

LEAFY SPURGE CONTROL WITH TANK-MIXES OF IMAZAPIC AND SAFLUFENACIL APPLIED IN FALL. Stevan Z. Knezevic, Avishek Datta, Ryan E. Rapp, Jon Scott, Leo D. Charvat*, and Joseph Zawierucha. Associate Professor, Post Doctoral Research Associate, Graduate Student, and Research Technologist, Haskell Agricultural Laboratory, University of Nebraska, Concord, NE 68728; Biology Area Manager, BASF Corporation, Lincoln, NE 68523 and Biology Project Leader, BASF Corporation, RTP, NC 27709.

Saflufenacil is a new herbicide being primarily developed for pre-plant burndown and PRE broadleaf weed control in field crops and non-cropland areas. Leafy spurge is a serious weed problem in North American range and pastureland. Imazapic is commonly used for leafy spurge control as a fall treatment. Our hypothesis was that there might be synergism between imazapic and saflufenacil if applied in fall. Field trials were initiated during fall of 2007 and 2008 with the objective to describe dose-response curves of saflufenacil tank-mixed with imazapic in order to determine the best ratios of the two for leafy spurge control. Saflufenacil rates were 0, 12.5, 25, 50, and 100 g/ha, imazapic rates were 0, 35, 70, and 105 g/ha. Dose-response curves based on log-logistic model were used to determine the ED₉₀ values of saflufenacil for each imazapic level. Imazapic rate of 105 g/ha applied alone provided about 90% control at 240 DAT and about 80% control at 300 DAT. Saflufenacil applied alone provided excellent control but only for 30 DAT depending on the rates used, then the leafy spurge started re-growing. Imazapic rate of 35 and 70 g/ha applied alone provided about 65% control for 240 DAT. The ED₉₀ values (90% control) of saflufenacil in the tank-mix with imazapic rates of either 35 or 70 g/ha were around 20-25 g/ha for control up to 275 DAT suggesting synergism between the two herbicides at those rates. There were also some grass injuries of about 10-20% with 105 g/ha of imazapic. sknezevic2@unl.edu