

**WEEDS TO WATCH: WEEDS THAT SEEM TO BE EXPANDING THEIR HABITAT RANGE.** William G. Johnson, Robert G. Hartzler, and Dawn E. Nordby, Assistant Professor, Department of Botany and Plant Pathology, Purdue University, W. Lafayette, IN 47907, Professor, Department of Agronomy, Iowa State University, Ames, IA 50011, and Extension Weed Specialist, Department of Crop Sciences, University of Illinois, Urbana, IL 61801.

Extension weed scientists in Iowa, Illinois, Indiana, Minnesota, Wisconsin, and Michigan have noted twelve weed species that appear to pose an increasing threat to agronomic fields. This information was assembled into a poster titled “Weeds to Watch” which is available online at <http://weeds.cropsci.uiuc.edu/extension/Other/WeedstoWatch.pdf>. Information on the poster includes color pictures to aid in identification, maps that provide information regarding current distribution of each species, brief text descriptions about why it is believed to be problematic and recommended control measures.

This presentation will focus briefly on pertinent biological and control issues for each weed listed on the poster. In addition, we will utilize field survey results to determine how often these species were found in Midwest soybean fields during late-season surveys.

We conducted an extensive survey of soybean fields the fall of 2004 to determine the identity, density, and distribution of late season weed escapes in Iowa, Illinois and Indiana. In each state, a minimum of 30 fields were sampled. Fields were distributed throughout each state and sampled by following an inverted W-pattern. Ten locations along each arm were sampled for a total of 40 sampling units per field. At each sample stop, the identity and density of each weed species in 0.5 square meter quadrat was recorded.

Six of the twelve weeds on the Weeds to Watch poster were commonly found in the fall of 2004. Common lambsquarters, giant ragweed, and waterhemp were found in more than 10% of the fields sampled in two out of the three states. Purple deadnettle, common pokeweed, cressleaf groundsel, and burcucumber were found less frequently. Key biological characteristics of these weeds include germination patterns which allow them to become too large to control with postemergence herbicides or they emerge after postemergence herbicides are applied. The presence of stalk boring insects has been noted in common lambsquarter, giant ragweed, and common waterhemp and preliminary evidence suggests that insect infested plants are more difficult to control with glyphosate. In conclusion, adjustments in management practices will be needed to reduce the occurrence of yield losses due to these weeds.