PEPPER, SUMMER (*Capsicum annuum* 'Aristotle')
Phytophthora capsici

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Evaluation of fungicides for *Phytophthora capsici* management on pepper, Clayton 2022.

The research trial was performed at the Central Crops Research Station in Clayton, NC. Research plots were single raised beds on 5-ft centers covered with white plastic mulch; 14-ft long with 5-ft fallow borders on each end. Pepper was seeded on 8 Apr and transplanted to the field on 10 May (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. Four treatments were tested in a randomized complete block design with four repetitions. Fungicide treatments were applied using a CO_2-pressurized backpack sprayer equipped with a single-nozzle, handheld boom with a hollow cone nozzle (TXVS-26) delivering 40 gal/A at 35 psi. Applications were made on 10 and 26 May and 9, 23, 30 Jun. Disease severity per plot was assessed on 26 May, 1, 9, 23 Jun and 11 Jul. Data were analyzed in the software ARM (Gylling Data Management, Brookings, SD) using analysis of variance (AOV) and Fisher's protected least significant differences (LSD) test to separate means.

Phytophthora capsici was first detected on 26 May at approximately 2% disease in the field. No phytotoxicity was observed in the experiment, but some plant yellowing was noted in some plots (Data not shown). At the disease severity data obtained 30 Jun there was no difference in treatments but the treatment Theia had the lowest disease severity (%). Yields were assessed as marketable and non-marketable (data not shown), for marketable there was no statistically difference in treatments but treatment of Theia was higher than the non-treated control and the other treatments.

Treatments	Rate /acre	Disease Severity[z] (%)	Marketable Yields[y] (lbs/treatment)
Non-treated control		10.3 a[x]	4.15 a
Theia 100%	3.0 lb	3.58 a	10.65 a
Howler 50%	2.5 lb	10.73 a	5.70 a
Presidio 39.5%	4 fl oz	17.88 a	3.55 a

[z] Disease rating scale based on wilting foliage caused by *P. capsici* / 30 Jun.
[y] Marketable and non-marketable total yields (lbs./treatment).
[x] Treatments followed by the same letter(s) within a column are not statistically different (P=0.05, Fisher's Protected LSD).