## APPLICATION TECHNOLOGY COMPARISON FOR SEASON-LONG WEED CONTROL IN MIDSOUTH COTTON M.M. Houston J.K. Norsworthy Dept. of Crop, Soil, and Environmental Sciences **University of Arkansas** Favetteville, AR W.L. Patzoldt **Blue River Technology** Sunnyvale, CA J.A. Fleming T.C. Smith Dept. of Crop, Soil, and Environmental Sciences University of Arkansas Fayetteville, AR L.T. Barber University of Arkansas Research and Extension Service Lonoke, AR

## <u>Abstract</u>

With record high herbicide prices on the horizon for the 2022 growing season, producers are looking for every opportunity to trim cost. John Deere See and Spray<sup>TM</sup> Select Technology has been reported to do so, cutting usage by nearly 80% in recorded burndown applications, allowing an in-crop prototype design to be tested in cotton. An experiment was conducted in Keiser, AR in 2021, comparing a traditional broadcast application program against several See and Spray application programs. Each were evaluated for cotton injury, Palmer amaranth control, cotton lint yield, and their respective herbicide savings. At both 14 days after (DA) early postemergence (EPOST) and midpostemergence (MPOST), cotton injury was significantly reduced with the See and Spray technology even when applying the same herbicides. This is largely attributed to the separation of residuals into a separate tank and the limitation of exposure from the postemergence (POST) products. Palmer amaranth control was >90% in all treatments following an EPOST application, with no differences between application technologies throughout the entire season. Cotton lint yield averaged 1352 lbs/A for the broadcast program, similar to the various See and Spray programs which ranged from 1246 to 1506 lbs/A. Postemergence herbicide usage was reduced an average of 11% at EPOST and 27% at MPOST across the See and Spray programs. In summary, See and Spray programs provided equal Palmer amaranth control and cotton lint yield while reducing cotton injury and POST herbicide usage and subsequent costs.