

**CGA 362622, COTORAN & STAPLE SYSTEMS FOR WEED CONTROL IN COTTON**  
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**Abstract**

Field trials were conducted in 2002 to evaluate broadleaf weed control at the Cherry Hospital Research Farm near Goldsboro, NC; the Peanut Belt Research Station located near Lewiston-Woodville, NC; and the Caswell Research Farm located near Kinston, NC. The PRE x POST x LAYBY factorial treatments evaluated included PRE treatment options of: Prowl 0.75 lb ai/A, Prowl 0.75 lb ai/A +Staple 0.032 lb ai/A, Prowl 0.75 lb ai/A + Cotoran 1.0 lb ai/A. Post treatment options included CGA 362622 0.0047 lb ai/A, CGA362622 0.0047 lb ai/A + Staple 0.032 lb ai/A , CGA 362622 EPOST and POST (split application at 0.0047 lb ai/A for each application), and no treatment. The two LAYBY options included Caparol 0.65 lb ai/A + MSMA 2 lb ai/A or no treatment. POST applications were made at the 5-leaf cotton stage. Plots were arranged in a randomized complete block design with three replications of treatments. Weed densities ranged from 20 - 50 plants/m<sup>2</sup> for each species evaluated.

Early season crop injury was transient and did not influence yield. There was a PRE by POST by LAYBY interaction for weed control and cotton yields. POST applications of CGA, when combined with a LAYBY option provided greater than 95% of sicklepod (*Senna obtusifolia*), yellow nutsedge (*Cyperus esculentus*), ivyleaf morningglory (*Ipomoea hederaceae*) and pitted morningglory (*Ipomoea lacunosa*). PRE applications of either Prowl+Staple or Prowl+Cotoran when combined with CGA increased control of jimsonweed (*Datura stramonium*), prickly sida (*Sida spinosa*) and smooth pigweed (*Amaranthus hybridus*) to 83% or better. The addition of CGA to any herbicide regime provided at least 95% control of sicklepod. Cotton yields were equivalent when LAYBY herbicides were used in conjunction with any POST herbicide treatment. CGA and Staple used together in a tankmix system, offer good control of broadleaf weeds, and provide an excellent weed control program for non-transgenic cotton. Weed management systems that include PRE, POST and LAYBY herbicide treatments were required for consistent high cotton yields and maximum weed control.