# Tropical Spiderwort (*Commelina benghalensis* L.) Control and Emergence Patterns in Preemergence Herbicide Systems

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Tropical spiderwort is an exotic, invasive weed in the southern USA that has become one of the most troublesome cotton weeds in Georgia and Florida. Due to the continuous emergence pattern of tropical spiderwort, successful management will require a multi-component approach that includes an effective herbicide with soil residual activity. Field studies were conducted in Georgia and North Carolina to evaluate the effectiveness of several preemergence herbicides in suppressing tropical spiderwort emergence. The most effective (≥80% control) herbicides in 2002 at 6 wk after treatment (WAT) were clomazone at 0.42 and 1.05 kg ai/ha, fluometuron at 1.68 kg ai/ha, and s-metholachlor at 1.07 and 1.60 kg ai/ha. In 2003 and 2004, only s-metolachlor at 1.60 kg/ha controlled tropical spiderwort >80%. Because of soil type restrictions in 2003 and 2004, lower rates of fluometuron were used, and tropical spiderwort control was reduced 24 to 49%. Diuron, flumioxazin, norflurazon, and prometryn provided <70% control. Linear relationships were observed for tropical spiderwort emergence over time during the first 80 d after planting (DAP) for the herbicides evaluated. Rates of tropical spiderwort emergence for most treatments were similar to the untreated control (1.61% per day). Flumioxazin at 0.035 kg/ha (1.22% per day) and *s*-metolachlor at 1.07 and 1.60 kg/ha (0.73 and 0.50% per day, respectively) had lower rates of emergence than the untreated control. The time at which 40% of the total emergence for the season in the untreated control occurred was termed the $E_{40}$. Application of s-metolachlor at 1.07 kg/ha delayed $E_{40}$ populations by 21 d relative to the untreated control, while *s*-metolachlor at 1.60 kg/ha suppressed emergence below the $E_{40}$ until cotton canopy closure in Georgia. The application of herbicides with soil residual activity will be crucial for management of tropical spiderwort.