

THE RELATIONSHIP OF SOYBEAN CYST NEMATODE AND PURPLE DEADNETTLE MANAGEMENT IN MICROPLOTS. Jared S. Webb, Bryan G. Young, and Jason P. Bond, Graduate Research Assistant and Associate Professors, Department of Plant, Soil, and Ag systems, Southern Illinois University, Carbondale, IL 62901.

Soybean cyst nematode (SCN, *Heterodera glycines*) can reproduce on the winter annual weed species purple deadnettle under field and greenhouse conditions. Purple deadnettle has been shown to be an effective host of SCN under greenhouse conditions. Hosts such as purple deadnettle may allow the SCN population to increase in the absence of soybean. The relationship of SCN reproduction on winter annual weeds has not been well documented under field conditions. Therefore, field microplots were established in Carbondale, IL during the 2005 and 2006 growing seasons to characterize the reproduction of SCN on purple deadnettle under simulated field conditions and determine what influence winter annual weed management strategies have on the SCN population. Removal strategies for purple deadnettle consisted of either removal by herbicide or tillage in the fall or spring. Glyphosate was used at 840g ae/ha for control of purple deadnettle by herbicide.

SCN were found to infect the roots of purple deadnettle during both years of the experiment. However, reproduction of SCN was only found to occur during one year of the experiment. Reproduction occurred at a very minimal level and would not justify concern from producers. SCN cysts/100cm<sup>3</sup> soil and eggs/100cm<sup>3</sup> soil were not influenced by the presence of purple deadnettle during either year of the experiment. There were no differences in cysts/100cm<sup>3</sup> soil or eggs/100cm<sup>3</sup> soil from any purple deadnettle removal strategy. These results indicate that growers should not be concerned with managing purple deadnettle to restrict SCN population growth. However, more research is justified to determine the influence of SCN HG type on the host compatibility of purple deadnettle. This experiment was conducted with SCN HG type 2.5.7 (race 5), which has not been previously tested for purple deadnettle host compatibility.