

MSU Weed Science Research Program

WEED CONTROL SYSTEMS WITH HALOSULFURON PRODUCTS IN CORN, 2011

Trial ID: C0110
Conducted: CAMPUS

Study Dir.: Andy Chomas
Investigator: Christy Sprague

Date Planted: 5/10/2011 Row Spacing: 30 IN
Variety: GARST 88M51 No. of Reps: 4
Population: 30,500 S/A % OM: 3.4
Soil Type: LOAM pH: 6.6
Plot Size: 10 X 35 FT Design: RANDOMIZED COMPLETE BLOCK

Tillage: Fall Chisel, Spring Field Cultivated X2
Fertilizer: 300 lbs/A 46-0-0 Broadcast. 125 lbs/A 19-19-19 in Row at Planting.

Application Description

	A	B	C
Application Timing:	PRE	POST	LP
Date Treated:	5/10/2011	6/7/2011	6/22/2011
Time Treated:	6:45 PM	5:00 PM	8:25 AM
% Cloud Cover:	100	20	100
Air Temp., Unit:	70 F	93 F	72 F
% Relative Humidity:	55	45	90
Wind Speed/Unit/Dir:	7 mph SE	7 mph SW	6 mph SW
Soil Temp., Unit:	60 F	80 F	71 F
Soil/Leaf Surface M:	5	5	3
Soil Moist (1=w 5=d):	3	5	2

Crop Stage at Each Application

	A	B	C
Height (In.):		10-16 (12)	30-36 (34)
Stage (L):		6:V4-5 (4)	13:V8 (8)

Weed Stage at Each Application

	A	B	C
Height (In.):		0.3-6 (3) *	.5-10 (8) *
Stage (L):		1-5 (4)	2-9 (7)
Height (In.):		.5-2 (.5)	4-6 (6)
Stage (L):		2-6 (4)	8-12 (10)
Height (In.):		.5-3 (2)	4-12 (8)
Stage (L):		2-6 (6)	5-12 (10)
Height (In.):		1-3 (2)	2-10 (7)
Stage (L):		4-8 (6)	6-14 (10)
Height (In.):		1-3 (2)	4-8 (6)
Stage (L):		2-3 (3)	1-5 (3)

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	CUB	3.5	XRFF	8003	18"	20"	100"	20	H2O	30
B	CUB	3.5	XRFF	8003	24"	20"	100"	20	H2O	30

Comments: * Weed Stage at Each Application: The order is as follows, ANGR(ANNUAL GRASS), CHEAL(COMMON LAMBSQUARTERS), AMARE(REDROOT PIGWEED), AMBEL(COMMON RAGWEED), ABUTH(VELVETLEAF).

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								ZEAMX	ANGR	CHEAL	AMARE	AMBEL	ABUTH
								injury	control	control	control	control	control
								percent	percent	percent	percent	percent	percent
								6/7/2011	6/7/2011	6/7/2011	6/7/2011	6/7/2011	6/7/2011
								AT POST	AT POST	AT POST	AT POST	AT POST	AT POST
								0	0	0	0	0	0
Trt	Treatment	Form	Form	Rate	Grow	Appl							
No.	Name	Conc	Type	Unit	Stg	Code							
1	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	0	75	100	100	83	75	
1	Permit Plus	75	WDG	0.75 oz/a	POST	B							
1	Activator 90		L	0.25 % v/v	POST	B							
1	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
2	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	0	78	100	100	79	74	
2	Permit Plus	75	WDG	0.75 oz/a	POST	B							
2	Roundup PowerMAX	4.5	SL	22 fl oz/a	POST	B							
2	Activator 90		L	0.125 % v/v	POST	B							
2	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
3	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	0	81	100	100	77	71	
3	Yukon	67.5	WG	4 oz/a	POST	B							
3	Roundup PowerMAX	4.5	SL	22 fl oz/a	POST	B							
3	Activator 90		L	0.125 % v/v	POST	B							
3	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
4	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	0	79	100	100	84	71	
4	Roundup PowerMAX	4.5	SL	22 fl oz/a	POST	B							
4	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
5	Untreated					C	0	0	0	0	0	0	
6	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	0	79	100	100	74	72	
6	Permit	75	DF	0.66 oz/a	LP	C							
6	Roundup PowerMAX	4.5	SL	22 fl oz/a	LP	C							
6	Activator 90		L	0.125 % v/v	LP	C							
6	Ammonium Sulfate	100	DF	17 lb/100 gal	LP	C							
LSD (P=.05)								0.0	6.5	0.0	0.0	12.3	9.0
Standard Deviation								0.0	4.3	0.0	0.0	8.2	5.9
CV								0.0	6.65	0.0	0.0	12.39	9.83

Means followed by same letter do not significantly differ (P=.05, LSD)
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Weed Code													
Crop Code													
Rating Data Type													
Rating Unit													
Rating Date													
Trt-Eval Interval													
# Subsamples, Dec.													

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ZEAMX injury percent 6/14/2011 7 DAPO	ZEAMX injury percent 6/22/2011 15 DAPO	ANGR control percent 6/22/2011 15 DAPO	CHEAL control percent 6/22/2011 15 DAPO	AMARE control percent 6/22/2011 15 DAPO	AMBEL control percent 6/22/2011 15 DAPO
1	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	18	0	71	100	100	83
1	Permit Plus	75	WDG	0.75	oz/a	POST	B						
1	Activator 90		L	0.25	% v/v	POST	B						
1	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
2	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	23	0	76	99	100	100
2	Permit Plus	75	WDG	0.75	oz/a	POST	B						
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
2	Activator 90		L	0.125	% v/v	POST	B						
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
3	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	14	0	77	100	100	100
3	Yukon	67.5	WG	4	oz/a	POST	B						
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
3	Activator 90		L	0.125	% v/v	POST	B						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
4	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	4	0	80	91	100	100
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
5	Untreated						C	0	0	0	0	0	0
6	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	1	0	69	78	80	61
6	Permit	75	DF	0.66	oz/a	LP	C						
6	Roundup PowerMAX	4.5	SL	22	fl oz/a	LP	C						
6	Activator 90		L	0.125	% v/v	LP	C						
6	Ammonium Sulfate	100	DF	17	lb/100 gal	LP	C						

LSD (P=.05)	7.2	0.0	4.5	7.4	0.0	8.5
Standard Deviation	4.8	0.0	3.0	4.9	0.0	5.6
CV	48.96	0.0	4.8	6.27	0.0	7.61

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Weed Code	ABUTH	ZEAMX	ANGR	CHEAL	AMARE	AMBEL
Crop Code						
Rating Data Type	control	injury	control	control	control	control
Rating Unit	percent	percent	percent	percent	percent	percent
Rating Date	6/22/2011	6/29/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011
Trt-Eval Interval	15 DAPO	7 DALP	29 DAPO	29 DAPO	29 DAPO	29 DAPO
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ABUTH	ZEAMX	ANGR	CHEAL	AMARE	AMBEL
1	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	83	0	71	99	100	89
1	Permit Plus	75	WDG	0.75	oz/a	POST	B						
1	Activator 90		L	0.25	% v/v	POST	B						
1	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
2	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	88	0	73	100	100	100
2	Permit Plus	75	WDG	0.75	oz/a	POST	B						
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
2	Activator 90		L	0.125	% v/v	POST	B						
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
3	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	88	0	74	99	100	100
3	Yukon	67.5	WG	4	oz/a	POST	B						
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
3	Activator 90		L	0.125	% v/v	POST	B						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
4	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	75	0	74	81	96	100
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
5	Untreated						C	0	0	0	0	0	0
6	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	56	0	100	100	100	96
6	Permit	75	DF	0.66	oz/a	LP	C						
6	Roundup PowerMAX	4.5	SL	22	fl oz/a	LP	C						
6	Activator 90		L	0.125	% v/v	LP	C						
6	Ammonium Sulfate	100	DF	17	lb/100 gal	LP	C						

LSD (P=.05)	7.9	0.0	3.8	4.0	4.6	5.2
Standard Deviation	5.2	0.0	2.5	2.6	3.1	3.5
CV	8.04	0.0	3.86	3.29	3.7	4.28

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								ABUTH	ANGR	CHEAL	AMARE	AMBEL	ABUTH
								control	control	control	control	control	control
								percent	percent	percent	percent	percent	percent
								7/6/2011	8/1/2011	8/1/2011	8/1/2011	8/1/2011	8/1/2011
								29 DAPO	55 DAPO	55 DAPO	55 DAPO	55 DAPO	55 DAPO
								0	0	0	0	0	0
Trt	Treatment	Form	Form	Rate	Grow	Appl							
No.	Name	Conc	Type	Unit	Stg	Code							
1	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	90	61	85	100	100	95	
1	Permit Plus	75	WDG	0.75 oz/a	POST	B							
1	Activator 90		L	0.25 % v/v	POST	B							
1	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
2	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	91	65	86	100	98	91	
2	Permit Plus	75	WDG	0.75 oz/a	POST	B							
2	Roundup PowerMAX	4.5	SL	22 fl oz/a	POST	B							
2	Activator 90		L	0.125 % v/v	POST	B							
2	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
3	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	93	71	88	100	100	95	
3	Yukon	67.5	WG	4 oz/a	POST	B							
3	Roundup PowerMAX	4.5	SL	22 fl oz/a	POST	B							
3	Activator 90		L	0.125 % v/v	POST	B							
3	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
4	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	78	68	61	100	100	90	
4	Roundup PowerMAX	4.5	SL	22 fl oz/a	POST	B							
4	Ammonium Sulfate	100	DF	17 lb/100 gal	POST	B							
5	Untreated					C	0	0	0	0	0	0	
6	Harness Xtra 5.6	5.6	L	1 qt/a	PRE	A	100	96	99	100	96	100	
6	Permit	75	DF	0.66 oz/a	LP	C							
6	Roundup PowerMAX	4.5	SL	22 fl oz/a	LP	C							
6	Activator 90		L	0.125 % v/v	LP	C							
6	Ammonium Sulfate	100	DF	17 lb/100 gal	LP	C							
LSD (P=.05)								9.9	8.7	7.6	0.0	4.9	6.3
Standard Deviation								6.6	5.7	5.0	0.0	3.2	4.2
CV								8.75	9.55	7.19	0.0	3.94	5.33

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Trial ID: C0110
Conducted: CAMPUSStudy Dir.: Andy Chomas
Investigator: Christy SpragueWeed Code
Crop Code ZEAMX
Rating Data Type yield
Rating Unit bu/ac
Rating Date 10/18/2011
Trt-Eval Interval HARVEST
Subsamples, Dec. 0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	
1	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	221
1	Permit Plus	75	WDG	0.75	oz/a	POST	B	
1	Activator 90		L	0.25	% v/v	POST	B	
1	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B	
2	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	220
2	Permit Plus	75	WDG	0.75	oz/a	POST	B	
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B	
2	Activator 90		L	0.125	% v/v	POST	B	
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B	
3	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	215
3	Yukon	67.5	WG	4	oz/a	POST	B	
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B	
3	Activator 90		L	0.125	% v/v	POST	B	
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B	
4	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	215
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B	
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B	
5	Untreated						C	87
6	Harness Xtra 5.6	5.6	L	1	qt/a	PRE	A	221
6	Permit	75	DF	0.66	oz/a	LP	C	
6	Roundup PowerMAX	4.5	SL	22	fl oz/a	LP	C	
6	Activator 90		L	0.125	% v/v	LP	C	
6	Ammonium Sulfate	100	DF	17	lb/100 gal	LP	C	

LSD (P=.05)	27.1
Standard Deviation	18.0
CV	9.16

Means followed by same letter do not significantly differ (P=.05, LSD)

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