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From: Sue & David Peasley [mailto:peasleyhort@bigpond.com]
Sent: Tuesday, 1 July 2003 8:26 AM
To: Cheryl Mcrae
Subject: Minority report - Philippines banana IRA

Cheryl,

As discussed in our telephone conversation of June 19, the attached minority report is submitted for your consideration and action.

This report follows my email letter dated 9 June outlining my initial response to the Draft IRA Report July 2003, which was presented to the panel on June 4, 2003.

Regards

David Peasley
Member,
Risk Analysis Panel
30 June 2003

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Minority report to the Chair, Risk Analysis Panel for the importation of fresh bananas from the Philippines

David Peasley
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Member of the Risk Analysis Panel

As a member of the Risk Analysis Panel (RAP), and Chair of the Technical Working Group for Horticulture, Environment and Operations, appointed to conduct the Import Risk Analysis for the importation of fresh bananas from the Philippines, I respectfully submit the following minority report of my issues of concern over the Draft IRA Report, July 2003, presented to the full RAP on June 4, 2003, for your consideration.

I was included as a member of the RAP in February 2001 because of my knowledge and experience in horticultural aspects of banana production in Australia over a period of 30 years.

Over the past two years the RAP has conducted an exhaustive search for available scientific information on which to base the risk analysis and included specialist expertise into the process through the three Technical Working Groups.

The Final Report is now being prepared and, after careful consideration, I cannot support the revised risk assessments as presented, particularly for the key pest Moko disease.

My main issues of concern are –

1. **Lack of scientific information about Moko.** There are significant gaps in the worldwide scientific information on Moko disease, namely -

- its mode of infection and spread under various transmission mechanisms (mechanical and insect), its rate of spread within the plant, the incubation period under a range of conditions, etc.,
- the epidemiology of asymptomatic (symptomless) infection,
- the importance of asymptomatic weed hosts in the establishment and spread, longevity in the rhizosphere, mechanisms for spread by cultivation and flooding, etc.,
- inoculation levels required to initiate infection,
- the importance of insect transmission in the spread of inoculum,
- its potential for infection and spread, particularly in the highly favourable conditions of the major growing area of Australia (Tully Valley, Far North Queensland) which are different to those in the Philippines.
- the ability of the Moko bacterium to exude from discarded fruit, waste and enter the soil environment (where it may persist for 12-18 months or longer),
- data on Moko infection incidence on all plantations.

2. **Requested Philippines experiment results not forthcoming.** Many of these missing areas of research were identified by the RAP to the Philippines Scientific Delegation in April 2002 and it was agreed scientific experiments

were to be conducted in the Philippines and monitored by an Australian scientist to provide a sound basis for the risk analysis. Results of these experiments have not been provided to the panel, nor has the panel received a progress report.

3. **Difficulty in verifying Philippines information.** Verification ('ground-truthing') of information supplied by the Philippines has been difficult. Whilst I appreciate the potentially awkward diplomatic position of persisting with requests for information, the panel should not be constrained in pursuing relevant information. On several occasions requested information has been incorrect, inadequate or not forthcoming.

4. **Australian economic impact data not supplied.** The economic impact study conducted by the Centre for International Economics (CIE) and commissioned by the Australian Banana Growers Council (ABGC) into the economic impact of importing diseases and pests into the Far North Queensland banana growing areas has been withheld from the RAP (ABGC letter 9 October 2002), despite a commitment to do so from Ross Boyle, Chief Executive Officer, Banana Industry Committee, 15 April 2002.

   The panel has therefore been unable to analyse the claims released by ABGC at the Australian Banana Industry Congress in June 2001, that the introduction of just two diseases (Black Sigatoka and Moko) would cost $918 million in lost production, increased spraying and labour costs; that long term production would be reduced by more than 20% and costs for growers would leap by $3000 per hectare per year. The economic impact study also indicates that nearly 2000 people (14% of the workforce) in North Queensland alone would loose their jobs and this would lead to major social consequences.

5. **Plausible pathway for disease spread.** A completely plausible pathway has been identified for the Moko organism to infect fruit and not show symptoms. The organism can enter the Australian environment through infected skin and crown tissue as discarded waste.

6. **Favourable conditions for infection and spread in Australia's major growing region.** The potential risk of establishment and spread and the difficulty of developing practical risk management options to contain the disease, particularly in the major production area of Australia, the Tully Valley, have been under estimated in the latest panel assessment. Highly favourable conditions exist for infection and spread, including –

- high rainfall,
- heavy soils,
- high temperatures with small diurnal range for most of the year,
- frequent and severe flooding potential of the floodplain,
- high degree of mechanisation,
- difficulty in isolating infection.

7. **Lack of information about the role of other host plants in Australia.** The panel does not have sufficient information to assess the epidemiology of

spread of the Moko disease organism where there are no visible symptoms present. It is possible for the organism to establish by attaching to the rhizosphere of alternative host plants particularly common weeds such as *Bidens pilosa* and *Solanum nigrum* which are widespread in banana production areas, backyards and roadsides of Far North Queensland, then spread to banana plants following cultivation of weeds prior to planting bananas.

8. **Risk management options developed without data or full panel.** Members of the panel have developed risk management options for Moko in the Philippines and Australia without the scientific data from the Philippines, requested in April 2002, and without the involvement of the full panel for a period of over six months. I do not agree with the proposal to establish "low disease prevalence areas" as a practical risk management option because of the difficulty of identifying consistent practical management area units on which to calculate infection rates as eligibility criteria for export.

   I also disagree with the proposal that new or modified horticultural practices for Moko are feasible on the flood plains of Far North Queensland. No modified practices are suggested in the draft IRA and I do not believe infected plants can be isolated or treated effectively under a management system with long rows (600 metres), frequent travel by wheeled vehicles and mounds (required for drainage) which prevent access between rows. A Moko infected plant could therefore effectively eliminate the whole planted row from production.

   Also, the option of 'moving the enterprise to land not affected by the disease' is not a realistic one and fails to recognise the topography and flooding potential of the major production areas of North Queensland where plantations cannot be isolated effectively.

9. **Inadequate time frame for impact assessment.** The time frame for assessing the risk and consequences to Australia has been set at one year (12 months). I do not believe this is a realistic time frame. A period of at least five years is a more appropriate time frame, particularly for assessing the impact or consequences on business operations, regional economies and the environmental impact of a new disease in the Australian environment

   Environment conditions vary from year to year and over the range of banana growing areas of Australia. Also, the behaviour of a new pest under Australian conditions is not always comparable with that experienced in other countries. The recent discovery of Wheat Streak Mosaic Virus is an example of a new disease entering the country and not being detected for a period of at least 5 years. The consequences of such an incursion are likely to be enormous for the Australian economy. The Moko bacterium could remain in the rhizosphere of susceptible host weed species, showing no symptoms and be spread during periods of heavy rain, flooding or cultivation, to banana plants.

10. **Risk of disease increases with proximity of other banana varieties.** Plantings of varieties other than Cavendish, eg, Lady Fingers are increasing in Far North Queensland. These 'cooking' banana varieties have the B genome. Varieties with the B genome have been shown to be more attractive to insects and therefore may constitute a higher risk for insect transmission of the Moko bacterium.

11. **No disease free areas in Philippines.** Area freedom status is not possible in the banana production areas of the Philippines. This is compounded by the high rate of infection in native bananas in close proximity to commercial plantations and the random pattern of infection within the plantation.

12. **Highly conservative approach to risk assessment not taken.** The risk calculation for importation pathway No.2 (IMP 2 – The likelihood that a tonne of harvested fruit will be infected with the pest), resulted in an estimate of approximately 1.3×10^{-3}. This figure fell on the boundary between extremely low and low on the risk estimation matrix. The least conservative likelihood (low) was chosen because "each of the factors used to estimate P have already been conservatively estimated it was considered inappropriate to choose the higher likelihood category". Again, without new scientific information I do not believe there is adequate justification for changing the previously held assessment presented in the first draft IRA. As a result the overall probability of importation of Moko for a metric tonne of bananas was found to be extremely low instead of very low.

13. **Uncertainty prevents risks being established.** Without adequate information about disease epidemiology, it is not possible to assign probabilities of establishment and spread when there is significant uncertainty over important areas of the risk analysis. The draft final IRA repeatedly states that a 'highly conservative' assessment has been taken, however I do not believe an adequate body of sound information has been established to make such a statement.

14. **The issue of multiple pests close to the Appropriate Level Of Protection (ALOP) has not been addressed.** When there are several pests just below the ALOP this must increase the overall risk above that of individual pests. The risk assessment matrix makes no allowance for multiple pest assessment.

15. **Dissenting vote with panel not recorded.** The panel is aware of my disagreements on risk assessments of Moko for Imp.2 on the importation pathway in past RAP meetings and for Dist. 4 and 5 on the distribution pathway as well as the consequences both direct and indirect on plant life and the modification of horticultural practices. I requested that my dissenting vote be recorded on several occasions (May 25, June 5, 2002 and June 5, 2003). I am concerned that my requests have not been acknowledged.

16. **Direct impact of Moko not as great in Australia.** The final draft of 1 July 2003 states that Australia's experience in the management of diseases such as Bunchy Top, Panama disease and root burrowing nematode would mean that "the direct effects of Moko on Australian banana production may not be as

great as its effect on small farms in other countries". Managing a soil borne disease under the highly favourable conditions for establishment and spread in Far North Queensland is not a valid comparison to make against Bunchy Top and Panama disease, which are largely diseases of the sub-tropics.

Summary

- Panel has conducted an exhaustive search for information to analyse the risks of importing Philippines bananas.

- Despite this search, significant gaps in information still exist in relation to Moko disease.

- A completely plausible pathway exists for the Moko organism to enter the Australian environment.

- Eradication of Moko would be highly unlikely to succeed under the highly favourable conditions of Far North Queensland and the management systems that are necessary to maintain viability.

- Until these key areas of uncertainty are thoroughly researched, a genuine highly conservative risk assessment must be adopted by the panel.

David Peasley
Member,
Risk Analysis Panel

30 June 2003