

Efficacy of Sharpen for Weed Control in Wheat Stubble Following Wheat Harvest near Mitchell, Nebraska during the 2009 Growing Season.

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A field study was initiated near Mitchell, Nebraska to examine the effect of Sharpen for weed control in wheat stubble following wheat harvest. The experimental design was a randomized complete block with four replications. Plots were 11 feet wide by 25 feet long and were located on a loam soil with an organic matter content of 1.2% and a pH of 7.8. At the time of herbicide application, August 8, 2009, wheat stubble was infested with kochia (2 to 10 inches), Russian thistle (2 to 5 inches), and common purslane (2 to 7 inches). Herbicides were applied with a backpack sprayer calibrated to deliver 20 gallons of water per acre at 32-psi pressure with Spraying Systems 11002 VS nozzles. At the time of spraying, air temperature was 63 F, humidity 81%, wind was blowing at 5 mph out of the northwest, and spraying started at 8:30 AM. Winter wheat was planted in the plot area on August 27, 2009.

The addition of Sharpen, 2,4-D ester, and Distinct to Roundup Power Max improved kochia, Russian thistle, and common purslane control over that achieved with Roundup Power Max alone (Table 1). Winter wheat was planted in late August but did not emerge until early October following precipitation that occurred in late September. Minor winter wheat stunting was observed in plots treated earlier with Sharpen and Distinct.

Table 1. Efficacy of Sharpen for Weed Control in Wheat Stubble Following Wheat Harvest.

Treatment ¹	Rate	Percent weed control									Winter wheat injury 10/18
		Kochia			Russian thistle			Common purslane			
		8/17	8/26	9/7	8/17	8/26	9/7	8/17	8/26	9/7	
	(lb/acre)	----- (%) -----									

Nontreated	--	0	0	0	0	0	0	0	0	0	0
Roundup Power Max + AMS + X77	0.75	93	96	94	96	98	94	95	99	97	0
Sharpen + Roundup Power Max + AMS + MSO	0.022 + 0.75	98	98	95	99	99	95	99	97	96	8
2,4-D ester + Roundup Power Max + AMS + X77	0.5 + 0.75	99	99	99	98	99	99	99	99	99	0
Distinct + Roundup Power Max + AMS + X77	0.17 + 0.75	97	99	99	97	99	99	99	93	95	5
Sharpen + Distinct + Roundup Power Max + AMS + MSO	0.022 + 0.17 + 0.75	96	98	98	96	99	98	99	99	98	13
Sharpen + Distinct + Roundup Power Max + AMS + MSO	0.022 + 0.08 + 0.75	98	99	98	97	99	99	99	98	99	1
LSD at 0.05		3	3	4	4	1	4	2	6	6	9

¹Adjuvants were combined with herbicides at the following rates: ammonium sulfate (AMS) at 17 lbs per 100 gallons of water, nonionic surfactant at 0.25% v/v, and methylated seed oil at 1% v/v.