



16 June 2004

PLANT BIOSECURITY POLICY MEMORANDUM 2004/19

**RELEASE OF ADDENDUM TO THE REVISED DRAFT IMPORT RISK ANALYSIS
REPORT - BANANAS FROM THE PHILIPPINES**

This Plant Biosecurity Policy Memorandum (PBPM) is to notify stakeholders of the release of the Addendum to the revised Draft Import Risk Analysis (IRA) Report for the importation of bananas from the Philippines.

In February 2004 Biosecurity Australia released a *revised Draft Import Risk Analysis Report for Bananas from the Philippines*.

In March 2004, Biosecurity Australia identified and corrected a transcription error in a cell of an electronic spreadsheet used in the estimation of risk. The IRA Team advising Biosecurity Australia on this IRA was then asked to review the ramifications of correcting the spreadsheet error, including consequential effects on the risk assessment and risk management for all quarantine pests and diseases. They were asked to document any changes to the recommended quarantine conditions set out in the February 2004 Draft IRA Report.

The IRA Team has prepared an Addendum to the revised Draft IRA Report.

The Addendum recommends more stringent measures for the importation of bananas from the Philippines in relation to two diseases (Moko and banana bract mosaic virus) and one pest (mealybugs). The Addendum provides replacement sections of the February 2004 revised Draft IRA Report, with changes highlighted for ease of reading.

All members of the IRA team support release of the Addendum for stakeholder comment.

The Addendum presents the majority view of the IRA Team. One member holds minority views on some matters. His views are documented in attachments to a letter written to the Executive Manager of Biosecurity Australia. His letter, and a separate letter from the other six members of the IRA Team are attached to the Addendum.

The Executive Summary and the recommended draft Quarantine Conditions are attached.

Biosecurity Australia has made available a copy of the Microsoft Excel spreadsheet that presents in electronic form the risk estimation model used in the revised Draft IRA report. For convenience, tables of the relevant inputs and outputs are included.

The Addendum, the revised Draft IRA Report and the spreadsheet are available at www.daff.gov.au/plantbiosecurity. Copies in either hard copy or CD ROM format can also be requested from Technical and Administrative Services.

Comments on the revised draft IRA report, as amended by the Addendum should be submitted by 16 August 2004 to the following address:

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Confidentiality

Stakeholders are advised that, subject to the *Freedom of Information Act 1982* and the *Privacy Act 1988*, all submissions received in response to Plant Biosecurity Policy Memoranda will be publicly available and may be listed or referred to in any papers or reports prepared on the subject matter of the memoranda.

The Commonwealth reserves the right to reveal the identity of a respondent unless a request for anonymity accompanies the submission. Where a request for anonymity does not accompany the submission the respondent will be taken to have consented to the disclosure of his or her identity for the purposes of Information Privacy Principle 11 of the *Privacy Act 1988*.

The contents of the submission will not be treated as confidential unless they are marked 'confidential' and they are capable of being classified as such in accordance with the *Freedom of Information Act 1982*.

Consultation

If you wish to suggest inclusion of an additional stakeholder in our distribution list, or if you wish to be removed from the distribution list, please provide details to Technical and Administrative Services.

Information on all IRAs and policy reviews being conducted by Plant Biosecurity is available on the Internet at www.daff.gov.au/plantbiosecurity.

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REPLACEMENT EXECUTIVE SUMMARY – BANANA REVISED DRAFT IRA REPORT

In June 2000, Australia initiated an import risk analysis (IRA) on Philippines bananas following provision of necessary technical information by the Philippines Bureau of Plant Industry (BPI) in May 2000.

BPI in their submission requested a risk analysis of a proposal to export fresh mature hard green banana fruit to Australia. BPI proposed exports of four varieties of Cavendish (Extra Dwarf, Giant Cavendish, Grand Nain and Williams) and Gros Michel from the Mindanao region (Davao, Cotabato and Bukidnon) in the Philippines.

An IRA team (then referred to as a Risk Analysis Panel) was established to conduct the IRA. The members are:

Dr Cheryl McRae	Chair Senior Manager — Biosecurity Development and Evaluation Biosecurity Australia
Dr Sharan Singh	Manager — Plant Biosecurity Biosecurity Australia
Dr Rob Allen	Principal Policy Officer — Plant Health Queensland Department of Primary Industries
Dr Bryan Cantrell	Principal Policy Officer — Plant Health Queensland Department of Primary Industries
Mr Bob Paton	Policy Officer — Market Access New South Wales Agriculture
Mr David Peasley	Horticultural Consultant
Mr Mike Robbins	Manager — Grain, Seed and Nursery Stock Australian Quarantine and Inspection Service

The IRA team established three technical working groups to assist its consideration of pathogen, arthropod, and horticulture, environment and operational issues relevant to the IRA. In May 2001, Biosecurity Australia released an *Issues Paper* on the BPI proposal for stakeholder comment. In October 2001, following stakeholder comments on the *Issues Paper* and discussions with the Chairs of technical working groups during their visit to the Philippines, BPI clarified that the proposed export area of Davao means Davao del Sur, Davao del Norte and Davao Oriental and Cotabato means South Cotabato, North Cotabato and Sarangani. At the same time, BPI also advised Biosecurity Australia that the cultivar Gros Michel was no longer produced in their banana plantations.

In June 2002, Biosecurity Australia released a *Draft IRA Report* for stakeholder comment. Twenty submissions were received on the draft report, including substantial comments from the Philippines Government and industry, the Australian Banana Growers' Council (ABGC) and the Western Australian Government. In addition to stakeholder submissions on the June 2002 *Draft IRA Report*, supplementary comments and reports relevant to the IRA were received from ABGC and the Philippines Government.

Given the substantial nature of the various submissions and reports, and the widely varying technical viewpoints, the IRA team considered it appropriate to undertake an extensive review of the technical information concerning each of the quarantine pests identified in the IRA.

Additionally, the IRA team reviewed the various other technical issues arising from the submissions and reports.

As a consequence, the IRA team identified the need to make significant changes to the analysis as reported in the June 2002 *Draft IRA Report*. For this reason this report is issued as a *revised Draft IRA Report* which takes into account the stakeholder submissions and reports, and technical information available to the IRA team.

This *revised Draft IRA Report* describes the procedures followed to identify and assess the biosecurity risks associated with the importation into Australia of fresh mature hard green Cavendish banana fruit of four varieties (Extra Dwarf, Giant Cavendish, Grand Nain and Williams) from specified areas of Davao (Davao del Sur, Davao del Norte and Davao Oriental), Cotabato (South Cotabato, North Cotabato and Sarangani) and Bukidnon in the Mindanao region, the Philippines. The report also considers and evaluates, as appropriate, risk management measures. It presents recommendations on proposed biosecurity measures sufficient to ensure that Australia's appropriate level of protection (ALOP) is maintained.

This report contains the following:

- Australia's framework for biosecurity policy and IRAs, information on the background to this IRA, a summary of banana industries in the Philippines and Australia, and Australia's biosecurity policies for fresh bananas;
- An outline of the methodology and results of pest categorisation, risk assessment and risk management;
- An assessment of contaminants of banana shipments from the Philippines;
- Draft quarantine import conditions for fresh mature hard green banana fruit from the Philippines;
- Further steps in the IRA process.

Australia's current biosecurity policies for fresh bananas

Fresh banana fruit for human consumption are not currently imported by Australia.

Fresh banana fruit may be imported for *in-vitro* laboratory work under secure quarantine conditions, and at Quarantine Approved Premises. Strict quarantine conditions are observed for these imports, including a requirement that packaging materials and containers be disposed of by incineration, autoclaving or other methods approved by the Director of Animal and Plant Quarantine. The goods in each consignment must be packaged securely and transported directly to a facility approved by AQIS for laboratory analysis. Samples must be in clean, new packaging and must be free from quarantine pests and other regulated articles (eg soil).

The importation of certain 'banana products' from several countries, including the Philippines, is permitted. Banana products include cooked, dried and canned or preserved product.

Movement of banana fruit and banana planting material within Australia may also be subject to intrastate and interstate quarantine restrictions dependent on State and Territory plant health concerns.

Import risk analysis

The technical component of an import risk analysis for plants or plant products is termed a 'pest risk analysis', or PRA¹. As stated in the International Plant Protection Convention's International Standards for Phytosanitary Measures Publication Number 11 (ISPM 11 – Rev. 1) — *Pest Risk Analysis for Quarantine Pests including analysis of environmental risks*, a PRA comprises three discrete stages:

- initiation of the PRA;
- risk assessment; and
- risk management.

Initiation of this PRA

As described above, this IRA Report was initiated by a proposal from the Philippines to export fresh hard green Cavendish banana fruit to Australia. The following PRA flows from that proposal and is the technical component of the IRA Report. The PRA area considered in this report is Australia.

International standards to address the specific quarantine concerns associated with imports of bananas do not exist, nor has Australia completed a risk analysis of this commodity. In addition, Australia does not import fresh hard green Cavendish bananas for consumption from other countries, nor does it have existing import conditions upon which to base a response to the Philippines proposal.

In consideration of these issues, an analysis of the biosecurity risk associated with fresh hard green bananas from the Philippines was required.

A list of pests likely to be associated with fresh hard green bananas from the Philippines (i.e. the biosecurity risk pathway) was generated from information supplied by the Philippines Government and banana industry, literature searches, databases and expert consultation. This list was used in the risk assessment stage of the PRA.

Pest Categorisation

Ninety-nine pests of bananas were categorised according to their presence or absence in Australia, their association with banana fruit, their potential to become established in Australia, and the potential consequences of establishment. From these, 22 were identified as quarantine pests and were the focus of individual risk assessments.

These pests are:

- Banana bract mosaic virus
- Banana bunchy top virus
- *Ralstonia solanacearum* Race 2 (Moko)
- *Guignardia musae* (freckle)
- *Mycosphaerella fijiensis* (black Sigatoka)
- *Fusarium oxysporum* f.sp. *cubense* (Panama disease)

¹ PRA is used throughout this document as an abbreviation of Pest Risk Analysis. The Australian Government Department of Agriculture, Fisheries and Forestry uses the term PRA to describe the technical component of an import risk analysis on plants or their products.

- Mealybugs — *Dysmicoccus neobrevipes*; *Pseudococcus jackbeardsleyi*; *Rastrococcus invadens*
- Weevils — *Philicoptus demissus*; *P. iliganus*; *P. stringifrons*; *P. sp.1*; *P. sp.2*
- Hard scales — *Aspidiotus excisus*; *A. coryphae*; *Pinnaspis musae*
- Fruit flies — *Bactrocera occipitalis*; *B. philippinensis*
- Spider mites — *Oligonychus orthius*; *O. velascoi*; *Tetranychus piercei*

Additionally, other organisms that may enter Australia with shipments of Philippines bananas – ‘contaminants of banana shipments’ (as opposed to those quarantine pests that were identified as being pests of banana fruit) were considered to be of quarantine concern. Of these, 52 weeds were classified as quarantine pests. It was considered that other quarantine pests might also be found among five groups of possible non-weed contaminants of banana shipments (mammals, amphibians, reptiles, molluscs and arthropods).

Assessment and management of risk

The unrestricted biosecurity risk² was assessed by combining the estimates of the likelihoods of entry, establishment or spread of each quarantine pest or group of pests with the consequences of their entry, establishment or spread. Evaluation of consequences included harm to the environment, including impacts on native species.

In relation to **Moko, freckle, banana bract mosaic virus** and two species of **mealybugs** (*Dysmicoccus neobrevipes*; *Pseudococcus jackbeardsleyi*) the unrestricted biosecurity risk was assessed as being too high to meet Australia’s ALOP. For all other pests of Philippines banana fruit, the unrestricted risk was assessed as being sufficiently low as to meet Australia’s ALOP.³

The 2002 *Draft IRA Report* assessed the unrestricted biosecurity risk of black Sigatoka as being too high to meet Australia’s ALOP. However, the IRA team, on review of the scientific evidence, considered because black Sigatoka is a *leaf* pathogen and not a pathogen of banana *fruit*, that the unrestricted risk associated with black Sigatoka was in fact acceptable. The finding that risk management is not required for black Sigatoka is based on a detailed assessment of, among other things, the likelihood of particulate leaf trash being associated with packed fruit, the likelihood of the fungus being on these tiny pieces of trash and the likelihood that the fungus would be viable, as well as the likelihood that the fungus, if present, would be distributed to a susceptible host.

Summary of risk management measures

Risk management describes the process of identifying and implementing measures to mitigate risks so as to achieve ALOP, or tolerance for loss, while ensuring that any negative effects on trade are minimised.

² Unrestricted risk estimates are those derived in the absence of specific risk management measures; or using only internationally accepted baseline risk management strategies. In contrast, restricted or mitigated risk estimates are those derived when ‘risk management’ is applied. In the case of this *Draft IRA Report*, unrestricted risk is the risk associated with fruit produced to the standard achieved through risk management practices used in the production, processing, quality control, packing, transport and shipment of fruit from the specified areas, as described in documentation provided by the Philippines, as well as pre-export and on-arrival quarantine inspections.

³ Note that fruit of all kinds entering Australia is subject to AQIS on-arrival inspection procedures. These procedures are focussed on both the commodity (packed fruit) and any packing materials that may be associated with it.

Various possible biosecurity measures to manage the identified risks for Moko, freckle, banana bract mosaic virus and mealybugs were considered, with key areas of focus being the need to reduce the risks associated with:

- symptomless infection for Moko, freckle and banana bract mosaic virus, and hence potential entry, establishment or spread of these diseases through imported fruit;
- transmission of freckle in particulate trash; and
- mealybug infestation, particularly in the spaces between banana fruit.

Moko

Two feasible risk management measures were identified for Moko: sourcing fruit for export from areas of low pest prevalence (ALPP); and restricting the distribution of Philippines bananas in Australia.

Bananas from the Philippines could be granted access if they were sourced from an Australian approved plantation area, which can demonstrate that the prevalence of Moko is below a level deemed acceptable by Australia – an ALPP. The low pest prevalence (LPP) level for Moko in an approved ALPP would not exceed 0.003 cases (infected mats) per hectare per week, which is about 1 case per 7 hectares per year – i.e. no more than one infected mat in 11,900 mats 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.

As an alternative to sourcing fruit from LPP areas within the Philippines, Philippines banana fruit could be granted access if the port of importation and the distribution of that fruit in Australia were restricted to those parts where commercial banana production does not occur. This measure would be in addition to the risk management practices used in the production and processing, quality control, packing, transport and shipment of fruit from the specified areas in the Philippines, as described in documentation provided by Philippines Department of Agriculture and described in this *Draft IRA Report*. Restricting the distribution of Philippines bananas in Australia could be implemented by the Australian Commonwealth Government using the *Quarantine Act 1908* and its subordinate legislation.

Each of these measures would provide security sufficient to meet Australia's ALOP. The major difference between sourcing fruit for export from areas of LPP and restricting the port of importation and the distribution of Philippines bananas in Australia is likely to be the time required and the administrative complexity of providing for their implementation. The administration of the restriction on the movement of Philippines banana fruit would require additional arrangements and resources to address such issues as monitoring, auditing and non-compliance. The cost of these arrangements and resources would be borne by importers or wholesalers also necessitating the need to develop infrastructure for cost recovery.

It was considered that the time required to develop the suite of legal, administrative and operational arrangements that would be necessary to give the restricted distribution of Philippines banana fruit practical application in Australia is likely to be longer than the time required to demonstrate areas with Moko prevalence at or below the specified LPP level. On this basis, the use of ALPP was considered to be the least trade restrictive of the two risk management options and is the recommended measure.

Freckle

Two feasible risk management measures were identified for freckle: sourcing fruit for export from areas of low pest prevalence; and restricting the distribution of Philippines bananas in Australia.

Bananas from the Philippines could be access if they were sourced from an Australian approved plantation area, which can demonstrate that the prevalence of freckle is below a level deemed acceptable by Australia – an ALPP. The low pest prevalence (LPP) level for freckle in an approved ALPP would not exceed 1 case per hectare per week – i.e. no more than one case per 1700 plants per week where a case is defined as the detection of freckle symptoms on any part of a mat from which a bunch could be harvested. This LPP would be demonstrated by weekly survey data over a minimum period of 4 weeks immediately preceding fruit harvest intended for export to Australia. If the prevalence of freckle exceeds the set level, the affected area shall be suspended for a minimum period of 4 weeks.

As an alternative to sourcing fruit from low pest prevalence areas within the Philippines, Philippines banana fruit could be granted access if the port of importation and the distribution of that fruit in Australia was restricted to those parts where commercial banana production does not occur. This measure would be in addition to the risk management practices used in the production, processing, quality control, packing, transport and shipment of fruit from the specified areas in the Philippines, as described in documentation provided by Philippines Department of Agriculture and described in this *Draft IRA Report*. Restricting the distribution of Philippines bananas in Australia could be implemented by the Commonwealth Government using the *Quarantine Act 1908* and its subordinate legislation.

Each of these measures would provide security sufficient to meet Australia's ALOP. The major difference between using ALPPs and restricting the distribution of Philippines banana fruit in Australia is likely to be the time required and the administrative complexity of providing for their implementation. The administration of the restriction on the movement of Philippines banana fruit would require additional arrangements and resources to address such issues as monitoring, auditing and non-compliance. The cost of these arrangements and resources would be borne by importers or wholesalers also necessitating the need to develop infrastructure for cost recovery.

It was considered that the time required to develop the suite of legal, administrative and operational arrangements that would be necessary to give the restricted distribution of Philippines banana fruit practical application in Australia is likely to be longer than the time required to demonstrate areas with freckle prevalence at or below the specified LPP level. On this basis, the use of ALPP was considered to be the least trade restrictive of the two risk management options and is the recommended measure.

Banana bract mosaic virus

Two feasible risk management measures were identified for bract mosaic virus: sourcing fruit for export from areas of low pest prevalence (ALPP); and restricting the distribution of Philippines bananas in Australia.

Bananas from the Philippines could be granted access if they were sourced from an Australian approved plantation area, which can demonstrate that the prevalence of bract mosaic virus is below a level deemed acceptable by Australia – an ALPP. The low pest prevalence (LPP) level for banana bract mosaic virus in an approved ALPP would not exceed 0.05 cases (infected mats) per hectare per week, which is about 3 cases per hectare per year – i.e. no more than one infected mat in 567 plants per year. This LPP level would be demonstrated by weekly surveys over a minimum period of 7 weeks immediately preceding harvest of fruit intended for export to Australia. If the prevalence

of bract mosaic virus exceeded the set LPP level, the affected area would be suspended for a minimum period of 7 weeks.

As an alternative to sourcing fruit from LPP areas within the Philippines, Philippines banana fruit could be granted access if the port of importation and the distribution of that fruit in Australia were restricted to those parts where commercial banana production does not occur. This measure would be in addition to the risk management practices used in the production and processing, quality control, packing, transport and shipment of fruit from the specified areas in the Philippines, as described in documentation provided by Philippines Department of Agriculture and described in this *Draft IRA Report*. Restricting the distribution of Philippines bananas in Australia could be implemented by the Australian Commonwealth Government using the *Quarantine Act 1908* and its subordinate legislation.

Each of these measures would provide security sufficient to meet Australia's ALOP. The major difference between sourcing fruit for export from areas of LPP and restricting the port of importation and the distribution of Philippines bananas in Australia is likely to be the time required and the administrative complexity of providing for their implementation. The administration of the restriction on the movement of Philippines banana fruit would require additional arrangements and resources to address such issues as monitoring, auditing and non-compliance. The cost of these arrangements and resources would be borne by importers or wholesalers also necessitating the need to develop infrastructure for cost recovery.

It was considered that the time required to develop the suite of legal, administrative and operational arrangements that would be necessary to give the restricted distribution of Philippines banana fruit practical application in Australia is likely to be longer than the time required to demonstrate areas with banana bract mosaic virus prevalence at or below the specified LPP level. On this basis, the use of ALPP was considered to be the least trade restrictive of the two risk management options and is the recommended measure.

Mealybugs

Additional packing station measures would be required to reduce the biosecurity risk associated with the mealybugs *D. neobrevipes* and *P. jackbeardsleyi* to meet Australia's ALOP. While no individual risk management measures were identified, a combination of targeted sponging and brushing between banana fingers by packing station staff and an insecticide treatment with proven high efficacy against mealybugs as part of the routine procedures undertaken within the packing station was considered to be the least trade restrictive risk management measure combination that would bring the risk within Australia's ALOP.

Weeds and other contaminants of banana shipments

Risk assessments were carried out for the 52 weeds identified as quarantine pests. Eleven weeds were identified as requiring risk management to reduce the risks of entry, establishment or spread to an acceptable level. These risks could be managed by a suite of practical measures discussed in this report, relating to the packaging materials used and to packing and transport procedures.

Because likelihood of entry, establishment or spread of non-weed contaminant organisms of banana shipments from the Philippines was considered negligible, the overall risk was not considered sufficient to require management beyond that already proposed for weeds, except that fruit, packing materials and transport vehicles must also be free from the groups of non-weed contaminants (mammals, amphibians, reptiles, molluscs and arthropods).

Quarantine conditions

The *revised Draft IRA Report* outlines a set of conditions for the importation of Philippines bananas. The quarantine conditions described in the report are based on the risk assessment and risk management conclusions from this IRA. Specifically, they flow from the evaluation of risk management options. The conditions are in addition to the risk management practices used in the production, processing, quality control, packing, transport and shipment of fruit from the specified areas in the Philippines, as described in documentation provided by Philippines Department of Agriculture.

The quarantine conditions proposed for the importation of Philippines bananas deal comprehensively with the risks identified in the IRA. A rigorous through-chain systems approach, dealing with all key points in the import pathway, is applied to protect Australia's favourable plant health status and to verify the integrity of the measures applied.

Biosecurity Australia considers that the quarantine conditions i.e. the risk management measures proposed in this report are the least trade restrictive means of ensuring that Australia's ALOP would be met and are commensurate with the identified risks. Biosecurity Australia invites technical comments on their economic and practical feasibility. Alternative measures for managing risk may be accepted, generally or on a case-by-case basis if the proponent can demonstrate that they provide an equivalent level of quarantine protection. Those seeking to propose alternative risk management measures should provide a submission for consideration. Such proposals are welcome and should include supporting scientific information and describe how the alternative measures would meet Australia's ALOP.

Conclusion

This *revised Draft IRA Report* recommends that import of fresh hard green bananas from the Philippines be permitted subject to certain conditions.

In accordance with the process for conducting IRAs as outlined in the *Import Risk Analysis Handbook*, established by the Australian Government Department of Agriculture, Fisheries and Forestry's Biosecurity Australia, comments are invited on this *revised Draft IRA Report* and its **Addendum**. Submissions should reach Biosecurity Australia within 60 days of publication of **the Addendum** to this report. The *Final IRA Report* will take into account any comments received on this draft as well as any new information that may come to hand. The *Final IRA Report* will be open to appeal for a period of 30 days after its release.

REPLACEMENT QUARANTINE CONDITIONS – BANANA REVISED DRAFT IRA REPORT

INTRODUCTION

The quarantine conditions described below are based on the conclusions from this IRA. Specifically, they are based on the risk management options evaluation described in *Risk Management for Quarantine Pests* and the risk assessment and risk management of shipment contaminants described in *Contaminants of Banana Shipments from the Philippines*. The conditions are in addition to the risk management practices used in the production, processing, quality control, packing, transport and shipment of fruit from the specified areas in the Philippines, as described in the Philippines Department of Agriculture responses to the IRA team questions and the *Draft IRA Report* regarding the proposal to import Philippine bananas (Philippines Dept. Agriculture, 2001; 2002; 2002b). These practices are discussed in the *Method for Import Risk Analysis* and in the various pest risk assessments.

Biosecurity Australia considers that the quarantine conditions i.e. risk management measures proposed below are the least trade restrictive means of ensuring that Australia's ALOP would be met and are commensurate with the identified risks. Biosecurity Australia invites technical comments on the economic and practical feasibility of the measures. Alternative measures for managing risk may be accepted, generally or on a case-by-case basis if the proponent can demonstrate that they provide an equivalent level of quarantine protection. Those seeking to propose alternative risk management measures should provide a submission for consideration. Such proposals are welcome and should include supporting scientific information and describe how the alternative measures would meet Australia's ALOP.

A bilateral arrangement document would be signed between the Bureau of Plant Industry (BPI) and Biosecurity Australia to ensure that Australia's biosecurity requirements are satisfied.

Recognition of the competent authority

The Bureau of Plant Industry (BPI) is the Philippines' designated National Plant Protection Organization (NPPO) under the auspices of the International Plant Protection Convention (IPPC). BPI is the official plant protection organisation responsible, *inter alia*, for inspection of plants and plant products moving in international trade and the issuance of certificates relating to phytosanitary condition and origin of consignments of plants and plant products.

Systems for monitoring and surveillance

Monitoring and surveillance systems used in commercial banana plantations, packing stations and transportation in the Philippines are described in the *Method for Import Risk Analysis* and individual pest risk assessments. All export banana plantations are inspected weekly for pests and diseases. Fruit is subject to quality assurance and quarantine inspection. In addition to specific pests, the hard green condition of the fruit is monitored in quality assurance and quarantine inspections.

CERTIFICATION REQUIREMENTS

Pre-import measures

Import Permit

1. A valid 'Permit to Import Quarantine Material' is required to be obtained from the Australian Quarantine and Inspection Service (AQIS).

Quarantine Entry

2. A Quarantine Entry must be lodged with AQIS for fresh hard green bananas. The Quarantine Entry may be lodged by an importer or their agent or broker.

Export areas

3. These conditions apply to sea and air shipments of fresh hard green Cavendish bananas grown in approved commercial plantations, which are located in approved areas of Mindanao in the Philippines. Registered packing stations will also be located in the approved areas at or in the vicinity of the registered plantations.

Export Plantations

4. The bananas will only be permitted from approved plantations.
 - 4.1. All bananas for export to Australia must be sourced only from approved plantations. BPI is required to register all plantations for export to Australia prior to commencement of exports to enable trace back in the event of non-compliance. BPI will maintain a register of plantations 'Approved for Export to Australia' consisting of the following information.
 - 4.1.1. Ownership details
 - 4.1.2. Management details
 - 4.1.3. Precise geographical/physical location of approved plantations, including block boundaries and numbers.
5. All plants in export plantations will be inspected weekly, and complete records will be maintained for external audit.
6. Operation of participating plantations will be approved under ISO 9002 Certification or an approved equivalent, and will cover all relevant aspects of these import conditions.

Low pest prevalence for Moko in a plantation *

7. The bananas will only be permitted from an approved area with demonstrated low pest prevalence of Moko (*Ralstonia solanacearum* Race 2).
 - 7.1. An area of low pest prevalence (ALPP) would be established under the auspices of BPI and boundaries identified by precise grid references.
 - 7.2. The low pest prevalence (LPP) level for Moko in an approved ALPP will not exceed 0.003 cases per hectare per week, which is about 1 case per 7 hectares per year. A case is defined as an infected mat. This LPP level would be demonstrated by weekly surveys over a minimum period of two (2) years immediately preceding harvest of fruit intended for export to Australia.
 - 7.3. BPI would ensure the availability of legislation, administrative infrastructure, competent personnel and other resources necessary to meet the requirements of the ALPPs.
 - 7.4. In the event that the prevalence of Moko exceeds the set LPP level, the affected area shall be suspended from export to Australia for a minimum period of two (2) years.

Low pest prevalence for freckle in a plantation *

8. The bananas will be sourced from an approved area with demonstrated low prevalence of freckle (*Guignardia musae* Racib.; anamorph, *Phyllostictina musarum* (Cooke) van der Aa).
 - 8.1. An ALPP would be established under the auspices of BPI and boundaries identified by precise grid references.
 - 8.2. The LPP level for freckle in an approved ALPP will not exceed 1 infected mat per hectare per week. A case is defined as the detection of freckle symptoms on any part of a mat from which a bunch could be harvested. This LPP would be demonstrated by weekly survey data over a minimum period of four (4) weeks immediately preceding harvest of fruit intended for export to Australia.
 - 8.3. BPI would establish a quality control program for the survey, laboratory diagnosis and eradication of freckle cases, including the assessment of surveyor and diagnostician competency. BPI would regularly audit and verify pest survey records and make this information available to Australia as required.
 - 8.4. In the event the prevalence of freckle exceeds the set LPP level, the affected area shall be suspended from export to Australia for a minimum period of four (4) weeks.

Low pest prevalence for banana bract mosaic virus in a plantation *

9. The bananas will be sourced from an approved area with demonstrated low prevalence of banana bract mosaic virus
 - 9.1. An ALPP would be established under the auspices of BPI and boundaries identified by precise grid references.
 - 9.2. The LPP level for banana bract mosaic virus in an approved ALPP will not exceed 0.05 cases per hectare per week, which is about 3 cases per hectare per year. A case is defined as

* Restricted distribution of Philippines banana fruit may be approved as an alternative condition to low pest prevalence (see post-import measures)

an infected mat. This LPP would be demonstrated by weekly survey data over a minimum period of seven (7) weeks immediately preceding harvest of fruit intended for export to Australia.

9.3. BPI would establish a quality control program for the survey, laboratory diagnosis and eradication of banana bract mosaic virus cases, including the assessment of surveyor and diagnostician competency. BPI would regularly audit and verify pest survey records and make this information available to Australia as required.

9.4. In the event the prevalence of banana bract mosaic virus exceeds the set LPP level, the affected area shall be suspended from export to Australia for a minimum period of seven (7) weeks.

Packing station measures to address the risk associated with the mealybugs *D. neobrevipes* and *P. jackbeardsleyi*

10. Packing station staff responsible for cleaning banana fruit as it passes through the packing station will specifically target the spaces between individual banana fruit fingers for cleaning by sponging and brushing to remove *D. neobrevipes* and *P. jackbeardsleyi* mealybugs.
11. An insecticide with proven high efficacy against mealybugs will be applied to all banana fruit in the packing station after the fruit has passed through the cleaning step.

Packing stations

12. BPI is required to register all export packing station facilities prior to commencement of exports to enable trace back in the event of non-compliance.
13. The manager of the packing station will ensure that equipment and storage areas used for handling export bananas are clean and are practically free from quarantine pests or other regulated articles before being used to process export fruit.
14. BPI will inspect packing stations during the packing and storage of export bananas to monitor and verify that the necessary requirements are met, including measures to prevent contamination of fruit and packing materials with quarantine pests and other regulated articles.
15. BPI will conduct unannounced random audit checks on approved packing stations to monitor the measures taken to prevent mixing or substitution of bananas eligible for export to Australia with non-export bananas.
16. The solution in de-handing and flotation tanks in the packing station will be continuously maintained at 20ppm available chlorine and 200ppm alum. Concentration of chlorine and alum will be monitored by an approved technique, and records will be audited by BPI.
17. The bananas will be packed in clean new packaging. The bananas will be partially vacuum packed in polyethylene bags and then placed into vented cartons, which will be assembled immediately prior to packing.
18. Operation of participating packing stations will be approved under ISO 9002 Certification or an approved equivalent.
19. Quality assurance inspection will be carried out after each 'lot' has been packed, and 600 clusters from each lot will be inspected. A lot is the quantity of bananas packed for export to Australia by a packing station on a day.
20. BPI will suspend exports from non-compliant packing stations.
21. BPI will make available to AQIS, on request, information on its supervisory activities in relation

to packing stations.

Labelling

22. Identification of origin of fruit will be displayed on each carton – including
 - 22.1. Plantation identification number (as per register)
 - 22.2. Block identification number
 - 22.3. Packing facility number
 - 22.4. Date of packing
 - 22.5. Packing line number
 - 22.6. Packer identification number
 - 22.7. BPI Inspection stamp/No.
- 22.8. Should restricted distribution of Philippines banana fruit in Australia be approved then both the lid and the box must be labelled clearly - For restricted distribution in Australia and/or describe those parts of Australia where the fruit can and cannot be distributed, and indicate that it is a serious offence under the Quarantine Act to contravene this regulation.
23. In the event that restricted distribution of bananas within Australia is used as an alternative to areas of low pest prevalence for Moko, freckle and **BBrMV**, each hand would be clearly labelled to identify the origin of the fruit as from the Philippines or each finger would be coded for example, by dipping in a coloured wax.
24. Palletised product will be identified by attaching a uniquely numbered pallet card to each pallet or part pallet. Pallet cards will be marked with the plantation registration number.

Storage

25. Any packed cartons that are not immediately transported to the wharf will be stored in approved premises practically free from quarantine pests or other regulated articles.

Loading and transport

26. Packed cartons will be immediately loaded into a shipping container, or on to a vehicle and transported to the wharf.
27. If packed fruit is not containerised at a packing station, the vehicle cargo area will be covered to prevent contamination with quarantine pests or other regulated articles.
28. If fruit is not containerised, palletised fruit at the wharf will be stored separately from domestic or other export fruit in areas practically free from quarantine pests or other regulated articles.
29. Cartons, containers, pallets, transportation vehicle cargo areas, and ship or aircraft holds will be practically free from quarantine pests and other regulated articles.
30. A consignment will not be split or have its packaging changed while in transit to Australia or while in another country en route to Australia.

Pre-export quarantine inspection

31. All consignments will be subject to pre-export inspection by BPI
 - 31.1. Inspection will occur prior to loading the shipment into containers or ships.
 - 31.2. From each consignment, the BPI officer will randomly select 600 clusters for inspection. Where a consignment incorporates more than a single lot, then each individual lot would be sampled.
 - 31.3. A nil tolerance will apply to quarantine pests and other regulated articles.
 - 31.4. A nil tolerance will apply to fruit that is not in mature hard green condition or is damaged in order to ensure freedom from fruit flies.

Phytosanitary documents

32. A single Phytosanitary Certificate and other relevant documents will accompany each banana consignment, and will be endorsed by BPI.
 - 32.1. BPI will verify that fruit for Australia has been sourced from a registered plantation(s), and complies with Australia's biosecurity requirements as set out in the bilateral arrangement document.
 - 32.2. The relevant Notice of Intent (NOI) number(s) to export bananas, annotated with the pallet card numbers of pallets will be included in the consignment.
 - 32.3. Timber packaging and pallets must be certified on the Notice of Intent to export bananas (NOI) as having been inspected and cleared by BPI.
 - 32.4. The shipping container number(s) and container seal number(s) must be supplied by BPI.
 - 32.5. Each consignment will be accompanied by the following additional declaration:
 - 32.6. "The bananas in this consignment have been produced in an approved area(s) of Mindanao in accordance with the conditions governing the entry of bananas from the Philippines to Australia"

Notification

33. BPI will notify AQIS immediately of any notifiable non-compliance, including detection of Moko, freckle or BBrMV in registered plantations above the specified pest levels and details of deregistered plantations.

Post-import measures

Verification of phytosanitary documents

34. AQIS staff will inspect and verify documentation concerning the shipment.
 - 34.1. The shipment must have a valid import permit.
 - 34.2. The shipment must have a phytosanitary certificate that identifies registered plantations

and bears the above additional declaration.

- 34.3. Any shipment with incomplete documentation or certification that does not conform to specifications must be refused entry, with the option of re-export or destruction. AQIS would notify BPI immediately of action taken.

On-arrival quarantine inspection and treatment

35. The bananas and packaging materials will be inspected by AQIS.
 - 35.1. All shipments are subject to inspection on arrival and any treatment necessary before release.
 - 35.2. Timber packaging, pallets or dunnage in full container load (FCL) containers will be subject to inspection and treatment on arrival, unless certified as having been treated by an approved method.
 - 35.3. The AQIS authorised officer will select at random 600 clusters for inspection. A 600-unit inspection sample will be drawn for each lot.
 - 35.4. A nil tolerance will apply to quarantine pests and other regulated articles.
 - 35.5. A nil tolerance will apply to fruit that is not in mature hard green condition or is damaged.
36. All potential quarantine pests found during on-arrival inspection must be forwarded to an AQIS approved appropriate laboratory for identification. AQIS will provide the results of pest interceptions to BPI.
37. Possible treatment of rejected fruit will be considered in consultation with quarantine entomologists or pathologists.
38. Any non-compliant shipments will be treated, re-exported or destroyed at the importers expense.
39. If live stages of a quarantine arthropod pest are intercepted during on-arrival inspection, and the importer accepts the treatment option, the affected shipment will be fumigated with methyl bromide in accordance with the relevant AQIS standards. It is noted that, if methyl bromide fumigation is required, this treatment may damage the bananas.
40. The efficacy of fumigation will be verified by inspection 24 hours after completion of the treatment.

Restricted distribution of Philippines fruit in Australia

These conditions apply only as an alternative if fruit is not sourced from low pest prevalence areas for Moko, freckle and BBrMV (see conditions 7 and 8). As noted at the beginning of this section, these conditions are in addition to the risk management practices used in the production, processing, quality control, packing, transport and shipment of fruit from the specified areas in the Philippines, as described in the Philippines Department of Agriculture responses to the IRA team questions and the Draft IRA Report regarding the proposal to import Philippine bananas (Philippines Dept. Agriculture, 2001; 2002a; 2002b). These practices are discussed in the Method for Import Risk Analysis and in the various pest risk assessments.

41. Philippines banana fruit are restricted to distribution in those parts of Australia south of a demarcation line across Australia (Figure 13). The demarcation line starts on the Western Australian coast at the 26th parallel and continues east along the 26th parallel until it intersects with the South Australia border. The demarcation line follows the South Australian border north

until it meets the Northern Territory border. At this point, the demarcation line moves east and follows South Australia's northern border to its end at the Queensland border. The demarcation line turns south following South Australia's border as far as the parallel equating to 32⁰30'S. The demarcation line follows the 32nd 30' parallel east across New South Wales to the east coast of Australia.

42. The entry of Philippines banana fruit into Australia is limited to those ports south of the demarcation line described at condition 41. Those ports would be the ports in the States of South Australia, Victoria, New South Wales, Tasmania and Western Australia south of the 26th parallel, as specified in section 12 of the Proclamation.

Audits

43. AQIS may audit the pathway of imported fruit at any time.

Review of import conditions

44. AQIS may review conditions at any time and may, in consultation with BPI, suspend the importation of bananas. A suspension would be reviewed following a joint AQIS, Biosecurity Australia and BPI investigation.
45. AQIS, and Biosecurity Australia, in consultation with BPI, will review the import requirements if circumstances or information warrant such action.