

EVALUATION OF FUNGICIDES AND SPRAY PROGRAMS FOR CONTROL OF DOWNY MILDEW OF CUCUMBER IN GEORGIA III, 2006

D. B. Langston, Jr., University of Georgia Coop. Ext. Ser., Dept. Plant Pathology, Tifton, GA 31793

Materials and Methods

Cucumber transplants were planted on 6 Sep in black plastic mulch-covered beds at the Tifton Vegetable park, a unit of the Coastal Plain Experiment Station in Tifton, GA. Mulched beds had a 36-in. top, were laid on 6-ft centers, and were painted white prior to planting. Plants were arranged in one row per bed and were spaced 2 ft apart within the row, resulting in 8 plants per plot. Plots were 15 ft long, were separated on each end by 5 ft of bare plastic, and were arranged in a randomized complete block design with 4 replications. Fertility, insects and weeds were managed according to standard University of Georgia Extension Service recommendations. Fungicide treatments were applied using Lee Spider Spray Trac® calibrated to deliver 40 gal/A at 75-80 psi through TX-18 hollow cone nozzles. Rainfall for Sep and Oct

combined was 3.2 in. which is 2.8 in. below the 91 yr average.

Results and Discussion

Downy mildew was first observed on 2 Oct and increased to high levels by 27 Oct. All treatments significantly suppressed downy mildew severity by the 3 Nov rating compared to non-treated plots except BmJ applied alone and Sonata applied alone at the 3.0 qt rate. Sonata applied alone at the 3.0 qt rate was the only treatment that did not suppress AUC (area under the disease progress curve) compared to the non-treated plots. Treatments containing Bravo Weatherstik, Previcur and Manzate provided the greatest level of disease suppression by the 3 Nov rating and in AUC. Since disease began after some fruit were harvested, yield was not recorded and was likely unaffected

Treatments, rates/A, and (spray times) ^z	Downy mildew	
	3 Nov ^y	AUC ^x
BmJ, 1.2 oz (1-6)	7.3 ab ^w	184.1 b
BmJ, 1.2 oz + Bravo Weatherstik 6F, 2.0 pt (1-6)	3.3 e	89.8 e
BmJ, 1.2 oz + Bravo Weatherstik 6F, 2.0 pt (1,3,5) Bravo Weatherstik 6F, 2.0 pt (2,4,6).....	3.3 e	87.4 e
BmJ, 1.2 oz (1,3,5) Previcur 6F, 19.2 fl oz (2,4,6).....	5.0 cd	130.8 dc
Sonata, 2.0 qt + BioTune, 6.4 fl oz (1-6)	6.0 bc	143.6 c
Sonata, 3.0 qt + BioTune, 6.4 fl oz (1-6)	7.0 ab	197.3 ab
Sonata, 3.0 qt + BioTune, 6.4 fl oz + Previcur 6F, 19.2 fl oz (1-6)	3.3 e	88.9 e
Sonata, 2.0 qt + BioTune, 6.4 fl oz + Previcur 6F, 10.0 fl oz (1-6)	3.8 de	97.3 de
Manzate 75DF, 2.0 lb (1-6) (1-6).....	3.0 e	71.4 ef
Bravo Weatherstik 6F, 2.0 pt (1-6)	3.8 de	89.8 e
Previcur 6F, 19.2 fl oz + Manzate, 2.0 lb (1,3,5) Tanos 50WDG, 8.0 oz + Bravo Weatherstik 6F, 2.0 pt (2,4,6)	2.3 e	48.8 f
Check	8.3 a	221.6 a

^zSpray dates were: 1=22 Sep; 2=28 Sep; 3=4 Oct; 4=12 Oct; 5=19 Oct; 6=27 Oct.

^yDowny mildew was rated on a 1-10 scale where 1=1-10% leaf area affected by downy mildew and 10=100% leaf area affected by downy mildew.

^xArea under the disease progress curve from ratings taken on 6, 13, 25 Oct and 3 Nov.

^wMeans followed by the same letter(s) are not significantly different according to Fisher's protected LSD test at $P \leq 0.05$.