WINTER WHEAT TOLERANCE TO FALL APPLIED ENVOKE UNDER TWO PLANTING METHODS AS A COVER CROP FOR COTTON

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Abstract

In the fall of 2006 two studies were established to observe the effects of Envoke on winter wheat when applied at various application timings. One study utilized a broadcast seeding method with Envoke applied Early-Pre Plant (EPP) or Preemergence (PRE). The second study was drill seeded and Envoke was applied PRE or EPOST. Envoke rates were 0, 0.05, 0.10, and 0.20 oz/a plus 0.25% v/v NIS. At 28 day after planting (DAP) wheat stand reduction increased as the Envoke rate increased with both application timings. Envoke applied EPP reduced the wheat stand from 16 to 59% and when applied PRE stand reduction ranged from 31 to 68%. Wheat stunting was similar between both application timings, ranging from 21 to 60% at 91 DAP. Wheat stunting decreased throughout the season. Cotton injury was also observed throughout the season. Injury was similar between both application timings ranging from 5 to 32%, and injury reduced as the season progressed. No wheat stand reduction was observed in the drilled wheat study. Wheat stunting with both application timings ranged from 1 to 62% at 56 DAP, and stunting decreased throughout the season. Cotton injury was greatest at 230 days after treatment ranging from 9 to 37% with the PRE treatments and 11 to 45% with the EPOST treatments. Injury declined as the season progressed. Cotton injury observed in both studies had no effect upon cotton lint yields when Envoke was applied at 0.05 and 0.10 oz/a. However, Envoke at the 0.20 oz/a rate reduced lint yields. This research has shown that Envoke can be applied at the labeled rate of 0.10 oz/a in the fall in conjunction with planting of a winter wheat cover crop. These findings will help cotton producers protect their land resources while managing troublesome weeds like glyphosate resistant horseweed.