

EVALUATION OF FUNGICIDES AND SPRAY PROGRAMS FOR CONTROL OF POWDERY MILDEW IN SUMMER SQUASH IN GEORGIA, 2006

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

Materials and Methods

Squash were transplanted on 2 May 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 and were planted on 6-ft centers. Plants were planted 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 four replications. Fertility, insects and weeds were managed according to standard University of Georgia Extension Service recommendations. Fungicide treatments were applied with Lee Spider Spray Trac® calibrated to deliver 40 gal/A at 75-80 psi through TX-18 hollow cone nozzles. Rainfall for May and Jun combined was 6.8 in. which is 1 in. below the 91 yr average.

Results and Discussion

Powdery mildew was first observed on 12 Jun and increased to high levels by 25 Jul. All treatments significantly suppressed powdery mildew compared to non-treated plots based on the 19 Jun rating. Both Pristine and V-10118 were significantly superior treatments for suppressing powdery mildew severity on both rating dates when compared to other fungicides and spray programs. Sonata alone sprayed on a 7 day schedule and Sonata tank-mixed with Nova were the only treatments that did not significantly reduce disease compared to the non-treated check on the 25 Jun rating date. No phytotoxicity was observed with any of the treatments. Since disease began after some fruit were harvested, yield was not recorded and was likely unaffected.

Treatments, rates, and (spray times) ^z	Powdery mildew ^y	
	19 Jun	25 Jun
Pristine 38WG, 14.5 oz/A (1,3,5,6).....	1.3 d ^x	1.5 d
V-10118, 9.3 fl oz/A (1,3,5,6).....	2.0 d	2.0 d
V-10118, 6.2 fl oz/A (1,3,5,6).....	3.5 c	4.8 c
Procure 50WS, 6.0 oz/A (1,3,5,6).....	4.5 bc	5.0 c
Nova 40W, 5.0 oz/A (1,3,5,6).....	4.3 bc	5.3 bc
Sonata @ 2.0 qt/A + Biotune, 1 pt/100 gal (1,2,4,5,7).....	3.5 c	5.3 bc
Sonata @ 3.0 qt/A + Biotune 1 pt/100 gal (1,3,5,6).....	5.3 b	7.5 ab
Sonata @ 2.0 qt/A + Biotune, 1 pt/100 gal (1-4) + Nova 40W, 2.5 oz/A (1,3,5,6).....	3.8 c	6.3 a-c
Non-treated.....	7.3 a	7.8 a

^zSpray dates were: 1=31 May; 2=4 Jun; 3=7 Jun; 4=9 Jun; 5=14 Jun; 6=21 Jun; 7=19 Jun.

^yPowdery mildew was rated on a 1-10 scale where 1=1-10% leaf area affected by powdery mildew and 10=100% leaf area affected by powdery mildew on both upper and lower leaf surfaces.

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