

2012 prickly lettuce control in pulse crops with Lorox applied in the fall and spring.

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An experiment was conducted in four no-till fields near Beach, ND in Golden Valley County to evaluate weed control during the growing season in field pea and lentil from fall applied Lorox (linuron) singularly and in tank-mix with Valor (flumioxazin) and in the spring with Lorox singularly and in a tank-mix with Pursuit. The previous crop at all four locations was wheat. Soils at the four sites were sampled and then analyzed for the percent of sand, silt, and clay as well as organic matter content, pH and EC. All fall applied treatments were made on 28 Oct 2011 and all spring treatments were made on 10 Apr 2012. Treatments were applied to the center 6.3 feet of a 10 x 30 foot plot with a CO₂ hand held plot sprayer equipped with 11002 flat fan nozzles delivering 15.5 gpa at 30 psi. On 8 Jun 2012 6 fl oz/acre of Clethodim and 1 qt/acre of crop oil was applied with a field sprayer at 11.0 gpa at 40 psi through flat fan nozzles 8002 to Site #4 to control volunteer wheat. The experiment at all four sites was a randomized complete block design with four replications per treatment. An error was made in application at Site #4 in the spring in replication four and data from only three replications was used to calculate the statistics for that site.

Sites #1 and #2 did not have sufficient weed pressure to evaluate weed control during the entire growing season. Weed pressure became more evident at Site #3 in the late season. No observable crop injury occurred at any of the sites even in the plot where the application error occurred at Site#4 where 2 pounds/acre of Lorox was applied in the fall and an additional 2 pounds/acre was applied in the spring. Though sufficient weed populations were not present at two of the four sites general observation indicated little control of Russian thistle and kochia in Lorox only treatments. Fall applications appeared to be more effective than spring treatments for the control of prickly lettuce.

Crop injury was not observed in the lentil or field pea at these four locations. Nova Source provided the financial support for this trial. Thank you to Travis Hauck, Steve Zook, and Mike Zook for proving the use of the plot areas.

Soil characteristics of four selected sites

Location	Sand	Silt	Clay	Texture	OM	pH	EC
	----- % -----				%		mmhos/cm
Site #1	18.8	33.8	47.5	Clay	3.3	7.0	0.30
Site #2	30.0	35.0	35.0	Clay Loam	1.9	8.2	0.28
Site #3	22.5	35.0	42.5	Clay	4.0	7.7	0.67
Site #4	27.5	32.5	40.0	Clay Loam	3.8	7.2	0.84

Application information

Location	Application Time	Air Temperature	Soil Temperature
		-----°F -----	
Fall Application		October 28, 2011	
Site #1	11:00-11:45 am	48.5	37.0
Site #2	12:00-1:00 pm	49.9	37.0
Site #3	1:15-2:25 pm	50.0	42.0
Site #4	2:45-3:30 pm	47.0	43.0
Spring Application		April 10, 2012	
Site #1	10:15-11:00 am	47.0	42.0
Site #2	11:15 am -12:30 pm	48.5	45.0
Site #3	12:45-1:15 pm	51.0	46.0
Site #4	1:30-2:10 pm	49.5	47.0

Percent of weed control with Lorox applied in fall and spring at Site #3 on 20 Jul 2012.

Treatment	Rate	Kochia	Russian Thistle	Prickly Lettuce
Untreated Check		0	0	0
Lorox Fall	2lb/a	0	0	95
Lorox Spring	2lb/a	0	0	63.8
Lorox /Fall + Spring	1lb/a + 1lb/a	0	0	56.3
Lorox + Valor/ Fall	2lb/a + 1.5 floz/a	93.8	88.8	100
Lorox Fall + Pursuit Spring	2lb/a + 2.0oz/a	67.5	65.0	97.5
LSD 0.05		29.4	29.0	15.7
CV%		72.6	75.1	15.0

Percent weed control with Lorox applied in the fall and spring at Site #4.

Treatment	Rate	Kochia		Russian Thistle		Prickly Lettuce		Vol Canola	
		29-Jun	20-Jul	29-Jun	20-Jul	29-Jun	20-Jul	29-Jun	20-Jul
Untreated Check		0	0	0	0	0	0	0	0
Lorox Fall	2lb/a	0	0	0	0	93.3	85.0	56.7	65.0
Lorox Spring	2lb/a	0	0	0	0	75.0	60.0	0	0
Lorox /Fall + Spring	1lb/a + 1lb/a	0	0	0	0	75.0	75.0	65.0	56.7
Lorox + Valor/ Fall	2lb/a + 1.5 floz/a	96.7	88.3	90.0	81.7	100.0	96.3	83.3	83.3
Lorox Fall + Pursuit Spring	2lb/a + 2.0 floz/a	88.3	88.3	50.0	35.0	85.0	85.0	78.3	78.3
LSD 0.05		2.9	5.2	5.0	9.8	10.2	9.6	15.0	15.0
CV%		5.1	9.6	11.7	27.6	7.9	7.9	17.5	13.9