OPTIMIZING FLUAZIFOP APPLICATIONS FOR JOHNSONGRASS CONTROL

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Abstract

Johnsongrass control has been a growing issue for cotton producers across the mid-South. Reliance on glyphosate has left many producers with johnsongrass populations that are less sensitive or potentially resistant, leading to escapes across production fields. Acetyl CoA carboxylase-inhibitors have been proven to successfully control johnsongrass without harming broadleaf crops and if used properly could add another effective mode of action for cotton producers. Therefore, research was conducted to determine the fluazifop application rate, timing, and number for applications necessary for johnsongrass control in two field trials in 2021 located in Keiser and Marianna, Arkansas. These studies evaluated fluazifop at 2 different rates (0.9 and 1.8 lb ai/acre), across three different initial application timings (2- to 3-leaf, 5- to 6-leaf, and 8- to 9-leaf johnsongrass), and as a single or sequential application program. Initial applications to 2- to 3-leaf or 5- to 6-leaf johnsongrass resulted in greater than 85% control when averaged over rate and single or sequential application. When looking at reduction in the number of johnsongrass plants per 10 ft^2, the greatest reduction occurred when sequential applications of either rate were utilized or following a single application of 1.8 lb ai/acre. These results confirm that fluazifop could be utilized for johnsongrass control in cotton, and if so, producers can utilize lower rates with sequential application or single applications of higher rates.