

**Evaluation of fungicides for management of *Alternaria* leaf blight on cantaloupe, spring 2011.**

On 17 Jun 2011, plots were established at the University of Florida's Gulf Coast Research and Education Center in Balm, FL with the intent to assess the effect of fungicides on the control of gummy stem blight of cantaloupe. Plots consisted of 14 ft long bed sections within 308 ft long, raised beds with 5 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" spacing along beds skipping a 6 ft alley between plots and every third bed as a buffer. Fungicide treatments, including a non-treated control were arranged in a completely randomized block design with each treatment repeated three times. The treatments were applied on 14 Jun, 21 Jun, and 28 Jun (corresponding with applications 1 to 3 below) with a CO<sub>2</sub> back pack sprayer calibrated to deliver 90 (app. 1) and 120 gal/A (apps. 2,3) at 40 psi. Plants were inoculated on 23 Jun with 2.5 x 10<sup>5</sup> conidia/ml of an aqueous conidial suspension of *Didymella bryoniae*, which was obtained from 2-wk-old 0.25X PDA cultures growing in Petri dishes at 75°F under 12-hr light. Plots were monitored regularly for gummy stem blight, and rated on 7 July after disease reached appreciable levels. Alternating applications of Previcur Flex 6F (1.2 pt/A) and Curzate 60DF (3.2 oz/A) were conducted on 21 Jun and 28 Jun to minimize the impact of downy mildew.

Although plots were inoculated with *D. bryoniae*, *Alternaria cucumerina* and *Pseudoperonospora cubensis* were also observed on leaf lesions; of which *A. cucumerina* was the predominant pathogen. Disease severity was assessed as the percentage of canopy affected by the three diseases: gummy stem blight, *Alternaria* leaf blight, and downy mildew. Of these treatments, Pristine-Bravo WeatherStik, Fontelis-Bravo WeatherStik, and Luna Experience-Bravo WeatherStik-Pristine significantly reduced disease severity by 21.3–52.0% compared to the non-treated control. However, Pristine-Bravo WeatherStik and Luna Experience-Bravo WeatherStik-Pristine performed significantly better than Fontelis-Bravo WeatherStik. Applying Luna Experience alone with a 7-day or 14-day interval did not significantly reduce disease severity in this study.

Treatment, rate/A (application) <sup>z</sup>	Final disease severity (%) <sup>y</sup>
Pristine, 18.5 fl oz (1,3); Bravo WeatherStik, 3 pt (2).....	45.8 c <sup>x</sup>
Inspire Super, 20 fl oz (1,3); Bravo WeatherStik, 3 pt (2).....	84.7 ab
Fontelis, 20 fl oz (1,3); Bravo WeatherStik, 3 pt (2).....	75.2 b
Luna Experience, 10 oz (1,2,3).....	84.7 ab
Luna Experience, 10 oz (1,2,3); Bravo WeatherStik, 3 pt (2); Pristine, 18.5 fl oz (2).....	54.2 c
Luna Experience, 10 oz (1,3).....	91.0 a
Non-treated control.....	95.5 a
<i>P</i> > <i>F</i>	<0.0001

<sup>z</sup> Listed treatment rates are on a per acre basis unless noted otherwise.

<sup>y</sup> The severity was assessed as the percentage of canopy affected. The Horsfall-Barratt scale was used for rating, but values were converted to mid-percentages prior to statistical analyses.

<sup>x</sup> Values followed by the same letter are not statistically significant (*P* = 0.05) according to Fisher's LSD test.