EFFECTS OF ALS INHIBITING HERBICIDES ON POTATOES, 2010

Trial ID: P0610 Protocol ID: P0610
Location: Montcalm Study Director: Andy Chomas
Project ID: Investigator: Wesley Everman

General Trial Information

Study Director: Andy Chomas
Investigator: Wesley Everman

Personnel

Study Director: Andy Chomas
Investigator: Wesley Everman

Crop Description

Crop 1: SOLTU Solanum tuberosum Potato
Variety: SNOWDEN
BBCH Scale: BPOT **Planting Date:** May-17-10
Rate, Unit: 1 S/FT
Row Spacing, Unit: 34 IN

Pest Description

Pest 1 Type: W **Code:** ANGR
Common Name: annual grass

Pest 2 Type: W **Code:** CHEAL Chenopodium album L.
Common Name: Lambsquarters, common

Pest 3 Type: W **Code:** AMARE Amaranthus retroflexus L.
Common Name: Pigweed, redroot

Site and Design

Plot Width, Unit: 9 FT **Site Type:** FIELD field
Plot Length, Unit: 20 FT
Plot Area, Unit: 180 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Trial Initiation Comments:
Spring Disk X3, Chisel, Field Cultivated. Cultivated on , Hilled on .

Field Prep./Maintenance:
Broadcast 200 lbs/A K-mag, 10 lbs/A Boron, 2 ton/A Chicken Manure. 5 gal/A 10-34-0, 23 gal/A 28%N at Plant, 100 lbs/A 46-0-0 Broadcast.

Soil Description

% OM: 1.5 **Texture:** LS loamy sand
pH: 5.8

Application Description

	A	B	C
Application Date:	Jun-1-10	Jun-11-10	Jul-6-10
Time of Day:	3:15 pm	10:15 am	10:00 am
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	CRACK	EP	LP
Application Placement:	BROADC	BROADC	BROADC
Air Temperature, Unit:	80 F	70 F	79 F
% Relative Humidity:	36	73	72
Wind Velocity, Unit:	5 MPH	2 MPH	3 MPH
Wind Direction:	W	SE	SW
Soil Temperature, Unit:	75 F	62 F	72 F
Soil Moisture:	2	3	3
% Cloud Cover:	5	80	5

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	SOLTU BPOT	SOLTU BPOT	SOLTU BPOT
Stage Scale Used:			BBCH
Stage Majority, Percent:			FLOWER
Height, Unit:		5 IN	15 IN
Height Minimum, Maximum:		4 7	14 19

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Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ANGR W	ANGR W	ANGR W
Stage Majority, Percent:	COT	L1	L19
Stage Minimum, Percent:		COT	L17
Stage Maximum, Percent:		L3	L26
Height, Unit:	0.25 IN	0.25 IN	19 IN
Height Minimum, Maximum:		0.25 3	17 20
Density, Unit:		4 FT2	
Pest 2 Code, Type, Scale:	CHEAL W	CHEAL W	CHEAL W
Stage Majority, Percent:	COT	L6	L20
Stage Minimum, Percent:		COT	L18
Stage Maximum, Percent:		L8	L24
Height, Unit:	0.25 IN	1.5 IN	26 IN
Height Minimum, Maximum:		0.25 3	17 32
Density, Unit:		6 FT2	
Pest 3 Code, Type, Scale:	AMARE W	AMARE W	AMARE W
Stage Majority, Percent:	COT	L6	L21
Stage Minimum, Percent:		COT	L21
Stage Maximum, Percent:		L10	L25
Height, Unit:	0.25	1 IN	22 IN
Height Minimum, Maximum:		0.25 3	22 28
Density, Unit:		3 FT2	

Application Equipment

		B	C
Equipment Type:	BKPK	BKPK	BKPK
Operating Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	FF	FF	FF
Nozzle Size:	8003	8003	8003
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Boom Length, Unit:	100 IN	100 IN	100 IN
Boom Height, Unit:	18 IN	23 IN	34 IN
Ground Speed, Unit:	3.5 MPH	3.5 MPH	3.5 MPH
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	20 gal/ac	20 gal/ac	20 gal/ac
Mix Size, Unit:	2 liters	2 liters	2 liters

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	1	2	3	4	5	6	7	8	9	10
	Pest Code							ANGER	CHEAL		ANGR	CHEAL	AMARE		ANGR	CHEAL
	Crop Code															
	Rating Date						Jul-6-10	Jul-6-10	Jul-6-10	Jul-19-10	Jul-19-10	Jul-19-10	Jul-19-10	Aug-2-10	Aug-2-10	Aug-2-10
	Rating Type						injury	control	control	Injury	Injury	Injury	Injury	injury	control	control
	Rating Unit						percent	percent	percent	percent	percent	percent	percent	percent	percent	percent
	Trt-Eval Interval						AT LP	AT LP	AT LP	14 DALP	14 DALP	14 DALP	14 DALP	21 DALP	21 DALP	21 DALP
1	CGA-362622	75	WG	0.0034	lb ai/a	EP	5	99	95	14	100	89	99	1	100	81
1	Activator 90	100	L	0.25	% v/v	EP										
2	CGA-362622	75	WG	0.0067	lb ai/a	EP	3	99	94	24	100	94	98	0	95	94
2	Activator 90	100	L	0.25	% v/v	EP										
3	CGA-362622	75	WG	0.0034	lb ai/a	EP	5	100	98	11	100	85	98	0	100	76
3	Herbimax	100	L	0.5	% v/v	EP										
4	CGA-362622	75	WG	0.0034	lb ai/a	LP				10	94	66	73	0	76	65
4	Activator 90	100	L	0.25	% v/v	LP										
5	CGA-362622	75	WG	0.0067	lb ai/a	LP			95	15	100	76	83	0	93	70
5	Activator 90	100	L	0.25	% v/v	LP										
6	Harmony SG 50%	50	SG	0.004	lb ai/a	EP	10	99	93	0	98	91	96	0	95	96
6	Activator 90	100	L	0.25	% v/v	EP										
7	Harmony SG 50%	50	SG	0.004	lb ai/a	LP	0			28	90	66	75	1	88	69
7	Activator 90	100	L	0.25	% v/v	LP										
8	Basis	75	WG	0.015	lb ai/a	EP	11	100	93	4	100	94	100	0	100	88
8	Activator 90	100	L	0.25	% v/v	EP										
9	Basis	75	WG	0.015	lb ai/a	LP				33	100	70	75	0	98	70
9	Activator 90	100	L	0.25	% v/v	LP										
10	Permit	75	DF	0.024	lb ai/a	EP	10	100	71	5	98	64	100	0	98	8
10	Activator 90	100	L	0.25	% v/v	EP										
11	Permit	75	DF	0.024	lb ai/a	LP				11	81	59	69	0	75	8
11	Activator 90	100	L	0.25	% v/v	LP										
12	Matrix	25	WG	0.024	lb ai/a	EP	3	100	76	5	98	81	100	0	98	69
12	Activator 90	100	L	0.25	% v/v	EP										
13	Matrix	25	WG	0.024	lb ai/a	LP	0	100	70	14	98	62	80	0	95	38
13	Activator 90	100	L	0.25	% v/v	LP										
14	Sencor	75	DF	0.25	lb ai/a	CRACK	5	100	96	11	100	98	98	0	100	100
14	Matrix	25	WG	0.024	lb ai/a	EP										
14	Activator 90	100	L	0.25	% v/v	EP										
15	Weed Free						3	100	49	0	100	100	100	0	83	85
16	Non-Treated						0	0	0	0	0	0	0	0	0	0
	LSD (P=.05)						8.2	2.0	18.9	11.4	11.3	9.0	6.5	1.3	22.2	15.1
	Standard Deviation						5.6	1.4	13.0	8.0	7.9	6.3	4.6	0.9	15.6	10.6
	CV						125.48	1.51	16.77	69.66	8.68	8.43	5.46	571.94	17.9	16.67

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	11	12	13	14	15	16	17	22
	Pest Code						AMARE							
	Crop Code							SOLTU	SOLTU	SOLTU	SOLTU	SOLTU	SOLTU	SOLTU
	Rating Date						Aug-2-10	Sep-23-10	Sep-23-10	Sep-23-10	Sep-23-10	Sep-23-10	Sep-23-10	Sep-23-10
	Rating Type						control	< 1 7/8"	< 1 7/8"	Oversize	Oversize	PickOut	PickOut	Grade A
	Rating Unit						percent	kilogram	count	kilogram	count	kilogram	count	kilogram
	Trt-Eval Interval						21 DALP	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
1	CGA-362622	75	WG	0.0034	lb ai/a	EP	90	1.586	40	0.435	1	0.465	3	17.09
1	Activator 90	100	L	0.25	% v/v	EP								
2	CGA-362622	75	WG	0.0067	lb ai/a	EP	100	0.983	23	2.270	6	0.395	3	17.23
2	Activator 90	100	L	0.25	% v/v	EP								
3	CGA-362622	75	WG	0.0034	lb ai/a	EP	100	1.290	31	1.515	4			14.70
3	Herbimax	100	L	0.5	% v/v	EP								
4	CGA-362622	75	WG	0.0034	lb ai/a	LP	81	2.526	56			0.685	6	14.32
4	Activator 90	100	L	0.25	% v/v	LP								
5	CGA-362622	75	WG	0.0067	lb ai/a	LP	86	2.405	56			0.946	10	13.88
5	Activator 90	100	L	0.25	% v/v	LP								
6	Harmony SG 50%	50	SG	0.004	lb ai/a	EP	100	1.983	44			0.415	2	13.45
6	Activator 90	100	L	0.25	% v/v	EP								
7	Harmony SG 50%	50	SG	0.004	lb ai/a	LP	90	4.614	109			3.008	31	
7	Activator 90	100	L	0.25	% v/v	LP								
8	Basis	75	WG	0.015	lb ai/a	EP	100	1.730	42			0.635	5	13.39
8	Activator 90	100	L	0.25	% v/v	EP								
9	Basis	75	WG	0.015	lb ai/a	LP	85	5.208	125			3.198	34	
9	Activator 90	100	L	0.25	% v/v	LP								
10	Permit	75	DF	0.024	lb ai/a	EP	100	1.364	30	0.740	2	0.705	5	12.01
10	Activator 90	100	L	0.25	% v/v	EP								
11	Permit	75	DF	0.024	lb ai/a	LP	84	3.071	69			0.490	4	12.14
11	Activator 90	100	L	0.25	% v/v	LP								
12	Matrix	25	WG	0.024	lb ai/a	EP	100	2.381	55	0.615	2	0.175	1	18.09
12	Activator 90	100	L	0.25	% v/v	EP								
13	Matrix	25	WG	0.024	lb ai/a	LP	95	1.934	42			0.070	1	13.54
13	Activator 90	100	L	0.25	% v/v	LP								
14	Sencor	75	DF	0.25	lb ai/a	CRACK	100	2.029	44	0.255	1	0.160	1	18.81
14	Matrix	25	WG	0.024	lb ai/a	EP								
14	Activator 90	100	L	0.25	% v/v	EP								
15	Weed Free						95	2.001	45	0.425	1	0.125	2	14.52
16	Non-Treated						0	3.125	73			0.135	1	
	LSD (P=.05)						11.0	0.7997	19.2	.	.	1.1479	10.2	2.182
	Standard Deviation						7.7	0.5596	13.4	.	.	0.7756	6.9	1.483
	CV						8.78	23.42	24.27	.	.	100.24	95.54	9.98

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	23	26	27	28	29
	Pest Code										
	Crop Code						SOLTU	SOLTU	SOLTU	SOLTU	SOLTU
	Rating Date						Sep-23-10	Sep-23-10	Sep-23-10	Sep-23-10	Sep-23-10
	Rating Type						Grade A	SPEC. GRAV.	HH	VD	BC
	Rating Unit						count		0-10	0-10	0-10
	Trt-Eval Interval						HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
1	CGA-362622	75	WG	0.0034	lb ai/a	EP	140.5	1.13			3
1	Activator 90	100	L	0.25	% v/v	EP					
2	CGA-362622	75	WG	0.0067	lb ai/a	EP	128.7	1.17		1	4
2	Activator 90	100	L	0.25	% v/v	EP					
3	CGA-362622	75	WG	0.0034	lb ai/a	EP	119.8	1.23			4
3	Herbimax	100	L	0.5	% v/v	EP					
4	CGA-362622	75	WG	0.0034	lb ai/a	LP	128.5	1.16		1	2
4	Activator 90	100	L	0.25	% v/v	LP					
5	CGA-362622	75	WG	0.0067	lb ai/a	LP	127.3	1.10			2
5	Activator 90	100	L	0.25	% v/v	LP					
6	Harmony SG 50%	50	SG	0.004	lb ai/a	EP	110.8	1.28		2	2
6	Activator 90	100	L	0.25	% v/v	EP					
7	Harmony SG 50%	50	SG	0.004	lb ai/a	LP					3
7	Activator 90	100	L	0.25	% v/v	LP					
8	Basis	75	WG	0.015	lb ai/a	EP	110.3	1.71		1	1
8	Activator 90	100	L	0.25	% v/v	EP					
9	Basis	75	WG	0.015	lb ai/a	LP				2	3
9	Activator 90	100	L	0.25	% v/v	LP					
10	Permit	75	DF	0.024	lb ai/a	EP	87.0	1.72		2	2
10	Activator 90	100	L	0.25	% v/v	EP					
11	Permit	75	DF	0.024	lb ai/a	LP	131.0	1.56			2
11	Activator 90	100	L	0.25	% v/v	LP					
12	Matrix	25	WG	0.024	lb ai/a	EP	156.3	1.11		1	3
12	Activator 90	100	L	0.25	% v/v	EP					
13	Matrix	25	WG	0.024	lb ai/a	LP	125.0	1.22		1	4
13	Activator 90	100	L	0.25	% v/v	LP					
14	Sencor	75	DF	0.25	lb ai/a	CRACK	158.5	1.10			4
14	Matrix	25	WG	0.024	lb ai/a	EP					
14	Activator 90	100	L	0.25	% v/v	EP					
15	Weed Free						124.3	1.20		2	3
16	Non-Treated										2
	LSD (P=.05)						17.25	0.388	.	1.9	2.2
	Standard Deviation						11.73	0.265	.	1.0	1.6
	CV						9.25	20.63	.	65.33	58.89