

Use of Eptam for weed control in irrigated potato. Harlene Hatterman-Valenti and Collin Auwarter.

A study was conducted west of Inkster, ND at the Northern Plains Potato Growers Association Irrigation Research site to evaluate several Eptam based programs with Dual II Magnum + Sencor for weed control in irrigated ‘Russet Burbank’ potatoes. Plots were 4 rows by 25 ft arranged in a randomized complete block design with 4 replicates. Seed pieces (2 oz) were planted on 36 inch rows and 12 inch spacing on May 23, 2009. Treatments were applied prior to planting (‘A’) and after hilling (‘B’), but prior to emergence. Extension recommendations were used for cultural practices throughout the year. The herbicide treatments were applied to the middle two rows using a CO<sub>2</sub> backpack sprayer equipped with 8002 flat-fan nozzles with an output of 20 gpa and a pressure of 40 psi. Weed control was evaluated on June 22, July 14, and August 13. Treated rows were harvested on September 26 and graded at Fargo.

Application Date:	5/23/09	6/16/09
Air Temperature (F):	65	67
Rel. Humidity (%):	60	76
Wind (mph):	2	8
Soil Moisture:	Adequate	Below normal
Cloud Cover (%):	0	100

Table 1. Effect of herbicide treatments on weed control.

Name	Rate	Rate Unit	Code	6/22/09			7/14/09			8/13/09		
				Colq	Rrpw	Grft	Colq	Rrpw	Grft	Colq	Rrpw	Grft
				-----% Control-----			-----Control-----			-----% Control-----		
Untreated				0	0	0	0	0	0	0	0	0
Eptam	5.5	pt/a	A	96	100	99	94	100	100	98	98	100
Eptam + Sencor	4.5	pt/a	A	100	100	100	100	100	100	100	100	100
Eptam + Matrix	0.33	lb/a	B									
Eptam + Matrix	4.5	pt/a	A	100	100	100	100	100	100	100	100	100
Dual II	1.5	oz/a	B									
Dual II	2	pt/a	B	100	100	100	100	100	100	100	100	100
Magnum+ Sencor	0.33	lb/a	B									

Rrpw = redroot pigweed, Colq = common lambsquarters, Grft = green foxtail

Table 2. Effect of herbicide treatments on potato yield and grade.

Name	Rate	Rate Unit	Code	<4oz 4-6oz 6-8oz 8-10oz 10-12oz >12oz Total >4oz							
				-----CWT/A-----							
Untreated				144	133	81	42	13	11	424	279
Eptam	5.5	pt/a	A	149	119	70	25	19	17	400	251
Eptam + Sencor	4.5	pt/a	A	126	118	77	45	16	17	399	273
Eptam + Matrix	0.33	lb/a	B								
Eptam + Matrix	4.5	pt/a	A	135	103	82	47	19	26	413	278
Dual II	1.5	oz/a	B								
Dual II	2	pt/a	B	141	132	78	51	16	20	438	297
Magnum + Sencor	0.33	lb/a	B								

Weed control evaluations showed all treatments performed well. The new location did not have the weed pressure previously reported. Total yields showed no differences and that the untreated performed as well as any other treatment. This was attributed to the limited weed pressure. There was no significant difference in grade. All treatments had between 63 and 68% of their tubers greater than the 4 oz size. Results indicate that Eptam and Eptam combinations provide similar weed control as the combination of Dual II Magnum + Sencor and that plants treated with these herbicides had similar yields and grades.