

COTTON LINT YIELD AND FIBER QUALITY RESPONSE TO REDUCED SEEDING RATES

Steve P. Nichols and Charles E. Snipes

Mississippi State University

Delta Research and Extension Center

Stoneville, MS

Normie Buehring

Mississippi State University

North Mississippi Research & Extension Center

Verona, MS

Abstract

Field studies were conducted at Stoneville, MS and Verona, MS during 2003 to examine the potential for increasing grower profits through the use of reduced seeding rates. Cotton varieties ST 4892BR, ST 5599BR, and DP 555BR were evaluated at 1, 2, 3, 4, and 5 seeds per foot. Randomized treatments were assigned to plots of four rows spaced 40 inches apart, 50 feet long, replicated four times, and arranged in a split-plot design with variety as the main plot and seeding rate as the subplot. Generally, highest yields for all three varieties were obtained with seeding rates of 3 to 4 seeds per foot of row at both locations. Plant populations for these seeding rates ranged from approximately 35,000 to 45,000 plants per acre. Fiber length, uniformity index, and fiber strength were not affected by seeding rate. Small differences in micronaire were observed at the Verona location but were of no economical significance. There were no differences in micronaire at Stoneville. Plant mapping data revealed more first position bolls present with lower seeding rates. However, lower seeding rates set more bolls higher on the plant potentially delaying maturity.