SCOURINGRUSH IN NEBRASKA. Eric E. Frasure and Mark L. Bernards, Graduate Research Assistant and Assistant Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln, NE 68583-0915.

Scouringrush is an increasing problem in some no-till fields in eastern Nebraska. The objective of this research was to identify effective methods for controlling scouringrush. Experiments were established on existing scouringrush patches in four separate studies in southeastern Nebraska between 2006 and 2008. Herbicides were applied using a backpack sprayer. In the first study we evaluated 14 herbicides labeled for use in corn, soybean or wheat. Only chlorsulfuron (53 g ai/ha) provided greater than 50% control. The second study used a split-plot design to measure the individual and combined effects of repeated mowing and nine different herbicide treatments. Mowing reduced biomass by 20% one year after the final herbicide application. Among the herbicide treatments, chlorsulfuron (158 g/ha followed by [f/b] 79 g/ha) was most effective and eliminated all stems one year after treatment. Imazapyr (560 g/ha f/b 1120 g/ha) and sulfometuron (210 g/ha f/b 420 g/ha) reduced scouringrush biomass 78% one year after treatment. The third study used a factorial design to evaluate tillage, herbicide, and crop competition effects. Repeated tillage controlled scouringrush only temporarily. Competition from dense stands of sorghum had an effect similar to repeated tillage one year after treatment. Chlorsulfuron (158 g/ha) controlled 90% of scouringrush one year after treatment. The fourth study compared additional herbicide treatments to tillage, mowing, and crop competition. The most effective herbicides were chlorsulfuron (158 g/ha) and dichlobenil (6700 g/ha). However, neither is labeled for use in corn or soybean. A greenhouse study was conducted to determine the effect of chlorsulfuron on corn and soybean growth when it is applied at rates necessary to control scouringrush. Both foliar and soil applied chlorsulfuron reduced corn and soybean height and biomass. Chlorsulfuron was the only treatment that completely controlled scouringrush, but it had an adverse effect on corn and soybean growth.