

INTERACTION OF ETHOFUMESATE AND GLYPHOSATE FOR WEED CONTROL IN GLYPHOSATE-RESISTANT SUGARBEET. Dennis C. Odera and Andrew R. Kniss, Post Doctoral Research Associate and Assistant Professor, Department of Plant Sciences, University of Wyoming, Laramie, WY 82071.

A field study was conducted near Lingle, Wyoming to evaluate the interaction of ethofumesate and glyphosate for weed control in glyphosate resistant sugarbeet. Ethofumesate was applied either preemergence incorporated (PPI), or postemergence (POST) at the 2 true leaf or 6 true-leaf stage of sugarbeet. Ethofumesate was applied at 0.28, 0.56, or 1.12 kg/ha at each application timing. POST applications of glyphosate at 0.56 kg/ha were made either alone, or as a tank-mix with ethofumesate. Ethofumesate applied PPI at 0.28 kg/ha reduced redroot pigweed and common lambsquarters densities by 61 and 40%, respectively. Increasing the rate of ethofumesate PPI to 0.56 kg/ha reduced redroot pigweed and common lambsquarters densities by 93, 63%, respectively. When added to the first POST application of glyphosate, ethofumesate at 0.28 kg/ha reduced redroot pigweed, common lambsquarters, and hairy nightshade densities by 61, 32, and 16%, respectively, compared to glyphosate alone. Increasing the rate of ethofumesate to 0.56 kg/ha reduced redroot pigweed, common lambsquarters, and hairy nightshade densities by 89, 30, and 20%, respectively, compared to glyphosate alone. When glyphosate was applied alone at 0.56 kg/ha at the 2 true-leaf and again at the 6 true-leaf sugarbeet stage, control of redroot pigweed, common lambsquarters, and hairy nightshade was 86, 98, and 99%, respectively. Adding ethofumesate at 0.28, 0.56, or 1.12 kg/ha to the 6 true-leaf application of glyphosate increased redroot pigweed control to 87, 94, to 97%, respectively.