EVALUATION OF STALK DESTRUCTION PROGRAMS FOR 2,4-D TOLERANT COTTON IN SOUTH TEXAS

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Abstract

Cotton stalk destruction is an essential practice for the management of boll weevil in Texas. Effective and timely stalk destruction must be employed by growers in an effort to meet stalk destruction deadlines within their respective growing region. 2,4-D is widely utilized in an overall stalk destruction program; however, the adoption of 2,4-D tolerant cotton varieties has led to the need for alternative herbicides for effective control of these varieties. Several field trials evaluating different stalk destruction programs for 2,4-D tolerant cotton varieties have been conducted over the past three growing seasons across multiple locations in South Texas. Programs evaluated included the application of alternative herbicides and mechanical stalk destruction. In the 2020 growing season, two field trials were conducted near Corpus Christi and Lyford, TX. Cotton stalks were mowed following harvest and prior to chemical treatments at both locations. At the Corpus Christi location, several products in single application and sequential application programs were evaluated. Sequential application programs provided the most consistent control at 7 and 14 days after application (DAA) of the sequential application. Dicamba or dichlorprop applied at 1 lb. a.e. acre^{-1} with the addition of a thidiazuron-containing product, followed by (fb) a sequential treatment of dicamba or dichlorprop at 1 lb. a.e. acre^{-1} resulted in 70 to 93% cotton mortality at 7 DAA and 88 to 96% cotton mortality at 14 DAA. Dichlorprop applied at 0.75 lb. a.e. acre^{-1} plus thidiazuron was the only single application treatment evaluated that resulted in >90% cotton mortality. At the Lyford, TX location dicamba or diclorprop at 1 lb. a.e. acre^{-1} plus thidiazuron fb dicamba or dichlorprop at 1 lb. a.e. acre^{-1} resulted in cotton mortality >90% at 7, 14, and 21 DAT.