

NEW HERBICIDE MIXTURE FOR FOUNDATION WEED CONTROL IN GLYPHOSATE TOLERANT CORN. Bruce E. Maddy\*, Marvin E. Schultz, David C. Ruen, and Jeff M. Edwards, Dow AgroSciences, Indianapolis, IN 46268.

GF-1834 is a new soil applied corn herbicide mixture designed to provide early season control of grass and broadleaf weeds in herbicide tolerant corn, enabling optimal timing of the in-crop postemergence application of glyphosate or glufosinate herbicides. GF-1834 suspo-emulsion formulation contains 510 grams per liter active ingredient (4.25 lb ai per gallon), which includes acetochlor, clopyralid monoethanolamine salt, and flumetsulam at 450 + 45.6 + 14.4 grams ai per liter respectively (3.75 + 0.38 + 0.12 lb ai/gal).

Eleven field trials were conducted in 2006 to evaluate herbicidal efficacy and crop tolerance of GF-1834 when applied preemergence in Roundup Ready<sup>®</sup> corn. Trials were located in central IA, central MO, southern MN, southern WI, central IL, and western IN. Herbicidal efficacy was evaluated four weeks after the V1 stage. Weed control with the normal 1X use rate of GF-1834, 1043 grams ai per hectare (1.75 pints per acre), was compared to approximate 0.5X rates of several reference herbicide treatments. Crop tolerance with GF-1834 was evaluated at V1, one week after V1 and two weeks after V1. Corn plots were not taken to yield.

Herbicidal efficacy results demonstrate that GF-1834 provided control of grass and broadleaf weeds equal to or superior to the reference treatments. Crop tolerance from all treatments, including 1X and 2X use rates, was commercially acceptable.

EPA registration for an improved version of GF-1834 is anticipated in the first quarter of 2007.

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