

2019

Quarantine & Quality
Management Division

**STANDARD OPERATION PROCEDURES FOR EXPORT OF WATERMELON INTO
NEW ZEALAND**

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PART I – GENERAL PRINCIPLES

1 Purpose

- a. This Standard Operation Procedures (SOP) outlines the procedural requirements and activities undertaken by Tonga Ministry of Agriculture, Forestry and Food (MAFF) in relation to the export of watermelon from Tonga into New Zealand.
- b. The basis of this SOP was mutually agreed upon by MAFF and the New Zealand Ministry of Primary Industries (MPI) in the Work Plan D which was effective on March 1998.

2 Scope

This SOP applies to unaccompanied watermelon consignments in either sea or air freight containers only. It does not cover the accompanied watermelon consignments carried by passengers or crew member.

3 Structure of SOP

- a. The SOP contains the following components:
 - i. General Principles
 - ii. End Point Inspection and Fumigation System
 - iii. Exporter Based Inspection and Fumigation System
 - iv. Stage of Ripeness (as a Treatment) System
- b. There may be flexibility in this system which may include adding new crops, changing of existing crops or altering the pathways and others. However all changes are subjected to the approval of MPI.

4 General Requirements – Quarantine Quality System

- a. A proper record system shall be in place by MAFF in monitoring compliance by registered exporters. The record shall include:
 - i. Procedures for registration of exporters together with relevant details (export history, pack house details) and growers.
 - ii. Inspection procedures and records
 - iii. Fumigation procedures and records
 - iv. Post treatment security procedures

- a. In the event of an interception of infested watermelon produce by MPI, MAFF would carry out the following tasks:
 - i. Trace back to relevant Grower, Pack house and Exporter records.
 - ii. Homogeneity of Consignments
 - iii. Inspection by Certified Quarantine Authority
 - iv. Treatment
 - v. Post Treatment Security
 - vi. Phytosanitary Certificate

5 Approved Crop and Treatment Combinations

Watermelons of all varieties are approved for import into New Zealand from Tonga.

6 Fumigation Treatment

- a. All watermelon produce subject for import must be strictly fumigated in accordance with the specified standard below:
 - i. Gas - methyl bromide;
 - ii. Dosage Rate/Duration Time - 32g/m^3 for 4 hours;
 - iii. Flesh temperature of between 21°C and 26°C
 - iv. Chamber Volume - loading of not more than 50% of watermelon wooden bin
- b. The fumigation standard details must specify on the Phytosanitary Certificate.

7 Maximum Pest Limitation (MPL)

- a. As per the specification set out by MPI, a limitation of 5 live pests from any species of Tephritidae (fruit fly) per million units of watermelon produce needs to be intercepted or present in the import consignment of watermelon, to trigger a critical noncompliance and possibly reach a decision to ban/suspension on the importation of watermelon produce by MPI.
- b. MAFF is obliged to implement this pest limitation requirement and ensure strict compliance by all registered exporters of watermelon produce in Tonga.

8 Quality Audit System

- a. MPI from time to time may conduct random audits of the implementation of the watermelon pathway under this SOP in Tonga.
- b. The purpose of the audit is to ensure adequate compliance by MAFF and registered watermelon Exporters with procedures set out in this SOP.
- c. Non-compliance can be minor or critical in nature. In the event of any noncompliance, MPI solely reserves the right to make any the following decisions:
 - i. Call on MAFF to rectify the noncompliance issue; or
 - ii. temporary suspend the import of watermelon through the specified pathway in this SOP into NZ from Tonga until such time the Chief Plan Officer of MPI is satisfied to resume operation; or
 - iii. Completely ban watermelon importation though the specified pathway in this SOP; or
 - iv. Make any other decision that he may deem think fit or suitable in the circumstances.

9 Communications

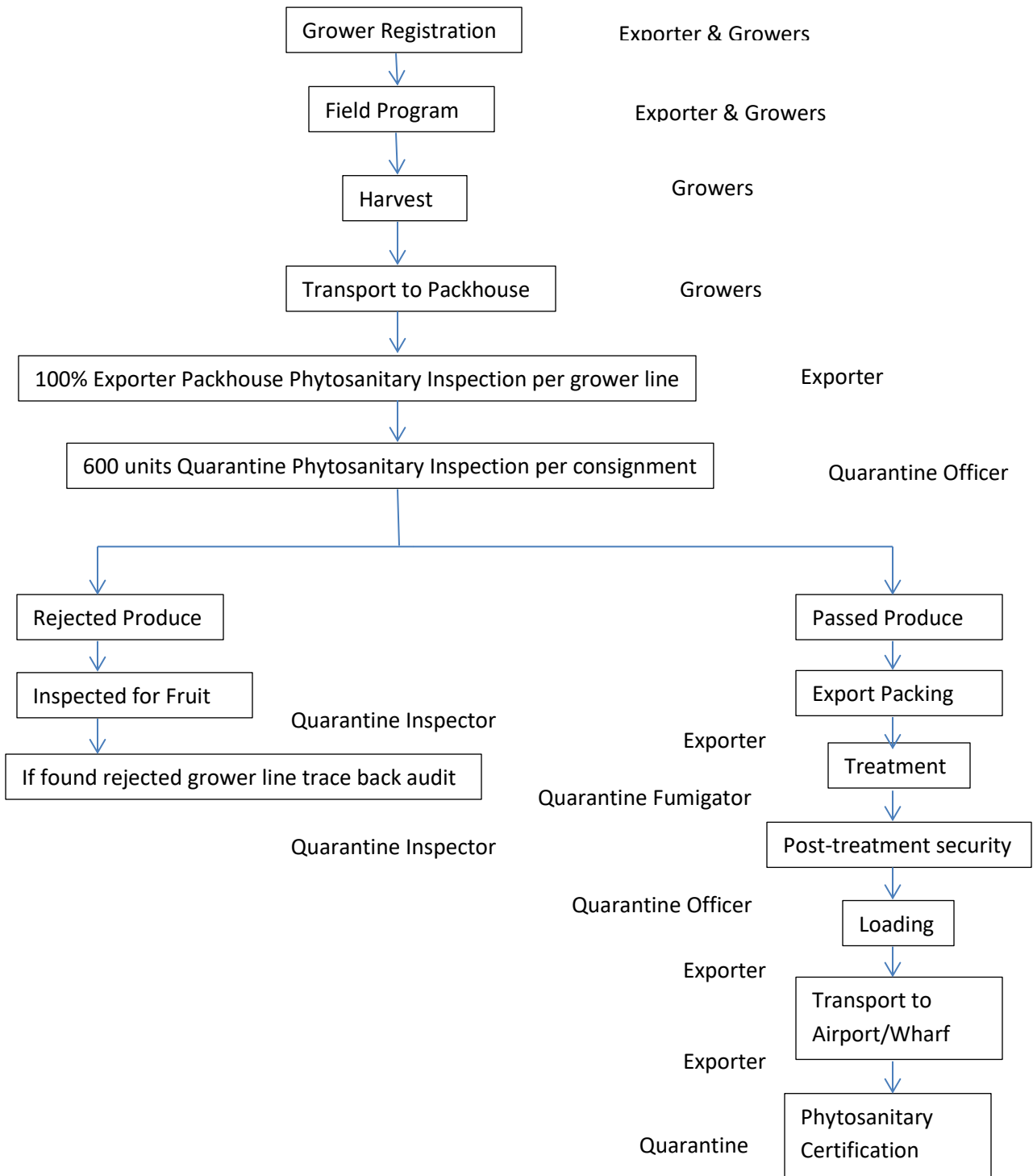
- a. The Chief Plant Officer, New Zealand MPI and the Director of Tonga MAFF shall communicate from time to time regarding the content of this SOP.
- b. All proposed amendments or alternations in this SOP must be approved by MPI and MAFF prior implementation and thereafter becomes an update of this SOP.

10 Relevant Stakeholders

In terms of implementing this SOP, the following are relevant stakeholders are involved with different line of responsibilities specified in this SOP.

- i. Quarantine Quality Management Division (QQMD) officials/inspectors;
- ii. Registered Exporters of Watermelon; and
- iii. Registered Growers of Watermelon

11 Generic Flowchart



PART II – The Watermelon Export Pathway System

1 Quarantine End Point Inspection

MAFF (particularly QQMD officials) are required to undertake the following tasks as part of the end point inspection in the Watermelon Pathway System required by New Zealand.

- i. A grower pack house and exporter registration system
- ii. A 100% quarantine inspection of 600units (see attachment 5)
- iii. Fumigation
- iv. Post treatment security of product

2 On Farm Production – Grower Registration

- a. The Director for MAFF practically delegates the registration of growers who intended to export watermelons into New Zealand to the registered exporters.
- b. All interested growers must register with their respective Exporters, by using the application form GI (see attachment 3), prior to growing their watermelon produce.
- c. All and only registered growers of watermelons are covered by this SOP.
- d. The duration for such registration is one calendar year.
- e. MAFF must verify the registration records and unique numbers of the registered growers and exporters.
- f. The Director reserves the rights for the following decisions:
 - i. De-register a grower's site production for non-registration and failure to comply with the procedural requirements under this SOP;
 - ii. Re register a grower if he is satisfy that the grower has rectify noncompliance and operate in accordance with the requirements under this SOP;
 - iii. Reject the issuance of phytosanitary certificates for watermelon consignments of unregistered growers.
- g. The registration records will be available for inspection by MPI at any time.

3 Registration of Exporter

- i) Registration of Exporters of Fruit Fly Host Commodities from Tonga into New Zealand
 - All Exporters indenting to export fruit fly host commodities to New Zealand must be registering by MAFF Tonga.

- The registration and de – registration of Exporters is the responsibility of the Director of MAFF who has designated the Head of Quarantine and Quality Management Division to carry out this task.
 - Intending Exporters must apply for registration using Application Form No.E1 (see attachment 1).
 - Each Exporter must also sign the Exporter Agreement Form E2 (see attachment 1).This is assurance of his agreement to adhere to the terms of the SOP.
- ii) The designated QQMD officer will assist exporters to complete Packhouse Application Form No. E3, (see attachment 2) assess the suitability of facilities for inspection, packaging and storage, and ensure that the applicant has the following documents.
- Valid export license from the Ministry of Labour , Commerce and Tourism
 - MAFFF Export Application Form E1
 - MAFFF Export Agreement Form E2
- iii) The designated QQMD or MAFFF officer will inspect the Exporter’s facilities. The minimum requirements for registration will be:
- Suitable building and facilities for grading, inspection, packing and storage of commodities.
 - Building should have concrete floor, sound roof and adequate ventilation.
 - Building should have adequate light and lighting for grading and inspection.
 - Building should have an adequate water supply.
- iv) All documents must be completed and submitted to the Head of Quarantine and Quality Management Division for consideration.
- v) The Head of QQMD shall register approved Exporters in writing (refer form E3) indicating the Exporter’s registration number and the list of commodities and the SOP pathways under which they are permitted to export .Unless revoked earlier , registration will remain valid up to the end of the calendar year in which it is granted.
- vi) Registered Exporter’s will accept only quality fruit for export from registered Growers. Non – adherence to this will result in immediate de- registration.
- vii) The Head of QQMD may de – register any Exporter if he /she do not comply with the terms of the SOP.

4 Transportation (from property to packhouse)

- a. Registered growers are responsible for transporting of watermelon produce directly from their respective property to the pack house.
- b. The watermelon produce must be handled with care to avoid bruising, cracking or possible pest infestation.
- c. Registered growers are responsible for offloading the watermelon produce on arrival at the pack house. Again special care and attention are needed in handling the produce to avoid possible cracking or bruising which may result in pest infestation.

5 Packhouse Grading & Inspection

- a. All grading and packing of watermelon produce for import must be carried out in a pack house registered by MAFF.
- b. Export Packhouse Phytosanitary Inspectors (EPPI) must carry out a single inspection of every individual watermelon to ensure it is free from soil, bruising, soft spot, cracks and fruit fly infestation. (see attachment 6)
- c. In the event of any produce that fails to meet the inspection requirement under 4 b, the inspector must reject fresh produce.
- d. The EPPI is responsible at this stage to regularly carry out a sampling after grading and prior to packing at the pack house to ensure that grading staff complies with the inspection requirements.
- e. In the meantime, all graded watermelon are segregated into the export bin or carton for inspection by MAFF Quarantine Inspector.

6 Exporters

- a. All exporters intending to export watermelon, a fruit fly host commodity to New Zealand must register under MAFF by virtue of Application Form E1.
- b. Each registered exporter must sign the agreement in E2 to ensure bound by this SOP. QQMD officials at MAFF may assist exporter with his form filling.
- c. Registered exporters must ensure that all its intended growers are registered.
- d. Head of QQMD reserves the right to conduct the following acts:
 - i. Refuse issuance of phytosanitary certificate for export of watermelon by an unregistered exporter;
 - ii. Suspend or deregister an exporter who recklessly accepts watermelon produce from an unregistered grower;

- e. MAFF through QQMD officials must ensure inspection of the pack house and exporter's facilities for the following:
 - i. Valid export license from the Ministry of Labor , Commerce and Tourism
 - ii. MAFF Export Application Form E1
 - iii. MAFF Export Agreement Form E2
 - iv. Ensure the interior of pack house is fit and proper for grading, inspection, packaging and storing of watermelon produce for export.
 - v. Pack house Facility should have concrete floor, sound roof and adequate ventilation.
 - vi. Building should have adequate light and lighting for grading and inspection.
 - vii. Building should have an adequate water supply.
- f. All documents must be completed and submitted to the Head of Quarantine and Quality Management Division for consideration.
- g. The Head of QQMD shall carry out the following:
 - i. Register approved Exporters in writing (refer form E3),
 - ii. Issue the Exporter with a registration number and
 - iii. The list of commodities and the SOP pathways under which they are permitted to export.
 - iv. De register any Exporter at any time before his registration expires for noncompliance with this SOP.
- h. Unless revoked earlier, registration will remain valid up to the end of the calendar year in which it is granted.
- i. Registered Exporters must only accept quality watermelon produce for export from registered Growers. Non – adherence to this may result in immediate de- registration.

7 MAFF Inspection

- a. MAFF (particularly QQMD officials) must completely inspect 600 units of produce (ie 100%) presented by a registered grower for export to New Zealand.
- b. Any unit found to be infested with fruit fly and/or other actionable pests will be rejected from export.
- c. MAFF will also reject unsound fruit, or fruit in any other state, that may have fruit fly infestation.

- d. MAFF must record information details of all inspections it carries out. These include:
- i. Name of crop Produce
 - ii. Inspection date
 - iii. MAFF Quarantine Inspector
 - iv. Name of Grower name
 - v. Registered Exporter's name
 - vi. Monitoring sheet number
 - vii. Number of units inspected
 - viii. Number of reject units from each grower
 - ix. Total number of exportable cartons/bins
 - x. Reason for rejects
 - xi. Pest identifications
 - xii. Reference to treatment records
 - xiii. Reference to phytosanitary certificate
- e. Growers' Lots that have been passed through MAFF inspection will be packed by the registered exporter.
- f. All export cartons/bins will be labelled with a monitoring sheet number which will be written on every bin.

8 Fumigation

- a. MAFF must undertake the fumigation process of all intended watermelon consignments to be exported according to the standards requirements under this SOP.
- b. Prior to operation, MAFF must test the fumigation facility at least once every week during the export season in accordance with the operating procedures set out by New Zealand to ensure that there are no mechanical failures.

9 Post Treatment Security

- a. Following fumigation, MAFF must place a sticker on cartons/bins or consignments which have been passed and cleared for export.

- b. Cartons will then be placed either in an insect proof container, or covered with insect proof netting. Insect proof conditions will be maintained until such time as produce is loaded and secured on board in the means of transportation.
- c. MAFF must monitor transportation procedures and reconcile consignments at the port of discharge.

10 Phytosanitary Certificate Endorsements

- a. All cleared and passed watermelon consignments must acquire a phytosanitary certificate which verifies the following:
 - i. That the subjected produce in the consignment have been treated in accordance with the MPI import requirements that is reflected in this SOP;
 - ii. MAFF had inspected the consignments and confirmed suitability to access New Zealand port.
 - iii. A fumigation treatment detail which was carried out is specified in the phytosanitary certificate. Details include: the chemical used, dosage rate, treatment time, the flesh temperature of the produce and the chamber loading level during treatment

11 Tonga MAFF Finding on Inspection

In fruit fly is detected during Tonga MAFF inspection, the grower who supplied the infested line(s) will be suspended from supplying produce for export to New Zealand until such time as the Director of Agriculture is satisfied the requirements of the SOP can again be met. If a further fruit fly interception is made from produce supplied from the same grower in the same calendar year, further exports of fruit fly host produce from that grower to New Zealand will be suspended for the remainder of that calendar year.

12 Inspection Procedures

- i) Procedure for Inspection of Fruit Fly Host Commodities for Export
 - The following inspection procedure applies only to the watermelons.
 - Only registered Growers will deliver fruit fly host commodities to the Exporter's pack houses for inspection.
 - Growers must have copies of the Monitoring Sheet (see attachment 7) from the Exporter and shows to the designated MAFF –QQMD Inspector before the commodities can be cleared for grading and inspection.
 - It is the responsibility of the Exporter to carry out the grading and a full initial inspection of the commodities.
 - The Export Pack House Inspectors (EPPI) will inspect every individual fruit (100%) for freedom from soil, bruising, soft spots, cracks, insect infestation etc. and reject such fruit accordingly.

- After the EPPI inspection, the designated MAFF QQMD inspector will carry out 600units inspection of the commodity random pick from consignment.
- Detection of any fruit fly (egg, Larvae or adult) alive or dead, will result in the rejection of the grower line
- If the consignment has passed MAFF Quarantine and Quality inspection the Exporter can pack export cartons /bins.
- After packing the designated QQMD Inspector will place the Grower’s registration number and a seal “PASSED INSPECTION” onto the carton or bin.
- After sealing of the carton / bin by QQMD Inspector, the commodity will be covered with an insect – proof screen.
- Exporter’s shall be responsible for the safe transportation of the inspected commodity from the pack house to the MAFF post – treatment centers, either at Queen Salote Wharf or the Fua’amotu Airport or Neiafu Wharf , Vava’u .The commodities must be transported under cover with an insect – proof screen.

ii) QQMD Inspectors will record the following for each grower line:

- Inspection date
- Crop
- Exporter
- Grower
- Registration number
- Monitoring sheet number
- Number of units inspection
- Number of units rejected
- Total number of cartons /bins exported
- Number of units with insect pests
- Pest identification
- Phytosanitary Certificate number
- Fumigation number
- Inspectors name and remarks

This information is required for auditing purposes.

PART III: Detection of Fruit Fly in New Zealand

1 Advice of Detection of Fruit Fly in New Zealand

- a. Upon receipt of advice from CPO of MPI of a detection of a fruit fly from any imported watermelon consignments from Tonga.
- b. MAFF will withhold the issuance of phytosanitary certificates for watermelon treated under the identified pathway in this SOP until all components of the pathway system is checked.

- c. MAFF together with a representative from MPI will thoroughly checked the pathway system to find out the loophole.
- d. Following that, CPO may then re-endorse the pathway system once satisfied that New Zealand's biosecurity requirements can again be met.

2 Contingency Plans-Within New Zealand

a. Inspection of Unaccompanied Consignments on arrival in New Zealand

- i. New Zealand MPI will examine a predetermine sample from all consignments on arrival in New Zealand. This sample will be based on the sampling plans.

b. Action on Detection of Fruit Fly

- i. Detection of fruit fly (egg, larva or adult), alive or dead in excess of the appropriate acceptance number will result in a rejection of that consignment.
- ii. The MPI CPO will advise the Director MAFF that the importation of watermelon produce through this pathway will be suspended until such time the CPO is satisfied that New Zealand's biosecurity requirements can again be met.

c. Action on Detection of Other Pests and Contaminants

Refer Pest Lists

d. Quarantine Pests

- i. Detection of live quarantine pests in excess of the established maximum pest limit will result in the consignment being treated and MAFF will be notified.
- ii. Where a treatment is not available (e.g. seeds and diseases) the importer may have the option of having the consignment sorted, re-shipped or destroyed.

e. Injurious Pests

- i. Detection of live injurious pests above the sample tolerance will result in the consignment being treated.

f. Contaminants

- i. Detection of live contaminants above the sample tolerance will result in the consignment being treated.

g. Soil Contamination

- i. Detection of live contaminants above the sample tolerance will result in the consignment being treated.

h. Action for Accompanied Consignments

- i. MPI will order re-shipment or destruction of any fruit fly host produce brought to New Zealand as accompanied consignments.
- i. **Feedback of Non-Conformance Information**
- ii. MPI will regularly feedback information relating to pest interception details, above accepted tolerances, to Tonga MAF.

PART IV: Plans for Specific Crops

1 Tonga Sampling Plans-Tonga Fruit Fly Hosts

Single Stage Sampling - Tongan Watermelons

Sample Size (number of units)	Acceptance Number of Units infested with live pests, seeds or disease symptoms				
	Critical Quarantine Pests		Quarantine Pests	Injurious Pests	Contaminants
	Live	Dead			
100	0	0	0	1	5
600	0	0	0	21	48
950	0	1	1	36	80

2 Pest Lists

WATERMELON

A. Critical Quarantine Pests

Fruitflies (Tephritidae) (MPL = 5 pests per million units)

B. Quarantine Pests (MPL = 0.5%, i.e. 1 infested fruit in 200)

Aulacophora similis
(pumpkin beetle)
Aulacophora quadrimaculata
(pumpkin beetle)
Phakellura indica (cucumber
Ferrisia virgata (striped
mealybug)
Leptoglossus australis (squash
Platysinus insularis (brown
weevil)
Sphaerorhinus sp. indet (weevil)
Aphididae, Pemphigidae (aphids)

Seeds -

Baccharis spp.
Cenchrus spp.
Chondrilla juncea
Cyperus spp. excepting
C. brevifolius
C. eragrostis
C. esculentus
C. rotundus
Eragrostis curvula
Lycium spp. excepting
L. chinense
L. ferocissimum
Pennisetum alopecuroides
Pennisetum macrourum
Phragmites spp.
Solanum eleagnifolium
Sorghum x alnum
Sorghum halapense
Tribulus spp.
Xanthium spp. excepting
X. spinosum

C. Injurious Pests (MPL = 5%, i.e. 5 infested fruit in 100)

Chrysodeixis eriosoma (green looper)
Nezara viridula (green vegetable bug)

D. Contaminants (MPL = 10%, i.e. 10 infested fruit in 100)

Spiders, predatory mites, vinegar flies, etc.

3 Pesticide List MAFF Recommended for RG2 Pests

This pesticide helps to control *Bemisia tabaci* and *Liriomyza trifolii* its one of RG2 Pest which can be found on watermelon. (see attachment 4)

PART V – Definitions & Terminologies

The outlined definitions should be adopted when interpreting the meanings of certain specified terms in this SOP.

- a. **CPO:** Chief Plants Officer of the Ministry of Primary Industry in New Zealand
- b. **Critical Non-conformance:** A non-conformance (or series of non-conformances) that, in the opinion of the audit team, jeopardizes New Zealand's biosecurity.

- c. **NZ MPI:** New Zealand Ministry of Primary Industry
- d. **Tonga MAFF:** Tonga Ministry of Agriculture and Forestry
- e. **Accompanied:** Produce that is brought in by person (e.g. passenger, crew member) for personal consumption
- f. **Unaccompanied:** Produce consigned as bona fide sea or cargo
- g. **Consignment :** Once or more grower lines inspected, packed and fumigated for export and contained on one phytosanitary certificate.
- h. **Grower Line:** Any number of one product from one grower presented for inspection at one time
- i. **Monitoring Sheet:** The uniquely numbered form used by exporter to verify the quantity of grower produce and the registration status of that grower
- j. **MPL:** Maximum pest level or limitation
- k. **SOP:** Standard Operation Procedures
- l. **Unit:** An individual piece of produce
- m. **Exporter Lot:** Any number of grower lines inspected and packed by a registered exporter and submitted to Tonga MAF for inspection at one place at one time
- n. **Exporter Packhouse:** A designated person (usually the most experienced) responsible for the export **Phytosanitary Inspector** pack out and maintenance of inspection records.
- o. **Reconditioning:** Any action (e.g. re-sorting and re-grading a line) that lowers the level of infestation to meet New Zealand's agriculture security requirements.