

MSU Weed Science Research Program

Potato Timing Study, Montcalm, 2008

Trial ID: P1108
 Conducted: Montcalm

Study Dir.:
 Investigator: Wesley Everman

Date Planted: 5/12/08 **Row Spacing:** 34 IN
Variety: Snowden **No. of Reps:** 4
Population: 9.5 in space **% OM:** 1.1
Soil Type: Loamy Sand **pH:** 5.1
Plot Size: 10 X 25 FT **Design:** FACTORIAL

Tillage: Spring disk X3
 Spring Chisel X 1
 Cultivate X 1
Fertilizer: 12 gal 10-34-0 and 20 gal 19-17-0 on (5/12/08)
 150 lbs 46-0-0 (6-17-08)
 150 lbs 46-0-0 (6-27-08)

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
Crop	Code	Common Name	
1.	SOLTU	POTATO	

Application Description

	A	B	C	D
Application Timing:	PRE	10 DAP	21 DAP	POST
Date Treated:	5/13/08	5/22/08	6/2/08	6/18/08
Time Treated:	5:36 PM	12:48 PM	10:35 AM	2:00 PM
% Cloud Cover:	45	75	15	100
Air Temp., Unit:	69 F	65 F	74 F	67 F
% Relative Humidity:	40	35	39	64
Wind Speed/Unit/Dir:	12 mph SE	1 mph W	7 mph W	6 mph W
Soil Temp., Unit:	63 F	57 F	64 F	66 F
Soil/Leaf Surface M:	4 5	4 5	4 5	4 5
Soil Moist (1=w 5=d):	4	4	4	4

Crop Stage at Each Application

	A	B	C	D
Crop Name:	SOLTU	SOLTU	SOLTU	SOLTU
Height (In.):			Cracking	12

Weed Stage at Each Application

	A	B	C	D
Weed 1 Name:	CHEAL	CHEAL	CHEAL	CHEAL
Height (In.):		Cot	.5-1(.5)	

Weed Density (plants/sq. ft.)

	1	2	3
Date:	5/13/08	5/22/08	6/2/08
Weed Name:	CHEAL	CHEAL	CHEAL
Density:		4	30

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Boom				
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	BKPK	3.5	FF	8003	18	20	100	20	H20	30
B	BKPK	3.5	FF	8003	18	20	100	20	H20	30
C	BKPK	3.5	FF	8003	18	20	100	20	H20	30
D	BKPK	3.5	FF	8003	18	20	100	20	H20	30

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Weed Code							CHEAL	DIGSN	Weed Code						
Crop Code							SOLTU		SOLTU	CHEAL	DIGSN	SOLTU			
Rating Data Type							Inj	Control	Control	Inj	Control	Control	<1 7/8"		
Rating Unit							Percent	Percent	Percent	Percent	Percent	Percent	kilogram		
Rating Date							6/18/08	6/18/08	6/18/08	6/24/08	6/24/08	6/24/08	9/11/08		
Trt-Eval Interval							36 DAP	36 DAP	36 DAP	42 DAP	42 DAP	42 DAP	HARVEST		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7		
1	Planting						0.0	100.0	100.0	0.0	89.3	100.0	40.3		
1	Dual Magnum	7.62	L	1	pt/a	0 DAP									
1	Lorox	50	DF	1	lb/a	0 DAP									
2	Planting						0.0	100.0	100.0	0.0	80.0	97.7	39.0		
2	Dual Magnum	7.62	L	1	pt/a	0 DAP									
2	Lorox	50	DF	1	lb/a	0 DAP									
2	Sencor	75	DF	0.125	lb/a	0 DAP									
3	Planting						0.0	100.0	100.0	0.0	100.0	100.0	37.3		
3	Dual Magnum	7.62	L	1	pt/a	0 DAP									
3	Lorox	50	DF	1	lb/a	0 DAP									
3	Matrix	25	WG	1	oz/a	POST									
3	Activator 90		L	0.25	% v/v	POST									
4	Planting						0.0	100.0	100.0	0.0	100.0	100.0	39.7		
4	Dual Magnum	7.62	L	1	pt/a	0 DAP									
4	Lorox	50	DF	1	lb/a	0 DAP									
4	Sencor	75	DF	0.33	lb/a	POST									
4	Matrix	25	WG	1	oz/a	POST									
4	Activator 90		L	0.25	% v/v	POST									
5	10 DAP						0.0	100.0	100.0	0.0	95.0	100.0	38.7		
5	Dual Magnum	7.62	L	1	pt/a	10 DAP									
5	Lorox	50	DF	1	lb/a	10 DAP									
6	10 DAP						0.0	100.0	100.0	0.0	97.3	100.0	37.3		
6	Dual Magnum	7.62	L	1	pt/a	10 DAP									
6	Lorox	50	DF	1	lb/a	10 DAP									
6	Sencor	75	DF	0.125	lb/a	10 DAP									
7	10 DAP						0.0	100.0	100.0	0.0	99.0	100.0	45.3		
7	Dual Magnum	7.62	L	1	pt/a	10 DAP									
7	Lorox	50	DF	1	lb/a	10 DAP									
7	Matrix	25	WG	1	oz/a	POST									
7	Activator 90		L	0.25	% v/v	POST									
8	10 DAP						0.0	100.0	100.0	0.0	99.3	100.0	40.7		
8	Dual Magnum	7.62	L	1	pt/a	10 DAP									
8	Lorox	50	DF	1	lb/a	10 DAP									
8	Sencor	75	DF	0.33	lb/a	POST									
8	Matrix	25	WG	1	oz/a	POST									
8	Activator 90		L	0.25	% v/v	POST									
9	21 DAP						0.0	100.0	100.0	0.0	100.0	100.0	31.7		
9	Dual Magnum	7.62	L	1	pt/a	21 DAP									
9	Lorox	50	DF	1	lb/a	21 DAP									
10	21 DAP						0.0	100.0	100.0	0.0	100.0	100.0	27.3		
10	Dual Magnum	7.62	L	1	pt/a	21 DAP									
10	Lorox	50	DF	1	lb/a	21 DAP									
10	Sencor	75	DF	0.125	lb/a	21 DAP									

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Weed Code							CHEAL	DIGSN	CHEAL DIGSN							
Crop Code							SOLTU		SOLTU	SOLTU						
Rating Data Type							Inj	Control	Control	Inj	Control	Control	<1 7/8"			
Rating Unit							Percent	Percent	Percent	Percent	Percent	Percent	kilogram			
Rating Date							6/18/08	6/18/08	6/18/08	6/24/08	6/24/08	6/24/08	9/11/08			
Trt-Eval Interval							36 DAP	36 DAP	36 DAP	42 DAP	42 DAP	42 DAP	HARVEST			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	1	2	3	4	5	6	7			
11	21 DAP						0.0	100.0	100.0	0.0	100.0	100.0	27.3			
11	Dual Magnum	7.62	L	1	pt/a	21 DAP										
11	Lorox	50	DF	1	lb/a	21 DAP										
11	Matrix	25	WG	1	oz/a	POST										
11	Activator 90		L	0.25	% v/v	POST										
12	21 DAP						0.0	100.0	100.0	0.0	100.0	100.0	23.3			
12	Dual Magnum	7.62	L	1	pt/a	21 DAP										
12	Lorox	50	DF	1	lb/a	21 DAP										
12	Sencor	75	DF	0.33	lb/a	POST										
12	Matrix	25	WG	1	oz/a	POST										
12	Activator 90		L	0.25	% v/v	POST										
LSD (P=.05)							0.00	0.00	0.00	0.00	8.84	1.23	21.93			
Standard Deviation							0.00	0.00	0.00	0.00	5.22	0.73	12.95			
CV							0.0	0.0	0.0	0.0	5.4	0.73	36.3			

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Crop Code	SOLTU	SOLTU	SOLTU	SOLTU	SOLTU
Rating Data Type	<1 7/8"	pickout	pickout	oversize	cnt/oversiz
Rating Unit	count	count	kilogram	count	kilogram
Rating Date	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08
Trt-Eval Interval	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	8	9	10	11	12
1	Planting						1.7100	0.0	0.0000	2.3	0.77000006
1	Dual Magnum	7.62	L	1	pt/a	0 DAP					
1	Lorox	50	DF	1	lb/a	0 DAP					
2	Planting						1.7567	0.3	0.0367	0.7	0.19166668
2	Dual Magnum	7.62	L	1	pt/a	0 DAP					
2	Lorox	50	DF	1	lb/a	0 DAP					
2	Sencor	75	DF	0.125	lb/a	0 DAP					
3	Planting						1.6683	1.3	0.2250	4.3	1.56666676
3	Dual Magnum	7.62	L	1	pt/a	0 DAP					
3	Lorox	50	DF	1	lb/a	0 DAP					
3	Matrix	25	WG	1	oz/a	POST					
3	Activator 90		L	0.25	% v/v	POST					
4	Planting						1.6817	0.3	0.0567	2.0	0.68166674
4	Dual Magnum	7.62	L	1	pt/a	0 DAP					
4	Lorox	50	DF	1	lb/a	0 DAP					
4	Sencor	75	DF	0.33	lb/a	POST					
4	Matrix	25	WG	1	oz/a	POST					
4	Activator 90		L	0.25	% v/v	POST					
5	10 DAP						1.3367	0.3	0.0867	1.3	0.46333338
5	Dual Magnum	7.62	L	1	pt/a	10 DAP					
5	Lorox	50	DF	1	lb/a	10 DAP					
6	10 DAP						1.7233	0.0	0.0000	1.0	0.32333339
6	Dual Magnum	7.62	L	1	pt/a	10 DAP					
6	Lorox	50	DF	1	lb/a	10 DAP					
6	Sencor	75	DF	0.125	lb/a	10 DAP					
7	10 DAP						2.0083	1.0	0.1233	2.7	0.87500009
7	Dual Magnum	7.62	L	1	pt/a	10 DAP					
7	Lorox	50	DF	1	lb/a	10 DAP					
7	Matrix	25	WG	1	oz/a	POST					
7	Activator 90		L	0.25	% v/v	POST					
8	10 DAP						1.8167	0.3	0.0400	1.3	0.48333340
8	Dual Magnum	7.62	L	1	pt/a	10 DAP					
8	Lorox	50	DF	1	lb/a	10 DAP					
8	Sencor	75	DF	0.33	lb/a	POST					
8	Matrix	25	WG	1	oz/a	POST					
8	Activator 90		L	0.25	% v/v	POST					
9	21 DAP						1.4117	0.0	0.0000	1.3	0.46833338
9	Dual Magnum	7.62	L	1	pt/a	21 DAP					
9	Lorox	50	DF	1	lb/a	21 DAP					
10	21 DAP						1.2617	0.3	0.0350	2.3	0.77500011
10	Dual Magnum	7.62	L	1	pt/a	21 DAP					
10	Lorox	50	DF	1	lb/a	21 DAP					
10	Sencor	75	DF	0.125	lb/a	21 DAP					

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Crop Code	SOLTU	SOLTU	SOLTU	SOLTU	SOLTU
Rating Data Type	<1 7/8"	pickout	pickout	oversize	cnt/oversiz
Rating Unit	count	count	kilogram	count	kilogram
Rating Date	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08
Trt-Eval Interval	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	8	9	10	11	12
11	21 DAP						1.2150	0.0	0.0000	2.3	0.93000010
11	Dual Magnum	7.62	L	1	pt/a	21 DAP					
11	Lorox	50	DF	1	lb/a	21 DAP					
11	Matrix	25	WG	1	oz/a	POST					
11	Activator 90		L	0.25	% v/v	POST					
12	21 DAP						1.1600	0.7	0.1067	0.7	0.24166670
12	Dual Magnum	7.62	L	1	pt/a	21 DAP					
12	Lorox	50	DF	1	lb/a	21 DAP					
12	Sencor	75	DF	0.33	lb/a	POST					
12	Matrix	25	WG	1	oz/a	POST					
12	Activator 90		L	0.25	% v/v	POST					
LSD (P=.05)							0.97487	1.68	0.26388	3.20	1.117083423
Standard Deviation							0.57568	0.99	0.15583	1.89	0.659663564
CV							36.84	254.86	263.37	101.57	101.88

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Crop Code	SOLTU	SOLTU	SOLTU	SOLTU	SOLTU
Rating Data Type	Grade A	Grade A	dry	wet	SPEC. GRAV
Rating Unit	count	kilogram			
Rating Date	9/11/08	9/11/08	9/11/08	9/11/08	9/11/08
Trt-Eval Interval	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	13	14	15	16	17
1	Planting						139.7	17.4500006	9.82333472	0.749166742	1.0826051
1	Dual Magnum	7.62	L	1	pt/a	0 DAP					
1	Lorox	50	DF	1	lb/a	0 DAP					
2	Planting						149.3	17.7316683	10.33833512	0.778833408	1.0814252
2	Dual Magnum	7.62	L	1	pt/a	0 DAP					
2	Lorox	50	DF	1	lb/a	0 DAP					
2	Sencor	75	DF	0.125	lb/a	0 DAP					
3	Planting						154.0	21.4066699	10.34333428	0.784833450	1.0819204
3	Dual Magnum	7.62	L	1	pt/a	0 DAP					
3	Lorox	50	DF	1	lb/a	0 DAP					
3	Matrix	25	WG	1	oz/a	POST					
3	Activator 90		L	0.25	% v/v	POST					
4	Planting						117.7	18.3783340	9.70833399	0.742333427	1.0828034
4	Dual Magnum	7.62	L	1	pt/a	0 DAP					
4	Lorox	50	DF	1	lb/a	0 DAP					
4	Sencor	75	DF	0.33	lb/a	POST					
4	Matrix	25	WG	1	oz/a	POST					
4	Activator 90		L	0.25	% v/v	POST					
5	10 DAP						143.7	19.0166702	10.01833444	0.779500086	1.0846870
5	Dual Magnum	7.62	L	1	pt/a	10 DAP					
5	Lorox	50	DF	1	lb/a	10 DAP					
6	10 DAP						147.7	18.3816680	9.27500150	0.689833412	1.0804344
6	Dual Magnum	7.62	L	1	pt/a	10 DAP					
6	Lorox	50	DF	1	lb/a	10 DAP					
6	Sencor	75	DF	0.125	lb/a	10 DAP					
7	10 DAP						140.7	18.7166690	9.04500098	0.595666707	1.0716321
7	Dual Magnum	7.62	L	1	pt/a	10 DAP					
7	Lorox	50	DF	1	lb/a	10 DAP					
7	Matrix	25	WG	1	oz/a	POST					
7	Activator 90		L	0.25	% v/v	POST					
8	10 DAP						146.3	17.7033347	9.03500075	0.698333393	1.0837252
8	Dual Magnum	7.62	L	1	pt/a	10 DAP					
8	Lorox	50	DF	1	lb/a	10 DAP					
8	Sencor	75	DF	0.33	lb/a	POST					
8	Matrix	25	WG	1	oz/a	POST					
8	Activator 90		L	0.25	% v/v	POST					
9	21 DAP						116.0	14.1483350	8.96500105	0.674500056	1.0807029
9	Dual Magnum	7.62	L	1	pt/a	21 DAP					
9	Lorox	50	DF	1	lb/a	21 DAP					
10	21 DAP						123.7	16.6166685	8.64666739	0.618666711	1.0766995
10	Dual Magnum	7.62	L	1	pt/a	21 DAP					
10	Lorox	50	DF	1	lb/a	21 DAP					
10	Sencor	75	DF	0.125	lb/a	21 DAP					

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Crop Code		SOLTU	SOLTU	SOLTU	SOLTU	SOLTU
Rating Data Type		Grade A	Grade A	dry	wet	SPEC. GRAV
Rating Unit		count	kilogram			
Rating Date		9/11/08	9/11/08	9/11/08	9/11/08	9/11/08
Trt-Eval Interval		HARVEST	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	13	14	15	16	17
11	21 DAP						148.0	18.0666694	9.46500110	0.675000079	1.0764905
11	Dual Magnum	7.62	L	1	pt/a	21 DAP					
11	Lorox	50	DF	1	lb/a	21 DAP					
11	Matrix	25	WG	1	oz/a	POST					
11	Activator 90		L	0.25	% v/v	POST					
12	21 DAP						110.3	14.0066685	8.65000144	0.634000067	1.0785915
12	Dual Magnum	7.62	L	1	pt/a	21 DAP					
12	Lorox	50	DF	1	lb/a	21 DAP					
12	Sencor	75	DF	0.33	lb/a	POST					
12	Matrix	25	WG	1	oz/a	POST					
12	Activator 90		L	0.25	% v/v	POST					
LSD (P=.05)							68.95	6.06328882	2.151214815	0.1767161963	0.00886222
Standard Deviation							40.71	3.58051217	1.270342119	0.1043550029	0.00523334
CV							29.85	20.3	13.45	14.87	0.48

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Crop Code	HH	VD	IBS	BC
Rating Data Type				
Rating Unit				
Rating Date	9/11/08	9/11/08	9/11/08	9/11/08
Trt-Eval Interval	HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	18	19	20	21
1	Planting						0.0	5.7	0.0	0.0
1	Dual Magnum	7.62	L	1	pt/a	0 DAP				
1	Lorox	50	DF	1	lb/a	0 DAP				
2	Planting						0.3	3.3	0.0	0.0
2	Dual Magnum	7.62	L	1	pt/a	0 DAP				
2	Lorox	50	DF	1	lb/a	0 DAP				
2	Sencor	75	DF	0.125	lb/a	0 DAP				
3	Planting						3.3	4.7	0.0	0.0
3	Dual Magnum	7.62	L	1	pt/a	0 DAP				
3	Lorox	50	DF	1	lb/a	0 DAP				
3	Matrix	25	WG	1	oz/a	POST				
3	Activator 90		L	0.25	% v/v	POST				
4	Planting						0.3	5.3	0.0	0.0
4	Dual Magnum	7.62	L	1	pt/a	0 DAP				
4	Lorox	50	DF	1	lb/a	0 DAP				
4	Sencor	75	DF	0.33	lb/a	POST				
4	Matrix	25	WG	1	oz/a	POST				
4	Activator 90		L	0.25	% v/v	POST				
5	10 DAP						0.7	4.3	0.0	0.0
5	Dual Magnum	7.62	L	1	pt/a	10 DAP				
5	Lorox	50	DF	1	lb/a	10 DAP				
6	10 DAP						0.0	4.0	0.0	0.0
6	Dual Magnum	7.62	L	1	pt/a	10 DAP				
6	Lorox	50	DF	1	lb/a	10 DAP				
6	Sencor	75	DF	0.125	lb/a	10 DAP				
7	10 DAP						0.0	5.0	0.3	0.0
7	Dual Magnum	7.62	L	1	pt/a	10 DAP				
7	Lorox	50	DF	1	lb/a	10 DAP				
7	Matrix	25	WG	1	oz/a	POST				
7	Activator 90		L	0.25	% v/v	POST				
8	10 DAP						0.7	6.3	0.0	0.0
8	Dual Magnum	7.62	L	1	pt/a	10 DAP				
8	Lorox	50	DF	1	lb/a	10 DAP				
8	Sencor	75	DF	0.33	lb/a	POST				
8	Matrix	25	WG	1	oz/a	POST				
8	Activator 90		L	0.25	% v/v	POST				
9	21 DAP						0.3	8.3	0.7	0.0
9	Dual Magnum	7.62	L	1	pt/a	21 DAP				
9	Lorox	50	DF	1	lb/a	21 DAP				
10	21 DAP						0.3	6.0	0.0	0.0
10	Dual Magnum	7.62	L	1	pt/a	21 DAP				
10	Lorox	50	DF	1	lb/a	21 DAP				
10	Sencor	75	DF	0.125	lb/a	21 DAP				

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Crop Code		HH	VD	IBS	BC
Rating Data Type					
Rating Unit					
Rating Date		9/11/08	9/11/08	9/11/08	9/11/08
Trt-Eval Interval		HARVEST	HARVEST	HARVEST	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	HH	VD	IBS	BC
11	21 DAP						18	19	20	21
11	Dual Magnum	7.62	L	1	pt/a	21 DAP	0.3	5.7	0.0	0.0
11	Lorox	50	DF	1	lb/a	21 DAP				
11	Matrix	25	WG	1	oz/a	POST				
11	Activator 90		L	0.25	% v/v	POST				
12	21 DAP						0.0	5.3	0.0	0.0
12	Dual Magnum	7.62	L	1	pt/a	21 DAP				
12	Lorox	50	DF	1	lb/a	21 DAP				
12	Sencor	75	DF	0.33	lb/a	POST				
12	Matrix	25	WG	1	oz/a	POST				
12	Activator 90		L	0.25	% v/v	POST				

LSD (P=.05)	1.20	2.52	0.39	0.00
Standard Deviation	0.71	1.49	0.23	0.00
CV	134.65	27.93	276.34	0.0

ARM Action Codes

T1 = [C15]/([C15]-[C16])