

**IS REPLANTING CRUCIAL FOLLOWING AN OFF-TARGET APPLICATION OF HARMONY XTRA  
IN COTTON?****Donnie K. Miller****LSU AgCenter, Northeast Research Station  
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St. Joseph, LA****Abstract**

Field studies were conducted in 2007 at the Northeast Research Station near St. Joseph, La, the Dean Lee Research Station near Alexandria, La, and the Delta Research and Extension Center near Stoneville, Ms to determine the necessity of replanting following an off-target or misapplication of Harmony Extra (thifensulfuron + tribenuron) to cotton. Treatments evaluated included Harmony Extra at 0, 1/4, 1/8, 1/16, 1/32, or 1/64 x rate of a 1x rate of 0.3 oz/A applied to cotton at the 2 to 3 leaf growth stage. Varieties evaluated included DP 164 B2RF at St. Joseph and Stoneville and DP 143 B2RF at Alexandria. Application dates were May 24 at St. Joseph, May 22 at Stoneville, and May 31 at Alexandria. Cotton was replanted in adjacent plots on June 21 at St. Joseph (delayed due to lack of adequate moisture), May 29 at Stoneville, and June 11 at Alexandria. Parameters measured included visual crop injury and height 14 and 28 d after treatment (DAT), node above white flower (NAWF) (St. Joseph and Alexandria only), and seedcotton yield.

At 14 DAT, cotton height was reduced with Harmony Extra applied at 1/4 to 1/32 x rates at Stoneville, 1/4 x rate at St. Joseph, and not reduced at Alexandria when compared to when no herbicide was applied. At 28 DAT, height reduction was observed with Harmony Extra at 1/4 to 1/16 x rates at Stoneville, 1/4 and 1/8 x rates at St. Joseph, and at the 1/4 x rate at Alexandria. Injury 14 DAT following application of Harmony Extra was 20% or greater at rates of 1/16 x or greater at Stoneville and St. Joseph and 1/4 x at Alexandria. At 28 DAT, injury was at least 20% at rates of 1/8 x or greater at Stoneville and St. Joseph and 1/4 x at Alexandria. A delay in cotton maturity as determined by an increase in NAWF number was observed only at St. Joseph at the 1/4 x rate when compared to when no herbicide was applied. Early-season injury and height reduction following Harmony Extra application resulted in yield reduction only at the 1/4 and 1/8 x rate at St. Joseph. Yield comparison indicated no advantage to replanting cotton as in all but one instance, when yield was equal, cotton recovered from initial injury and yielded greater than replanted cotton.

Application of Harmony Extra resulted in significant injury and height reduction at higher rates evaluated. In these studies, replanting of cotton was not the best option following reduced rate application of Harmony Extra.