

Spring wheat burndown with Sharpen + Glyphosate applied PRE

This objective of this study was to evaluate weed control and spring wheat tolerance to Sharpen applied preemergence. 'Howard' spring wheat was seeded June 1 at 100 lb/A into 7.5-inch rows into wheat stubble. Herbicides treatments were applied preemergence (PRE) on June 2. Weeds present included kochia (0.5-2", 10/ft²), common lambsquarters (1-3", 3/ft²), greenflower pepperweed (4-12", 3/ft²), flixweed (2-10", 2/ft²), wild buckwheat (1-3", 6/ft²), and biennial wormwood (0.5-1", 15/ft²). No broadleaf herbicides were applied postemergence. Individual plots were 10 x 30 ft and replicated three times.

No wheat injury was observed with any treatment. Similar studies have been conducted (2006-08) with Sharpen applied 7-10 days preplant. No injury was observed in those studies either. Sharpen alone provided 63-83% weed control 9 days after treatment (DAT), but only 28-67% control 4 weeks after treatment (WAT). All other treatments provided excellent control of the two mustard weeds, greenflower pepperweed and flixweed. It is likely that a new flush of weeds emerged soon after the PRE application. None of the treatments provided sufficient control of the other weeds to eliminate the need for a postemergence application. Sharpen (18 g) + Glyphosate generally provided similar control of kochia, lambsquarters, and wild buckwheat as did glyphosate alone. However, Sharpen (25 g) + glyphosate generally increased control of these weeds by about 10%. For kochia, lambsquarters, and wild buckwheat, control was generally better with Sharpen (25 g) + Glyphosate than either of these alone. However, for biennial wormwood there was definite antagonism between these two herbicides. Biennial wormwood control was significantly better with glyphosate alone than tank mixed with Sharpen. However, wheat yield with Sharpen + Glyphosate was about 5 bu/A more than with Glyphosate alone.

Table. Spring wheat burndown with Sharpen + Glyphosate applied PRE (0944).

Treatment ^a	Rate	Kocz ^b		Colq ^b		Gfwp ^b		Flix ^b		Wibw ^b		Biww ^b		Wheat	
		Jun 11	Jul 05	Jun 11	Jul 05	Jun 11	Jul 05	Jun 11	Jul 05	Jun 11	Jul 05	Jun 11	Jul 05	Yield	TW
Untreated		0	0	0	0	0	15	0	0	0	0	0	0	22.3	56.6
Sharpen ^c	18 g	67	54	83	65	63	57	80	35	78	67	65	28	37.6	57.2
Glyphosate	840 g	50	63	63	73	50	100	40	100	50	77	43	87	70.1	58.4
Sharpen + Glyphosate	18 g + 840 g	78	64	92	70	82	98	88	100	89	81	78	66	75.9	58.3
Sharpen + Glyphosate	25 g + 840 g	80	72	93	83	85	100	90	100	91	86	83	60	76.3	59.3
Weedar 64 + Glyphosate	280 g + 840 g	53	61	80	69	63	100	65	100	72	83	70	89	74.4	59.0
Sharpen + Glyphosate	25 g + 840 g	68	65	88	76	77	100	83	100	87	89	77	75	74.8	59.4
LSD (0.05)		8.7	18.7	9.6	18	9.5	28.2	10.9	4	7.2	9.9	7.4	11.6	15.4	1.6
CV		9	19	8	16	9	19	9	3	6	8	7	11	14	2

^a All treatments were applied PRE; MSO and AMS (1% + 2%) were applied with all treatments

^b Kocz = Kochia, Colq = Common lambsquarters, Gfwp = Greenflower pepperweed, Flix = Flixweed, Wibw = Wild buckwheat, Biww = Biennial wormwood

^c Sharpen at 18 g/ha is equivalent to 0.75 fl oz/A; 25 g/ha is equivalent to 1 fl oz/A; Glyphosate at 840 g is equivalent to 0.75 lb ae