

MSU Weed Science Research Program

Weed Control and Potato Crop Tolerance

Trial ID: POT01-07
 Conducted: Montcalm

Study Dir.: Sprague, Powell
 Investigator: Christy Sprague

Date Planted: 5/9/07	Row Spacing: 34" IN
Variety: Snowden	No. of Reps: 4
Population: 12" Seed Spacing	% OM: 2.5
Soil Type: Loamy Sand	pH: 4.9
Plot Size: 10 X 30 FT	Design: RANDOMIZED COMPLETE BLOCK

Tillage: Moldboard Plowed and raked 5/9/07
Fertilizer: 250lb Potash Plowdown

20 gallon 19-17-0 with planter

8oz Admire with planter

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
2.	ECHCG	BARNYARDGRASS	ECHINOCHLOA CRUS-GALLI (L.) P.BEAUV.
3.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
Crop	Code	Common Name	
1.	SOLTU	POTATO	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	5/23/07	6/15/07
Time Treated:	8:15 pm	9:30 am
% Cloud Cover:	10	15
Air Temp., Unit:	80 F	80 F
% Relative Humidity:	25	36
Wind Speed/Unit/Dir:	2 mph W	1 mph W
Soil Temp., Unit:	76 F	77 F
Soil/Leaf Surface M:	5 5	5 5
Soil Moist (1=w 5=d):	5	5

Crop Stage at Each Application

	A	B
Crop Name:	SOLTU	SOLTU
Height (In.):	-	10-12
Stage (L):	-	many

Weed Stage at Each Application

	A	B
Weed 1 Name:	CHEAL	CHEAL
Height (In.):	-	1/2-3"
Stage (L):	-	coty-12
Weed 2 Name:	ECHCG	ECHCG
Height (In.):	-	2"
Stage (L):	-	1-2
Weed 3 Name:	AMARE	AMARE
Height (In.):	-	1"
Stage (L):	-	6

Weed Density (plants/sq. ft.)

	1	2	3	4
Date:	7/16/07	7/16/07	7/16/07	7/16/07
Weed Name:	ECHCG	CHEAL	AMARE	POLCO
Density:	<1	2	<1	<1

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Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	22"	20	100	19	water	27
B	Cub	3.8	AirMix	11003	20"	20	100	19	water	27

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	SOLTU injury percent 6/7/07 15 DA-A	SOLTU injury percent 6/15/07 23 DA-A	CHEAL control percent 6/15/07 23 DA-A	ECHCG control percent 6/15/07 23 DA-A	SOLTU injury percent 6/28/07 36 DA-A	ECHCG control percent 6/28/07 36 DA-A	CHEAL control percent 6/28/07 36 DA-A	AMARE control percent 6/28/07 36 DA-A
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code								
1	V-10142	75	WG	6.4	oz/a	PRE	A	0	0	78	94	0	92	73	99
2	V-10142	75	WG	8.5	oz/a	PRE	A	0	0	91	99	0	99	73	99
3	V-10142	75	WG	10.67	oz/a	PRE	A	0	0	92	97	0	91	79	99
4	V-10142	75	WG	6.4	oz/a	PRE	A	0	0	81	97	0	98	73	99
4	V-10142	75	WG	6.4	oz/a	POST	B								
4	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
5	V-10142	75	WG	8.5	oz/a	PRE	A	0	0	92	99	0	99	92	99
5	V-10142	75	WG	8.5	oz/a	POST	B								
5	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
6	V-10142	75	WG	10.67	oz/a	PRE	A	0	0	92	99	0	97	95	99
6	V-10142	75	WG	8.5	oz/a	POST	B								
6	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
7	Untreated							0	0	0	0	0	0	0	0
8	V-10142	75	WG	6.4	oz/a	PRE	A	0	0	94	99	0	99	96	99
8	Dual Magnum	7.62	EC	1	pt/a	PRE	A								
8	V-10142	75	WG	8.5	oz/a	POST	B								
8	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
9	Matrix	25	WG	1	oz/a	PRE	A	0	0	35	99	0	99	75	99
9	Dual Magnum	7.62	EC	1	pt/a	PRE	A								
9	Matrix	25	WG	1	oz/a	POST	B								
9	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
10	Dual Magnum	7.62	EC	1	pt/a	PRE	A	0	0	98	99	0	99	99	99
10	Sencor	75	WG	4	oz/a	PRE	A								
10	V-10142	75	WG	8.5	oz/a	POST	B								
10	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
11	Dual Magnum	7.62	EC	1	pt/a	PRE	A	0	0	98	99	0	99	98	99
11	Sencor	75	WG	4	oz/a	PRE	A								
11	Matrix	25	WG	1	oz/a	POST	B								
11	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B								
12	Chateau	51	WG	1.5	oz/a	PRE	A	73	45	99	96	33	85	98	97
13	Dual Magnum	7.62	EC	1	pt/a	PRE	A	0	0	15	99	0	99	30	25
14	Dual Magnum	7.62	EC	1	pt/a	PRE	A	0	0	96	99	0	99	79	99
14	Reflex	2	L	1	pt/a	PRE	A								
15	Boundary	6.5	EC	1.5	pt/a	PRE	A	0	0	99	99	0	99	96	98
16	Boundary	6.5	EC	1.5	pt/a	PRE	A	0	0	98	99	0	99	92	99
16	Reflex	2	L	0.5	pt/a	PRE	A								

LSD (P=.05)	1.0	2.1	8.4	4.4	9.0	9.0	11.3	2.6
Standard Deviation	0.7	1.4	5.9	3.1	6.3	6.3	7.9	1.8
CV	15.93	51.32	7.5	3.35	311.77	6.95	10.12	2.08

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Weed Code	AMBEL	ECHCG	CHEAL	AMARE
Crop Code				
Rating Data Type	control	control	control	control
Rating Unit	percent	percent	percent	percent
Rating Date	6/28/07	7/26/07	7/26/07	7/26/07
Trt-Eval Interval	36 DA-A	64 DA-A	64 DA-A	64 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	V-10142	75	WG	6.4	oz/a	PRE	A	99	87	74	99
2	V-10142	75	WG	8.5	oz/a	PRE	A	99	99	85	99
3	V-10142	75	WG	10.67	oz/a	PRE	A	99	98	88	99
4	V-10142	75	WG	6.4	oz/a	PRE	A	99	99	86	99
4	V-10142	75	WG	6.4	oz/a	POST	B				
4	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
5	V-10142	75	WG	8.5	oz/a	PRE	A	99	99	91	99
5	V-10142	75	WG	8.5	oz/a	POST	B				
5	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
6	V-10142	75	WG	10.67	oz/a	PRE	A	99	98	95	99
6	V-10142	75	WG	8.5	oz/a	POST	B				
6	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
7	Untreated							0	0	0	0
8	V-10142	75	WG	6.4	oz/a	PRE	A	99	99	98	99
8	Dual Magnum	7.62	EC	1	pt/a	PRE	A				
8	V-10142	75	WG	8.5	oz/a	POST	B				
8	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
9	Matrix	25	WG	1	oz/a	PRE	A	93	99	84	99
9	Dual Magnum	7.62	EC	1	pt/a	PRE	A				
9	Matrix	25	WG	1	oz/a	POST	B				
9	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
10	Dual Magnum	7.62	EC	1	pt/a	PRE	A	99	99	97	99
10	Sencor	75	WG	4	oz/a	PRE	A				
10	V-10142	75	WG	8.5	oz/a	POST	B				
10	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
11	Dual Magnum	7.62	EC	1	pt/a	PRE	A	99	99	99	99
11	Sencor	75	WG	4	oz/a	PRE	A				
11	Matrix	25	WG	1	oz/a	POST	B				
11	Acitvator 90 (NIS)		L	0.25	% v/v	POST	B				
12	Chateau	51	WG	1.5	oz/a	PRE	A	99	86	89	92
13	Dual Magnum	7.62	EC	1	pt/a	PRE	A	99	99	30	80
14	Dual Magnum	7.62	EC	1	pt/a	PRE	A	99	99	78	99
14	Reflex	2	L	1	pt/a	PRE	A				
15	Boundary	6.5	EC	1.5	pt/a	PRE	A	99	99	94	98
16	Boundary	6.5	EC	1.5	pt/a	PRE	A	99	99	95	99
16	Reflex	2	L	0.5	pt/a	PRE	A				
LSD (P=.05)								4.3	10.5	12.6	9.8
Standard Deviation								3.0	7.4	8.8	6.8
CV								3.28	8.1	10.98	7.5