IDENTIFYING ACCESSIONS AND MANAGEMENT PRACTICES FOR THE PRODUCTION OF PIMA COTTON IN SOUTH CAROLINA

Sarah K. Holladay
Michael A. Jones
Clemson University
Florence, SC
B. Todd Campbell
USDA-ARS
Florence, SC

Abstract

Production of Pima cotton (*Gossypium barbadense* L.) in the United States is currently limited to the West. Pima has superior, more valuable fiber than the broadly cultivated Upland cotton (*Gossypium hirsutum* L.). In this study it was hypothesized that Pima can be economically produced in South Carolina. The objectives were (1) to identify Pima accessions/varieties in a two-year agronomic performance trial with acceptable yield and fiber quality when ginned by two different ginning methods; and (2) to evaluate Pima accessions/varieties under irrigated and dryland conditions and three planting dates in a two-year management trial. In both trials, the Upland checks yielded significantly higher than Pima accessions/varieties by ~50%; however, the majority of Pima accessions/varieties had significantly better fiber quality. Irrigation had no significant impact on lint yield in either year of the study. Yield was significantly higher for the early date in 2019. Few entries had a significant response to ginning method for fiber length and strength in 2018. The top five Pima accessions/varieties had statistically similar net return values to the Upland checks when priced at the base loan rate for Pima ($0.95/lb) and Upland ($0.52/lb). However, with yields fairly low over all, further research is required to conclude whether or not Pima would be successful in South Carolina.