



Department of
**Primary Industries and
Regional Development**

Work Instruction
**Inspection of Cut Flowers for
Tomato-Potato Psyllid**
Version 1.1 – June 2021

WI-ICA64/65

dpird.wa.gov.au

Revision Register

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1.0	10/05/2018	Initial Issue
1.1	02/06/2021	Addition of ICA65. Updated template

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1 PURPOSE

The purpose of this work instruction is to provide guidelines for the inspection of cut flowers for tomato potato psyllid. This instruction does not encompass specific protocol inspections for other pests or disease that may be required for some States or Territories.

2 SCOPE

This work instruction covers the requirements for the inspection of cut flowers requiring certification for freedom from tomato potato psyllid and movement from Western Australia to another State or Territory within Australia by an **Authorised Inspection Person**.

3 REFERENCES

WI-QA015	<i>Guidelines for Completion of Plant Health Assurance Certificates</i>
ICA-64	<i>Post-Harvest Treatment and Inspection of Cut Flowers for Tomato Potato Psyllid</i>
ICA-65	<i>Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid</i>

4 DEFINITIONS

Authorised Inspection Person	means a person who has completed approved training in the detection and recognition of tomato potato psyllid and who is authorised to conduct inspections on behalf of the Business by having their name and signature on a register of Authorised Inspection Persons maintained by the Business.
approved taxonomist	means a person who is approved by DPIRD and is listed on the DPIRD Plant Health Register of Approved Taxonomists.
Assurance Certificate	means a <i>Plant Health Assurance Certificate</i>
Authorised Signatory	means a person whose name and specimen signature is included as an Authorised Signatory on the business's application for accreditation.
business	means the legal entity responsible for the operation of the facility and the ICA arrangement detailed in the Business' Application for Accreditation.
certified/certification	means covered by a valid <i>Plant Health Assurance Certificate</i>

consignment	means a quantity of packed produce described on one Plant Health Assurance Certificate by a single consignee. A consignment may contain a number of lots.
DPIRD	means the Department of Primary Industries and Regional Development – Western Australia.
end-point inspection	means the process by which a representative sample is drawn and inspected from the finalised consignment prior to certification.
facility	means the location where cut flowers are assembled, inspected, securely stored, certified and dispatched.
homogeneous	means produce that is all of the same or similar kind or nature.
ICA	means Interstate Certification Assurance.
in-line inspection	means the process by which a representative sample of packed product is drawn from a lot and inspected during the processing and packing of the produce.
inspection	means the act of inspecting produce to determine if the entry conditions or tomato potato psyllid freedom requirements of the importing State or Territory have been met.
lot	means a quantity of homogeneous product assembled for inspection at one place at one time. A lot could consist of product from one or more growers/blocks/properties.
tomato potato psyllid	means all stages of <i>Bactericera cockerelli</i> including egg, nymph and adult.
TPP	means tomato potato psyllid.
package	means the complete outer covering or container used to transport and market the produce.
packed product	means produce that has been packed into its final package. .
produce	means cut flowers and foliage, but excludes seeds, underground parts and dried or processed plant materials.

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.
psyllids	means all stages of psyllid spp. including egg, nymph and adult.
unit (cut flowers)	means a single cut stem with flowers and/or foliage attached.

5 GENERAL

This Work Instruction refers to key elements of the Interstate Certification Assurance Operational Procedures *Post-Harvest Treatment and Inspection of Cut Flowers for Tomato Potato Psyllid* [ICA-64] and *Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid* [ICA-65] that require further explanation to a task or activity. Persons responsible **must** ensure they refer to the relevant sections of the Operational Procedure before applying any task in this Work Instruction.

6 ACTIONS

6.1 Sampling Cut flowers for Inspection

6.1.1 Inspection Type

The **Authorised Inspection Person shall** inspect cut flowers by one of two types.

1. End-point inspection; or
2. In-line inspection.

6.1.2 Inspection Rate

The **Authorised Inspection Person shall** inspect cut flowers by end-point or in-line inspections at one of the following rates:

- 600 units; or
- 2% of the number of packages.

6.1.3 Factors to be Considered Prior to Taking a Sample for Inspection

An **Authorised Inspection Person** may be presented with a mixed consignment or lot from which they will be required to draw a sample and inspect.

Mixed consignments and lots present unique problems regarding homogeneity and require special consideration with regard to sampling.

The **Authorised Inspection Person shall** consider the following factors when making a decision on how to sample from a mixed consignment or lot:

- treatments (where known) that have been applied to control certain pests and disease;
- history of previous tomato potato psyllid detections (where known) associated with a particular production area, cut flower or foliage type or grower;
- the quantity of a particular cut flower or foliage type within the lot or consignment; and
- the number of different growers/packers associated with the lot or consignment.

6.1.4 Minimum Sample Size

A minimum of three (3) packages will be drawn when undertaking an inspection using the 2% sampling rate.

Where the **Authorised Inspection Person** identifies that the number of units in a consignment or lot is less than the required 600 units (i.e. pre-determined unit number inspection e.g. 600 units), the **Authorised Inspection Person shall** examine all units in the consignment.

6.2 Sample Selection for an In-Line Inspection

An In-line inspection **shall** involve the selection and inspection of cut flowers drawn from a lot and inspected during the processing and packing of the product.

The **Authorised Inspection Person shall** sample packed product at the predetermined inspection rate ([refer 6.1.2 Inspection Rate](#)) from the packing line and move the packed product to the inspection area for examination ([refer 6.4 Examination of Cut flowers](#)).

The following are two examples of how to sample cut flowers during an In-line Inspection.

Example A – In-line 600 Unit Inspection

An Authorised Inspection Person is presented with 3000 cell trays of tomato seedlings of which three consignments consisting of 1000 trays each are to be consigned to Tasmania.

The Certification Controller of the packing shed advises the Authorised Inspection Person that the packing period to pack the cell trays into cartons will be 3 hours. The Authorised Inspection Person calculates the rate at which the samples are to be drawn to obtain a 600 unit sample as follows:

The Authorised Inspection Person calculates:

- *3 hour packing period for 3000 cell trays from one grower (one lot)*
- *600 units are to be drawn prior to packing over a 3 hour packing period = 100 units per ½ hour*
- *one cell tray = one unit*

100 cell trays will need to be drawn every ½ hour from the processing line prior to packing the cell trays into cartons.

The Authorised Inspection Person examines 100% of each cell tray (unit) until the required 100 cell trays (units) have been reached for each interval. The Authorised Inspection Person shall not examine more than 100 trays (units) at each interval.

Note: The sampling rate selected has provided sufficient time to fully inspect the units as they are drawn during each period.

(Refer [Attachment 1](#) for the completed Tomato Potato Psyllid Inspection Record for Example A)

Example B – In-line 2% Inspection

An Authorised Inspection Person is presented with 1200 cell trays of tomato seedlings of which three consignments consisting of 400 cell trays each are to be consigned to South Australia.

The Certification Controller of the packing shed advises the Authorised Inspection Person that the packing period to pack the cell trays into cartons will be 3 hours. The Authorised Inspection Person calculates the rate at which the samples are to be drawn from the processing line to obtain a 2% sample as follows:

The Authorised Inspection Person calculates:

- 3 hour packing period for 1200 cell trays from one grower (one lot)
- 400 trays per hour packed
- 1200 trays packed over a 3 hour packing period

One (1) in fifty (50) or 8 cell trays per hour need to be drawn from the processing line prior to packing the trays into cartons.

24 trays inspected over 3 hour packing period

The Authorised Inspection Person examines 100% of each cell tray (unit) until the required 8 cell trays (units) have been reached for each interval. The Authorised Inspection Person shall not examine more than 8 trays at each interval.

Note: The sampling rate selected has provided sufficient time to fully inspect the units as they are drawn during each period.

(Refer [Attachment 2](#) for the completed Tomato Potato Psyllid Inspection Record for Example B)

6.3 Sample Selection for an End-point Inspection

End-point inspections are only carried out on consignments that have been finalised.

The **Authorised Inspection Person shall** sample packages at the predetermined inspection rate ([refer 6.1.2 Inspection Rate](#)) from the consignment and move the packages to the inspection facility ready for examination ([refer 6.4 Examination of Cut flowers](#)).

The following are two examples of how to sample cut flowers for an End-point Inspection.

Example C – End-point 600 Unit Inspection

An Authorised Inspection Person is presented with a mixed consignment of cut flowers to be consigned to a quarantine restricted market for tomato potato psyllid. The consignment consists of 344 cartons and comprises:

- 72 cartons of Gerbera sp. in pots from grower/packer A. Smith;
- 56 cartons of Bougainvillea sp. in pots from grower/packer B. Brown;
- 144 cartons of Heliconia sp. in pots and 72 cartons of Anthurium sp. in pots from grower/packer C. Blogs.

The Authorised Inspection Person calculates that:

A. Smith's 72 cartons represent 21% of the consignment;

B Brown's 56 cartons represent 16% of the consignment;

C Blogs' 144 cartons of (*Heliconia* sp.) represents 42% and 72 cartons of (*Anthurium* sp.) represents 21% of the consignment respectively.

The Authorised Inspection Person determines that the proportion of cut flowers in pots to be examined from each grower will be based on the percentage of each growers cut flowers in the consignment.

The Authorised Inspection Person calculates the number of units to examine from each grower as follows:

The number of A. Smith's *Gerbera* sp. to examine is $600 \times 21\% = 126$ units

The number of B. Brown's *Bougainvillea* sp. to examine is $600 \times 16\% = 96$ units

The number of C Blogs' *Heliconia* sp to examine is $600 \times 42\% = 252$ units, and the number of *Anthurium* sp. to examine is $600 \times 21\% = 126$ units

The Authorised Inspection Person draws cut flowers at random from each grower until they have examined the required number of units.

(Refer [Attachment 3](#) for the completed Tomato Potato Psyllid Inspection Record for Example C)

Example D – End Point 2% Inspection

An Authorised Inspection Person is presented with a mixed consignment of red and yellow *Gerbera* sp. (in pots) which are to be consigned to a quarantine restricted market for tomato potato psyllid. The consignment comprises:

Six (6) pallets of red *Gerbera* sp. and four (4) pallets of yellow *Gerbera* sp. from grower/packer J. Smith.

The consignment totals 120 cartons with each pallet comprising 12 cartons.

The Authorised Inspection Person calculates that there are:

- 72 cartons of red *Gerbera* sp. representing 60% of the consignment; and
- 48 cartons of yellow *Gerbera* sp. representing 40% of the consignment.

The Authorised Inspection Person determines that the proportion of packages to be sampled will be based on the percentage of red and yellow *Gerbera* sp. (in pots) in the consignment.

The Authorised Inspection Person calculates the number of red and yellow *Gerbera* sp. sample packages to take as follows:

- $2\% \times 72$ packages = 2 packages (always round up to next whole number)
- $2\% \times 48$ packages = 1 packages (always round up to next whole number)

The Authorised Inspection Person draws sample packages at random from the pallets to achieve 3 packages (2 red and 1 yellow *Gerbera* sp. [in pots] in packages).

The Authorised Inspection Person examines 100% of units within each sample package.

(Refer [Attachment 4](#) for the completed Tomato Potato Psyllid Inspection Record for Example D)

6.4 Examination of Cut flowers

An **Authorised Inspection Person shall** examine cut flowers after drawing the required number and depending on the inspection type and rate (refer [6.1.1 Inspection Type](#) and [6.1.2 Inspection Rate](#)).

Where a 2% rate is nominated by the Certification Controller, an **Authorised Inspection Person shall** examine 100% of the cut flowers contained in each sample package.

Where a 600 unit rate is nominated by the Certification Controller, an **Authorised Inspection Person shall** not examine more than 600 units.

All cut flowers examinations **shall** be carried out by an **Authorised Inspection Person**.

The **Authorised Inspection Person shall**:

1. move all cut flowers to the inspection area;
2. record information on the *Tomato Potato Psyllid Inspection Record* in accordance with the Interstate Certification Assurance Operational Procedures *Post-Harvest Treatment and Inspection of Cut Flowers for Tomato Potato Psyllid* [ICA-64] and *Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid* [ICA-65] .
3. place cut flowers on the inspection bench;
4. visually examine the required number of units ([refer 6.1.2 Inspection Rate](#)) for tomato potato psyllid;

Cut flowers selected for inspection **must** be thoroughly inspected on both sides of the leaves, flowers and stems. Particular attention **shall** be paid to areas that may provide shelter to tomato potato psyllid such as the flowers and stem axils.

The **Authorised Inspection Person** will use, as necessary, a hand lens of at least X10 magnification or similar device to assist in the examination of cut flowers for the detection of tomato potato psyllid.

The **Authorised Inspection Person** where possible, **shall** shake/tap foliage over a clean white inspection tray for a minimum of 10 seconds to dislodge any insects. The **Authorised Inspection Person** will then inspect the tray for signs of tomato potato psyllid. This process is to be repeated until the required number of units has been inspected.

The **Authorised Inspection Person** should ensure that any tapping and shaking during the inspection does not damage the sampled units.

Where packages are fully unpacked during the examination of the produce, the **Authorised Inspection Person shall** examine the sample package (and lid if applicable) for the presence of suspect tomato potato psyllid.

5. place sampled units back into the package, where applicable, until the sample package has been fully repacked;
6. return the sample packages to the consignment or lot following the inspection;
7. record information on the *Tomato Potato Psyllid Inspection Record* in accordance with the of Interstate Certification Assurance Operational Procedures *Post-Harvest Treatment and Inspection of Cut Flowers for Tomato Potato Psyllid* [ICA-64] and *Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid* [ICA-65] .

6.5 Suspect Tomato Potato Psyllid Detection

The **Authorised Inspection Person shall** immediately advise the Certification Controller of the detection of suspect tomato potato psyllid. The **Authorised Inspection Person shall** take a sample and reject and segregate all produce in the consignment or lot until the sample results are returned to the business.

The **Authorised Inspection Person shall** determine by reference illustrations and photographs (refer [Attachment 6](#) Identification of Tomato Potato Psyllid) whether the sample is suspect tomato potato psyllid.

Should the Authorised Inspection Person determine the sample to be suspect tomato potato psyllid, the sample **shall** be submitted to an Approved Taxonomist in accordance with the Interstate Certification Assurance Procedures *Post-Harvest Treatment and Inspection of Cut Flowers for Tomato Potato Psyllid* [ICA-64] and *Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid* [ICA-65] .

If the suspect psyllids is subsequently confirmed not to be tomato potato psyllid by the **Authorised Inspection Person**, all rejected product that is held in the consignment or lot may be reconsidered for certification provided all requirements of ICA-64 have been met.

6.6 Sampling Suspect Tomato Potato Psyllid

6.6.1 Taking the Sample

All suspect tomato potato psyllid samples **must** be submitted to an Approved Taxonomist by an **Authorised Inspection Person**. Where possible, an **Authorised Inspection Person** should take more than one sample.

The **Authorised Inspection Person shall** take each sample by:

1. carefully retrieving the suspect tomato potato psyllid with an appropriate instrument i.e. brush, forceps or scalpel;
2. placing the suspect tomato potato psyllid in a specimen bottle that contains an appropriate preservative material i.e. methylated spirits.

Where a suspect tomato potato psyllid is contained on the cut flowers or foliage, or part of the cut flowers or foliage with the suspect tomato potato psyllid **must** be wrapped in damp paper towel and placed into a plastic bag without a preservative material i.e. methylated spirits.

3. completing a Sample Submission Form (refer [Attachment 5](#) for correctly completed example) for each sample taken; and
4. placing the specimen bottle or produce (if applicable) along with completed sample submission form into a sealable plastic bag.

The **Authorised Inspection Person shall** forward the sample to an Approved Taxonomist within 24 hours of the sample being taken.

Where a suspect pest sample cannot be delivered in person by an **Authorised Inspection Person**, the sample **shall** be forwarded by secured mail or courier to an Approved Taxonomist for identification.

6.7 Issuance of a Plant Health Assurance Certificate

Following examination of the produce and when the **Authorised Inspection Person** is satisfied that all the conditions and restrictions associated with the produce described on the Tomato Potato Psyllid Inspection Record have been met the **Authorised Inspection Person shall** issue a Plant Health Assurance Certificate in accordance with Interstate Certification Assurance Operational Procedures *Post-Harvest Treatment and Inspection of Cut Flowers for Tomato Potato Psyllid* [ICA-64] and *Fumigation of Cut Flowers with Ethyl Formate for Tomato-Potato Psyllid* [ICA-65] and *Guidelines for Completion of Plant Health Assurance Certificates* [WI-QA015].

7 ATTACHMENTS

Attachment 1	<i>Tomato Potato Psyllid Inspection Record</i>	(COMPLETED EXAMPLE)
Attachment 2	<i>Tomato Potato Psyllid Inspection Record</i>	(COMPLETED EXAMPLE)
Attachment 3	<i>Tomato Potato Psyllid Inspection Record</i>	(COMPLETED EXAMPLE)
Attachment 4	<i>Tomato Potato Psyllid Inspection Record</i>	(COMPLETED EXAMPLE)
Attachment 5	<i>Sample Submission Form</i>	(COMPLETED EXAMPLE)
Attachment 6	<i>Identification of Tomato Potato Psyllid</i>	

MELON THRIPS INSPECTION RECORD

Date of Inspection <i>23/04/16</i>		Package Identification		
Place of Inspection <i>ABC P/L Lot 1 Tomato Lane, Somewhere WA</i>		IP Number (if applicable) <i>W9999</i>		
Name of Authorised Inspection Person <i>A.I. Person</i>		Name & Address of Grower and or Packer (if multiple, list in comments/findings column) <i>ABC P/L Lot 1 Tomato Lane, Somewhere WA</i>		
Inspection Type <input type="checkbox"/> End-point <input checked="" type="checkbox"/> In-line		Produce Type (if multiple, list in comments/findings column) <i>Geraldton Wax cut flowers</i>		
Inspection Rate <input checked="" type="checkbox"/> 600 Unit <input type="checkbox"/> 2%		Total Number of Packages in Consignment/Lot (list separately if multiple commodities) <i>15 ctns</i>		
Notes:		PHAC No(s) <i>9993,9994,9995</i>		
Package No.	Time sample taken (in-line only)	Number of Units	Total Number of Units	Comments/Findings
1	<i>8:30am</i>	<i>100</i>	<i>100</i>	
2	<i>9:00am</i>	<i>100</i>	<i>200</i>	
3	<i>9:30am</i>	<i>100</i>	<i>300</i>	
4	<i>10:00am</i>	<i>100</i>	<i>400</i>	
5	<i>10:30am</i>	<i>100</i>	<i>500</i>	
6	<i>11:00am</i>	<i>100</i>	<i>600</i>	
7				
8				
9				
10				
11				
12				
13				
14				
15				
Pass	<input checked="" type="checkbox"/>	Fail	Signature of Authorised Inspection Person: <i>A.I. Person</i>	
Actions resulting from a suspected detection of a quarantine pest				

MELON THRIPS INSPECTION RECORD

Date of Inspection <i>23/04/16</i>		Package Identification		
Place of Inspection <i>ABC P/L Lot 1 Tomato Lane, Somewhere WA</i>		IP Number (if applicable) <i>W9999</i>		
Name of Authorised Inspection Person <i>A.I. Person</i>		Name & Address of Grower and or Packer (if multiple, list in comments/findings column) <i>ABC P/L Lot 1 Tomato Lane, Somewhere WA</i>		
Inspection Type <input type="checkbox"/> End-point <input checked="" type="checkbox"/> In-line		Produce Type (if multiple, list in comments/findings column) <i>Geraldton Wax cut flowers</i>		
Inspection Rate <input type="checkbox"/> 600 Unit <input checked="" type="checkbox"/> 2%		Total Number of Packages in Consignment/Lot (list separately if multiple commodities) <i>15 ctns</i>		
Notes:		PHAC No(s) <i>8993, 8994, 8995</i>		
Package No.	Time sample taken (in-line only)	Number of Units	Total Number of Units	Comments/Findings
1	<i>8:15am</i>	<i>8</i>	<i>8</i>	
2	<i>8:30am</i>	<i>8</i>	<i>8</i>	
3	<i>8:45am</i>	<i>8</i>	<i>8</i>	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Pass	<input checked="" type="checkbox"/>	Fail	Signature of Authorised Inspection Person: <i>A.I. Person</i>	
Actions resulting from a suspected detection of a quarantine pest				

MELON THRIPS INSPECTION RECORD

Date of Inspection <i>23/04/16</i>		Package Identification		
Place of Inspection <i>ABC P/L Lot 1 Tomato Lane, Somewhere WA</i>		IP Number (if applicable) <i>A. Smith W9898 B. Brown W9991, C. Blogs W9992</i>		
Name of Authorised Inspection Person <i>A.I. Person</i>		Name & Address of Grower and or Packer (if multiple, list in comments/findings column)		
Inspection Type <input checked="" type="checkbox"/> End-point <input type="checkbox"/> In-line		Produce Type (if multiple, list in comments/findings column)		
Inspection Rate <input checked="" type="checkbox"/> 600 Unit <input type="checkbox"/> 2%		Total Number of Packages in Consignment/Lot (list separately if multiple commodities) <i>Gerbera 72 cartons, Bougainvillea 56 cartons, Heliconia 144 cartons, Anthurium 72 cartons</i>		
Notes:		PHAC No(s) <i>8991</i>		
Package No.	Time sample taken (in-line only)	Number of Units	Total Number of Units	Comments/Findings
1		126	126	<i>Gerbera sp A Smith Somewhere WA</i>
2		96	222	<i>Bougainvillea sp B Brown Somewhere WA</i>
3		50	272	<i>Heliconia sp C Blogs Somewhere WA</i>
4		50	322	<i>Heliconia sp C Blogs Somewhere WA</i>
5		50	372	<i>Heliconia sp C Blogs Somewhere WA</i>
6		50	422	<i>Heliconia sp C Blogs Somewhere WA</i>
7		50	472	<i>Heliconia sp C Blogs Somewhere WA</i>
8		2	474	<i>Heliconia sp C Blogs Somewhere WA</i>
9		126	600	<i>Anthurium sp C Blogs Somewhere WA</i>
10				
11				
12				
13				
14				
15				
Pass	<input checked="" type="checkbox"/>	Fail	Signature of Authorised Inspection Person: <i>A.I. Person</i>	
Actions resulting from a suspected detection of a quarantine pest				

MELON THRIPS INSPECTION RECORD

Date of Inspection <i>23/04/16</i>				Package Identification	
Place of Inspection <i>ABC P/L Lot 1 Tomato Lane, Somewhere WA</i>				IP Number (if applicable) <i>W9999</i>	
Name of Authorised Inspection Person <i>A.I. Person</i>				Name & Address of Grower and or Packer (if multiple, list in comments/findings column) <i>J. Smith Green Lane Somewhere WA</i>	
Inspection Type <input checked="" type="checkbox"/> End-point <input type="checkbox"/> In-line				Produce Type (if multiple, list in comments/findings column) <i>Gerbera sp.</i>	
Inspection Rate <input type="checkbox"/> 600 Unit <input checked="" type="checkbox"/> 2%				Total Number of Packages in Consignment/Lot (list separately if multiple commodities) <i>120 cartons</i>	
Notes:				PHAC No(s) <i>8884</i>	
Package No.	Time sample taken (in-line only)	Number of Units	Total Number of Units	Comments/Findings	
1		36	36	<i>Red Gerbera sp J Smith Pallara Q 4110</i>	
2		36	72	<i>Red Gerbera sp J Smith Pallara Q 4110</i>	
3		36	108	<i>Yellow Gerbera sp J Smith Pallara Q 4110</i>	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Pass	<input checked="" type="checkbox"/>	Fail	Signature of Authorised Inspection Person: <i>A.I. Person</i>		
Actions resulting from a suspected detection of a quarantine pest					

SAMPLE SUBMISSION FORM

AUTHORISED INSPECTION PERSON DETAILS

Authorised Inspection Person Name

C. Smith

IP Number of Accredited Business

W9898

Name and address of grower/packer or IP number of the produce that sample was taken

B Brown Chef Rd Somewhere

Type of produce & quantity from which sample was taken

Type of produce:
Geraldton Wax cut flowers
Quantity of produce:
15 ctns

Date sample was taken

23/04/17

Date sample was submitted to Diagnostician

23/04/17

Contact Telephone No

08 9999 9999

Email/Fax No

08 9999 9998

SAMPLE DETAILS

Type of Sample: (e.g. insect, leaves, seeds)

insect

Diagnosis request: (e.g. identify insect, disease, seed)

Confirm whether tomato potato psyllid or not

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.

*Sample taken by C Smith at Chef Rd Somewhere on Geraldton Wax cut flowers
Diagnosis required for market access to South Australia*

DIAGNOSIS DETAILS - For Diagnostician Use Only

Date Sample Received

23/04/17

Date Sample Diagnosed

24/04/17

Diagnosis Result

*Confirmed as Tomato potato psyllid (*Bactericera cockerelli*)*

Method of Diagnosis

Microscope

Comments

Diagnostician Name

B. Bugg

Diagnostician Position

Senior Entomologist

Signature

B. Bugg

Date

24/04/17

Tomato potato psyllid

Tomato potato psyllid (*Bactericera cockerelli*) is an exotic plant pest which feeds on tomato, potato, capsicum, chilli, tamarillo and sweet potato, and solanaceous weeds like nightshade, leading to loss of plant vigour and yield.

What is a psyllid?

The psyllid is a tiny sap-sucking insect. Tomato potato psyllids go through three stages of development – egg, nymph and adult.

Adults and nymphs cause injury to plants by feeding with sucking mouth parts.

- Adult psyllids resemble a winged aphid and are about 3mm long. The body is brownish and has white or yellowish markings on the thorax and a broad white band on the abdomen. Wings are transparent and rest roof-like over the body.
- Nymphs are up to 2mm long, oval shaped, flattened and scale-like in appearance. Young nymphs are yellow with a pair of red eyes and three pairs of short legs. Older nymphs are greenish and fringed with hairs and have visible wing buds.
- Psyllid eggs are less than 1mm long and are attached to the plant by a short vertical stalk. They are usually laid on the lower surface of leaves or as a halo around the leaf edge. Eggs are white when first laid then turn yellow to orange after a few hours.

The tomato potato psyllid can carry the bacterium “*Candidatus Liberibacter solanacearum*”, which is associated with the ‘zebra chip’ disease in potato.

Symptoms of psyllid infestation to look for

Look for damage on the underside of leaves. Signs of tomato potato psyllid include:

- Insects jumping from the foliage when disturbed.
- Severe wilting of plants caused by high numbers of psyllids feeding.
- Yellowing of leaf margins and upward curling of the leaves.
- White sugar-like granules (excreted by adults and nymphs), which coat plant leaves and stems, and can lead to the development of sooty mould.
- Ants on plants may be symptomatic of the presence of sugars.

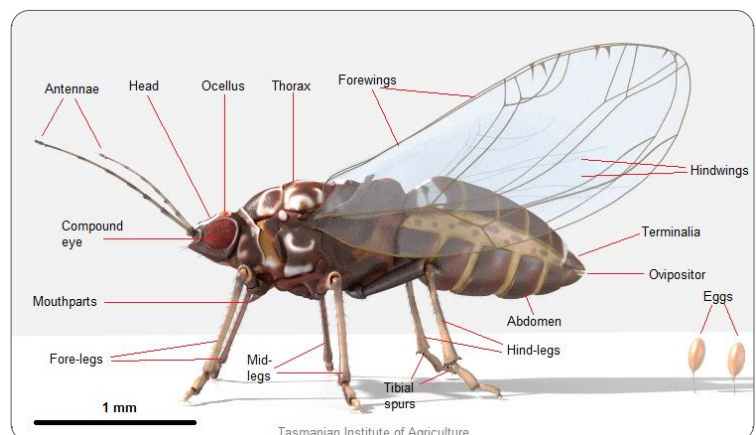
- Stem death symptoms similar to other potato and tomato disorders.



Mature adult psyllid in comparison to 5 cent piece. Note the small size of the insect and how the wings rest roof-like over the body



Adult psyllids are darker in colour than nymphs, which are up to 2mm long, oval shaped, flattened and scale-like in appearance. Tomato potato psyllid can be found on the underside of leaves and go through three stages in their development – egg, nymph and adult.



(Source: University of Tasmania)