

Study Name: No-till lentil tolerance to herbicides applied in the fall or preemergence (0721)

Objectives: Evaluate lentil tolerance to experimental herbicides applied in fall 2006 or spring 2007.

Results:

Diuron caused moderate to severe crop injury applied preemergence (PRE). Linuron caused very little crop injury whether applied in the fall or PRE. Valor caused slight to moderate crop injury depending rate and time of application. Less injury was observed from Valor at lower rates and applied in the fall. KIH-485 caused very little injury fall-applied, but slight to moderate injury applied PRE. No injury was observed from BAS 800 following a fall application at two rates.

Due to uneven prickly lettuce populations, a visual control evaluation was not performed. Instead, prickly lettuce plants were counted in each plot and assigned a number to represent a density range (see below). For example, the untreated had a prickly lettuce population meriting a value of 4.3, which would correspond to between 11 and 25 plants per plot. BAS 800 + glyphosate had a value of 1, which would correspond to no prickly lettuce plants present in the plots, indicating that BAS 800 + glyphosate controlled emerged plants in the fall with no new spring emergence. Treatments containing glyphosate in the generally had fewer prickly lettuce. Adding Valor, KIH-485, BAS 800, or a growth regulator like 2,4-D or dicamba to fall-applied glyphosate helped reduce prickly lettuce densities even further.

1 = no plants	4 = 11-20 plants
2 = 1-5 plants	5 = 21-25 plants
3 = 6-10 plants	6 = 26+ plants

Table. Prickly lettuce control and no-till lentil tolerance to herbicides applied in the fall or preemergence (0721).

Treatment ^a	Rate	Timing	Lentil			Prickly lettuce
			% injury			See scale above
			Jun 5	Jun 28	Jul 12	Jun 5
Untreated			0	0	0	4.3
Glyphosate	0.75lb	Fall	0	0	0	2
Linuron + Glyphosate	0.5lb ai + 0.75lb	Fall	0	0	0	1.7
Linuron	0.5lb ai	PRE	2	6	6	3.3
KIH-485 + Glyphosate	0.225lb ai + 0.75lb	Fall	0	0	2	1.3
KIH-485	0.225lb ai	PRE	4	11	14	2.7
Valor + Glyphosate	2oz + 0.75lb	Fall	11	8	6	1.3
Valor + Glyphosate	3oz + 0.75lb	Fall	19	17	15	1
2,4-De + Banvel + Glyphosate	8fl oz + 4fl oz + 0.56lb	Fall	0	0	0	1
Affinity BS + Glyphosate + NIS	0.4oz + 0.75lb + 0.125%	Fall	0	0	0	2
Affinity BS + Banvel + Glyphosate + NIS	0.4oz + 3oz + 0.56lb + 0.125%	Fall	0	0	0	1.3
BAS 800 + Glyphosate	2.85fl oz + 0.75lb	Fall	0	0	0	1
BAS 800 + Glyphosate	5.7fl oz + 0.75lb	Fall	0	0	0	1
Valor	2oz	PRE	12	13	13	4.3
Linuron	1lb ai	PRE	2	5	7	3.3
Diuron	1.2lb ai	PRE	22	26	23	2
Diuron	2 lb ai	PRE	72	77	67	1.7
LSD (0.05)			6.7	7.5	7	2.1
CV			48	47	47	60.4

^a AMS at 2.5 g/100g was tank mixed with glyphosate; glyphosate rate listed in lb ae.