

GLYPHOSATE TOLERANT ASIATIC DAYFLOWER (*COMMELINA COMMUNIS*) CONTROL IN NO-TILL SOYBEANS. Jim A. Fawcett, Extension Crop Specialist, Iowa State University, Ames, IA 50011.

Asiatic dayflower is an annual monocot weed in the Spiderwort family that has recently become a problem for some crop producers in eastern Iowa. Its relative tolerance to glyphosate and lengthy period of emergence has made it a challenge to manage in soybeans.

A trial was conducted in 2002 in a field near Vinton, IA to investigate alternatives for controlling Asiatic dayflower in soybeans. Roundup Ready<sup>®</sup> soybeans were planted in 75-cm rows without tillage on May 7, 2002. Herbicide treatments were applied with a CO<sub>2</sub> backpack sprayer to 3 m by 7.5 m plots in a randomized complete block design with three replications. All applications were made using a carrier volume of 234 L/ha. All glyphosate applications included ammonium sulfate at 3% by weight. Visual evaluations of Asiatic dayflower control were made throughout the season.

Applications of clomazone and of flumioxazin made 3 days after planting did not provide acceptable control of Asiatic dayflower. Postemergence applications of bentazon, aciflourfen, lactofen, flumiclorac, imazamox, and fomesafen to 5- to 30-cm Asiatic dayflower provided little to no control of the weed. A planting time application of glyphosate at 0.84 kg ae/ha followed by an application of glyphosate to 10- to 30-cm Asiatic dayflower at rates up to 1.68 kg ae/ha made 63 days after planting did not provide acceptable control of the weed. However, more timely glyphosate applications did provide better control. Three glyphosate applications of 0.84 kg ae/ha at 3, 44, and 63 days after planting to 2- to 20-cm Asiatic dayflower provided greater than 80% control. Cloransulam-methyl at 18 g/ha applied to 2- to 20-cm dayflower also provided greater than 80% control. The greatest control with soil-applied herbicides occurred with cloransulam-methyl and with sulfentrazone.