Final Report

Evaluating Primocane and Floricane blackberry Varieties for Hardiness in Louisiana and Mississippi

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Public Abstract:

Blackberries are a popular and widely grown fruit crop in the United States. In 2017, the total value of U.S. Blackberry production was estimated at \$31 million U.S. dollars (AMRC, 2019). While Oregon is the predominant U.S. state growing cultivated blackberries, blackberry production also occurs in the southeastern United States. In particular, in Louisiana and Mississippi, this crop is popular for smaller fruit and vegetable operations and hobbyist growers. In 2018, Louisiana blackberries were produced on 93 farms covering 107 acres, resulting in a gross farm value of \$2.4 million (Louisiana Ag Summary 2018). Production numbers were very similar in Mississippi where blackberries were produced on 129 farms totaling 109 acres in production (USDA NASS, 2017). GFV was not reported for Mississippi blackberries. Although production in these two deep south states is limited, producers and enthusiasts continue to have questions on variety performance in our environment where temperatures and humidity are high and rainfall excessive at times. Therefore, Louisiana State University Agriculture Center (LSU AgCenter) and Mississippi State University – Extension (MSU) collaborated to establish blackberry plots for small-scale trials in each state. In 2019, two sites in Louisiana and one site in Mississippi where planted and are continuing to be maintained for demonstration sites to showcase production practices and plant growth for both hobby and commercial producers .

Introduction

Until installation of this project, University led blackberry production trials were non-existent in Louisiana. In Mississippi, Dr. Eric Stafne was and continues to conduct research trials in blackberry production systems. The lack of trials and demonstration sites in Louisiana presents a problem when a commercial producer requests state specific information. Therefore, the short-term objective of this proposal was to plant blackberry demonstration sites in both north and south Louisiana and at the Beaumont Horticultural Unit in southern Mississippi to showcase several varieties of primocane and floricane blackberries recommended for planting in other southeastern states. The long-term goals of this project are to continue to monitor these sites for plant vigor, disease and insect incidence and estimated yields over several years. It is the intention of the PI's to use these demonstration sites in local field days with county agents, commercial producers and avid home gardeners.

Methods

Five blackberries varieties (Prime Ark Traveler, Prime Ark Freedom, Osage, Ouachita and Natchez were planted at three sites in early November 2019. The two Louisiana sites included the Macon Ridge Research Station in Winnsboro located in the northeastern portion of the state and the Hill Farm Teaching Facility in Baton Rouge located on LSU's main campus in the southern portion of the state. The third site was in southern Mississippi at the Beaumont Horticulture Unit in Beaumont, Mississippi. Because the blackberry plants were ordered from several nurseries, it took some time for them all to arrive at LSU. Therefore, they were potted into 1-gallon pots using a commercial media and maintained on a canyard under automatic irrigation until planting in the field. The plants that arrived earliest had tremendous growth so they were pruned back to match those that arrived immediately before planting in the field. The last variety to arrive was already planted in 1-gallon containers. Five plants of each variety were planted at each site on 5-foot centers. A trellis system was installed at each site with a double wire. Drip irrigation was also installed at each site. All three sites were mulched with pine straw for weed control.

Results

Louisiana producers were invited to the Hill Farm Teaching Facility on December 18, 2019 for the annual fruit and vegetable grower's field day were they were able to see the newly planted trial. The blackberry trial was not showcased in Mississippi at the annual fruit and vegetable growers' field day because it was cancelled due to Covid restrictions on group events. The blackberry planting in the north Louisiana location was showcased on Oct 12, 2020 for a home and commercial garden seminar. A presentation was made on blackberry production followed by a tour of the planting. Because COVID cancelled most spring 2020 and summer 2020 events, we were unable to host a field day at the south Louisiana location. However, we were able to create a virtual blackberry field day for commercial producers. This was prerecorded and is available for viewing at this web link

<u>https://www.lsuagcenter.com/portals/our_offices/research_stations/deanlee/features/horticulture/ho</u> <u>me-horticulture/home-fruit-production</u> underneath the title home fruit production videos. There are six videos with the titles

- 1. Blackberry field day overview
- 2. Blackberry varieties
- 3. Blackberry diseases
- 4. Black berry weed control
- 5. Blackberry quality and consistency
- 6. Blackberry post-harvest care

We were also able to take our experience with these new plots and training received at the blackberry SRSFC agent training and use that information to update our Louisiana blackberry production extension publication found at this web link https://www.lsuagcenter.com/articles/page1564515844169. During the height of the Covid pandemic we were also able to use our blackberry plantings and create videos for home gardeners on blackberry propagation

<u>https://www.facebook.com/watch/?v=563242140995154</u>) and to explain the differences in blackberries and dewberries (https://www.youtube.com/watch?v=a4i0z1rW_Lg). It is our intention to highlight these 3 plantings at future home and commercial trainings in the years to come. IN the south Louisiana location, the trial will also be used in the HORT 4085 principals of fruit and nut production course offered in the spring semesters in odd years.

Plant survival was not as expected at the south Louisiana location and the Mississippi location. A third of the plants were lost at each site despite utmost attention to irrigating, fertilizing and weed maintenance. These plants will be replaced in the fall season. Only three plants died at the north Louisiana location. Photos of each planting site are on the next page. This grant has enabled LSU and

MSU to have several locations where we can begin growing blackberry plants allowing us to talk to producers about variety performance in the Deep South. We are very grateful to the SRSFC for funding these demonstration sites.

Literature Cited

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North Louisiana Blackberry Planting



South La Blackberry Planting



Mississippi Blackberry Planting

