BLUE MOLD CONTROL BY SPRAYING TOBACCO BEDS

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Regular, thorough spraying of tobacco beds with certain carbamate fungicides is the least expensive and safest way to control blue mold in tobacco beds. The most effective carbamates tested are wettable powders containing either 65% zineb (Z-78 or Parzate) or 76% ferbam (Fermate). While small power sprayers are ideal for spraying large beds, inexpensive bucket pumps equipped with a 30-foot length of spray hose and a spray rod are suitable for treating small beds.

MOLD CONTROL BY SPRAYING WITH ZINEB AND FERBAM

How Much to Use: Either zineb or ferbam wettable powder may be used without wetting agents at the rate of 3 pounds of zineb or 4 pounds of ferbam per 100 gallons of spray mixture. These amounts will treat 200 square yards of bed an entire season.

65% zineb (Z-78 or Parzate)        5 oz. (heaping ½ pint)       12 oz. (1 ½ pints)
76% ferbam (Fermate)               6½ oz. (1 heaping pint)      1 lb. (3 pints)

Apply 5 gallons of spray mixture per 100 square yards each time, more if this is necessary to wet every leaf in the bed. Be sure to apply 2-1/2 ounces of the 65% zineb or 3-1/4 ounces of 76% ferbam per 100 square yards at each application. These amounts are important. They are contained in 5 gallons of spray mixture. If only 2-1/2 gallons can be applied, prepare the mixture double strength.

Directions for Mixing and Applying: Pour the measured quantity of powder into a widemouth jar or bucket with a small amount of water. Shake or stir thoroughly until well mixed. Then pour into the correct volume of water. Stir while spraying. Prepare only enough for one application and use the same day when mixed. Beds may be sprayed through the cover, provided the cloth is stretched 6 or more inches above ground. Hold the nozzle 1 or 2 feet over the cover, moving it back and forth at sufficient intervals to wet, without drenching, every plant in the bed. Use as much as 100 pounds pressure where possible.

When and How Often to Spray: Spray twice a week, every three or four days, regardless of weather. Start when plants reach the full 4-leaf stage, or earlier if in areas where blue mold is already present. Make it a point to start before mold appears. Use double strength sprays for two applications when mold first appears in beds, then resume regular strengths. Remember the treatment does not prevent all infection but prevents severe damage. Infected plants recover and grow normally. Continue spraying until all plants in the bed have become affected and started to recover, or until time for setting.

1/ In cooperation with Bureau of Plant Industry, Soils and Agricultural Engineering, U. S. Department of Agriculture, and the University System of Georgia.
2/ Plant Pathologist, U. S. Department of Agriculture, Coastal Plain Experiment Station, Tifton, Georgia.
MOLD CONTROL WITH CARBAMATE-SALICYLIC ACID SPRAYS

The use of small amounts of powdered salicylic acid with zineb or ferbam provides the least expensive and most effective spray treatment known for control of blue mold, especially when the ingredients are mixed on the farm. In addition to being more effective, this mixture requires only about one-fourth the regular amounts of carbamate, thus resulting in reduced spray residue.

More than limited amounts of salicylic acid may damage small plants. Unless the ingredients are measured and mixed in exactly the right amounts, it is safer to use ready-mixed preparations. Dimole and Perm-Sal are commercial preparations of ferbam and salicylic acid in safe proportions. Use these as directed on the label, and follow the regular spray schedule. Do not use double strengths of salicylic acid mixtures since these may damage the plants.

Home-Made Carbamate-Salicylic Acid Sprays

Materials for Mixing: From 3/4 to 1 pound of zineb or ferbam, plus 3 to 4 ounces of salicylic acid powder plus 1 ounce of wetting agent (Dreft) are sufficient for spraying 200 square yards of bed an entire season, or for preparing a total of 100 gallons of spray mixture. Use the minimum suggested amount of salicylic acid on small plants.

<table>
<thead>
<tr>
<th>Materials (Use all three)</th>
<th>For 10 Gallons</th>
<th>For 25 Gallons</th>
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<tbody>
<tr>
<td>65% zineb</td>
<td>7 level tablespoons</td>
<td>1/2 pt. (4 ounces)</td>
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<tr>
<td>Powdered salicylic acid</td>
<td>1 tablespoon</td>
<td>3 level tablespoons</td>
</tr>
<tr>
<td>Dreft</td>
<td>1 teaspoon</td>
<td>1 level tablespoon</td>
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A 76% ferbam may be substituted for zineb at the rate of 10 tablespoons to 10 gallons of spray mixture and 3/4 pint to 25 gallons.

How to Mix: Place the measured amount of salicylic acid powder in a shallow waterglass with the Dreft and add a very small amount of water. Carefully crush all lumps with the fingers to make a smooth paste. Wash this into a wide-mouth jar or bucket with more water and add the zineb or ferbam. Shake or stir until well mixed. Stir while spraying. Use in the same way and according to the same schedule as regular zineb spray mixture. Avoid heavy applications of salicylic acid on small plants.

Use of Zineb Sprays Mixed with Insecticides

Zineb, used alone or in combination with salicylic acid, may be mixed with Parathion or TEPP as needed occasionally for control of aphids. Do not mix ferbam with Parathion or TEPP, since this combination may injure the tobacco plants. Arsenicals and DDD may safely be mixed with either zineb or ferbam.

Where it is desired to mix Parathion and DDD with zineb sprays for control of all insects, add 1/2 pound of 15% Parathion wettable powder plus 1 pound of 50% DDD wettable powder to 25 gallons of blue mold spray mixture. One-fourth pound of 40% TEPP may be substituted for Parathion. If ferbam sprays are used, apply TEPP or Parathion in separate applications. If preferred, mix 1 pound of lead arsenate or zinc-safened calcium arsenate (Security Poison) to each 25 gallons of spray mixture for control of leaf eating insects. Add the insecticides to the diluted blue mold spray mixture.