

**EFFECT OF OVER-THE-TOP AND POSTEMERGENCE DIRECTED  
APPLICATIONS OF ENVOKE ON COTTON GROWTH AND YIELD**

**D.K. Miller, P.R. Vidrine, S.T. Kelly, and D.R. Lee**

**LSU AgCenter  
Baton Rouge, LA**

**Abstract**

Field studies were conducted in 2001 at the Dean Lee Research Station near Alexandria, La and at the Northeast Research Station near St. Joseph, La in 2002 to evaluate cotton tolerance to over-the-top and postemergence directed applications of Envoke (trifloxysulfuron sodium). In 2001, treatments evaluated included Envoke applied EPOST (4lf) at 0.1, 0.15, or 0.25 oz/A; LPOST (10lf) or LPD (12lf) at 0.15 or 0.25 oz/A; sequentially at 0.1 or 0.25 oz/A EPOST followed by 0.15 or 0.25 oz/A, respectively; and EPOST at 0.15 oz/A in combination with Touchdown IQ (glyphosate) at 32 oz/A. Comparison treatments included Staple (pyrithiobac) EPOST at 1.2 or 2.4 oz/A, Dual II Magnum (metolachlor) plus Touchdown IQ at 16 plus 32 oz/A, and a nontreated control. Experimental design was a randomized complete block with three replications. Treatments were applied at 15 GPA over-the-top and 7.5 GPA postemergence directed to each four row, 12' x 40' plot. Crop assessment included visual injury at 12, 21, 28, and 55 d after EPOST application and seedcotton yield. At St. Joseph in 2002, treatments evaluated included Envoke applied EPOST (2-3lf) at 0.1 or 0.15 oz/A; MPOST (5-6lf) at 0.1, 0.15, or 0.2 oz/A; PD (5-6lf) at 0.15 or 0.2 oz/A; LPOST or LPD (8-9lf) at 0.15, 0.2, or 0.25 oz/A; EPOST at 0.15 oz/A in combination with Caparol (prometryn) at 0.016 or 0.064 oz/A; and MPOST at 0.1 oz/A in combination with Staple at 0.3, 0.6, or 1.2 oz/A. Comparison treatments included Staple MPOST at 1.2 oz/A and a nontreated control. Experimental design was a randomized complete block with four replications. Treatments were applied at 15 GPA to each two row, 6.67' x 30' plot. Crop assessment included plant height 3, 14, and 142 d after LPOST treatment, node above white flower (NAWF) 42 d after LPOST, total nodes 142 d after LPOST, yield, and fiber quality. In both studies, nonionic surfactant at 0.25% was included with all treatments except tankmixtures with Touchdown IQ.

At Alexandria in 2001, Envoke resulted in no greater than 6% visual injury from 12 to 55 d after EPOST treatment. Seedcotton yield was equivalent for all treatments and the nontreated control and ranged from 1766 to 2661 lb/A. At St. Joseph in 2002, no significant differences in plant height, NAWF, or number of total nodes were observed for herbicide treatments and the nontreated control. Differences in seedcotton yield, lint fraction, or fiber micronaire, strength, or length were observed. In this research, cotton was very tolerant to both over-the-top and postemergence directed applications of Envoke.