

CONTROLLING VOLUNTEER COTTON WITH POSTMERGENCE HERBICIDES**W. J. Grichar****Texas AgriLife Research Service****Beeville, TX****D.D. Fromme****Texas AgriLife Extension Service****Corpus Christi, TX****P. A. Dotray****J. W. Keeling****Texas AgriLife Research****Lubbock, TX****Abstract**

Field studies were conducted in the Texas High Plains (2007 to 2009) and in south Texas (2009) cotton growing areas using typical small plot procedures to determine Roundup-Ready cotton response to various POST herbicides. In the High Plains region, EPOST herbicide applications were made when cotton was up to 5-leaf stage while LPOST applications were made to cotton at the 6 to 10 leaf stage. In South Texas, herbicides were applied when cotton was at the cotyledon stage (EPOST) or 6 to 8 leaf stage (LPOST).

Herbicide control of cotton in the High Plains generally was sporadic. Some herbicides provided better control of cotton when applied EPOST while others were more effective LPOST. In south Texas, several herbicides were just as effective when applied EPOST compared with LPOST applications.

Texas High Plains

In 2007, EPOST applications of Aim at 1.0 oz/A, ET at 1.5 and 2.0 oz/A, and Ignite at 29.0 oz/A controlled cotton at least 96%. Layby-Pro at 32.0 oz/A provided 92% control of cotton while Buctril at 8.0 oz/A provided 86% control. None of the above mentioned herbicides controlled cotton better than 83% when applied EPOST. Clarity controlled cotton no better than 53% with either EPOST or LPOST applications while Gramoxone Inteon at 16.0 to 32 oz/A provided 68 to 83% control when applied EPOST or LPOST. In 2008, only EPOST or LPOST applications of Clarity or Ignite and LPOST applications of Gramoxone Inteon at 32.0 oz/A provided effective cotton control ($\geq 90\%$). Buctril and Layby Pro applied EPOST or LPOST or Aim applied LPOST controlled cotton 82 to 87%. At Location 1 in 2009, Aim applied EPOST or LPOST, Buctril applied EPOST, ET applied LPOST, Gramoxone Inteon at 32.0 oz/A applied EPOST or LPOST, Layby Pro applied EPOST, and Sharpen at 1.5 or 2.0 oz/A controlled cotton at least 91% while tillage controlled cotton at least 92%. At location 2, only Gramoxone Inteon at 32.0 oz/A applied EPOST and both rates of Sharpen applied EPOST or LPOST effectively controlled cotton.

South Texas

When rated 4 weeks after treatment, cotton treated at the cotyledon stage was more effectively killed with some herbicides than that treated at the 6 to 8 leaf stage (Table 2). Aim at 1.0 oz/A, Buctril at 8.0 oz/A, Chaparral at 2.5 oz/A, Gramoxone Inteon at 24 oz/A, and Ignite at 29 oz/A effectively controlled cotton ($\geq 94\%$) whether applied to cotton at the cotyledon or 6 to 8 leaf stage. Atrazine at 32 oz/A, Callisto at 3.0 oz/A, and Python at 1.0 oz/A effectively controlled cotton when applied at the cotyledon stage ($\geq 99\%$) but when applied to 6 to 8 leaf cotton, control varied from 40 to 84%. Cleanwave at 14 oz/A, Starane at 16 oz/A, and 2,4-D at 32 oz/A controlled cotton 86 to 89% regardless of application timing while Peak at 0.75 oz/A and Spirit at 1 oz/A failed to control cotton (22-65%).

These studies show that herbicides can effectively control volunteer cotton but applications should be made when the cotton is small to be effective.