

**TRIFLOXYSULFURON AND PROMETRYN TANKMIX COMBINATIONS  
IN POST-DIRECTED WEED CONTROL PROGRAMS**

**Matthew T. Kirkpatrick, L. Thomas Barber, Nathan W. Buehring, and Daniel B. Reynolds  
Mississippi State University  
Mississippi State, MS**

**Abstract**

Trifloxysulfuron and prometryn are broad spectrum herbicides for postemergence weed control in cotton. These two chemicals will be marketed as a premix under the trade name Suprend. This study was designed to address weed control efficacy of Suprend following Touchdown and Touchdown plus Dual applied early postemergence over the top, in a weed management program. The test was designed as a randomized complete block design with four replications, and conducted at the Black Belt Research Station in Brooksville, MS. Touchdown (12 oz ae/A) or Touchdown (12 oz ae/A) plus Dual (0.95 lbs ai/A) were applied as a post emergence over the top treatment when cotton was three inches tall. Suprend was applied either post-directed at 6 to 10 inch cotton or layby following the topical application of Touchdown or Touchdown plus Dual. Suprend rates of 0.6, 0.8, 1.0, 1.2 lbs ai/A were used at each application timing. Weed control ratings were taken seven days after each application, and were based on a scale of 0 to 100% weed control.

Results of the study indicated that there were no significant ( $\alpha=0.05$ ) differences in weed control between Touchdown alone followed by Suprend and Touchdown + Dual followed by Suprend when post-directed at 6 to 10 inch cotton. Both chemical combinations resulted in sufficient weed control of pitted morningglory, palmleaf morningglory, smallflower morningglory, and large crabgrass (90-95%). Rates of Suprend also did not affect weed control, and a high weed mortality was observed for each weed species. The use of Suprend, regardless of rate, resulted in greater control of each weed species than Touchdown applied alone. Application timing of Suprend did not affect efficacy when applied following an early postemergence over the top application of Touchdown plus Dual. However, Touchdown alone followed by Suprend resulted in significantly less control when applied post-directed as compared to layby. These data indicate that Touchdown followed by a layby application of Suprend provided control equal to or greater than Touchdown plus Dual followed by 0.008lbs ai/A Aim or 0.06 lbs ai/A Valor. In conclusion, these preliminary data show that a low rate of Suprend (0.6 lbs ai/A) in combination with Touchdown applied layby, provided as effective control as did higher rates of Suprend and Touchdown plus Dual or layby applications of Aim or Valor.