

COMPETITION OF ANNUAL MORNINGGLORY (*IPOMOEA SPP.*) IN CORN AND SOYBEAN. Phillip J. Parrish, Dawn E. Nordby, and Emerson D. Nafziger, Graduate Student, Department of Crop Sciences, University of Illinois, Urbana, IL 61801, Extension Specialist, Department of Crop Sciences, University of Illinois, Urbana, IL 61801, and Professor, Department of Crop Sciences, University of Illinois, Urbana, IL 61801.

Field research was conducted at Urbana, IL in 2006 and 2007 to determine the competitiveness of *Ipomoea* species in corn and soybean crops. Stage of crop and weed density were significant factors in leaf area and biomass. The two way interactions of weed location on stage of crop, and weed density on crop stage were significant to leaf area and biomass in corn and soybean. The three way interaction of weed location, weed density and stage of crop was also significant to leaf area and biomass in corn and soybean.

Introduction:

Annual morningglory species are becoming a problem in production agriculture in Illinois due to recent weed management strategies. Morningglory has a continuous emergence. This along with increased use of glyphosate as a post emergence treatment alone is a potential reason for morningglory to become a problematic weed. Experiments concerning competition were conducted in Urbana in both corn and soybean test plots.

Materials and Methods:

Fields with high densities of *Ipomoea* sp. were chosen for the study. Test rows of morningglory were created by using tiling pipe over row crop or between rows during post-emergent broadcast applications of herbicide. Soybean plots were applied with a pre-emergent spray of Dual II Mag (2pt) and a post-emergent Firstrate (0.75oz) and Roundup (0.75#a.e.). Corn plots were applied with a post-emergent spray of Atrazine (2pt) and Roundup (0.75#a.e.). Densities were manually developed at 0, 16, 32 and an excess of 64 plants per square meter. Strips were only six inches, which translates to 0, 3-4, 6-7 and about 12 plants per square meter of strip. Harvest times for morningglory were at V4, R1, R3 and R6 stages of the soybean, and at V5, V6, V9, VT and R6 stages of the corn. Data collection included total leaf area (cm²) and biomass (g).