OPTIMIZING TIMING BETWEEN SEQUENTIAL APPLICATIONS OF DICAMBA AND GLUFOSINATE

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Abstract

Fexapan®, Xtendimax® with VaporGrip®, and Engenia® labels do not allow for dicamba and glufosinate to be applied in mixture over-the-top of XtendFlex™ crops. Field experiments were conducted in 2019, in Crawfordsville, Marianna, and Keiser, AR, to evaluate the efficacy of dicamba followed by glufosinate and glufosinate followed by dicamba when applied at .2, 3, 7, 14, and 21 day intervals from the initial application on native Palmer amaranth populations. Field experiments were conducted to assess if the interval between sequential applications could be optimized to improve weed control when compared to dicamba and glufosinate POST herbicide programs. In two of the three experiments where Palmer amaranth weed size was greater than 5 inches, dicamba followed by glufosinate at the 14 day interval provided consistently greater control than either sequence of dicamba and glufosinate at .2, 3 and 7 days intervals. Overall, dicamba followed by glufosinate at the 14 day interval provided equal or greater control than dicamba followed by dicamba or glufosinate followed by glufosinate at any interval. The addition of two effective modes of action for POST control of Palmer amaranth will mitigate the evolution of herbicide resistance an aid in preservation of currently available technologies.