USE OF REVITON AS A COTTON HARVEST AID

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Abstract

Cotton growers in the mid-southern U.S. region face many late season challenges imposed by adverse weather conditions that vary spatially and temporally. As a result, growers must apply the best cotton defoliation option at the correct time to maintain fiber quality and ensure a timely and efficient harvest. The objective of this research was to evaluate different rates of the newly registered cotton defoliant Reviton as a cotton harvest aid. Experiments were conducted in 2021, on-farm in Tillar, Arkansas and at the R.R Foil Plant Sciences Research Center at Mississippi State, Mississippi to evaluate Reviton as a cotton defoliant and determine the impact different rates of Reviton have on cotton defoliation, desiccation, and regrowth inhibition. Reviton rates ranging from 0.5 - 1.0 fl oz/a were applied initially when cotton reached 60% open as well in a sequential application following a standard application of Drop at 2 fl oz/A, Folex 6 fl oz/A, and Finish 6 at 8 fl oz/A. Reviton efficacy was compared to the standard as well as Aim at 0.75 fl oz/A. Results from the study conducted in Arkansas indicate that Reviton applied at 0.75 fl oz/a at 60% boll open resulted in the greatest percent defoliation (42%) and desiccation (50%) ratings seven days after application. However, results from the study conducted in Mississippi indicate that Reviton applied at 0.5 fl oz/A of recommended rate at the same growth stage resulted in the greatest percent defoliation (43%) and desiccation (40%) ratings seven days after application. In addition, visual ratings of defoliation and desiccation seven days after the second application had values greater than 98% regardless of defoliation treatment. However, following the third application, results indicate percent regrowth was lowest for the standard treatment which included thidiazuron (Drop). Reviton applied at 0.75 fl oz/A and 0.5 fl oz/A resulted in the greatest percent defoliation and desiccation seven days after application. However, these treatments also resulted in the greatest amount of re-growth 14 days after application. Initial results indicate that Reviton has a fit as an effective cotton defoliant as long as lower rates are utilized and temperatures are cool enough to prevent regrowth.