

## EVALUATION OF CGA 362622 IN LOUISIANA COTTON

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### Abstract

Broadleaf weeds continue to pose problems to Louisiana cotton growers. Currently registered early-season postemergence (POST) herbicides are limited for use in transgenic and/or conventional cotton varieties.

CGA 362622 is a new sulfonylurea herbicide developed by Syngenta Crop Protection, Inc., for POST weed control in cotton and sugarcane. The proposed ISO name is Trifloxysulfuron Sodium and the mode of action is an ALS inhibitor. CGA 362622 controls a wide spectrum of broadleaves, grasses, and sedges at low use rates varying between 0.04 and 0.11 oz/A. CGA 362622 can be applied early POST over the top of cotton, POST directed, and at layby. The addition of a nonionic surfactant or crop oil concentrate enhances POST weed control. CGA 362622 is formulated as a 75 WDG.

The objective of this study was to evaluate efficacy and crop tolerance of CGA 362622 when applied early POST, POST directed, and layby in cotton. Field studies were conducted at Alexandria and St. Joseph, Louisiana, in 2000. CGA 362622 was applied at 0.10 and 0.15 oz/a was applied early POST and 0.15 and 0.20 oz/a POST direct and layby. Staple (pyrithiobac) at 1.2 oz/a and Roundup Ultra (glyphosate) at 1.5 pt/a were used as standards at each application. Ag-98 surfactant at 0.25% v/v was added to treatments except Roundup Ultra. At early POST application weeds ranged in size from 1 to 4 in. with 2 to 6 leaves. At early POST directed application weeds ranged in size from 1 to 6 in. with 2 to 8 leaves. At layby application weed sizes were 2 to 10 in. with 4 to 10 leaves. Treatments were applied in 15 GPA.

At Alexandria, CGA 362622 at 0.10 and 0.15 oz/a applied early POST and POST directed provided 90 to 96% control of pitted morningglory (*Ipomoea lacunosa*) entireleaf morningglory (*Ipomoea hederacea*), smellmelon (*Cucumis melo*), hemp sesbania (*Sesbania exaltata*), and palmer pigweed (*Amaranthus Palmeri*). Hophornbeam copperleaf (*Acalyphy ostryifolia*), and browntop millet (*Brachiaria ramosa*) control ranged from 77 to 98% at both rates and application timings. At layby application timing control following CGA 362622 was less than at earlier timings providing 88 to 93% control of morningglories and pigweed, 70 to 83% control of smellmelon and hemp sesbania, and 23 to 48% of hophornbeam copperleaf and browntop millet. Staple provided similar control to CGA 362622, controlling 80 to 96% of morningglories, smellmelon, hemp sesbania, and pigweed. However, control of hophornbeam copperleaf and browntop millet was lower and ranged from 13 to 73% at all applications. Roundup Ultra controlled 72 to 98% of all weeds evaluated. No cotton injury was noted following treatments.

At St. Joseph, following CGA 362622, sicklepod (*Senna obtusifolia*), morningglories (pitted and entireleaf), and hemp sesbania control was 80 to 95% at both rates and all application timings. Staple controlled sicklepod 60% and morningglories and hemp sesbania 83 to 85% at early POST. At the later POST directed and layby applications control of all weeds was 90 to 95%. Roundup Ultra controlled all weeds 70 to 80% at early POST and 90 to 95% at the POST directed and layby timings. No cotton injury was observed following treatments. Cotton yield was similar between treatments and higher than the non-treated check.

CGA 362622 provided good to excellent control of broadleaf weeds at the early POST, POST directed, and layby application timings, which was comparable to Staple and Roundup Ultra. Grass control was acceptable when CGA 362622 was applied early POST and POST directed, which was better than Staple but less than Roundup Ultra. No cotton injury was observed from CGA 362622 applications at either location.