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Dear Louise

DRAFT IMPORT RISK ANALYSIS FOR FRESH CAPSICUM (PAPRIKA) FRUIT FROM THE REPUBLIC OF KOREA

I refer to Biosecurity Australia advice 2008/14 dated 20 May seeking comments and submissions on the draft import risk analysis (IRA) for fresh capsicum (paprika) fruit from the Republic of Korea.

Preliminary review of the risk analysis report by the Department of Agriculture and Food, Western Australia (DAFWA) indicates that there are a number of issues that require further consideration and resolution. Some of the issues include:

- The risks posed by exotic seed-borne organisms, particularly the viruses and viroids are inadequately addressed.
- There are at least 26 organisms that are not listed in the draft IRA but can be associated with fresh capsicum in the Republic of Korea. Of the 26 organisms listed, 14 organisms are of potential quarantine concern to Western Australia.
- Western Australia's regional freedoms have not been considered. There are at least five pests listed in the draft IRA that are present in Australia but not in Western Australia.

DAFWA is not able to support the risk analysis at this stage however DAFWA will be able to consider supporting this proposal after Biosecurity Australia's consideration and satisfactory resolution of concerns and issues raised in this letter, those that arise from further discussion and in the Attachment 1.

Thank you for the opportunity to comment on the proposal.

Yours sincerely

Shashi Sharma
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Att.

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**Department of Agriculture and Food Western Australia's Submission to
Biosecurity Australia's Draft Import Risk Analysis Report for Fresh
Capsicum (Paprika) Fruit from the Republic of Korea**

Plant pathology

General comments

- Page 10 – 1.2.2 Scope

“For this reason, the potentials for the seed-borne viruses of capsicum that occur in Korea but not in Australia to establish and spread in Australia or regions of Australia from fresh capsicum fruit from Korea are not considered in this IRA.”

Capsicum seed for planting is permitted entry into Australia from all countries, as described in Condition C11817 in the Australian Quarantine and Inspection Service (AQIS) import conditions (ICON) database despite the fact that exotic seed-borne pathogens of capsicum could be present within the seeds. The Department requests BA to review the risk seed-borne pathogens of capsicum and especially viruses/viroids represent to Australia.

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“Biocontrol agents have been introduced in many greenhouses for the control of thrips and mites, to supplement pesticide use”. Are there any fungal, bacterial or viral biocontrol agents used in these greenhouses?

- Page 26 – 3.1.5 Export

“Capsicum fruit for export are visually inspected for pests and diseases by trained quarantine officers”. The level of inspection is not specified. The Department requests further information regarding sample/inspection rate.

Pest Categorisation process

A review of the scientific literature and online databases has identified 26 organisms that have not been listed in the draft but can be associated with fresh capsicum (*Capsicum annuum*) in the Republic of Korea. Of the 26 organisms listed, 14 organisms are of potential quarantine concern to Western Australia. DAFWA requests that these 14 organisms be assessed to determine their quarantine status as outlined in FAO (2007), 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 to be further assessed should these organisms fulfill these requirements.

Table 1: Plant pathogen species associated with capsicum production and present in source area but not listed in Appendix A of the draft

	Organism Name	Host	Reference to host and origin	Potential quarantine concern for WA (absence from WA)
1.	<i>Alternaria brassicae</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
2.	<i>Botryodiplodia palmarum</i>	<i>Capsicum annuum</i>	CABI 2008	No
3.	<i>Colletotrichum dematium</i> f.sp. <i>capsicum</i>	<i>Capsicum annuum</i>	Farr <i>et al.</i> 2008	No
4.	<i>Colletotrichum nigrum</i>	<i>Capsicum annuum</i>	Farr <i>et al.</i> 2008	No
5.	<i>Colletotrichum truncatum</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
6.	<i>Corticium rolfsii</i>	<i>Capsicum annuum</i>	CABI 2008	No
7.	<i>Ditylenchus destructor</i>	<i>Capsicum annuum</i>	CABI 2008	No
8.	<i>Erwinia carotovora</i> subsp. <i>carotovora</i>	<i>Capsicum annuum</i>	CABI 2008	No
9.	<i>Erwinia chrysanthemi</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
10.	<i>Fusarium oxysporum</i> f.sp. <i>vasinfectum</i>	<i>Capsicum annuum</i>	CABI 2008	No
11.	<i>Gloeosporium piperatum</i>	<i>Capsicum annuum</i>	Farr <i>et al.</i> 2008	No
12.	<i>Glomerella cingulata</i>	<i>Capsicum annuum</i>	Farr <i>et al.</i> 2008; CABI 2008	Yes
13.	<i>Golovinomyces orontii</i>	<i>Capsicum annuum</i>	CABI 2008	No
14.	<i>Meloidogyne incognita</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
15.	<i>Meloidogyne hapla</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
16.	<i>Meloidogyne javanica</i>	<i>Capsicum annuum</i>	CABI 2008	No
17.	<i>Mycosphaerella tassiana</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
18.	<i>Nectria haematococca</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
19.	<i>Peronospora hyoscyami</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
20.	<i>Phyllosticta capsici</i>	<i>Capsicum annuum</i>	Farr <i>et al.</i> 2008	No
21.	<i>Phytophthora cryptogea</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
22.	<i>Pratylenchus penetrans</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
23.	<i>Pseudomonas marginalis</i> pv. <i>marginalis</i>	<i>Capsicum annuum</i>	CABI 2008	No
24.	<i>Pseudomonas syringae</i> pv. <i>syringae</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
25.	<i>Pythium dissotocum</i>	<i>Capsicum annuum</i>	Spencer 2005	Yes
26.	<i>Thanatephorus cucumeris</i>	<i>Capsicum annuum</i>	CABI 2008	Yes

Further comments regarding Appendix A: initiation and pest categorization for phytosanitary pests:

1. *Cercospora capsici*

It is requested that further consideration be given to this pathogen as this pathogen can infect peduncles (Pernezny *et al.* 2003) and is considered to be seed borne (Richardson 1990; Cerkauskas 2004).

2. *Peanut stunt virus, Pepper mottle virus, Tobacco rattle virus and Tobacco ringspot virus*

These pathogens can be transmitted by seeds. Further consideration is required.

3. *Pseudomonas marginalis*

Reported detected in decayed *Capsicum annuum* fruits in shipments (Vincelli and Cappellini 1984). Further consideration is required.

4. *Potato virus Y*

This virus is subject to official control in WA. Further consideration is required.

5. *Verticillium dahliae*

This pathogen is not known to occur in the Ord River Irrigation Area of WA. Further consideration is required.

The following plant pathogens known to occur on Capsicum in the Republic of Korea were listed as present in Australia in Appendix A of the draft. DAFWA underlines that these pathogen are not known to occur in WA and therefore request further consideration for:

1. *Pectobacterium carotovorum* subsp. *carotovorum*

No records in WA. The paper cited (Cother 1980) reports the pathogen as being present in NSW only. Further consideration is required.

2. *Phytophthora infestans*

No records in WA. Further consideration is required.

3. *Potato leafroll virus*

No records in WA. Further consideration is required.

4. *Ralstonia solanacearum* (race 1 & 3)

R. solanacearum was found on potato in 1967 and 1968 but has not been detected since. The surveillance activities of DAFWA conducted throughout WA should have detected this pathogen if it was still present in WA. This pathogen is a quarantine pest for WA.

5. *Xanthomonas vesicatoria*

No records in WA. Further consideration is required.

Entomology

General comments

- Page 55 Appendix A (INSECTA: HEMIPTERA)

For completeness sake, it should be noted that the Q-biotype of *Bemisia tabaci* has now been recorded in Korea (Lee *et al.*, 2005). As in the draft IRA, Australia does not consider *B.tabaci* as being of significance on the fruit pathway.

Pest Categorisation process

A review of the scientific literature and online databases has identified 3 organisms that have not been listed in the draft but can be associated with fresh capsicum (*Capsicum annuum*) in Korea. Of the 3 organisms listed, 2 organisms are of potential quarantine concern to Western Australia. DAFWA requests that these 2 organisms be assessed to determine their quarantine status as outlined in FAO (2007), 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 to be further assessed should these organisms fulfill these requirements.

Table 2: Invertebrate pest species associated with capsicum production and present in source area but not listed in Appendix A of the draft

	Organism Name	Host	Reference to host and origin	Potential quarantine concern for WA (based on absence)
1.	<i>Tarsonemus bilobatus*</i>	<i>Capsicum annuum</i>	CABI 2008	No
2.	<i>Liriomyza bryoniae</i>	<i>Capsicum annuum</i>	CABI 2008	Yes
3.	<i>Trachea (Agrotis) tokionis</i>	<i>Capsicum annuum</i>	Kim & Kim 1981	Yes

* According to CAB (2008) *Tarsonemus bilobatus* (also present in Western Australia and Australia) occurs on capsicums in Korea. For completeness’s sake this species needs to be considered for inclusion.

Further comments regarding Appendix A: Initiation and pest categorization for phytosanitary pests:

1. *Epilachna vigintioctomaculata* / *E. vigintioctopunctata* (Coleoptera)

Epilachna vigintioctomaculata (large 28-spotted lady beetle) and *Epilachna vigintioctopunctata* (hadda beetle) are listed as separate species for Korea in CPC (2008, on-line). In Appendix A reference is to *E. vigintioctomaculata*. Poole (2008) and the APPDB (2008) refer to the presence of *Henosepilachna vigintioctopunctata* as respectively being present in WA and Australia at large. The correct naming needs to be cleared out with a Coleopterist.

The following invertebrate pest species known to occur on capsicum in the Republic of Korea were listed as present in Australia in Appendix A of the draft. DAFWA underlines that these pests are either not known to occur in WA or has a restricted distribution or other issues that needs clarification, and therefore request further consideration:

1. *Pseudaulacaspis pentagona*

Although *Pseudaulacaspis* spp. has been recorded in WA, the white peach scale, *Pseudaulacaspis pentagona* as such (as correctly stated in the draft IRA) does not occur in WA. As such the draft IRA is correct. However, the statement that “leaves and fruits are not *usually* infested” does not justify the pest being identified as not

being on the fruit pathway. WA suggests that the pest should be considered to be potentially on the pathway, and assessed in order to determine if it needs further evaluation. Further consideration is required.

2. *Tetranychus kanzawai*

No records in WA. This species has not been recorded in WA (Poole, 2008) and is subject to official control in that potential carriers of this species undergo on-arrival inspection and treated as necessary. Further consideration is required.

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