

**DEVELOPMENT AND MATURITY  
MEASUREMENTS ON TRANSGENIC BT AND  
ROUNDUP READY™ COTTON**  
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**Abstract**

In 1996, Hartz experimental lines with the Bollgard™ (BG) gene and Roundup Ready™ (RR) gene were tested at Mississippi State, MS to evaluate maturity and yield. HX6250BG, HX6254BGRR, HX6450BG, HX6454BGRR, HX6474BGRR, and Deltapine 50 (DP50) were grown in four reps. Node above cracked boll (NACB) measurements were taken weekly from a ten foot section of row, beginning August 22. On September 5 and 12, HX6450BG was more mature than HX6454BGRR with a NACB of 9.4 vs. 10.8 and 6.7 vs. 7.7 respectively. All of the Hartz lines were significantly more mature (lower NACB) than DP50 on September 5 but not on September 12. There was no difference in maturity between HX6250BG and HX6254BGRR. All plants within the ten foot section of row were hand harvested by position. The Roundup Ready™ lines had higher lint yield. There was no significant difference between yield in HX6250BG (1173.72 lbs/acre) and HX6254BGRR (1352.72 lbs/acre). There was a significant difference between yield in HX6450BG (1297.59 lbs/acre) and HX6454BGRR (1700.82 lbs/acre). Lint yield for HX6454BGRR (1700.82 lbs/acre) was significantly greater than HX6474BGRR (1351.86 lbs/acre). HX6454BGRR and HX6474BGRR are in the same cultivars background but have a different Bt gene insertion event. The gene insertion event for HX6454BGRR is M531 and is M757 in HX6474BGRR. Percent of lint yield from first position bolls for HX6450BG and HX6454BGRR were equal, however HX6454BGRR produced more lint per node than did HX6450BG.