PRE-HARVEST TREATMENT, HARD MATURE CONDITION, AND INSPECTION STANDARDS OF MANGOES

VERSION REGISTER

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Plant Biosecurity & Product Integrity

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The Department of Primary Industries proudly acknowledges all First Nations peoples (Aboriginal peoples and Torres Strait Islanders) and the Traditional Owners and Custodians of the country on which we live and work. We acknowledge their continuing connection to land, waters and culture and commit to ongoing reconciliation. We pay our respect to their Elders past, present and emerging.

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1 PURPOSE

The purpose of this procedure is to describe –

(a) the principles of operation and standards required; and

(b) the responsibilities and practices of personnel;

that apply to certification of mangoes for fruit fly under an Interstate Certification Assurance (ICA) arrangement.

2 SCOPE

This operational procedure is applicable only for B74 (Calypso), Kensington Pride (KP), Honey Gold, and R2E2 mango fruit cultivars.

This operational procedure covers the certification of Class 1 quality mangoes that have been pre-harvest treated, inspected to meet hard mature condition, as described in the Mango Grading and Firmness Standard with a softness rating scale of "0" (refer Attachment 8), and inspected for symptoms of fruit fly infestation following packing for consignment under this ICA operational procedure.

> ***Certification of mangoes that meet hard mature condition and have been pre-harvest treated and inspected under this Operational Procedure is not a quarantine requirement for entry of mangoes into all interstate markets. It is important to note that Tasmania does not accept product certified under this procedure.***
>
> ***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.***

3 REFERENCES

ICA-WI-02	*Guidelines for Completion of Plant Health Assurance Certificates*

4 DEFINITIONS

Accredit	Means to accredit persons to issue Plant Health Assurance Certificates under section 411 of the *Biosecurity Act 2014*.
Accredited Certifier	means a person who holds accreditation under chapter 15 of the *Biosecurity Act 2014* to give Biosecurity Certificates.
Accrediting Authority	means the Department of Primary Industries (DPI).
Application for Accreditation	Means an *Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) Arrangement* [CAF-47].

APVMA	means the Australian Pesticides and Veterinary Medicines Authority.
Authorised Signatory	means person whose name and specimen signature are provided as an authorised signatory with the Accredited Certifiers Application for Accreditation.
Block	means an identifiable area of land on which produce is grown and pre-harvest treated as a unit and that is detailed on the Business's property plan.
Business	means the Accredited Certifier responsible for the operation of the facility and Interstate Certification Assurance arrangement detailed in the Business's Application for Accreditation.
B74	means B74 cultivar mango, also known as Calypso cultivar.
Class 1	means the first class of mango fruit graded within defect standards as defined by the 2016 Mango Industry Quality Standards. Class 1 also incorporates the sub-group of 'Premium' grade fruit which represents fruit with no blemishes and high blush.
Certification Assurance	Means covered by a valid *Plant Health Assurance Certificate* [CAF-16] issued by an Accredited Certifier operating under an ICA arrangement.
Concentrate	means an agricultural chemical concentrate containing 400mg/L dimethoate, registered or approved under an APVMA minor use permit for the control of fruit fly by cover spray of the specific host fruit.
Consignment	means a quantity of packed produce presented on one Plant Health Assurance Certificate by a single consignee. A consignment may contain a number of lots.
Dimethoate	See concentrate.
End-point inspection	means the process by which a representative sample is drawn and inspected from the finalised consignment prior to certification.
Facility	means the location of grading and packing operations covered by the Interstate Certification Assurance arrangement.
Fruit fly	means Queensland fruit fly (*Bactrocera tryoni*), Lesser Queensland fruit fly (*Bactrocera neohumeralis*), Mango fruit fly (*Bactrocera frauenfeldi*) and Northern Territory fruit fly *(Bactrocera aquilonis)*.
Hard mature condition	means fruit that has reached the stage of ripeness at the time of picking that will allow completion of the ripening process with a softness rating of "0" on the scale of 0 – 4, as described in the Mango Grading and Firmness Standard (Attachment 8).
Host Produce	means B74 (Calypso), Kensington Pride (KP), Honey Gold, and R2E2 mango fruit cultivars.

Homogeneous	means produce that is all of the same or similar kind or nature i.e. the same cultivar or variety.
ICA	means Interstate Certification Assurance.
In-line inspection	means the process by which a representative sample of packed product is drawn from a lot and inspected during the processing and packing of the produce.
Lot	means a quantity of homogeneous produce assembled for inspection at one place at one time. A lot could consist of produce from one or more growers/blocks/properties.
Mangoes	See Host Produce.
Non-Conformance	means a nonfulfillment of a specified requirement.
Operational Procedure	means *Pre-Harvest Treatment, Hard Mature Condition, and Inspection Standards for Mangoes* [ICA-69].
Package	means the complete outer covering or container used to transport and market the product.
Packed Product	means fruit in packages following grading and packing and ready for marketing.
Plant Health Assurance Certificate	means a *Plant Health Assurance Certificate* [CAF-16].
Property	means one or more contiguous parcels of land (lots on plan), owned or leased by a business, that are managed as a unit and isolated from any other parcel of land owned or leased by the same business.
Secure Conditions	Secure conditions are defined as: (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, cold rooms, vehicles, or other facilities free from gaps or other entry points greater than 1.6 mm.

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 (refer 7.1.2);
- ensuring the business has current accreditation for an ICA arrangement under this Operational Procedure (refer 7.1.1);
- maintaining a property plan for each property on which mangoes are grown, treated, and harvest inspected for certification under this protocol (refer 7.2);
- 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;
- ensuring all preparation of fruit for certification is carried out in accordance with this Operational Procedure;
- ensuring pre-harvest treatments are applied (refer 6.1.1 and 7.3);
- taking action following identification of non-conforming product at harvest (refer 7.4.4);
- ensuring sorters, graders and packers are able to identify hard mature condition and symptoms of fruit fly infestation (refer 7.6);
- overseeing and supervising the sorting, inspection and packing process (refer 7.6);
- notify the accrediting authority no more than one business day from the time of detection of live fruit fly larvae (refer 7.5.3);
- instigating corrective action taken following rejection of packed product (refer 7.8.5).

The **Treatment Operator** is responsible for –

- maintaining a tank calibration certificate for each sprayer used for cover spray treatment of mangoes under this Procedure (refer 7.3.1.1);
- applying cover sprays to all source blocks of mangoes certified under this Operational Procedure prior to packing (refer 6.1.1);
- preparing cover spray mixtures (refer 7.3.1.3, 7.3.1.4, and 7.3.1.6);
- maintaining cover spray equipment (refer 7.3.1.7);
- maintaining cover spray mixture preparation and treatment records (refer 7.3.1.8).

The **Harvest Supervisor** is responsible for –

- overseeing the harvest of mangoes for certification under this Operational Procedure (refer 7.4);
- inspecting a minimum of 10 mangoes from each 500kg of fruit harvested for certification for hard mature condition (refer 7.4.1);
- rejecting, cutting and examining any fruit displaying symptoms of infestation for evidence of fruit fly (refer 7.4.1);

- immediately advising the Certification Controller on detection of live fruit fly at harvest (refer 7.4.1);
- maintaining a copy of the Mango Grading and Firmness Standard and inspection equipment (refer 7.4.2);
- maintaining harvest inspection records (refer 7.4.3).

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

- ensuring that all mangoes received for certification under this operational procedure are supplied by a grower accredited under Part A (refer 7.5);
- ensuring mangoes grown by another business are accompanied by a Harvest Inspection Declaration and details of any cover spray that has been applied has be included in the declaration (refer 7.5.1);
- ensuring that all mangoes are in hard mature condition, as defined in the Mango Grading and Firmness Standard with a softness rating of 0 and found free from live fruit fly infestation (refer 7.5);
- ensuring that grower identification and maturity details are maintained for all fruit received and certified under this operational procedure from receival to certification and dispatch (refer 7.5.1).
- ensuring that all mangoes to be consigned are securely received, handled, stored, and transported (refer 7.5.2);
- the hard mature condition status of mangoes is clearly identified at receival at the packing facility to prevent mixing of conforming and non-conforming mangoes (refer 7.5);
- inspecting a minimum of 10 mangoes from each 500kg of fruit received for certification for hard mature condition (refer 7.5.3);
- ensuring that any mangoes received which are not in hard mature condition or clearly identified must be regarded as non-conforming for the purpose of this operational procedure (refer 7.5).
- maintaining a copy of the Mango Grading and Firmness Standard and inspection equipment including a hand lens, microscope or other device that provides X10 or greater magnification for examination of suspect fruit (refer 7.5.4);
- rejecting, cutting and examining any fruit displaying symptoms of infestation for evidence of fruit fly (refer 7.5.3);
- immediately advising the Certification Controller on detection of live fruit fly at fruit receival (refer 7.5.3);
- maintaining fruit receival inspection records (refer 7.5.5).

The **Sorters/Graders/Packers** are responsible for –

- ensuring all mangoes sorted, graded, and packed for certification under this operational procedure meet Class 1 standards and are inspected for evidence of hard mature condition, as defined Mango Grading and Firmness Standard, with a softness rating of “0” and no signs of fruit fly infestation (refer 7.6);
- ensuring nonconforming fruit are identified, removed from the packing line and controlled to prevent mixing with conforming fruit (refer 7.6).

The **Packed Product Controller** is responsible for –

- random selection and inspection of 2% or 600 units, whichever is greater of packed product as part of in-line or end-point inspection to ensure compliance with hard mature condition, as defined in the Mango Grading and Firmness Standard with a softness rating of "0" and to confirm freedom of fruit fly (refer 7.8);
- advising the Certification Controller of any problems detected so that corrective action can be implemented (refer 7.8);
- ensuring that, for in-line inspections, there is a system in place to identify all fruit packed since the previous inspection, during which the fruit had passed inspection (refer 7.8.2);
- conducting 100% inspection of the fruit from each sample package, examining all surfaces to ensure compliance with the hard mature condition and verifying the absence of broken skin or signs of fruit fly infestation (refer 7.8.3);
- identifying each sample package with a Packed Product Sample (PPS) number (refer 7.8.4);
- taking corrective action following identification of nonconforming fruit in any sample package (refer 7.8.5, 7.8.5.1, and 7.8.5.2);
- maintaining records of the results of all packed product inspections (refer 7.8.7).

The **Authorised Dispatcher** is responsible for –

- ensuring that, prior to consignment, each package is marked, in accordance with requirements, in indelible and legible characters of at least 5 mm (refer 7.9.1);
- ensuring that all certified and packed fruit is stored and transported under secure conditions which prevent infestation by fruit fly (refer 7.9.2);
- ensuring that, prior to consignment, all packages containing fruit certified under this operational procedure are accompanied by a Plant Health Assurance Certificate issued by the business (refer 7.9.3);
- ensuring that Plant Health Assurance Certificates are distributed in accordance with requirements (refer 7.9.4);
- maintaining copies of all Plant Health Assurance Certificates issued by the business under the ICA arrangement (refer 7.9.5).

The **Authorised Signatories** are responsible for –

- ensuring, prior to signing and issuing a Plant Health Assurance Certificate, that produce covered by the certificate has been prepared in accordance with the business' ICA arrangement and that the details on the certificate are true and correct in every particular (refer 7.9.3).

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

6 REQUIREMENTS

All mango fruit certified under this Operational Procedure must comply with the following requirements:

i. be pre-harvest treated;
ii. be in hard mature condition;
iii. be harvest inspected; and
iv. be packed product inspected.

6.1 Pre-Harvest Treatment

All mango fruit certified must receive pre-harvest treatment.

6.1.1 Pre-harvest Treatment

Pre-harvest treated means a dimethoate cover spray program, applied prior to harvest in accordance with the APVMA Approved Label directions:

A program of **cover sprays** consisting of –

- a cover spray mixture of 75mL of a concentrate containing 400g/L **dimethoate**, per 100 litres of spray mixture;
- applied to **all mango trees** on the property. Exemption for dimethoate cover spray will be considered for blocks marked on the property plan (refer 7.2) intended for international export and not for export to Western Australia;
- applied **thoroughly** to the fruit;
- at a maximum interval of **every fourteen days**;
- from **five weeks** prior to commencing harvest to the completion of harvest.

6.2 Hard Mature Condition

All mango fruit certified must be in a hard mature condition.

This means that the fruit at picking has reached such a stage of development as to ensure a proper completion of the ripening process and is in a hard mature condition, as described in the Mango Grading and Firmness Standard, with a softness rating of “0” (refer Attachment 8).

6.2.1 Harvest Inspection

All mango fruit certified must be harvest inspected, which means a minimum sample rate of 10 fruit per 500kg of fruit harvested, was inspected after harvest and found to be in a hard mature condition and free of live fruit fly infestation.

6.3 Packed Product Inspection

All mango fruit certified must be inspected after packing which means from a 2% or 600 unit, whichever is greater, sample of fruit that was inspected following sorting, grading, and packing and found to be in a hard mature condition and free from symptoms of fruit fly infestation.

DPI Queensland and interstate quarantine authorities maintain the right to inspect certified produce at any time 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 registered under the Agvet Code 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 arrangement under this Operational Procedure shall make application for accreditation (refer Attachment 1) at least 10 working days prior to the intended date of commencement of operation under the ICA arrangement.

If the Business only pre-harvest bait sprays mangoes for post-harvest inspection and certification by another Accredited Certifier, then Part A is to be indicated on the application and a property plan attached (refer 7.2 Property Plan). A Business seeking accreditation under Part A must lodge their application at least 10 days prior to commencing pre-harvest treatment.

If the Business only post-harvest inspects, packs and certifies mangoes, Part B is to be indicated on the application. A Business seeking accreditation under Part B must lodge their application at least 10 days prior to commencing fruit receival from an Accredited Certifier accredited under Part A.

If the Business carries out pre-harvest treatment and post-harvest inspection, and certification of mangoes, then Part A and Part B are to be indicated on the application and a property plan attached. A Business seeking accreditation under Part A and Part B must lodge their application at least 10 days prior to commencing pre-harvest bait spraying.

7.1.2 Audit Process

7.1.2.1 Initial Audit

Prior to a Business becoming accredited, an initial audit of the business is conducted. This is to verify the ICA system is implemented and capable of operating in accordance with the requirements of the Operational Procedure, and the system is effective in ensuring compliance with the specified requirements of the ICA arrangement.

On completion of a successful initial audit, accreditation is granted to cover up to a maximum of twelve months from the date of initial accreditation, and a Certificate of Accreditation is issued (refer 7.1.3 Certificate of Accreditation).

7.1.2.2 Compliance Audits

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

Compliance audits are, wherever practical, conducted when the ICA system is operating.

A compliance audit is conducted within four weeks of the commencement of certification under the ICA arrangement by the Accredited Certifier.

An additional compliance audit is conducted between six and nine months after the date of accreditation for an ICA arrangement that operates for more than six months of the year.
Random audits are conducted on a selected number of Accredited Certifiers 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 system records or ICA system documentation.

Unscheduled compliance audits may be conducted at any time to investigate reported or suspected nonconformances.

7.1.2.3 Re-Accreditation

Accredited Certifiers are required to re-apply for accreditation each year the Accredited Certifier seeks to operate under the ICA arrangement. Accredited Certifiers seeking re-accreditation must lodge a renewal application prior to accreditation lapsing, or if accreditation has lapsed, prior to commencing further certification of produce under the ICA arrangement.

A compliance audit is conducted within twelve weeks of the date of re-accreditation for an Accredited Certifier applying for annual re-accreditation.

An additional compliance audit is conducted between six and nine months after the date of re-accreditation for an ICA arrangement that operates for more than six months of the year.

7.1.3 Certificate of Accreditation

An Accredited Certifier will receive a *Certificate of Accreditation for an Interstate Certification Assurance Arrangement* detailing the scope of the arrangement including –

- the facility location;
- Operational Procedure;
- any restrictions on the accreditation such as –
  - type of produce covered,
  - chemicals covered; and
- the period of accreditation.

The Accredited Certifier must maintain a current Certificate of Accreditation and make this available on request by an Inspector.

An Accredited Certifier may not commence or continue certification of produce under the ICA arrangement unless it is in possession of a valid and current Certificate of Accreditation for the facility, procedure and produce type covered by the Accreditation Certificate.

PART A - (Covers the grower activities of pre-harvest sprays and harvest inspection for hard mature condition)

7.2 Property Plan

The Certification Controller must maintain a property plan for each property on which mangoes are grown, treated and harvest inspected for certification under this operational procedure.

The property plan must 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 (e.g. house, packing shed, equipment sheds, etc.).

7.3 Pre-Harvest Treatment

All mango fruit, certified under this operational procedure must have been pre-harvest treated for fruit fly.

Pre-harvest treated means the application of an approved program of cover sprays.

7.3.1 Pre-Harvest Cover Spraying

7.3.1.1 Cover Spray Equipment Calibration

Spray Tank Volume and Calibration

Permanent volume indicator marks must 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 must include the volume in litres required to fill the tank to that level.

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

7.3.1.2 Calculating the Quantity of Concentrate to Add to the Spray Mixture

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

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

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

For example –

350 litre 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 Attachment 5).

7.3.1.3 Cover Spray Mixture Preparation Chart

The business must maintain a Cover Spray Mixture Preparation Chart (refer Attachment 5) or similar record in close proximity to the spray mixture preparation area at the time of making up the spray mixture. A chart must be prepared for each spray unit used by the business for cover spraying under this operational procedure.

The chart must 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;

(d) the volume in millilitres (mL) of a concentrate containing 400g/L dimethoate 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 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.

7.3.1.4 Cover Spray Treatment

The Spray Operator must undertake cover sprays commencing at least **five weeks before harvest** at a maximum interval of **every fourteen days** and continuing **until the completion of harvest.**

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 must 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 must not be harvested until the specified withholding period has been complied with after the cover spray application.

7.3.1.5 Cover Spray Mixture Preparation

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

7.3.1.6 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 for the required volume of mixture.

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 by mixing the tank for a minimum of 2 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.

7.3.1.7 Cover Spray Equipment Maintenance

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

7.3.1.8 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 7) or records which capture the same information.

The business's cover spray 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.

7.4 Harvesting

The Harvest Supervisor must oversee the harvest process to ensure only conforming mangoes are harvested for certification under this operational procedure.

Harvested fruit must be stored in secure conditions within 24 hours of harvest.

7.4.1 Harvest Inspection

The Harvest Supervisor must select a minimum of 10 fruit from every 500kg harvested. Fruit must be checked for hard mature condition, as defined in the Mango Grading and Firmness Standard (refer Attachment 8) with a softness scale of "0", and freedom of fruit fly infestation.

Fruit must be selected from any 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 (i.e. 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 must immediately advise the Certification Controller of the detection of live fruit fly larvae.

Harvest inspection must be completed on mangoes that are to be certified in accordance with this operational procedure, and –

(a) in the case of a business that is a different business from the packer - prior to completion of the Harvest Inspection Declaration (refer Attachment 10) and delivery to the packer;

(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 receival inspection.

7.4.2 Harvest Inspection Equipment

The business must maintain a copy of the Mango Grading and Firmness Standard (refer Attachment 8) that shows how to determine ripeness of fruit and inspection equipment including a hand lens, microscope or other device that provides X10 or greater magnification for examination of suspect fruit.

7.4.3 Harvest Inspection Records

The Harvest Supervisor must maintain records of harvest inspection of fruit.

Harvest inspection records must be in the form of a Harvest Inspection Record (refer Attachment 9) 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 identification number/code of the bins/crates used;
- the softness rating;
- the number of fruit cut and examined;
- the presence or absence of fruit fly;
- the Harvest Supervisor's name and signature.

7.4.4 Action Following Identification of Non-Conforming Product at Harvest

If any fruit is found to be not of hard mature condition, as defined in the Mango Grading and Firmness Standard (refer Attachment 8) with a softness rating of "0", or infested with live fruit fly at harvest the Certification Controller must take the following actions –

(a) all mangoes harvested from the source block on the day of the detection must be rejected for certification under this operational procedure; and

(b) as soon as practical and not more than one business day from the time of the detection, the detection must be reported to the Accrediting Authority so an investigation may be carried out to determine the cause and rectify any problems.

7.4.5 Rejected Product

Rejected product must be isolated in an area that is clearly identified to prevent mixing with conforming product. Product may be consigned to another market whose requirements can be met.

7.4.6 Harvest Inspection Declaration

A business that grows mangoes must be accredited under Part A of this operational procedure and the business packing the mangoes must be accredited under Part B of this operational procedure.

The business growing the mangoes must supply a Harvest Inspection Declaration (refer Attachment 10) with each delivery of mangoes supplied to the packing business for certification.

A declaration is not required where the business that grows the fruit is the same business that packs 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 conducted the harvest inspection on the mangoes;

(b) the identity of the block or blocks in which the mangoes were grown;

(c) the identifying numbers of the bins/crates being supplied;

(d) results of harvest inspection for hard mature condition;

(e) that the mangoes were inspected at harvest and found free of live fruit fly infestation;

(f) details of the pre-harvest spray treatment that was applied.

PART B - (Covers the packer activities of fruit receival (verify hard mature condition), sorting, grading, and packing, inspection (verify hard mature condition and freedom from fruit fly) and certification)

7.5 Fruit Receival

The Fruit Receival Officer must ensure that –

(a) all mangoes received for certification under this operational procedure are supplied by a grower accredited under Part A;

(b) all mangoes are in hard mature condition, as defined in the Mango Grading and Firmness Standard (refer Attachment 8) with a softness rating of "0";

(c) the hard mature condition status of mangoes is clearly identified at receival at the packing facility to prevent mixing of conforming and non-conforming mangoes.

(d) all mangoes to be consigned must be securely received, handled, stored, and transported in accordance with section 7.5.2.

Any mangoes received which are not in hard mature condition or clearly identified must be regarded as non-conforming for the purpose of this operational procedure.

7.5.1 Receival of Mangoes Grown by another Business

For a business which packs mangoes grown by another business, the Fruit Receival Officer shall ensure –

(a) each delivery of mangoes supplied by another business for certification under this operational procedure is accompanied by a Harvest Inspection Declaration (refer Attachment 10);

(b) fruit supplied for certification has been inspected for hard mature condition and found free from live fruit fly infestation;

(c) details of any cover spray that has been applied shall be included on the Harvest Inspection Declaration (refer Attachment 10);

(d) grower identification and maturity details are maintained for all fruit received and certified under this operational procedure from receival to certification and dispatch.

The business must maintain copies of all declarations received from growers whose produce they pack and certify under this operational procedure.

7.5.2 Secure Handling and Storage

This section applies if a business:

(a) Grows and packs mango cultivars other than B74 (Calypso), Kensington Pride (KP), R2E2 and/or Honey Gold;

OR

(b) Receives and packs mango cultivars other than ICA-69 certified B74 (Calypso), Kensington Pride (KP), R2E2 and/or Honey Gold, and consigns the product to WA

The business must ensure all fruit which is to be consigned is received and packed under secure conditions which prevent infestation by fruit fly.

The Business must ensure fruit under this ICA accreditation is segregated from all other mango fruit cultivars or non-ICA-69 accredited fruit.

7.5.3 Fruit Receival Inspection

The Fruit Receival Officer must carry out an inspection of all fruit received for certification under this operational procedure.

The Fruit Receival Officer must select a minimum of 10 fruit from every 500kg of fruit received. Fruit must be checked for hard mature condition, as defined above and freedom of fruit fly infestation.

Fruit must be selected from any 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 (i.e. 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 must be immediately advised on detection of live fruit fly larvae. A business which both grows and packs the mangoes, conducts the harvest inspection in conjunction with the fruit receival inspection.

As soon as practical and not more than one business day from the time of the detection, the detection must be reported to the Accrediting Authority so an investigation may be carried out to determine the cause and rectify any problems.

7.5.4 Fruit Receival Inspection Equipment

The business must maintain a copy of the Mango Grading and Firmness Standard (refer Attachment 8) that shows how to determine fruit firmness and inspection equipment including a hand lens, microscope or other device that provides X10 or greater magnification for examination of suspect fruit.

7.5.5 Fruit Receival Inspection Records

The Fruit Receival Officer must maintain records of fruit receival inspection.

Fruit receival inspection records must be in the form of a Fruit Receival Inspection Record (refer Attachment 11) or a record which captures the same information.

Fruit receival inspection records must include –

- the name and 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 identification number/code of the bins/crates used;

- the maturity status of the fruit, as defined above;
- the number of fruit cut and examined;
- the presence or absence of fruit fly;
- the Fruit Receival Officer's name and signature.

7.6 Sorting, Grading and Packing

All mangoes sorted, graded, and packed for certification under this operational procedure must be Class 1 fruit and inspected for evidence of hard mature condition, as defined Mango Grading and Firmness Standard (refer Attachment 8) with a softness rating of "0" and fruit fly infestation during the normal sorting, grading, and packing process.

Any fruit not in hard mature condition and/or showing symptoms of fruit fly infestation (i.e. softening, spotted areas weeping with sap or showing breakdown) must be rejected. Fruit showing symptoms of fruit fly infestation, must be cut to expose the flesh, and examined for the presence of live fruit fly larvae. The Certification Controller must be immediately advised on detection of live fruit fly larvae.

The Certification Controller must oversee the sorting, grading, and packing process to ensure only conforming mangoes are packed for certification under this operational procedure.

7.6.1 Identification and Control of Non-Conforming Product at Sorting, Grading and Packing

All fruit that are found to be non-conforming (i.e. found not to be in hard mature condition and/or showing symptoms of fruit fly infestation) must be segregated to prevent mixing with conforming product during the sorting, grading, and packing operation.

Examples of segregation of non-conforming fruit must include –

(a) locating non-conforming fruit in a defined and separate area to conforming fruit and maintaining separation until the fruit is sorted, graded, and packed;

OR

(b) placing non-conforming fruit in reject bins or other containers which are clearly marked or significantly different in appearance to distinguish them from conforming fruit.

Other methods may be used provided they clearly identify non-conforming product from conforming product.

7.7 Packing

A business which packs conforming (i.e. meets the requirements of this operational procedure) and non-conforming fruit must implement systems to identify the condition status of fruit after packing to prevent mixing of conforming and non-conforming fruit.

7.7.1 Identification of Conforming and Non-Conforming Fruit after Packing

Examples of acceptable methods of identifying the condition status of conforming and non-conforming fruit after packing include –

(a) using packaging that differs significantly in appearance;

OR

(b) immediately marking each package of conforming fruit in a manner that clearly identifies the fruit as conforming to the requirements specified under this operational procedure.

7.8 Packed Product Inspection

The Packed Product Controller must randomly select 2% or 600 units, whichever is greater, of packed product for inspection and compliance with hard mature condition, as defined in the Mango Grading and Firmness Standard (refer Attachment 8). Each fruit must be inspected for the absence of broken skin or symptoms of fruit fly infestation, which include sting marks, splits, discolouring, weeping sap, deformities, or blemishes.

The Packed Product Controller must advise the Certification Controller of any problems or potential problems detected so that corrective action can be implemented.

Packed Product Inspection may be conducted:

(a) as an in-line inspection during grading and packing of a consignment;

OR

(b) as an end-point inspection following assembly of a consignment.

The Packed Product Controller must ensure that packed product is stacked in an orderly fashion so that produce packed since the last sample package can be easily identified.

7.8.1 Sampling for End-point inspection

End-point inspection must be conducted after the consignment has been consolidated but prior to certification and dispatch.

Each consignment of produce to be certified must be sampled at the rate of either 2% or 600 units, whichever is greater. The sample must be selected at random from packages i.e. trays containing final packed product. Sample packages must be selected at random from within the consignment.

7.8.2 Sampling for In-Line Inspection

The in-line inspection method is only available at the first point of packing of the mangoes. For in-line inspections, the Packed Product Controller must be able to identify all fruit which has been packed in the period since the previous inspection when the fruit had passed inspection.

The in-line inspection must involve selection of a sample of packed product from a lot, packed on the one day for certification under this Operational Procedure. Packed fruit must be sampled at the rate of either 2% or 600 units, whichever is greater. The sample must be selected at random from the packages i.e. trays of final packed product as it leaves the packing line in the packing shed for consolidation.

7.8.3 Examination of the Sample

The Packed Product Controller must conduct 100% inspection of the fruit from each sample package.

Each fruit in the sample package must be removed and all surfaces examined for compliance with hard mature condition, as defined in the Mango Grading and Firmness Standard (refer Attachment 8). Each fruit must be inspected for the absence of broken skin or symptoms of fruit fly infestation, which include sting marks, splits, discolouring, weeping sap, deformities, or blemishes:

> ***Fruit fly 'sting marks' often appear to be pin pricks on the skin of the fruit.***
>
> ***Sting marks are a puncture mark caused by the female fruit fly with its ovipositor as it positions eggs within the host produce. Once the eggs hatch the larvae burrow towards the centre of the host produce. Sting marks often cause softness under the skin.***
>
> ***If a sting mark is found, cut at the site of the mark and investigate the flesh of the fruit for signs of fruit fly larvae. If fruit fly larvae are present, the flesh will be discoloured and mushy.***
>
> ***Fruit fly larvae are creamy white and up to 9mm in length, with a slightly conical body and 11 segments. When examined under a hand lens the larva's thin head has small black mouth parts. There are 3 pairs of spiracles (small, raised structures used for breathing) grouped together at the thick end of the larva.***
>
> ***When the larvae are disturbed, and especially if exposed to sunlight, they can draw their body in to an 'n' shape and 'flick' themselves up to 10 cm in any direction. This is a dispersal mechanism of the mature QFF larvae and is diagnostic for the species.***

7.8.4 Identification of Sample Packages

Sample packages must be sequentially numbered during the day of packing.

The Packed Product Controller must identify each sample package with a Packed Product Sample (PPS) number by placing either a stamp or sticker bearing the lettering PPS No., on the exposed end of the package, then marking on or below the identifier the sequential sample number and their initials.

Where consignments are palletised, the sample packages examined by the Packed Product Controller must be stacked on the pallet with the PPS No. visible on the outside of each pallet packed for certification under this operational procedure.

An example of a PPS No. stamp or sticker is shown as Attachment 12 – Identification of Packed Product.

7.8.5 Action Following Identification of Non-Conforming Packed Product

The Packed Product Controller must notify the Certification Controller of any rejection. The Certification Controller must advise the sorting, grading, and packing staff of the non-conformance and conduct an investigation to identify the cause.

In the event of fruit fly detection, as soon as practical and not more than one business day from the time of the detection, the detection must be reported to the Accrediting Authority so an investigation may be carried out to determine the cause and rectify any problems.

7.8.5.1 In-Line Inspection

If any sample package contains a fruit that is not in a hard mature condition, does not meet Class 1 standard, or has symptoms of fruit fly infestation, the Packed Product Controller must –

(a) reject the sample package; and

(b) withdraw and isolate all product packed since the previous sample package was selected; and

(c) stop the packing line.

Once any problems have been identified and rectified, sorting, grading, and packing may recommence.

The Packed Product Controller must note in the 'Comments' section of the Packed Product Inspection Record next to the entry for the sample package which failed inspection, the reason for failure and the number of withdrawn packages.

Following resumption of sorting, grading, and packing, the Packed Product Controller must select an additional 3 sample packages from the withdrawn packages.

The Packed Product Controller must conduct 100% inspection of the fruit in the additional sample packages to ensure the fruit is in a hard mature condition, meets Class 1 standard and free of symptoms of fruit fly infestation.

Additional sample packages must be given the next three Packed Product Sample (PPS) numbers after the package which initially failed inspection. The inspection results must be entered on the inspection record.

If all 3 additional sample packages are found to conform, the withdrawn packages and the 3 sample packages may be passed for certification and returned to the product assembly point.

If any of the additional sample packages contain a non-conforming fruit, all withdrawn packages must be rejected.

7.8.5.2 End-Point Inspection

If any sample package contains a fruit that is not in a hard mature condition, of Class 1 standard or has symptoms of fruit fly infestation the entire consignment must be rejected.

The Packed Product Controller must note in the 'Comments' section of the Packed Product Inspection Record next to the entry for any sample package which failed inspection, the reason for failure and the number of packages in the rejected consignment.

7.8.6 Rejected Product

The Packed Product Controller shall ensure that rejected packages must be isolated and clearly identified to prevent mixing with conforming packages. Refer to Section 7.5.2 for secure storage and handling of fruit.

All rejected packages must be regraded, repacked, and reinspected in accordance with this section prior to certification under this operational procedure.

Alternatively, rejected packages may be treated and certified in accordance with an alternative quarantine entry condition, or consigned to markets that do not require certification of hard mature condition, treatment, and inspection for fruit fly.

7.8.7 Packed Product Inspection Records

The Packed Product Controller must maintain records of the results of packed product inspection.

Packed product inspection records must be in the form of a Packed Product Inspection Record (refer Attachment 13) or a record which captures the same information.

Packed product inspection records must include –

- the name and Interstate Produce (IP) Number of the business that operates the approved facility in which the fruit was packed;
- the date of inspection of the sample package;
- the sample package sequential number (PPS No.);
- the type of inspection, in-line, or endpoint;
- the inspection result for the sample package;
- details of defects or problems detected during inspection;
- the number of any withdrawn or rejected packages;
- the inspection results and follow-up action following rejection;
- the Packed Product Controller's name and signature.

7.9 Dispatch

7.9.1 Package Identification

The Authorised Dispatcher must ensure that, prior to consignment, each package is marked in indelible and legible characters of at least 5 mm, with –

- the Interstate Produce (IP) number of the accredited business that packed the fruit;
- the words 'MEETS ICA-69'; and
- the date or date code on which the produce was packed;

prior to the issuance of a Plant Health Assurance Certificate by the Business under this operational procedure.

7.9.2 Secure Transport

The Authorised Dispatcher **must** ensure all certified and packed fruit is stored and transported under secure conditions which prevent infestation by fruit fly.

Secure conditions are defined as:

(f) unvented packages;

(g) vented packages with the vents secured with gauze/mesh with a maximum aperture of 1.6 mm;

(h) fully enclosed under tarpaulins, hessian, shade cloth, mesh or other covering which provides a maximum aperture of 1.6 mm;

(i) shrink wrapped and sealed as a palletised unit;

(j) fully enclosed or screened buildings, cold rooms, vehicles, or other facilities free from gaps or other entry points greater than 1.6 mm.

7.9.3 Plant Health Assurance Certificates

The Authorised Dispatcher must ensure a Plant Health Assurance Certificate (refer Attachment 2) is completed and signed by an Authorised Signatory of the business prior to dispatch of the consignment from the facility.

Plant Health Assurance Certificates must include -

(a) in the “Accredited Certifier that Prepared the Produce” 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, if applicable and ensuring hard mature condition of the mangoes.
- Where the consignment contains fruit grown by a number of growers the word “VARIOUS” must be used;’
- the name of mango cultivar or variety that has been supplied by the Accredited Business

(c) in the “IP No. of Acc. Business” section -

- the IP No. of the Accredited Business;

(d) in the “Treatment” section, where applicable -

- pre-harvest treatment details including -
- 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 “400 g/L dimethoate”;
- in the Concentration column, the words “at 75 mL/100 L”; and
- in the Duration and Temperature column, the words “cover sprayed”;

Individual Plant Health Assurance Certificates must be issued to cover each consignment (i.e. a discreet quantity of product transported to a single consignee at one time) to avoid splitting of consignments.

Plant Health Assurance Certificates must be completed, issued and distributed in accordance with the Work Instruction *Guidelines for Completion of Plant Health Assurance Certificates* [WI-02].

Plant Health Assurance Certificates must be in the form of a *Plant Health Assurance Certificate* [CAF-16]. A completed example is shown as Attachment 2.

7.9.4 Plant Health Assurance Certificate Distribution

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

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

7.9.5 ICA System Records

The Business must maintain the following records –

PART A

(a) Property Plan for each property. Refer Attachment 3;

(b) Chemical Mixture Tank Calibration Certificate. Refer Attachment 4;

(c) Cover Spray Mixture Preparation Chart, where applicable. Refer Attachment 5;

(d) Cover Spray Mixture Preparation and Treatment Record, where applicable. Refer Attachment 7;

(e) Harvest Inspection Record. Refer Attachment 9.

PART B

(a) A copy of each Harvest Inspection Declaration received, where applicable. Refer Attachment 10;

(b) Fruit Receival Inspection Record, where applicable. Refer Attachment 11;

(c) Packed Product Inspection Record. Refer Attachment 13;

(d) the duplicate copy of each Plant Health Assurance Certificate issued by the business. Refer Attachment 2.

ICA system records must be retained for a period of at least 12 months from completion, or until the next compliance audit of the ICA arrangement, whichever is the later.

> ***An accredited Business must hold a minimum of 12 months ICA system records at the time of any compliance audit. If the compliance audit is conducted more than 12 months from the last compliance audit, the Business must maintain all records completed since the previous compliance audit.***

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

7.9.6 ICA System Documentation

The Business must 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 this Interstate Certification Assurance Arrangement*.

(d) a current copy of the Work Instruction Guidelines for Completion of Plant Health Assurance Certificates [ICA-WI-02].

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

8 ATTACHMENTS

Attachment 1	Accreditation of an Accredited Certifier for an Interstate Certification Assurance Accreditation (ICA) Arrangement	[CAF-71] **Blank** (Page 1 and 2)
Attachment 2	Plant Health Assurance Certificate	[CAF-16] **Example**
Attachment 3	Property Plan	[CAF-144] **Blank**
Attachment 4	Chemical Mixture Tank Calibration Certificate	[CAF-03] **Blank**
Attachment 5	Cover Spray Mixture Preparation Chart	[CAF-102] **Blank**
Attachment 6	Cover Spray Mixture Preparation Chart	[CAF-102] **Example**
Attachment 7	Cover Spray Mixture Preparation and Treatment Record	[CAF-103] **Blank**
Attachment 8	Mango industry fruit firmness standard	N/A
Attachment 9	Harvest Inspection Record	[CAF-146] **Blank**
Attachment 10	Harvest Inspection Declaration	[CAF-147] **Blank**
Attachment 11	Fruit Receival Inspection Record	[CAF-148] **Blank**
Attachment 12	PPS No. stamp or sticker	[CAF-149] **Blank/Example**
Attachment 13	Packed Product Inspection Record	[CAF-150] **Blank**

Queensland Government

Department of Agriculture and Fisheries

Application for accreditation of an accredited certifier for an Interstate Certification Assurance (ICA) arrangement

Pursuant to section 420 of the *Biosecurity Act 2014*

OFFICE USE ONLY
DATE RECEIVED:
PHIS NUMBER:
DATE APPROVED OR REFUSED:
FURTHER INFORMATION REQUEST DATE:
DATE FURTHER INFORMATION RECEIVED:
PAYMENT PROCESSED DATE:
PAYMENT AMOUNT RECEIVED:
RECEIPT NUMBER:

Important information for applicants

This form is to be used to apply as an accredited certifier for an Interstate Certification Assurance (ICA) arrangement.

Information requested will enable your application to be processed as prescribed by the *Biosecurity Act 2014*. Your application must be assessed and granted by the chief executive before you can proceed with the proposed activity.

Before lodging this application you should be familiar with the requirements of the *Biosecurity Act 2014* available on the Office of the Queensland Parliamentary Counsel website www.legislation.qld.gov.au.

How to complete form for a new application

- Must complete entire form.

How to complete form for an amendment or renewal

- Update any areas that require amendments;
- Must complete part A section 1, part B sections 2-4 and part C.

How to submit this form

- In person to:

  Any Department of Agriculture and Fisheries regional office; or

- Via post to:

  Department of Agriculture and Fisheries
  PO Box 5083
  Nambour Qld 4560

Prescribed fee

- For the current fees visit www.daf.qld.gov.au/biosecurity-fees
- Fees are applicable until the end of the financial year.
- The prescribed fee must be paid at the time the application is submitted for it to be processed.

Term of accreditation

The term of this accreditation shall be one (1) year unless sooner cancelled or suspended from the date of your application being approved.

Notification

The applicant will be notified of the outcome within thirty (30) days of receipt of the application. The applicant will be notified by post to the applicant's postal address.

The application is deemed to have been received when the District Co-ordinator (Certification and Accreditation Services) in your district is in receipt of an accurate and complete application and payment of the prescribed fee has been received, processed and cleared.

Contact us

For more information please contact the District Co-ordinator (Certification and Accreditation Services), Plant Biosecurity & Product Integrity, Biosecurity Queensland, Department of Agriculture and Fisheries in your district or the Department of Agriculture and Fisheries Customer Service Centre on 13 25 23.

ATTACHMENT 1

Type of application *(select one only)*

☐ New application ☐ Amendment ☐ Renewal

Part A – Accredited certifier application

1. Applicant details

Please supply ACN or ARBN *(if applicable)*

Please supply Interstate Produce Number (IPN) *(if known)*

Q

Applicant is: *(select one only)*

☐ an individual ☐ a partnership ☐ an incorporated company ☐ a co-operative association

☐ other *(please specify)*

If applicant is an individual, please complete the following *Supply full legal name including first name, surname and any other name/s.* First name

Last name

Other name/s

If applicant is a partnership, please complete the following *Supply the full legal name of each partner in their normal order.*

First name Last name

First name Last name

First name Last name

If applicant is an incorporated company, co-operative association or other type of legal entity, please complete the following *Supply the full legal name.*

Trading name/s of the applicant *Supply any business names or brand names used by the applicant on packages of certified items.*

2. Address details

Street address

Suburb/Town/Locality Country State Postcode

Postal address *(if different to street address)*

Suburb/Town/Locality Country State Postcode

3. Contact details

Phone Fax *(if applicable)* Mobile *(if applicable)*

E-mail address

Preferred method of contact

☐ Any ☐ E-mail ☐ Phone ☐ Mail

Queensland Government

Plant Health Assurance Certificate

Pursuant to Sections 412 and 413 of the Biosecurity Act 2014

(Means a biosecurity certificate issued in accordance with Chapter 15 of the *Biosecurity Act 2014*.)

Certificate Number: 9999999999

Consignment Details (Please print)

Consignor	Consignee
Name: Joes Mangoes Pty Ltd	Name: F & V Wholesalers Pty Ltd
Address: Orchard Road, Mareeba QLD 4880	Address: 280 Bannister Road, Canning Vale WA 6155

Reconsigned To (Splitting consignments or reconsigning whole consignments)

Name:

Address:

Method of Transport (Provide details where known)

☒ Road	Truck/Trailer Registration	
☐ Rail	Consignment	
☐ Air	Airline/Flight no.	
☐ Sea	Vessel Name & Voyage no.	

Certification Details (Please print)

Accredited Certifier Carrier of Biosecurity Matter	Grower or Packer
Name: Joes Mangoes Pty Ltd	Name: Joes Mangoes Pty Ltd
Address: Orchard Road, Mareeba QLD 4880	Address: Orchard Road, Mareeba QLD 4880

IP No. of Acc. Certifier	Brand Name or Identifying Marks (as marked on packages)	Date Code (as marked on packages)
Q 9999	Joes Mangoes	8/12/25

Facility No.	Procedure Code	Expiry Date
01	ICA-69	31/10/26

Facility No.	Procedure Code	Expiry Date
		/ /

Number of Packages	Type of Packages (e.g. trays, cartons)	Type of Carrier of Biosecurity Matter	Authorisation for Split Consignment
2000	Trays	R252 Mangoes	

Date	Treatment	Chemical (Active Ingredient)	Concentration	Duration and Temperature
/ /	☐ Dipping	Dimethoate	400ppm	☐ One min. ☐ 10 sec. then wet for 60 sec.
/ /	☐ Flood Spraying	Dimethoate	400ppm	10 seconds then wet for 60 seconds
/ /	☐ Fumigation	Methyl Bromide	g/m^3	Two hours @ °C
/ /	☐ Inspected and found free of melon thrips			
/ /	☐ Sourced from a property located more than 5km from a known infestation of red imported fire ant			
/ /	☐ Mature green condition at packing			
/ /	☐ Bananas in a hard green condition with unbroken skin			
6 / 12 / 25	Pre-harvest spray 400 g/L dimethoate at 75 ml/100L, cover spayed			
/ /				

Additional Certification

Meets ICA-69

Declaration

I, an Authorised Signatory of the accredited certifier that prepared the Carrier of Biosecurity Matter described above, hereby declare that the Carrier of Biosecurity Matter have been prepared in the accredited certifier's approved facilities in accordance with the accreditation(s) granted to the accredited certifier under the *Biosecurity Act 2014* and that the details shown above are true and correct in every particular.

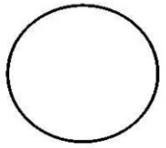
Authorised Signatory's Name (Please print)	Signature	Date
Arthur John Signatory	A J Signatory	8 / 12 / 25

Yellow copy: Consignment copy (original) **White copy:** Accredited Certifier's copy (duplicate copy)

CAF-16 (01/25) V8

ATTACHMENT 2

PROPERTY PLAN



INDICATE NORTH

CAF-144 (09/18) V1

ATTACHMENT 3

PROPERTY PLAN DETAILS

The property plan (overleaf) is to include the following-

1. the location of blocks on which mangoes are grown;
2. the Block Reference Code or Number used to identify each block identified on the plan;
3. road access including street name/s;
4. internal roadways within the property;
5. the location and identification of buildings on the property (house, packing shed, equipment sheds etc).

COMPLETE THE FOLLOWING DETAILS FOR EACH BLOCK SHOWN ON THE PROPERTY PLAN

Block Reference Code or No.	Name Used on Farm for the Block	Cultivar	Number of Mango Trees in Block	Fruit to be Certified?
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO
				YES/NO

CAF-144 (09/18) V1

ARRANGEMENT DETAILS

Applicant's Name *(as shown on the application form)*

Street Address of Facility *(as shown on the application form)*

Postcode

SCOPE OF ARRANGEMENT

Application is made for accreditation under Part A of CTM-01 *Condition and Treatment of Mangoes* for the following-

Pre-harvest treatment/s to be covered *(☑ tick one box only)*-

- ❑ Cover Spraying only
- ❑ Bait Spraying only
- ❑ Cover & Bait Spraying

Chemical/s to be covered *(☑ one or more boxes as applicable)*-

- ❑ Dimethoate (cover spraying)
- ❑ Maldison (bait spraying)

I ..... *(full printed name)* the

..... *(position in business)* am authorised to sign on behalf of the business and I understand that-

(a) accreditation will only be granted for the scope outlined above;
(b) following accreditation, certification can only be issued in accordance with scope of accreditation detailed in the *Certificate of Accreditation for an Certification Assurance Accreditation (CAA) Arrangement* covering the arrangement;
(c) application must be made to amend any of the current details in the *Application of an Accredited Certifier for a Certification Assurance Accreditation (CAA) Arrangement* [CAF-71] or this Property Plan.

..... / /
Signature Date

ATTACHMENT 3

CHEMICAL MIXTURE TANK CALIBRATION CERTIFICATE

EQUIPMENT CALIBRATED

Name and Address of Owner of Equipment: _____

_____

Type of equipment (eg boom spray, mister): _____

Brand: _____

Model: _____

Serial No.: _____

Other Identification: _____

TESTING DETAILS

Name and Address of the Business Conducting the Test: _____

_____

Date of Testing: _____

Type of Flow Meter Used: _____

Date of Latest 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

CAF-03 (06/17) V1

ATTACHMENT 4

COVER SPRAY MIXTURE PREPARATION CHART

Spray Unit _____

Tractor (*if applicable*)_____ Gear_____

Engine RPM/Throttle Setting _____

Concentrate (*Trade Name*) _____

Active Ingredient _____ Conc. _____ g/L

Concentrate Mixing Rate _____ mL/litre 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

CAF-102 (06/17) V1

COVER SPRAY MIXTURE PREPARATION CHART

Spray Unit Hardi Mini-Variant 600

Tractor *(if applicable)* Ford 5000 Gear 3 high

Engine RPM/Throttle Setting 2500

Concentrate *(Trade Name)* Genfarm Dimethoate 400 Insecticide

Active Ingredient Dimethoate Conc. 400 g/L

Concentrate Mixing 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 mL Concentrate / 250 Litres Mixture

300 mL Concentrate / 400 Litres Mixture

375 mL Concentrate / 500 Litres Mixture

Prepared by: Sam Sprayer (Printed Name) S Sprayer (Signature) 23/9/19 (Date)

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COVER SPRAY MIXTURE PREPARATION AND TREATMENT RECORD

COVER SPRAY MIXTURE PREPARATION						COVER SPRAY TREATMENT					
Date	Time	Volume of Concentrate (Millilitres)	Volume of Mixture (Litres)	Trade Name of Concentrate	Other Pesticide(s) or Additive(s)	Date of Application	Spray Equipment Used	Block Treated (Code)	Number of Trees/Hectares Treated	Spray Operator's Name	Signature

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ATTACHMENT 7

Mango Grading and Firmness Standard

All mango fruit consigned in accordance with ICA-69 accreditation must be graded for defects in accordance with 'Class 1' fruit as defined by the 2016 Mango Industry Standards[1]. All mango fruit must also be graded to meet the '0' softness rating on the fruit firmness standard to ensure hard mature condition is met.

Fruit Grade

OVERALL DEFECTS	
IMMATURITY	KP: ≥15% DM and ≥14° brix at eat ripe. Calypso: ≥15% DM and ≥14° brix at eat ripe. Honey Gold: ≥15% DM and ≥14° brix at eat ripe. R2E2: ≥13% DM and ≥12° brix at eat ripe
COLOUR	Colour stage: KP: minimum rating 3. All other varieties: minimum rating 4
FIRMNESS	0. in accordance with the fruit firmness standard below.
TEMPERATURE	12°C-18°C
MAJOR DEFECTS	
INSECTS	Nil (Live scale: Nil)
DISEASE	Nil
BROKEN SKIN	Nil
CHILL DAMAGE	Nil
INTERNAL	Nil
RESIN CANAL DISCOLOURATIN	Nil
SUN BURN DARK / DEPRESSED	Nil
SEVER SKIN BLEMISH (?10% OF SKIN)	Nil
LENTICEL STAR CRACKED	Nil
MINOR DEFECTS	
LIGHT	
LENTICEL LIGHT	≤ rating 3 Mango Quality Assessment Manual (MQAM)[2] rating scale
SUN BURN LIGHT	≤25% No browning. MQAM page 15, picture 2
RUSETT LINES	≤10%

[1] 2016 Mango Industry Quality Standards, available online https://www.industry.mangoes.net.au/cmsb/uploads/mg15002-2016-mango-industry-quality-standards.pdf

[2] For a copy of the MQAM please contact the AMIA. Contact details are available online https://www.industry.mangoes.net.au/contact/contact-amia/

MEDIUM	
PINK SPOT	Rating 1 (less than 6 spots, or an area of 1cm²)
SAP BURN	≤4cm² ≤ cumulative 10%
HEALED SCARRING	≤4cm² ≤ cumulative 10%
CLEAVAGE SCAR	≤4cm² ≤ cumulative 10%
BROWNING SKIN MARKS	≤4cm² ≤ cumulative 10%
TOLERANCE	
MAJOR	2%
MINOR	10%

Fruit Firmness (ripeness)

Mango fruit ripeness is determined by holding the fruit in the palm of the hand and gently squeezing with the fingers or thumb when the fruit is hard, or with the whole hand when the fruit is softer. Considerable care is required when assessing softness of near-ripe and ripe fruit, since excessive finger pressure can cause bruising. It is better to use whole hand pressure with mangoes.

The 'give' or deformation of all mango fruit must be rated '0' in accordance with the following scale (based on White et al. 2009).

Softness rating scale

Rating	Description
0	Hard (no 'give' in the fruit)
1	Rubbery (slight 'give' in the fruit)
2	Sprung (flesh deforms by 2–3 mm with extreme thumb pressure)
3	Firm soft (whole fruit deforms with moderate hand pressure)
4	Soft (whole fruit deforms with slight hand pressure)

A: Grasping with whole hand (correct).

B: Pressing with the thumb (incorrect).

HARVEST INSPECTION RECORD

Date	Grower IP Number	Source Block/s	No. of Bins/Crates	Bin/Crate ID Number/s or Code/s	Firmness Rating (No greater than "0")	No. of Fruit Cut & Examined	Fruit Fly Present ☑		Details	Certification Controller	
							Yes	No		Name	Signature

ATTACHMENT 9

PRE-HARVEST TREATMENT AND HARVEST INSPECTION DECLARATION

A Pre-Harvest Treatment and Harvest Inspection Declaration must be provided to the packer to cover the mangoes delivered for certification under ICA-69 from each source block each day, or at the time of changing from one block to another block, whichever is the earlier.

I _____ *(full printed name)*

an Authorised Signatory of -

_____ *(Business name),*

Interstate Produce (IP) No. **Q** ☐☐☐☐

hereby declare that the-

_____ *(no. of packages)* _____ *(type of packages - bins, crates, trays)*

of _____ *(type of produce)*

identified by - _____ *(package identification)*

delivered to -

_____*(Accredited Certifier name)*

Interstate Produce (IP) No. **Q** ☐☐☐☐ on- / / *(date)*

for grading, packing and certification under ICA Operational Procedure ICA-69 *(☑ as appropriate)*, declare-

1. The last pre-harvest cover spray treatment of the source block contained –

   ❑ 75 mL of a concentrate containing 400 g/L dimethoate per 100 L of mixture

2. The identity of the source block and date of the last pre-harvest treatment are -

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

3. The mangoes were inspected at harvest and found -

   ❑ to meet hard mature condition/firmness rating "0";

   ❑ free from symptoms of 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

ATTACHMENT 10

FRUIT RECEIVAL INSPECTION RECORD

Date	Grower's ID/IP No.	Source Block	Cultivar	No. of Bins/ Crates/Trays	Bin/Crate ID Number/s or Code/s	Firmness Rating (No greater than "0")	No. Fruit Cut & Examined	Fruit Fly		Details	Fruit Receival Officer	
								Yes	No		Name	Signature

PPS No. Stamp or Sticker

Marking Sample Packages after Packed Product Inspection

Following inspection, the Packed Product Controller must-

(a) mark one end of each sample package by applying a stamp or sticker with the PPS No. (Packed Product Sample No.) and their initials as shown below;

(b) ensure that the PPS No. stamp or sticker is visible on the exposed end of the package when the package is assembled on the pallet.

Stamp or Sticker Design (Example Only)

Completed Stamp or Sticker (Example Only)

Packed Product Inspection Record

Fruit Variety:		Interstate Produce (IP) Number: Q					

Date of Inspection	PPS No	Inspection		Hard Mature		Damaged Skin		COMMENTS (Note any defects or problems detected during inspection and the number of any withdrawn or rejected packages)	Packed Product Controller	
Tick applicable columns →		In-Line	End-Point	Yes	No	Yes	No		Printed Name	Signature

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ATTACHMENT 13