

Evaluation of newly-registered fungicides for the control of Botrytis blight on geranium, 2019.

Plugs from a 128-cell flat of Geranium 'Pinto Premium White' were transplanted into 4-in. pots containing a soilless medium (Suremix MI Grower Products Inc, Galesburg, MI) on 4 Feb and placed inside an 80% shaded research greenhouse on the campus of Michigan State University. Plants were fertilized three times weekly with 200 ppm Peters 20-20-20 water soluble fertilizer (ICL Specialty Fertilizers, Dublin, OH). Greenhouse temperatures during the experiment averaged 66.7°F and ranged from a low of 56.0°F to a high of 80.7°F. Six, single-plant replications per treatment were arranged in a completely randomized design. *Botrytis cinerea* cultures were grown on potato dextrose agar for four weeks. Plates were flooded with sterile distilled water and scraped with a sterile spatula to dislodge spores. Liquid from the plates was strained through cheesecloth, and diluted to 5.0 x 10⁶ conidia/fl oz. The low and high labeled rates for Astun and Broadform were tested against the high labeled rate of industry standard Decree. Fungicides were applied to glistening with a hand pump compressed air sprayer on 22 Feb and 4 Mar. A single inoculation was conducted on 24 Feb by spraying 0.1 fl oz of the conidial suspension onto each plant. Immediately after inoculation, the plants were placed in metal cages enclosed in translucent plastic bags for increased humidity, where they remained for the entirety of the experiment. On 4 and 13 Mar the total number of leaves and the number of leaves with sporulating *B. cinerea* were counted and disease severity was rated using a scale of 1 to 10. Data were analyzed using SAS PROC GLM.

Disease pressure was moderate with the untreated inoculated plants averaging more than one third of their leaves with sporulating *B. cinerea* by the final rating. Newly-registered products, Astun SC and Broadform SC, were similar to the industry standard Decree 50WDG for both leaves with sporulation (%) and disease severity rating. Phytotoxicity was not observed for any treatments.

Product and rate/100 gal	Leaves with sporulating <i>B. cinerea</i> (%)		Disease severity*	
	4 Mar	13 Mar	4 Mar	13 Mar
Untreated inoculated	31.1 b**	38.3 b	4.7 c	6.2 b
Astun SC 10 fl oz	9.3 a	11.1 a	2.5 b	3.0 a
Astun SC 17 fl oz	8.0 a	8.5 a	2.0 ab	2.2 a
Broadform SC 4 fl oz	2.5 a	5.4 a	1.5 ab	1.7 a
Broadform SC 8 fl oz	0.8 a	2.9 a	1.2 a	1.5 a
Decree 50WDG 1.5 lb	3.1 a	8.5 a	1.5 ab	2.0 a

*Rated on a scale of 1-10, where 1=healthy, 2=small/isolated lesions, 3=moderate sized isolated lesions, 4=numerous moderate sized lesions, 5=large necrotic areas, 6=large necrotic areas/30-50% defoliation, 7=large necrotic areas/51-70% defoliation, 8=large necrotic areas/71-90% defoliation, 9= \geq 91% defoliation, 10=plant death.

**Column means with a letter in common are not significantly different (Fishers protected LSD test; $P=0.05$).