

FURTHER EVALUATION OF GLYPHOSATE BRANDS. Brady F. Kappler, Robert F. Klein, Stevan Z. Knezevic, Drew J. Lyon, Alex R. Martin, Frew W. Roeth, Gail A. Wicks. Extension Educator, Professor, Assistant Professor, Associate Professor, Professor, and Professor, Department of Agronomy University of Nebraska, Lincoln, NE 68583-0915.

The proliferation of glyphosate products into the glyphosate resistant crop arena has taken the generic herbicide market to a different level. No matter how many herbicides are introduced the question always comes back to: Will glyphosate product A perform as well as a glyphosate product B? Field studies were conducted for three years in five locations across Nebraska to evaluate different brands of glyphosate herbicides. The study was conducted in glyphosate tolerant soybean at Clay Center, Concord, and Lincoln, Nebraska with the exception that glyphosate tolerant corn was used at Clay Center in 2002. The study was conducted in wheat stubble in North Platte and Sidney, Nebraska. In 2001 & 2002 Treatments of 0.42 kg ae/ha and 0.84 kg ae/ha of the following glyphosate products were applied; In 2003 treatments were reduced to 0.31 kg ae/ha and 0.62 kg ae/ha

Herbicides investigated over the three years included Roundup UltraMax, Roundup Ultra, Roundup WeatherMAX, Roundup UltraDry, Touchdown, Clearout 41 Plus, Glyphos Xtra, Cornerstone, Glyphomax, and Glyphomax Plus. Most of the products represent the isopropylamine (IPA) salt of glyphosate however, Touchdown is formulated as the diammonium salt of glyphosate, Roundup UltraDry is formulated as the mono-ammonium salt of glyphosate and Roundup WeatherMAX is formulated as a potassium (K) salt of glyphosate. At North Platte and Sidney locations a product known as Engame was included in the study. Engame is a pure acid formulation of glyphosate. All sites were evaluated for percent control of both grass and broadleaf species at 10-15 and 25-30 DAT..

Over 3 years differences were small and varied slightly across the different trade names in the glyphosate tolerant soybean and corn treatment. Neither Lincoln, Concord, nor Clay Center had any significant differences in control at the 0.42 & 0.84 kg ae/ha or 0.31 kg ae/ha & 0.62 kg ae/ha. Control remained similar across the different rating dates as well for 2001 & 2002 at Sidney, where in wheat stubble, there were once again very few significant differences between products at either rate. At North Platte in 2002 & 2003 and in Sidney in 2003 Engame provided significantly better weed control of kochia and Russian thistle and Sandbur at all rates than any of the K or IPA salt formulations of glyphosate.

As a whole, few differences were seen between different glyphosate brands in this study across the locations especially in row crop situations. However, with a difficult to control species, such as barnyardgrass or in a more demanding climate, such as western Nebraska differences can be easier to find. In these situations the pure acid of glyphosate performed significantly better than the IPA or K formulations of Glyphosate. In climates that are less arid climates or with species that are susceptible to glyphosate there seems to be little or no differences between brands. Rate, environmental factors, and cost will most likely play a larger role in the decision process than brand name.