Department of Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

Interstate Certification Assurance

Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid

Version 1.0 – June 2021

ICA-65

Revision Register

Issue Number	Date of Issue	Amendments
1.0	02/06/2021	Initial issue

Uncontrolled copies of this document are not subject to amendment or revision.

Holders of uncontrolled copies should contact the Quality Assurance Officer to obtain a current version of this document

Important disclaimer

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

Contact

Department of Primary Industries and Regional Development

Quarantine WA
Locked Bag 69
Welshpool DC WA 6986

Quality Assurance Office
t +61 (0)8 9334 1800
e qwa.qualityassurance@dpird.wa.gov.au
w dpird.wa.gov.au

Contents

1 PURPOSE

The purpose of this procedure is to describe –

(a) the principles of operation, design features and standards required for fumigation chambers and facilities; and
(b) the inspection and secure packing; and
(c) the responsibilities and actions of personnel;

that apply to the certification of ethyl formate fumigation, inspection and packing of cut flowers under an Interstate Certification Assurance (ICA) arrangement.

2 SCOPE

This procedure covers all certification of ethyl formate fumigation, inspection and secure packing of cut flowers by a Business operating under an Interstate Certification Assurance arrangement in Western Australia.

This procedure covers the requirements for tomato-potato psyllid and is applicable to-

- Businesses operating inside areas where the requirements specified in 6. Requirements are a specified condition of entry of an interstate quarantine authority.
- **Cut flowers from the Convolvulaceae and Solanaceae plant families cannot be certified under this arrangement.**

This procedure does not abrogate or override the responsibility of licensed fumigators to comply with the legislative requirements as prescribed in the *Health (Pesticides) Regulations 1956* and the *Occupational Safety and Health Act 1984*.

Certification of ethyl formate fumigation under this Operational Procedure may not be an accepted quarantine entry condition for all produce to all intrastate or interstate markets.

Some intrastate or interstate markets may require additional quarantine certification as a condition of entry.

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

Information on intrastate and interstate quarantine requirements can be obtained from Quarantine WA.

3 REFERENCES

WI-QA015	*Plant Health Assurance Certificate Completion*
	Health (Pesticides) Regulations 1956
	Occupational Safety and Health Act 1984.
WI-ICA65-01	*Inspection of Cut Flowers for tomato potato psyllid*

4 DEFINITIONS

Accredit	means to accredit persons to issue Assurance Certificates under the *Biosecurity and Agriculture Management Act 2007.*
Application for Accreditation	means an Application for Accreditation of a Business for an Interstate Certification Assurance (ICA) arrangement.

APVMA	Australian Pesticides and Veterinary Medicines Authority.
Assurance Certificate	means a Plant Health Assurance Certificate.
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.
Business	means the legal entity responsible for the operation of the fumigation facility and ICA arrangement detailed in the Business's Application for Accreditation.
Carrier cut flowers	means all cut flower and foliage from the Plantae kingdom excluding the Convolvulaceae and Solanaceae plant families of plants.
Certified/certification	means covered by a valid Plant Health Interstate Assurance Certificate.
Chamber	means a permanent or tarped enclosure made from gas-proof material specifically designed for the purpose of fumigation.
Exposure period	means the time elapsed after equilibration.
Facility	means the location of the fumigation chamber or chambers covered by the Interstate Certification Assurance arrangement.
Fumigant	means any product containing 166.7 g/kg ethyl formate ($C_3H_6O_2$) and 833.3g/kg carbon dioxide (CO_2).
Fumigation	means the treatment of cut flowers with a fumigant.
Fumigator / Licenced Fumigator	means a person licensed to undertake fumigation pursuant to the *Health (Pesticides) Regulations 1956*.
ICA	means Interstate Certification Assurance.
Inspector	means an inspector appointed under the *Biosecurity and Agriculture Management Act 2007.*
Interstate Certification Assurance	means a system of Interstate Certification Assurance developed to meet the requirements of State and Territory governments for the plant health certification of cut flowers for Interstate and Intrastate quarantine purposes.
Load	means the total number of packages covered by one fumigation treatment.
Plant Health Assurance Certificate	means a certificate issued by an Authorised Signatory under an ICA arrangement stating that the plant or other thing described on the certificate meets a specified treatment, condition, pest or area freedom or other requirement
Tomato potato psyllid (TPP)	means all adult *Bactericera cockerelli.*

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. Staff responsible for these process control activities are called "Nominated Persons"

The **Certification Controller** is responsible for -

- representing the Business during audits and other matters relevant to ICA accreditation;
- ensuring the Business has current accreditation for an ICA arrangement under this Operational Procedure;
- 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 that all fumigation of produce certified under the Business's ICA arrangement is carried out in accordance with this Operational Procedure.
- ensuring all fumigations are performed by a licensed fumigator;
- ensuring the fumigation facility has been approved by the relevant Local Authorities (as applicable);
- ensuring a Fumigation Dosage Chart is maintained for each fumigation chamber operated at the facility;
- ensuring each fumigation chamber operated at the facility is covered by a valid Gas Retention Test Certificate issued by a licensed fumigator within the last six months; or first fumigation on each tarp used per outbreak;
- ensuring thermometers used for measuring cut flower temperatures are identified and calibrated at least every 6 months;
- if applicable, ensuring weighing scales are calibrated at least every 6 months.

The **Fumigator** is responsible for –

- maintaining the fumigation chamber and fumigation equipment;
- determining the chamber volume;
- maintaining thermometer identification and calibration records;
- determining the minimum cut flower temperature for each fumigation;
- determining the rate and dosage of fumigant required for each fumigation;
- if applicable, maintaining weighing scale calibration records.
- maintaining fumigation treatment records.

The **Authorised Dispatcher** is responsible for –

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

The **Authorised Signatories** are responsible for –

- ensuring prior to signing and issuing an Assurance Certificate, that cut flowers covered by the certificate has been prepared in accordance with the Business's ICA arrangement, and the details on the certificate are true and correct in every particular.

6 REQUIREMENT

1. All carrier cut flowers in the consignment must be treated with a product containing 166.7 g/kg ethyl formate ($C_3H_6O_2$) and 833.3g/kg carbon dioxide (CO_2) in accordance with the label or APVMA minor use permit at a minimum of;
   - 25g/m^3 at 15^{o}C or above over a 1 hour exposure period;

And

2. All treated cut flowers must be securely stored post treatment and packed immediately post inspection by one or more of the following methods to prevent contamination with tomato-potato psyllid:
   (a) unvented packages;
   (b) vented packages with the vents secured with mesh which has a maximum aperture of 0.5mm; or
   (c) wrapping or bagging in sealed plastic sleeves or bags; or
   (d) fully enclosed consignments under tarpaulins, hessian, shade cloth, mesh or other covering which has a maximum aperture of 0.5mm; or
   (e) consignment shrink-wrapped and sealed as a palletised unit; or
   (f) fully enclosed or screened buildings, cold-rooms, vehicles (including tautliners in good condition); or
   (g) other facilities free from gaps or other entry points greater than 0.5mm.

And

3. For NSW, inspected at the rate of the greater of 2% or 600 units of the consignment and found free of tomato-potato psyllids

A licensed fumigator must carry out all ethyl formate fumigations.

The Department of Primary Industries and Regional Development 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 conform to specified requirements.

Some cut flowers may be damaged by chemical treatments. Businesses applying chemical treatments should be checked 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 product's 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.

7 PROCEDURE

7.1 Accreditation

7.1.1 Application for Accreditation

A Business seeking accreditation for an ICA arrangement under this Operational Procedure must make application for accreditation at least 10 working days prior to the intended date of commencement of certification of produce.

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 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, applicants will be granted provisional accreditation and posted a Certificate of Accreditation (refer 7.1.3 Certificate of Accreditation).

Compliance Audits

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

A compliance audit is conducted within four weeks of the initial audit and accreditation of 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 an new Certificate of Accreditation is issued (refer 7.1.3 Certificate of Accreditation).

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

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

Unscheduled compliance audits may be conducted at any time to investigate reported or suspected non-conformance.

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 being accredited to certify produce under the ICA arrangement.

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

7.1.3 Certificate of Accreditation

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

The Business must maintain a current Certificate of Accreditation 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 covered by the Interstate Assurance Certificate.

7.2 Fumigation Facility Requirements

Each chamber operated at the facility for ethyl formate fumigation of cut flowers under this Operational Procedure must –

(a) be a permanently constructed fumigation chamber or a semi-permanent fumigation chamber made from gas-proof material designed specifically for the purpose of fumigation; and

(a) be able to maintain a temperature of 15°C or above during the exposure period; and

(a) be covered by a current and valid Chamber Test Certificate issued by a licensed fumigator within the last six months (refer 7.3 Chamber Testing).

7.2.1 Fumigation Dosage Chart

The Business must maintain a Fumigation Dosage Chart (refer Fumigation Dosage chart – Attachment 2) or similar record in close proximity to the chamber for each chamber used by the Business for fumigation under this Operational Procedure.

The chart must provide the following details –

(a) the Business's name and Interstate Produce (IP) number;

(b) the identification of the chamber to which the chart applies;

(c) the total chamber volume in cubic metres (refer 7.4 Calculation of Fumigation Chamber Volume);

(d) the quantity of fumigant in grams (g) required to be added to the chamber to achieve the correct concentration (refer 7.6.66 Calculation of Fumigant Dosage).

(e) The printed name and signature of the licensed fumigator responsible for the preparation of the chart and the date of preparation.

7.2.2 Fumigation Chamber and Fumigation Equipment Maintenance

The Fumigator must carry out regular checks of the fumigation chamber and any fumigation equipment such as gas monitoring devices and gas sampling tubes to ensure they continue to operate effectively and remain free from malfunction, damage or excessive wear.

7.3 Chamber Testing

All chambers used for ethyl formate fumigation under an Interstate Certification Assurance arrangement must be covered by a valid Chamber Test Certificate issued by a licensed fumigator.

Chamber testing must be performed by using either Gas Retention Testing or Pressure Decay Testing.

7.3.1 Gas Retention Testing

Operational chambers must be tested at least every six months, or as required by an Inspector. Chamber Test Certificates must be issued following testing in accordance with the following –

(a) After preparing the chamber in accordance with the requirements of this Operational procedure, gas concentrations must be measured and recorded 20 minutes after the start of the fumigation (the equilibration period) and at one hour after the equilibration period of the fumigation prior to venting.

(b) All monitoring points must be measured to determine that the required Concentration has been attained. All monitoring points must equilibrate within +/- 5% of each other at the twenty minute monitoring where more than one monitoring point is in use.

(c) If monitoring points do not measure within +/- 5% of each other at twenty minutes after commencement of monitoring, the fumigation will be deemed to fail and the

Fumigator must vent off all fumigant, ensure gas freedom and then inspect the chamber for a possible cause.

(d) A minimum of 60% of the original fumigant concentration is required to be retained at the final monitoring (after one hour exposure period). If the 60% level is not reached then the fumigation will be deemed to have failed and the Fumigator must vent the chamber to ensure gas freedom and investigate the cause.

(e) At least one successful fumigation gas retention test for a chamber must be undertaken before a Chamber Test Certificate may be issued for that chamber. The licenced fumigator that is conducting the test may require additional fumigation retention testing if this is considered necessary.

7.3.2 Pressure Decay Testing

Operational chambers must be tested at least every six months, or as required by an Inspector. Chamber Test certificates must be issued following testing by a licenced fumigator in accordance with the following –

(a) Pressure inside the closed container must be raised to 250 Pa using high-pressure compressed air supplied from a portable compressor or gas cylinder. As the pressure inside the container reaches 250 Pa, turn off the compressed air supply and:

(b) Allow the pressure to decay to 200 Pa; and

(c) Start measuring the time (in seconds) when it reaches 200 Pa; and

(d) Stop measuring the time (in seconds) when it reaches 100 Pa; and

(e) Record the pressure decay time (in seconds); and

(f) A minimum of 10 seconds must elapse for the chamber to pass the pressure decay test; and

(g) At least one successful Pressure Decay test for each chamber must be undertaken before a Chamber Test Certificate may be issued for that chamber. The licenced fumigator that is conducting the test may require additional pressure decay testing if this is considered necessary.

7.3.3 Chamber Test Certificate

The Chamber Test Certificate (refer attachment 4) must record –

- the name and Interstate Produce (IP) number of the Business that operates the fumigation chamber;
- the facility address;
- the identification of the chamber to which the certificate applies;
- the date of the test;
- the measurements of the chamber;
- the chamber volume;
- the volume of any external ducting;
- the total chamber volume in cubic metres;
- for testing against Gas Retention Test
    - the fumigation rate (g/m^3);
    - the time of vaporisation;
    - the quantity of ethyl formate in grams (g) added to the chamber to achieve the concentration at the time of the test(s);
    - the readings for each monitoring point for each test at 20 minutes after vaporisation is complete;

- the readings for each monitoring point for each test at the end of the test (at one hour after vaporisation is complete);
- the time venting commenced;
- the percentage of gas retained for each test at the end of the test;

- For testing against Pressure Decay
  - The time in seconds it takes for the pressure to decay from 200 Pa to 100 Pa.
- the licence number, printed name and signature of the licensed fumigator who performed the test (s).

7.4 Calculation of Fumigation Chamber Volume

The volume of the space to be fumigated is equal the volume of the total space enclosed for fumigation. The volume of the space must be calculated using a measuring tape or other suitable device to determine length, width and height and is to be expressed in cubic metres (m^3).

Where an enclosed chamber is used for fumigation, the volume of any gas circulation equipment external to the chamber, which is not sealed from the chamber during fumigation, must also be included in calculation of the chamber volume.

Where modifications are made to the fumigation chamber, the chamber volume must be re-calculated and a new fumigation dosage chart must be completed as per section 7.2.1 Fumigation Dosage Chart.

The following calculation may be used to determine the volume of the chamber in cubic metres (m^3) –

(chamber height (m) x chamber length (m) x chamber width) + external ducting volume (m^3) = total chamber volume (m^3)

For example –

Chamber Height	=	2.5 metres
Chamber Length	=	3 metres
Chamber Width	=	3 metres
Chamber Volume	=	2.5 x 3 x 3 = 22.5 m^3
External Ducting Volume	=	0.5 m^3 (if applicable)
Total Chamber Volume	=	22.5m^3 + 0.5m^3 = 23.0m^3

Details of chamber volume, and fumigant dosage rates must be prominently displayed in the vicinity of the chamber (refer 7.2.1 Fumigation Dosage Chart).

7.5 Calculation of Chamber Temperature

Immediately prior to the commencement of fumigation, the Fumigator must ensure that ambient temperature of the chamber is 15°C or above.

7.5.1 Equipment

Thermometers used for monitoring the chamber temperature must be digital type and must be uniquely identified for calibration purposes.

Thermometers used for monitoring the chamber temperature must be capable of reading in graduations of 0.1 ºC or 0.2 ºC.

7.5.2 Calibration of Thermometers

Thermometers used for monitoring chamber temperatures must be calibrated at intervals of no greater than six months and must be accurate to within +/- 0.5°C.

Calibration may be undertaken using the ice-point check method, by checking against a calibrated reference platinum resistance thermometer, or by a recognised testing authority.

The business must maintain results of thermometer calibration checks.

Thermometer calibration records must record the following information-

- the date of calibration;
- the identification of the thermometer calibrated;
- the temperature reading (s) and the correction if any to the thermometer reading to an accuracy of at least +/- 0.1 ºC;
- the name of the officer or recognised testing authority responsible for conducting the calibration checks.

Ice - Point Check Calibration

Thermometers should be washed with distilled or de-ionised water and stored for several hours at 0 ºC before calibration check.

A slurry mixture of distilled or de-ionised water and shaved ice made from distilled water is prepared in an insulated vessel. Drain any excess free water and then fully immerse each thermometer to above the mercury column. Lift the thermometer until the mercury is just visible and read the indicated temperature. Repeat this procedure until there is no change in the reading and then record the indicated temperature.

The correction for the thermometer will be the deviation of the reading from 0 º C.

If the indicated temperature is outside the range 0 º +/- 0.5 ºC the thermometer is unsuitable for use under this procedure.

Whilst it may be possible to adjust electronic thermometers, inaccurate glass thermometers must be replaced and appropriate records made.

7.5.3 Chamber Temperature Monitoring

The Fumigator must monitor the chamber temperature readings for each fumigation ensuring that the chamber temperatures remain at 15˚C or above during the exposure period.

7.6 Preparing, Loading and Sealing the Chamber

7.6.1 Preparing the Chamber

The Fumigator must check the chamber for damage and possible leak sites prior to the chamber being loaded.

Any damage (e.g. damaged door seals or holes or tears in chamber walls) must be made good prior to loading.

The Fumigator must check chamber circulation and ventilation systems are operating correctly and ensure all vents are closed and sealed prior to the chamber being loaded.

7.6.2 Loading the Chamber

The Fumigator must ensure that an adequate distance is maintained between each package, pallet or bulk bin and the sides and top of the chamber to allow circulation of the fumigant. A 5 cm space must be left between each package, pallet load or bulk bin in the chamber with a minimum space of 10 cm between the top and sides of cut flowers to the walls and ceiling.

The Fumigator must calculate loading rates within the chamber to ensure specified loading rates are not exceeded for the commodity or commodities being fumigated.

Cut flowers may be fumigated either unpacked, in bulk bins or following packing.

The Fumigator must ensure that any cut flowers which are packaged or covered with impervious materials such as plastic bags or waxed paper are opened, cut or removed to allow adequate penetration of the gas.

7.6.3 Placement of Gas Supply Line (s)

The gas supply line (s) must be strategically placed within the chamber to effectively introduce and allow dispersal of the gas. As the fumigant is up to three times heavier than air, the gas should be introduced directly into the airstream of the flameproof circulation fans. Precautions must be taken to prevent any liquid fumigant coming in contact with the cut flowers being fumigated.

Adequate fan circulation must be provided to circulate the fumigant (refer 7.7.4 Mixing of Fumigant).

7.6.4 Placement of Gas Sampling Lines

Ethyl formate concentrations are to be monitored during fumigations, gas-sampling lines must be positioned within the chamber for each fumigation. Sampling lines must be crushproof (for example 6 mm internal diameter hydraulic hose is effective) and must be positioned as follows-

(f) for chambers less than 30 m^3 one gas sampling line must be located in the centre of the stack;

(g) for chambers 30 m^3 or greater three sampling lines must be used and located at the top back, centre, and base front of the stack.

7.6.5 Sealing the Chamber

Once all of the cut flowers have been placed in to the chamber, the Fumigator must ensure the chamber is gas tight by closing all vents and access points and checking all possible leak sites such as doors, gaskets and joints.

7.6.6 Calculation of Fumigant Dosage

The dosage rate applied to fumigation must be in accordance with section 6. Requirement.

Determine the amount of fumigant required in grams (g) using the following formula –

Chamber volume x dosage rate = g fumigant

For example –

$22m^3 \times 25g/m^3 = 550g$ fumigant

The Fumigator must maintain records of the total amount of fumigant applied for each fumigation on the Fumigation Treatment Record (refer Attachment 3).

7.7 Application of Fumigant

7.7.1 Loss of Weight System

The Fumigator measures out the required amount of fumigant by the loss of weight in the dispensing cylinder.

To operate this method, the dispensing cylinder is placed onto scales to allow the weight of the cylinder to be determined before application of the fumigant.

The Fumigator must tare off the weight of the required amount of fumigant on the dispensing cylinder and open the valve to apply the required amount until the cylinder is at the tared weight.

7.7.2 Scales and other Weighing Equipment Calibrations

Scales and other weighing equipment must be calibrated using a calibration weights or similar device that accurately measure the minimum and maximum capacity of the weighing equipment. The equipment must be verified as accurate to within ± 10% of the total load range. A maximum error margin of 1% percent of the minimum dosage (g) of fumigant used for the chamber applies. Scales used for the Loss of Weight System must be calibrated using a known weight at least every six months.

The business must maintain results of weighing scale calibration checks.

Weighing scale calibration records must record the following information:

- the date of calibration;
- the identification of the scales calibrated;
- confirmation that the equipment is accurate to within ± 1 percent of the minimum dosage (g) of fumigant used for the chamber; and
- the officer responsible for conducting the calibration check.

7.7.3 Vaporiser/Volatiliser

Ethyl formate must be applied using a heated vaporiser to ensure that the ethyl formate is vaporised effectively. Vaporisers must be approved by the fumigant manufacturer.

7.7.4 Mixing of Fumigant

To ensure adequate mixing of the fumigant, flameproof recirculation fans must be used to disperse the gas throughout the chamber and thereby enhance the penetration of the fumigant. Once the gas is evenly distributed it maintains that condition unless an outside event such as excessive leakage occurs.

It is suggested that a fan capable of providing 60 room changes of volume per hour be used for 15 minutes after the introduction of the gas. Low velocity/low volume fans may be used for longer periods.

Fumigation commences (the exposure period) at the time all the fumigant has been introduced into the chamber and the fumigant has equilibrated.

Effective mixing of the ethyl format must be determined by monitoring gas concentrations at all monitoring points 20 minutes after the introduction of the gas (refer 7.8 Monitoring Fumigant Concentration). All monitoring points must equilibrate within +/- 5% of each other (where more than one sampling point is used), otherwise the fumigation is deemed to have failed.

7.7.5 Testing for Leaks

Once the fumigation has commenced, the Fumigator must test the chamber for leaks using an appropriate leak detector. Due to the flammability of ethyl formate, do not use Halide type leak detectors.

Sites checked must include -

- doors sealing points;
- external ducting; and
- exit points for supply lines and gas sampling lines.

Any leaks detected must be repaired immediately. If leaks are detected that cannot be repaired during the treatment, the fumigation must be deemed as failed (refer 7.9 Fumigation Failure) and the fumigation must be aborted and the chamber repaired before further use.

7.8 Monitoring Fumigant Concentration

Effective fumigation is dependent on maintaining a satisfactory level of fumigant within the chamber during the fumigation.

Monitoring of fumigant concentration is mandatory for every fumigation. Where monitoring indicates that the required concentration will not be achieved the fumigation must be deemed as failed (refer 7.9 Fumigation Failure) and the Fumigator must vent off all fumigant, ensure gas freedom and then inspect the chamber for the possible cause. When the cause has been rectified the cut flowers must be re-fumigated as per section 6. Requirement.

All instruments used for measuring and monitoring fumigant concentrations must be fit for the purpose, be capable of reliably measuring ethyl formate concentrations within the fumigation enclosure of between 1–200 g/m³, be in a good working order and calibrated on a regular basis according to manufacturer's instructions.

7.8.1 Monitoring Frequency

Fumigant concentrations must be measured at the start and end of the fumigation exposure period.

Fumigant concentrations must be measured at:

1. Start-point monitoring

The fumigation exposure period begins when the fumigant concentrations at all monitoring points are at or above the concentration standard and have reached equilibrium (when all readings are within 5% of the lowest reading).

2. End-point monitoring

Fumigant concentrations at all monitoring points must be at or above the concentration standard at the end of the fumigation period, before fumigation can be declared successful.

7.8.2 Concentration Standard

- Start-point – 20 min after end of vaporisation = 21.25 g/m3 of fumigant (3.54 g/m3 ethyl formate)
- End-point – 1 hour = 15 g/m3 of fumigant (2.5 g/m3 ethyl formate)

The Fumigator must record the monitoring results for each fumigation on the Fumigation Treatment Record (refer 7.11 Fumigation Treatment Record.) or records which capture the same information.

7.8.3 Monitoring Equipment Calibrations

Monitoring equipment must be calibrated as per the manufacturer's instruction. The equipment must be verified as accurate to within 1ppm. Calibration of equipment must be conducted annually or as per manufactures instructions.

The business must maintain Monitoring Equipment Calibration Records or a record which captures the same information. Monitoring Equipment Calibration Records must include -

a) business name and Interstate Produce (IP) Number;
b) the identification of the weighing equipment to be calibrated;
c) the date of calibration;
d) the results achieved;
e) comments or actions taken to correct weighing equipment;
f) the name and signature of the person conducting the calibration.

7.9 Fumigation Failure

Where fumigation has failed, the Fumigator shall vent off all fumigant, ensure gas freedom and then inspect the chamber for the possible cause. When the cause has been rectified the cut flowers must be re-fumigated as per section 6. Requirement or consigned to markets that do not require certification of treatment and/or inspection for tomato-potato psyllid.

The Fumigator must record the fumigation results for each failed fumigation on the Fumigation Treatment Record (refer 7.11 Fumigation Treatment Record.) or records which capture the same information.

7.10 Completion of Fumigation

7.10.1 Venting of Chamber

After one hour of treatment (exposure period) the chamber must be ventilated by running the exhaust system to extract all of the remaining gases and ensure that the concentration of ethyl formate and carbon dioxide are less than any the applicable maximum residue limits before cut flowers are released from the chamber.

7.10.2 Unloading the Chamber

Unloading of the chamber may commence after the Fumigator has released the cut flowers. The ventilation system should be kept running during this process.

7.10.3 Venting of Cut Flowers

Treated cut flowers must be given sufficient time to air after treatment to allow adequate dispersal of the fumigant out of the produce and ensure that the Exposure Standards of ethyl formate and carbon dioxide are less than any applicable maximum residue limits.

7.10.4 Post Treatment Identification

All treated cut flowers must be held post treatment in a designated treatment area which is physically isolated from untreated cut flowers. Each treatment lot must be identified with a lot number affixed to all individual containers in the lot or a sign placed at entry points to the designated treatment area immediately after treatment is completed.

7.11 Fumigation Treatment Records

The Fumigator must record each fumigation using a Fumigation Treatment Record (refer Attachment 3) or records which capture the same information.

Treatment records must identify –

- the date of fumigation;
- the packer's identification;
- the type of cut flowers treated;
- the quantity of cut flowers treated;
- all temperature measurements taken prior to fumigation;
- the fumigation dosage rate (g/m^3);
- the total quantity in grams (g) of fumigant added to the chamber;
- the time vaporisation completed;
- the readings for each monitoring point at 20 minutes after vaporisation is complete;
- the percentage of gas retained for each test;
- the commencement time of the fumigation (the time when the fumigant has equilibrated);
- the readings for the each monitoring point at the end of the exposure period (at one hour after fumigant has equilibrated);
- the percentage of gas retained for each test;
- the completion time of the fumigation (the time venting commenced);
- the Fumigator's licence number, name and signature.

7.12 In-Process Identification and Traceability

Where the business receives, grades and packs treated and untreated carrier cut flowers, sorting systems must be in place for identifying the treatment status of treated and untreated carrier cut flowers from receival, through grading and packing and as packed product.. Sorting systems must ensure separation is maintained between treated and untreated cut flowers at all times. All cut flowers found to be non-conforming must be segregated to prevent mixing.

All cut flowers which is found to be non-conforming (i.e. contain suspect psyllids or has not been treated) must be segregated to prevent mixing with conforming product.

Examples of segregation of nonconforming cut flowers must include -

(a) locating nonconforming carrier cut flowers in a defined and separate area to conforming cut flowers and maintaining separation until the cut flowers are graded, inspected, packed and dispatched; or

(b) placing nonconforming carrier cut flowers in clearly marker containers to distinguish them from conforming carrier cut flowers.

Other methods may be used provided they clearly and accurately identify nonconforming carrier cut flowers from conforming cut flowers.

7.13 Inspection of Cut Flowers Consigned to New South Wales

For New South Wales, post fumigation, the cut flowers must be inspected and verified as free of TPP by an Authorised Inspection Person inspecting as per section 6: Requirements.

Following treatment, cut flowers within each consignment dispatched by the business consigned to New South Wales must be inspected in a designated inspection area in the facility to verify freedom from suspect tomato-potato psyllid by an Authorised Inspection Person.

Cut flowers must be inspected and have samples taken in accordance with ICA Work Instructions - Inspection of Cut Flowers for Tomato-potato Psyllid [WI-ICA65-01].

Each unit in the sample must receive 100 percent inspection. Particular attention is to be paid to sites that provide shelter for psyllids such as under the underside of leaves.

Authorised Inspection Persons should take steps to assess workplace health and safety risks associated with the handling and inspection of cut flowers which have been treated with an approved insecticide. If necessary, the use of appropriate personal protective equipment may be required.

7.13.1 Authorised Inspection Persons

One or more persons within the Business must be trained and accredited as Authorised Inspection Persons. Authorised Inspection Persons must have successfully completed an approved training course in the detection and recognition of symptoms of suspect tomato-potato psyllid.

The business must ensure that they have at least one Authorised Inspection Person whilst accredited under this ICA.

Authorised Inspection Persons must be assessed at least annually by an ICA Auditor of the accrediting authority to demonstrate currency of competency in the detection and recognition of psyllids.

The Certification Controller must maintain an individual Certificate of Achievement for each Authorised Inspection Person within the Business.

The names and specimen signatures of Authorised Inspection Persons must be recorded on a Register of Authorised Inspection Persons (refer Attachment 6) by the Certification Controller. Only persons currently on the register can carry out consignment inspections for tomato-potato psyllid.

The register must include:

1. the name of the Authorised Inspection Person;
2. date of successful completion of a defined training and assessment program
3. a copy of the Certificate of Attainment for the successful completion of a defined training and assessment package for identification of TPP.

7.13.2 Inspection Facilities and Equipment

The Certification Controller must maintain the following inspection facilities and equipment: -

- an inspection bench or table in an area protected from adverse weather conditions, which is constructed of stable, rigid and durable material i.e. steel, timber or plastic. The bench or table must be of a reasonable size and height and be painted in a light colour or covered in a durable light coloured material. The bench or table must also be placed in a well-lit and ventilated area on a flat sealed and durable surface i.e. concrete;
- a hand lens, microscope or other device that provides at least X10 magnification for the observation of suspected psyllids;
- a white coloured tray i.e. plastic photograph tray or other surface for dislodging suspect psyllids into for inspection;
- reference illustrations and photographs for identification of tomato-potato psyllid and other common psyllids;
- a fine paint brush for collecting samples of suspected psyllids;
- sealable plastic bags for collecting specimens of infested/contaminated cut flowers;
- sealable specimen bottles for placing samples of suspect psyllids;
- sticky labels for identification of specimen bags and bottles;
- preservative material;
- a pocket knife or similar item to further investigate cut flowers for the presence of psyllids.

The Authorised Inspection Person must carry out regular checks of the inspection facilities and equipment to ensure it continues to operate effectively and remains free from damage or excessive wear.

In addition the business must also provide a means of:

- segregating and isolating cut flowers which has ‘passed’ inspection and from all other tomato-potato psyllid cut flowers; and
- segregating and isolating cut flowers which has ‘failed’ inspection, either due to suspect or confirmed presence of tomato-potato psyllid, from all other tomato-potato psyllid cut flowers.

Cut flowers that have failed inspection due to the suspected presence of tomato-potato psyllid and is intended to be sent to a tomato-potato psyllid restricted market must be segregated and isolated from all other tomato-potato psyllid cut flowers until it is confirmed that tomato-potato psyllid are or are not present.

7.13.3 Cut flower Inspection

The business must select a minimum of 600 units or a minimum of 2% of the carton count (whichever is the greater) as per section 6: Requirements from randomly selected cut flowers consigned from the facility each day. Samples must be selected at random from packed product as an end-point inspection following assembly of a ‘consignment for dispatch’.

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

7.13.4 Examination of the Sample

The Authorised Inspection Person must carry out 100% inspection of the cut flowers from each sample package for freedom from tomato-potato psyllid or psyllid like insects.

The sample packages selected for inspection must be brought to the inspection bench. Each unit in the sampled packages must be examined by an Authorised Inspection Person and found free from tomato-potato psyllid or psyllid like insects.

7.13.5 Identification of Sample Packages (PPS Number)

Sample packages must be sequentially numbered during packing.

The Authorised Inspection Person must identify each sample package by placing a stamp or sticker with the lettering Packed Product Sample Number (PPS) (refer attachment 9) on the exposed end of the package and mark on or below the identifier the sequential sample number the date and their initials prior to returning it to the pallet.

The sample packages examined by the Authorised Inspection Person must be stacked on the pallet with the PPS Number visible on the outside of each pallet packed under this protocol.

7.13.6 Cut flower Inspection Records

The Authorised Inspection Person must maintain records of all tomato-potato psyllid inspections. Inspection records must be in the form of a Cut Flower Inspection Record (refer Attachment 7) or records which capture the same information.

Cut Flower Inspection records must include -

- The Interstate Produce (IP) number of the business that operates the approved facility in which the cut flowers were packed;
- the date of inspection of the sample packages;
- the inspection results 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 by the Certification Controller following withdrawal;
- the Authorised Inspection Persons name and signature.

7.14 Action Following Detection of Suspect Psyllid in Inspected Cut Flowers

1.1.1 Detection of Live Suspect Psyllid

The Authorised Inspection Person must immediately advise the Certification Controller of any detection of psyllid or psyllid-like insects identified during inspection.

If any cut flowers are found to be infested with tomato-potato psyllid or psyllid like insects, **all cut flowers** from the that treatment lot/consignment including any cut flowers which have been packed for certification but which remain at the facility must be **rejected for certification**.

Suspect psyllids must be submitted to an Approved Taxonomist/Entomologist for identification.

If the business does not provide the suspect psyllid to an Approved Taxonomist/Entomologist **all cut flowers** from the consignment, including any cut flowers which have been packed for certification but which remain at the facility must be **rejected for certification** under this arrangement.

The Authorised Inspection Person **must** record the detection of suspect psyllid or psyllid-like insects on the Cut Flower Inspection Record (refer Attachment 7) or records which capture the same information.

Cut flowers that are rejected and segregated from certification is to be either:

1. Held in an identified area until sample analysis of the suspect psyllid is conducted and written results confirming the suspect psyllid is not tomato-potato psyllid is provided; or
2. Consigned to a market that does not require certification of freedom from tomato potato psyllid; or
3. Treated in accordance with the destination market's quarantine requirements for the control of tomato-potato psyllid.

If the suspect psyllid sample is returned confirming the sample is not tomato potato psyllid, all rejected cut flowers that are segregated may be reconsidered for certification under this Operational Procedure provided all requirements have been met (i.e. inspection is completed in accordance with this protocol and the cut flowers is found free from tomato-potato psyllid and all other conditions have been met).

If tomato potato psyllid is confirmed by diagnosis of the sample or if it cannot be positively identified as not being tomato-potato psyllid, the Certification Controller of the accredited business must obtain written notification from the Approved Taxonomist/Entomologist to this effect.

All cut flowers from the consignment, including any cut flowers which has been packed for certification but which remains at the facility **must** be rejected for certification as per section 7.15.1: Rejected Product.

As soon as practical and not more than twenty-four (24) working hours from the time of the receipt of the positive sample result, the result **must** be reported to the DPIRD so an investigation may be carried out to determine the cause and rectify any problems

The DPIRD - Quality Assurance Coordinator can be contacted via:

- Email – qa@agric.wa.gov.au
- Phone – 9334 1800

Details of the rejected product must also be included on the Cut Flower Inspection Record.

7.14.1 Handling Suspect Psyllid Specimens

Suspect psyllid samples must be handled, stored and dispatched in accordance with the Work Instructions for the - Inspection of Cut Flowers for Tomato-potato Psyllid [WI-ICA65-01]

The Authorised Inspection Person must record the following details on the Psyllid Identification Record (refer Attachment 8)

- the name of the Authorised Inspection Person taking the sample;
- the Interstate Produce (IP No.) number of the accredited Business inspecting the cut flowers;
- the name and address of the grower and packer or Interstate Produce (IP No.) number of the source property;
- the type and quantity of cut flowers from which the sample was taken;
- the date the sample was taken;
- the date the sample was submitted to an Approved Taxonomist/Entomologist;
- the contact telephone number and e-mail and fax contact of the Authorised Inspection Person;
- and the type of sample, diagnosis request and sample details.

The Authorised Inspection Person must seal the specimen bottle into a sealable plastic bag with the sample submission form, then forward, the sample by secured means to an Approved Taxonomist/Entomologist within 24 hours of taking the sample.

Where a suspect psyllid is captured and contained on cut flowers, the cut flower or part of the cut flower with the suspect pest must be wrapped in damp paper towel and placed into a plastic bag without a preservative material.

The Business must obtain written notification of all sample result from the Approved Taxonomist/Entomologist. The Approved Taxonomist/Entomologist must complete the Diagnosis Details Section of the Psyllid Identification Record and return it to the Certification Controller of the accredited Business.

Where suspect psyllid cannot be positively identified by an Approved Taxonomist/Entomologist, the cut flowers will be rejected for certification under the Operational Procedure.

7.15 Confirmation of Tomato-Potato Psyllid

Where a suspect psyllid is subsequently confirmed to be tomato-potato psyllid or if it cannot be positively identified by an Approved Taxonomist/Entomologist as not being tomato-potato psyllid, the Certification Controller of the accredited business must obtain written notification from the entomologist/taxonomist to this effect.

All cut flowers in the consignment must be rejected for certification under the arrangement as per section7.15.1: Rejected Product. Confirmation of tomato-potato psyllid must be reported to the Accrediting Authority within 24 hours by the accredited business.

Details of the rejected product must also be included on the Cut Flowers Inspection Record.

7.15.1 Rejected Product

All rejected cut flowers must be isolated and clearly identified to prevent mixing with conforming product.

Product rejected for tomato-potato psyllid may be –

a) certified in accordance with an alternative quarantine entry condition; or
b) consigned to markets that do not require certification of treatment and/or inspection for tomato-potato psyllid.

Details of the rejected product must also be included on the Cut Flower Inspection Record.

7.16 Post treatment and Inspection Security and Identification

7.16.1 Security

All treated and inspected cut flowers must be held post treatment and inspection in the designated treatment area which is physically isolated from untreated cut flowers.

7.16.2 Packing

Packed and palletised cut flowers must be placed in secure conditions without delay after treatment and inspection.

Inspected cut flowers and foliage must be held for the minimum practical period after inspection before it must be secured to prevent infestation by tomato-potato psyllid.

Any treated and inspected cut flowers which remain unpacked at the end of the day must be held in secure conditions until packed.

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

Certified product must be stored at and transported from the facility in secure conditions which prevent infestation by tomato-potato psyllid.

Secure conditions include at least one of the following-

- unvented packages;
- vented packages with the vents secured with mesh which has a maximum aperture of 0.5 mm; or

- wrapping or bagging in sealed plastic sleeves or bags; or
- fully enclosed consignments under tarpaulins, hessian, shade cloth, mesh or other covering which has a maximum aperture of 0.5 mm; or
- consignment shrink-wrapped and sealed as a palletised unit; or
- fully enclosed or screened buildings, cold-rooms, vehicles (including tautliners in good condition); or
- other facilities free from gaps or other entry points greater than 0.5 mm.

The Business must have adequate procedures in place which prevent mixing of treated and untreated cut flowers at the facility.

7.17 Dispatch

7.17.1 Package Identification

The Authorised Dispatcher must ensure that 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 treated; and
- the words "**MEETS ICA –65**"; and
- the **date (or date code**) on which the cut flowers were treated;

Prior to the issuance of a Plant Health Assurance Certificate by the Business under this Operational Procedure.

7.18 Assurance Certificates

The Authorised Dispatcher must ensure a Plant Health Assurance Certificate is completed and signed by an Authorised Signatory of the Business prior to dispatch of the consignment from the facility to a market requiring certification of fumigation with ethyl formate.

Interstate Assurance Certificates must be in the form of a Plant Health Interstate Assurance Certificate. A completed example is shown as Attachment 1.

Individual Plant Health Assurance Certificates must be completed and 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.

Each Plant Health Assurance Certificate must state fumigation date, concentration, duration and temperature

Interstate Assurance Certificates must be completed, issued and distributed in accordance with the Work Instruction Guidelines for Completion of Plant Health Assurance Certificates (WI-QA015).

7.19 Interstate Assurance Certificate Distribution

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

The **duplicate** (blue copy) is to be sent to the below address not less than monthly.

- Quality Assurance Officer
  Quarantine WA
  Locked Bag 69
  WELSHPOOL DC, WA 6986

The **triplicate** (white copy) must be retained by the QA accredited Business that issued the certificate.

7.19.1 ICA System Records

The Business must maintain the following records –

(a) Fumigation Dosage Chart for each chamber;
(b) Chamber Test Certificate for each chamber;
(c) Thermometer calibration records;
(d) Fumigant monitoring and leakage detection instrument calibration records
(e) Weighing Equipment/Scales calibration records;
(f) Fumigation Treatment Record;
(g) Certificate of Attainment for each Authorised Inspection Person;
(h) Register of Authorised Inspection Persons;
(i) Psyllid Sample Submission form.
(j) Cut Flower Inspection Record;
(k) A copy of each Plant Health Interstate Assurance Certificate issued by the Business.

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.

7.19.2 ICA System Documentation

The Business must maintain the following documentation –

(a) a copy of the Business's current Application for Accreditation;
(b) a current copy of this Operational Procedure;
(c) a current Certificate of Accreditation for an Interstate Certification Assurance Arrangement.

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

8 NON-CONFORMANCES AND SANCTIONS

8.1.1 Non-conformances

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

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

8.1.2 Incident Reports

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

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

8.1.3 Suspension and Cancellation

DPIRD may suspend or cancel an accreditation when an accredited business is found, for example, to have:

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

Any action taken by DPIRD to suspend or cancel an accreditation must be provided in writing to the business. This must also provide guidance on the lodgement of a written appeal requesting that the decision be reviewed.

9 ATTACHMENTS

Attachment 1	Plant Health Interstate Assurance Certificate (completed example)
Attachment 2	Fumigation Dosage Chart
Attachment 3	Fumigation Treatment Record
Attachment 4	Chamber Test Certificate
Attachment 5	Thermometer Calibration Record
Attachment 6	Register of Authorised Inspection Persons
Attachment 7	Cut Flower Inspection Record
Attachment 8	Psyllid Identification Record
Attachment 9	Identification of Cut Flower Sample Packages

Attachment 1

Department of Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

ORIGINAL (Yellow) – Consignment Copy
DUPLICATE (Blue) – Quarantine WA Copy
TRIPLICATE (White) – Business (Book) Copy

Certificate Number: XXXXX

Business Specific Information*

Dispatch Date: / / Ref No:

Arrival Date: / / PO No:

* These items display business specific information entered at the discretion of the consignor. They do not represent any part of the certifying conditions of the produce.

Plant Health Assurance Certificate

Biosecurity and Agriculture Management (Quality Assurance and Accreditation) Regulations 2013

All accreditation details must be completed. Please print clearly and initial any alterations

Consignment Details

Consignor

Name ABC Pty Ltd
Address Block Road
Perth WA 6000

Consignee

Name Fresh Agents
Address Somewhere Road
Somewhere SA

Re-consigned To

(Splitting consignments or re-consigning whole consignments).

Name
Address

Certification Details

IP Number	Facility Number	Procedure
W 9999	01	ICA-65

Accredited Business That Prepared The Produce

Name ABC Pty Ltd
Address Block Road
Perth WA 6000

Grower or Packer

Name ABC Pty Ltd
Address Block Road
Perth WA 6000

Other Facilities Supplying Produce

Number of Packages	Type of Packages (e.g. trays, cartons)	Type of Produce	Brand Name or identifying marks (As marked on packages)	Date Code (As marked on packages)	Authorisation for Split Consignment
344	Cartons	Cut flowers	ABC Produce	230321	Affix Authorisation Stamp to Split / Re-consignee here

Treatment Details

Treatment	Chemical (Active Ingredient)	Treatment Date	Concentration / Duration and Temperature
Fumigation	Ethyl Formate	23/3/21	25g/m³ for 1 hour @ 15°C

Additional Certification / Codes

GSLxx

Declaration

I, an authorised Signatory of the accredited business that prepared the plants or plant produce described above, hereby declare that the plants or plant produce have been prepared in the business's approved facilities in accordance with the business's Certification Assurance arrangement and that the details shown above are true and correct in every particular. I acknowledge that it is an offence under the *Biosecurity and Agriculture Management (Quality Assurance and Accreditation) Regulations 2013* to issue assurance certificates without being accredited and/ or making false statements in certificates and declarations.

Authorised Signatory's Name (Please Print)	Signature	Date
Joe Bloggs	J Bloggs	23/03/2021

FUMIGATION DOSAGE CHART

Chamber Identification: ……..……..

Total Chamber Volume: ……

Business Name: ……..……

IP Number: **W** ……..

Facility Address: ……..……..

……Post Code…..……...

DOSAGE CHART

MINIMUM CONCENTRATION (g/m3)	**CALCULATED QUANTITY OF Fumigant (gms)** (required to achieve indicated concentration)
25	

This chart is to be located in close proximity to each Fumigation Chamber

Prepared by: ……..…….. (Fumigators Name).

Signature: ……. Date: ……

FUMIGATION TREATMENT RECORD – ICA-65

Owner of Fumigation Facility				Interstate Produce Number:	**W**
Date of Fumigation	/ /	Chamber ID:		Chamber Volume:	m³
Fumigator's Name				WADH Licence No:	
Temperature Readings (ºC)				Fumigation Rate:	Min. 25g/ m³
				Amount of Fumigant Used:	

Grower/Packer Name	Number of Packages	Product Type (eg Geraldton Wax)	Type of Packages (Cartons, Bins, etc)	Time Vaporisation Completed	Monitoring ethyl formate g/m3		Time Venting Commenced	ID Code (if applicable)
					@ 20 minutes	@ 1 hour		

Comments:

CHAMBER TEST CERTIFICATE – ICA-65

Operator of Fumigation Chamber				Interstate Produce No:	**W**
Facility Address:				Chamber Identification:	
				Date of Test:	
Chamber Dimensions (internal):	Length m	Width m	Height m	Chamber Volume:	m³
Fumigator's Printed Name:				External Ducting (if applicable)	m³
Fumigator's WADH Licence No:		Expiry Date:	/ /	Total Chamber Volume:	m³

Gas Retention Test

Test Number	Fumigation Rate (g/m³)	Quantity of Fumigant added (g)	Time Vaporisation Completed	Ethyl Formate Concentration at Monitoring Point(s) after 20 minutes	Ethyl Formate Concentration at Monitoring Point(s) after 1 hour	Time Venting Commenced	Percentage of Ethyl Formate retained after 1 hour

Pressure Decay Test

Test Number	Pressurised to 250 Pa	Time (seconds) for pressure to decay from 200 Pa to 100 Pa	Comments
	☐		
	☐		

The fumigation chamber described above has been tested in accordance with requirements of Department of Primary Industries and Regional Development, Western Australia Operational Procedure ***Fumigation with Ethyl Formate*** **(ICA-65)** and has been shown to achieve at least 60% retention of ethyl formate after 1 hour exposure period

…… …….. / /

Fumigator's Name Signature Date

Attachment 5

THERMOMETER CALIBRATION

Name of Fumigation Company or Fumigator's Business Name	**Date**	**Thermometer Number**	**Temperature Reading**	**Variation of Temperature from Ice Point - 0°c**	**Name of Testing Officer (please print)**	**Signature of Testing Officer**
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					
	… / … / …					

Attachment 6

REGISTER OF AUTHORISED INSPECTION PERSONS –ICA-65

Accredited Business Name			IP Number	W				
Date of Training	Approved Inspection Person		Authorisation by Certification Controller					
	Printed Name	Signature	Printed Name		Signature			

Note: Place a line through any entry for any person who is no longer Approved to carry out tomato potato psyllid inspections under the Business's Interstate Certification Assurance arrangement.

Attachment 7

CUT FLOWER INSPECTION RECORD (ICA-65)

Date of Inspection:		Package Identification				
Place of Inspection:		IP Number:	W			
Name of Authorised Inspection Person:		PHAC No(s):				
Inspection Rate	☐ 600 Unit ☐2 %	Name & Address of Grower and / or Packer: (if multiple, list in comments/findings column)				
Notes:		Carrier nursery stock Type: (if multiple, list in comments/findings column)				

Total Number of Packages in Lot / Consignment: (list separately if multiple commodities)

Package No.	Number of Units	Total Number of Units	Comments/Findings
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
17			
18			
19			
20			
21			

Pass		Fail		Signature of Authorised Inspection Person:	

Actions resulting from a suspected detection of a quarantine pest

PSYLLID IDENTIFICATION RECORD – ICA-65

APPROVED INSPECTION PERSON DETAILS

Approved Inspection Person Name		IP Number of Accredited Business	**W**
Name and address of grower/packer or IP number of the produce that sample was taken		Type of produce & quantity from which sample was taken	Type of produce: Quantity of produce:
Date sample was taken		Date sample was submitted to Diagnostician	
Contact Telephone No		Email/Fax No	

SAMPLE DETAILS

Type of Sample: (e.g. insect, leaves, seeds)	
Diagnosis request: (e.g. identify insect, disease, seed)	
Sample details: Describe where, when and how the sample was taken. Include the type produce or crop the sample was taken from, who took the sample and why diagnosis is required.	

DIAGNOSIS DETAILS - For Diagnostician Use Only

Date Sample Received		Date Sample Diagnosed	
Diagnosis Result			
Method of Diagnosis			
Comments			
Diagnostician Name		Diagnostician Position	
Signature		Date	

IDENTIFICATION OF PACKED PRODUCT SAMPLE PACKAGES

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 Number (Packed Product Sample Number) and their initials as shown below; and

(b) ensure that the PPS Number 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)