

## EVALUATION OF FUNGICIDES AND SPRAY PROGRAMS FOR CONTROL OF DOWNY MILDEW OF CUCUMBER IN GEORGE II, 2006

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### **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 a 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 Discussions**

Downy mildew was first observed on 2 Oct and increased to high levels by 27 Oct. All treatments significantly suppressed downy mildew severity as shown by the 3 Nov rating compared to non-treated plots. The treatment receiving A-14576 was the only treatment that did not suppress AUC (area under the disease progress curve) compared to the non-treated plots. Since disease began after some fruit were harvested, yield was not recorded and was likely unaffected. No phytotoxicity was observed among treatments.

Treatments, rates/A, and (spray times) <sup>z</sup>	Downy mildew	
	3 Nov <sup>y</sup>	AUC <sup>x</sup>
Curzate 60DF, 3.2 lb + Manzate 75DF, 2.0 lb (1-6).....	1.8 g	31.5 h
Previcur Flex 6F, 19.2 fl oz + Manzate 75DF, 2.0 lb (1,3,5)		
Tanos 50WDG, 8.0 oz + Bravo Weatherstik 6F, 2.0 pt (2,4,6) .....	1.8 g	46.7 gh
Ranman 400SC, 2.75 fl oz + Silwett , 2.0 fl oz + Manzate 75DF, 2.0 lb (1,3,5)		
Previcur Flex 6F, 19.2 fl oz + Bravo WeatherStik 6F, 2.0 pt (2,4,6) .....	2.0 fg	50.3 f-g
Tanos 50WDG, 8.0 oz + Manzate 75DF, 2.0 lb (1,3,5)		
Curzate 60DF, 3.2 lb + Manzate 75DF, 2.0 lb (2,4,6) .....	2.3 e-g	51.4 f-h
Bravo WeatherStik 6F, 2.0 pt (1-6) .....	2.3 e-g	53.8 e-h
V 10161, 4.0 fl oz (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt (2,4,6).....	2.0 fg	54.1 e-g
Curzate 60DF, 5.0 lb + Manzate 75DF, 2.0 lb (1-6).....	2.3 e-g	56.1 e-g
Ranman 400SC, 2.75 fl oz + Silwett , 2.0 fl oz + Manzate 75DF, 2.0 lb (1,3,5)		
Tanos 50WDG, 8.0 oz + Bravo WeatherStik 6F, 2.0 pt ((2,4,6) .....	2.0 g	58.0 e-g
V 10162, 28.0 fl oz (1-6) .....	3.0 c-e	61.3 d-g
Manzate 75DF, 2.0 lb (1-6) .....	2.3 e-g	62.8 d-g
Ranman 400SC, 2.75 fl oz + Silwett, 2.0 fl oz (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt (2,4,6).....	2.5 d-g	62.8 d-g
Previcur Flex 6F, 19.2 fl oz + Manzate 75DF, 2.0 lb (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt (2,4,6).....	2.5 d-g	63.9 d-g
V-10161, 4.0 fl oz (1,3,5)		
Manzate 75DF, 2.0 lb + V-10135 , 12.0 oz ((2,4,6) .....	2.3 e-g	64.3 d-g
Ranman 400SC, 2.1 fl oz + Silwett @ 2.0 fl oz + Manzate 75DF, 2.0 lb (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt ((2,4,6) .....	2.0 fg	64.3 d-g
Ridomil Gold Bravo 3.67SC, 2.5 pt (1,3,5)		
Quadris Opti 5.5F, 2.0 pt ((2,4,6) .....	2.3 e-g	65.0 d-g
V-10161, 3.0 fl oz (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt (1,3,5).....	2.3 e-g	65.4 d-g
Ridomil Gold Bravo 76.5WP, 2.0 lb (1,3,5)		
Quadris Opti 5.5F, 2.0 pt ((2,4,6) .....	2.5 d-g	69.0 c-g
Ranman 400SC, 2.1 fl oz + Induce, 0.125% v/v + Manzate 75DF, 2.0 lb (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt (1,3,5).....	2.8 c-f	70.2 c-f
Ranman 400SC, 2.1 fl oz + Silwett, 2.0 fl oz (1,3,5)		
Bravo WeatherStik 6F, 2.0 pt (2,4,6).....	2.5 d-g	71.7 c-f
Ranman 400SC, 2.1 fl oz + Manzate 75DF, 2.0 lb (1-6).....	2.5 d-g	76.4 c-e
Prevam, 50 ml/100 gallons + Bravo WeatherStik 6F, 2.0 pt (1-6) .....	2.8 c-f	83.3 b-d
mandipropamid 8.0 fl oz + Bravo WeatherStik 6F, 2.0 pt (1,3,5)		
Quadris Opti 5.5F, 2.0 pt (2,4,6).....	3.3 cd	88.9 bc
mandipropamid @ 8.0 fl oz + Induce, 0.125% v/v (1,3,5)		
Quadris Opti 5.5F, 2.0 pt (2,4,6).....	3.5 c	104.4 b
A-14576, 6.84 fl oz + Induce, 0.125% v/v (1,3,5)		
Quadris Opti 5.5F, 2.0 pt (2,4,6) .....	4.8 b	136.6 a
Check .....	6.3 a	136.5 a

<sup>z</sup>Spray dates were: 1=22 Sep; 2=28 Sep; 3=4 Oct; 4=12 Oct; 5=19 Oct; 6=27 Oct.

<sup>y</sup>Downy 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.

<sup>x</sup>Area under the disease progress curve from ratings taken on 6, 13, 25 Oct and 3 Nov.

<sup>x</sup>Means followed by the same letter(s) are not significantly different according to Fisher's protected LSD test at  $P \leq 0.05$ .