

Evaluation of fungicides for the management of Clubroot on radish, 2004.

The experiment was conducted at the Ohio Agricultural Research and Development Center Muck Crops Agricultural Research Station in Celeryville, OH. Fertilizer (17-17-17, 500 lb/A) was incorporated into the field on 27 Apr. Plots were disked, leveled, and compacted, and radishes (cv. Cabernet) were direct seeded at a rate of 12 seeds/ft using a Stan-Hay vacuum seeder on 28 May. Treatments were arranged in a randomized complete block design with four replications. Each plot consisted of three 15 ft rows with 18 in. between rows. Dual II MAGNUM (1.5 pt/A) was applied on 28 May for weed control. Treatments were drenched into the row in a 10 in. band using a hand-held watering can on 28 May. Overhead irrigation (0.2 in.) was applied two hours after the treatments were applied. Radishes were harvested from a 10 ft section of the center row of each plot on 2 Jul, and mean clubroot disease severity was determined for each treatment. Data were analyzed by ANOVA using SAS statistical software. Means were separated using Fisher's protected least significant difference test. Average maximum temperatures for 28-31 May, 1-30 Jun, and 1-2 Jul were 72.7, 77.4, and 85.6 °F; minimum averages were 49.7, 56.9, and 56.9 °F and total rainfall was 1.3, 6.7 and 0.0 in., respectively.

Clubroot pressure was high. None of the treatments reduced clubroot compared to the untreated control.

Treatment and rate/1000 plants	Clubroot severity*
Omega 500F 1.7 fl oz.....	62.4 a**
Ranman 400SC 1.7 fl oz.....	64.6 a
Ranman 400SC 3.4 fl oz.....	66.8 a
Ranman 400SC 6.8 fl oz.....	67.3 a
Control.....	68.8 a

*Clubroot severity calculated using the number of radishes in each of five categories and the midpoint value from the categories: 1 = 0% disease; 2 = 1-20% disease; 3 = 21-40% disease; 4 = 41-60% disease; and 5 = 61-100% disease. Severity = $\frac{\sum(\text{category midpoint} \times \text{number of radishes in category})}{n}$, where n = number of total radishes harvested.

**Values are the means of four replicate plots; means followed by the same letter within a column are not significantly different at $p \leq 0.05$.