

TECHNICAL EVALUATION OF A NEW POTASSIUM SALT OF GLYPHOSATE FORMULATION. Erika J. Ehler, Jeffrey A. Koscelny, David C. Heering, Dawn Wyse-Pester and Paul G. Ratliff, Technology Development Representative and Technology Development Managers, Monsanto Co., St. Louis, MO 63167.

Field and laboratory research trials were conducted during 2002 and 2003 to determine the physical characteristics and the efficacy profile of a new potassium salt of glyphosate (Roundup Original MAX) formulation. Roundup Original MAX contains 4.5 lbs glyphosate acid equivalent per gallon and is formulated using the potassium counter ion. Roundup Original MAX is a complete formulation containing a unique delivery system. The specific gravity of the formulation is 1.3565 with a gallon of formulated product weighing 11.297 pounds. Eighty-seven small-plot field efficacy trials were conducted throughout the U.S. to evaluate performance. At labeled rates, Roundup Original MAX provided reliable control of annual and perennial weeds. In 728 side-by-side observations with competitive formulations, Roundup Original MAX provided statistically equivalent weed control versus Glyphomax Plus and Touchdown IQ and statistically better weed control versus Glystar Plus ( $P=0.05$ ). Glyphosate tolerant (Roundup Ready) crop response to applications of Roundup Original MAX when no additional nonionic surfactant was added ranged from minimal to no affect with no impact on yield. Roundup Original MAX is currently being commercialized throughout most of the United States.