

## PIRSA RESPONSE TO:

### BIOSECURITY AUSTRALIA ADVICE 2008/14 DRAFT IMPORT RISK ANALYSIS REPORT FOR FRESH CAPSICUM (PAPRIKA) FRUIT FROM THE REPUBLIC OF KOREA

Primary Industries and Resources SA (PIRSA) have considered the recent Draft Import Risk Analysis Report for Fresh Capsicum (Paprika) from the Republic of Korea (Biosecurity Australia Advice 2008/14 – 20 May 2008).

The following comments are provided following our analysis of the document:

#### PEST RISK ASSESSMENTS

The pest categorisation process appears to be sound. In particular the three quarantinable pests (*Frankliniella intonsa*, *F. occidentalis* and *Thrips palmi*) identified for pest risk assessment pose a valid concern.

However, one agent that PIRSA believes should be reconsidered is *Phytophthora infestans*. Although this pathogen is widely distributed within Australia, it is believed that metalaxyl resistant strains have not been detected within the country. This is not the case in Korea where such strains were initially detected in 1992. The potential introduction of metalaxyl resistant strains of *P. infestans* via imports of fresh capsicum fruit from Korea could put at risk Australia's current management practices for this important pathogen.

It should be noted that the leafminer pests such as *Liriomyza huidobrensis* and *L. trifolii* would have a high economic impact if they were introduced and became established within Australia. As they only attack host foliage and not fruit, they are correctly not assessed further in the analysis as they are not considered to be on the fruit pathway. It is very important however that no capsicum foliage is present in any future consignment, either adhering to the fruit or loose within a consignment. (See "Pest Risk Management" below.)

#### General Analysis

The Senior Statistician, Food Safety Program, SA Research and Development Institute (SARDI) has provided the following comments concerning qualitative analysis for consideration:

- The qualitative likelihoods used in the Draft IRA are presented in Table 2.1. These are used in the Draft IRA by taking the midpoint of the corresponding indicative probability range presented in that table. For example, a value of  $0.5 = (0.7+0.3)/2$  is used for calculations involving the MEDIUM likelihood.
- While qualitative likelihoods are intuitively appealing when quantitative data is not available, one downside is that there is no differentiation between the likelihoods of 0.31 and 0.7 – both are treated as MEDIUM.

- Consequently, the calculation of Probability of Entry = Probability of importation x Probability of distribution will always yield LOW when the import and distribution probabilities are both MEDIUM (assuming that MEDIUM = 0.5, then  $0.5 \times 0.5 = 0.25 \rightarrow$  LOW). However, if the import and distribution probabilities are in fact close to the upper limit, 0.7 say, then their product gives 0.49, which should give a value of MEDIUM and not LOW.
- A general discussion about the limitations of qualitative risk ranking systems, such as used in the Draft IRA Report, can be found in Cox, L. A. Jr, Babayev, D. and Huber, W. (2005). Some limitations of Qualitative Risk Rating Systems. *Risk Analysis* **25**, 651-662.

## PEST RISK MANAGEMENT

### Thrips

Three quarantinable thrips (*Frankliniella intonsa*, *F occidentalis* and *Thrips palmi*) have been identified as part of the Draft IRA process. Given the small size and cryptic nature of these pests, the identified thrips species are likely to be difficult to detect on infested fruits. Also as indicated in the Draft IRA, eggs of *Frankliniella* species can be laid both on and under the skin of capsicum fruits. It is therefore recommended that the AQIS inspection processes plus any pre-export inspection by Korean authorities include the use of stereomicroscopes and / or "magi-lamps" plus suitable supplementary lighting for the examination of the required fruit samples. This should be explicitly stated as part of the subsequent inspection requirements.

### Capsicum foliage

On the basis of the identified concerns over quarantinable leaf miner pests (*Liriomyza huidobrensis* and *L trifolii*), and the potential presence of the exotic *Ascoshyta capsici* and metalaxyl resistant strains of *P infestans*, it is recommended that capsicum foliage be specifically included in the definition of regulated articles – Page 46 - Packaging and Labelling – first dot point ie "Capsicum fruit exported to Australia is not contaminated by quarantine pests or regulated articles (eg **capsicum foliage**, trash, soil and weed seeds).

## CONCLUSION

Apart from the comments above, the document appears to provide a comprehensive assessment of the risks associated with potential future imports of fresh capsicum (paprika) fruit from the Republic of Korea.