

PLANT BIOSECURITY & PRODUCT INTEGRITY

MATURE GREEN CONDITION OF TOMATOES

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PLANT BIOSECURITY & PRODUCT INTEGRITY

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MATURE GREEN CONDITION OF TOMATOES

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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 preharvest treatment equipment; and
- (b) the responsibilities and practices of personnel;

that apply to the certification of mature green condition of tomatoes for fruit fly under an Interstate Certification Assurance (ICA) arrangement.

2. SCOPE

This procedure covers all certification of mature green condition of tomatoes from a Business operating under an Interstate Certification Assurance arrangement in Queensland.

This procedure is applicable where the requirements specified in <u>6. Requirement</u> are a specified condition of entry of an interstate quarantine authority for Queensland fruit fly.

Certification of mature green condition of tomatoes under this Operational Procedure may not be an accepted quarantine entry condition for all interstate markets.

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

Information on interstate quarantine requirements can be obtained from the plant quarantine service in the destination state or territory.

3. REFERENCES

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

Certificates.

4. **DEFINITIONS**

accredit means to accredit a person to issue Assurance

Certificates under section 21 of the Plant Protection Act

1989.

Agvet Code means the *Agvet Code of Queensland*.

Application for means an Application for Accreditation of a Business for

Accreditation an Interstate Certification Assurance (ICA) Arrangement

[CAF-47].

APVMA means Australian Pesticides and Veterinary Medicines

Authority.



Assurance Certificate means a Plant Health Assurance Certificate [FDU 384].

Authorised Signatory means an officer of an ICA accredited Business whose

name and specimen signature is provided as an authorised signatory with the Business's 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 legal entity responsible for the operation of

the facility and ICA arrangement detailed in the

Business's Application for Accreditation.

Certification means a voluntary arrangement between the Department **Assurance** of Agriculture, Fisheries and Forestry Queensland (DAFF

of Agriculture, Fisheries and Forestry Queensland (DAFF Queensland) and a Business that demonstrates effective in-house quality management and provides assurance through documented procedures and records that

produce meets specified requirements.

certified/certification means covered by a valid Plant Health Assurance

Certificate [FDU 384].

coloured fruit means tomatoes that are more mature than mature

green at the time of colour sorting after harvest.

facility means the property where the produce is grown and

pre-harvest treatment is carried out, and the location where the grading and packing operations covered by

the ICA arrangement are carried out.

fruit fly means Queensland fruit fly.

ICA means Interstate Certification Assurance.

Inspector means an inspector appointed under the *Plant*

Protection Act 1989.

Interstate Certification Assurance 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.

mature green means the fruit has no more than a two centimetre

diameter area of pink to red colour at the stylar end at

the time of colour sorting after harvest.

nonconformance means a nonfulfilment of a specified requirement.

tomato means fruit of the species *Lycopersicon esculentum*.

treated means pre-harvest treated in accordance with the

requirements of this Operational Procedure.

Queensland fruit fly means all stages of the species Bactrocera tryoni and

related species B. aquilonis and B. neohumeralis.



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)

- ensuring the Business has current accreditation for an ICA arrangement under Part A of this Operational Procedure (<u>refer 7.1</u>);
- maintaining a property plan for each property on which tomatoes are grown for certification under this Operational Procedure (<u>refer 7.2</u>);
- ensuring all source blocks of tomatoes harvested for certification under this Operational Procedure have undergone pre-harvest treatment in accordance with 6. Requirement (refer 7.3);
- if applicable, ensuring treated and untreated fruit are identified and controlled to avoid mixing of treated and untreated fruit at harvest (refer 7.5.1 and 7.5.2);

PART B (covering grading, packing and certification)

- ensuring the Business has current accreditation for an ICA arrangement under Part B of this Operational Procedure (refer 7.1);
- if applicable, ensuring treated and untreated fruit, and mature green fruit and coloured fruit, are identified and controlled to avoid mixing during sorting, grading and packing (refer 7.8.1, 7.9.1 and 7.9.2).

The **Spray Operator** is responsible for -

- applying pre-harvest sprays according to specified requirements to all source blocks of tomatoes certified under this Operational Procedure (refer 7.3);
- maintaining a tank calibration certificate for each sprayer used for pre-harvest treatment of tomatoes under this Operational Procedure (refer 7.4.1);
- conducting pre-harvest spray application calibration tests on pre-harvest treatment equipment (refer 7.4.1);
- maintaining pre-harvest spray application calibration test records (<u>refer 7.4.1</u>);
- preparing pre-harvest spray mixtures (<u>refer 7.4.4</u>);
- maintaining pre-harvest spray equipment (refer 7.4.4);
- maintaining pre-harvest spray mixture preparation and treatment records (<u>refer</u> 7.4.5).



The Fruit Receival Officer is responsible for -

- ensuring all tomatoes received for grading, packing and certification under Part B are sourced from a Business accredited under Part A of this Operational Procedure (refer 7.7);
- if applicable, ensuring treated and untreated fruit are identified at receival and controlled to avoid mixing of treated and untreated fruit (refer 7.7);
- ensuring tomatoes grown by another Business are accompanied by a *Tomato Pre-Harvest Treatment Declaration* (refer 7.7.1).

The Authorised Dispatcher is responsible for -

- ensuring all packages covered by an Assurance Certificate issued by the Business under this Operational Procedure are identified (<u>refer 7.10.1</u>);
- maintaining copies of all Assurance Certificates issued by the Business under the ICA arrangement (refer 7.11).

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 7.10.2).

6. REQUIREMENT

Tomatoes certified for mature green condition under this Operational Procedure must comply with the following requirements: pre-harvest treated; in mature green condition.

1. Pre-harvest treated means -

- a program of **cover sprays** with **one** of the following chemicals -
 - trichlorfon;
 - chlorpyrifos;
 - methamidophos;
 - parathion-methyl;
- applied -
 - to each block of tomato plants grown on the property for certification of mature green condition,
 - according to the directions on the approved label or an applicable APVMA permit for the control of Queensland fruit fly, other fruit flies, tomato grub, budworm, *Heliothis* spp. or mites on tomatoes;
- at a maximum interval of every fourteen (14) days;
- commencing a minimum of twenty-one (21) days prior to commencing harvest; and
- ending at the completion of harvest of fruit for certification.



2. Mature green means -

 the fruit has no more than a two centimetre diameter of pink to red colour at the stylar end ("breaker" stage) at the time of colour sorting after harvest.

DAFF Queensland 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 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.

Note: the registrations for methamidophos and parathion-methyl have been cancelled with a phase out period. Uses of methamidophos will no longer be permissible after 15 June 2014, and parathion-methyl will no longer be permissible after 26 July 2013.

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 (<u>refer Attachment 1</u>) at least 10 working days prior to the intended date of commencement of operation under the ICA arrangement.

If the Business grows and pre-harvest treats fruit for packing and certification by another Business, then Part A is indicated on the application and a Property Plan attached.



If the Business only packs and certifies fruit grown by other businesses, then Part B is indicated on the application.

If the Business grows, pre-harvest treats, packs and certifies fruit then Part A and Part B are indicated on the application and a Property Plan attached.

7.1.2 Audit Process

Initial Audit

Prior to accrediting a Business, an Inspector carries out an initial audit of the Business to verify the ICA system is in place 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, applicants will be granted provisional accreditation and posted a Certificate of Accreditation (<u>refer 7.1.3 Certificate of Accreditation</u>).

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 accreditation under the ICA arrangement by the Business.

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 (<u>refer</u> 7.1.3 Certificate of Accreditation).

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 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 system records or ICA system documentation.

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



Re-Accreditation

Accredited Businesses are required to re-apply for accreditation each year the business seeks to operate under the ICA arrangement. Businesses 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 reaccreditation for a Business 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 Business will receive a *Certificate of Accreditation for an Interstate Certification Assurance Arrangement* detailing the scope of the arrangement including –

- the facility location;
- Operational Procedure;
- the type of produce and chemical covered;
- · other restrictions on the accreditation; and
- the period of accreditation.

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

A Business 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 procedure, produce type and chemical(s) covered by the Assurance Certificate.



PART A - (Covers the grower activities of pre-harvest treatment)

7.2 Property Plan

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

The property plan shall include the following -

- (a) the location of all the blocks on which tomatoes are grown;
- (b) the Block Reference Code or Number used to identify the block;
- (c) the name (if any) used on-farm to identify the block or group of blocks;
- (d) the number of hectares in the block;
- (e) whether it is intended to certify fruit harvested from the block under the ICA arrangement;
- (f) road access including street name/s;
- (g) internal roadways within the property; and
- (h) the location and identification of buildings on the property (e.g. 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 (<u>refer 7.1.1 Application for Accreditation</u>) if accreditation for Part A is required.

If any changes occur to the property plan information, a new property plan must be submitted to the ICA District Co-ordinator within 10 working days of the change occurring.

A blank Property Plan is included as <u>Attachment 3</u> and should be copied for completion and inclusion with the Business's Application for Accreditation.

7.3 Pre-Harvest Treatment

All tomato fruit certified under this Operational Procedure must have been pre-harvest treated for fruit fly with an approved program of **cover sprays** in accordance with 6. Requirement.

Sprays shall be applied at a maximum interval of every fourteen (14) days at the rate shown on the approved label or an applicable APVMA permit for the control of Queensland fruit fly, other fruit flies, budworm, *Heliothis* spp. or mites on tomato.



Pre-harvest cover sprays may be applied from an aircraft provided –

- (a) the approved label of the chemical concentrate or an applicable APVMA permit provides a per hectare rate of application; and
- (b) there is no statement on the approved label or APVMA permit that the concentrate should not be applied by aircraft or CDA equipment.

Where pre-harvest treatment is carried out by a business other than the accredited business (e.g. application by a sub-contractor such as an aerial distribution contractor), the accredited business shall be responsible for ensuring the requirements of this Operational Procedure are complied with and the necessary records maintained.

Aerial distribution must be carried out by a business with a valid Aerial Distribution Contractor's Licence issued under the Agricultural Chemicals Distribution Control Act 1966.

7.4 Pre-Harvest Cover Spraying

7.4.1 Cover Spray Equipment Calibration

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 or by some other method which accurately measures any volumes used. The person conducting the calibration test shall issue 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 [CAF-03] is shown as Attachment 4.

A tank calibration certificate is not required for hand held equipment such as hand held misters or knapsack sprayers, where the capacity of the spray tank is less than 25 litres.

Volume indicator marks and a tank calibration certificate are not required for aircraft used by a licensed aerial distribution contractor.



Pre-Harvest Spray Application Calibration

Spray application calibration tests must be performed for chemical applications which require the spray mixture to be applied at a specified rate per hectare.

The Spray Operator shall carry out spray application calibration tests on pre-harvest spraying equipment prior to commencement of the season. Water without concentrate may be used in these calibration tests.

Application rate calibration tests may be carried out on boom spray equipment using the following method -

Dynamic Calibration

- 1. Fill the spray tank with water. With pump operating at normal speed, check all nozzles. Collect and record the output of every nozzle for a given time, say one minute, using an accurate measuring cylinder.
- 2. Replace any nozzle with more than 10% variation from the manufacturer's output specification.
- 3. Calculate the effective spraying width of the boom in metres:
 - broadcast spraying, use number of nozzles x nozzle spacing;
 - band spraying, add the band widths;
 - bed spraying, add the bed widths.
- 4. Divide effective spraying width into 1000 for the distance in metres to travel in the calibration run (1000m²).

For example -

effective spray width = 2 metres

length of calibration run = $\frac{1000}{2}$ = 500 metres

- 5. Accurately mark out this distance in the field, using stakes or pegs.
- 6. Refill spray tank with water to the maximum mixture level mark or an incremental volume mark.
- 7. Mark the position of the tractor so that you can return to exactly the same position after the calibration run, ensuring the spray tank has the same level of alignment for accurate measurement of the spray volume used.



- 8. Spray out over the measured distance at the same pressure, same engine RPM and gear and the same ground surface as in your field spraying.
- 9. Return to the exact starting position and carefully measure the volume of water required to refill the spray tank to the same maximum mixture level or incremental volume mark.
- 10. Multiply the number of litres to refill the tank by 10 to give the number of litres your sprayer will apply per hectare.

For example -

volume to refill tank = 37.5 litres

application rate (L/ha) = $37.5 \times 10 = 375 \text{ L/ha}$

Spot-checking (Quick Check Method)

Divide the volume of spray used (in litres) by the area treated (in hectares) in a given spray application.

For example -

volume of spray applied = 300 litres

area treated = 0.8 hectares

application rate (L/ha) = 300 = 375 L/ha

0.8

If the actual application rate varies by more than 10% from the calculated application rate the spray equipment must be re-calibrated.

Pre-Harvest Spray Application Calibration Records

Records of spray equipment calibration tests shall be maintained by the Certification Controller which record the name of the person conducting the test, the date of testing and the results achieved during the tests.

Results of testing shall include the full calculations used to determine the application rate of the spray equipment.

An example Cover Spray Application Calibration Test Record is included as Attachment 5.



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

For each chemical concentrate applied under this Operational Procedure, calculate the quantity of concentrate required for **every litre of mixture** in the spray tank (refer 7.4.1 Cover Spray Equipment Calibration).

The dilution rate of concentrate in the mixture shall be in accordance with the label rate on the concentrate container or an APVMA permit for the control of Queensland fruit fly, other fruit flies, tomato grub, budworm, *Heliothis* spp. or mites on tomato.

The following calculation may be used to determine the quantity of concentrate required for a given volume of mixture -

rate of concentrate (mL/L) X no. of litres of mixture (L) = $\frac{\text{Volume of }}{\text{concentrate}}$ For example -

rate of concentrate = 0.75 mL/L

no. of litres mixture = 500 L

75 mL X 500 L = 375 mL (0.375 L) concentrate

Calculate the volume of concentrate required for the **maximum mixture level** and each of the **incremental volumes** marked on the spray tank and record these on the Spray Mixture Preparation Chart for each chemical concentrate used (refer 7.4.3 Cover Spray Mixture Preparation Chart).

7.4.3 Cover Spray Mixture Preparation Chart

The Spray Operator shall maintain a Cover Spray Mixture Preparation Chart (<u>refer Attachment 6</u> and <u>Attachment 7</u>) or similar record in close proximity to the spray mixture preparation area for each spray unit and chemical concentrate combination used by the Business for pre-harvest treatment under this Operational Procedure.

The chart shall provide the following details -

- (a) identification of the spray equipment (or aircraft) 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 (or for aircraft, the airspeed);
- (c) the trade name of the concentrate to which the chart applies;
- (d) the name and concentration of the active ingredient in the concentrate;
- (e) the quantity of concentrate required per litre of spray mixture in mL per litre (refer 7.4.2 Calculating the Quantity of Concentrate to Add to the Spray Mixture);



- (f) the total volume in litres of the spray tank when filled to the maximum mixture level mark (refer 7.4.1 Cover Spray Equipment Calibration);
- (g) the volume in millilitres (mL) of concentrate required in the mixture when filled to the maximum mixture level mark;
- (h) the volume in millilitres (mL) of a concentrate required in the mixture for any known incremental volumes used;
- (i) the printed name and signature of the person responsible for the chart's preparation and the date of preparation.

A business that uses a variety of chemical concentrates (e.g. chlorpyrifos and trichlorfon) shall prepare a Cover Spray Mixture Preparation Chart for each concentrate used.

Where pre-harvest spraying is undertaken by another business such as a licensed aerial distribution contractor, the business shall prepare and maintain a Spray Mixture Preparation Chart in a suitable format for each aircraft and chemical concentrate used.

7.4.4 Cover Spray Treatment

Cover sprays shall be applied from a minimum of **twenty-one (21) days** prior to commencing harvest until the completion of harvest of all certified fruit on the property.

Cover sprays shall be applied at a maximum interval of every **fourteen (14) days** to all **tomato plants** growing on the property for certification under this Operational Procedure.

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

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

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

Cover Spray Mixture Preparation

The Spray Operator shall prepare the chemical mixture within 24 hours of application, or more frequently as required.

Making Up the Cover Spray Mixture

Using a clean graduated measuring vessel, measure the amount of concentrate required for the required volume of **spray mixture** (<u>refer 7.4.2 Calculating the Quantity of Concentrate to Add to the Spray Mixture</u>).

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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.

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.

7.4.5 Cover Spray Mixture Preparation and Treatment Records

The Spray Operator must record details of all cover spray mixture preparation and treatment using a Cover Spray Mixture Preparation and Treatment Record (refer Attachment 8) 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;
- the trade name of the concentrate used:
- volume of concentrate used (millilitres) in the spray mixture;
- the total volume (litres) of the made up spray mixture;
- any other pesticides or additives added to the spray mixture;
- the date of application;
- the spray equipment used;
- the block/s treated;
- the number of hectares sprayed;
- the identification of the Spray Operator.

Only cover sprays applied for the purpose of complying with the requirements of this Operational Procedure and the certification of pre-harvest treatment for fruit fly under the ICA arrangement are required to be recorded.

Applications of chemicals that are additional to the requirements of this Operational Procedure or are not the subject of certification for mature green condition are not required to be recorded.

7.5 Harvesting

The Certification Controller shall oversee the harvest process to ensure only tomatoes conforming with the pre-harvest treatment requirements specified in <u>6. Requirement</u> are harvested for colour sorting and certification under this Operational Procedure.

7.5.1 Identification of Treated and Untreated Fruit in the Field

A Business that maintains treated and untreated blocks of tomatoes shall identify the treatment status of field blocks to prevent mixing of treated and untreated fruit.

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.



7.5.2 Identification of Treated and Untreated Fruit at Harvest

A Business that maintains treated and untreated blocks of tomatoes 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 fruit include -

- (a) using picking bins/crates which differ in colour for treated and untreated fruit;
- (b) using picking bins/crates which differ significantly in appearance for treated and untreated fruit;
- (c) marking bins with the source block or treatment status of the fruit.

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

7.6 Grower Declaration

A Business that grows and pre-harvest treats tomatoes that are to be packed for certification by another Business must be accredited for an ICA arrangement under Part A of this Operational Procedure.

The accredited Business shall provide the packing Business a *Grower Declaration* (refer Attachment 9 and Attachment 10) for each block supplied for certification under this Operational Procedure each day, or at the time of changing from one block to another block, whichever is the earlier.

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

The declaration must identify -

- (a) the name and Interstate Produce (IP) Number of the accredited Business that grew and pre-harvest treated the fruit;
- (b) the identity of the block in which the fruit was grown;
- (c) the number and type of containers supplied from that block on that day;
- (d) details of the last pre-harvest cover spray treatment applied to the block;
- (e) the date or dates of the last pre-harvest treatment of the block;
- (f) the name and signature of the Authorised Signatory.



PART B - (Covers the packer activities of fruit receival, sorting, grading and packing, and certification)

7.7 Fruit Receival

The Fruit Receival Officer shall ensure that tomatoes received for certification under this Operational Procedure -

- (a) are supplied by a grower accredited under Part A; and
- (b) where the Business receives treated and untreated fruit the treatment status of the fruit is clearly identified at receival at the packing facility to prevent mixing of treated and untreated fruit; or

Any fruit received that is not clearly identified as treated shall be regarded as untreated for the purpose of this Operational Procedure.

(c) where the Business **only receives fruit** that has been **pre-harvest treated** in accordance with Part A -

no specific identification of the treatment status of the fruit is required.

7.7.1 Receival of Tomatoes Grown by Another Business

A Business that packs tomatoes grown by another Business shall ensure -

- (a) each delivery of tomatoes supplied by another Business for certification under this Operational Procedure is accompanied by a *Grower Declaration* (refer Attachment 9);
- (b) fruit supplied for certification has undergone pre-harvest treatment in accordance with 6. Requirement of this Operational Procedure;
- (c) 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.

7.8 Colour Sorting

All tomatoes that are graded and packed for certification under this Operational Procedure shall be colour sorted after harvest to ensure only fruit that is **mature** green or less mature at the time of sorting are packed for certification.

Mature green means the fruit has no more than a **two centimetre area of pink to red colouration at the stylar end** (commonly known as the "breaker" stage) at the time of colour sorting.



Any nonconforming fruit (i.e. fruit that is more mature than mature green) shall not be packed for certification under this Operational Procedure.

Fruit that has been colour sorted may be ripened in bulk or as packed product after sorting but must be identified and controlled until packed (<u>refer 7.8.1</u> <u>Identification of Conforming and Nonconforming Fruit After Colour Sorting</u>).

7.8.1 Identification of Conforming and Nonconforming Fruit After Colour Sorting

A Business which ripens mature green fruit prior to packing for market shall implement systems to identify the colour status of the fruit after colour sorting to prevent mixing of conforming fruit (i.e. pre-harvest treated and mature green at colour sorting) and nonconforming fruit.

Examples of acceptable methods of identifying conforming and nonconforming fruit after colour sorting include -

- (a) using containers (e.g. bulk bins) which differ significantly in appearance;
- (b) marking each container of mature green fruit in a manner that clearly identifies the fruit as mature green at the time of colour sorting.

Other methods may be used provided they clearly identify mature green fruit and coloured fruit.

7.9 Grading and Packing

The Certification Controller shall oversee the grading and packing process to ensure only fruit that has been pre-harvest treated and is in a mature green condition is packed for certification under this Operational Procedure.

7.9.1 Identification of Conforming and Nonconforming Fruit During Grading and Packing

A Business which grades and packs conforming fruit and nonconforming fruit shall implement systems to identify the status of fruit during grading and packing to prevent mixing of conforming and nonconforming fruit.

Examples of acceptable methods of identifying conforming and nonconforming fruit during grading and packing include -

- (a) packing conforming fruit at different times to nonconforming fruit and clearing the lines before changing over; or
- (b) packing conforming and nonconforming produce on different packing lines.

Other methods may be used provided they clearly identify and segregate conforming and nonconforming fruit.



7.9.2 Identification of Conforming and Nonconforming Fruit After Packing

A Business which grades and packs conforming and nonconforming fruit shall implement systems to identify the status of the fruit after packing and before they leave the packing system to prevent mixing of conforming and nonconforming fruit.

Examples of acceptable methods of identifying conforming and nonconforming fruit after packing include -

- (a) using packaging which differs significantly in appearance;
- (b) marking each package of treated fruit in a manner that clearly identifies the fruit as treated in accordance with this Operational Procedure.

Other methods may be used provided they clearly identify conforming and nonconforming fruit.

7.10 Dispatch

7.10.1 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, with -

- the Interstate Produce (IP) number of the Business that operates the approved facility in which the produce was sorted and packed;
- the words "MEETS ICA-27":
- the date (or date code) on which the fruit was packed; and
- the Interstate Produce (IP) number or other identifier of the grower of the fruit, 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 Grower Identifier Record that matches the grower identifiers used with the grower's name or IP number so the grower can be easily identified if required.

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

7.10.2 Assurance Certificate

The Authorised Dispatcher shall ensure an Assurance Certificate is completed and signed by an Authorised Signatory of the Business prior to consignment to a market requiring certification of mature green condition of tomatoes for fruit fly.

Assurance Certificates shall be in the form of a *Plant Health Assurance Certificate* [FDU 384].



Assurance Certificates shall include -

- (a) in the "Accredited Business that Prepared the Produce" section -
 - the name and address of the Accredited Business that **packed** the fruit;
- (b) in the "Grower or Packer" section -
 - the name and address of the Accredited Business that was responsible for pre-harvest treatment of the fruit. Where the consignment contains fruit pre-harvest treated by a number of growers the word "VARIOUS" shall be used:
- (c) in the "IP No. of Acc. Business" section -
 - the IP No. of the Accredited Business that packed the fruit;
- (d) in the "Treatment" section -
 - 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 "Mature Green";
 - in the Chemical (Active Ingredient) column, the concentration and name of the active ingredient of the chemical used in the last pre-harvest spray on the source block(s) (eg ""500 g/L trichlorfon");
 - in the Concentration column, the mixing rate of the concentrate in the spray mixture (eg"at 1.25 mL/L"); and
 - in the Duration and Temperature column, the words "cover spray".

A completed example is shown as Attachment 2.

Individual Assurance Certificates shall be issued to cover each consignment (i.e. 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* [ICA-WI-02].

7.10.3 Assurance Certificate Distribution

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

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



7.11 ICA System Records

The Business shall maintain the following records -

PART A

- (a) Property Plan for each property (<u>refer 7.2</u>);
- (b) Chemical Mixture Tank Calibration Certificate (refer 7.4.1);
- (c) If applicable, a Cover Spray Application Calibration Test Record (<u>refer</u> 7.4.1);
- (d) Cover Spray Mixture Preparation Chart (<u>refer 7.4.3</u>);
- (e) Cover Spray Mixture Preparation and Treatment Record (refer 7.4.5);

PART B

- (a) a copy of each Grower Declaration received (refer 7.7.1);
- (b) if applicable, a Grower Identifier Record (refer 7.10.1);
- (c) a copy of each *Plant Health Assurance Certificate* [FDU 384] issued by the Business (refer 7.10.3).

ICA system records shall 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.

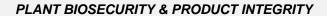
ICA system records shall be made available on request by an Inspector.

7.12 ICA System Documentation

The Business shall maintain the following documentation -

- (a) a copy of the Business's current Application for Accreditation (<u>refer</u> Attachment 1);
- (b) a current copy of this Operational Procedure;
- (c) a current Certificate of Accreditation for an 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 shall be made available on request by an Inspector.





8. ATTACHMENTS

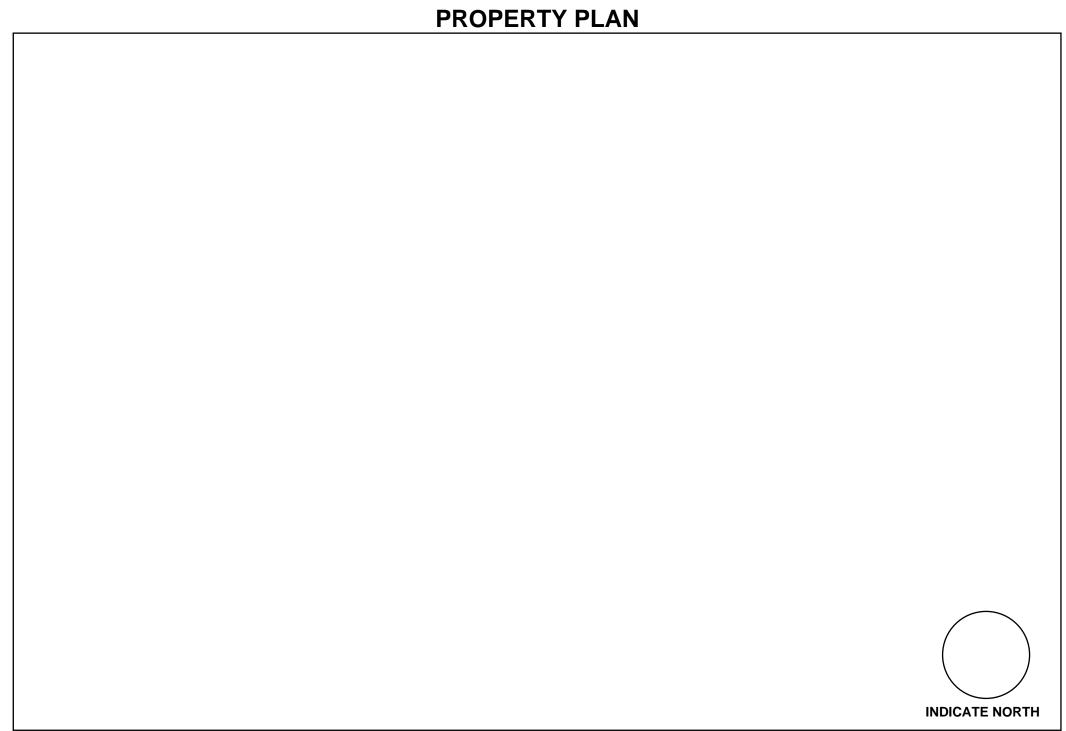
Attachment 1	Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) Arrangement	CAF-47 (FRONT PAGE ONLY)
Attachment 2	Plant Health Assurance Certificate	FDU 384 (COMPLETED EXAMPLE)
Attachment 3	Property Plan	(BLANK)
Attachment 4	Chemical Mixture Tank Calibration Certificate	CAF 03 (BLANK)
Attachment 5	Cover Spray Application Calibration Test Record	(BLANK)
Attachment 6	Cover Spray Mixture Preparation Chart	(BLANK)
Attachment 7	Cover Spray Mixture Preparation Chart	(COMPLETED EXAMPLE)
Attachment 8	Cover Spray Mixture Preparation and Treatment Record	(BLANK)
Attachment 9	Grower Declaration	(BLANK)
Attachment 10	Grower Declaration	(COMPLETED EXAMPLE)



Plant Health Assurance Certificate

Original (yellow) - Consignment copy Duplicate (white) - Business copy

ORIGINAL			
Consignment Details (Please print) Consignor	Consign	Certificate Number	9999999
Name Joe's Tomatoes Pty Ltd	Name	F&V Wholesalers F	P/L
Address Orchard Road		Melbourne Markets	
Bundaberg Q 4670	Address	Footscray VIC 301	
Reconsigned To (Splitting consignments or reconsigning whole	consignments) Method	of Transport (Provide details when	e known)
97		d Truck/Trailer Registration	\ \
Name	Rail	Consignment	
Address	Air	Airline/Flight no.	
	☐ Sea	Vessel Naprie & Voyage no.	
Certification Details (Please print) Accredited Business that Prepared the Produce	Grower	or Packer	
Name Central Packing Co. P/L	Name	Joe's Tomatoes	Pty Ltd
Address Childers Road	Address	orchard Road	
Bundaberg QLD 4670		Bundaberg ALD 4	670
IP No. of Acc. Business Brand Name or Identifying	Marks (as marked on pa	ackages) Date C	ode (as marked on packages
Q 9999 Joe's Tomatoe			132
Facility No. Procedure Code Expiry Qa	ate Facility N	Q. Procedure Code	Expiry Date
	0/11	1	
OI ICA-ZI			
Number of Packages Type of Packages (eg. trays,cartigns)	Type of Produce	Authorisation for S	Split Consignment
	'onatoes		
		Duratio	n and Temperature
Date Treatment Changeal	7 / 2/	Jancenti audin	10 sec. then wet for 60 sec
Dipping Fenthion		0ppm	10 sec. then wet for 60 sec
Flood Spraying Diriveltiposi		Oppm 10 seconds then w	et for 60 seconds
		2.5ppm 10 seconds then w	et for 60 seconds
/ / Non-recirculated Spray Fentision		2.5ppm 10 seconds then w	et for 60 seconds
Furnigation Methyl Box		g/m³ Two hours @	°C
	Hot Air Hot		°C
1 1 1 1 1 1 1 1	richlorfon at 1.25		
Bananas in a hard green condition wit	h unbroken skin	70000 A	
	10 (1000) 100000000000000000000000000000		
Additional Certification			
	-		
Declaration			
I, an Authorised Signatory of the accredited business the	at prepared the plants	or plant produce described abo	ve, hereby declare that th
plants or plant produce have been prepared in the bus	iness's approved facili	ities in accordance with the acc	reditation(s) granted to the
business under the Plant Protection Act 1989 and		nown above are true and co	
Authorised Signatory's Name (Please print)	Signature		Date
Arthur John Signatory	A) Signatory		23/ 12 / 10
Form FDU 384 07/06	© State of Queensland 2006		Forms Management Un



PROPERTY PLAN DETAILS

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

- 1. the location of the blocks on which tomatoes 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	Area of Block (Ha)	Fruit to be Certified?
			YES/NO

ARRANGEMENT DETAILS
Applicant's Name (as shown on the application form)
Others Address of Facility (c.)
Street Address of Facility (as shown on the application form)
Postcode
SCOPE OF ARRANGEMENT
Application is made for accreditation under Part A of ICA-27 Mature Green
Condition of Tomatoes for the following -
Chemical/s to be covered (☑ one or more boxes as applicable) —
Chlamanifes Triphlagen
Chlorpyrifos Trichlorfon
Methamidophos Parathion-methyl
I(full printed name) the
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
Interstate Certification Assurance (ICA) Arrangement covering the arrangement;
(c) application must be made to amend any of the current details in the
Application for Accreditation of a Business for an Interstate Certification
Assurance Arrangement [CAF-47] or this Property Plan.
Signature / / / Date

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:			
	CALIBRATI	ON RESULTS	
Maximum Mixture Level Vo	lume (litres)		
Incremental Volumes (litres (as marked on the spray tak			
	CERTIF	TICATION	
	flow meter. Volume	bed above has been calibrated indicator marks have been cleank to that level.	
Printed Name		Signature	/ / Date

CAF 03 (29/09/97) ATTACHMENT 4

COVER SPRAY APPLICATION CALIBRATION TEST RECORD

Date of Test	No. of Nozzles	Output for Individual Nozzles (Litres /minute/nozzle)	Effective Spray Width (metres)	Calibration Run (metres)	Litres Used in Run	Application Rate (L/ha)	Testing Officer's Name
/ /							
/ /							
/ /							
/ /							
/ /							
/ /							
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/ /							

NOTES

- 1. Pre-Harvest Spray Application Calibration Tests must be carried out prior to commencement of treatment each year.
- 2. Check the output from each nozzle to ensure uniformity. Replace any having > 10% variation.
- 3. Measure effective spray width. For example, sum of width of beds covered by the boom.
- **4.** Work out the distance for a calibration run covering 100 m² (100 ÷ effective spray width determined in step #3 = calibration run distance in metres).
- **5.** With a known volume of water, spray the test area at normal operating speed. Measure the volume of water required to refill the tank to the same level as when starting the test.
- **6.** Multiply the amount from step #5 above by 100 to get the number of litres per hectare that your sprayer will apply.

COVER SPRAY MIXTURE PREPARATION CHART

Spray Unit	
Tractor (if applicable)	Gear
Engine RPM/Throttle Setting	
Concentrate (Trade Name)	
Active Ingredient	Conc /
Application Rate	litres/hectare
Concentrate Mixing Rate	mL/litre of mixture
Full Tan	ık
Full Spray Tank Volume =	Litres
Volume of Concentrate =	millilitres
Part Fil	ll .
mL Concentrate /	Litres Mixture
mL Concentrate /	Litres Mixture
mL Concentrate /	Litres Mixture
Prepared by: Printed Name	/ / Signature Date

COVER SPRAY MIXTURE PREPARATION CHART

Spray Unit <u>Hardi Mini-Variant 600</u>
Tractor (if applicable) Ford 5000 Gear 2 (high)
Engine RPM/Throttle Setting 2500 rpm
Concentrate (Trade Name)Dipterex
Active Ingredient <u>Trichlorfon</u> Conc. <u>500</u> g/L
Application Ratelitres/hectare
Concentrate Mixing Rate 2.5/1.25 mL/L of mixture
Full Tank
Full Spray Tank Volume = 600 Litres
Volume of Concentrate = <u>1500/750</u> millilitres
Part Fill
200 mL Concentrate / 500/250 Litres Mixture

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 Hectares Treated	Spray Operator's Name	Signature

GROWER DECLARATION

A Grower Declaration must be provided to the packer to cover tomatoes delivered for certification under the ICA Operational Procedure ICA-27 from each source block each day, or at the time of changing from one block to another block, whichever is the earlier. 1 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 tomatoes identified by -(package identification) delivered to-(Business name) Interstate Produce (IP) No. **Q** on (date) for sorting, packing, and certification under the ICA Operational Procedure Mature Green Condition of Tomatoes [ICA-27], hereby declare-1. The last pre-harvest treatment of the source block was a cover spray with a mixture containing a chemical concentrate with a concentration of (☑ as appropriate) – **∟**mg/L **J**g/kg **trichlorfon ∟**mL/L □mg/L ☐ chlorpyrifos ☐mL/L □g/kg □g/kg ☐ methamidophos □mL/L ☐mg/L □mL/L □g/kg ☐parathion-methyl **∟**mg/L diluted at the rate of _____ concentrate per litre of spray mixture. 2. The identity of the source block and date of the last pre-harvest treatment are -**Date of Last Pre-harvest Treatment** Reference Code or Number of Block 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.

GROWER DECLARATION

A Grower Declaration must be provided to the packer to cover tomatoes delivered for certification under the ICA Operational Procedure ICA-27 from each source block each day, or at the time of changing from one block to another block, whichever is the earlier.

an Authorised Signatory of - Joe's Tomatoes Pty Ltd (Business name) Interstate Produce (IP) No. Q 9 0 0 0 hereby declare that the- 13 (no. of packages) Bulk Bins (type of packages - bins, crates, trays)	
Interstate Produce (IP) No. Q 9 0 0 0	
hereby declare that the-	
(10. 0) packages Dulk Dillis (type of packages birts, crates, trays	
of tomatoes	
identified by -	
Joe's Tomatoes Pty Ltd // package identification	
delivered to-	
Central Packing Co. P/L Business name	
Interstate Produce (IP) No. Q 9 9 9 on 23 / 12 / 10 (date	
for sorting, packing, and certification under the ICA Operational Procedure Mature Greek Condition of Tomatoes [ICA-27], hereby declare-	
1. The last pre-harvest treatment of the source block was a cover spray with a mixture containing a chemical concentrate with a concentration of (☑ as appropriate) –	
Itrichlorfon 500 □g/kg □g/kg	
□chlerpyrifos □mL/L □g/L □g/kg	
☐methanidophos ☐mL/L ☐g/L ☐g/kg	
parathion-methyl	
diluted at the rate of 1.25mL concentrate per litre of spray mixture.	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
2. The identity of the source block and date of the last pre-harvest treatment are -	
Reference Code of Number of Block Date of Last Pre-harvest Treatment	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
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.	
J Grower	
23 /12 / 10	