PLANTING DATE AND VARIETY EFFECTS ON COTTON STAND ESTABLISHMENT AND LINT YIELD E. Clawson Louisiana State University AgCenter St. Joseph, LA D. Boquet, J. Caylor, and C. Shivers Louisiana State University AgCenter Winnsboro, LA

Abstract

To investigate planting date effects on modern cotton varieties of varying maturities, a planting date by variety study was performed at the Macon Ridge Research Station, Winnsboro, LA in 2002 and 2003. The soil type was a Gigger Silt Loam, the row spacing was 40 inches, and the study was irrigated. The following varieties were utilized in both years: Deltapine DP DeltaPEARL, Deltapine DP 555 BG/RR, Phytogen PSC 355, Stoneville ST 4892 BR, and SureGrow SG 215 BG/RR. Sure-Grow SG 821 was planted in 2002 only, and Deltapine DP 565 was planted in 2003 only. Planting dates ranged from late March to early June in each year, with 8 dates in 2002 and 9 dates in 2003. Data was obtained on soil temperature following planting, stands, lint percent, and lint yield. In both years, March 25 and April 4 planting dates had soil temperatures below 60°F and poor stands. In 2002, late season hurricanes affected harvest of late planting dates, with the April 24 planting date being the last date first-picked prior to these storms. The general decline in yields as planting extended past the optimum date was more pronounced in 2002 than in 2003, when good weather was present late in the season.

A significant planting date by variety interaction on lint yield occurred in each year. Numerically, the greatest lint yields were obtained with April 24 planting for all varieties in 2002 and with May 2 planting for all but one variety in 2003. For each variety in both years the highest yielding planting date yielded significantly more than the early June date. Certain patterns were apparent in the in numeric ranking in lint yield among the varieties. Deltapine DP 555 BG/RR and Deltapine DP DeltaPEARL, both considered to be "long season" varieties, did not perform as well as other varieties when planted May 13 or later in 2002. This effect was not seen in 2003, when late season weather conditions were good and Deltapine DP 555 BG/RR was one of the highest yielding varieties for May planting dates. In 2002, relative to other varieties, Phytogen PSC 355 and Stoneville ST 4892 BR were moderate to high yielding across all planting dates, while SureGrow SG 215 BG/RR was more competitive at May or early June dates than earlier. In 2003, there was more variability in variety lint yield rankings by planting dates: however, the pattern of improved relative performance at late planting dates was again seen for Sure-Grow SG 215 BG/RR. Preliminary results indicate the optimum planting window for this area of Louisiana is probably late April to early May. When planting later than this window, long season varieties may have a higher tendency toward yield losses from the poor weather commonly occurring late in the growing season.

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