

COTTON RESPONSE TO CGA 362622: RATES, TIMINGS, AND TANK-MIXTURES
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Abstract

In-house and university trials were conducted across the cotton belt to evaluate the performance of CGA 362622 (trifloxysulfuron, proposed common name). CGA 362622 75WG 0.1-0.25 oz/A was applied 1-13 leaf cotton alone or in tank-mixes with Touchdown, Touchdown + Dual Magnum, Roundup UltraMax, or Roundup Ultra.

In general, Post-emergence Over-the-Top (POT) applications of CGA 362622 75 WG applied alone at 0.1 oz/A caused <15% cotton injury. However, greater injury resulted if applications were made when cotton was stressed. Injury from 0.2 oz/A applied POT was typically less than 20%, but persisted longer than injury from 0.1 oz/A. Initial injury at both rates was always <10% when applications were made to 5 leaf or larger cotton.

Averaged across 11 trials, CGA 362622 75 WG 0.1 oz/A a + glyphosate injured cotton 10-14% and was slightly more injurious than CGA 362622 alone (8%). When tank-mixed with Dual MAGNUM or Dual MAGNUM + glyphosate, applications of CGA 362622 resulted in 15-20% cotton injury. However, these tank-mixes also demonstrated the potential for higher levels of cotton injury at some sites.

Weed free yield trials showed no yield reduction with CGA 362622 75WG POT applied to 3-4 leaf cotton at rates up to 0.15 oz/A. Initial injury with 0.1-2.5 oz/A was 23-32% compared to 16% with Staple 1.2 oz/A. At 21 DAA, injury was 11% or less except for CGA 362622 2.5 oz/A which was 16%. Average seed cotton yield with CGA 362622 0.1-0.15 oz/A ranged from 2579-2587 lb/A compared to 2409 lb/A with Staple. At 0.25 oz/A, yield was comparable to Staple 1.2 oz/A. Injury with 1.5-2.5 oz/A applied L-POT to 12-13 lf cotton was less than 20% 5-7 DAA. L-POT applications resulted in higher cotton injury levels than PD applications (2-3%) of the same rate. Injury from 0.15-0.25 oz/A applied to 12-13 lf cotton was <10% by 23 DAA. Seed Cotton yields with 12-13 lf applications (2544-2606 lb/A), regardless of rate or application placement, were comparable to 0.1 oz/A E-POT and numerically higher than Staple E-POT.

POST-over-the-top label recommendations:

- Applications are not recommended for cotton that is under stress caused by drought, excessive soil moisture, heavy insect and/or disease pressure, low soil fertility, etc.
- Add a non-ionic 0.25% v/v, do not use a COC, MSO, or any fertilizer additives
- Cotton should have a minimum of 5 true leaves.
- Do not apply CGA 362622 at rates higher than 0.15 oz/A.
- Use a minimum of 10 gals water per acre.
- Do not tank-mix with any other herbicide or additives, or unacceptable injury may occur.
- Do not tank-mix with malathion, profenofos (Curacron®), or emamectin-benzoate containing insecticides (Proclaim™) or unacceptable cotton injury can occur.
- Over-the-top applications can result in transient yellowing of cotton and occasional stunting. Symptoms can persist for a few days but have no effect on cotton yield.

In a total weed control program, CGA 362622 offers greater flexibility as a post-directed spray (PD) or layby treatment. CGA 362622 75WG rates for PD allow single applications of 0.15-0.25 oz/A. Do not exceed a total 0.4 oz/A per growing season of CGA 362622. As a PD application, CGA 362622 offers various options for tank-mix partners, which include Touchdown, Caparol, Dual Magnum, Staple, Cotoran, and MSMA.