

WEED MANAGEMENT WITH IMAZAPIC IN WARM-SEASON GRASS AND LEGUME MIXTURES. Daniel D. Beran, Market Development Specialist, BASF Corporation, Des Moines, IA 50311; Gary L. Kilgore, Crops and Soils Extension Specialist, Kansas State Research and Extension, Chanute, KS 66720; and Robert A. Masters, Dow AgroSciences, Lincoln, NE 68506.

Separate studies were conducted to evaluate the utility of imazapic for establishing a native grass and forb mixture, and to determine the efficacy of imazapic for controlling johnsongrass and musk thistle in native grass stands and legume stands. Experiments were initiated at Mead and North Platte, NE in 1997 to determine the effect of imazethapyr and imazapic on the establishment of a prairie mixture comprised of native grasses, legumes, and asters. Based on grass canopy cover and legume density, imazethapyr or imazapic applied at preemergence 35 g/ha resulted in successful establishment of the native grasses and legume components. Experiments were conducted in southeastern Kansas in 2000 and 2001 to determine the efficacy of imazapic for selectively controlling johnsongrass in infested stands of native warm-season grasses. Herbicide treatments were applied on June 6, 2000 near Yates Center, KS to perennial johnsongrass that was 30-60 cm tall. Measured 14 weeks after treatment, imazapic applied at 140 and 175 g ai/ha resulted in 88 and 99% control of rhizome johnsongrass, respectively. Similarly, imazapic at 175 g/ha plus 2,4-D at 350 g/ha resulted in 91% control of johnsongrass. A final study was initiated in spring 2001 near Beatrice, NE to determine the efficacy of imazapic for controlling musk thistle in an established stand of warm-season grasses, alfalfa and red clover. Imazapic applied at 140 g/ha on May 15, 2001 reduced musk thistle flowering by 95% when measured 6 weeks after treatment. Imazapic at this rate also had the least amount of injury to alfalfa and red clover when compared to other herbicide treatments. The results of these studies illustrate the utility of imazapic for establishing mixtures of native grasses and legumes as well as managing invasive grass and broadleaf weeds in mixed stands.