

Chapter 3

Issues: scientific questions

3.1 This chapter reviews arguments on the diseases and pests which were of most concern in evidence.

Moko

3.2 Moko is a vascular wilt disease caused by the bacterium *Ralstonia solanacearum*. It is an aggressive disease which if not controlled will kill the plant. In some parts of the world it has serious effects. In commercial banana plantations of the Philippines costly control measures limit the incidence to about one plant per hectare per year.¹

3.3 The IRA assessed the risk of Moko as follows:

Moko	June 2002 draft	Feb 2004 draft	June 2004 addendum
annual probability of entry, establishment & spread	high	moderate	high
consequences	moderate	low	low
unrestricted risk	moderate	low	low

3.4 A 'low' unrestricted risk does not satisfy Australia's Appropriate Level of Protection (ALOP) and would require risk management measures. The IRA suggests that bananas could be sourced from areas of low pest prevalence in the Philippines, or distribution in Australia could be restricted to areas where commercial bananas are not grown. Risk management measures are discussed from paragraph 3.51.

Claimed inadequacy of data on incidence of Moko in the Philippines

3.5 The prevalence of Moko in Philippine plantations affects the probability of the important step 'the likelihood that a tonne of harvested fruit will be infected'. The IRA relied on advice from Philippine authorities on the number of cases (infected plants) detected during routine control operations in 1998-2001.²

3.6 The Australian Banana Growers' Council (ABGC) argued that this information was inadequate:

1 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.145f, 159.

2 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.148. Submission 6, ABGC, attachment 2.

- (a) the reporting period (4 years) is far too short to enable a proper assessment of the highest-likely incidence of a disease which shows substantial variations in incidence from year to year;
- (b) the geographic area from which the data is drawn is unspecified ...
- (c) the data is average incidence data and therefore, it is certain that the incidence of Moko in some plantations will at times be substantially higher...
- (d) the data has not been supported by any survey data and therefore is unable to be audited and verified.³

3.7 The ABGC advised it had had confidential information that ‘the incidence of Moko in one plantation in the Philippines managed by a multi-national company was 4.39 cases/hectare in the year. This is more than three times the incidence relied upon in the Second Report.’ The ABGC noted that Australia had asked the Philippines for a retrospective survey of the incidence of Moko in commercial plantations over 5-10 years, but the Philippines had not done this.⁴

3.8 On the matter of relying on four-year summary information provided by the Philippines, Biosecurity Australia (BA) commented that this was ‘sufficient for the purpose of the analysis and further information was not requested because the unrestricted risk of Moko using this data exceeded Australia’s ALOP.’ As well:

In the margins of technical discussions and field visits before and after this information was received, Australian experts asked questions of Philippines experts about the incidence of Moko in the Philippines and the answers were consistent with the incidence data provided...

The disease incidence could vary from time to time in a plantation and it was not considered essential to determine the highest likely disease incidence... the unrestricted risk estimate for Moko exceeded Australia’s ALOP and, therefore, any fruit originating from an area where the disease incidence was higher than the level used in the risk simulation would not qualify for export to Australia.⁵

3.9 On the matter of the request for a 5-10 year survey, BA said that the purpose of this would be to investigate insect transmission of Moko/Bugtok, and although the Philippines never provided it, ‘given that the Philippines have conceded that Moko/Bugtok is insect-transmitted, the IRA team maintained its original position [that insect vectors can transmit the disease from local banana cultivars to commercial Cavendish plantations].’⁶

3 Submission 6, ABGC, p.10.

4 Submission 6, ABGC, p.10. Mr L. Collins (ABGC), *Committee Hansard* 13 April 2004, p.18.

5 Biosecurity Australia, further information 1 February 2005, Q20-25.

6 Biosecurity Australia, further information 1 February 2005, Q10,15.

Claimed errors in assessing certain probabilities

3.10 Estimating the probability of ‘the likelihood that a tonne of harvested fruit will be infected’ involves several steps. In the June 2002 draft, the likelihood was assessed as ‘very low’; in the February 2004 draft, ‘extremely low.’ This reduces the assessed risk of Moko.

3.11 Dr Fegan, an Australian expert on Moko, argued that several of the assumptions or findings used to reach this conclusion were unsound. He argued that:

- the assumed incubation period (time between infection and showing visible symptoms) should be longer than the 12 weeks allowed in the IRA calculations;⁷
- the reasoning used to estimate that no more than 15% of infected plants will develop symptomless infected bunches is unsound and is a misuse of the source information (Stover 1972);
- the estimate that no more than 50% of the fruit on a symptomless infected bunch will be infected is questionable.⁸

3.12 Dr Fegan also argued that potential for transmission of the disease by insects ‘requires more in-depth comment than that given in the Revised Draft IRA report.’ This is relevant to the third dotpoint just above: infection by insects may be expected to affect a greater proportion of fruit on a symptomless infected bunch than infection moving upwards from roots or cuts.⁹

3.13 BA argued that the estimates that 15% of infected plants will develop symptomless infected bunches, and no more than 50% of the fruit on a symptomless infected bunch will be infected, were ‘very conservative.’¹⁰

3.14 Dr Hayward, an Australian expert on Moko, also argued that the likelihood of entry, establishment and spread has been estimated conservatively. He said that:

- there are no recorded instances where Moko has been introduced on dessert banana fruit;
- symptomless infected fruit would be expected to manifest as prematurely ripened fruit at some point along the distribution and marketing chain;

7 Submission 5, Dr M. Fegan, p.1: ‘Research from the Philippines (Soguilon, 2003) has shown that infected plants do not exhibit symptoms 13 weeks after inoculation with the pathogen.’ A longer incubation period implies a greater number of symptomless infected plants in proportion to visibly infected plants at any one time, and therefore increases the likelihood that infected fruit will unwittingly be harvested from a symptomless infected plant.

8 Submission 4, Dr M. Fegan, p.1-2.

9 Submission 4, Dr M. Fegan, p.3. *Committee Hansard* 13 April 2004, p.25.

10 Dr C. McRae (Biosecurity Australia), *Committee Hansard* 10 March 2005, p.4-5

- insect transmission is only important for cooking bananas and ‘is not know to reach epidemic proportions in the absence of cooking bananas’ (but Dr Hayward agreed that ‘more investigation is required’);¹¹
- the estimate that no more than 50% of the fruit on a symptomless infected bunch will be infected is more likely to be an overestimation than an underestimation: ‘In the Philippines the fruit are bagged at an early stage so that insect transmission is not a factor to be considered.’¹²

Probability that Moko, if it became established, would spread

3.15 Submissions stressed that if Moko became established, it is most unlikely that it could be quarantined or eradicated. No country has been successful in eradicating it. There are no chemical controls.¹³ According to Mr Peasley conditions in North Queensland are ideal for the spread of Moko, especially by floodwater. Symptoms are easily confused with other diseases and it is more than likely that, by the time it was positively identified, it would be too late to contain it.¹⁴

3.16 The IRA acknowledges these points and assesses the probability of spread among commercial banana plants as ‘high’, which is the highest probability category.¹⁵

Consequences of Moko

3.17 The ABGC was concerned that, apparently without any new information, ‘The IRA Team has reduced its assessment of the consequences of Moko from moderate to low between the First and Second Reports...’

This change is based entirely on the IRA Team’s reassessment of one criteria: the indirect impact of Moko on the economic viability of rural communities. In the First Report (at page 144), the IRA Team considered the indirect impact of Moko on rural communities to be ‘highly significant at the local and district level, significant regionally and of importance at the national level.’ By contrast, in the Second Report (at page 161), the IRA Team considered the indirect impact of Moko on regional communities to be ‘minor at a district level.’ The IRA Team has not provided an adequate explanation or relied upon any new scientific, technical or

11 Cooking bananas (plantains) are widely grown in the Philippines, often in smallholdings near commercial plantations of dessert bananas. They are not grown in Australia. Dr C. Hayward, submission 4 p.2, submission 4a p.2.

12 Submission 4, Dr C. Hayward, attachment: p.7; & submission 4a.

13 Submission 4a, Dr C. Hayward, p.2

14 Mr D. Peasley, *Committee Hansard* 13 April 2004, p.44. Submission 7, attachment G

15 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.157.

economic information to support its major reassessment of this critical issue.¹⁶

3.18 The IRA notes that there is an element of subjectivity in assessing some sorts of consequences, such as loss of social amenity.¹⁷

3.19 BA commented that ‘the IRA team members conducted further analysis on the available information at the time of preparation of the revised Draft IRA Report and this did not support a ‘moderate’ rating.¹⁸

3.20 Mr Peasley argued that controlling Moko in the ways done in the Philippines would not be feasible because of Australia’s more mechanised farming practices; therefore the consequences could be much more severe here than there:

In the Philippines, Moko spread is contained by destroying all plants within a 5 metre radius of the infected plant, disinfecting the affected area by heat (burning rice hulls) or applying soil fumigants, and erecting barricades around the affected area to prevent entry by workers. The Philippines industry does not use vehicles within the plantation itself because of the high availability of labour at relatively low cost.

Implementing such a system in FNQ [Far North Queensland] would not be economically feasible as the detection of one infected plant could effectively remove the whole of the 600 metre row (and possibly the two adjoining rows if the 5 metre radius rule were to apply), from production because the mounded rows prevent access from row to row except at headlands at the end of each row. The direct consequences in lost production from an infection are thus far greater under the banana production system in FNQ.¹⁹

Comment

3.21 Changes between the June 2002 draft IRA and the February 2004 draft have the effect that:

- annual probability of entry, establishment and spread of Moko (without risk management measures) is reduced from ‘high’ to ‘moderate’;
- consequences are reduced from ‘moderate’ to ‘low’;
- therefore the unrestricted risk is reduced from ‘moderate’ to ‘low’.²⁰

16 Submission 6, ABGC, p.11.

17 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - draft IRA report*, June 2002, p.145. *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.162.

18 Biosecurity Australia, answers to questions 3 March 2005, enc.2, p.3.

19 Submission 7, Mr D. Peasley, attachment G2, p.3.

20 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.158.

3.22 The June 2004 addendum changed the annual probability of entry, establishment and spread back to ‘high’; but this, combined with consequences assessed as ‘low’, still leaves the unrestricted risk as ‘low’.²¹

3.23 It happens that in this case the changes have not changed the conclusion that the unrestricted risk is above Australia’s Appropriate Level of Protection (ALOP). Thus the argument turns to whether risk management measures are feasible and adequate (discussed below). However it is still a matter of interest whether changes between the first and second draft are adequately justified.

3.24 Concerning the adequacy of Philippine data on the prevalence of Moko, the Committee accepts BA’s reasoning that since the information given puts the unrestricted risk at above Australia’s ALOP, more information is not necessary. To put this another way: if the reported prevalence implies the need for risk management by areas of low pest prevalence (ALPP), and if the low prevalence required to satisfy an ALPP regime is considerably lower than the reported prevalence (which it is), it does not matter if the actual prevalence is higher than the reported prevalence. What does matter is the reliability of the regime for guaranteeing that the required low pest prevalence provisions are met.

3.25 The Committee shares Dr Fegan’s concerns over the other steps used to estimate the probability that a tonne of harvested fruit will be infected. This is relevant even if an ALPP regime is adopted, since these steps are subsequent to proving low pest prevalence; hence, if they are changed, it could change the prevalence needed to compensate.

3.26 The Committee shares the ABGC’s concern that the assessment of consequences has been changed, apparently with no new information.²²

Banana bract mosaic virus

3.27 Banana bract mosaic virus (BBrMV) reduces the health of infected plants and causes production losses. According to Professor Dale, symptoms are variable and not obvious to the untrained eye. The aphids that transmit the virus are widespread and common in Australia. There is no cure.²³

3.28 The IRA assessed the risk of BBrMV as follows:

21 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - Addendum to revised draft IRA report of February 2004*, June 2004, p.38.

22 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.

23 Submission 6, ABGC, p.19. Submission 8, Prof. J. Dale, p.[3]

Banana bract mosaic virus	June 2002 draft	Feb 2004 draft	June 2004 addendum
annual probability of entry, establishment & spread	extremely low	low	moderate
consequences	very low	low	low
unrestricted risk	negligible	very low	low

3.29 A ‘low’ unrestricted risk does not satisfy Australia’s Appropriate Level of Protection (ALOP) and would require risk management measures. The IRA (as amended by the June 2004 addendum) suggests that bananas could be sourced from areas of low pest prevalence in the Philippines, or distribution in Australia could be restricted to areas where commercial bananas are not grown. Risk management measures are discussed from paragraph 3.51.

3.30 The main point of dispute in evidence was the likelihood that a tonne of harvested fruit will be infected. It appears that the IRA panel gave considerable weight to the fact that ‘Philippine authorities report that BBrMV is now rarely encountered...’

Overall, variation about incubation period and expression of visible symptoms of disease, in conjunction with the report that BBrMV is rarely seen in commercial Cavendish plantations in the Philippines, led to the consideration that the likelihood of infection within a tonne of export fruit was **very low**.²⁴

3.31 Professor Dale, an Australian expert on BBrMV, argued that ‘this is a very unsafe conclusion’, since:

- similar viruses in similar situations have proved almost impossible to eradicate;
- the virus was very widespread ten years ago;
- the Philippines have provided no evidence to support their assertion that the virus is now rarely encountered;
- reliance on visual surveys to identify infected plants is ‘unsafe’ since symptoms are variable and the ability to identify infected plants is usually quite specialised.

24 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.120.

3.32 Professor Dale believes that more than 10 per cent of banana plants in Mindanao could be infected, and the likelihood that a tonne of harvested fruit will be infected is more likely to be ‘moderate’ or ‘high’ than the IRA’s ‘very low’.²⁵

3.33 Biosecurity Australia, commenting on this issue, quoted from the website of the Cooperative Research Centre for Tropical Plant Protection: ‘Banana bract mosaic disease symptoms are usually very distinctive.’²⁶ However, read in context, this is a reference to distinguishing BBrMV from *other viral diseases* in a plant which has already been noticed as diseased. It is not a statement about how easy it is to distinguish a diseased plant from a healthy plant in the field.²⁷

3.34 The June 2004 addendum changes the annual probability of entry, establishment and spread to ‘moderate’. This changes the unrestricted risk to ‘low’, which does not satisfy Australia’s ALOP. Risk management measures would be required. This could be done, as for Moko, by sourcing bananas from areas of low pest prevalence, or by restricted distribution in Australia.²⁸

3.35 This change, like other changes in the June 2004 addendum, resulted from a recalculation to correct an error in a spreadsheet. It was not a response to Professor Dale’s arguments.

Black Sigatoka

3.36 Black Sigatoka is a leaf spotting fungal disease. The means of possible entry to Australia, according to the IRA, is in leaf trash trapped between banana fingers. The IRA also considered the possibility of free spores travelling on fruit or packaging surfaces, but did not consider this to be a significant risk.²⁹

3.37 The IRA assessed the risk of Black Sigatoka as follows:

Black Sigatoka	June 2002 draft	Feb 2004 draft	June 2004 addendum
annual probability of entry, establishment & spread	high	extremely low	extremely low
consequences	low	low	low
unrestricted risk	low	negligible	negligible

25 Submission 8, Prof. J. Dale, p.[3-4]. Submission 6, ABGC, attachment 9. Mindanao is the proposed source of exports to Australia: Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.13.

26 Ms M. Harwood (Biosecurity Australia), *Committee Hansard* 16 June 2004, p.7.

27 CRC for Tropical Plant Protection, correspondence 16 February 2005.

28 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - Addendum to revised draft IRA report of February 2004*, June 2004, p.9,88-9.

29 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.178-9.

3.38 The ABGC argued that changing the annual probability of entry, establishment and spread from ‘high’ to ‘extremely low’ represents a 1700-fold reduction in the probability, which ‘is not based on any advancement in the understanding of the biology or epidemiology of Black Sigatoka.’

3.39 The ABGC questioned what it called ‘the assumption... that infected leaf trash will not be trapped between banana fingers’. This appears to be a reference to the IRA’s statement that ‘it was considered very unlikely that any particular bunch would contain trash particles.’ The ABGC questioned the IRA relying on a ‘one page’ study by NSW Agriculture. The ABGC argued that the IRA had ignored information from the Western Australian Dept of Agriculture ‘which records that 102 pieces of leaf trash were identified in banana cartons from New South Wales and Queensland, and that four of those pieces of leaf trash were infected with fungus.’³⁰

3.40 The ABGC also questioned the IRA’s position that ‘free spores will either be removed from fruit through the cleaning action of washing and brushing, or be killed by the solution of chlorine and alum in the de-handing and flotation tanks.’ The ABGC argued that ‘the IRA Team reached that conclusion in the absence of any direct evidence as to the efficacy of chlorine treatment for bananas [for Black Sigatoka] under **commercial conditions** anywhere in the world.’³¹

3.41 In light of these concerns the Committee considers that BA should obtain suitably qualified, high level internationally recognised expertise in considering the disputed risk factors.

Freckle

3.42 Freckle is a leaf and fruit spotting fungal disease. Possible means of entry to Australia are symptomless infection of fruit, and in leaf trash.³²

3.43 The IRA assessed the risk of freckle as follows:

Freckle	June 2002 draft	Feb 2004 draft	June 2004 addendum
annual probability of entry, establishment & spread	high	high	high
consequences	low	low	low
unrestricted risk	low	low	low

30 Submission 6, ABGC, p14. Similarly Mr L. Collins (ABGC), *Committee Hansard* 13 April 2004, p.12. Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.179; similarly p.57.

31 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.178. Submission 6, ABGC, p.14.

32 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.163.

3.44 A 'low' unrestricted risk does not satisfy Australia's appropriate level of protection (ALOP) and would require risk management measures. The IRA suggests that bananas could be sourced from areas of low pest prevalence in the Philippines, or distribution in Australia could be restricted to areas where commercial bananas are not grown.

3.45 The ABGC's concerns about freckle related to the adequacy of the proposed risk management measures, discussed below.

Mealybugs

3.46 Mealybugs feed by sucking sap. They can damage plants directly and cause indirect damage by transmitting plant viruses. The scenario of concern is mealybugs being carried in protected spaces between banana fingers.

3.47 The IRA assessed the risk of mealybugs as follows:

Mealybugs	June 2002 draft	Feb 2004 draft	June 2004 addendum
annual probability of entry, establishment & spread	high	high	high
consequences	low*	low	low
unrestricted risk	low*	low	low
* see paragraph 3.49			

3.48 A 'low' unrestricted risk does not satisfy Australia's Appropriate Level of Protection (ALOP) and would require risk management measures. The February 2004 draft suggests sponging and washing. The June 2004 addendum adjusted the annual probability of entry, establishment and spread to a small degree which did not change the risk category, but does imply that risk management measures should be stricter, as discussed below.

3.49 The ABGC was concerned that the IRA had reduced the consequences and unrestricted risk between the first and second drafts 'without any adequate explanation or new science.' This comment presupposes that the June 2002 draft ought to have shown the consequences as 'moderate' and the unrestricted risk as 'moderate', on the following grounds:

- In the assessment of consequences, the verbal description of 'international trade effects', when rated according to the guidelines, leads to a rating of D, not C as shown;
- This leads to an overall rating of 'moderate' consequences, which combines with 'high' probability to give 'moderate' risk.³³

33 Submission 6, ABGC, p.17; correspondence 4 March 2005.

3.50 The ABGC's other concerns related to the proposed risk management measures, considered below.

Risk management measures

3.51 Where assessment shows that 'unrestricted risk' (risk in the absence of any special protective measures) is higher than Australia's appropriate level of protection (ALOP), the analysis must then consider whether there are risk management measures that would bring the risk down to within Australia's ALOP.³⁴

3.52 The revised draft IRA issued in February 2004 (as amended by the June 2004 addendum) identified risk management measures as follows:

- For Moko, freckle and banana bract mosaic virus, acceptable risk could be achieved either by sourcing bananas from areas of demonstrated low pest prevalence, or by restricting distribution within Australia to areas where commercial bananas are not grown. The IRA recommended using areas of low pest prevalence in the Philippines on the grounds that this would be easier to establish than restricted distribution in Australia.
- For mealybugs, a combination of targeted inspection and targeted sponging and brushing between banana fingers and an insecticidal spray or dip treatment would make the risk acceptable.³⁵

3.53 Concerns about the risk management measures are discussed below.

Sourcing bananas from areas free of the pest

3.54 The IRA describes 'area freedom [from the pest]' as a risk management measure:

Area freedom would require, among other things, systems to establish, maintain and verify freedom, including assurance that the pest was absent at the time of harvest and that it had not been reported within a specified period prior to harvest. A buffer zone may also be required...³⁶

3.55 The June 2002 draft IRA regarded area freedom as a feasible risk management measure for freckle, but not for Moko, because of the problem of symptomless infection and presence of infection in nearby susceptible host species.

3.56 The February 2004 draft said of Moko (and of freckle in almost the same words):

34 Biosecurity Australia, *Guidelines for Import Risk Analysis*, draft September 2001, p.158.

35 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.17-18; *Addendum*, p.58ff.

36 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.270.

While the principle of area freedom is theoretically available as a risk management measure for Moko, delimitation, establishment and maintenance of a pest free area would need to be relevant to the biology of Moko, including its survival potential and means of spread, as well as the characteristics of production places/sites. The epidemiology of Moko is such that it might be difficult to meet the requirements of ISPM 4 and 10. As such, this measure may not be a technically feasible option in the current circumstances in the Philippines.³⁷

3.57 On this basis the February 2004 draft turned to other measures which were considered to be technically feasible: sourcing bananas from areas of low pest prevalence, and restricted distribution in Australia.

Sourcing bananas from areas of low pest prevalence

3.58 The February 2004 draft, in relation to Moko and freckle, considered sourcing bananas from ‘areas of low pest prevalence’ (ALPP). The June 2002 draft had not considered this.

3.59 The February 2004 draft said: ‘The concept of ‘area of low pest prevalence’ is accepted internationally by phytosanitary experts, and is a recognised pest management measure under the SPS Agreement (Article 6).’ Ms Harwood said that the concept of low pest prevalence has been used by Australia for many years, including in situations where Australia is the exporter.³⁸

3.60 The draft details the proposed requirements for proving an area of low pest prevalence. The Philippines would have to prove to Australia’s satisfaction that the requirements were met.³⁹

3.61 The February 2004 draft proposed that for Moko the required low pest prevalence would be one case per four hectares per year:

This LPP level would be demonstrated by weekly surveys over a minimum period of 2 years immediately preceding harvest of fruit intended for export to Australia. If the prevalence of Moko exceeded the set LPP level, the affected area would be suspended for a minimum period of 2 years.⁴⁰

37 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - draft IRA report*, June 2002, p. 14,245-7; February 2004, p.271,284.

38 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.271. Ms M. Harwood (Biosecurity Australia), *Committee Hansard* 8 March 2004, p.27.

39 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.272ff.

40 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.17,271ff.

3.62 The June 2004 addendum makes the required low pest prevalence for Moko more stringent: one case per seven (instead of four) hectares per year.⁴¹ This may be compared with the actual incidence of Moko in the Philippines of about one case per hectare per year.⁴²

3.63 The IRA (as amended by the addendum) suggests that the maximum prevalence of freckle should be one case per hectare per week; for banana bract mosaic virus, three cases per hectare per year.⁴³

3.64 The ABGC argued that ‘an area of low pest prevalence regime is identical to an area freedom regime except that it would require export bananas to be sourced from plantations that have a low rather than no incidence of Moko.’ The ABGC argued that the reasons which, in the panel’s view, made area freedom unacceptable also make areas of low pest prevalence unacceptable as a risk management measure. It argued that the same considerations apply in relation to freckle.⁴⁴

Auditing compliance with ALPP provisions

3.65 The ABGC also ‘strongly rejects’ the use of any quarantine measure that relies upon monitoring and inspection by Philippines authorities:

The area of low pest prevalence regime recommended for Moko requires weekly inspections of Philippine plantations. The Council has no confidence that the Philippines Government will strictly manage and enforce the inspection requirements, particularly as the Philippines does not have a culture of quarantine and graft and corruption is widespread in the Philippines.⁴⁵

3.66 Mr Collins of the ABGC expanded on this in evidence:

I have visited the farms in the Philippines. I do not believe inspections will be carried out correctly. Banana jobs are well sought after in the Philippines, and there are many people after those jobs. I cannot see a plantation worker coming forward and recording that they had found another case of moko that is going to put that farm in a position of not being allowed to send to Australia anymore. I just do not believe it would be recorded. There is no culture of quarantine in the Philippines....

The big plantations have their own scientific research and do everything internally. They keep all those records internal to their companies. They are

41 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004: Addendum, June 2004, p.3.

42 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.159.

43 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - addendum to revised draft IRA report of February 2004*, June 2004, p.87-8.

44 Submission 6, ABGC, p. 3,12,16.

45 Submission 6, ABGC, p.12

very protective of them. I do not believe that the BPI will have access to them on an ongoing basis.⁴⁶

3.67 Mr Peasley, commenting in November 2003 on the draft as it stood then, said: ‘I think the IRA needs a reality check here...’

... it was pretty obvious that the large banana companies run their own race despite the BPI. I question whether BPI has the necessary independent authority to effectively enforce these requirements.⁴⁷

3.68 Biosecurity Australia argued that ‘we make a pragmatic judgment of the capacity of the exporting country to actually do what we are prescribing and, by the presence of AQIS and BA and at start-up, we make sure that the actual conditions we are prescribing are what happen in the real world.’

We do take exports of horticultural produce from China, Thailand and other places, and we have in place arrangements to assure ourselves that the quarantine conditions that we consider necessary to deal with risk are in fact being applied to our satisfaction.

3.69 This could include a presence of BA and AQIS at startup and ‘over time’, including by random audits.⁴⁸

Restricted distribution in Australia

3.70 Restricted distribution would mean banning imported bananas from the tropical and subtropical areas where commercial bananas are grown.

3.71 The June 2002 draft IRA thought that restricted distribution was impractical:

Movement controls would necessitate State and Territory border and airport checkpoint controls. These are expensive to operate and may lead to substantial disruption of trade in places of high cross-border traffic.

The administration of movement controls on bananas would require auditing and control on the distribution of bananas in Australia by supermarket chains, presumably including a requirement that fruit and cartons retain labelling to the point of sale.

Movement controls may disrupt markets for domestically grown product, and may lead to indirect impacts on Australian banana producers.⁴⁹

46 Mr L. Collins (ABGC), *Committee Hansard* 13 April 2004, p.16.

47 Submission 7, Mr D. Peasley, attachment K2, p.5.

48 Ms M. Harwood (Biosecurity Australia), *Committee Hansard* 10 March 2004, p.16, 24 May 2004 (hearing into Budget Estimates), p.116, 16 June 2004 p.9.

49 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - draft IRA report*, June 2002, p.247.

3.72 The February 2004 draft proposes restricted distribution as a possible risk management measure. It does not explain why the problems quoted above are no longer regarded as persuasive. In evidence BA commented that ‘there have been some developments since 2002’:

Firstly, there has been more use made of restricted distribution regimes in Australia since 2002, including on the movement of bananas from banana growing areas in Queensland during the black sigatoka problems. In the light of that and in the light of the fact that the practicalities were demonstrated to some extent by those controls and their application the panel looked at the administrative, legal and other arrangements that would be necessary for a restricted distribution regime to apply. They still came to the conclusion that it would be very complex, that there were legal, administrative and operational complexities in doing it, but they also came to the conclusion that it was feasible. They identified low pest prevalence as essentially a more feasible means or a less trade restrictive means...⁵⁰

3.73 The February 2004 draft suggests an east-west demarcation line so that the restricted area would include all of Queensland and Northern Territory, Western Australia above latitude 26 degrees, and New South Wales above latitude 32 degrees 30 minutes). It also suggests:

- An awareness campaign to inform the community about the restrictions: ‘This campaign would particularly focus on participants in the distribution chain (wholesalers and retailers) and seek their co-operation’;
- A requirement that imported fruit cartons are appropriately labelled; as well ‘...it may be necessary to identify imported Philippines banana fruit so that they could be readily distinguished...’⁵¹

3.74 Witnesses were concerned about the practicality of restricted distribution. Mr Paton, an IRA panel member, said, ‘I have a very strong problem with this idea of restricted distribution...’:

I guess my position on restricted distribution is the experience I have had since I joined New South Wales in terms of interstate movements of produce. Certainly through eastern Australia there are essentially unrestricted movements. In the sense of being able to police those movements there are no road blocks between Queensland, New South Wales and Victoria.... Understanding the market systems which are out there, it would be very difficult to see how, in the longer term, you could actually control that movement. The theory is that by this restricted distribution, very little of that material will move into production areas in

50 Ms M. Harwood (BA, *Committee Hansard* 10 March 2004, p.13. Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.282.

51 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.17.

Queensland. If you were to put that into the wholesale system in Sydney, I would not give any guarantees that you would have any control on it at all.⁵²

3.75 Mr Peasley, an IRA panel member, said: ‘I made it very clear to the panel that I did not regard [the proposed risk management measures] as practical or enforceable...’

You have no control over secondary wholesalers and independents about where the bananas go.⁵³

3.76 Dr Curll of NSW Agriculture argued that ‘the wild card in all this is the consumer...’:

Whilst you might have a very tight quality control process for major retail sources, once the person at the shop has picked the fruit up, put it in their bag, put it in their car and driven 300 or 400 kilometres in one direction or another, you will have a situation like we have with fruit fly. It is a real, tough ask to expect that disease not to get into areas where it should not be.⁵⁴

3.77 Dr Curll said that New South Wales would certainly not have sufficient resources to enforce a restricted distribution measure.⁵⁵

3.78 Biosecurity Australia stressed that restricted distribution is not the preferred measure: the preferred alternative is sourcing bananas from areas of low pest prevalence in the Philippines.⁵⁶

Sponging, brushing and insecticidal treatment

3.79 The June 2002 draft considered that insecticidal treatment would reduce the risk of mealybugs to an acceptable level. The February 2004 draft IRA considered that insecticide alone would not be adequate. It considered that the least trade restrictive risk management measure would be ‘a combination of targeted inspection of the spaces between banana fingers by quality assurance staff and targeted sponging and brushing between banana fingers by packing station staff’.⁵⁷

52 Mr R. Paton, *Committee Hansard* 13 May 2004, p.2,5.

53 Mr D. Peasley, *Committee Hansard* 13 April 2004, confidential evidence p.1 (quoted with his consent)

54 Dr M. Curll (NSW Agriculture), *Committee Hansard* 13 May 2004, p.7.

55 Dr M. Curll (NSW Agriculture), *Committee Hansard* 13 May 2004, p.8.

56 Ms M. Harwood (Biosecurity Australia), *Committee Hansard* 16 June 2004, p.7.

57 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - draft IRA report*, June 2002, p.256. *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004, p.18,292ff.

3.80 The ABGC argued that ‘the proposed risk management measures for mealybugs are laughable...’:

Mealybugs are small insects that hide in the safe crevices between banana fingers, where they are protected from inspection and washing and brushing. Immature mealybugs called crawlers are microscopic and would evade any inspection regime. This is demonstrated by the fact that live mealybugs were detected in 36 of the 82 consignments of Philippines bananas imported to New Zealand between 11 January 2001 and 21 March 2002 despite those consignments having already been inspected for mealybugs in the Philippines prior to export...

Even assuming that those measures would be effective (which they wouldn’t), does the IRA Team really expect that Philippine packing station workers will diligently inspect and sponge and brush between the fingers of every single cluster of bananas (estimated at 79,000,000 per year) which will be packed for export to Australia?⁵⁸

3.81 Mr Paton also thought that sponging and brushing was not sufficient.⁵⁹

3.82 The June 2004 addendum, based on a recalculation of probabilities to correct an error discovered in a spreadsheet, found that the unrestricted likelihood of mealybugs entering Australia was higher than previously thought. It recommended adding insecticidal dip or spray treatment to bring the risk within Australia’s ALOP.⁶⁰

Comment on risk management measures

3.83 The Committee agrees with concerns about auditing compliance with an area of low pest prevalence regime in the Philippines. On the evidence given, the Committee does not have confidence that the integrity of areas of low pest prevalence could be assured in the longer term.

3.84 The Committee has serious concerns about restricted distribution in Australia as a risk management measure. Considerations are:

- the June 2002 draft argued against restricted distribution;
- the February 2004 draft did not explain why it no longer regarded those arguments as persuasive;
- at least two IRA panel members continued to question its practicality;
- the Committee does not regard BA’s evidence on developments since 2002 as persuasive.

58 Submission 6, Australian Banana Growers Council, p.17-18.

59 Mr R. Paton, *Committee Hansard* 13 May 2004, p.5,11.

60 Biosecurity Australia, *Importation of Fresh Bananas from the Philippines - revised draft IRA report*, February 2004: Addendum, June 2004, p.66.

3.85 As well, the Committee has concerns about restricted distribution as a matter of principle. Plant movement controls already exist in Australia, but they should not be increased if it can be avoided. Australia's large size and scattered population makes internal border controls costly and of uncertain long-term reliability.

3.86 In the Committee's view Australia should affirm that its first, simplest and safest quarantine barrier is the sea. It should not accept any general duty under the SPS Agreement to restrict the free movement of Australians and their goods within Australia.