

**EVALUATION OF NEW PREEMERGENCE AND  
POSTEMERGENCE HERBICIDE PROGRAMS IN  
CENTRAL TEXAS COTTON**

**P. A. Baumann, G. D. Morgan and J. W. Smith  
Texas Agricultural Extension Service  
College Station, TX**

Reflex was applied preemergence, Palmer amaranth control ranged from 90-100% at rates of 16-48 ozs./A, and far exceeded the control provided by 40 ozs./A of Cotoran. Again, no significant crop injury was observed.



**Abstract**

The prolonged use of preplant and preemergence herbicide programs over the past thirty years in Central Texas cotton cultures have afforded the opportunity for new weed species to invade. This phenomenon, along with new herbicides being labeled has promoted the exploration of alternatives to traditional herbicide programs. Several new approaches were examined at two locations in Central Texas during the 1997 crop season.

Postemergence tank-mix combinations of Staple and Roundup Ultra herbicides were examined at two sites to determine if any synergistic effects were provided by the combination over either product used alone. Reduced rates of Staple (0.6 and 0.9 oz./A) were compared alone to treatments that included the addition of 1 or 1.5 pts. of Roundup Ultra. Palmer amaranth (*Amaranthus palmeri*) control was not significantly improved when comparing any of the tank-mix combinations with either product used alone at the same rates. Early-season ivyleaf morningglory (*Ipomoea hederacea*) control was significantly better with the Staple/Roundup Ultra combinations than when Staple was used alone at either 0.6 or 0.9 oz./A. However, the tank-mix was not significantly better than either the 1.0 or 1.5 pts./A rate of Roundup Ultra used alone. As one might expect, these same results were seen when control of seedling johnsongrass (*Sorghum halpense*) was examined. Smellmelon (*Cucumis melo*) control was significantly better when the tank-mix combinations were applied compared to Staple alone, and at the mid-season rating of the Roundup Ultra treatments.

Preemergence weed control with Staple was evaluated at one location for Palmer amaranth and ivyleaf morningglory control. Palmer amaranth control was excellent (> 98%) at rates of 0.6 and 0.8 oz./A and equivalent to combinations with Cotoran, Karmex, or Zorial. However, generally speaking, the combinations improved ivyleaf morningglory control.

Reflex herbicide was evaluated for soil applied activity with regard to weed control and cotton tolerance. When applied preplant incorporated, Reflex at 16 ozs./A or greater provided Palmer amaranth control equal to 24 ozs./A of Treflan. Control improved as rates increased to 48 ozs./A with no significant cotton phytotoxicity observed. When