

PERFORMANCE OF GOLDSKY HERBICIDE ON GRASS AND BROADLEAF WEEDS IN SPRING WHEAT. Roger E. Gast, Brett M. Oemichen, Monte R. Weimer, and Marcin D. Dzikowski, Dow AgroSciences LLC, Indianapolis, IN 46268.

Pyroxsulam is a new triazolopyrimidine sulfonamide herbicide that provides broad spectrum postemergence grass and broadleaf weed control in wheat. The control spectrum includes key annual grasses occurring across the global wheat markets such as blackgrass (*Alopecurus sp.*), windgrass (*Apera spica-venti*), wild oat (*Avena sp.*), annual bromes (*Bromus sp.*), ryegrass (*Lolium sp.*) and canarygrass (*Phalaris sp.*), and certain broadleaf species. GoldSky™ herbicide is an oil dispersion premix formulation (coded GF-1848) containing pyroxsulam, florasulam and fluroxypyr-meptyl designed to deliver full spectrum control of key annual weeds in the U.S. spring wheat market. The label use rate of one pint formulated product A⁻¹ delivers 15 + 2.5 + 100 gae ha⁻¹ of each component, respectively.

Replicated field research trials were conducted in 2007 and 2008 at 29 locations across the northern spring wheat states of North Dakota, Montana and Idaho to determine the relative performance of GF-1848 compared to current standard grass and broadleaf herbicide tank mix treatments. GF-1848 was applied at the labeled rate with a non-ionic surfactant at 0.5% v/v plus ammonium sulfate fertilizer at a rate of 1.7 kg ha⁻¹. Comparison grass herbicide treatments included clodinafop, fenoxaprop, pinoxaden, flucarbazone, and the premix of mesosulfuron plus propoxycarbazone, all applied at typical label rates.

GF-1848 provided 91% mean late season control of wild oats over 12 locations, similar to the clodinafop (92%) and pinoxaden (94%) treatments. Wild oat control with other comparison treatments was lower. Fenoxaprop control ranged from 62% to 86% and mesosulfuron plus propoxycarbazone 83% to 87% depending on tank mix partners, and flucarbazone plus 2,4-D averaged 82%. Yellow foxtail late season control with GF-1848 was 92%, comparable to pinoxaden (94%), and was higher than all other comparison treatments. Green foxtail control with GF-1848 was 76%, similar to clodinafop and flucarbazone at 81% and 71%, respectively. Both treatments provided less green foxtail control than pinoxaden or fenoxaprop treatments.

GF-1848 provided excellent control of key broadleaf weeds such as kochia (92%), Russian thistle (88%), wild mustard (98%), wild buckwheat (90%), redroot pigweed (99%) and common lambsquarters (92%). Spring wheat tolerance to GF-1848, up to the double label rate, was excellent in all weed free trials with no significant yield losses observed. Rotational studies conducted on the key rotational crops indicate that all tested crops can be planted the season following application of GF-1848. The results of these trials indicate that GoldSky provides unique one pass, cross-spectrum control of key weeds in spring wheat delivered in a single formulation.

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