

**EVALUATION OF CGA 362622 FOR WEED
CONTROL IN ALABAMA COTTON**

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Abstract

CGA 362622 (trifloxysulfuron sodium), a new herbicide developed by Novartis Crop Protection, Inc. was evaluated for weed control and crop tolerance in field experiments conducted during 1999 and 2000 on Alabama Agricultural Experiment Stations in Belle Mina, Headland, Prattville, and Shorter. CGA 362622 (CGA) has a broad spectrum of target weeds, low usage rates (0.0044-0.0132 lb ai/A in cotton), and is expected to be registered for postemergence (POST) application in cotton and sugarcane by 2003. Unless specifically stated, all trials utilized Roundup Ready® cotton planted in four 36-40 inch row plots, 25-30 ft. in length. Herbicide applications were made using tractor and ATV-mounted spray equipment calibrated to deliver 15 GPA. The formulation of CGA used was a 75 WDG.

CGA 0.0045 lb ai/A caused significant injury to cotton when applied POST over-the-top (POT) at the 2 leaf stage in 1999. Injury symptoms were transient. Velvetleaf (*Abutilon theophrasti*) control with CGA exceeded 90% when applied POST-directed (PDS) to 6 leaf cotton. Spurred anoda (*Anoda cristata*) was not controlled with CGA. Pitted morningglory (*Ipomoea lacunosa*) and sicklepod (*Senna obtusifolia*) were controlled 80-90% by all rates of CGA at all application timings. Analysis of seed cotton yields from two locations showed CGA PDS at high rates (0.0067-0.0134 lb ai/A) produced more cotton than POT applications with lower rates. CGA was also evaluated in 1999 in a layby study. Pitted morningglory control ranging from 87-94% was obtained with the addition of ametryn to CGA. Sicklepod control was likewise improved.

CGA at two rates (0.0045 and 0.0067), pyriithiobac, and glyphosate were each applied PDS to 6, 9, and 12 inch cotton in 2000. Velvetleaf control with CGA was equivalent to pyriithiobac and glyphosate at the 6 inch application (80-88%), but less than glyphosate at the 9 and 12 inch application stages. Entireleaf morningglory (*Ipomoea hederacea* var. *integriscula*) control showed no differences among treatments at any application stage with control ranging from 45-72%. Control of coffee senna (*Senna occidentalis*) with CGA was equal (50-70%) to that given by glyphosate, and both glyphosate and CGA were greater than pyriithiobac. Adequate sicklepod control was provided only at the 6 inch application stage with CGA at 0.0067 lb ai/A equal to glyphosate. Through two years of field evaluations, CGA has given control of several tough weeds for Alabama cotton growers, and will provide a viable alternative to pyriithiobac and glyphosate in POT applications.