

## **TWIN-ROW SPACING DOES NOT AFFECT WEED FREE CRITICAL PERIOD IN CONSERVATION-TILLAGE CORN**

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### **ABSTRACT**

The critical period for weed control is the crop growth stage when weeds must be controlled to prevent cash crop yield losses. Field trials were conducted at the E.V. Smith Research and Extension Center near Shorter, AL, in 2004 and 2005 to compare the critical period for weed control in twin (19 cm twin rows centered on 76 cm centers) and wide-row (76 cm) corn (*Zea mays* L.). In both years, the corn variety Dekalb 69-72RR was planted into rye (*Secale cereale* L.) residue utilizing narrow strip tillage (only pneumatic tires following subsoiler shank) and a planter equipped with row cleaners and double-disk openers. A series of treatments with increasing duration of weed interference and weed free periods were implemented within each row spacing. Weeds present in both years of the experiment were carpetweed (*Mollugo verticillata* L.), cutleaf eveningprimrose (*Oenothera laciniata* Hill), large crabgrass [*Digitaria sanguinalis* (L.) Scop.], Palmer amaranth (*Amaranthus palmeri* L.), and purple nutsedge (*Cyperus rotundus* L.). Row spacing did not affect the weed free critical period in conservation tillage corn. The critical weed free periods in 2004 and 2005 were 4.7 and 14.5 days, respectively. Relative yield losses never exceeded 25% in either year in non-treated plots, likely resulting from early season weed suppression provided by the high-residue rye cover during the critical weed free period.