

EVALUATION OF ACROBAT MZ FOR MANAGING PHYTOPHTHORA FRUIT ROT OF PUMPKIN, 1999: A field experiment was conducted at the Long Island Horticultural Research and Extension Center in Riverhead, NY, in a field (Riverhead sandy loam soil) where *Phytophthora* fruit rot of pumpkin had developed in 1994, 1996, 1997 and 1998. Fertilizer (1000 lb/A of 10-10-10) was broadcast and incorporated on 23 Jun. Pumpkin seeds were planted on 26 Jun at 24-in. within row plant spacing and 68-in. between row spacing. The herbicides Curbit EC (4 pt/treated A) and Command 4EC (1 pt/treated A) were applied on 29 Jun in a 10-inch band over the planted rows, then incorporated by irrigating. Cucumber beetles were managed by applying Sevin XLR (1 qt/A) on 3 Jul, 3 Aug and 18 Aug. Powdery mildew was managed by applying Bravo Weather Stik (3 pt/A) + Nova 40W (2.5 oz/A) on 3, 17, 23 and 31 Aug. Average monthly high and low temperatures (F) were 83/62 in Jun, 89/69 in Jul, 83/66 in Aug, and 77/61 in Sep. Rainfall (in.) was 0.8, 3.67, 8.18, and 5.31 for these months, respectively. The field was irrigated (approx. 1.0 in.) when soil was dry due to inadequate rainfall on 12 Jul, 19 Jul, 30 Jul, and 2 Aug. Plots were three 26-ft rows with 14 ft between plots. Acrobat MZ was applied 9 times (27 Jul; 5, 16, 23, and 30 Aug; 9, 13, 20, and 28 Sep) with a tractor-mounted boom sprayer equipped with D3-45 hollow cone nozzles spaced 11 in. apart that delivered 100 gpa at 250 psi. An application was made before the end of the 7 day interval on 13 Sep because of heavy rain on 10 Sep and rain forecast for 15-17 Sep. A randomized complete block design with five replications was used. Fruit were examined weekly for symptoms of *Phytophthora* fruit rot and other diseases.

Disease pressure was high. Symptoms caused by *Phytophthora capsici* were first observed on 7 Sep, following a large quantity of rain on 26-27 Aug (3.55 and 1.05 in., respectively). Although this rain should have provided favorable conditions for *Phytophthora*, fruit rot was only observed in 2 of the 10 plots with an overall incidence of 0.8% on 7 Sep. The next large rainfalls were 1.46 in. on 10 Sep, then 3.05 in from Hurricane Floyd on 16 Sep. Incidence of *Phytophthora* fruit rot was significantly lower in Acrobat MZ-treated than nontreated plots beginning on 27 Sep.

Fruit with *Phytophthora* fruit rot (%) *

Treatment and rate/A	20 Sep	27 Sep	5 Oct	12 Oct	19 Oct
Nontreated	7.3	72.3 a **	85.3 a	86.4 a	91.4 a
Acrobat MZ 2.25 lb	16.0	41.6 b	48.5 b	57.7 b	74.4 b
<i>P</i> -value	0.0923	0.0129	0.0049	0.0043	0.0096

* Total observed with definite symptoms of *Phytophthora* fruit rot (sporangia visible) and unconfirmed symptoms (sporangia not visible). Almost all affected fruit had sporangia.

** Numbers in a column with a letter in common are not significantly different according to Fisher's Protected LSD ($P = 0.05$).