

EFFECT OF TILLAGE ON COMMON WATERHEMP EMERGENCE AND VERTICAL DISTRIBUTION OF SEED IN THE SOIL. Dawn E. Nordby, Extension Specialist, Weed Science IPM, University of Illinois, Urbana, IL 61801 and Robert G. Hartzler, Professor, Department of Agronomy, Iowa State University, Ames, IA 50011.

Field studies were conducted near Ames, IA in 2001 and 2002 to determine the effects of tillage on the behavior of common waterhemp (*Amaranthus rudis* Sauer) in the soil seedbank. Emergence of common waterhemp was greater in no-till than chisel till. Tillage did not affect the initial time of emergence; however, the time to 50% emergence was longer in no-till than chisel till. Duration of emergence did not differ among tillage systems. Common waterhemp seed was concentrated near the soil surface in no-till, whereas seed in the chisel till were primarily found between 9 and 15 cm. The delayed and increased emergence in no-till contributes to the problems in managing common waterhemp in this system.