

Evaluation of fungicides for field control of sweetpotato black rot caused by *Ceratocystis fimbriata*, 2017.

This experiment was conducted at Central Crops Research Station in Clayton, NC. Covington sweetpotatoes were transplanted on 2 Jun and spaced at 1 plant per foot in row. The plots were 20 feet long, and the spacing between rows was 45 inches. The field was planted in sweetpotato the previous year. Treatments were randomized in a random complete block design with four replications per treatment. Sweetpotato slips were inoculated prior to transplant by soaking slips in a *C. fimbriata* spore suspension (1×10^6 spores/mL) for 20 minutes. Drench treatments were applied immediately following transplanting to the base of each plant. All treatments with a spray application were applied immediately after transplanting. Treatments with multiple spray applications (Quash, Luna Tranquility, Quadris Top, and Priaxor at 32, 16, and 8 floz/A) were applied on 3-week intervals on 23 Jun, 14 Jul, and 4 Aug. Spray treatments were applied with a CO₂ powered backpack sprayer at 40 gal/A. Drench treatments were applied by pouring 75 mL of fungicide mixture at the base of each plant. Sweetpotatoes were harvested on 13 Oct. Once harvested, roots were weighed, washed, sorted by size, counted, split into two groups for curing, and rated for black rot. After rating, only U.S. No. 1 (3-9 inches) sized roots were cured for either 2 or 4 days. After curing, roots were rated again for black rot. Data were analyzed in the software SAS (SAS Institute, Cary, NC) using Proc GLIMMIX with lsmeans (pdiff.) to differentiate differences between treatment means

No phytotoxicity was observed in any treatment. Intuity and Quash both controlled black rot well. No other treatment provided a significant level of control over the inoculated nontreated control. In the table, treatments are sorted by % Black Rot.

Treatment	Application Method	Rate	% Black Rot*
Intuity	Drench	9.02 fl oz/A	4.27 d**
Quash	Spray	4 oz/A	6.38 cd
Non-treated, non-inoculated	N/A	N/A	7.71 bcd
Serenade ASO	Drench	1 qt/A	
Velum Prime	Drench	6.84 fl oz/A	9.54 abcd
Priaxor	Drench	32 fl oz/A	12.61 abcd
Velum Prime	Drench	6.84 fl oz/A	12.64 abcd
Priaxor	Drench	8 fl oz/A	12.94 abcd
Priaxor	Drench	16 fl oz/A	13.14 abcd
Sercadis	Drench	4.5 fl oz/A	13.71 abcd
Luna Tranquility	Spray	11.2 fl oz/A	13.99 abcd
Priaxor	Drench	7 fl oz/A	14.10 abcd
Priaxor	Spray	32 fl oz/A	15.94 abcd
Mertect	Drench	107 fl oz/100 gal	18.21 abcd
Actinovate	Drench	6 oz/A	18.32 abcd
Priaxor	Spray	16 fl oz/A	21.03 abc
Quadris Top	Spray	8 fl oz/A	21.36 abc
Non-treated, inoculated	N/A	N/A	22.08 ab
Priaxor	Spray	8 fl oz/A	24.71 a
Vertisan	Spray	18.2 fl oz/A	24.91 a

* % black rot was calculated for each treatment based on percentage of No. 1 roots with black rot after curing

** Treatments followed by the same letter(s) within a column are not statistically different (LSmeans (Pdiff))