

Lentil tolerance to experimental herbicides

'Pennell' lentil was seeded May 18 at 95 lb/A into 7.5-inch rows into wheat stubble. Glyphosate was applied preplant over the entire study area on May 14. Herbicides treatments were applied preemergence (PRE) on May 21. Individual plots were 10 x 30 ft and replicated three times.

The objective of the study was to evaluate lentil response to experimental herbicides applied PRE. As of December 2009, Express, Prowl, Sharpen, KIH-485, Spartan, and Valor are not labeled for PRE use in lentil. All treatments caused at least 10% visual injury 6 weeks after treatment (WAT). Lentil in most treatments recovered to less than 10% injury by 8 WAT. Valor at 2 and 3 oz caused 17 to 37% injury at 8 WAT. Treatments containing Sharpen or Valor tended to have lower test weight. Pursuit + Prowl provided excellent control of wild buckwheat (Wibw), redroot pigweed (Rrpw), and common lambsquarters (Colq). Prowl tank mixed with either Express or Sharpen provided poor control of all weeds. Valor and KIH-485 generally provided poor to fair weed control. Spartan provided good control of wild buckwheat and lambsquarters, but only fair control of pigweed. Treatments with better weed control tended to have higher yield. Valor caused the most crop injury and also had the lowest lentil yield.

Table. Lentil tolerance to experimental herbicides (0916).

Treatment ^a	Rate	Lentil		Wibw ^b		Rrpw ^b		Colq ^b		Lentil			
		Jul 01	Jul 25	Jul 01	Jul 25	Jul 01	Jul 25	Jul 01	Jul 25	Yield	TW		
		--% injury--		-----% control-----								lb/A	lb/bu
Untreated		0	0	0	0	0	0	0	0	849	55.2		
Express + Prowl H2O	0.25 oz + 2 pt	12	1	75	43	69	43	81	48	969	55.1		
Sharpen + Prowl H2O	1 fl oz + 2 pt	10	3	71	48	61	37	72	52	924	49.8		
Pursuit + Prowl H2O	2 fl oz + 2 pt	16	8	97	92	99	97	100	97	1337	59.8		
KIH-485	0.15 lb ai	16	7	57	38	85	79	65	50	1147	57.6		
KIH-485	0.3 lb ai	25	7	53	38	89	83	74	63	996	58.7		
Valor	2 oz	21	17	74	61	77	60	76	58	806	54.3		
Valor	3 oz	39	37	86	66	86	63	84	61	447	55.3		
Spartan	3 fl oz	16	5	91	83	81	63	91	91	1218	58.8		
Handweeded ^c		12	3		96		92		94	1270	59.5		
LSD (0.05)		8.8	8.3	20.7	27.8	10.3	14.4	17.7	22	338	3.8		
CV		5	5	12	16	6	8	10	13	20	4		

^a All treatments applied PRE

^b Wibw =Wild buckwheat; Rrpw =Redroot pigweed; Colq =Common lambsquarters

^c Prowl H2O (2 pt) was applied PRE to aid handweeding