

**FIELD PERFORMANCE OF HARTZ
BOLLGARD™ COTTON VARIETIES
AT MULTIPLE LOCATIONS
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Abstract

Backcross-derived Hartz Bollgard™ cotton varieties were tested during 1995 at 8 locations across the Cotton Belt to determine the agronomic and yield performance of these new lines. Bollgard varieties were compared to the recurrent parent varieties and 2 standard commercial variety checks. The varieties tested were: H1215, H1215BG, H1220, H1220BG, H1244, H1244BG, H1330, H1330BG, H1380, H1380BG, H1560, and H1560BG. The standard checks were DP50 and Stv. LA887. The yield trials were conducted at locations in Texas, Louisiana, Mississippi, Tennessee, Georgia, and North Carolina. All plots were managed identically (including insect control), using standard management practices for the region. Plots were 2 rows, 40 feet long with each treatment replicated 4 times and machine harvested at maturity. Lint yield measurements and yield components indicated that the yield potential of the Bollgard varieties was equal to or greater than the recurrent parent variety. In 46 of 48 comparisons, the Bollgard variety lint yield and lint percent was equal to or greater than the non-transgenic recurrent parent variety ($p = 0.05$). Similarly, in 45 of 48 comparisons, the boll size of the Bollgard variety was equal to or greater than the non-transgenic parent variety ($p = 0.05$). Fiber quality (fiber length, fiber strength, and micronaire) of the Bollgard varieties was similar to the recurrent parent lines. Significant differences in fiber quality were isolated to 2 of the Bollgard lines tested ($p = 0.05$). Separate studies were used to evaluate the lepidopteran control of the Bollgard varieties. When averaged across 8 locations, the Hartz Bollgard variety (unsprayed for lepidopteran pests) yielded 9.3% greater than non-transgenic Hartz variety, sprayed to control lepidopteran pests.