

EVALUATION OF CINCH® IN COTTON WEED CONTROL PROGRAMS

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Abstract

S-metolachlor is a broad spectrum herbicide for preplant incorporated or preemergence weed control in cotton. DuPont Chemical Company recently acquired the rights to market metolachlor under the trade name Cinch. This study was designed to address the weed control efficacy of Cinch as a preemergence treatment in cotton. The test was designed as a randomized complete block with four replications and conducted at the Blackbelt Research Station in Brooksville, MS. Cinch was applied at 0.96 lb ai/A as a preemergence treatment alone or in combination with 0.031 or 0.042 lb ai/A Staple (pyrithiobac). Preemergence treatments were followed by sequential applications of Roundup WeatherMax (glyphosate) and Staple at either 2-3 leaf cotton and 5-8 leaf cotton or 5-8 leaf cotton alone. Roundup WeatherMax was applied at a rate of 0.38 lb ae/A or 0.56 lb ae/A in combination with Staple at a rate of 0.021 lb ai/A or 0.031 lb ai/A. Weed control ratings were taken 7, 21, and 28 days after the 5-8 leaf application and were based on a 0 to 100 percent control scale.

The results of the study indicated that there were no significant differences in weed control in all Roundup WeatherMax and Staple combinations when applied following Cinch for large crabgrass (*Digitaria sanguinalis*), barnyardgrass (*Echinochloa crus-galli*), and broadleaf signalgrass (*Brachiaria platyphylla*). All treatment combinations resulted in greater than 95% control of these species. Greater than 90% pitted (*Ipomea lacunosa*) and entireleaf morningglory (*Ipomea hederacea* var. *integriuscula*) control was also obtained with all treatment combinations. The results further indicate that when only one sequential application of Roundup WeatherMax (0.56 lb ae/A) and Staple (0.031 lb ai/A) at 5-8 leaf cotton was applied following either Cinch or Cinch plus Staple there was significantly less sicklepod (*Senna obtusifolia*) control (75 and 80%, respectively) compared to all other combinations (>90%). Weed control efficacy with Cinch as a preemergence program with Roundup Weathermax and Staple was not significantly different, compared to other programs where Dual Magnum (metolachlor), Touchdown IQ (glyphosate), and Envoke (trifloxysulfuron) were used.