

Herbicide efficacy and crop tolerance in Lentils. (1998) (Brian Jenks and Kent McKay, Minot) 'Laird' lentils were planted May 23 into 7.5-inch rows at 550,000 pls/A in a conventional tillage system. Herbicide treatments consisted of preplant incorporated, preemergence, and postemergence applications. Individual plots were 10 by 30 ft and were arranged in a RCBD with three replications. PPI and PRE treatments were applied (May 22 and May 25) with 80015 flat fan nozzles delivering 20 gpa at 30 PSI. All postemergence treatments were applied June 25 with 8001 flat fan nozzles delivering 10 gpa at 40 PSI. Lentils were approximately 6-inches tall at the POST application. Foxtail pressure was initially light and erratic, but emergence continued through the season. Foxtail populations in some areas were about 4 per square foot and 1-2 inches tall at POST application. Yellow foxtail was the most common species, but green foxtail was also present. Lentils were harvested with a small plot combine on September 10.

<u>Treatment^a</u>	<u>Rate</u>	<u>July 14</u>		<u>September 9</u>		<u>Yield</u>
		<u>Injury</u>	<u>Fxtl</u>	<u>Injury</u>	<u>Fxtl</u>	
-----% injury or control -----						
Untreated		0	0	0	0	1326
Prowl / Motive + NIS	2.4 pt / 2 fl oz + 0.25%	50	94	40	94	660
Prowl / Motive + NIS	2.4 pt / 3 fl oz + 0.25%	83	98	72	99	283
Motive + NIS	2 fl oz + 0.25%	53	87	35	80	731
Motive + NIS	3 fl oz + 0.25%	72	95	53	97	561
Balance	1.25 oz	33	57	23	40	971
Balance	2 oz	47	58	28	40	912
Python	1 oz	0	0	0	0	1352
Spartan	0.25 lb ai	2	67	0	73	1173
Axiom	15 oz	2	72	0	80	1389
Resource + NIS	0.027 lb ai + 0.25%	30	0	15	0	490
V-53482	0.078 lb ai	5	67	0	90	1411
Frontier	20 fl oz	1	75	0	82	1351
Sonalan	2 pt	1	77	0	79	1110
Sencor	0.25 lb ai	0	42	0	35	874
Broadstrike + Treflan	2 pt	3	67	0	55	1292
Treflan	1.5 pt	0	72	0	67	1048
Prowl	3 pt	0	72	0	59	1227
Sencor + Treflan	0.25 lb ai + 1 pt	0	79	0	62	1059
CV		46	19	59	31	27
LSD (0.05)		15	19	13	30	455

^a Applied PPI: Prowl, Sonalan, Broadstrike + Treflan, Treflan, and Sencor + Treflan
 Applied PRE: Balance, Python, Spartan, Axiom, V-53482, Frontier, and Sencor
 Applied POST: Motive and Resource

Motive, Balance, and Resource caused moderate to severe injury to lentils. Very slight or no injury was observed with the other treatments. Prowl/Motive, Motive, Axiom, V-53482, Frontier, and Sonalan provided good to excellent foxtail control. Foxtail control with Motive alone at 2 fl oz/A was 17% less than 3 fl oz/A.