Study Name: No-till lentil tolerance to fall- and spring-applied Sonalan

Study Number: 0539

Objectives:

Results:
Individual plots were 15 by 30 ft and replicated three times. Herbicide treatments were applied with a granular spreader on November 9, 2004, and incorporated by one pass with a heavy harrow. Spring treatments were applied April 21, 2005 with either a tractor mounted CO_2-pressurized sprayer delivering 20 gpa through XR80015 nozzles, or with a granular spreader. Selected treatments were incorporated by one pass with a heavy harrow. The non-incorporated treatments were on the north end of the field and the incorporated treatments were on the south end to allow us to use a field-size heavy harrow for herbicide incorporation. 'Pennell' lentils were seeded May 2 at 60 lb/A into 7.5-inch rows. Data was collected on crop injury, crop density, and weed control (redroot pigweed=Rrpw, wild buckwheat=Wibw, Kochia=Kocz).

Most treatments caused only slight crop injury. Pendimax caused about 16% injury, while Sonalan at 10 lb caused as much as 14% injury. There were no differences in crop density between treatments. None of the treatments provided good control of all weeds. However, it should be noted that there were very dry conditions at application time in the fall and spring, which may have hindered herbicide incorporation. It should also be noted that even though this study was established in barley stubble, the field had not been in no-till in previous years. Fields that have been in no-till for several years will have weed seed primarily on or just below the soil surface, which is where the Sonalan should be for maximum activity. Lentil yield tended to be higher where Sonalan was not incorporated; however, we believe this is due to where the plots were located in the field and not necessarily due to crop injury. Below is a news release we distributed in fall 2005 to provide recommendations for Sonalan use in lentil. Note that Sonalan is now labeled for use in the fall only.

Table. No-till lentil tolerance to fall- and spring-applied Sonalan.

			Lentil			Rrpw		Wibw		Kocz	Yield	TW
Treatment[a]	Rate	Timing	Jun	Jul	Jun	Jun	Aug	Jun	Aug	Aug	Sep	Sep
			— % injury —		pl/m[b]	——— % control ———					lb/A	lb/bu
Not incorporated												
Untreated			0	0	18.2	0	0	0	0	0	850	55.5
Assure II	8 fl oz	POST	0	0	15.9	0	0	0	0	0	720	55.7
Sonalan	7.5 lb	Fall	4	2	18.2	43	77	52	53	72	1170	56.7
Sonalan	10 lb	Fall	7	3	15.0	40	80	40	48	77	1180	58.3
Sonalan	7.5 lb	11 DPP	9	7	16.4	66	75	72	62	75	1510	58.6
Sonalan	10 lb	11 DPP	14	14	18.1	88	86	94	85	72	1480	58.6
Pendimax	3 pt	11 DPP	16	16	15.5	77	78	90	83	77	1290	57.9
Sonalan	2 pt	11 DPP	0	0	17.6	3	53	13	27	37	960	57.8
Sonalan	2.5 pt	11 DPP	3	0	17.2	40	50	35	30	53	1120	55.7
Incorporated (Harrow)												
Sonalan	7.5 lb	Fall	8	7	18.0	69	68	100	67	73	910	54.7
Sonalan	10 lb	Fall	11	9	17.1	79	84	90	87	78	1150	57.3
Sonalan	7.5 lb	11 DPP	7	5	17.3	83	76	91	85	83	990	57.0
Sonalan	10 lb	11 DPP	11	11	15.9	91	79	94	92	79	1120	57.6
Sonalan	2 pt	11 DPP	4	2	18.3	48	47	57	67	43	850	55.6
Sonalan	2.5 pt	11 DPP	8	7	17.0	80	70	66	70	63	880	56.4
Untreated			0	0	18.8	0	0	0	0	0	880	56.7
LSD (0.05)			5	3	NS	23	17	35	29	14	380	NS

CV	44	0.9	9.5	27	18	38	33	15	21	3.9

[a]*Assure II + COC (8 fl oz + 1%) was applied postemergence to control grass weeds.*
[b]*Crop density is reported in plants per meter of row.*