

Blackberry Pest Pressure on Rotating Cross-Arm Trellis Compared to T-trellis: 2019 Results from University of Arkansas

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Blackberry (*Rubus* L sub-genus *Rubus* Watson) production in the Southeast has been expanding for the past decade, but may be limited by high pest pressure from anthracnose, spotted wing drosophila (SWD) and brown and green stinkbugs. A trial was established in May 2017 at University of Arkansas System Division of Agriculture Fruit Research Station in Clarksville, AR to study how Rotating Cross-Arm (RCA) trellises impact pest pressure in blackberry compared to a standard T-trellis. The factorial design consisted of three blackberry cultivars (Prime-Ark® Traveler, Ouachita, and Osage) on both RCA and a standard T-trellis. The trial was managed using a standard commercial insect and disease management program. Ten cull berries were randomly chosen from harvest twice per week for anthracnose and stink bug damage ratings. The ratings were based on a rating scale of 0-6 representing the number of drupelets affected. Thirty berries (fifteen marketable and fifteen cull berries) were harvested once per week from each treatment x cultivar combination and assessed under a dissecting microscope to determine the number of SWD eggs per berry. On average over the 2019 season 0.35 SWD eggs per berry were found in fruit harvested on the RCA and 0.77 SWD eggs per berry were found in fruit harvested from the standard T-trellis. This represents over a 50% reduction in the number of SWD eggs per berry found on the RCA versus the standard trellis. This may be due to differences in canopy densities or difference in spray coverage penetration between the two trellis systems. There was no effect of trellising on severity of berry infection by anthracnose infection in 2019. A trellis and cultivar interaction for ratings of stinkbug damage was observed in 2019, however it is hypothesized that this result is due to an edge effect and not a true treatment effect. Stinkbugs are known to move into a field from the edges. These preliminary results are important as they demonstrate how alternative trellis systems may benefit Southeastern blackberry growers by reducing populations of key economically important pests.