

SEEDING RATES AND PLANT POPULATION EFFECT ON COTTON PRODUCTION IN GEORGIA**Jared R. Whitaker****John L. Snider****The University of Georgia****Tifton, GA****Guy D. Collins****North Carolina State University****Rocky Mount, NC****Seth A. Bryd****Texas A&M University****Lubbock, TX****Abstract**

Cotton seeding rates in Georgia have been dramatically stretched over time, likely because of increasingly expensive seed and the ability to maintain yields with relatively low plant populations. It is common for Georgia producers to plant two seed per row-foot equaling approximately 29,000 seed per acre. Significant work in Georgia during the mid-90's demonstrated top yields could be produced when seeding rates fell to two per row-foot and when populations reached as low as 1.2 to 1.9 plants per row-foot. To reevaluate these recommendations in current production systems a total of 12 trials were conducted during 2013 to 2015 in Georgia. This work revealed several pieces of information which producers could use to make informed seeding rate and plant population decisions. From a seeding rate standpoint, two seed per row-foot provided statistically top yields in most situations and higher seeding rates provided increased yield potential only in cases of late planting date or low germination. Data also indicated that higher seeding rates, up to six per row-foot, rarely negatively impacted yield. Cotton variety also impacted seeding rates and plant populations needed to maximize yield, whereas some varieties compensated easily from lower stands and others produced higher yields with higher seeding rates and plant populations. From a plant population standpoint, this work demonstrated that in current production systems populations of at least 1.5 to 1.75 plants per row-foot are needed to consistently maximize yields and producers should make decisions on rates based on stand establishment and make modifications where possible.