SECOND YEAR RESULTS FOR SEEDING RATE STUDIES IN COTTON IN SOUTH ALABAMA Steven M. Brown Dalton E. Barber Samuel A. Frazier Auburn University Auburn, AL

<u>Abstract</u>

Cotton seeding rate trials were conducted at the Brewton Research Unit (BRU), Brewton, AL, and the Wiregrass Research and Extension Center (WREC), Headland, AL, in 2020-21, and the Tennessee Valley Research and Extension Center (TVREC), Belle Mina, AL, in 2021. Two varieties, DP 2055 B3XF and PHY 400 W3FE, were planted in standard (36 or 40-inch) rows. Targeted seeding rates were 1.0, 1.2, 1.5, 1.7, 2.0, 2.4, and 3.0 seed/ft; or one seed every 12, 10, 8, 7, 6, 5, and 4 inches, respectively. Populations were achieved with planter settings and/or hand thinning. At WREC, the Precision eSet planter over-planted rates below 1.5 seed/ft. Otherwise, actual stand counts ranged from 72 to 88 percent of targeted seeding rates. Measured differences in plant growth by seeding rate included a slightly higher node of uppermost harvestable boll and more vegetative bolls at the lower populations, those below the targeted rate of 2.0 seed/ft. DP 2055 B3XF was the taller of the two varieties. Regression analysis based on actual populations indicated no yield differences among rates at WREC or BRU (2021) but slight yield advantages for greater plant stands at BRU (2020) and TVREC (2021). In 2020, there were no differences in yield between the two varieties at BRU and WREC. In 2021, DP 2055 B3XF had significantly higher yields than PHY 400 W3FE at WREC, while the reverse was true at TVREC.