SWEETPOTATO (*Ipomoea batatas* 'Covington') H. Collins, M. L. Adams, and L. M. Quesada-Ocampo
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Evaluation of fungicides for postharvest management of *Rhizopus* soft rot in sweetpotato, 2021.

This experiment was conducted at the Central Crops Research Station in Clayton, NC. Sweetpotato roots used in the study were grown at the Cunningham Research Station in Kinston, NC and were rinsed in water prior to use. Roots were previously cured and were selected based upon similar size, shape, and disease-free appearance. The experiment was started on 25 May. Sweetpotatoes were wounded using a calibrated, rubber-band-propelled wooden dowel. After wounding, roots were inoculated with a spore suspension applied with a repeating micropipette. The approximate concentration of the spore suspension was 1.0×10^6 spores/mL. Following inoculation, roots were allowed to air dry. Roots were then placed onto a packing line and fungicide spray treatments were applied using a compressed air pressurized sprayer delivering 0.5 gal/2,000 lb of roots at 20 psi with four TG-1 full cone nozzles. Enough product was used to ensure complete coverage of each sweetpotato. After fungicide application, sweetpotatoes were placed into clear, plastic containers (40 x 50 x 17.9 cm) and stored at 27ºC and 99% relative humidity for 14 days. Roots used for the non-treated control were inoculated, but had no treatments applied. Ten replications per treatment were included with 5 roots per replication. Roots were rated for disease incidence (percentage of sweetpotatoes infected) and disease severity (percent of sweetpotatoes per box infected/soft) at 3, 7, 10, and 14 days after inoculation on 28 May, 1, 4, and 8 Jun. Data were analyzed in the software ARM (Gylling Data Management, Brookings, SD) using analysis of variance (AOV) and Fisher's Protected LSD test (*P*=0.05) to separate means.

Rhizopus was first observed 3 days after inoculation. Stadium provided a significant reduction in disease severity on 1, 4, and 8 Jun. No other treatments provided significant reduction of disease severity. No significant differences were observed between any treatments in disease incidence at any rating date. No phytotoxicity was observed in any treatment. In the table, treatments are sorted by disease severity on 8 Jun.

Treatment Name and Rate	Disease Severity[z]				Disease Incidence[y]			
	28 May	1 Jun	4 Jun	8 Jun	28 May	1 Jun	4 Jun	8 Jun
AGR-Biofun1 – 3% V/V	6.2 a[x]	41.6 a	45.2 a	49.3 a	86.0 a	98.0 a	100.0 a	100.0 a
Nontreated	7.3 a	39.72 a	43.5 a	47.0 a	80.0 a	92.0 a	94.0 a	94.0 a
AGR-Biofun2 – 6% V/V	6.0 a	24.5 ab	28.2 ab	31.1 ab	84.0 a	90.0 a	94.0 a	94.0 a
Stadium – 1 fl oz/ton	3.5 a	15.2 b	19.0 b	21.6 b	66.0 a	76.0 a	84.0 a	92.0 a

[z] Disease severity was calculated by the percentage of each sweetpotato in the box that was soft/infected

[y] Disease incidence was calculated for each treatment based on the percentage of sweetpotatoes per box infected.

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