

CHEMICAL CONTROL OF COMMON MULLEIN. Walter H. Fick and Sandra Wick, Associate Professor, Department of Agronomy, Kansas State University, Manhattan, KS 66506 and County Extension Agent, Smith Center, KS 66967.

Common mullein (*Verbascum thapsus* L.) is a biennial broadleaf found throughout much of North America. Originally introduced from Europe, this upright growing species with large flannel leaves grows in old fields, waste areas, roadsides, railroad rights-of-way, and abused pastures. Common mullein appears to be increasing following years of drought in the central Great Plains. A study was initiated in Smith County Kansas during 2006 to determine the efficacy of 13 herbicide treatments applied for common mullein control. Treatments were applied on April 21 to actively growing rosettes using a CO₂-powered 4-nozzle boom sprayer. All herbicides were applied with 0.25% (v/v) nonionic surfactant in a total spray solution of 187 L ha⁻¹. Individual plots were about 2 m wide by 7.6 m long. Treatments were applied using a randomized block design with four replications. Common mullein density was determined at the time of herbicide application using a 0.9-m belt transect taken down the center line of each plot. Density reduction was determined 8 and 14 weeks after treatment. Data were analyzed using analysis of variance and means separated at P < 0.10 using Fisher's protected LSD test. Eight weeks after treatment herbicides providing greater than 70% density reduction of common mullein included picloram + 2,4-D at 0.15 + 0.56 kg ha⁻¹ (75%), aminopyralid at 0.09 kg ha⁻¹ (76%), aminopyralid + 2,4-D at 0.09 + 0.75 kg ha⁻¹ (92%), metsulfuron methyl at 0.01 kg ha⁻¹ (91%), metsulfuron methyl + dicamba + 2,4-D at 0.01 + 0.14 + 0.4 kg ha⁻¹ (77%), and picloram + fluroxypyr at 0.19 + 0.19 kg ha⁻¹ (82%). Other treatments included picloram at 0.14 kg ha⁻¹, dicamba + 2,4-D at 0.28 + 0.8 kg ha⁻¹, 2,4-D at 2.1 kg ha⁻¹, diflufenzopyr + dicamba at 0.06 + 0.14 kg ha⁻¹, diflufenzopyr + dicamba + metsulfuron methyl at 0.06 + 0.14 + 0.01 kg ha⁻¹, triclopyr at 0.56 kg ha⁻¹, and triclopyr + fluroxypyr at 0.42 + 0.14 kg ha⁻¹. All treatments except 2,4-D and diflufenzopyr + dicamba + metsulfuron methyl provided greater than 70% density reduction of common mullein 14 weeks after treatment. Aminopyralid, aminopyralid + 2,4-D, metsulfuron methyl, and metsulfuron methyl + dicamba + 2,4-D provided greater than 90% control of common mullein.