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CROWN TREATMENT FOR HOP DOWNY MILDEW CONTROL

by
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Crown treatment is an economical and effective way to reduce the amount of downy mildew in Oregon hopyards.

WHAT TO USE

In order of preference, the following materials are recommended:

1. Granular, or powdered, calcium cyanamide.
2. Copper sulphate (bluestone) - hydrated lime dust.
3. Zinc-sulphate-hydrated lime dust.

Calcium cyanamide is not only a fungicide but a source of nitrogen, valuable as a fertilizer. It is used in the form in which it is purchased, unmixed with other materials.

The bluestone should preferably be monohydrated or dehydrated. It can be used, like zinc sulphate, in finely ground or powdered form.

Use a mixture of at least 10 pounds of bluestone or zinc sulphate to 90 pounds of hydrated lime.

Either of these dusts may be purchased ready-mixed. Growers who prefer, or find it necessary, to buy the ingredients separately and do their own mixing should take pains to do a thorough job to insure uniform results.

All of the crown-treatment materials should be packed in tight containers and stored in a dry place until used.

WHEN TO USE

All of the materials should be applied as early in the spring as weather conditions will permit; if possible, after danger of flooding is past.

* Agent, Division of Tobacco, Medicinal and Special Crops, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, United States Department of Agriculture.

Applications should be made after old vines have been removed and before new shoots appear above the soil surface.

Calcium cyanamide should not be used on replants. On older plants it should be applied to the soil surface before hoeing or after the crowns have been covered with soil following hoeing.

Either bluestone-hydrated lime or zinc sulphate-hydrated lime dust may be used on replants.

If no hoeing is done, or if the crowns are covered with soil immediately following hoeing, either dust may be applied to the surface of the ground.

Better results will be obtained, if crowns are pruned, by applying either dust to the exposed crowns and leaving them uncovered until the vines are strung.

If growers wish to cover the crowns immediately after pruning, either dust should be applied to the exposed crowns before covering.

HOW TO USE

A tin can which will hold the exact amount of material to be applied to each hill is commonly used for applying the materials.

Either a flour sifter, a coarse-meshed burlap bag or a hand duster can be used.

The materials should be spread in an even layer over the crowns in a circle approximately 18 inches in diameter.

HOW MUCH TO USE

Approximately two ounces per hill of any one of the three materials should be sufficient. The necessary poundage per acre will vary with the number of hills being treated.

CROWN TREATMENT NOT A CURE-ALL

Complete control of downy mildew by crown treatment alone cannot be expected. It should be followed by spraying or dusting throughout the growing season.

The following additional control measures are suggested:

1. Destroy "wild" hop vines growing in or near cultivated yards.
2. Cut, rake and burn badly diseased vines as soon after harvest as possible without injuring the plants. This will probably be after first frosts when vines stop active growth.

3. Prune crowns before growth starts in the spring. Remove the prunings from the yard and burn them.

4. After growth starts, patrol yards carefully and at regular intervals. Remove all "spikes" that appear; carry them from the yard in a tight container and burn them immediately. Members of the spike-removal patrol should not be used in training, stripping, or suckering.

5. Train as early as possible to prevent shoots from coming in contact with the soil.

6. Spraying or dusting should begin as soon as vines have been strung.

7. Strip carefully, if at all, when vines are being strung. Less permanent injury will result if stripping is delayed.

8. Suckering should begin when vines are strung and continue at regular intervals throughout the growing season.