Department of Primary Industries

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Our Ref:

Dr Colin Grant
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Dear Dr Grant

DPI RESPONSE TO THE DRAFT IMPORT RISK ANALYSIS REPORT FOR TABLE GRAPES FROM THE PEOPLE'S REPUBLIC OF CHINA

Thank you for your memorandum of 19 February 2010, notifying the Department of Primary Industries (DPI) of the release of the Draft Import Risk Analysis (IRA) report for Table Grapes from the People's Republic of China for comment.

Specialists within the DPI have examined the IRA and the DPI response to the draft IRA is attached. The following is a summary of the main issues:

1. DPI considers that the pest categorisation process is incomplete. It does not include the spotted wing drosophila (*Drosophila suzukii*), an important fruit fly-like pest native to China which has recently established in North America, where it is causing highly significant economic damage to horticultural production.
2. DPI considers that the draft IRA report for table grapes from China should include the results of the pest risk analysis being conducted by BA on the spotted wing drosophila to assure stakeholders that mitigation measures against this pest are appropriate.
3. DPI considers that more information is required with respect to traceability of production of table grapes for export to Australia. This is necessary to provide more assurance that the table grape producers are not "vulnerable to food safety problems" as reported by Huang *et al* 2008. These authors conclude that there is "almost no traceability in the system" of production of fruit and vegetables in China.
4. DPI considers that more information is required about how the mitigation measures proposed will be applied to ensure risks are reduced to Australia's ALOP.
5. DPI recommends that these and other issues mentioned in the attached report are addressed by Biosecurity Australia before the final Import Risk Analysis is prepared.

Thank you for the opportunity to provide comments on the Import Risk Analysis and I look forward to being notified of the progress of this IRA.

Mr Russell McMurray
Acting Deputy Director Biosecurity Victoria

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Department of Primary Industries

DPI response to the Revised Draft Import Risk Analysis for Table Grapes from China.

April 2010

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INTRODUCTION

Biosecurity Australia (BA) on 18 August 2008 announced the formal commencement of a standard import risk analysis (IRA) under the regulated process to consider a proposal to import table grapes from the People's Republic of China. The draft IRA for import of table grapes from the People's Republic of China was released for comment on the 19 February 2010 with stakeholders' comments due by 21 April 2010.

In the draft IRA, BA found that there were 28 quarantine pests associated with table grapes from China. After risk assessment, BA concluded that 17 pests and two sanitary pests (black widow spiders) required mitigation. The pests include the Japanese Beetle, an omnivorous pest which has become a more serious pest in North America than in its area of origin in northeastern Asia, and diseases including grapevine leaf rust which was recently the subject of eradication in the Northern Territory.

This list did not include the spotted wing drosophila which has established in North America in the last two seasons, where it is causing significant economic damage to horticultural production and exports.

The draft proposed that phytosanitary measures including area freedom, systems approach (vineyard spraying and surveillance, fruit bagging, visual inspection and remedial action), preshipment fumigation and sulphur treatment were necessary, to reduce risks to below Australia's appropriate level of protection.

DPI officers in Biosciences Research and Biosecurity Victoria have evaluated the draft IRA.

DPI RESPONSE

- DPI considers that the pest categorisation process is incomplete. It does not include the spotted wing drosophila (*Drosophila suzukii*), an important fruit fly-like pest native to China which has established in North America in the last two seasons, where it is causing highly significant economic damage to horticultural production and exports.
- DPI considers that the draft IRA report for table grapes from China should include the results of the pest risk analysis being conducted by BA on the spotted wing drosophila. The draft IRA should not proceed until this is done in order that stakeholders have assurance that mitigation measures against this pest are appropriate.
- DPI considers that more information is required with respect to traceability of production of table grapes for export to Australia. This is necessary to provide more assurance that the table grape producers are applying the required mitigation measures and are not "vulnerable to food safety problems" as reported by Huang *et al* 2008? These authors conclude that there is "almost no traceability in the system" of production of fruit and vegetables in China.
- DPI considers that the draft IRA report should provide more assurance that pesticide residues, similar to those recently reported from Vietnam concerning imported Chinese apples and pears, will not occur in table grapes imported from China?
- DPI considers that more information is required about how the mitigation measures proposed will be applied to ensure that risks are reduced to Australia's ALOP.
- DPI recommends that these and other issues mentioned below are addressed by Biosecurity Australia before the final Import Risk Analysis is prepared.

Particular issues with the IRA are reported below:

China's commercial production practices for table grapes (Pages 15-30)

DPI points out a). the lack of information about the production units which will be supplying table grapes to Australia and b). the lack of information about the quality assurance processes associated with these production units.

What assurance does Australia have that these producers are not "vulnerable to food safety problems" as concluded by Huang *et al* 2008? These authors conclude that there is "almost no traceability in the system"[2]

of production of fruit and vegetables in China. Other reports (e.g. BOABC report 200901) state that scattered cultivation and differences in farmers educational background and awareness of environmental issues are important constraints to exports of horticultural produce.

An apparent consequence of this production system is the recent report from Vietnam (Vietnam: Highest pesticide residue on top fruits and mandarin oranges, Source: english.vietnamnet.vn Publication date: 3/26/2010) of pesticide residues in apples, pears and mandarins imported from China. Results showed that 20% of apple, and 10% of pear samples which were tested contained pesticide residues exceeding the permitted levels.

In addition, many of the mitigation measures against quarantine pests which are proposed by BA rely on a relatively complex systems approach, which may not be achievable or verifiable given the production systems which dominate horticulture in China. The size of vineyards also has an effect on the mitigation measures such as vineyard freedom – small vineyards will be more likely to be contaminated by pests which can move into the vineyard from neighbouring vineyards which are not "disease (or pest) free"

What are the approved agricultural chemicals which are permitted for use on fruits and vegetables in China (Page 22)? Are they consistent with those approved for use on the same crops in Australia?

Table 3.1 presents only one regime for pest control in table grapes in China. It lists three pesticides. What other pesticides are approved for use on table grapes in China, and what measures are taken to ensure that growers use pesticides responsibly and that pesticide residues in table grapes meet Australia's requirements for pesticide residues?

Pest categorisation

The pest categorisation process is incomplete. It does not include the spotted wing drosophila (*Drosophila suzukii*), an important fruit fly-like pest native to China which has established in North America in the last two seasons, where it is causing highly significant economic damage to horticultural production and exports (Dreves *et al* 2009). This pest is known to infest grapes, and long distance spread is likely to be associated with transport of infested fruit to new areas. Appendix A1 on Page 218 does include reference to the spotted wing drosophila, however, it has not yet been assessed for its pest risk status. BA is currently conducting a pest risk analysis for this pest.

DPI considers that the draft IRA report for table grapes from China should include the results of this pest risk analysis in order that stakeholders have assurance that mitigation measures against this pest are appropriate.

Risk assessment for Quarantine pests

Phylloxera

Page 220. In the heading Potential for establishment and spread it should actually highlight that phylloxera can be spread by fruit and foliage. This is not highlighted in the Table, but it is in the National Phylloxera protocols.

Page 261. Appendix B. Under distribution it lists Phylloxera as being present in Queensland and South Australia. This CABI reference is incorrect. Whilst historically phylloxera has been detected in Queensland (but last recording was 1967) no phylloxera has been detected ever in South Australia.

Comment. Sexual reproduction occurs in China albeit rarely (Li 2004). No sexual reproduction has yet been observed in Australia. If sexual forms were to be introduced this could cause problems as more genotypes would develop in Australia than currently exist.

See Attachment 1 for further comments.

Brown rot

Page 151 - Initial infection is NOT always via wounds but can occur through undamaged tissue (Byrde and Willetts 1977).

Page 152 – If vineyards are close to crops which are more susceptible to brown rot e.g. pome and stone fruit, then the likelihood of table grapes being infected by this pathogen and exported to Australia (i.e. the probability of importation) increases to greater than low.

Spike stalk brown spot

Alternaria viticola Brunaud is a dubious name/species. Simmons (2007) regarded it as an unknown taxon. He could not find the type material. Thus it must be considered that all the Chinese reports of this fungus could be mis-identifications of another fungus. More information is required.

Draft Import Conditions/Proposed mitigation measures

Pest free places of production or vineyard freedom is a proposed option in the IRA (e.g. P192), and more detail about this option is required to provide assurance that it is a reasonable approach, especially with regard to pests and diseases which can move significant distances unaided by man.

Issues of concern would be the size of the vineyard to be registered as 'disease free', its distance from diseased vineyards or other sources of the pathogen(s) [e.g. urban, wild or native vines that are alternative hosts in vineyard surrounds] and procedures to guarantee vineyard freedom. These issues should be considered in relation to knowledge of spread of the pathogens. Vineyard freedom could be compromised if the vineyard area is too small and/or not far enough away from sources of the pathogen(s) and/or there are extreme weather events promoting pathogen spread.

See Attachment 1 for further comments.

How are the mandatory requirements for China to adhere to existing commercial practices (p184) to be met? Existing practices are known to be notoriously difficult, if not impossible, to check (Huang *et al* 2008).

RECOMMENDATION

DPI recommends that the above issues are addressed by Biosecurity Australia before the final Import Risk Analysis is prepared.

References:

Byrde RJW and Willetts HJ (1977). The brown rot fungi of fruit. Pergamon Press.

Dreves AJ, Walton V and Fisher G (2009). A new pest attacking healthy ripening fruit in Oregon. Oregon State University Extension Service, Publication EM 8991, October 2009.

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, 30 (3): 469-479.

Korosi GA, Trethowan, CJ & Powell KS. 2009 Reducing the risk of phylloxera transfer on viticultural waste and machinery. Acta Hort (ISHS) 816: 53-62.

Simmons E. (2007). Alternaria: an identification manual. CBS Fungal Diversity Centre, Utrecht.

Source: english.vietnamnet.vn , Vietnam: Highest pesticide residue on top fruits and mandarin oranges.

ATTACHMENT 1

RESPONSE TO REVISED DRAFT IRA FOR TABLEGRAPES FROM CHINA, ENTOMOLOGY AND PLANT PATHOLOGY– KEVIN POWELL, BOB EMMETT, JAMES CUNNINGTON.

Comments below from Kevin Powell (DPI Rutherglen):

Page 220
In the heading Potential for establishment and spread it should actually highlight that phylloxera can be spread by fruit and foliage. This is not highlighted in the Table, but is in the National Phylloxera protocols.

Page 261.
Appendix B. Under distribution it lists Phylloxera as being present in Queensland and South Australia. This CABI reference is incorrect. Whilst historically phylloxera has been detected in Queensland (but last recording was 1967) no phylloxera has been detected ever in South Australia.

Page 87.
D . vitifolia should be D. vitifoliae.

Comment. Sexual reproduction occurs in China albeit rarely (Li 2004). No sexual reproduction has yet been observed in Australia. If sexual forms were to be introduced this could cause problems as more genotypes would develop in Australia than currently exist.

Page 88.
In second bullet point to should change winged D. vitifoliae or crawlers should be changed to winged D. vitifoliae and crawlers

Page 88.
Bullet point 3. In reference to Powell 2008 should add that phylloxera survive under water at 5 degrees C for 7 days (Korosi et al., 2009) indicating cool temperatures (at least down to %C allow crawler survival). The ref is Korosi GA, Trethowan, CJ & Powell KS. 2009 Reducing the risk of phylloxera transfer on viticultural waste and machinery. Acta Hort (ISHS) 816: 53-62.

Page 91.
Probability of spread.

Bullet Point 1.
Comment: Whitebridge area is not mentioned in the list Mooroopna is but do we have evidence it is there still?

Comments below from Bob Emmett (DPI Irymple):

I attended a meeting with the Australian Table Grape Association (ATGA) and DAFF Plant Biosecurity Staff at Mildura on Wednesday 31 March to discuss the Draft Chinese Table Grape IRA (February 2010). The ATGA asked me to comment on the IRA, especially in relation to disease risks. My brief comments were as follows.

Information summarised in the IRA was clearly presented and well organised.

Pathogens causing diseases of main concern were:
(1) Grape cluster black rot (*Physalospora baccae*);
(2) Black rot (*Guignardia bidwellii*);
(3) Spike stalk brown spot (*Alternaria viticola*).

Information on the pathogens for (1) and (3) was limited. Pathogens for (1) and (2) have wind-borne ascospores and (3) has wind-borne dark, multi-celled conidia. Pathogens for (1), (2) and (3) could be present in bunches/berries as symptomless infections and there was no indication that storage procedures would eliminate these infections.

Pest risk management for (1)-(3) would require pest area freedom as indicated in the IRA. However, pest vineyard freedom is also a proposed option in the IRA and I suggested that more information about this option should be requested. Issues of concern would be the size of the vineyard to be registered as 'disease free', its distance from diseased vineyards or other sources of the pathogen(s) [e.g. urban, wild or native vines that are alternative hosts in vineyard surrounds] and procedures to guarantee vineyard freedom. These issues should be considered in relation to knowledge of spread of the pathogens. Vineyard freedom could be compromised if the vineyard area is too small and/or not far enough away from sources of the pathogen(s) and/or there are extreme weather events promoting pathogen spread.

Experiences with extreme weather events and the unexpected spread of diseases such as black rot (USA) and black spot (Australia) into and within biosecurity trial sites were discussed. Experience with latent infections in grape berries/bunches (Botrytis, Aspergillus, Alternaria, other pathogens) and the potential use of risk assessment tools developed in the ORL table grape project (Oscar Villalta, Rob Holmes, John Lopresti and others) were also discussed.

Comments below from James Cunnington:

Here is what I have come up with for the fungi:

Alternaria viticola Brunaud is a dubious name/species. Simmons (2007) regarded it as an unknown taxon. He could not find the type material. Thus it must be considered that all the Chinese reports of this fungus could be mis-identifications of another fungus.

Alternaria vitis Cavara. Simmons (2007) could not validate this as a species. The type material is in poor condition and could not be distinguished from other small-spored species of Alternaria. Thus it must be considered that all the Chinese reports of this fungus could be mis-identifications of another fungus.

Cladosporium uvarum McAlpine is probably not a real species. Dugan et al 2004 did not regard it as a confirmed species. Again I wonder if the Chinese have been mistaking this fungus for something else.

The Pennycook (2009) reference appears incomplete.

References:

Korosi GA, Trethowan, CJ & Powell KS. 2009 Reducing the risk of phylloxera transfer on viticultural waste and machinery. Acta Hort (ISHS) 816: 53-62.

Simmons E. (2007). Alternaria: an identification manual. CBS Fungal Diversity Centre, Utrecht.