

EVALUATION OF FUNGICIDES FOR PHYTOPHTHORA FRUIT ROT AND TIP BLIGHT OF SUMMER SQUASH, 1997: A field experiment was conducted at the Long Island Horticultural Research Laboratory in Riverhead, NY, on Haven loam soil. *P. capsici* had occurred on pumpkin in this field in 1996. Fertilizer (1000 lb/A of 10-10-10) was broadcast and incorporated on 15 May. Three-wk old seedlings were transplanted 18 Jul at 18-in. plant spacing. Cucumber beetles and aphids were managed by applying Metasystox R (1 qt/A) on 18 Jul and Asana XL (9.6 oz/A) on 31 Jul and 20 Aug. Powdery mildew was controlled by applying Bayleton 50DF (4 oz/A) on 25 Aug and Bravo Ultrex (2.7 lb/A) on 25 Aug, and 5 and 16 Sep. The field was irrigated (approx. 1.0 in.) on 8 Aug and 18 Sep for plant growth and on 3, 7, 10, and 14 Oct (1-1.5 in.) to provide favorable conditions for *Phytophthora*. Average monthly high and low temperatures (F) were 87/65 in Jul, 82/64 in Aug, and 76/58 in Sep. Rainfall (in.) was 2.53, 3.97, and 1.20 for these months, respectively. Treatments were started on 31 Jul, just before conditions that usually led to disease. Acrobat MZ (2.25 lb/A) was applied weekly and Ridomil Gold (1 pt/A) biweekly. Treatments were applied on 31 Jul; 7, 14, 22, and 28 Aug; 5, 10, 18 and 25 Sep; and 1, 9 and 17 Oct using a CO₂-pressurized backpack sprayer and hand-held boom equipped with three XR TeeJet (8003VS) nozzles spaced 17 in. apart that delivered 40 gpa at 50 psi. A randomized complete block design with four replications was used. On 14 and 20 Oct, plants with unmistakable symptoms of fruit rot or vine tip blight were counted.

Both fruit rot and tip blight were more severe in untreated plots. Acrobat MZ protected fruit as well or better than Ridomil Gold, but was not as effective in protecting vine tips from blight. Good coverage would be more important for Acrobat MZ than Ridomil Gold because dimethomorph, the a.i. in Acrobat MZ, is only translaminarily systemic whereas mefenoxam, the a.i. of Ridomil can also move acropetally when taken up by roots. Superior spray coverage could be obtained with a high pressure sprayer, which might result in better disease control.

Treatment and Rate/A	Disease Incidence (Symptomatic Plants/Total)			
	Fruit Rot (%)*		Tip Blight (%)*	
	14 Oct	20 Oct	14 Oct	20 Oct
Nontreated Control	33.0 a	56.0 a	39.8 a	31.0 a
Ridomil Gold (1 pt/A).....	9.5 ab	15.7 b	4.0 a	2.0 b
Acrobat (2.25 lb/A).....	2.0 b	29.0 ab	16.0 a	14.5 a
P-value	0.043	0.024	0.15	0.07

* Analysis of variance was done on log-transformed data; percentages followed by different letters differed significantly according to Fisher's Protected LSD (p=0.05).