

B/RR-COTTON PERFORMANCE IN ROUNDUP AND CONVENTIONAL WEED MANAGEMENT SYSTEMS

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Abstract

A study was conducted during 2000 and 2001 to evaluate yield and weed control for bollworm/Roundup (glyphosate) tolerant (B/RR) cotton varieties (Paymaster 1218 BG/RR, Stoneville 4892 BR, Sure-Grow 501 B/RR and Deltapine 451 B/RR) response in conventional and Roundup weed management systems. Conventional varieties (Stoneville 474, Sure-Grow 747, PhytoGen PSC 355, and Sure-Grow 501) were also included in the conventional weed management system. The experimental design was a randomized complete block with four replications. The study was conducted on a Leeper silty clay loam soil where weed infestations of pitted morningglory (*Ipomoea lacunosa*) and pigweed (*Amaranthus sp.*) were light to moderate. Both weed management systems achieved high levels of weed control (>95% late season control). Regardless of year, B/RR varieties showed no differences in percent lint turnout or yield due to weed management system. Lint yields for B/RR varieties, across weed management systems, ranged from 1184 to 1423 lb/ac in 2000 and 879 to 1072 lb/ac in 2001. Yields for B/RR cotton varieties were equal or greater than the conventional varieties. Lint yield for the conventional varieties ranged from 1182 to 1526 lb/ac in 2000, and 887 to 952 lb/ac in 2001. Lint percent turnout ranged from 39 to 44% in 2000 and 34 to 38% in 2001. Both years lint percent turnout for B/RR varieties were not affected by weed management systems. Deltapine 451 B/R had the lowest percent lint turnout of 39% in 2000 and 34% in 2001. Sure-Grow 501, Stoneville 4892 BR and Stoneville 474 had the highest lint percent turnout of 44% in 2000 and 37 to 38% in 2001.