

**ROUNDUP READY FLEX COTTON TOLERANCE TO POSTEMERGENT
CO-APPLICATION OF GLYPHOSATE, PROWL H₂O, AND INSECTICIDES**

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Abstract

Field studies were conducted at the Northeast Research Station in St. Joseph, La. to evaluate the tolerance of Roundup Ready Flex cotton to postemergence co-application of Prowl H₂O with Roundup Weathermax and insecticides. Treatments evaluated included Prowl H₂O at 32 oz/A co-applied with Roundup Weathermax at 22 oz/A alone or in combination with one of the following insecticides: Acephate at 0.55 lb/A, Baythroid at 2.1 oz/A, Bidrin at 6.4 oz/A, Centric at 1.88 oz/A, Dimethoate at 8 oz/A, Karate Z at 2 oz/A, Mustang Max at 3.5 oz/A, Trimax at 1.5 oz/A, or Vydate C-LV at 13.6 oz/A. Roundup Weathermax alone at 22 oz/A was also included. Applications were made to ST4554 B2RF cotton at the 4 node growth stage. Treatments were evaluated in a randomized complete block experimental design with four replications. Treatments were applied to each 6.67' by 25' plot with a backpack sprayer at 15 GPA. Visual crop injury observations were made 7, 14, and 28 d after treatment (DAT). Crop height 7 and 21 DAT and seedcotton yield were also determined. Data were subjected to ANOVA and means separated using LSD at the 0.05 level of significance.

At 7 DAT, all treatments exhibited no signs of injury following application. At 14 DAT, Prowl H₂O applied in combination with Roundup Weathermax alone resulted in 16% visual injury with all insecticide co-applications resulting in equivalent injury ranging from 13 to 23%. By 28 DAT, injury was no greater than 5% for any treatment. Visual injury was not manifested in growth reduction effects as at 7 and 21 DAT cotton height ranged from 17 to 19 and 30 to 40 cm, respectively, with no differences noted among treatments. In addition, injury observed did not result in negative yield effects as seedcotton yield ranged from 3349 to 4039 lb/ A with no differences noted among treatments.

Co-application of Prowl H₂O with Roundup Weathermax postemergence to four leaf cotton can result in initial crop injury. Injury appeared to be transient and not increased with addition of insecticides evaluated. Cotton growth and yield were unaffected by treatments evaluated.