

## SPECIFICATIONS FOR COLD TREATMENT OF PLUM AND TABLE GRAPE FROM CHILE TO NEW ZEALAND

### 1. SPECIFICATIONS FOR RECORDING AND SENSING DEVICES

Temperature probes and temperature recorders must be capable of meeting the specified requirements.

#### **a. Temperature recorders**

SAG shall ensure that temperature recorders:

- (i) are able to accommodate the required number of sensors;
- (ii) are capable of recording and storing data for the period of the treatment;
- (iii) are capable of storing information following the treatment until the information can be examined by the appropriate authority;
- (iv) are capable of recording readings by the sensors at least hourly to the same degree of accuracy as is required of the sensors (*see below*);
- (v) are capable of producing, or can download the information to produce, printouts which identify each sensor, time and temperature, as well as the identification of the container where the treatment was undertaken;
- (vi) are traceable to an approved treatment operator (where the treatment is carried out pre-shipment).

#### **b. Calibration of temperature sensors**

The calibration of sensors will be conducted using a slurry of crushed ice and distilled water, or by an equivalent agreed method. Calibration of sensors will be carried out by SAG, or authorised representative prior to shipping, to ensure that they meet the calibration range requirement.

Any sensor which reads outside of the range of  $\pm 0.6^{\circ}\text{C}$  from  $0^{\circ}\text{C}$  must be replaced by a sensor that meets this criterion.

#### *Pre-shipment cold treatment*

Temperature sensors will be calibrated prior to cold disinfestation treatment. Following the disinfestation treatment the sensors will again be checked by SAG, or authorised representative, to ensure that they meet the calibration range requirement.

A calibration record must be prepared for each treatment batch, and signed and stamped by SAG. The original calibration record/s must be attached to the phytosanitary certificate accompanying the consignment. See Attachment 1 for an example of a calibration record.

### *In-transit cold treatment*

A record of calibration for each sensor (Attachment 1) will be made available to the MAFBNZ inspector upon arrival of shipments in New Zealand.

MAFBNZ will randomly check calibrations on arrival in New Zealand.

## **2. TREATMENT COMPLETED PRE-SHIPMENT**

If a consignment<sup>1</sup> is to receive pre-shipment cold treatment SAG will ensure compliance with the following conditions:

### **2.1 Cold room facilities**

Pre-shipment treatment is only permitted in cold room facilities approved by SAG.

SAG must ensure that cold room facilities used by exporters are of a suitable standard and with refrigeration equipment capable of achieving and holding the fruit at the required temperature.

SAG will maintain a register of cold room treatment facilities approved for pre-shipment treatment of nectarine, peach, plum and table grape for export to New Zealand. This register will include documentation covering:

- (i) location and construction plans of all facilities, including owner/operator contact details;
- (ii) dimensions of the facilities and the room capacity;
- (iii) the temperature range of the equipment, defrost cycle control and specifications of any integrated temperature recording equipment; and
- (iv) a list of operators that are approved to carry out cold disinfestation treatments for exports to New Zealand.

### **2.2 Placement of temperature sensors**

All activities relating to the loading of cold rooms and placement of temperature sensors and connection to loggers/recorders must be carried out under the supervision of an SAG officer or SAG authorised representative.

A minimum of two sensors must be used to measure room temperature, and a minimum of four sensors must be used to measure fruit flesh temperature. The two room temperature sensors must be placed at the inlet and outlet points of air circulation. The four flesh temperature probes should be placed close to the potential “warmest spots” as follows:

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<sup>1</sup> *Consignment*: (ISPM Glossary of Phytosanitary Terms) a quantity of plants, plant products and/or other regulated articles being moved from one country to another and covered by a single phytosanitary certificate (a consignment may be composed on one or more lots).

- (i) one probe placed at the centre of the stack in the centre of the cold room;
- (ii) one probe placed at the corner of the top stack in the centre of the cold room;
- (iii) one probe placed at the centre of the stack near the outlet of cold air; and
- (iv) one probe placed at the corner of the top stack near the outlet of cold air.

The recording of temperature data can be commenced at any time. The actual treatment will be deemed to have begun only when all sensors have attained the required treatment temperature.

Where the minimum number of sensors is used and any one sensor fails to record a temperature for more than four consecutive hours the treatment will be deemed to have failed and will be required to be re-commenced.

### **2.3 Confirmation of treatment**

Where the treatment record indicates that the treatment parameters have been met SAG may authorise the cessation of the treatment. Results of this calibration must be recorded on the calibration record.

If, as a result of re-calibration, any sensor produces a lower reading than during the initial calibration the sensor recordings must be adjusted appropriately. Where the adjustment shows that the treatment parameters have not been met the treatment will be deemed to have failed.

Where a treatment has been deemed to have failed the fruit may be retreated at the discretion of SAG and industry participants. In circumstances where SAG has documented confirmation that the conditions of the treatment schedule have been maintained since treatment cessation, the treatment may be allowed to continue. Data collection must continue from the time of reconnection of the recording device.

Treatment record printouts must be endorsed (stamped and signed) by SAG and maintained for MAFBNZ audit.

### **2.4 Storage of fruit before loading into containers**

Where treated fruit must be stored prior to loading, the fruit must be stored under conditions that prevent the reinfestation or contamination of the fruit. When storage is carried out in the same cold room where the treatment was completed the doors to the cold room must be sealed by SAG until the produce is ready for loading.

Where storage of product must occur in another room, the room must be free of untreated produce and contaminants. Any produce from other treated batches must be segregated. The produce must be moved to the room under SAG supervision and in a manner that will prevent re-infestation or contamination of the produce. The door of the room must be sealed by SAG until the produce is ready for loading.

## 2.5 Loading into containers

Containers will be inspected before loading by SAG to ensure freedom from pests and any vents are covered to preclude the entry of pests. Loading must take place under SAG supervision.

To ensure post-treatment security is maintained, fruit must be loaded within an insect proof building or by using an insect proof enclosure between the cold room entrance and the container.

## 2.6 Sealing of containers

A numbered tamper proof seal will be placed on the door of the loaded container door by an authorized SAG officer. The seal number will be noted on the phytosanitary certificate.

## 3. IN-TRANSIT COLD TREATMENT

SAG will ensure compliance with the following conditions:

### a. Container type

In-transit cold treatment will only be permitted in a self-refrigerated (integral) shipping container.

SAG will be responsible for ensuring that containers used by exporters are of a suitable type, and with refrigerator equipment capable of achieving and maintaining the required temperatures.

### b. Placement of temperature sensors

Containers must be packed in a manner which ensures that there is even airflow under and around all pallets and any loose stacked cartons.

Records of fruit pulp temperature are required from at least three locations. Sensors will be placed in fruits as follows:

- (i) Two fruit pulp temperature sensors will be placed approximately 1.5 metres from the end of the load for 12 metre containers and approximately 1 metre from the end of the load for 6 metre containers. One of the fruit pulp temperature sensors will be placed inside a carton on the side of the pallet that runs parallel with the side walls and is facing another pallet of fruit. The other fruit sensor will be placed in a carton at a side wall. Both sensors will be located at one-half the height of the stack.
- (ii) The remaining fruit pulp temperature sensor must be located in the top of a carton in the centre of the stack.
- (iii) It is important that the tip of the fruit pulp temperature sensors are not allowed to extend outside the fruit.
- (iv) Placement of sensors will be under the direction and supervision of an officer authorised by SAG.

- (v) On completion of treatments, printouts (or electronic equivalent) of all temperature sensors will be made available to the MAFBNZ officer at the port of arrival for final clearance of the container.

#### 4. PHYTOSANITARY CERTIFICATE

A phytosanitary certificate issued by SAG must accompany every consignment and have the additional declarations specified in the MAFBNZ “Import Health Standard for the Importation and Clearance of Fresh Fruit and Vegetables into New Zealand”.

NOTE: Where the cold disinfestation treatment is undertaken prior to shipment the full details of the treatment must be included in the “Disinfestation and/or Disinfection Treatment” area of the phytosanitary certificate. Details of the treatment duration and temperature must be recorded.

In-transit cold treatment must be specified in the “Disinfestation and/or Disinfection Treatment” area of the phytosanitary certificate.

Both the seal and container numbers will be recorded on the phytosanitary certificate in all cases.

#### 5. ON ARRIVAL INSPECTION

Upon arrival of shipments in New Zealand a MAFBNZ inspector will check the seal of the container to ensure the integrity of the consignment has been maintained in terms of possible post-treatment infestation and/or product substitution.

Temperature records for each container and the phytosanitary certificate (including all attachments) will be made available to a MAFBNZ inspector on arrival in New Zealand.

NB: If more than three fruit pulp sensors are used, MAFBNZ will only inspect records from three sensors that are closest to the treatment range.

##### **Phytosanitary Inspection**

If satisfied that the required cold treatment specifications have been achieved, MAFBNZ will then sample and inspect the consignment.

In the event that New Zealand’s phytosanitary requirements have not been met, actions will be taken in accordance with section 7 Non-Conformance Contingencies, MAFBNZ “Import Health Standard for the Importation and Clearance of Fresh Fruit and Vegetables into New Zealand”

Attachment I:

### RECORD OF CALIBRATION OF FRUIT SENSORS

NAME OF VESSEL \_\_\_\_\_

CONTAINER NUMBER \_\_\_\_\_

PHYTO NUMBER \_\_\_\_\_ NO. OF CARTONS \_\_\_\_\_

CONTAINER SEAL NUMBER \_\_\_\_\_

RECORDING INSTRUMENT TYPE \_\_\_\_\_

#### SENSOR CALIBRATION (0°C)

SENSOR NUMBER	TEST		CORRECTION FACTOR
	1	2	
1			
2			
3			

The offset values were entered into the recorder and temperature values in the treatment chart will be automatically adjusted.

The offset values were NOT entered into the recorder and temperature values in the treatment chart must be manually adjusted using the offset values.

SIGNATURE OF  
SAG OFFICER

Print Name:

Date: