

2011 BASF Clearfield Lentil System Trial

Eric Eriksmoen, Hettinger, ND

'CDC Maxim' lentil was seeded no-till on May 9. Pre-emergence treatments (PRE) were applied on May 19 with 42° F, 86% RH, cloudy sky and northeast wind at 3 mph. Post-emergence treatments (POST) were applied on June 15 to 8 node (4") lentil, 4 leaf volunteer Roundup Ready canola (vcan), 1 inch kochia (kocz), 2 inch Russian thistle (ruth), 4 inch wild buckwheat (wibw), Japanese brome (jabr) in the boot and heading downy brome (dobr) with 73° F, 41% RH, clear sky and north wind at 2 mph. Treatments were applied with a tractor mounted CO₂ propelled plot sprayer delivering 10 gpa at 30 psi through PK-01E80 nozzles to 5 foot wide by 28 foot long plots. The soil is classified as a silt-loam with a pH of 6.2 and OM of 3.2%. The trial was a randomized complete block design with four replications. Weed populations for volunteer canola, kochia, Russian thistle, wild buckwheat, Japanese brome and downy brome were 6, 2, 0.25, 3, 3 and 2 plants per square foot, respectively. There was also a scattered amount of prickly lettuce (plet), tansy mustard (tmus) and volunteer spring wheat (vhrs) present. Plots were evaluated for crop stand establishment on June 3, for crop injury on June 1 and June 15, and for weed control on June 15, July 1, July 18 and August 11. The trial was harvested on August 16.

Treatment	Product	App.	6/15	Crop	----- July 18 -----				----- August 11 -----				Test	Seed	
	rate	timing	inj	stand	wibw	tamu	jabr	vhrs	kocz	ruth	vcan	plet	weight	yield	
	oz/A		%	#/9' row	----- Percent Control -----									lbs/bu	lbs/A
1 Untreated			0	106	0	0	0	0	0	0	0	0	56.3	1174	
2 Roundup Original fb Clethodim	32 4	PRE POST	2	106	58	0	99	96	97	94	0	74	59.9	1560	
3 R'up + Prowl H ₂ O fb Clethodim	32 + 48 4	PRE POST	2	108	58	0	99	98	98	97	0	70	61.0	1685	
4 R'up+Prowl H ₂ O+Sharpen fb Clethodim	32+48+0.75 4	PRE POST	8	106	50	23	99	92	98	94	0	76	60.7	1658	
5 R'up fb Beyond	32 4	PRE POST	8	83	88	99	99	94	96	99	97	95	61.6	1660	
6 R'up + Prowl H ₂ O fb Beyond	32 + 48 4	PRE POST	14	106	94	99	99	99	96	99	99	92	61.2	1871	
7 R'up+Prowl H ₂ O+Sharpen fb Beyond	32+48+0.75 4	PRE POST	6	100	97	99	99	97	98	99	99	99	60.4	1603	
8 R'up + Sharpen fb Beyond	32 + 0.75 4	PRE POST	10	95	97	99	99	99	90	97	99	93	60.3	1887	
C.V. %			64	16	12	17	0	6	4	4	3	19	2.0	5.5	
LSD .05			6	NS	12	13	1	7	5	5	2	22	1.8	132	

NS = no statistical difference between treatments

Summary

Selected data is shown above. Crop injury consisted of leaf chlorosis and stunting which was quite evident with several treatments but did not correlate to seed yields. None of the pre-emergence treatments provided adequate season long control of wild buckwheat or prickly lettuce, however, treatments which also had a post-emergence application of Beyond herbicide had good to excellent control of these weeds. Beyond treatments also provided excellent season long control of tansy mustard and volunteer canola. All herbicide treatments provided excellent season long control of grassy weeds, kochia and Russian thistle.