STALK APPLICATION AS AN ALTERNATIVE METHOD OF APPLYING COTTON HARVEST AIDS

J.A. McGinty
C.W. Livingston
Texas A&M AgriLife Extension
Corpus Christi, TX
G.D. Morgan
Cotton Incorporated
Cary, NC

Abstract

Cotton harvest aids are typically broadcast-applied in a water carrier to fields prior to harvest. As open bolls are present at the time of application, the residue of these products may be present on harvested lint and seed. One potential alternative would be to avoid eliminate the contact of open bolls by harvest aid chemicals altogether by applying to the lower stem of the plant. To investigate this possibility, a field trial was conducted near Corpus Christi, TX in 2020. The trial was arranged as a randomized complete block design with three replications. A total of 18 stalk applied treatments evaluated, including 2,4-D, dicamba, dichlorprop, triclopyr, MCPA, dicamba + diflufenzopyr, aminopyralid, aminocyclopyrachlor, thidiazuron, and tribufos applied in either water, diesel, or basal oil carriers. Stalk applications were made with an 8002E nozzle oriented to spray the lower 10 inches of cotton stalks on both sides of the row. A foliar applied standard of thidiazuron + ethephon followed by thidiazurion was also included. At 21 DAT, the foliar applied standard provided optimal results (high defoliation, little desiccated or green leaf). Several stalk-applied treatments resulted in similar levels of green leaf, but often achieved this by desiccating an unacceptable level of foliage. This was most apparent with aminopyralid or aminocyclopyrachlor in water, or triclopyr or dichlorprop in diesel. Of the stalk-applied treatments, 2,4-D in either a water or diesel carrier and tribufos in diesel provided the best balance of high defoliation and low amounts of desiccated leaf.