

INFLUENCE OF TILLAGE AND CROP ON GIANT RAGWEED EMERGENCE, SEED DISTRIBUTION AND LONGEVITY. Dawn E. Nordby, Martin M. Williams II, Extension Specialist, Department of Crop Sciences, University of Illinois, Urbana, IL 61801, and Ecologist, USDA-ARS, Urbana, IL 61801.

Field studies were conducted in 2003 and 2004 at the Northern Illinois Agronomy Research Center at Dekalb, Illinois to determine the effect of tillage and crop on giant ragweed (*Ambrosia trifida*) emergence and seed distribution in the soil. Soil samples were collected in the fall to depth increments of 0 to 2cm, 2 to 6cm, 6 to 12cm, and 12 to 20cm to determine the seed distribution in the soil profile. Natural populations of giant ragweed were monitored for emergence throughout the growing season in established no-till and conventional tillage plots. Additions of giant ragweed to the seedbank have not been permitted since the initiation of the experiment. Conventional tillage was found to have no effect on distribution of giant ragweed seed in the soil in 2002, however in 2003, there was significantly less seed in the 0 to 2cm depth in the tilled treatment compared to the other depths in the same treatment. There was no difference in seed distribution in the no-till treatments in both years. The effect of tillage on giant ragweed emergence was not significant. Crop did affect emergence with soybeans having significantly less giant ragweed emergence than corn. There was also no crop by tillage interaction. This study will be continued to determine long-term effects of tillage and crop on giant ragweed emergence. Long-term evaluation of this study will be beneficial in developing tactical approaches to controlling giant ragweed.