

EFFECTS OF CALCIUM CARBONATE, SODIUM CARBONATE, AND IMAZAPYR FOR VEGETATION CONTROL ON SANDBARS ALONG MISSOURI RIVER. Avishek Datta\*, Stevan Z. Knezevic, Charles A. Shapiro, Jon Scott, and Mike Mainz. Post Doctoral Research Associate, Associate Professor, Professor, Research Technologist, and Research Technologist, Haskell Agricultural Laboratory, University of Nebraska, Concord, NE 68728.

In an effort to increase suitable nesting habitats for two endangered bird species, Piping Plovers (*Charadrius melodus*) and Interior Least Terns (*Sterna antillarum*), a series of sandbars are being constructed along the Missouri River. Lack of bare sand areas due to vegetative overgrowth is one of the causes for the reduction of nesting habitats. It is important to identify management practices that will maintain sandbars free of vegetation; thus, protect proper nesting habitats for the bird species. Therefore, field studies were initiated on two existing sandbars (river miles 837 and 838) in 2007 and 2008 near Springfield, SD, with the objective to test vegetation control as influenced by calcium carbonate, sodium carbonate, imazapyr, and their interactions. The experiment was arranged as a split plot design with 18 treatments replicated four times where the main plot was soil amendment (calcium carbonate or sodium carbonate) surface applied at three rates (0, 3, and 6 t/ha) and the sub-plot was a rate of imazapyr (0, 0.56, and 1.68 kg/ha). The site had natural infestations of various weed species, including: cocklebur, common ragweed, horsetail, maretail, nutsedge, sweet clover, waterhemp, and wild sunflower. Imazapyr applied alone at 1.68 t/ha or following either with a 3 or 6 t/ha calcium carbonate treatment provided about 80% overall vegetation control for up to two years after application. However, applications of calcium carbonate or sodium carbonate alone or a combination of sodium carbonate and imazapyr did not provide adequate overall vegetation control for two seasons. [sknezevic2@unl.edu](mailto:sknezevic2@unl.edu)