

FACTORS INFLUENCING COMMON LAMBSQUARTERS CONTROL WITH GLYPHOSATE. Andrew R. Kniss, Stephen D. Miller, and Robert G. Wilson, Assistant Research Scientist and Professor, Department of Plant Sciences, University of Wyoming, Laramie, WY 82071, and Professor, Panhandle Research and Extension Center, University of Nebraska, Scottsbluff, NE 69361.

Several reports have indicated that common lambsquarters has increased in glyphosate-resistant cropping systems. Field and greenhouse studies were conducted to examine factors that influence glyphosate efficacy on common lambsquarters. Weed size at application, glyphosate rate, addition of ammonium sulfate, and genetic makeup of individuals were all shown to have a role in glyphosate efficacy.  $GR_{50}$  values indicate that tolerance to glyphosate doubles as common lambsquarters increases in maturity from the 4 true-leaf to the 10 true-leaf stage of growth. Addition of ammonium sulfate at 1.7 kg/ha to glyphosate (0.84 kg ae/ha) increased control of 10 cm common lambsquarters from 73 to 91%, and 25 cm common lambsquarters from 80 to 89%. Increasing the glyphosate rate to 1.12 kg ae/ha provided an additional increase in percent control.