Pest Risk Analysis (PRA)
Stage 3: Risk Management

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Stages

- Stage 1: Initiation
- Stage 2: Pest Risk Assessment
  - Step 1: Pest Categorization
  - Step 2: Assessment of the Probability of Introduction and Spread
  - Step 3: Impacts
  - Step 4: Overall Assessment of Risk
  - Step 5: Uncertainty
- **Stage 3: Pest Risk Management**

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Pest risk analysis

- Stage 1 (initiation) asked:
  - What bad thing can happen?
- Stage 2 (pest risk assessment) asked:
  - How likely is it to happen?
  - How bad will it be?
  - Does it matter? Is the risk acceptable?
- Stage 3 (pest risk management) asks:
  - What can be done about it?

Pest identity

Overall pest risk

Response to risk

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Stage 3: Pest Risk Management

- Conclusions of pest risk assessment
- Risk acceptable? PRA ends 

- Risk unacceptable? PRA continues
  - **Risk management analysis**

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Risk management analysis

- Involves **identifying** and **evaluating options** for reducing, avoiding and eliminating pest risk after we have decided that the **risk is unacceptably** high and in **may be possible to mitigate**

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Risk management analysis

- Information required on:
  - Possible mitigations
    - Efficacy
    - Feasibility
    - Impact

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Principles and concepts

Core disciplines applied to both risk management analysis and risk management practice

- Necessity
- Managed risk
- Minimal impact
- Non-discrimination
- Technical justification
- Modification
- Equivalence

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- **Equivalence**
  - Mitigation options that have equivalent or better efficacy and are also feasible should be considered
- **Rational relationship**
  - Measure in question actually have an effect in mitigating the risk
  - Strength of measure proportional to risk

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Acceptability of risk

- Acceptable level of risk is established by the NPPO
- When might risk be acceptable?
  - Level of risk is so low that specific treatment is not cost effective
  - Level of risk is no greater than that already experienced
  - Cost of mitigation is excessive compared to the benefit
- When is risk unacceptable?
  - Pest incursion would result in economic, environmental or social consequences

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Identifying mitigation options

- **Measures can be implemented**
  - to the growing crop
  - to the harvested commodity
  - to associated materials

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Pest Risk Management

- **Measures can be implemented**
  - at origin or in the exporting country
  - at the point of entry
  - within the importing country or invaded area

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Mitigation points

Country of Origin

In Transit

Country of Destination

Nursery or Orchard → Packing House → Containers → Port of Arrival → Plantation

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Mitigation points

Country of Origin

- Place
- Crop
- Commodity
- Pathway

In Transit

- Storage Facility
- Container(s)
- Transport

(ship, train, truck …)

Country of Destination

- Commodity
- Pathway
- Place
- Other

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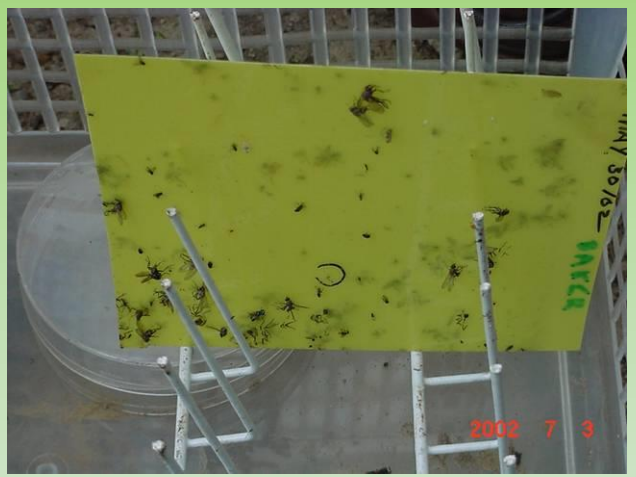
Country of origin

- **Place/area of production measures**
  - General or pest-specific surveillance
  - Historic data
  - Official measures to maintain pest-free status



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Country of origin

- **Crop measures**
  - Treatment of the crop, field or place of production
  - Growing plants under protected conditions to prevent infestation of the crop
  - Specifying time of harvest
  - Phytosanitary certification

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Country of origin

- **Commodity Measures**
  - Inspection or laboratory tests
  - Prohibition of parts of the host
  - Restricting the composition of a consignment
  - Pre-shipment quarantine
  - Specified conditions for preparing the consignment
  - Treatment for removal of pest(s)

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Country of origin

- **Pathway measures**
  - Targeted inspections, publicity and fines or incentives
  - Measures for machinery, modes of transportation, or packaging

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In transit

- **Commodity Measures**
  - Storage conditions may be specified
    - Temperature, packaging, separation from other specified plants etc.
  - Fumigation or other chemical treatment on board ship
  - Ship inspection before loading or at destination

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Country of destination

- **Commodity Measures**
  - Inspection of consignments at the point of entry
  - Treat the consignment to kill living pests
  - Contain imported consignments to limit spread of introduced pests
  - Post-entry quarantine
  - Limit use, distribution, or timing of consignments

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Country of destination

- Prohibition of a specific commodity from specific source
  - Only if no treatments or inspection techniques are available and effective in reducing risk to acceptable levels
  - A measure of last resort
  - IPPC principles of necessity, science-based, managed risk and minimal impact

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Other measures

- Document
  - Phytosanitary Certificates
  - Import permits
  - IPPC stamp for SWP
- Phytosanitary Certificates
  - Official assurance that specified import requirements are met
  - Confirms that risk management measures have been taken
  - Only for regulated articles
- Educate
  - Educate & inform travellers, importers, industry, government or public

Evaluating options

- Is it :
  - Effective *in reducing pest risk to an acceptable level*
  - Efficient; *does it reduce pest with minimum waste and cost?*
  - *Cost-effective*
  - Feasible? *Practical and possible*
  - Reproducible? *Giving same result each time*
  - Potential negative social, economic or environmental consequences

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Analysing mitigation options

Efficacy → How the total benefits associated with the management option are related to the total cost

Feasibility → Is it practical and possible

Impact → What are the direct economic, social and indirect impact of choosing this option

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Selecting options

	Option A	Option B	Option C
Effective	√		√
Feasible	√	√	√
Efficient	√	√	√
Limitations	No	Yes	Yes
Conclusion	**Accept**	Do not accept	**Accept**

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Conclusion of Stage 3

- Risk mitigation measures have been:
  - Identified
  - Evaluated
  - Selected
- Mitigation measures to reduce risk to acceptable level are selected, or
- No mitigation measures are available

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Conclusion of PRA

- Pest risk management conclusion:
  - selection of one of more options or series of options, OR
  - no suitable mitigation measures available
- PRA ends
  - options form the basis of phytosanitary regulations or requirements

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