

SQUASH (*Cucurbita pepo* ‘Dixie’)
Powdery mildew; *Podosphaera xanthii*

P.D. Roberts and R.E.Sytsma
Southwest Florida REC
University of Florida/IFAS
Immokalee, FL 34142

Four-week old squash seedlings were transplanted on 4 Sep into Immokalee fine sand at the Southwest Florida Research and Education Center, Immokalee, FL. Treatments were arranged in a randomized complete block design with four replications. Each plot consisted of eight plants spaced 24 in. apart within a 14 ft row with 8 ft between each plot and 6 ft between each row. Guidelines established by the University of Florida/IFAS were followed for land preparation, fertility, irrigation, weed management and insect control. Sprays were applied with a CO₂-pressurized backpack sprayer at 40 psi with a single hollow-cone nozzle at 24 gal/A. Disease severity was estimated as a percentage of leaf tissue with evidence of powdery mildew. Disease severity was analyzed by one-way ANOVA and significant differences between means were separated using Tukey’s Multiple Comparison. Average monthly high and low temperatures (°F) were 94 and 69 in Sep, 97 and 68 in Oct, and 88 and 44 in Nov. Rainfall totals for Sep, Oct, and Nov were 4.7, 3.4, and 0.09 in., respectively.

At the final reading date, plants in all treatments except PREV-AM and the high rate of CAF-06 had significantly reduced disease severity compared to the untreated plants which had approximately 2/3 of their foliage covered with evidence of powdery mildew. Several treatments reduced disease severity to less than 40% which was significantly less than the untreated plants and, except for Companion at 1 gal/A alone and HM 0736, were not significantly different from the other treatments. Nova and the combination treatment of Microthiol plus Topsin had the lowest disease ratings at the end of the trial compared to the other treatments. Treatments not significantly different from these two included CAF-06 at the low rate, treatments containing Companion, and HM0736. Phytotoxicity was not observed.

Treatment/Rate	Application Dates	Disease severity	
		2 Nov	11 Nov
Untreated control		24 a	66 a
Nova 40W 5oz/A.....	1, 2, 3, 4, 5, 6, 7, 8, 9	2 d	10 d
CAF-06 0.6 oz/gal.....	1, 2, 3, 4, 5, 6, 7, 8, 9	10 bcd	26 bcd
CAF-06 0.8 oz/gal.....	1, 2, 3, 4, 5, 6, 7, 8, 9	18 abc	46 abc
Seacide 1% v.v.....	1, 2, 3, 4, 5, 6, 7, 8, 9	14 abcd	40 bc
Companion 1 gal/A.....	1, 2, 3, 4, 5, 6, 7, 8, 9	14 abcd	31 bcd
Companion 1 gal/A.....	1, 2, 3, 4, 5, 6, 7, 8, 9	20 ab	25 cd
Manzate Pro Stick 75DG 1.5 lb/A	1, 2, 3, 4, 5, 6, 7, 8, 9		
PREV-AM 0.5 oz/gal.....	1, 2, 3, 4, 5, 6, 7, 8, 9	24 a	48 ab
HM 0736 14 oz/A.....	1, 2, 3, 4, 5, 6, 7, 8, 9	11 abcd	26 bcd
Microthiol 80DF 5 lb/A.....	1, 2, 3, 4, 5, 6, 7, 8, 9	7 cd	14 d
Topsin 4.5FL 10 fl oz/A	1, 2, 3, 4, 5, 6, 7, 8, 9		
Penncozeb 75DF 3 lb/A.....	1, 2, 3, 4, 5, 6, 7, 8, 9	7 cd	39 bc
Topsin 4.5FL 10 fl oz/A	1, 2, 3, 4, 5, 6, 7, 8, 9		

1=11 Sep, 2 =18 Sep, 3 =25 Sep, 4 =2 Oct, 5 =9 Oct, 6 =16 Oct, 7 =23 Oct, 8 =30 Oct, 9 =6 Nov