Fungicidal Control of Botrytis Fruit Rot of Strawberry

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BOTRYTIS FRUIT ROT, commonly known as gray mold rot, is the major fruit rot attacking strawberries in southern California fields. It is caused by the fungus, Botrytis cinerea, which thrives in wet conditions and cool temperatures. Botrytis spores are produced in tremendous quantities and are carried by the wind. The fungus usually attacks through senescent dead petals, stamens, or other delicate plant tissue. Much of the infection of the fruit originates at the stem end, but the fungus is able to penetrate the unbroken skin of the berry.

1967 tests

Studies of several fungicides for the control of the Botrytis fungus were conducted in 1967 and 1968 at the University of California’s South Coast Field Station at Santa Ana. Results reported here constitute a progress report and are not to be considered recommendations of the University of California. For recommendations on the control of Botrytis fruit rot see the latest strawberry pest control guide, available from local farm advisors.

Tioga and Fresno were the varieties tested in 1967 and polyethylene mulch was used in all plots. Plots of 10 strawberry plants were replicated four times. Captan 50W, Bayer 47531 50W, Dyrene 50W, and Benlate (Dupont 1991) 50W were used at the rate of 1 lb of actual material per 100 gallons of water. Difolatan 80W was used at 1.5 lbs and Dacoid 2787 75W at 1.6 lbs per 100 gallons of water. The fungicial mixtures were applied at the rate of 200 gallons per acre and 250 psi. Except for the Benlate treatment, all plots were sprayed on March 21, 30, April 3, 10, 20, and May 1, 1967. Because Benlate was not available as early as March, it was not applied until April 3; then it was regularly applied on schedule.

There was heavy rainfall through most of April, but Botrytis did not develop until just before the April 26 picking. The number of rotted berries infected with visible Botrytis on April 26 is shown in table 1.

After the fungicide treatments there were fewer rotted berries on April 26 and...
GRANULAR FORMULATIONS OF SYSTEMIC INSECTICIDES FOR CONTROL OF APHIDS ON EASTER LILIES

These experiments indicate that granular formulations of Temik and Furadan are promising insecticides for use in controlling aphids on lilies forced for Easter. Applications to the crown of the plants were as effective as when the granules were applied to the soil in the pots. Crown applications were also easier and thus required less time than soil applications. No phytotoxicity occurred on the varieties Ace and Nellie White. However, these insecticides need to be tested on a larger scale and on more varieties, before they can be recommended for commercial use.

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WHEN FORCED in the greenhouse, Easter lilies are subject to continual infestation by aphids. In southern California, Plantfume 103 (sulfotep, dihio) smoke generators are widely used for aphid control but because residual effects are short, almost weekly applications are required. In addition, Plantfume 103 is not very effective against the cotton aphid, *Aphis gossypii* Glover, one of the most common species attacking lilies. Malathion and Thiodan sprays are also used, but new growth is subject to reinfestation and repeated applications may be necessary. The advantages of systemic insecticides are obvious but our experience with sprays and drenches has been similar to that of previous researchers who found that sprays of systemic insecticides damaged three out of the four varieties tested. However, granular formulations of two carbamate systemic insecticides, Temik and Furadan have shown promise when used on two varieties of lilies. Temik is 2-methyl-2-(methylthio) propionaldehyde O-[(methylcarbamoyl) oxime; and Furadan is 2,3-dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate.