

Evaluation of fungicides for control of anthracnose on cucumber, Clinton 2017.

The experiment was conducted at the Horticultural Crops Research Station in Clinton, NC (N35°01.406'; W078°16.496'). Plots were single raised beds on 5-ft centers, covered with white plastic mulch; 14-ft long with 5-ft fallow borders at each end. The previous year the field was planted with cucumber. Cucumber was direct seeded on 27 Jul (2-ft in-row spacing, 2 seed/hill) and thinned to one plant per hill after emergence (7 plants/plot). Irrigation and fertilization (4-0-8, N-P-K) were applied via drip tape on 1, 10, 14, 18, 21, 23 and 30 Aug and 5, 11, 15, 17, 19, 22, 25 and 28 Sep and 2 Oct. Treatments were randomized into four complete blocks. Fungicide treatments were applied using a CO₂-pressurized backpack sprayer equipped with hollow cone nozzles (TXVS-26) delivering 40 gal/A at 45 psi. Applications were made on 25 Aug and 1, 8, 15, 21 and 28 Sep. Fruit were harvested on 5, 13, 18 and 26 Sep and 3 Oct. Plots were inoculated with a spore suspension (5 x 10³) on: 6, 14, 18, 20, 25 and 27 Sep. Disease severity was assessed on 10 and 25 Sep and 4 Oct as percentage of foliage with necrosis per plot. Data were analyzed in the software ARM (Gylling Data Management, Brookings, SD) using analysis of variance (AOV) and Fisher's Protected LSD test to separate means.

Anthracnose was first detected on 10 Sep at approximately 1% disease severity in the field and progressed throughout the remainder of the trial. Aprovia Top and Timorex Gold controlled *C. orbiculare* well. Merivon and combination treatments of Bravo Weather Stik, Folicur, Pristine and LifeGard were also effective in controlling anthracnose when compared to the non-treated. No phytotoxicity was observed. In the table, treatments are sorted by disease severity on 4 Oct.

Treatment and rate of product per acre	Application no. ^y	Disease severity ^z (%)		
		10-Sep	25-Sep	4-Oct
Aprovia Top 1.62SC 13.5 fl oz	1-6	6.8 d ^x	17.5 e	26.5 e
Timorex Gold 1.86EC 18 fl oz	1-6	9.0 cd	18.3 e	27.5 e
Merivon 42.5SC 5.5 fl oz	1-6	10.3 c	22.0 d	30.3 d
Bravo Weather Stik 6SC 24 fl oz	1-6			
Folicur 3.6F 7.2 fl oz	1-6	10.8 c	21.5 d	30.8 d
LifeGard 40WG 2 oz	1, 3, 5			
Bravo Weather Stik 6SC 24 fl oz	2, 4, 6			
Folicur 3.6F 7.2 fl oz	2, 4, 6	10.5 c	22.5 d	32.3 cd
Pristine 38WG 18.5 oz	1-6	14.8 b	25.5 c	34.0 c
LifeGard 40WG 2 oz	1-6	15.8 b	28.8 b	41.5 b
Non-treated	N/A	24.3 a	43.5 a	62.5 a

^z Disease rating scale based on percent necrotic foliage caused by *C. orbiculare*.

^y Application dates: 1=25 Aug, 2=1 Sep, 3=8 Sep, 4=15 Sep, 5=21 Sep, 6=28 Sep.

^x Treatments followed by the same letter(s) within a column are not statistically different ($P=0.05$, Fisher's Protected LSD).