COMPETITIVENESS OF SELECTED WEED SPECIES IN SOYBEAN. Shawn M Hock*, Stevan Z. Knezevic, Alex R. Martin, John L. Lindquist. Graduate Research Assistant, Professor, Professor, Professor. University of Nebraska. Department of Agronomy and Horticulture 279 Plant Science P.O. Box 830915 Lincoln, NE 68583-0915.

A competitive species is the one that can out-compete it's neighbor for nutrients, water, and light. Weed competitiveness can be quantified utilizing the concept of competitive index (CI). Weed competitiveness is affected by environmental conditions. Therefore, the CI of each weed species may very depending on environmental conditions. This study was conducted to determine and compare CI values among weed species as influenced by crop row spacing, and relative time of emergence. Field studies were conducted at 2 locations in eastern Nebraska in 2002. Glyphosate resistant soybeans were planted in 19 cm and 76 cm row spacing. A total of 12 species (velvetleaf, common lambsquarters, redroot pigweed, common waterhemp, common sunflower, common cocklebur, pennsylvania smartweed, giant ragweed, yellow foxtail, green foxtail, fall panicum, and barnyardgrass) were planted at soybean planting (VP), emergence (VE), and 1st trifoliate (V2). Weeds emerged at cotyledonary (VC) and first nodal (V1) stages of soybean. Competitive indices were affected by row spacing. CI's varied depending upon the quantifier (e.g. total dry matter (TDM), volume, and WeedSOFT NE). CI's based on TDM matched more closely to the CI's in WeedSOFT than the volume based CI's. The most competitive species were common sunflower and giant ragweed; the least competitive species were fall panicum and yellow foxtail. Narrow row spacing reduced TDM in most species, however, the most competitive species, common sunflower and giant ragweed, accumulated more dry matter by season end in narrow row spaced soybean.