> Smith, 1852
17.	Lepidoptera: Arctiidae	<i>Amsacta lactinea</i> (Cramer, 1777)
18.	Lepidoptera: Lasiocapidae	<i>Gastropacha quercifolia</i> (Linnaeus, 1758)
19.	Lepidoptera: Lycaenidae	<i>Celastrina argiolus</i> (Linnaeus, 1758)
20.	Lepidoptera: Noctuidae	<i>Amphipyra pyramidea</i> (Linnaeus)
21.	Lepidoptera: Noctuidae	<i>Eudocima tyrannus</i> (Guenée, 1852)
22.	Lepidoptera: Noctuidae	<i>Oraesia excavata</i> (Butler, 1878)
23.	Lepidoptera: Psychidae	<i>Clania minuscula</i> Butler
24.	Lepidoptera: Tortricidae	<i>Pandemis heparana</i> (Denis & Schiffermüller, 1775)
25.	Orthoptera: Acrididae	<i>Nomadacris japonica</i> (Bolivar, 1898)
26.	Orthoptera: Bradyporidae	<i>Deracantha onos</i> (Pallas, 1772)
27.	Orthoptera: Gryllidae	<i>Loxoblemmus doenitzi</i> Stein, 1881
28.	Orthoptera: Gryllidae	<i>Teleogryllus mitratus</i> Burmeister, 1838
29.	Orthoptera: Tettigoniidae	<i>Gampsocleis ussuriensis</i> Adelung, 1910

Comments to specific organisms

Oystershell scale – *Diaspidiotus ostreaeformis*

The Department is concerned at the apparent lack of consistency in the probability of entry assessment of the two hard scales Oystershell scale (*Diaspidiotus ostreaeformis*) and pear white scale (*Lopholeucaspis japonica*) which appear to have the same biological characteristics in that:

- Both organisms are present in a major apple export producing province
- Both species attack apple, *D. ostreaeformis* more so than *L. japonica*

- Nymphs and adults of both organisms are found on leaves and also on the bark of branches and sometimes the fruit
- As both organisms settle and stick on the fruit, grading and packing procedures would not be effective in the removal of these organisms.
- Both are of a similar small size *D. ostreaeformis* 1.3mm dia., *L. japonica* 1.5 to 2mm dia. making both organisms difficult to detect, especially at low population levels.

The Department requests that *D. ostreaeformis*, a pest of regional concern for Western Australia be assessed as having the same probability of entry as *L. japonica*, that is a 'High' Probability of Entry. The Department acknowledges that in reassessing the probability of entry of *D. ostreaeformis* to 'High' would not change the unrestricted risk estimate; however, it would add value to the scientific rigour of the assessment.

Summer fruit tortrix – *Adoxophyes orana*

The Department is concerned at the apparent duality of information provided regarding the assessment of the probability of entry for this organism. Specifically, the assessment indicates that *A. orana* can cause damage to more than 50% of fruit, yet in the closing statement indicates that larval stages are rarely associated with the fruit. The Department suggests that this duality be rectified as this would add value to the scientific rigour of the assessment.

Codling moth – *Cydia pomonella*

The Department has concerns with the statement that codling moth is restricted to the eastern province of Xinjiang and some areas of Gansu province as the recent report of Zhang *et al.* (2006) indicates that codling moth is a leading pest of apples in Shanxi province. The Department requests that the draft be updated to reflect this report and to ensure that codling moth is absent from adjacent provinces such as Shanxi which the draft indicates as a major apple exporting province.

Comments to the proposed phytosanitary measures

The Department is concerned at the lack of conviction Biosecurity Australia has regarding the area freedoms in place for *Bactrocera dorsalis* as indicated in the risk assessment for this organism i.e. '*Bactrocera dorsalis may be introduced into apple producing areas in the north of China through human movement of fruit fly-infested produce as there are limited official control measures...*'. The Department expects that for any area freedom proposal put in place for the risk management of this organism that adequate official control measures will be put in place in accordance with ISPM No. 4: *Establishment of pest free areas* (FAO 2006a) and ISPM No. 10: *Requirements for the establishment of pest free places of production and pest free production sites* (FAO 1999) and more specifically in ISPM No. 26: *Establishment of pest free areas for fruit flies (Tephritidae)* (FAO 2006b).

Although the Department accepts the proposed condition in relation to the invertebrate pest organisms, the Department would need to agree with the methodology to achieve these measures before initiating the legislative processes required to implement the recommendations of this Import Risk Analysis.

PATHOLOGY COMMENTS

General comments

Department of Agriculture, Western Australia's submission –

The draft IRA did not contain adequate pest data sheets. The Department requests that Biosecurity Australia includes all the data pest sheets in this draft IRA and in future draft IRAs.

The Department requests Biosecurity Australia to investigate the probable risk of importation of Italian root stock and bud wood into China that could potentially be infected with *Erwinia amylovora* (the causal agent of fireblight).

Pest categorisation process

A review of the scientific literature and online databases has identified 25 plant pathogens exotic to Western Australia known to be associated with apples in China. The Department requests that these 25 pathogens be assessed to determine their quarantine status as outlined in ISPM 11 (FAO 2007c).

Table 6: Plant pathogen species associated with apple production and present in China but not listed in Appendix A of the draft

	Organism Name	Reference to host and origin	Potential quarantine concern for WA (absence from WA)
1.	Apple fruit crinkle viroid	CAB International (2009)	Yes
2.	Apple green crinkle disease	CAB International (2009)	Yes
3.	<i>Armillaria mellea</i>	CAB International (2009)	Yes
4.	<i>Botryosphaeria dothidea</i>	CAB International (2009)	Yes
5.	<i>Cryphonectria parasitica</i>	CAB International (2009)	Yes
6.	<i>Cytospora personata</i>	Zhang (1989)	Yes
7.	<i>Leptosphaeria coniothyrium</i>	CAB International (2009)	Yes
8.	<i>Gibberella acuminata</i>	CAB International (2009)	Yes
9.	<i>Gibberella tricineta</i>	CAB International (2009)	Yes
10.	<i>Gleosporium fructigenum</i>	Wang <i>et al.</i> (2007)	Yes
11.	<i>Gluconobacter oxydans</i>	CAB International (2009)	Yes
12.	<i>Helicotylenchus dihystera</i>	CAB International (2009)	Yes
13.	<i>Macrophoma kuwatsukai</i>	Jia (1994) Zhao (1998)	Yes
14.	<i>Nectria cinnabarina</i>	CAB International (2009)	Yes
15.	<i>Neonectria galligena</i>	CAB International (2009)	Yes
16.	<i>Phanerochaete salmonicolor</i>	CAB International (2009)	Yes
17.	<i>Phomopsis prunorum</i>	Zhang <i>et al.</i> (2008)	Yes

	Organism Name	Reference to host and origin	Potential quarantine concern for WA (absence from WA)
18.	<i>Phyllachora pomigena</i>	Wang <i>et al.</i> (2007) Zhang <i>et al.</i> (2008) Jia (1994)	Yes
19.	<i>Pratylenchus loosi</i>	CAB International (2009)	Yes
20.	<i>Pseudomonas syringae</i>	CAB International (2009)	Yes
21.	<i>Rubus ellipticus</i>	CAB International (2009)	Yes
22.	<i>Tobacco necrosis virus</i>	CAB International (2009)	Yes
23.	<i>Tomato ringspot virus</i>	CAB International (2009)	Yes
24.	<i>Valsa mali</i>	CAB International (2009)	Yes
25.	<i>Xylaria polymorpha</i>	Luan & Wen (2004)	Yes

Further comments regarding the pest categorisation process include

- *Diaporthe eres*: the draft lists this pathogen as present in New South Wales. It should be noted that this pathogen is also known to occur in Western Australia (Shivas 1989).
- *Diaporthe perniciosa*: this pathogen is exotic to Western Australia. The APPD records for Western Australia refer to two Post Entry Quarantine detections. The infected trees were not released from Post Entry Quarantine but were destroyed. The Department requests that this pathogen be considered further.
- *Kalmusia coniothyrium*: this pathogen is exotic to Western Australia. The Department requests that this pathogen be considered further.
- *Monilinia mali*: this pathogen is exotic to Western Australia. The Department requests that this pathogen be considered further.
- *Pezicula malicorticis*: this pathogen is exotic to Western Australia. Studies of all isolates kept in the Department culture collection undertaken in 2004 proved that the APPD records were invalid for this pathogen. The Department requests that this pathogen be considered further.
- Tomato ringspot virus: this virus is exotic to Western Australia. The Department requests that this pathogen be considered further.
- *Fusarium camptoceras*: the draft IRA states that it is unlikely for this pathogen to be on the pathway (mature apple fruit) even though this pathogen is known to affect fruit and stored fruits (Roy *et al.* 1977;

Sharma & Siddiqui 1979). The Department requests that this pathogen be considered likely to be on the pathway and be considered further.

Pest risk assessments

Japanese apple rust (*Gymnosporangium yamadae*)

Probability of importation

- The draft IRA states that the '*basidiospores are unlikely to survive on apple fruits stored at low temperature*' but no evidence supporting this statement is presented. Germination studies undertaken by Fukushi (1925) showed that the basidiospores could survive sub-zero temperatures. It is therefore very likely that most basidiospore would survive on apple fruits stored at low temperatures.
- The draft IRA failed to recognize that aeciospores could also be present on the apples and could survive the cold storage period. Fukushi (1925) showed that not only could aeciospores survive cold temperatures but that exposure to winter conditions or cooling in the refrigerator induced them to germinate more readily.
- It is stated that the '*spores on the fruit surface would be eliminated during packing house processes*'. Washing or manual cleaning using air pressure guns will have no effect on symptomless infected fruits.
- The draft IRA states that no additives (i.e. chlorine or any other disinfectant) are usually used and that the water is changed at least daily. Those aeciospores removed have an opportunity to infest clean fruit therefore washing/air brushing will have either no effect and may even provide an opportunity to increase the number of infested apples.
- "On *Juniperus* and *Sabina* spp., *G. yamadae* can be latent during winter and may not be detectable at pre-export inspection of these plants. However, infection of apple trees does not persist after infected leaves or fruits have fallen in the dormant stage". This paragraph is not relevant to 'Probability of importation'.

Probability of distribution

- The draft IRA states that the '*basidiospores are unlikely to survive on apple fruits stored at low temperature*' but no evidence supporting this statement is presented. Germination studies undertaken by (Fukushi 1925) showed that the basidiospores could survive sub-zero temperatures. It is therefore very likely that most basidiospore would survive on apple fruits stored at low temperatures.
- Fukushi (1925) showed that not only aeciospores could survive cold temperatures but that exposure to winter condition or cooling in the refrigerator induced them to germinate more readily.

Marssonina blotch (*Diplocarpon mali*)

Probability of importation

- The draft IRA failed to mention that Sharma *et al.* (2003) reported that asymptomatic fruits started to develop lesions during transit or while in storage. It clearly can not be assumed that all infected fruits will be rejected during the packing house processes. The Department suggests the likelihood to be changed to 'Moderate'.

Comments referring to the risk management measures for quarantine pests to Australia

Management of European canker (*Neonectria ditissima*)

Option 1: Pest free areas

- As stated in the draft, systems would need to be put in place by AQSIQ to establish, maintain and verify that *N. ditissima* does not occur within the proposed area. This may not be achievable as (a) European canker has been reported throughout China's apple production areas and (b) maintenance of pest free areas may not be technically feasible.
- A typographical error appears to have been included in the draft regarding the spread of European canker as reference has been made to "New Zealand" instead of "China".

Option 2: Pest free places of production

- Systems would need to be put in place by AQSIQ to establish, maintain and verify that *N. ditissima* does not occur within the proposed places of productions. This may not be achievable as (a) European canker has been reported throughout China's apple production areas and (b) maintenance of pest free places of production may not be technically feasible.

Management of *Diplocarpon mali*, *Gymnosporangium yamadae*, *Monilinia fructigena*, *Phyllostica arbutifolia*, sooty blotch and flyspeck fungi (SBSF)

Orchard control and surveillance

- The designated areas in which the registered orchards fall need to be fully defined. For example: What is the distance between the nearest occurrence of one of the diseases of concern (e.g. brown rot)? Will there be a disease-free buffer zone and movement restriction requirements? Can registered and unregistered orchard adjoin each other?
- The draft IRA states that registered growers would implement an orchard control program. Details of the pathogen control program would need to be provided to DAFF by AQSIQ before trade commenced. The Department cannot see how scientific and technical comments can be provided on this proposed orchard control program as it was not provided with the draft IRA.
- The draft IRA states that '*AQSIQ/CIQ would be responsible for ensuring that export apple growers are aware of diseases of quarantine concern to Australia, field sanitation and control measures*'. No details were provided regarding the proposed field sanitation and control measures.

- Would DAFF be responsible for auditing export apple growers to ensure compliance? What would be the consequences of non-compliance?
- *'Monitoring/detection surveys for diseases that require orchard management measures must be conducted regularly by AQSIQ/CIQ in orchards registered for export to verify the effectiveness of the measures'* No specific details were provided regarding the diseases of concerns and the proposed orchard management measures. There needs to be some definition of acceptable level, frequency, intensity, diagnostic methods, records keeping, reporting, etc.
- The draft IRA states that AQSIQ would be required to inspect all export orchards prior to removal of bags and harvest for *D. mali*, *G. yamadae*, *M. fructigena*, *P. arbutifolia* and SBFS fungi. No details were provided regarding the intended protocol used to conduct these inspections.
- The draft IRA should identify the actions AQSIS/CIQ and DAFF will take should any of these pathogens be detected during the proposed inspections.
- The Department would prefer the removal of the juniper hosts (*Juniperus* spp. and *Sabina* spp.) of *G. yamadae*, since no evidence was provided to demonstrate the effectiveness of using a chemical control program to control this pathogen on these hosts.

Fruit bagging

- Insufficient evidence has been provided regarding the effectiveness of bagging apples to control *D. mali*, *G. yamadae*, *M. fructigena*, *P. arbutifolia* and SBFS fungi. The two references cited, Zhang (2006) and Zhang (2007) refer to two Masters Degree theses. Information arising from papers published in International refereed journals would be preferable.
- Bagging of fruit is a key component of the risk mitigation however there appears to be no provision for verification that the bags are applied at the time specified. There is also no provision for verification of the integrity of the bags from bagging until outer bag removal. Climatic conditions such as storms, hail, strong winds and small animals could indeed rupture the bags and create point of entry for the pathogens of concern.
- The draft IRA does not provide any information regarding the proposed *'disease control measures (including fungicide sprays) that would need to be applied to manage each of the quarantine pathogens prior to bagging'*. The Department cannot see how comments can be provided on the proposed disease control measures as they were not provided in the draft IRA.
- The draft IRA states that AQSIQ would need to ensure that registered export orchards are free of the pathogens that can infect mature apples (i.e., after bag removal) however no specific or measures/protocols were provided.

Disinfection treatment in the packing house

- The draft should clearly state that removal of the inner bags several weeks before harvest may allow infection of apple fruit by *M. fructigena* and *G. yamadae*.
- It is proposed that all apples for export to Australia be subjected to a 500 ppm available chlorine dip for five minutes. The draft IRA states that this treatment has been shown to remove sooty blotch and flyspeck from fruit (Hendrix 1991). This statement is misleading. In fact, the publication revealed that the treatment would only reduce the incidence of flyspeck from 100 to 27%.
- Hendrix (1991) reported on the effect of the chlorine dipping on *Gloeodes pomigena* (a causal agent of sooty blotch) and *Zygophiala jamaicensis* (a causal agent of flyspeck) only. The potential effect of the proposed treatment on the other causal agents of sooty blotch and flyspeck known to be present in China is unknown.
- Chlorine dips would probably only kill spores present on external surfaces. The treatment would only be effective if concentration is maintained. Maintaining chlorine concentration and pH in dump tanks is a difficult task.
- Would chlorine dips be mandatory? The draft IRA stated (under 3.3.6 Packing house) that in China, apples are washed using clean potable water, usually with no additives.

Comments referring to the risk management measures for quarantine pests for Western Australia

Management for *Venturia inaequalis*

- The Department agrees that bagging of fruits would not be effective to reduce the risk of apple to an acceptable level.
- The draft IRA indicates that two options to reduce risks were evaluated in the New Zealand apple IRA in detail. These were the sourcing of fruit from: (i) pest free areas and; (ii) pest free places of production. The draft IRA concludes that these options can equally be applied to apples from China. The Department could not find any reference to these two options in the New Zealand apple IRA. In fact the New Zealand apple IRA stated that no satisfactory risk management procedures could be identified for apple scab disease. It was therefore proposed that imports from New Zealand apples into Western Australia not be permitted.

Option 1: Pest free areas

- As stated in the draft IRA, systems would need to be put in place by AQSIQ to establish, maintain and verify that *V. inaequalis* does not occur within the proposed area. This may not be achievable as: (a) apple scab has been reported throughout China's apple production areas and; (b) maintenance of pest free areas may not be technically feasible.

- A typographical error appears to have been included in the draft regarding the spread of European canker as reference has been made to “New Zealand” instead of “China”.

Option 2: Pest free places of production and pest free productions sites

- Systems would need to be put in place by AQSIQ to establish, maintain and verify that *V. inaequalis* does not occur within the proposed places of productions. This may not be achievable as; (a) apple scab has been reported throughout China’s apple production areas and; (b) maintenance of pest free places of production and pest free production sites may not be technically feasible.

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Date: 24 March 2006

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Dear Louise

**COMMENTS ON THE REVISED DRAFT IMPORT RISK ANALYSIS REPORT FOR
APPLES FROM NEW ZEALAND**

I refer to Biosecurity Australia Policy Memorandum 2005/20 dated 1 December 2005 inviting comments on the revised draft import risk analysis report for apples from New Zealand.

As the revised draft IRA does not recommend the entry of New Zealand apples into Western Australia, the Department of Agriculture Western Australia (the Department) has not considered the document in depth. However, should a situation arise in future resulting in a review of the prohibition, the Department will need to consider existing policy and this IRA in its entirety. The Department will not be able to support any proposal to import apples into Western Australia until all concerns and identified issues have been addressed.

The Department would like to draw Biosecurity Australia's attention to recent information advising that wheat bug (*Nyctelia huttoni*) has been introduced to Europe (Netherlands and Belgium) where it is suspected to have arrived accidentally with shipments from New Zealand. The European Plant Protection Organisation (EPPO) advises that *N. huttoni* is reported as being a contaminating pest often found on apple fruit packages exported from New Zealand. This information may have a bearing upon how this quarantine pest is considered.

If you have any queries please contact Simone Tuten on stuten@agric.wa.gov.au or (08) 9368 3434.

Yours sincerely

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