

MSU Weed Science Research Program

KIXOR WEED CONTROL SYSTEMS IN CORN, 2011

Trial ID: C0211  
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
Application Timing:	PRE	POST
Date Treated:	5/10/2011	6/7/2011
Time Treated:	7:00 PM	5:15 PM
% Cloud Cover:	100	20
Air Temp., Unit:	70 F	99 F
% Relative Humidity:	55	45
Wind Speed/Unit/Dir:	10 mph SE	8 mph SW
Soil Temp., Unit:	60 F	80 F
Soil/Leaf Surface M:	5	5
Soil Moist (1=w 5=d):	3	5

Crop Stage at Each Application

	A	B
Height (In.):		10-16 (12)
Stage (L):		6:V4-5 (4)

Weed Stage at Each Application

	A	B
Height (In.):		.25-6 (4) *
Stage (L):		1-6 (5)
Height (In.):		.5-1 (1)
Stage (L):		4-6 (6)
Height (In.):		1-2 (1)
Stage (L):		5-8 (6)
Height (In.):		.5-3 (2)
Stage (L):		4-8 (6)
Height (In.):		1-2 (2)
Stage (L):		2-3 (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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Weed Code								ZEAMX	ANGR	CHEAL	AMARE	AMBEL	ABUTH
Crop Code								injury	control	control	control	control	control
Rating Data Type								percent	percent	percent	percent	percent	percent
Rating Unit								6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011
Rating Date								AT POST	AT POST	AT POST	AT POST	AT POST	AT POST
Trt-Eval Interval								0	0	0	0	0	0
# Subsamples, Dec.								0	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Sharpen	2.9	L	2	fl oz/a	PRE	A	0	96	100	100	81	93
1	Guardsman Max	5	L	3	pt/a	PRE	A						
2	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	0	34	78	81	75	88
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
3	Verdict	5.6	L	15	fl oz/a	PRE	A	0	89	81	88	78	93
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
4	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	0	62	84	78	76	85
4	Prowl H2O	3.8	L	2	pt/a	PRE	A						
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
5	Sharpen	2.9	L	2	fl oz/a	PRE	A	0	90	100	99	87	91
5	Guardsman Max	5	L	2.5	pt/a	PRE	A						
5	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
6	Untreated						B	0	0	0	0	0	0
7	Lumax	3.94	SE	2	qt/a	PRE	A	0	93	100	100	91	100
7	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
8	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	A	0	91	99	98	75	81
8	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
9	SureStart	4.18	SE	1.75	pt/a	PRE	A	0	84	88	100	79	85
9	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
LSD (P=.05)								0.0	11.6	10.6	8.9	10.4	16.3
Standard Deviation								0.0	7.9	7.2	6.1	7.1	11.2
CV								0.0	11.17	8.95	7.39	9.96	14.02

Means followed by same letter do not significantly differ (P=.05, LSD)  
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Weed Code								ANGR	CHEAL	AMARE	AMBEL	ABUTH	ANGR
Crop Code													
Rating Data Type								control	control	control	control	control	control
Rating Unit								percent	percent	percent	percent	percent	percent
Rating Date								6/28/2011	6/28/2011	6/28/2011	6/28/2011	6/28/2011	8/1/2011
Trt-Eval Interval								21 DAPO	21 DAPO	21 DAPO	21 DAPO	21 DAPO	55 DAPO
# Subsamples, Dec.								0	0	0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Sharpen	2.9	L	2	fl oz/a	PRE	A	79	85	95	99	82	66
1	Guardsman Max	5	L	3	pt/a	PRE	A						
2	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	97	89	96	100	90	78
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
3	Verdict	5.6	L	15	fl oz/a	PRE	A	77	89	96	100	79	63
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
4	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	95	95	100	100	94	87
4	Prowl H2O	3.8	L	2	pt/a	PRE	A						
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
5	Sharpen	2.9	L	2	fl oz/a	PRE	A	82	89	93	100	85	71
5	Guardsman Max	5	L	2.5	pt/a	PRE	A						
5	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
6	Untreated						B	0	0	0	0	0	0
7	Lumax	3.94	SE	2	qt/a	PRE	A	97	97	99	100	90	88
7	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
8	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	A	79	90	96	100	78	67
8	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
9	SureStart	4.18	SE	1.75	pt/a	PRE	A	83	93	100	100	90	66
9	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
LSD (P=.05)								6.0	6.1	3.8	1.2	8.2	10.6
Standard Deviation								4.1	4.2	2.6	0.8	5.6	7.3
CV								5.4	5.19	3.03	0.94	7.38	11.2

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								CHEAL	AMARE	AMBEL	ABUTH	ANGR	CHEAL	
								control	control	control	control	control	control	
								percent	percent	percent	percent	percent	percent	
								8/1/2011	8/1/2011	8/1/2011	8/1/2011	8/30/2011	8/30/2011	
								55 DAPO	55 DAPO	55 DAPO	55 DAPO	84 DAPO	84 DAPO	
								0	0	0	0	0	0	
Trt	Treatment	Form	Form	Rate	Rate	Grow	Appl							
No.	Name	Conc	Type	Unit	Unit	Stg	Code							
1	Sharpen	2.9	L	2	fl oz/a	PRE	A	70	86	98	92	63	71	
1	Guardsman Max	5	L	3	pt/a	PRE	A							
2	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	70	90	100	92	75	71	
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
3	Verdict	5.6	L	15	fl oz/a	PRE	A	71	90	100	95	63	72	
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
4	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	74	98	100	98	79	76	
4	Prowl H2O	3.8	L	2	pt/a	PRE	A							
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
5	Sharpen	2.9	L	2	fl oz/a	PRE	A	72	86	100	94	66	72	
5	Guardsman Max	5	L	2.5	pt/a	PRE	A							
5	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
5	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
6	Untreated						B	0	0	0	0	0	0	
7	Lumax	3.94	SE	2	qt/a	PRE	A	81	96	100	93	80	86	
7	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
8	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	A	71	100	99	90	61	71	
8	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
9	SureStart	4.18	SE	1.75	pt/a	PRE	A	75	100	100	91	63	77	
9	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B							
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
LSD (P=.05)								8.3	10.6	2.8	9.9	5.9	9.9	
Standard Deviation								5.7	7.3	1.9	6.8	4.0	6.8	
CV								8.75	8.75	2.14	8.18	6.6	10.23	

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Weed Code								AMARE	AMBEL	ABUTH	ZEAMX
Crop Code											
Rating Data Type								control	control	control	yield
Rating Unit								percent	percent	percent	bu/ac
Rating Date								8/30/2011	8/30/2011	8/30/2011	10/18/2011
Trt-Eval Interval								84 DAPO	84 DAPO	84 DAPO	HARVEST
# Subsamples, Dec.								0	0	0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code				
1	Sharpen	2.9	L	2	fl oz/a	PRE	A	90	94	98	221
1	Guardsman Max	5	L	3	pt/a	PRE	A				
2	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	100	100	98	218
2	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
2	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
3	Verdict	5.6	L	15	fl oz/a	PRE	A	100	100	98	225
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
4	Sharpen	2.9	L	2.5	fl oz/a	PRE	A	99	100	100	219
4	Prowl H2O	3.8	L	2	pt/a	PRE	A				
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
4	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
5	Sharpen	2.9	L	2	fl oz/a	PRE	A	100	100	96	217
5	Guardsman Max	5	L	2.5	pt/a	PRE	A				
5	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
5	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
6	Untreated						B	0	0	0	127
7	Lumax	3.94	SE	2	qt/a	PRE	A	99	100	100	228
7	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
8	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	A	98	100	98	210
8	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
9	SureStart	4.18	SE	1.75	pt/a	PRE	A	98	100	98	205
9	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B				
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B				
LSD (P=.05)								3.6	6.1	6.1	21.9
Standard Deviation								2.5	4.2	4.2	15.0
CV								2.84	4.72	4.83	7.21

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