



# TREATMENT AND INSPECTION OF MANGOES

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## 1. PURPOSE

The purpose of this procedure is to describe –

- (a) the principles of operation, design features and standards required for pre-harvest treatment equipment; and
- (b) the responsibilities and practices of personnel;

that apply to the treatment and inspection of mangoes for fruit fly under an Interstate Certification Assurance (ICA) arrangement.

## 2. SCOPE

This procedure covers all certification of treatment and inspection of mangoes by a business operating under an Interstate Certification Assurance arrangement in the Northern Territory.

**This procedure covers the requirements for Queensland fruit fly and is applicable to –**

- **Businesses operating where the pre-harvest and post-harvest requirements specified in Section 6. Requirement, are a specified condition of entry of an interstate quarantine authority for Queensland fruit fly.**

***Certification of treatment and inspection of mangoes under this Operational Procedure may not be an accepted quarantine entry condition for all intrastate and interstate markets.***

***Some intrastate and interstate markets may require additional certification for pests and diseases other than fruit fly as a condition of entry.***

***It is the responsibility of the business consigning the produce to ensure compliance with all applicable quarantine requirements.***

***Information on intrastate and interstate quarantine requirements can be obtained from the Northern Territory Quarantine.***

## 3. REFERENCES

- |               |  |
|---------------|--|
| <b>ICA-01</b> | Dipping in Dimethoate or Fenthion                                |
| <b>ICA-02</b> | Flood Spraying with Dimethoate or Fenthion                       |
| <b>ICA-03</b> | Low Volume Non-Recirculated Spraying with Fenthion               |
| <b>WI-02</b>  | Guidelines for Completion of Plant Health Assurance Certificates |



#### 4. DEFINITIONS

<b>Accredit</b>	means to authorise nominated staff within a business to issue Assurance Certificates.
<b>Act</b>	means the <i>Plant Health Act</i> .
<b>Agnote</b>	means a document published by the Department of Primary Industry and Fisheries that relates to the handling of chemicals and the specific treatment or preparation of a product.
<b>Application for Accreditation</b>	means an Application for Accreditation of a business for an Interstate Certification Assurance (ICA) and/or Certification Assurance (CA) arrangement (Attachment 1).
<b>APVMA</b>	means the Australian Pesticides and Veterinary Medicines Authority.
<b>Assurance Certificate</b>	means a Plant Health Assurance Certificate (Attachment 2).
<b>Authorised Signatory</b>	means a person whose name and specimen signature is included as an Authorised Signatory on the business's approved Application for Accreditation.
<b>Business</b>	means the legal entity responsible for the operation of the facility and ICA arrangement detailed in the business's Application for Accreditation.
<b>Certification Assurance</b>	means a voluntary arrangement between the Department Primary Industry and Fisheries and a business that demonstrates effective in-house quality management and provides assurance through documented procedures and records that produce meets specified requirements.
<b>Certified/Certification</b>	means covered by a valid Plant Health Assurance Certificate (Attachment 2).
<b>Facility</b>	means the orchard location where mangoes are grown and pre-harvest spraying and harvesting is carried out, and/or the location of the post-harvest treatment, grading and packing operations covered by the Interstate Certification Assurance arrangement.
<b>Fruit fly</b>	means Queensland fruit fly ( <i>Bactrocera tryoni</i> ), Lesser Queensland fruit fly ( <i>Bactrocera neohumeralis</i> ) and Northern Territory fruit fly ( <i>Bactrocera aquilonis</i> ).
<b>ICA</b>	means Interstate Certification Assurance.
<b>Inspector</b>	means an inspector appointed under the <i>Plant Health Act</i> .
<b>Interstate Certification Assurance</b>	means a system of Certification Assurance developed to meet the requirements of State and Territory governments for the certification of produce for interstate and intrastate quarantine purposes.
<b>Mango</b>	means fruit of the species <i>Mangifera indica</i> .
<b>Non-conformance</b>	means a non-fulfilment of a specified requirement.
<b>NTQ</b>	means Northern Territory Quarantine.
<b>Tasmania only</b>	means the section only applies to consignments to Tasmania.



## 5. RESPONSIBILITY

These position titles have been used to reflect the responsibilities of staff under the ICA arrangement. These positions may not be present in all businesses, or different titles may be used for staff who carry out these responsibilities. In some businesses one person may carry out the responsibilities of more than one position.

The **Certification Controller** is responsible for -

- representing the business during audits and other matters relevant to ICA accreditation;
- training staff in their duties and responsibilities under this Operational Procedure;
- ensuring the business and its staff comply with their responsibilities and duties under this Operational Procedure.

### **PART A** - (Covering Pre-harvest Treatment and Harvest Inspection)

- ensuring the business has current accreditation for an ICA arrangement under Part A of this Operational Procedure (refer 7.1);
- maintaining a property plan for each property on which mangoes are grown for certification under this Operational Procedure (refer 7.2);
- ensuring all source blocks of mangoes harvested for certification under this Operational Procedure have undergone pre-harvest treatment from six weeks prior to harvest to completion of harvest (refer 7.3);
- taking action following detection of fruit fly infestation at harvest (refer 7.8).

### **PART B** - (Covering Fruit Receival, Post-harvest Treatment, Grading and Packing and Certification)

- ensuring the business has current accreditation for an ICA arrangement under Part B of this Operational Procedure (refer 7.1);
- ensuring the business has current accreditation for post-harvest treatment under Operational Procedures ICA-01 or ICA-02 or ICA-03 (refer 7.11);
- overseeing the grading and packing of mangoes for certification under this Operational Procedure (refer 7.12);
- taking action following detection of fruit fly infestation at fruit receival or grading and packing (refer 7.13).

The **Spray or Bait Operator** is responsible for –

- maintaining a tank calibration certificate for each sprayer used for pre-harvest treatment of mangoes under this Operational Procedure (refer 7.4.1 and 7.5.1);
- applying pre-harvest sprays to all source blocks of mangoes certified under this Operational Procedure from six weeks prior to harvest to completion of harvest (refer 7.4);
- preparing pre-harvest spray mixtures (refer 7.4.2.1 and 7.5.2.1);
- maintaining pre-harvest spray equipment (refer 7.4.2.3. and 7.5.2.3);



- maintaining pre-harvest spray mixture preparation and treatment records (refer 7.4.2.4 and 7.5.2.4).

The **Harvest Supervisor** is responsible for –

- overseeing the harvest of mangoes for certification under this Operational Procedure (refer 7.7);
- inspecting a minimum of ten (10) mangoes from each 500kg of fruit harvested for certification for evidence of fruit fly (refer 7.7);
- rejecting, cutting and examining any fruit displaying symptoms of infestation for evidence of fruit fly (refer 7.7);
- immediately advising the Certification Controller on detection of live fruit fly at harvest (refer 7.7).
- maintaining harvest inspection records (refer 7.7.2).

The **Fruit Receival Officer** is responsible for –

- ensuring all mangoes received for post-harvest treatment, grading and packing and certification under Part B are sourced from a business accredited under Part A of this Operational Procedure (refer 7.10);
- ensuring mangoes grown by another business are accompanied by a Pre-Harvest Treatment and Harvest Inspection Declaration (refer 7.10.1);
- inspecting a minimum of ten (10) mangoes from each 500kg of fruit received for certification for evidence of fruit fly (refer 7.10.2);
- immediately advising the Certification Controller on detection of live fruit fly at fruit receival (refer 7.10.2);
- maintaining fruit receival inspection records (refer 7.10.4).

**Graders and Packers** are responsible for –

- inspecting mangoes for evidence of fruit fly during grading and packing (refer 7.12);
- rejecting, cutting and examining any mangoes displaying symptoms of infestation for evidence of fruit fly (refer 7.12);
- immediately advising the Certification Controller on detection of fruit fly during grading and packing (refer 7.12).

The **Authorised Dispatcher** is responsible for –

- ensuring all packages covered by an Assurance Certificate issued by the business under this Operational Procedure are identified (refer 7.15.1);
- maintaining copies of all Assurance Certificates issued by the business under the ICA arrangement (refer 7.16).



**Authorised Signatories** are responsible for –

- ensuring, prior to signing and issuing an Assurance Certificate, that produce covered by the certificate has been prepared in accordance with the business's ICA arrangement and that the details on the certificate are true and correct in every particular (refer 7.15.2).

## 6. REQUIREMENTS

Mangoes certified under this Operational Procedure **must** comply with the following requirements –

All varieties of mangoes, **except for the Kensington Pride (KP) and R2E2 cultivars**, certified for treatment and inspection under this Operational Procedure **must** comply with the three requirements in (1), Pre-harvest Treated, (2), Post-harvest Inspected and (3), Post-harvest Treated below:

Mangoes of the **KP and R2E2** cultivar certified for treatment and inspection under this protocol **must** comply with the post-harvest inspection, and post-harvest treatment requirements specified below in (2) and (3) only.

### 1. Pre-harvest treated means:

(a) A program of bait sprays consisting of -

- a bait spray mixture of -
  - 435ml of a concentrate containing 1150g/L maldison, and 2 litres yeast autolysate protein lure, per 100 litres of water,
- OR**
- fruit fly bait concentrate containing 0.24g/L spinosad (eg. Naturelure\*), at label rate.
- applied to –
  - all mango trees on the property requiring treatment for certification under this Operational Procedure, and
  - all other fruit fly hosts trees on the property, with fruit at a susceptible stage (unless receiving a program of fenthion or dimethoate cover sprays).
- applied to the leaves at a rate of not less than 100ml per tree to at least every second tree in the block (e.g. by treating every second row);
- at a maximum interval of every seven days;
- from six weeks prior to commencing harvest to the completion of harvest.

**OR**

(b) A program of **cover sprays** consisting of –

- a cover spray mixture of –
  - 75ml of a concentrate containing 550g/L fenthion, per 100 litres of spray mixture,
- OR**
- 75ml of a concentrate containing 400g/L dimethoate, per 100 litres of spray mixture;





- applied thoroughly to the fruit of all the varieties of mango trees requiring treatment for certification under this protocol;
- at a maximum interval of every fourteen days;
- from six weeks prior to commencing harvest to the completion of harvest.

**OR**

- (c) A combined program of bait sprays and cover sprays applied in accordance with (a) and (b) above, at intervals determined by the type of spray in the most recent application.

2. **Post-harvest inspection** which means from a lot that was inspected after harvest and found free of live fruit fly infestation.

3. **Post-harvest treatment** which means treated by either -

- (a) full immersion of the fruit in a mixture containing 400mg/L dimethoate for a period of not less than 60 seconds;

**OR**

- (b) full immersion of the fruit in a mixture containing 412.5mg/L fenthion for a period of not less than 60 seconds;

**OR**

- (c) flood spraying the fruit in a single layer with a mixture containing 400mg/L dimethoate in a high volume application of at least 16L/minute per each square metre of the area being sprayed, which provides complete coverage of the fruit for a minimum of 10 seconds, after which the fruit **must** remain wet for not less than 60 seconds;

**OR**

- (d) flood spraying the fruit in a single layer with a mixture containing 412.5mg/L fenthion, in a high volume application of at least 16L/minute per each square metre of the area being sprayed, which provides complete coverage of the fruit for a minimum of 10 seconds, after which the fruit **must** remain wet for not less than 60 seconds;

**OR**

- (e) spraying the fruit in a single layer in a non-recirculating system with a mixture containing 412.5mg/L fenthion, in a low volume application of at least 1.2L/minute per each square metre of the area being sprayed, which provides complete coverage of the fruit for a minimum of ten seconds, after which the fruit **must** remain wet for not less than 60 seconds;

All mango fruit is required to undergo post-harvest treatment by a business accredited for an ICA arrangement for Operational Procedures ICA-01, ICA-02 or ICA-03.

Post-harvest treatment **must** be the last treatment before packing.



*The Department of Primary Industry and Fisheries and interstate quarantine authorities maintain the right to inspect at any time certified produce and to refuse to accept a certificate where produce is found not to comply with specified requirements.*

*Some produce may be damaged by chemical treatments. Businesses applying chemical treatments should check with experienced persons such as Departmental officers for any available information. Testing of small quantities is recommended.*

*The business must use products in accordance with the instructions included on the products approved label or an applicable APVMA permit, and follow any first aid, safety, protection, storage and disposal directions on the product label or permit. Treatment facilities must comply with the requirements of the local government, environmental and workplace health and safety authorities.*

*Following the required treatments in this procedure does not absolve the business from the responsibility of ensuring that treated produce does not contain a pesticide residue above the Maximum Residue Level (MRL).*

## 7. PROCEDURE

### 7.1 Accreditation

#### 7.1.1 Application for Accreditation

A business seeking accreditation for an ICA/CA arrangement under this Operational Procedure **shall** submit an Application for Accreditation (refer Attachment 1) at least 10 working days prior to the intended date of commencement of certification of produce.

Applicants **must** provide the details of all produce, plants and plant products they intend to pack and certify under this ICA/CA arrangement in Section 4 of the Application for Accreditation. Ensure application form is completed correctly and all required attachments are provided. A copy of the application form **must** be maintained for audit purposes.

Each accredited business is provided with a unique Interstate Produce (IP) number to identify the business and its produce, plants and plant products for all interstate plant quarantine purposes as ministered by the Certificate of Accreditation.

#### 7.1.2 Audit Process

##### Desk Audit

When the application is received a desk audit is conducted to ensure the application completed correctly with the required attachments. If found to be incomplete the application form will be returned to the business for completion. Once the desk audit has been passed, an initial/compliance audit will be conducted.

##### Initial Audit

Prior to accrediting a business, an Inspector carries out an initial audit of the business to verify the ICA/CA system is implemented and capable of operating in accordance with the requirements of the Operational Procedure, and the system will be effective in ensuring compliance with the specified requirements of the ICA/CA arrangement.



On completion of a successful initial audit, applicants will be granted provisional accreditation for a period of 4 weeks and a 'Certificate of Accreditation' for Provisional Certification will be issued (refer 7.1.3).

### Initial Compliance Audit

In the first year of accreditation an initial compliance audit will be conducted within 4 weeks of accreditation or issuing an assurance certificate pursuant to the Operational Procedure. On completion of successful initial compliance audit the business **shall** be granted full accreditation.

On completion of a successful compliance audit, annual accreditation is granted to cover the current season, up to a maximum of twelve months from the date of provisional accreditation, and a new 'Certificate of Accreditation' issued (refer 7.1.3).

### Compliance Audits

Compliance audits are conducted to verify that the ICA/CA system continues to operate in accordance with the requirements of the Operational Procedure.

Ongoing compliance audits are conducted at least once every six months for a business that operates for more than six months of each year.

Random audits are conducted on a selected number of accredited businesses each year. Random audits may take the form of a full compliance audit, or audits of limited scope to sample treatment mixtures, certified produce, ICA/CA system records or ICA/CA system processes.

Unscheduled compliance audits may be conducted at any time either as a random audit or to investigate reported or suspected non-conformances.

### Re-Accreditation

Accredited businesses are required to re-apply for accreditation each year the business seeks to operate under the ICA/CA arrangement. Businesses seeking re-accreditation **must** lodge a renewal application prior to accreditation lapsing, or if accreditation has lapsed, prior to being accredited to certify produce under the ICA/CA arrangement.

A compliance audit is conducted within twelve weeks of the business applying for re-accreditation each year.

### 7.1.3 Certificate of Accreditation

An accredited business will receive a 'Certificate of Accreditation for an Interstate Certification Assurance' detailing the facility location, Operational Procedure, scope (type of produce and chemical covered) and period of accreditation.

The business **must** maintain a current 'Certificate of Accreditation for an Interstate Certification Assurance' and make this available on request by an Inspector.



A business may not commence or continue certification of produce under the ICA/CA arrangement unless it is in possession of a valid and current 'Certificate of Accreditation for an Interstate Certification Assurance' for the facility, procedure, produce type and chemical covered by the Assurance Certificate.

#### 7.1.4 Non-conformances and Sanctions

##### 7.1.4.1 Non-conformances

Audits are regularly undertaken to evaluate the effectiveness of implementation of the requirements. If, in the opinion of the auditor, there is evidence indicating that there has been a failure to meet one or more accreditation requirements, the auditor may raise a Non-conformance Report (NCR). Actions required to address the non-conformance **shall** be discussed and recorded on the NCR.

If integrity of the accreditation has been significantly compromised, the non-conformance may provide grounds for the suspension or cancellation of the accreditation, and prosecution.

##### 7.1.4.2 Incident Reports

Incident Reports may be raised by intra and/or interstate quarantine authorities to report the detection of a non-conformance in produce certified under this arrangement. An investigation into the incident **shall** be conducted and findings reported back to the originator.

If the integrity of the accreditation has been significantly compromised, the incident may provide grounds for the suspension or cancellation of the accreditation, and prosecution.

##### 7.1.4.3 Suspension and Cancellation

The NTQ may suspend or cancel an accreditation when a business is found, for example, to have:

- obtained accreditation through the provision of false or misleading information;
- not paid fees owing to the NTQ;
- contravened an accreditation requirement that compromises the integrity of the arrangement;
- not rectified a non-conformance;

Any action taken by the NTQ to suspend or cancel an accreditation **shall** be provided in writing to the business. This **shall** provide guidance making an appeal to have the decision be reviewed.

##### 7.1.4.4 Prosecution

Businesses found to be operating contrary to the Act may be liable for prosecution.

##### 7.1.4.5 Charging Policy

Plant Biosecurity fees will apply to businesses that participate in ICA/CA arrangements. NTQ can be contacted for a schedule of the Plant Biosecurity fees.



## **PART A** - (Covers the Grower Activities of Pre-harvest Treatment and/or Harvest Inspection)

### **7.2 Property Plan**

The Certification Controller **shall** maintain a property plan for each property on which mangoes are grown and pre-harvest treated and/or harvest inspected for certification under this Operational Procedure.

The property plan **shall** include the following details –

- (a) the location of all blocks on which mangoes are grown;
- (b) the reference number, code or other identification used to identify the block;
- (c) the cultivar and the number of mango trees planted in the block;
- (d) the name (if any) used on-farm to identify the block or group of blocks;
- (e) road access including street name/s;
- (f) internal roadways within the property;
- (g) the location and identification of buildings on the property (eg. house, packing shed, equipment sheds etc.).

A copy of the business's property plan/s **shall** be included with the business's Application for Accreditation (refer 7.1.1) if accreditation for Part A is required.

A blank Property Plan is included as Attachment 3 and may be copied for inclusion with the business's Application for Accreditation.

### **7.3 Pre-Harvest Treatment**

All mango fruit, except fruit of Kensington Pride and R2E2 cultivars, certified under this Operational Procedure **must** have been pre-harvest treated for fruit fly with either an approved program of bait sprays and/or cover sprays in accordance with 6.Requirement.

When sprays of both types are used in the same season, the type of spray applied determines the maximum interval that can elapse before the next spray is applied.

### **7.4 Pre-Harvest Bait Spraying**

#### **7.4.1 Bait Spray Equipment Calibration**

##### **7.4.1.1 Spray Tank Volume and Calibration**

Permanent volume indicator marks **shall** be made on the side of the spray tank, on a sight tube or sight panel on the outside of the tank, or by some other method which clearly and accurately indicates the **maximum mixture level** and any **incremental volumes** used.

Volume indicator marks **shall** include the volume in litres required to fill the tank to that level.



Each of the volume indicator marks **shall** be calibrated with the tank at the normal filling position using a calibrated flow meter. The person conducting the calibration test **shall** complete a certificate of calibration of the spray tank which **must** be available to the auditor at the initial audit and all compliance audits.

An example Chemical Mixture Tank Calibration Certificate is shown as Attachment 4.

#### 7.4.1.2 Bait Spray Equipment Calibration

The Spray Operator **shall** carry out application rate calibration tests on bait spraying equipment prior to commencement of the season each year and within four weeks of commencement of treatment.

*Application rate calibration tests may be carried out by using one of the following methods -*

- 1. Fill the spray tank with water. With pump operating at normal speed, collect and record the output from the equipment, using an accurate measuring cylinder.*
- 2. Calculate the time required to apply at least 100mL from the spray equipment.*
- 3. Record this duration as a guide to the time required to apply the correct quantity of bait spray to each tree.*

**OR**

- 1. Fill the spray tank with water. With pump operating at normal speed, determine how many squirts it takes to fill a 1 litre measuring cylinder.*
- 2. Adjust the equipment to output sufficient volume to require 10 squirts to fill the 1 litre container.*
- 3. Repeat the calibration test until you can consistently fill the 1 litre container with 10 squirts when operating at normal operating speed.*
- 4. One squirt is then equivalent to 100mLs of bait spray.*
- 5. Apply bait spray at the rate of one squirt to each tree.*

#### 7.4.1.3 Bait Spraying Equipment Calibration Records

Records of spray equipment calibration tests **shall** be maintained by the Spray Operator which records the name of the person conducting the test, the identification of the spray equipment, the date of testing and the results achieved during the tests.

An example Bait Spraying Equipment Calibration Test Record is included as Attachment 5.

#### 7.4.1.4 Calculating the Quantity of Concentrate to Add to the Bait Spray Mixture

Calculate 4.35mL of a concentrate containing 1150g/L **maldison** plus 20mL **yeast autolysate protein lure** for every litre of **water** in the spray tank.



Calculate the volumes of maldison concentrate and yeast autolysate for the maximum mixture level and each of the incremental volumes marked on the spray tank and record these on the Bait Spray Mixture Preparation Chart (refer 7.4.1.5).

#### 7.4.1.5 Bait Spray Mixture Preparation Chart

The business **shall** maintain a Bait Spray Mixture Preparation Chart (refer Attachment 6 and Attachment 7) or similar record in close proximity to the spray mixture preparation area at the time of making up the spray mixture.

A chart **shall** be prepared for each spray unit used by the business for bait spraying under this Operational Procedure.

The chart **shall** provide the following details –

- (a) the identification of the spray equipment and if applicable, the tractor to which the chart applies;
- (b) if applicable, the gear and engine rpm at which the tractor **must** be operated;
- (c) the time in seconds or the number of squirts required to apply 100mL of bait spray mixture (refer 7.4.1);
- (d) the total volume litres of the spray tank when filled to the **maximum mixture level** mark;
- (e) the trade name of the maldison concentrate to be used and the stated concentration of maldison as the active ingredient in the formulation;
- (f) the volume in millilitres (mL) of –
  - concentrate; and
  - yeast autolysate; and
  - water;required to achieve the required bait spray mixture when filled to the **maximum mixture level** mark;
- (g) the volume in millilitres (mL) of -
  - concentrate; and
  - yeast autolysate; and
  - water;required to achieve the required bait spray mixture for any **incremental volumes** used;
- (h) the printed name and signature of the person responsible for the chart's preparation and the date of preparation.

#### 7.4.2 Bait Spray Treatment

The Spray Operator **shall** undertake bait spray from **six weeks** prior to harvest until the completion of harvest of all certified fruit on the property.

The bait spray **shall** be applied at a maximum interval of **every seven days** to all **mango trees** (other than Kensington Pride and R2E2) **and** all **other fruit fly host trees** growing on the **property** with fruit at a susceptible stage (unless receiving a program of dimethoate or fenthion cover sprays).



A minimum of six bait spray applications **shall** be carried out prior to commencing harvest of fruit from a block.

If fruit is still being harvested, bait or cover spraying **should** be continued for three weeks in blocks where picking has ceased to ensure fruit flies **do not** breed on residual fruit.

The bait spray **shall** be applied as a squirt of coarse droplets to the foliage, preferably in a shady part of the tree. Avoid spraying during the hottest part of the day and avoid spraying the fruit where possible.

**Do not** apply bait to the trunk or inter-row grass and weeds. The side of the tree that is sprayed **should** be alternated for each spray application to minimise phytotoxicity.

**The mixture shall be applied at a rate of 100mL prepared bait spray mixture per tree.**

Pre-harvest bait sprays **must** be reapplied if rain sufficient to cause run-off occurs within two hours of spraying.

***Fruit from treated trees should not be harvested until the specified withholding period has been complied with after the bait spray application.***

#### 7.4.2.1 Bait Spray Mixture Preparation

The Spray Operator **shall** prepare the chemical mixture at least daily or more frequently as required.

#### 7.4.2.2 Making Up the Bait Spray Mixture

Using a clean graduated measuring vessel, measure the required amount of maldison for the volume of **water** (refer 7.4.1.4).

Suitable measuring vessels include graduated plastic or glass measuring cylinders.

Fill the spray supply tank with clean water to the **incremental volume** mark or **maximum mixture level** mark.

Add the required amount of maldison to the spray tank in accordance with the manufacturer's directions on the label.

Repeat this for the yeast autolysate.

Ensure that the chemicals are completely diluted in all of the water by mixing the tank for a minimum of two minutes before commencing the spray operation. Some equipment may require extended periods of mixing to fully dilute the chemical and yeast autolysate in the water.

Spray equipment, other than hand held equipment such as knapsack or backpack sprayers, **must** have a means of continuous agitation of the spray mixture in the spray tank throughout the spray operation to avoid settling or separation of the concentrate.





This can be achieved by mechanical mixing devices in the spray tank, or agitation from spray mixture returned via a by-pass from the spray pump.

#### 7.4.2.3 Bait Spray Equipment Maintenance

The Spray Operator **shall** carry out regular checks of spraying equipment to ensure it continues to operate effectively and remains free from malfunction, blockages, damage or excessive wear.

#### 7.4.2.4 Bait Spray Mixture Preparation and Treatment Records

The Spray Operator **must** record details of all bait spray mixture preparation and bait spray treatment using a Bait Spray Mixture Preparation and Treatment Record (refer Attachment 8) or records which capture the same information.

The business's bait spray preparation and treatment records **must** identify –

- the date of bait spray mixture preparation;
- the time of bait spray mixture preparation;
- the total volume (litres) of water in the spray mixture;
- volume of yeast autolysate used (millilitres) in the spray mixture;
- volume of maldison concentrate used (millilitres) in the spray mixture;
- the trade name of the concentrate used;
- the date of application; the spray equipment used;
- the block/s treated;
- the number of trees sprayed;
- identification of the Spray Operator.

### 7.5 Pre-Harvest Cover Spraying

#### 7.5.1 Cover Spray Equipment Calibration

##### 7.5.1.1 Spray Tank Volume and Calibration

Permanent volume indicator marks **shall** be made on the side of the spray tank, on a sight tube or sight panel on the outside of the tank, or by some other method which clearly and accurately indicates the **maximum mixture level** and any **incremental volumes** used.

Volume indicator marks **shall** include the volume in litres required to fill the tank to that level.

Each volume indicator marks **shall** be calibrated with the tank at the normal filling position using a calibrated flow meter. The person conducting the calibration test **shall** complete a certificate of calibration of the spray tank which **must** be available to the auditor at the initial audit and all compliance audits.

An example Chemical Mixture Tank Calibration Certificate is shown as Attachment 4.



### 7.5.1.2 Calculating the Quantity of Concentrate to Add to the Spray Mixture

Calculate 0.75mL of a concentrate containing 400g/L **dimethoate** or 550g/L **fenthion** for every litre of **mixture** in the spray tank.

*The following calculation may be used to calculate the quantity of fenthion or dimethoate concentrate required in a full spray tank –*

*No. of Litres required to fill tank X 0.75 = mL concentrate required*

*For example –*

*350litre spray tank X 0.75 = 262.5mL concentrate*

*A similar calculation may be used for incremental volumes.*

Calculate the volumes of concentrate for the **maximum mixture level** and each of the **incremental volumes** marked on the spray tank and record these on the Cover Spray Mixture Preparation Chart (refer 7.5.1.3).

### 7.5.1.3 Cover Spray Mixture Preparation Chart

The business **shall** maintain a Cover Spray Mixture Preparation Chart (refer Attachment 9 and Attachment 10) or similar record in close proximity to the spray mixture preparation area at the time of making up the spray mixture. A chart **shall** be prepared for each spray unit used by the business for cover spraying under this Operational Procedure.

The chart **shall** provide the following details –

- (a) the identification of the spray equipment to which the chart applies;
- (b) if applicable, the gear and engine rpm at which the tractor **must** be operated;
- (c) the total volume in litres of the spray tank when filled to the **maximum mixture** level mark (refer 7.5.1.1);
- (d) the volume in millilitres (mL) of a concentrate containing 400g/L **dimethoate** or 550g/L **fenthion** required to achieve a mixing rate of 75mL per 100 litres of spray mixture when filled to the **maximum mixture level** mark;
- (e) the volume in millilitres (mL) of a concentrate containing 400g/L **dimethoate** or 550g/L **fenthion** required to achieve a mixing rate of 75mL per 100 litres of spray mixture for any known **incremental volumes** used;
- (f) the printed name and signature of the person responsible for the chart's preparation and the date of preparation.

### 7.5.2 Cover Spray Treatment

The Spray Operator **shall** undertake cover spraying from six **weeks** prior to harvest until the completion of harvest of all certified fruit on the property.



The cover spray **shall** be applied at a maximum interval of every **fourteen days** to all **mango trees** growing on the **block** that are of a cultivar other than Kensington Pride or R2E2.

A minimum of three cover spray applications **shall** be carried out prior to commencing harvest of fruit from a block.

*It is recommended that all other fruit fly host trees on the property with fruit at a susceptible stage are treated to control fruit fly.*

The Spray Operator shall ensure that the spray mixture is applied with sufficient volume, and in a manner that provides sufficient penetration and distribution to ensure thorough coverage of all fruit.

Pre-harvest cover sprays **must** be reapplied if rain sufficient to cause run-off occurs within two hours of spraying.

*Fruit from treated trees should not be harvested until the specified withholding period has been complied with after the cover spray application.*

#### 7.5.2.1 Cover Spray Mixture Preparation

The Spray Operator **shall** prepare the chemical mixture at least daily or more frequently as required.

#### 7.5.2.2 Making Up the Cover Spray Mixture

Using a clean graduated measuring vessel, measure the amount of concentrate required to achieve 75mL per 100 litres of mixture of a 400g/L dimethoate concentrate or 550g/L fenthion concentrate for the required volume of **mixture** (refer 7.5.1.2).

Suitable measuring vessels include graduated plastic or glass measuring cylinders.

Add the required amount of concentrate to the spray tank in accordance with the manufacturer's directions on the label.

Fill the spray supply tank with clean water to the **incremental volume** mark or **maximum mixture level** mark.

Ensure that the chemical is completely diluted in all of the water by mixing the tank for a minimum of two minutes before commencing the spray operation. Some equipment may require extended periods of mixing to fully dilute the chemical in the water.

Spray equipment **must** have a means of continuous mixing of the spray mixture in the spray tank throughout the spray operation to avoid settling or separation of the concentrate.



This can be achieved by mechanical mixing devices in the spray tank, or agitation from spray mixture returned via a by-pass from the spray pump.

***The mixture may contain a fungicide or other chemical provided it is approved for use and known to be compatible with the concentrate used.***

### 7.5.2.3 Cover Spray Equipment Maintenance

The Spray Operator **shall** carry out regular checks of spraying equipment to ensure it continues to operate effectively and remains free from malfunction, blockages, damage or excessive wear.

### 7.5.2.4 Cover Spray Mixture Preparation and Treatment Records

The Spray Operator **must** record details of all cover spray mixture preparation and cover spray treatment using a Cover Spray Mixture Preparation and Treatment Record (refer Attachment 11) or records which capture the same information.

The business's pre-harvest treatment records **must** identify –

- the date of cover spray mixture preparation;
- the time of cover spray mixture preparation;
- volume of concentrate used (millilitres) in the spray mixture;
- the trade name of the concentrate used;
- the total volume (litres) of the made up spray mixture;
- any other pesticides or additives in the spray mixture;
- the date of application;
- the spray equipment used;
- the block/s treated;
- the number of trees/hectares sprayed;
- the identification of the Spray Operator.

## 7.6 Harvesting

The Harvest Supervisor **shall** oversee the harvest process to ensure only conforming mangoes are harvested for certification under this Operational Procedure.

### 7.6.1 Identification of Treated and Untreated Mangoes in the Field

A business which maintains treated and untreated blocks of mangoes **shall** identify the treatment status of field blocks to prevent mixing of treated and untreated mangoes.

Examples of acceptable methods of identifying treated and untreated blocks include -

- (a) using signs in treated and untreated blocks;
- (b) using colour markers in treated and untreated blocks.



Other methods may be used provided they clearly identify to pickers the treated and untreated blocks.

### 7.6.2 Identification of Treated and Untreated Mangoes at Harvest

A business which maintains treated and untreated blocks of mangoes **shall** identify the treatment status of harvested fruit to prevent mixing of treated and untreated fruit.

Examples of acceptable methods of identifying treated and untreated mangoes include –

- (a) using picking bins/crates which differ in colour for treated and untreated mangoes;
- (b) using picking bins/crates which differ significantly in appearance for treated and untreated mangoes.

Other methods may be used provided they clearly identify treated and untreated mangoes.

### 7.7 Harvest Inspection

The Harvest Supervisor **shall** select a minimum of ten (10) fruit from every 500kg harvested. Fruit **shall** be selected from those showing the greatest level of colouring, and any fruit with softening, bruising or other damage which may be a potential site for fruit fly infestation.

Fruit in the sample showing symptoms of fruit fly infestation (ie softening, spotted areas weeping with sap or showing bruising or breakdown) **must** be cut to expose the flesh and examined for the presence of live fruit fly larvae.

The Harvest Supervisor **shall** immediately advise the Certification Controller on detection of live fruit fly larvae.

Harvest inspection **shall** be completed for all varieties of mangoes, and –

- (a) **in the case of a Business that is a different Business from the packer** - prior to completion of the Pre-Harvest Treatment and Harvest Inspection Declaration and delivery to the packer (refer 7.10.1);
- (b) **in the case of a Business which both grows and packs the fruit** - harvest inspection is not required and is carried out in conjunction with fruit receipt inspection (refer 7.10.2).

#### 7.7.1 Harvest Inspection Equipment

The business **shall** maintain inspection equipment such as a hand lens, microscope or other device that provides X10 or greater magnification for examination of suspect fruit.

#### 7.7.2 Harvest Inspection Records

The Harvest Supervisor **shall** maintain records of harvest inspection of fruit.

Harvest inspection records **shall** be in the form of a Harvest Inspection Record (refer Attachment 12) or a record which captures the same information.



Harvest inspection records **must** include –

- the Interstate Produce (IP) number of the business that grew the produce;
- the date of inspection;
- the block/s from which the fruit was harvested;
- the number of bins/crates harvested;
- the number of fruit cut and examined;
- the presence or absence of fruit fly;
- the Certification Controller's name and signature.

### 7.8 Action Following Identification of Nonconforming Product at Harvest

If any mango is found to be infested with live fruit fly at harvest the Certification Controller **shall** take the following actions –

- (a) all mangoes harvested from the source block on the day of the detection **shall** be rejected for certification under this Operational Procedure; and
- (b) all mangoes from the source block **shall** be rejected for certification under this Operational Procedure until a single pre-harvest cover spray treatment has been applied in accordance with the requirements of 7.3; and
- (c) as soon as practical and not more than three (3) working hours from the time of the detection, the detection **shall** be reported to the Operations Manager so an investigation may be carried out to determine the cause and rectify any problems.

#### 7.8.1 Rejected Product

Rejected product **shall** be isolated and clearly identified to prevent mixing with conforming product. Rejected product **shall** be fumigated with methyl bromide, or treated with vapour heat or hot water, at the required rate prior to consignment, or consigned to markets that **do not** require certification of treatment and inspection for fruit fly.

### 7.9 Pre-Harvest Treatment and Harvest Inspection Declaration

A business which pre-harvest treats mangoes which are to be packed by another business for certification **must** be accredited for an ICA arrangement under Part A of this Operational Procedure.

The business **shall** supply a Pre-Harvest Treatment and Harvest Inspection Declaration (refer Attachment 13) with each delivery of mangoes supplied to the packing business for certification.

***A declaration is not required where the business that grows and pre-harvest treats the fruit is the same business that packs, post-harvest treats and certifies the fruit under this Operational Procedure.***



The declaration **must** identify –

- (a) the Interstate Produce (IP) Number of the accredited business that grew and pre-harvest treated the mangoes;
- (b) the identity of and the date or dates of the last pre-harvest treatment of the block or blocks in which the mangoes were grown;
- (c) details of pre-harvest treatment applied;
- (d) that the mangoes were inspected at harvest and found free of live fruit fly infestation; and
- (e) whether or not dead fruit fly larvae were found at harvest inspection.

**PART B** - (Covers the Packer Activities of Fruit Receival, Post-harvest Treatment, Grading and Packing, Inspection and Certification)

#### 7.10 Fruit Receival

The Fruit Receival Officer **shall** ensure that –

- (a) all mangoes received for certification under this Operational Procedure are supplied by a grower accredited under Part A;
- (b) the treatment status of mangoes is clearly identified at receival at the packing facility to prevent mixing of treated and untreated mangoes.

Any mangoes received which are not clearly identified **shall** be regarded as untreated for the purpose of this Operational Procedure.

***Where all mangoes received have undergone pre-harvest treatment, no specific identification of the treatment status is required.***

#### 7.10.1 Receival of Mangoes Grown by Another Business

A business which packs mangoes grown by another business **shall** ensure –

- (a) each delivery of mangoes supplied by another business for certification under this Operational Procedure is accompanied by a Pre-Harvest Treatment and Harvest Inspection Declaration (refer Attachment 13);
- (b) fruit supplied for certification has undergone pre-harvest treatment if required in accordance with 6.;
- (c) fruit supplied for certification has been inspected during harvest and found free from live fruit fly infestation;
- (d) grower identification and the pre-harvest treatment details are maintained for all fruit received and certified under this Operational Procedure from receival to certification and dispatch.

The business **shall** maintain copies of all declarations received from growers whose produce they pack and certify under this Operational Procedure.



### 7.10.2 Fruit Receival Inspection

The Fruit Receival Officer **shall** carry out an inspection of **all fruit (including fruit of Kensington Pride and R2E2)** received for certification under this Operational Procedure.

The Fruit Receival Officer **shall** select a minimum of ten (10) fruit from every 500kg of fruit received. Fruit **shall** be selected from those fruit showing the greatest level of colouring, and any fruit with softening, bruising or other damage which may be a potential site for fruit fly infestation.

Fruit in the sample showing symptoms of fruit fly infestation (ie softening, spotted areas weeping with sap or showing bruising or breakdown) **must** be cut to expose the flesh and examined for the presence of live fruit fly larvae.

The Certification Controller **shall** be immediately advised on detection of live fruit fly larvae.

***A business which both pre-harvest treats and packs the mangoes, conducts the harvest inspection in conjunction with the fruit receival inspection (refer 7.6).***

### 7.10.3 Fruit Receival Inspection Equipment

The business **shall** maintain inspection equipment such as a hand lens, microscope or other device that provides X10 or greater magnification for examination of suspect fruit.

### 7.10.4 Fruit Receival Inspection Records

The Fruit Receival Officer **shall** maintain records of fruit receival inspection.

Fruit receival inspection records **shall** be in the form of a Fruit Receival Inspection Record (refer Attachment 14) or a record which captures the same information.

Fruit receival inspection records **must** include –

- the Interstate Produce (IP) number of the business that grew the produce;
- the date of inspection;
- the block/s from which the fruit was harvested;
- number of bins/crates received;
- the number of fruit cut and examined;
- the presence or absence of fruit fly;
- the Fruit Receival Officer's name and signature.

### 7.11 Post-Harvest Treatment

Mangoes certified under this Operational Procedure **must** be post-harvest treated in accordance with 6.





The business **must** hold a current accreditation for an ICA arrangement for either, Operational Procedure ICA-01, ICA-02 or ICA-03, and the arrangement **must** include mangoes in the produce types covered under the scope of the accreditation.

## 7.12 Grading and Packing

All mangoes graded and packed for certification under this Operational Procedure **shall** be inspected for evidence of fruit fly infestation during the normal grading and packing process.

Any fruit showing symptoms of fruit fly infestation (ie softening, spotted areas weeping with sap or showing bruising or breakdown) **must** be rejected, cut to expose the flesh and examined for the presence of live fruit fly larvae. The Certification Controller **shall** be immediately advised on detection of live fruit fly larvae.

The Certification Controller **shall** oversee the grading and packing process to ensure only conforming mangoes are packed for certification under this Operational Procedure.

### 7.12.1 Identification of Treated and Untreated Mangoes During Grading and Packing

A business which grades and packs treated and untreated mangoes **shall** implement systems to identify the treatment status of fruit during grading and packing to prevent mixing of treated and untreated fruit.

Examples of acceptable methods of identifying treated and untreated mangoes during grading and packing include –

(a) packing treated fruit at different times to untreated fruit and clearing the lines before changing over;

**OR**

(b) packing treated and untreated produce on different packing lines.

Other methods may be used provided they clearly identify and segregate treated and untreated mangoes.

### 7.12.2 Identification of Treated and Untreated Mangoes After Packing

A business which grades and packs treated and untreated mangoes **shall** implement systems to identify the treatment status of fruit after packing to prevent mixing of treated and untreated fruit.

Examples of acceptable methods of identifying treated and untreated mangoes after packing include –

(a) using packaging which differs significantly in appearance;

(b) marking each package of treated mangoes in a manner that clearly identifies the mangoes as treated in accordance with this Operational Procedure.

Other methods may be used provided they clearly identify treated and untreated mangoes.



### 7.13 Action Following Identification of Nonconforming Product During Fruit Receival or Grading and Packing

If any mango is found to be infested with live fruit fly during fruit receival inspection or grading and packing, the Certification Controller **shall** take the following actions –

- (a) all mangoes harvested from the source block on the day of the detection, including any mangoes which have been packed for certification but which remain on the premises, **shall** be rejected for certification under this Operational Procedure; and
- (b) all mangoes from the source block **shall** be rejected for certification under this Operational Procedure until a single pre-harvest treatment has been applied in accordance with the requirements of 7.3;
- (c) as soon as practical and not more than three (3) working hours from the time of the detection, the detection **shall** be reported to the Operations Manager so an investigation may be carried out to determine the cause and rectify any problems.

#### 7.13.1 Rejected Product

Rejected product **shall** be isolated and clearly identified to prevent mixing with conforming product.

Rejected product **shall** be fumigated with methyl bromide, or treated with vapour heat or hot water, at the required rate prior to consignment, or consigned to markets that do not require certification of treatment and inspection for fruit fly.

### 7.14 Post Treatment Security (Tasmania only)

Packing **shall** commence as soon as practicable after treatment. Fruit may be allowed to dry adequately prior to packing.

Treated fruit **shall** be held for the minimum practical period after treatment before it **must** be secured against reinfestation.

Any fruit which is stored outside the treatment facility after treatment and prior to dispatch **must** be held under secure conditions.

Any treated fruit which remains unpacked at the end of the day **must** be held in secure conditions until packed.

Completed pallets **shall** be held for the minimum practical period before placing in secure conditions.

Certified fruit **must** be transported from the facility in secure conditions which prevent infestation by fruit fly.

Certification Assurance certificates **must** state that fruit was; “Packed in such a way as to prevent re-infestation of insects.”



Secure conditions include -

- (a) unvented packages;
- (b) vented packages with the vents secured with gauze/mesh with a maximum aperture of 1.6 mm;
- (c) fully enclosed under tarpaulins, hessian, shade cloth, mesh or other covering which provides a maximum aperture of 1.6 mm;
- (d) shrink-wrapped and sealed as a palletised unit;
- (e) fully enclosed or screened buildings, coldrooms, vehicles or other facilities free from gaps or other entry points greater than 1.6 mm.

***Fruit consigned to Tasmania must be transported in full container lots sealed prior to transport, or as lesser container lots in accordance with the requirements of (a), (b) or (d) above.***

***Where consignments are transported to Tasmania as full container lots, the seal number must be included in the Brand Name or Identifying Marks section of the Plant Health Certificate covering the consignment (refer Attachment 2).***

***Where consignments are transported in vented packages that are sealed as a palletised unit in accordance with (d) above, the business must secure the top layer of the pallet by applying a row of tape over the shrink-wrap and have applied to the tape in waterproof ink the signature of an Authorised Signatory, the number of the Plant Health Assurance Certificate covering the consignment and the date.***

## 7.15 Dispatch

### 7.15.1 Package Identification

The Authorised Dispatcher **shall** ensure that, after treating and packing, each package is marked in indelible and legible characters of at least 5 mm, on the end of each package with –

- the "A" Registration (IP) number of the business that operates the approved facility in which the produce was post-harvest treated and packed; and
- the words "MEETS ICA-19"; and
- the date (or date code) on which the fruit was packed; and
- the "A" Registration (IP) number or other identifier of the grower of the mangoes, where the grower is a different business to the packer;

prior to the issuance of an Assurance Certificate by the business under this Operational Procedure.

Where the packer uses a different identifier to the IP number of the grower, the packer **must** maintain a record matching the grower's identifier with the grower's IP number so the grower's IP number can be easily identified if required.



Any packages containing fruit that has not been treated and inspected in accordance with the requirements of this Operational Procedure **shall** not be marked as stated above.

### 7.15.2 Assurance Certificates

The Authorised Dispatcher **shall** ensure a Plant Health Assurance Certificate is completed and signed by an Authorised Signatory of the business prior to consignment to a market requiring certification of treatment and inspection of mangoes for fruit fly.

Assurance Certificates **shall** be in the form of a Plant Health Assurance Certificate. A completed example is shown at Attachment 2.

Assurance Certificates **shall** include –

- (a) in the “Consignor” section -
  - the name and address of the Accredited business that **packed** the mangoes;
- (b) in the “Grower or Packer” section -
  - the name and address of the Accredited business that was responsible for **pre-harvest treatment** of the mangoes. Where the consignment contains fruit grown by a number of growers the IP No’s or codes of those businesses **shall** be used.
- (c) in the “IP No. of Accredited business” section -
  - the IP No. of the Accredited business that **packed** the mangoes.
- (d) in the “Treatment” section-
  - **post-harvest treatment** details in accordance with the Operational Procedure under which the treatment was applied ICA 01, 02 or 03;**and**
  - **pre-harvest treatment** details (**for fruit other than fruit of the Kensington Pride and R2E2 cultivars**) including -

#### For bait spraying –

- in the Date column, the most recent date or dates of pre-harvest bait spraying of the source block/s;
- in the Treatment column, the words “Pre-Harvest Spray”;
- in the Chemical (Active Ingredient) column, the words “150g/L maldison”;
- in the Concentration column, the words “at 435mL/100L”; and
- in the Duration and Temperature column, the words “bait sprayed”.

#### For cover spraying –

- in the Date column, the most recent date or dates of pre-harvest treatment of the source block/s;
- in the Treatment column, the words “Pre-Harvest Spray”;



- in the Chemical (Active Ingredient) column, the words “400g/L dimethoate” or 550g/L fenthion”;
- in the Concentration column, the words “at 75mL/100L”; and
- in the Duration and Temperature column, the words ‘cover sprayed”;

(e) in the “Additional Certification” section the words -

**“Inspected and found free from fruit fly infestation.”**

A completed example is shown as Attachment 2.

Individual Assurance Certificates **shall** be issued to cover each consignment (ie. a discrete quantity of product transported to a single consignee at one time) to avoid splitting of consignments.

Assurance Certificates **shall** be completed issued and distributed in accordance with the Work Instruction Guidelines for Completion of Plant Health Assurance Certificates (WI-02).

### 7.15.3 Assurance Certificate Distribution

The **original** (yellow copy) **must** accompany the consignment.

The **duplicate** (white copy) **must** be retained by the business.

The **triplicate** (green copy) **must** be sent to NTQ.

### 7.16 ICA System Records

The business **shall** maintain the following records –

#### PART A

- (a) Property Plan for each property (refer 7.2) Attachment 3;
- (b) Chemical Mixture Tank Calibration Certificate (7.4.1.1 and 7.5.1.1) Attachment 4;
- (c) Bait/Cover Spray Mixture Preparation Chart (refer 7.4.1.5 and 7.5.1.3) Attachments 6 and 7 and Attachment 9 and 10;
- (d) Bait/Cover Spray Mixture Preparation and Treatment Record (refer 7.4.2.4 and 7.5.2.4) Attachment 8 and Attachment 11;
- (e) Harvest Inspection Record (refer 7.7.2) Attachment 12.

#### PART B

- (a) A copy of each Pre-Harvest Treatment and Harvest Inspection Declaration received (refer 7.10.1) Attachment 13;
- (b) Fruit Reveal Inspection Record (refer 7.10.4) Attachment 14;
- (c) if applicable, a Grower Identifier Record (refer 7.15.1);
- (d) a copy of each Plant Health Assurance Certificate (Attachment 2) issued by the business (refer 7.15.3).

ICA system records **shall** be retained for a period of not less than 24 months from completion.



ICA system records **shall** be made available on request by an Inspector.

**7.17 ICA System Documentation**

The business **shall** maintain the following documentation –

- (a) a copy of the business’s current Application for Accreditation (refer Attachment 1);
- (b) a current copy of this Operational Procedure;
- (c) a current Certificate of Accreditation for an Interstate Certification Assurance.

ICA system documentation **shall** be made available on request by an Inspector.

**8. ATTACHMENTS**

Attachment 1	Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) and/or Certification Assurance (CA) Arrangement	<b>(BLANK)</b>
Attachment 2	Plant Health Assurance Certificate	<b>(COMPLETED EXAMPLE)</b>
Attachment 3	Property Plan	<b>(BLANK)</b>
Attachment 4	Chemical Mixture Tank Calibration	<b>(BLANK)</b>
Attachment 5	Bait Spray Equipment Application Rate Calibration Test Record	<b>(BLANK)</b>
Attachment 6	Bait Spray Mixture Preparation Chart	<b>(BLANK)</b>
Attachment 7	Bait Spray Mixture Preparation Chart	<b>(COMPLETED EXAMPLE)</b>
Attachment 8	Bait Spray Mixture Preparation and Treatment Record	<b>(BLANK)</b>
Attachment 9	Cover Spray Mixture Preparation Chart	<b>(BLANK)</b>
Attachment 10	Cover Spray Mixture Preparation Chart	<b>(COMPLETED EXAMPLE)</b>
Attachment 11	Cover Spray Mixture Preparation and Treatment Record	<b>(BLANK)</b>
Attachment 12	Harvest Inspection Record	<b>(BLANK)</b>
Attachment 13	Pre-Harvest Treatment and Harvest Inspection Declaration	<b>(BLANK)</b>
Attachment 14	Fruit Receival Inspection Record	<b>(BLANK)</b>

Tick each box that describes your business and the ICA/CA arrangement and provide specific details where required. Only one arrangement, that is one Operational Procedure at one Facility, may be covered in one application.

Indicate the type of application being made.

New       Renewal       Amendment

**1. Business/Person Details**

(a) Type of Ownership of Business

Individual       Incorporated Company       Other  
 Partnership       Cooperative Association      (please specify)

(b) Name of Business/Person


Please supply name in full. For a partnership, list the full names of each partner in their normal order. Companies must provide their Australian Company Number (ACN) or Australian Registered Body Number (ARBN) and attach a copy of the Certificate of Incorporation. Cooperative associations must provide appropriate proof of registration (i.e. a copy of the Certificate of Registration or registration search from the Office of Business Affairs or Australian Securities Commission)

ARBN             
 ACN     

(c) Trading Name/s of the Business/Person (as shown on packages sent to market)

--

(d) Postal address of the Business/Person


Telephone: (    )  
 Facsimile: (    )  
 Mobile:

E-mail

(e) Has the business/person been registered previously for the interstate movement of produce?       Yes       No      If yes, give the business's/persons Interstate Produce (IP) Number

<b>A</b>
----------

**2. Operational Procedure and Facility Details**

a) Operational Procedure/Procedure used in this arrangement

Reference No.	Title of Operational Procedure

(b) Street address of the facility


Telephone: (    )  
 Facsimile: (    )  
 Mobile:

**3. Authorised Signatories (for Plant Health Assurance Certificates)**

	Family Name	Given Name/s	Specimen Signature
Certification Controller			
Back-up Certification Controller			
Additional Authorised Signatories			

**4. Types of Produce to be Prepared Under the ICA/CA Arrangement (if insufficient space, attach a list)**


**5. Interstate Certification Assurance/Certification Assurance System Records**

(a) What records do you maintain to verify that the business is carrying out its responsibilities and duties under the Operational Procedure?

- We maintain all our records in accordance with the examples provided in the Operational Procedure.  
 We have developed alternative or additional records to those provided in the Operational Procedure.

(b) List the alternative or additional records you intend to use and attach a copy to this application.

(a) (b) (c)
-------------------

**6. Accreditation Conditions**

(a) For the purposes of this agreement the following definitions shall apply:-

- Applicant* means the person, **corporation**, or other legal entity who is accredited under this agreement.  
*Inspector* means an inspector appointed under the *Plant Health Act*  
*Department* means the Department of Primary Industry and Fisheries  
*Interstate Certification Assurance System* means the processes, equipment, personnel and resources used to implement the Operational Procedure nominated in Section 2(a).

- (b) The applicant must maintain and operate the interstate certification assurance system in accordance with the Operational Procedure as nominated in Section 2(a), and must maintain the records specified in Section 5.  
 (c) The applicant will, upon request, allow an inspector to enter any premises where produce certified under the agreement is treated or dispatched, or where any produce, equipment, chemicals, documents for records are stored.  
 (d) The inspector may inspect or take samples of any relevant item present on the premises at the time of the inspection.  
 (e) The applicant must take all steps to assist an inspector in the conduct of audits including allowing the inspector or officer to interview any employee of the applicant in relation to the Implementation of the Interstate Certification Assurance System.  
 (f) The applicant authorises the persons listed in Section 3 of this application to issue certificates on his or her behalf.  
 (g) In the event of cancellation or non-renewal of this arrangement the certificate pad and any green copies must be returned as they remain the property of Northern Territory Quarantine.  
 (h) Plant Biosecurity fees will apply to those businesses/persons that choose to participate in this ICA/CA arrangement. Northern Territory Quarantine can be contacted for a schedule of the Plant Biosecurity fees.

**The applicant agrees to abide by the accreditation conditions listed above and acknowledges that any accreditation is granted subject to those conditions.**

**The applicant certifies that all of the information contained in this application is true and correct.**

Signature/s	Date

**Note: Where the applicant is a corporation, the company seal must be applied, and signed, in the appropriate form. Where the applicants are members of a partnership, each of the partners must sign the application.**

**Office Use Only**

Desk Audit	<input type="checkbox"/> Passed	<input type="checkbox"/> Failed	
Name (print) _____			Date received ___ / ___ / ___
Signature: _____			Date completed ___ / ___ / ___

Post your application/s to: Department of Primary Industry and Fisheries, NT Quarantine,  
 GPO Box 3000, DARWIN NT 0801





## Plant Health Assurance Certificate

### Consignment Details (PLEASE PRINT)

### Certification Details (PLEASE PRINT)

CONSIGNOR (FROM)
Name <i>Joe Grower</i>
Address <i>1234 Produce Rd</i>
<i>Katherine NT 0850</i>

IP NUMBER	FACILITY NUMBER	PROCEDURE
A 9999	01	ICA- 19

CONSIGNEE (TO)
Name <i>Top Quality Fruit &amp; Veg</i>
Address <i>Adelaide Produce Market</i>
<i>Adelaide SA 53000</i>

ACCREDITED BUSINESS THAT PREPARED THE PRODUCE
Name <i>Joe Grower</i>
Address <i>1234 Produce Rd</i>
<i>Katherine NT 0836</i>

GROWER OR PACKER
Name <i>As Above</i>
Address

RECONSIGNED TO (Splitting consignments or consigning whole consignments).
Name
Address

OTHER FACILITIES SUPPLYING PRODUCE

BRAND NAME OR IDENTIFYING MARKS (as marked on packages)	DATE OR DATE CODE (as marked on packages)
<i>Joe's Mango Farm</i>	<i>04072007</i>

Number of Packages	Type of Packages (e.g. trays, cartons)	Type of Produce	Authorisation for Split Consignment
<i>40</i>	<i>Cartons</i>	<i>KP Mangoes</i>	_____
<i>60</i>	<i>Cartons</i>	<i>Mangoes – R2E2</i>	_____
_____	_____	_____	_____
_____	_____	_____	_____

### Treatment Details

Treatment	Chemical (Active Ingredient)	Treatment Date	Concentration / Duration and Temperature
<i>Dipping OR</i>	<i>Dimethoate</i>	<i>03/07/2007</i>	<i>400g/L@1ml/L (400ppm) for 1 min</i>
<i>Flood Spray OR</i>	<i>Dimethoate</i>	<i>03/07/2007</i>	<i>400g/L@1ml/L (400ppm) for 10 secs</i>
<i>Low Volume Spray</i>	<i>Fenthion</i>	<i>03/07/2007</i>	<i>550g/L @ 75ml/100L(412.5ppm)- 10 secs</i>
<i>Pre-harvest Spray</i>	<i>Dimethoate</i>	<i>20/06/2007</i>	<i>400g/L@ 0.75ml/L (3x f/n sprays before harvest)</i>

Additional Certification / Codes
<i>Inspected and found free from fruit fly infestation.</i>

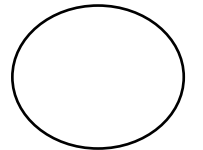
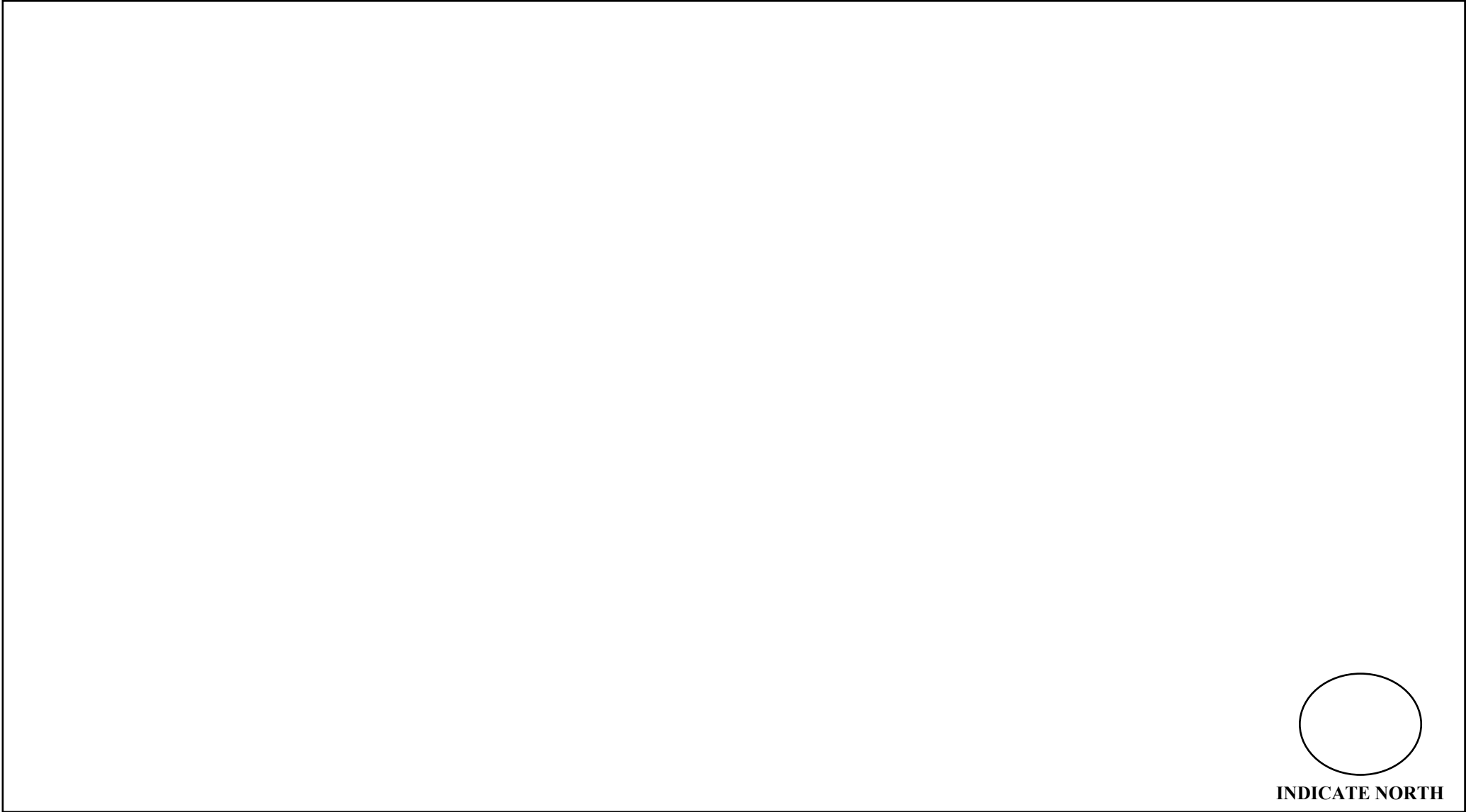
### Declaration

I, an authorised Signatory of the accredited business that prepared the plants or plant produce described above, hereby declare that the plants or plant produce have been prepared in the business's approved facilities in accordance with the *Plant Health Act* and that the details shown above are true and correct in every particular.

AUTHORISED SIGNATORY'S NAME (PLEASE PRINT)	SIGNATURE	DATE
<i>Joe Signatory</i>	<i>Joe Signatory</i>	<i>4/7/2007</i>

# PROPERTY PLAN

Attachment 3



INDICATE NORTH



# CHEMICAL MIXTURE TANK CALIBRATION CERTIFICATE

Attachment 4

## EQUIPMENT CALIBRATED

Name and Address of  
Owner of Equipment:

---

---

Brand:

---

Model:

---

Serial No.:

---

Other Information:

---

## TESTING DETAILS

Name and Address of  
the Business Conducting  
the Test:

---

---

Date of Testing:

---

Type of Flow Meter  
Used:

---

Date of Last Calibration  
of Flow Meter:

---

## CALIBRATION RESULTS

Maximum Mixture Level  
Volume (litres):

---

Incremental Volumes  
(litres) (as marked on  
the spray tank):

---

---

---

## CERTIFICATION

The spray mixture tank on the equipment described above has been calibrated in the normal filling position using a calibrated flow meter. Volume indicator marks have been clearly marked on the tank with the volume in litres required to fill the tank to that level.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_/\_\_\_\_/\_\_\_\_  
Date



# BAIT MIXTURE PREPARATION CHART

Attachment 6

Spray Unit \_\_\_\_\_

Tractor *(if applicable)* \_\_\_\_\_ Gear \_\_\_\_\_

Engine RPM/Throttle Setting \_\_\_\_\_

Application Rate - 100 mL in \_\_\_\_\_ seconds/squirts

Concentrate *(Trade Name)* \_\_\_\_\_

Active Ingredient - Maldison \_\_\_\_\_ g/L

## Full Tank

Volume of Water = \_\_\_\_\_ Litres

Volume of Yeast Autolysate = \_\_\_\_\_ millilitres

Volume of Concentrate = \_\_\_\_\_ millilitres

## Part Fill

\_\_\_\_\_ mL Yeast Autolysate and

\_\_\_\_\_ mL Concentrate / \_\_\_\_\_ Litres Water

\_\_\_\_\_ mL Yeast Autolysate and

\_\_\_\_\_ mL Concentrate / \_\_\_\_\_ Litres Water

Prepared by: \_\_\_\_\_ / /  
Printed Name Signature Date

# BAIT MIXTURE PREPARATION CHART

Attachment 7

Spray Unit Silvan 400  
Tractor (if applicable) Ford 5000 Gear 2 (high)  
Engine RPM/Throttle Setting 2,500  
Application Rate - 100 mL in 5 seconds/squirts  
Concentrate (Trade Name) HY-MAL Insecticide  
Active Ingredient - Maldison 1,150 g/L

## Full Tank

Volume of Water = 400 Litres  
Volume of Yeast Autolysate = 8,000 millilitres  
Volume of Concentrate = 1,740 millilitres

## Part Fill

4,000 mL Yeast Autolysate and  
870 mL Concentrate / 200 Litres Water  
2,000 mL Yeast Autolysate and  
435 mL Concentrate / 100 Litres Water

Prepared by: S Operator  
Printed Name

S Operator  
Signature

15 10 97  
Date





# COVER SPRAY MIXTURE PREPARATION CHART

Attachment 9

Spray Unit \_\_\_\_\_

Tractor \_\_\_\_\_

Operating Gear \_\_\_\_\_ Engine RPM \_\_\_\_\_

Chemical Concentrate \_\_\_\_\_

Concentrate Mixture Rate \_\_\_ mL/100L of mixture

## Full Tank

Full Spray Tank Volume = \_\_\_\_\_ Litres

Volume of Concentrate = \_\_\_\_\_ millilitres

## Part Fill

\_\_\_\_\_ mL Concentrate / \_\_\_\_\_ Litres Mixture

\_\_\_\_\_ mL Concentrate / \_\_\_\_\_ Litres Mixture

\_\_\_\_\_ mL Concentrate / \_\_\_\_\_ Litres Mixture

\_\_\_\_\_ mL Concentrate / \_\_\_\_\_ Litres Mixture

Prepared by: \_\_\_\_\_ / /  
Printed Name Signature Date

# COVER SPRAY MIXTURE PREPARATION CHART

Attachment 10

Spray Unit Hardi Mini-Variant 600

Tractor Ford 5000

Operating Gear 3(high) Engine RPM 2500

Chemical Concentrate Fenthion

Concentrate Mixture Rate 75 mL/100L of mixture

## Full Tank

Full Spray Tank Volume = 600 Litres

Volume of Concentrate = 450 millilitres

## Part Fill

75 mL Concentrate / 100 Litres Mixture

187.5 mL Concentrate / 250 Litres Mixture

300 mL Concentrate / 400 Litres Mixture

375 mL Concentrate / 500 Litres Mixture

Prepared by: S Operator  
Printed Name

S Operator  
Signature

15/7 /97  
Date





# PRE-HARVEST TREATMENT AND HARVEST INSPECTION DECLARATION

## Attachment 13

A Pre-Harvest Treatment and Harvest Inspection Declaration must be provided to the packer to cover the mangoes delivered for certification under ICA-19 from each source block each day, or at the time of changing from one block to another block, whichever is the earlier.

A Pre-Harvest Treatment and Harvest Inspection Declaration is not required for fruit of the Kensington Pride, R2E2, Calypso and Honey Gold cultivar.

I \_\_\_\_\_ (full printed name)

an Authorised Signatory of -

\_\_\_\_\_ (Business name),

Interstate Produce (IP) No. **A**

--	--	--	--

hereby declare that the -

\_\_\_\_\_ (no. of packages) \_\_\_\_\_ (type of packages - bins, crates, trays)

of mangoes identified by -

\_\_\_\_\_ (package identification)

delivered to -

\_\_\_\_\_ (Business name)

Interstate Produce (IP) No. **A**

--	--	--	--

On - / / (date)

for grading, packing, post-harvest treatment and certification under ICA Operational Procedure ICA19 - ( as appropriate), declare-

1.  The last pre-harvest treatment of the source block was –
  - a **cover spray** containing 75 mL of a concentrate containing -
    - 400 g/L dimethoate;
    - 550 g/L fenthion;
 per 100 litres of cover spray mixture.
  - a **bait spray** containing 435 mL of a concentrate containing 1150 g/L maldison plus 2 litres yeast autolysate protein lure per 100 litres of bait spray mixture.

2. The identity and date(s) of the last pre-harvest treatment of the source block(s) is -

Reference Code or Number of Block	Date of Last Pre-harvest Treatment

3. The mangoes were inspected at harvest and found ( as appropriate)-

- free from live fruit fly larvae;
- free from dead fruit fly larvae

I am authorised to sign on behalf of the business and the information given above is to the best of my knowledge true and correct in every particular.

\_\_\_\_\_ / /

Signature

Date

