

**IN-FURROW FUNGICIDES FOR SEEDLING
DISEASE CONTROL IN COTTON**

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Abstract

Three seedling disease control experiments were planted in the same field near the University of Tennessee West Tennessee Agricultural Experiment Station at Jackson, Tennessee in 1996. Stoneville 132 (commercially treated with fungicides) was planted in a sterile seed-bed May 2, 1996 on a Falaya silt loam soil. The plot area has been planted to cotton for at least 5 or more years. Each of the three tests (Test #I Rovral, Test #II Start and Test #III Ridomil) has a total of eight treatments including an untreated check.

Four replications of each treatment were planted in a randomized complete block design with a two-row planter equipped for soil in-furrow application of the fungicides. Stand counts were taken at 26 days after planting along with lint yields at harvest to determine efficacy of the various fungicides. The plots were inoculated in-furrow with *Rhizoctonia* and *Pythium* grown on millet seed.

In Test #I Rovral, only the treatment with Rovral 50WG 5.2 oz./A plus Ridomil 2EC 4 fl. oz./A and Terraclor 2EC 64 fl.oz./A plus Ridomil 2EC 8 oz./A gave a significant yield increase. Stand counts were significantly improved with all rates of Rovral 50WG plus Ridomil 2EC when compared to no treatment.

In Test #2, Start gave significantly less stand count with the higher rate of Start 60WG 11.6 oz./A. relative to the lower rate of 7.7 oz./A. Yields of both rates were much higher than the untreated but not significantly. Ridomil PC 2EC at 96 oz./A. and Terraclor Super-X at 96 oz./A. both gave a significantly higher stand count than the untreated. Delta Coat AD hopper-box treatment at 11.75 oz./100 lbs. seed did not improve stand counts or yields significantly.

In Test #3, all treatments with Ridomil (metalaxyl) or with Ridomil Gold (mefenoxan) gave significantly higher stand counts with either Rovral or Terraclor 2EC than the untreated. Ridomil PC 11G at 8 lbs./A produced stand counts comparable to Ridomil Gold 10.5 G at 8 lbs./A. Zeneca's new compound ICI A5504 (azoxystrobin) 80WG produced significantly higher stand counts at both the 0.1 oz. ai./1000 ft. and 0.2 oz. ai./1000 ft but not significantly higher than any of the other treatments. Although yields of

all the treatments were numerically higher than the untreated in this test none were significantly higher at the LSD (0.05) level.

These results show that under conditions existing in the plot area of these tests that Rovral 50WG should be used at the higher rate of 5.2 oz./A. along with Ridomil 2EC at 4 oz./A. They also show that Start 60WG should be used at the lower rate of 7.7 oz./A. compared to 11.6 oz./A. In addition these results show that Ridomil Gold is just as effective as Ridomil in either the granular or liquid formulation at the rates tested. Zeneca's ICI A5506 was as effective as the standard fungicides at either rate tested.