

Evaluation of Osprey® Xtra for the control of downy brome in winter wheat

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A field study was conducted at the Wilke Farm near Davenport, WA to evaluate Osprey Xtra for downy brome control in winter wheat. Osprey Xtra (thiencarbazon + mesosulfuron) active ingredients are both in the Mechanism of Action Group 2, which are compounds that inhibit acetolactate synthase (ALS), a key enzyme in the biosynthesis of the branched-chain amino acids isoleucine, leucine and valine. Osprey Xtra also contains mefenpyr-diethyl, which is used as a safener in combination with the active ingredients for selective weed control in wheat. Osprey Xtra is not yet registered for use in wheat. Osprey Xtra was compared to the current formulation of Osprey, which only contains (mesosulfuron + mefenpyr-diethyl). The addition of one or two emulsifiable concentrate (EC) herbicide formulations have been shown to increase the activity of Osprey Xtra, and is why those treatments were included in this study.

The soil for this site is a Broadax silt loam with 2.9% organic matter and a pH of 5.4. On September 20, 2016, 'Jasper' winter wheat was planted into chemical fallowed ground using a no-till drill with 7.5-inch row spacing. Seeding rate was 65 lb/acre and seed was planted to a 1.5-inch depth. Starter fertilizer was applied below the seed at planting at a rate of 100 lb N, 8 lb P and 10 lb S per acre. Spring treatments were applied on May 3rd using a CO₂ backpack sprayer set to deliver 10 gpa at 30 psi. Downy brome was 4 inches tall at the time of the application. Conditions were an air temperature of 64°F, relative humidity of 48% and the wind out of the southwest at 7 mph. The plots were harvested on August 9 using a Kincaid 8XP plot combine.

There was not a significant difference between Osprey and Osprey Xtra in relation to control of downy brome. Both products provided fair control of downy brome. None of the broadleaf tank mixes enhanced Osprey or Osprey Xtra's control of downy brome. The mean yield was 64 bu/A. There were no significant differences among herbicide treatments and the nontreated check in relation to yield.

		6/6	8/9
		Downy brome	
Treatment	Rate	control	Yield
	fl oz/A	-----0-100%-----	bu/A
Nontreated Check		--	59 a
Osprey ¹	4.75 oz	79 a	64 a
Osprey Xtra ¹	4.75 oz	73 a	63 a
Osprey + Huskie ²	4.75 oz + 13.5	79 a	59 a
Osprey Xtra + Huskie ²	4.75 oz + 13.5	75 a	68 a
Osprey + Huskie + Brox-M ²	4.75 oz + 13.5 + 16	78 a	62 a
Osprey Xtra + Huskie + Brox-M ²	4.75 oz + 13.5 + 16	83 a	73 a
Osprey + Huskie + WideMatch ²	4.75 oz + 13.5 + 16	79 a	64 a
Osprey Xtra + Huskie + WideMatch ²	4.75 oz + 13.5 + 16	73 a	63 a

¹ Treatments were tank mixed with 2.0 qt UAN + 0.5% v/v NIS

² Treatments were tank mixed with 2.0 qt UAN + 0.25% v/v NIS

³ Means, based on four replicates, within a column, followed by the same letter are not significantly different at P = 0.05 as determined by Fisher's protected LSD test, which means that we are not confident that the difference is the result of treatment rather than experimental error or random variation associated with the experiment.

Disclaimer

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.