From: Sue & David Peasley [mailto:peasleyhort@bigpond.com]
Sent: Monday, 1 December 2003 9:16 AM
To: Cheryl Mcrae
Subject: Draft IRA review - Philippines bananas - November 2003

Cheryl

Please find attached my comments on the November 2003 Draft IRA. As you requested I have thoroughly reviewed the document since it receiving it on Monday November 10. Some issues were resolved during our Monday 24 November teleconference.

It is obvious that there are areas of disagreement on several key issues within the panel, particularly the risk assessment for Moko disease, however, these are not going to be resolved unanimously. I therefore support the release of the Draft IRA for stakeholder comment, hopefully with consideration of my suggested changes, in order that the import risk analysis be resolved to a final recommendation as soon as possible.

The concerns expressed in my minority report of June 30, 2003 remain valid.

The fax you forwarded from the Australian Government Solicitor received on 28 October 2003 has pages 6 and 7 missing. Could you chase that up please.

Thank you and have a good break.

Regards

David

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Cheryl McRae
Chair,
Risk Analysis Panel
Philippines Banana IRA
Biosecurity Australia

Cheryl,

My suggested changes are indicated in *"blue"* and my comments in *"italics"*.

EXECUTIVE SUMMARY

In **Summary of risk management measures** *there needs to be an explanation that this IRA does not cover risk management measures after the pest enters Australia, ie., the IRA only refers to managing risk up to the point of entry into Australia. (This was discussed at our teleconference).*

Draft IRA Report text

pp. 50 & 51 – *I understand there were two sets of survey results into particulate trash in bananas in Australia. The one reported in the draft is July – November 2001. Is this the only survey? I don't know the status of the other survey, I haven't seen the data, however, I recall ABGC and NSW Agriculture were involved and it reported significant contamination by particulate trash? If it is statistically sound and verifiable, it would be worth including.*

P. 51 Imp 1. - *suggest you include the words "between plantations" after*……"seasonal variation" *and before* ……"as well as variations from one year to another."

P. 52 Imp 2 – 4th dot point.
Existing text –

- "Regular application of fungicides and at least 3 fungicide sprays before covering bunches".

My comment: This is impossible, and is at variance with the August 03 draft. The Philippines claim they cover the bunch as the second hand emerges. From the emergence of the 'cob' there is only a period of about one week before the second hand is exposed. They certainly could not apply 3 sprays during this period. I don't know why the original text was changed but I suggest the original text be reinserted – "Insecticide spray of the immature bunch prior to covering the bunch".

P. 52 Imp 3. Permanent Packing Stations
First dot point –

- Bunches are lowered onto the frame(**insert** - "*or pad")* carried on the shoulder.

P. 53 Imp 4.
Second last dot point.

- carton packed to correct weight – moist air is removed using vacuum hose and polyethylene bad is "tied off "- *delete, and insert "constricted by tying or an elastic band".*

P. 56 – Last sentence of Imp 6
"Consideration will also have to given…….". *delete* "consideration" *– it is too weak a direction.*

pp. 56 & 57 – Imp 7 and Imp 10
"Optical enhancements (magnification and spot lighting) would not be used".
My comment: Without these enhancements, inspection is not effective for these pests as they are hard to detect between fingers close to the crown and peduncle.

P. 77 – Table 13.
Assessment of local, district, state or territory and national consequences.
My comment: The consequences "significant" and "highly significant" have been omitted from the 'District' and 'local' level categories. Why is this so? They were included in TIP May 2002 report.

Imp 2 – bottom of p.142, top of page 143.
My comment: If the Soguilon 2003, study showed that the incubation period of Moko exceeded 13 weeks, how can it be "assumed that the symptoms would appear within 12 weeks"?

P. 143. second paragraph.
The proportion of banana plants infected with the Moko bacterium developing symptomless infected bunches - …"whilst this proportion has not been investigated for Philippines Cavendish bananas infected with B. strain, it is expected to be no higher than the 15% reported for the insect transmitted SFR stain in Central American Cavendish bananas (Stover 1972)."
My comments: What is the scientific basis for this 15% figure, besides Stover's 1972 reference (P. 198, Banana, Plantain and Abaca diseases). How can this be extrapolated to the Philippines situation? This area was to be included in the Philippines research experiments agreed on at April 2002, PSD meeting – Canberra.

P. 143.
The proportion of fruit that is infected on a symptomless infected bunch is likely to depend on various factors such as the number of vascular bundles affected at the point of infection, time period elapsed between infection and harvest, and climatic conditions. It was assumed for this analysis that the proportion of fruit that may be infected on a symptomless bunch is unlikely to exceed 50%.
My comments: Again, how can these assumptions be made in the absence of essential scientific research results.
Also, why is the Stover (1972) statement Page 140, "bacteria may remain localised for some time before disseminating through the plant…… ." *not included or acknowledged and was it considered when assessing the figure of 50%?*

Page 143 continued – last sentence.
"This calculation results in an estimate for Imp 2 of approximately 6.7 x 10^{-4} , which falls in the extremely low category.
My comment: How can the calculated risk fall from that calculated in the August 03 draft (1.3 x 10^{-3}, when there is no sound scientific evidence to support this downgrading of risk?
The August 03 draft likelihood figure fell on the boundary between very low and extremely low. The final rating, however, was chosen as extremely low because "each of the factors used to estimate P (the likelihood that the harvested bunch will bear a symptomless infected fruit) have already been conservatively estimated, it was considered inappropriate to choose the higher likelihood category".
The latest draft November 03, has now calculated the likelihood to be within the extremely low category, by introducing an assumption of 50% symptomless fruit. There is no scientific basis for this!

P.144 Imp 3, 5, 6, 7 and 10.
My comments: If these steps are no risk, what effect would removing them from the calculations have on the result?

Imp 4.
My comments: Should include a sentence covering the risk to depletion of chlorine levels by sap and organic matter accumulation (Lindsay QDPI reference), and the undetected knife wounds to fruit where the organism may be sealed in by sap.

P. 146. Dist.3
First dot point – "Of particular relevance are:

- The persistence of the bacteria in or on fruit, in discarded waste or in the soil;

My comment: Add "or attached to the rhizosphere of susceptible asymptomatic host weeds such as Solanum nigrum and Bidens pilosa.

P. 147. Dist.3 –
Distance
Second last sentence of final dot point –
My comments: "……..plantations, *add –" attaching to susceptible asymptomatic host weeds".*

Dispersal mechanisms
Fourth dot point –
My comments: "from decaying waste" , *add –"and the rhizosphere of asymptomatic weed host".*
Add another dot point –

- *Cultivation of soil prior to planting may spread the organism from asymptomatic weed hosts.*

P.148. Dist.3. Exposure of a susceptible host
First paragraph –
…….attracted to disposed waste, or human activity involved with cultivation and pruning.

My comments: *Add "(such as wheeled vehicles damaging roots or simply spreading the organism in mud on tyres.*

P.148 – final paragraph. Dist.3
"Exposure of a susceptible host……the scenario of highest concern was considered the movement of the Moko bacterium through a relatively short distance from banana waste discarded at roadside *insert "directly"* to an adjacent commercial plantation *insert "or via asymptomatic weed hosts"*.

P.153. The direct impact of Moko
Paragraph 4.
"However, while commercial banana production in Australia may be based on smaller plantation size than the Philippines, the Australian industry has considerable experience in the management of diseases such as Bunchy Top, Panama and root burrowing nematode with the result that the impacts of these diseases have been minimised. The direct effects of Moko on Australian production may not therefore be as great as its effects on small farms in other countries."

My comments: *This is not a valid comparison using Bunchy Top, a virus disease and Panama, neither of which have been eradicated from Australia. These diseases are extremely costly to contain. The Northern Territory Banana Industry has been dessimated by Panama Tropical Race 4, and Race 2 has not been controlled in other areas of Australia on non-Cavendish varieties.*
The issue here is that if Moko were to be carried or spread to the major growing area in tropical North Queensland, the chances of early detection would be remote because of the confusion of symptoms with Erwinia corm rot which is present and exhibits similar symptoms to Moko. By the time an infected site was diagnosed, it would probably be too late to contain or eradicate because of the ideal conditions for spread (high rainfall, high temperatures, heavy soil, frequent flooding and the frequency of mechanised wheeled vehicle access.
I disagree with the overall rating of B for the direct impact of Moko and I have repeatedly requested my dissenting vote of C be recorded.

P.154. The indirect impact of Moko.
"On first detection an eradication program could be initiated ……Standing Committee".
My comments:
1. *When symptoms have developed it is probably too late to eradicate.*
2. *Confusing symptoms with the Erwinia corm rot.*

These two factors would make an eradication program unlikely to succeed.

"If an eradication program failed……of Australia."
My comments: Has Moko ever been eradicated anywhere in the world?

P. 264. Risk Management for Moko
Area Freedom
My comments: *It seems an unnecessary statement that if there is no disease present then the likelihood of a tonne of fruit being infected is negligible – of course it is!*

P. 265. <u>Areas of Low Pest Prevalence</u>
"The concept of ……SPS Agreement (Article 6)". "There is currently no international standard established by the IPPC".
<u>My comments:</u> This RAP draft is using a draft standard in its determination.

"Calculation of Moko risk assessment, Imp.2 was estimated using the equation ……calculation of P".
<u>My comments:</u> The three components of P (the likelihood that a harvested bunch will bear a symptomless infection) are not scientifically sound. Firstly, the Moko incubation period of 12 weeks *is used in the IRA despite the latest Philippines research showing it was greater than 13 weeks (Soguilon 2003). Secondly*, the likelihood that an infected plant would bear a symptomless but infected bunch (0.15*) – the Stover factor. There is a lot of extrapolation and no hard evidence to support this figure. Thirdly*, the proportion of a symptomless infected bunch bearing symptomless but infected fruit (0.5). *The stakeholders will require these assessments to be substantiated by sound scientific evidence.*
Also, the prevalence of Moko (infected mats/hectare/week) under standard Philippines plantation practise has been "estimated using data provided by BPI". *The summary table of data on Moko incidence supplied by PBGEA has not been verified with weekly data over 5-years as requested and agreed to at the PSD meeting in April 2002.*

P.266/267. Specific requirements.
Established of an area of low pest prevalence (ALPP).
1.1. Geographical description, third dot point.
"BPI would determine ……..insect vectors".
<u>My comments:</u> There was ample evidence during the visit by TWG Chairs in 2001 that this requirement was not being enforced or implemented satisfactorily.

P.268. Change in status of an ALPP
<u>My comments:</u> There is total reliance on BPI for maintaining a quality control program for survey and documentation, action to delimit, contain, control or eradicate. Why is there no requirement for an external independent audit?

Fourth dot point –
"Identification of such areas …….may include…….designated area."
<u>My comments:</u> Why isn't mapping of all detections within a 2-year period on the plan of the designated area compulsory? Add "will" or" must" to replace "may".

I think the IRA needs a reality check here, I know it is not politically correct but 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.

P.270. Inspection for internal peduncle symptoms of Moko by QA staff.
<u>My comments:</u> The draft needs to explain more clearly the lag period, ie., that "the organism precedes the development of symptoms".

P. 271/273. Restricting the distribution of imported bananas.
Distribution of imported fruit.
"Movement of imported Philippines banana fruit north of the demarcation line would be prohibited unless a permit is granted."
My comments: This would be practically impossible to police or control because of the high volume of tourist traffic to the north of Australia. State government resources are not capable of an effective control of fruit movements.

"An awareness campaign……..Philippine bananas."
My comments: This is a naive proposal. The substantial leakage of fruit movement by tourists, independent distributors, secondary wholesalers, retailers, etc., has not been recognised in the draft. I strongly disagreed with the statement in the summary, Page 275, "that the restricted risk for Moko, if distribution is limited was found to be negligible. Because this satisfies Australia's ALOP, bananas could, in principle, safely be imported under this risk management option". *The words, "in principle" indicate that a particular scenario can be made to work on paper but would not be practical or effective in reality. I believe both of the feasible risk management measures – the designation of ALPP, and restricted distribution in Australia are not practical to implement effectively.*
The RAP must deal in reality.
Stakeholders will be sceptical if the measures proposed are not realistic and the measures may appear contrived.

P. 323. Quarantine conditions
Systems for monitoring and surveillance
My comments: Insert All at the start of the sentence "Banana plantations are inspected weekly for pest and disease."

P. 324. Pre import measures
Export plantations
4.1…….in the event of non-compliance *insert "and external auditing".*

4.1.3 Geographical …….numbers *insert "accurate location data such as GPS on the boundaries of approved plantation blocks".*

6. Operation of……..approved equivalent……..import conditions.
My comments: Approved by who? The equivalent should be subject to external audit.

P. 325. Low pest prevalence for Moko in a plantation.
7.1 An area of …….auspices of BPI. *Insert "and boundaries identified by precise grid references, eg., GPS and aerial photography".*

8.1 Freckle.
My comments: Refer to Moko comments above.

P. 326. Packing station measures……P. jackbeardsleyi.
10. Packing station staff…….mealy bugs.
My comments: Suggest delete "and brushing". *The only measures seen by TWG Chairs was sponging. Brushing would damage the fruit.*

15. Concentration of chlorine……..audited by BPI.
My comments: This needs to be strengthened by adding "continuous or frequent or automatically using an approved monitoring technique."

18. A lot……on a day.
My comments: 'packing station' needs to be clearly defined. The normal understanding of a packing station is one packers output from the line where they pack. Our definition is meant to refer to a packing facility or packhouse. These requirements need to be applicable to multi-destination and/or multi-client central or contract packhouses, eg., Chiquita.
Are packhouses required to pack for export to Australia exclusively in any day? And, what are the disinfestation procedures required when changing from one country and their requirements to packing to meet Australia's requirements?

P.327. Loading and transport
My comments: Add another requirement –
Pallets must be new or treated in an approved manner as defined by AQIS.

28. Cartons, containers…….practically free……regulated articles.
My comments: Is' practically free' and accepted term? If not it needs expansion and explanation.

P.329. Restricted distribution of Philippines fruit in Australia
These conditions apply only as an alternative if fruit is sourced from low prevalence areas for Moko and Freckle.
My comments: If this means that fruit from an ALPP can go anywhere in Australia and fruit outside the ALPP can only go in to the restricted distribution zone, this needs to be clarified in plain language in the executive summary and in this section.

P. 377. Moko data sheet
Soguilon reference (2003) referring to greater than 13 weeks incubation period.
My comments: This has not been included in references.

P. 378. Table 32.
My comments: The latitude of Australia's major growing area (Innisfail/Tully) is 17°S. This should be inserted into the Table to provide a reference point for stakeholders.

P. 382. Resistance to desiccation and survival in soil.
First paragraph.
My comments: How do we explain the appearance of Moko in a banana plant in a new plantation at Bukidnon in the Philippines highlands where no bananas had been planted for at least 20 years (TWG visit 2001)?

P. 383. Other sources of inoculum
My comments: There is no reference to spread by floodwaters, only rain splash and cyclonic conditions. Why has this not been included when early references to long distance dispersal by water were included in early drafts? This has very important implications for the north Queensland industry considering its predisposition to

frequent flooding and the massive population of bacterial cells contained in a single drop of bacterial ooze.

P. 388. Table 33. Incubation period of Moko in musa.
My comments: A question to the technical experts on the panel regarding the Stover 1972 reference which states the incubation period of 6 weeks to 3 months or more and the comment that 40% of mats showed symptoms after 70 days and 60% after 90 days. My question – does this mean 40% of plants of symptomless?

P. 390. Soguilon (2003)
My comments: The comments in the Table should be incorporated into the body of the text of the Moko data sheet.

P.424. Appendix 4. Banana growing in Australia and the Philippines
Suggested changes –
Domestic consumption – *Add "commercial" to read "Australian commercial plantations".*

Alternative enterprise options – *Add "subject to pesticide residue limitations" as per original wording from TWG3 report.*

P. 425. (Appendix 4 continued)
Vehicle use within plantation – *insert original wording from TWG3 report. After"* high frequency" *insert "2 to 3 times per week".*

P. 426. (Appendix 4 continued)
Production per hectare – *The new wording* "50 to 75 tonnes per hectare" *for the Philippines is misleading as it equates to 30 to 40 tonnes of export quality fruit (fruit packout yield). The original wording of "30 to 40 tonnes per hectare" is correct and is the same for the Philippines and north Queensland as it is the packout yield not the gross yield. (See TWG3 report table and PSD 2002 minutes).*

Bunch maturation time – *For Australia insert "12 to 20 weeks in the subtropics". Delete* "more than 20 weeks" (see original wording TWG3 report).

Cropping system – *Insert "100% ratoon cropping". Insert "not" after "Annual cropping " to read "Annual cropping not practised in Australia".*
For the Philippines delete "continuous" *as ratoon is the correct term.*

P. 427. Mechanisation V's labour
Australia –*Insert "at relatively high cost" after* "Generally low availability of labour". "In subtropics" *insert "approximately .25 workers per hectare". Delete* "one worker per hectare". *See original wording in TIP Report May 2002 –"1 worker to 4 hectares". Insert "A high degree of mechanisation in tropical growing areas has overcome the comparative disadvantages of low availability and high costs of labour".*

Philippines – *Insert "at relatively low cost" after* "labour" *as per TIP Report May 2002. Insert "High availability of labour is a production efficiency advantage".*

Staff training – *Insert after* "Variable levels of training" *"available and utilised for monitoring, pesticide application, machinery use, quality management, etc."*

Plantation security –

Australia -*Delete* "Entry to plantations is supervised".
Insert "Variable security levels – plantations generally accessible".
Philippines – "Entry to plantations is" *insert "strictly""* supervised".

Pest pressure –
Australia – "Varies with" *delete* "area" *and insert "location". The word "area" is misleading.*

David Peasley
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30 November 2003