VARIATIONS IN THE NEED FOR PLANT GROWTH REGULATORS IN LOUISIANNA COTTON Joel Faircloth LSU Agcenter Winnsboro, LA

Abstract

An on-farm test was performed in 2002 to assess the benefits of in-season Pentia® applications for cotton plant growth regulation. The test was performed in Monroe, LA on a non irrigated, sterlington silt-loam soil. This soil type is highly fertile and not representative of the majority of soils where cotton is produced in Louisiana. The variety tested was DP 555 BR®, a variety that has been documented as a tall, growthy, full season variety. In season applications were made three times at various rates in all treated plots. Measurements taken included plant height, node of first sympodial branch, boll location, total nodes per plant, nodes above white flower, percent open, and yield. Plant heights and the number of total nodes per plant were significantly reduced in Pentia® treated plots. Thus, Pentia® was also successful in reducing internode length. Boll location measurements indicated that more bolls on cotton plants in treated plots were located lower on the plant relative to the untreated check plants and the converse was true in the top of cotton plants. The earliness profile in treated plots was enhanced as witnessed in node of first sympodial branch, nodes above white flower, and percent open measurements. Lastly, yields were enhanced significantly in plots where Pentia® was applied. In conclusion, under certain conditions the application of Pentia® for plant growth regulation can offer height control, earliness, and yield benefits.