

**CONTROL OF VOLUNTEER ROUNDUP READY FLEX COTTON WITH POSTEMERGENCE****HERBICIDES****J.W. Keeling****J.D. Reed****D.M. Petty****B.A. Brown****Texas AgriLife Research****Lubbock, TX****Abstract**

In no-till or minimum-till systems, glyphosate-tolerant volunteer cotton can become a significant “weed” problem, competing with the crop for water and nutrients. Field studies were conducted in 2007 and 2008 near Lubbock, TX to evaluate selected postemergence herbicides for volunteer Roundup Ready Flex (RRF) cotton control as affected by growth stage. FiberMax 9058F was planted on June 7, 2007 and May 20, 2008. Applications were made July 2 (5-8 leaf) and July 16 (10-12 leaf) 2007 and June 20 (5-8 leaf) and July 3 (10-12 leaf) 2008. Direx (26 oz/A), Layby Pro (32 oz/A), Caparol (32 oz/A), Reflex (16 oz/A), Valor (2 oz/A), Gramoxone (16 oz/A), Buctril (8 oz/A), Ignite (28 oz/A), ET (1.5 oz/A), and Aim (1 oz/A) were applied to 5-8 leaf and 10-12 leaf cotton in a randomized complete block design with three replications. Treatments were applied over the top at a rate of 10 gallons per acre. Appropriate adjuvants were applied with herbicides as prescribed by product labels. Control was evaluated 7, 14, and 28 days after treatment (DAT) for each growth stage.

In 2007, Buctril, Ignite, ET and Aim applied to 5-8 leaf stage cotton controlled RRF cotton > 90%. Layby Pro controlled RRF cotton >75%. All treatments were less effective (<60%) when applied at the 10-12 leaf stage. In 2008, Buctril, Ignite, and Layby Pro were the only herbicides that controlled RRF cotton >65% when applied at the 5-8 leaf stage. Dry conditions before and following the 5-8 leaf stage treatment appear to have contributed to poor early stage RRF cotton control. Subsequent rains were then received before the 10-12 leaf stage treatment. Initial control >80% was observed with Layby Pro, Buctril, ET and Aim 14 DAT. However, by 28 DAT, significant cotton regrowth had occurred and control for all herbicides declined to <65%.

These results indicate that Ignite, Buctril, ET, Aim and Layby Pro can control volunteer RRF cotton, but should be applied before cotton reaches the 5-8 leaf stage. Care must also be taken to properly apply herbicides through a hooded sprayer to avoid crop injury. When possible, tillage may be the best option to control volunteer RRF cotton.