

(Effective January 1, 1992)
SUGGESTED PROCEDURE
FOR SUPERVISION OF
HOT WATER TREATMENT OF GRAPEVINES
FOR NEMATODE CONTROL

This treatment is a means of salvaging infested rootings. It is not a substitute for a nematode-free nursery soil or for fumigation. Use of this procedure must be approved by the commissioner in advance.

Following is a suggested procedure to be used for supervision of hot water treatment for nematode control.

- I Conditions under which hot water treatment of grapevines may be approved.
 - 1 To clean up dormant grapevine nursery stock found infested with nematodes.
 - 2 If an approved fumigation is blocked by conditions beyond the nurseryman's control after the fumigant has been applied.
 - 3 If a dispensation is granted by the Director.
- II Nematodes approved for control.

Any species of plant parasitic nematode that is not a known vector of plant virus diseases in grapevines.
- III Procedure
 - A. Equipment
 - 1 A recording thermometer with multiple probes accurate to $\pm 1^{\circ}\text{F}$.
 - 2 Tank to be used for pre-dip.
 - 3 Tank to be used for dip.
 - 4 Tank to be used for post dip or running water or hose for cooling vines.
 - B. Calibration

Each year, before vines are dipped, the recording thermometer must be calibrated and approved by the Department.
 - C. Preparation

All vines to be dipped should be washed and contain no soil.

D. Pre-Dip (for vines that are less than 78°F at time of treatment).

- 1 A water bath maintained at a temperature of 78°F to warm up vines.
- 2 Vines should be submerged for five to ten minutes.

E. Dip Treatment

- 1 A minimum of three probes are placed so one is near the heat source, and at least one is within the bunch or cluster of vines.
- 2 Vines that are to be dipped are loosely placed in baskets or loose bundles.
- 3 The ratio of water to vines should be such that after immersion of the vines, the water temperature of the probe in the vines will return to 125°F within one minute.
- 4 Water in the dip tank shall circulate during the treatment of vines to ensure even temperature distribution.
- 5 Temperatures at all probe locations shall be held at 125°F ± 1°F during the five minute dip period after an initial temperature drop and recovery. Any temperature deviation above or below 125°F ± 1°F must be corrected within one minute.

F. Post Dip

Immediately following hot water treatment, vines should be plunged into cool water or hosed off to prevent damage to the plants.

G. Supervision

- 1 The commissioner should approve the dipping equipment prior to the dipping.
- 2 Commissioner should ensure that the recording thermometer is calibrated prior to use.
- 3 Commissioner should visit the site on a daily basis during the dipping to examine the recording from the thermometer. If a nonrecording thermometer is used the commissioner should supervise each lot treated.
- 4 Vines that receive a dipping that fails to meet the standards outlined in this procedure should not be redipped due to cumulative damage to the vines.