

Reference: 03150/08

Department of
Primary Industries and Fisheries

23 FEB 2009

Ms Jeanette Radcliffe
Committee Secretary
Standing Committee on Rural
and Regional Affairs and Transport
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Ms Radcliffe

Inquiry into the IRA for the importation of Cavendish bananas from the Philippines

Please find attached Queensland's submission to the above inquiry by the Senate Standing Committee on Rural and Regional Affairs and Transport. This submission has been prepared by my Department on behalf of the Queensland Government.


The Department of Primary Industries and Fisheries (DPI&F) welcomes the opportunity to comment on various aspects of the IRA process suggested by the Terms of Reference.

This issue is of great concern for Queensland as our state produces 90 percent of all Australian bananas. The incursion of black Sigatoka in 2001 on this industry has already demonstrated the potential effects of an incursion of a serious exotic pest, the effects of Tropical Cyclone Larry in 2006 and the effects of widespread destruction in the banana industry.

However, the ongoing eradication of red imported fire ants demonstrates the enormous costs associated with the accidental importation of a hitch-hiker pest not associated with the commodity being imported. The department believes this to be a very real threat posed by the importation of bananas from the Philippines.

If you require any further information regarding this matter, please do not hesitate to contact Kareena Arthy on telephone 07 3239 3855 or email kareena.arthy@dpi.qld.gov.au.

Yours sincerely



Robert Setter
Director-General
Att

***Department of Primary Industries and
Fisheries, Queensland***

***Submission - Inquiry into the Import Risk
Analysis (IRA) for the importation of
Cavendish bananas from the Philippines***

***Standing Committee on Rural and
Regional Affairs and Transport***

February 2009

Submission - Inquiry into the Import Risk Analysis (IRA) for the importation of Cavendish bananas from the Philippines

Introduction

The Department of Primary Industries and Fisheries (DPI&F) welcomes the opportunity to provide a submission to the inquiry into the import risk analysis (IRA) for the importation of Cavendish bananas from the Philippines by the Senate Standing Committee on Rural and Regional Affairs and Transport.

This issue is of great concern to Queensland as 90 percent of all bananas produced in Australia are grown in north Queensland, specifically in the Cassowary Coast Council region. Obviously, with such a concentration of this industry in one region, the impacts of an exotic pest incursion in this crop could have significant adverse impacts on the banana industry. As a result, there would be significant flow on impacts for the region and other industries as well.

The effects of Tropical Cyclone Larry, which cut approximately 85 percent of the banana production in north Queensland, provide some comparative data to illustrate the effects of an event that severely contracts banana production in the region. Overall it was estimated that losses from banana production alone were approximately \$283 million. This had a significant impact on the welfare of wet tropics producers, the local north Queensland economy and consumers of bananas in Australia. Decreases in the level of annual net welfare to consumers and producers were estimated in 2006 at \$271 million and \$108 million respectively, totalling \$379 million.

The impacts of a severe cyclone do however differ markedly from those of an exotic pest or disease incursion. There was approximately nine months before production began to return and the impacts began to dissipate. However, this may be quite a different outcome from an incursion depending on the causal organism. For example, an incursion of *Ralstonia solanacearum* Race 2, the causal agent of Moko, requires a fallow period of at least two years once all of the required host material has been removed. After the incursion of black Sigatoka in the Tully banana production area was identified in April 2001, full market access was not restored until eradication was declared and area freedom status was reinstated in March 2005, almost four years later. In addition to production losses there are also considerable costs associated with the eradication of the pest itself.

As an illustration of the importance of banana production to the northern Queensland regional communities, in the Cassowary Coast Council region bananas account for almost 50 percent of exports out of the region. Unlike many rural communities with urban centres below 5-10,000 people, the population of this region is actually growing. Much of this growth has been attributed to the banana industry and secondary activities associated with the banana industry. Unemployment in the region is also low in comparison with many other coastal rural communities. Again this has been largely directly attributed to the banana industry.

Employees in this industry are culturally diverse with the banana industry being the main source of employment for backpackers and local indigenous people. There is also a large Hmong (Laotian) community and a similar sized Sikh community in this region, both of which work almost exclusively in the banana industry. The other feature of the banana industry is the high level of women that are employed. The majority of the women working in the industry are located in packing sheds.

The approximate contribution of these three key employment groups to the total employed in the banana industry would be:

- 10 percent backpackers;
- 10-30 percent indigenous, depending on the plantation; and
- 30 percent women.

It is therefore highly likely that this region would experience considerable economic and social difficulties if adjustment resulting from the loss or significant contraction of the banana industry were to occur due to an incursion of a high priority emergency plant pest.

The potential for an incursion of an environmental pest must also be considered. Such an incursion may be more far reaching and even more costly to a higher proportion of Australian communities. Bananas, once imported into Australia, would be distributed widely across the country potentially moving any contaminant hitch-hiker pests with them. As an illustration of the impacts of incursions of environmental pests, Queensland is still in the process of eradicating red imported fire ants after discovery of the pest in the Brisbane area in 2001. The cost of responding to this incursion to government alone is estimated to be over \$200 million to date.

Further specific comments in relation to the areas covered by the individual Terms of Reference are made below.

a. Biosecurity Australia's administration of the IRA process

It is acknowledged that this IRA was undertaken in accordance with the *Import Risk Analysis Handbook 2003* although a revised handbook was released in 2007. There is provision within the 2003 handbook for Biosecurity Australia (BA) to request further information from a proponent concerning import proposals if insufficient information is provided which DPI&F acknowledges was done. However it is further noted the *BA Import Risk Analysis Handbook 2007* (Annex 7) requires prospective importers to provide BA with pest and disease information if requested before an import proposal can be considered valid. The Philippines Bureau of Plant Industries (BPI), did not provide BA with requested information. Under the new guidelines in the 2007 IRA Handbook BA would have been within their rights to not consider the application until this was done.

Statements made in the report suggest information provided by BPI on surveys and reporting does not comply with relevant International Standards for Phytosanitary Measures (ISPM), including:

- ISPM 6 Guidelines for surveillance,
- ISPM 8 Determination of pest status in an area,
- ISPM 17 Pest reporting,
- ISPM 22 Requirements for the establishment of areas of low pest prevalence.

Therefore this information should not be relied upon by BA to make assessments of risk.

b. Scientific and technical information relied upon by the IRA team

DPI&F has reviewed the final report and the Eminent Scientists Group (ESG) report and, while it is acknowledged that considerable amendments have been made in the final IRA report, there is concern that the report still fails to provide a satisfactory level of confidence in the information provided on which some risk assessments have been made as well as the mitigation measures proposed to reduce risks to meet Australia's Appropriate Level of Protection (ALOP).

DPI&F is concerned that inadequate consideration has been given to the potential impact on the environment if an exotic species of consequence was introduced through the import pathway. The lack of consultation with the Department of the Environment, Water, Heritage and the Arts was identified by the Eminent Scientists Group. The implications of this lack of consideration will be dealt with further below in relation to specific risks.

Other issues relevant to specific pests that the department feels have not been considered adequately in the final IRA report are detailed below.

Moko

Although the rating has been changed from A to C (significant), greater consideration should be given to the potential threat to Australia's biodiversity, given the impact that an incursion may have on rare Australian native *Musa* and other closely related species that have never been exposed to Moko. This issue was highlighted by the Eminent Scientists Group report.

The taxonomy of the strains of *R. solanacearum* infecting bananas and Heliconias is not fully understood. The successful eradication of *R. solanacearum* race 2 strains from Heliconia in north Queensland should not be used as an indication of likely success in the event of a future Moko incursion as the circumstances surrounding this event are not comparable. This incident involved a small number of plants imported for a single grower. The detection was made very early and so the disease spread was minimal.

Given the current absence of *R. solanacearum* race 2 from Australia, little is known about its potential host range in Australian plants. There is potential that a Moko incursion could be sustained by previously unsuspected hosts. It is suggested that due to the strain of Moko in the Philippines, transmission by insects is limited. However, this may not be the case in Australia. Also, many animals, for example flying foxes and birds which are known to damage banana bunches, could conceivably transmit the infection in a manner analogous to other mechanical methods.

The high mechanisation of the Australian banana industry would facilitate relatively higher transmission rates of disease within Australia through damage to host plants.

Around 90 percent of all Australian bananas are produced in Queensland, and most in far north Queensland where the consequences of a Moko incursion would be highest. In these areas the regular wet season results in excessive quantities of water around plantations, as well as excessive run-off, as many banana plantations are planted in vertical rows on hillsides. These factors increase the likelihood of disease dispersal should there be a Moko incursion. In particular, the prevalence

of cyclones in far north Queensland, together with the associated rain and flooding events, offer greater potential for rapid, broad-scale dissemination of a Moko incursion into the environment through the spread of plant debris and soil.

The pathogen, *R. solanacearum* race 2, has been transmitted 90km by insects in Colombia and Venezuela, and over a period of three weeks, 5 percent of 700 bees and wasps collected in a Moko-infested area carried the disease and had transmitted it over five miles. Various bee species, which have been cited as potential vectors of Moko, may forage many kilometres from their hive. Small insects can travel vast distances on prevailing winds and, again, the possible dispersal factors associated with cyclones appears not to have been considered. It is unclear why conservative estimates were used in this risk scenario.

Although there is no specific data available on the number of Moko bacteria adhering to insects, or their persistence, it is highly unlikely that only 100 cells would be picked up. Furthermore, the claim that insects are not attracted to wounded plants must be discounted, particularly when no data are presented to support the claim.

Survival estimates of the Moko bacterium of five days in plant debris and two years in soil underestimate the risk of establishment of Moko (although the IRA does suggest that "survival for more than two years depends on the ability of the bacterium to infect the roots of a suitable host"). This is increased by the untested potential host-range of this bacterium in Australian plants. The potential for long-term survival of the Moko bacterium in the Australian environment is very high.

It is noted in several statements within the report (page 76) that information provided by the Philippines authorities is inadequate and outdated. As mentioned previously, it is concerning that BPI did not provide the requested information. It is of further concern that BA has used what they considered as inadequate and outdated information to undertake analysis of high risk pests.

Departmental scientists have noted that if Moko is present in a production area, harvest of internally infected yet symptomless fruit will be unavoidable.

It is also noted that there are still inconsistencies in the information provided for packing stations and mobile packing stations and the risk of contamination remains high, especially as it involves cutting of the clusters.

Black Sigatoka

During the eradication program in Tully in 2001, disease control and containment procedures were implemented to reduce the risk of spread of black Sigatoka to a very low level. All states that produce bananas imposed restrictions on movement of bananas from within the Pest Quarantine Area into their banana production areas until the disease was eradicated. The risk mitigation measures that the IRA report is proposing are considerably lower than those implemented under Australia's domestic quarantine arrangements during the Tully incursion.

The level of leaf material found in cartons of fruit imported from the Philippines to NZ is extremely high given that the produce had already gone through a cleaning and inspection process. The documented presence of leaf litter has been acknowledged in this latest report however the effect of this potentially infested host

material does not appear to have been acknowledged as increasing the risk associated with this pest.

The impacts of a black Sigatoka incursion on plant life would be "highly significant" in the north Queensland area affecting both the banana and Heliconia industries given the weather conditions are conducive to disease development for five to seven months of the year.

The disruption to intrastate and national market arrangements in the event of a detection of black Sigatoka is unlikely to be for a "short time". If the detection was to occur north of Tully, then the infected areas would encompass the Innisfail area and would therefore affect 90 percent of the Australian banana industry. This would have a major impact on markets. As noted previously, area freedom took in excess of four years to achieve after the previous incursion of black Sigatoka in the Tully banana production area. The rating should therefore increase to "highly significant".

Should black Sigatoka become established in Queensland, the increase in fungicidal spray applications could double to 48 sprays/year. This has significant implications with the banana industry being in close proximity to the Great Barrier Reef.

Agricultural industries in the Great Barrier Reef catchment are currently under heavy pressure to reduce chemical usage. Increased chemical sprays would result in further impacts on the environment, human populations and tourism. In the response to the black Sigatoka incursion in Tully from 2001, proposals for extraordinary chemical use needed environmental regulatory approval. Under current environmental policies it is unlikely that environmental regulatory approval would be given for this increased pesticide use in the reef catchment, making the eradication or management of black Sigatoka impossible.

Panama disease (*Fusarium oxysporum* f. sp. cubense)

Fusarium oxysporum f. sp. cubense (Foc) was reassessed in the pest categorisation process of the 2007 IRA report as not requiring further consideration or warranting full pest risk analysis which DPI&F considers to be inappropriate.

"Existing conditions for trade in bananas from areas where the disease is present" is cited as one of the factors contributing to this decision. However Queensland has relied on the stringent quarantine measures in the Northern Territory and in addition has a prohibition on the introduction to Queensland of banana plants or soil (including that which might contaminate machinery) in which bananas have been grown.

DPI&F has recently reviewed the risk from Tropical race 4 from the Northern Territory and concluded that this approach remains appropriate. The extent of decline in the Northern Territory banana industry is such that the amount of inoculum now is far below that which existed previously. The disease sites are effectively contained and there is a prohibition on the movement of banana plants, and machinery, appliances and other things that have been in contact with infected plants or soil, into banana growing areas of Queensland. All fruit produced in the Northern Territory is readily sold close to the place of production.

Insect pests

Inadequate consideration has been given to the matter of contaminant pests which may enter Australia as hitch-hikers on imported banana consignments. Whilst these are not necessarily specific pests of bananas, the entry and establishment of hitch-hiker pests has the potential to cause considerable costs to governments in response and eradication programs, and also have negative impacts on trade and the environment.

The IRA rates the consequences of the introduction of exotic scales, mealybugs and spider mites as low. There seems to be the perception that these are just pests that will add to but not increase the problems caused by similar pests that are already here. This is highly speculative and fails to adequately consider the issues for particular hosts, virus transmission or the disruption to Integrated Pest Management Programs that might result (not specifically in bananas).

The use of clusters of bananas for export, rather than single rows of fruit would compromise pre- and post-export inspection for hitch-hiker pests in banana consignments. Pests such as spider mites, armoured scales and mealybugs are particularly difficult to observe if fruit are left in clusters.

Another point of concern is the use of information relating to the occurrence of these pests in pineapple and mango consignments. Due to the physical differences between a cluster of bananas and an individual pineapple or mango, there is a greater chance of hitch-hikers being concealed in a banana cluster. It is therefore not appropriate to use data relevant to these other commodities as comparisons of risk.

c. Feasibility of the risk management measures and operational arrangements proposed in the final IRA report

Moko

DPI&F believe that it will be extremely difficult to achieve the required levels of visual inspection and corrective action for Moko in the plantation. Due to the size of plantations to be inspected, this would require a high number of skilled inspectors to achieve the level of inspection required.

Black Sigatoka

There are concerns about the ability of mobile packing stations to provide high pressure washing facilities for black Sigatoka control, particularly with water that is clean, rather than taken from a nearby drainage channel which may itself be contaminated with pests.

In the Philippines, it is doubtful that "areas of low pest prevalence could be established and maintained" in accordance with ISPM22 given that:

- nearby unsprayed blocks would provide constant disease inoculum pressure;
- the high number of annual sprays (30-45) suggests that there may be some development of fungicide resistance, making a high standard of control impossible; and

- there is possible loss of aerial spraying in some regions due to the perceived environmental and health issues.

Insect pests

Visual inspection has been proposed as the only mitigating measures for armoured scales, mealybugs and spider mites and whilst this will initially involve pre-clearance inspections, the report states this could change to on-arrival inspections should requirements change in the future. Having uninspected produce awaiting inspection increases the risk of entry of pests and so increases the surveillance required at Ports of Entry.

No detail about what might constitute corrective treatments for armoured scales or mealybugs has been provided should they be detected at pre-clearance inspections. Transmission of viruses by mealybugs should also be considered further.

Inspection protocol

It is stated that "AQIS will inspect each lot using standard 600-unit sampling procedures (to provide 95 percent confidence that there is not more than 0.5 percent infestation in the consignment)". Departmental biometricians believe this sampling procedure will not provide the required level of confidence. Many pest populations are aggregated in the field. Because bananas may be harvested and packed immediately in the field, the distribution of infested units in a consignment may not be homogenous. Standard tables are not appropriate for this situation as the confidence level provided by the sampling specified would be reduced. Sampling needs to be adjusted based on documented pest field distribution patterns to provide 95 percent confidence.

d. Capability of the Australian Government and, in particular, the Australian Quarantine Inspection Service to monitor and enforce compliance with the risk management measures and operational arrangements proposed in the final IRA report.

The current Commonwealth policy of 'keeping the risk off shore' relies on treatments and inspections being carried out in the country of export to prevent the introduction of exotic pests and diseases to Australia. This approach relies extensively on the effectiveness of the technology used and the sophistication and integrity of the exporting country's systems. Australian authorities are aware of significant deficiencies in the processes operating in some exporting countries. AQIS needs to ensure that effective deterrents to exporting countries are in place to correct these deficiencies.

A well documented example of non-compliance is the quarantine fumigation requirements which vary in efficacy as evidenced by post-quarantine detections of pests in imported goods. DPI&F has previously raised with the Commonwealth the need for uniform, severe sanctions to encourage exporting countries to raise the quality and consistency of their pre-shipment treatments and inspections.

A similar proposal was put forward in the recent "One Biosecurity: a working partnership" report of Beale *et al* (2008) in Recommendation 68.

International obligations

To ensure the risk analysis and mitigation procedures are of international standard, data provided by the Philippines to support their application to export bananas to Australia should meet standards defined in relevant ISPMs.

As mentioned previously, statements made in the report suggest the information provided by BPI on surveys and reporting does not comply with the following ISPM:

- ISPM 6 Guidelines for surveillance
- ISPM 8 Determination of pest status in an area
- ISPM 17 Pest reporting
- ISPM 22 Requirements for the establishment of areas of low pest prevalence and hence should not be relied upon by BA to make assessments of risk.

Conclusion

The risk mitigation measures proposed in this IRA are reliant on the implementation of procedures that are not practical. In addition, there is significant reliance on self-reporting of disease at the plantation level. This raises concerns that even if the implementation of the risk mitigation measures were practical they may not be met because of the lack of independence built into the processes.

It is also not clear whether BA is afforded the opportunity to verify the operational framework developed by AQIS to ensure that risks identified in the IRA are adequately mitigated. DPI&F would expect that the operational framework developed by AQIS would be evaluated by BA to ensure that the risk mitigation measures proposed are satisfied by the framework that has been developed.

As an alternative to the system outlined in the report, DPI&F proposes that this chapter should form the basis of a policy document for establishing an operational framework for the management of proposed risks or the means by which an 'Approved Supplier Program' (ASP) could be established and implemented between AQIS and BPI for the supply of bananas from the Philippines to Australia.

An ASP should:

1. provide a defined policy and strategies including requirements from which an operational process could be effectively developed, documented and implemented to manage the identified risks; and
2. demonstrate adoption of a quality management philosophy and how this is applied to the policies, strategies and requirements (as described) to assure risk mitigation processes are effective, practicable and achievable.

The development of such policy should be guided by the recommendations in the "One Biosecurity: a working partnership" report, particularly those within the Ensuring the integrity of the system section.