

Express Herbicide Applied POST in Express-Tolerant Sunflowers

A field study was initiated at the High Plains Agricultural Laboratory near Sidney, NE to evaluate crop injury and efficacy for weed control with Express herbicide in Express-tolerant sunflowers. The experimental design was a randomized complete block with three replications. Plots were 10 feet wide by 30 feet long. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 21 gallons/acre at three miles/hour and 20 psi. Express-tolerant sunflower cultivar (Pioneer 63N81) was no-till seeded into winter wheat residue on May 24, 2007 at the rate of 15,000 plants per acre. Preemergence treatments were applied on May 26, 2007. Postemergence treatments were applied on July 6, 2007 when sunflowers were in the V-10 growth stage. The study was located on an Duroc loam soil with 3.0% organic matter content and a pH of 6.5. Postemergence treatments were applied later than usual in the hope of getting greater weed pressure. However, dry conditions and a competitive sunflower crop kept weed pressure light. Kochia and Russian thistle were the main weeds present at the time POST treatments were applied. Weeds were 10 to 12 inches in height at the time of POST applications.

All herbicide treatments provided good to excellent control of kochia. Russian thistle control was best in treatments receiving a PRE application of Spartan herbicide or the high rate of Express applied alone. It is not clear why the high rate of Express applied after a PRE application of Prowl did not perform better.

No crop injury or yield differences were observed (data not shown). Yields averaged 1700 lbs/A.

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Weed control on August 21, 2007

Treatment	Rate	Timing	Weed control on August 21, 2007	
			Russian thistle	Kochia
			%	
Prowl	2 pt/A	PRE	60	90
Express	0.25 oz/A	POST		
Assure II	8 oz/A			
COC	1.5 pt/A			
Prowl	2 pt/A	PRE	68	100
Express	0.50 oz/A	POST		
Assure II	8 oz/A			
COC	1.5 pt/A			
Spartan	4.5 oz/A	PRE	90	100
Express	0.25 oz/A	POST		
Assure II	8 oz/A			
COC	1.5 pt/A			
Spartan	4.5 oz/A	PRE	97	100
Express	0.50 oz/A	POST		
Assure II	8 oz/A			
COC	1.5 pt/A			
Express	0.25 oz/A	POST	53	90
Assure II	8 oz/A			
COC	1.5 pt/A			
Express	0.50 oz/A	POST	87	87
Assure II	8 oz/A			
COC	1.5 pt/A			
Check			0	0
LSD (5%)			37	14