

SRSFC Research Grant/ 2016 / Grant # R-12 -- Final Report 1 December 2016

Title: “Comparison of all registered demethylation inhibitor fungicides for efficacy against mummy berry disease of blueberry” (companion grant to Phil Brannen’s University of Georgia mummy berry grant proposal of the same title)

Principal investigator:

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Objective:

Determine whether multiple EPA-registered demethylation inhibitor fungicides have differential efficacy when used against mummy berry disease of blueberry.

Materials and Methods:

Fungicides evaluated included Pristine, Indar, Proline, Quash, Orbit and an untreated control. This experiment was conducted on single, solid rows of 10-yr-old ‘Emerald’ and ‘Jewel’ southern highbush blueberry bushes planted on 3 × 10-ft spacing at the Horticultural Crops Research Station in Castle Hayne. Plots consisted of three adjacent bushes in a row. A randomized complete block design was used with three replications, for a total of (6 treatments x 3 reps x 2 cultivars) = 36 plots. Spray treatments were applied using a CO₂-powered backpack sprayer delivering the equivalent of 25 gallons per acre (gpa) at approx. 40 psi. A spray boom with two hollow cone nozzles spaced 20 inches apart was used. On each spray date, applications were made in a single timed pass down one side of each plot, and evaluations were made on the sprayed side. Treatments were applied at budbreak on 15 Mar, pre-bloom on 23 Mar, full bloom on 29 Mar and at the green berry stage on 13 Apr. Mummy berry shoot strike incidence was assessed on 1 Apr; fruit infection was assessed on 10 May.

Results:

Despite a long history of severe mummy berry problems at this site, treatments could not be compared because the disease was almost wholly absent at this location in 2016. This lack of disease incidence may have been due to the unusual winter; the 2015/2016 winter was quite warm and had the second-lowest chill hours on record. Many cultivars bloomed prematurely, and lack of chilling may have also affected the emergence of the mummy berry fungus. The experiment will likely be repeated in 2017, hopefully with better success. No phytotoxic effects were noted for any treatments.