# Evaluating a dry formulation of pyroxsulam for weed control in spring wheat

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A field study was conducted on the Derek Appel Farm near Egypt, WA (Lincoln County) to evaluate a dry formulation of pyroxsulam designed to be mixed with dry formulations of other sulfonylurea herbicides. Pyroxsulam is the active ingredient in PowerFlex® HL and a component of GoldSky® herbicide. Thifensulfuron and tribenuron are active ingredients that can be found in herbicide products such Harmony® Extra, Affinity® BroadSpec and Affinity® TankMix.

The soil at the site is a Broadax silt loam with a pH of 6.5 and organic matter of 8.1%. On May 17, 'Diva' soft white spring wheat was planted using a Yielder 1818 no-till drill with 7 to 11 inch paired row spacing. Seeding depth was 1 inch. The seed was sown into no-till ground at a rate of 75 lb/acre with starter fertilizer applied at 60, 10 and 10 lb/acre of N:P:K. Post-emergence herbicide applications were made on June 20 using a $CO_2$ backpack sprayer set to deliver 15 gpa at 30 psi and 3 mph. The air temperature was 64°F, the relative humidity was 60% and the wind was out of the south at 6 mph. The wheat had 5 to 7 tillers and was 11 to 12 inches tall. Weeds present at the time of spraying were wild oats with 2 to 5 tillers and 4 to 7 inches tall, and common lambsquarters, which were 3 to 6 inches tall. Plots were harvested on August 27 using a Kincaid 8XP plot combine.

No crop injury was observed in this study. All treatments containing pyroxsulam provided excellent control of wild oats, as did treatments containing Everest® 2.0 or Axial® XL. Treatments containing thifensulfuron and tribenuron provided excellent control of common lambsquarters, as did the treatments containing Huskie™ or WideMatch®. The dry formulation of pyroxsulam tested in this study appeared to perform as expected, that is, it provided excellent control of wild oats, but only fair control of common lambsquarters unless mixed with thifensulfuron and tribenuron.

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| | | July 16 | | August 27 |
|---|---|---|---|---|
| | | | Common | |
| | | Wild oat | lambsquarters | |
| Treatment[a] | Rate | control | control | Yield |
| | oz pr/a | ----------%---------- | | bu/a |
| Thifensulfuron | 0.8 | 61 | 99 | 73 |
| Tribenuron | 0.2 | | | |
| Thifensulfuron | 0.8 | 99 | 99 | 77 |
| Tribenuron | 0.2 | | | |
| Pyroxsulam | 1 | | | |
| Thifensulfuron | 0.5 | 80 | 100 | 73 |
| Tribenuron | 0.5 | | | |
| Thifensulfuron | 0.5 | 98 | 100 | 77 |
| Tribenuron | 0.5 | | | |
| Pyroxsulam | 1 | | | |
| Huskie | 13.5 | 99 | 100 | 75 |
| Everest 2.0 | 1 | | | |
| AMS | 16 | | | |
| Goldsky | 16 | 98 | 88 | 72 |
| Pyroxsulam | 1 | 95 | 70 | 77 |
| Axial XL | 16.4 | 100 | 73 | 79 |
| Widematch | 16 | | | |
| Nontreated Check | -- | -- | -- | 67 |
| LSD (5%) | | 16 | 6 | ns |

[a] All treatments were applied on June 20, and except the tank mix of Huskie and Everest 2.0, were applied with NIS at 0.25% v/v

**Some of the pesticides discussed in this presentation were tested under an experimental use permit granted by WSDA. Application of a pesticide to a crop or site that is not on the label is a violation of pesticide law and may subject the applicator to civil penalties up to $7,500. In addition, such an application may also result in illegal residues that could subject the crop to seizure or embargo action by WSDA and/or the U.S. Food and Drug Administration. It is your responsibility to check the label before using the product to ensure lawful use and obtain all necessary permits in advance.**