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Comparison of fungicide programs for controlling downy mildew on cucumbers, fall 2012.

On 2 Oct 2012, plots were established at the University of Florida's Gulf Coast Research and Education Center in Balm, FL to assess the effect of fungicide programs on the control of downy mildew on cucumber. Plots consisted of 14 ft-long bed sections within 300 ft-long, raised beds with 4 ft center-to-center bed spacing. Beds were covered with black virtually impermeable mulch and irrigated with a drip system. Seeds were sown at 30-in spacing along beds skipping a 6-ft alley between plots and every third bed as a buffer. Treatments, including a non-treated control were arranged in a completely randomized block design with each treatment repeated four times. The treatments were applied on 20 Sept, 27 Sept, 04 Oct, 18 Oct, 25 Oct, and 01 Nov (corresponding with applications 1 to 6 below). Fungicide treatments were applied via foliar spray on 6 Apr, 12 Apr, 19 Apr, 27 Apr, 3 May, and 11 May (corresponding with applications 1 to 6 below) with a CO₂ back pack sprayer calibrated to deliver 40 (apps. 2,3) and 60 gal/A (apps. 4,5,6) at 40 psi. Plots were monitored regularly for downy mildew, and rated on 24 Oct, 31 Oct, and 05 Nov as disease developed. Alternating applications of Quintec (6 fl oz/A) and Procure 480SC (8 fl oz/A) were applied throughout the season to minimize the impact of powdery mildew.

| Downy Mildew Severity (%) | | | | | | | | |
|--|---------------------|------------------|-----------------------|------------|---------------------|------------|-----------------------|------------------|
| Treatment, rate (application dates) | 24-Oct | | 31-Oct | | 6-Nov | | AUDPC | |
| Torac, 21 floz (1-6) | 12.9 | cd | 26.3 | cd | 62.5 | abc | 664 | cd |
| Torac, 21 floz (1-6); Curzate, 4 floz (1-6) | 15.4 | c | 22.1 | d | 48.4 | cde | 644 | cd |
| Bravo, 2 pt (1-8); Curzate, 4 oz (1-6) | 7.6 | de | 18.5 | de | 37.5 | ef | 412 | ef |
| Non-treated Control | 62.5 | a | 76.3 | a | 83.7 | a | 2048 | a |
| Presidio, 4 floz (1,3,5); Bravo, 2 pt (2,4,6) | 3.7 | f | 12.9 | ef | 42.6 | de | 316 | fg |
| Revus, 8 floz (1,3,5); Bravo, 2 pt (2,4,6) | 31.4 | b | 42.6 | b | 66.8 | ab | 1158 | b |
| Ranman, 2.75 floz (1,3,5); Bravo, 2 pt (2,4,6) | 10.8 | cd | 22.1 | d | 42.6 | de | 514 | ed |
| Bravo, 2 pt (1-6); Penncozeb, 2 lb (1-6) | 4.5 | ef | 10.8 | fg | 37.5 | ef | 297 | fg |
| V-10208, 10 floz (1,3,5); Bravo, 2 pt (2,4,6) | 7.6 | de | 12.9 | ef | 48.4 | cde | 415 | ef |
| QGU 42, 6 floz (1,3,5); Bravo, 2 pt (2,4,6) | 3.7 | f | 7.6 | g | 31.4 | f | 235 | g |
| Bravo, 2 pt (1-6); Synbiont, 96 floz (1-6) | 3.7 | f | 9.0 | fg | 37.5 | ef | 269 | g |
| Bravo, 2 pt (1-6) | 18.5 < 0.0 6 | bc 901 | 37.5 < 0. 0 | bc 0001 | 55.0 < 0.0 0 | bcd 901 | 819 < 0.0 0 | bc <i>001</i> |