

AGRICULTURAL EXPERIMENT STATION
Oregon State College
Wm. A. Schoenfeld, Director
Corvallis

Circular of Information No. 236

February, 1941

A ROSIN-POTASH SPREADER FOR SPRAYING HOPS
FOR DOWNY MILDEW CONTROL

by

G. R. Hoerner, Agent, Division of Drug and Related
Plants, Bureau of Plant Industry, United States
Department of Agriculture.

SPRAYING FOR DOWNY MILDEW

Downy mildew may be controlled by timely and thorough applications of liquid sprays which are recommended for use by growers equipped with suitable spraying machinery. At least 300 pounds pressure should be maintained. No. 2 discs should be used.

One material that has given good control with minimum injury to vines is made of 4 pounds of zinc sulphate, 4 pounds of processed lime to 50 gallons of water.

The number of applications necessary to secure adequate protection will vary with the season. An effort should be made to keep the rapidly growing vines protected particularly from the time they are first trained until the blossoms appear. Later applications may also be necessary.

Downy mildew spreads most rapidly during cool rainy weather. Sprays should be applied before rather than after infection has taken place.

USE OF SPREADER ADVISED

Hop vines are very difficult to cover thoroughly, with any of the commonly employed liquid sprays, without the use of a spreader.

Thorough coverage is essential to a satisfactory control of downy mildew or any of the other diseases of hops for the control of which liquid sprays are recommended.

ROSIN-POTASH SPREADER RECOMMENDED

As a result of experiments extending over a period of ten years and involving a large number of spreaders used in connection with a great many different liquid fungicides for the control of hop downy mildew the spreader described herewith is recommended.

When effectiveness, availability and cost are considered, rosin-potash spreader is the most satisfactory material found to date. It can easily be made up by the grower with a minimum of time and trouble and with simple and inexpensive equipment.

HOW THE SPREADER IS MADE

The basic formula given below will make about 30 gallons of spreader. If a larger quantity is desired, the amounts of the three ingredients used may be increased accordingly.

25 pounds lump rosin
6 pounds caustic potash
25 gallons water

Place water in metal container over fire.

Add potash. Either flake or lump potash may be used. It should not be handled with bare hands. Caution should be used when adding potash to water to avoid splashing and possible burning of face or hands. The supply of caustic should be kept tightly closed in metal cans to prevent contact with the air while in storage.

Break up the rosin into small lumps before adding it to the lye water.

Bring the water to a boil and cook the mixture until all the rosin is dissolved. Frequent stirring is desirable during the cooking process.

The resultant solution will be dark brown in color and can be stored in any tight container until used.

HOW MUCH SPREADER TO USE

As a rule, 1 quart of the spreader to 100 gallons of spray is sufficient.

The amount of spreader necessary may vary due to variations in the age of the vines being sprayed; the thoroughness of the spray applications; the size of openings in the discs used on the sprayer and the pressure employed.

Inspect the vines carefully as the spraying proceeds. If the under sides of the leaves are not thoroughly wet, more spreader should be added until complete coverage is secured.