

MSU Weed Science Research Program

EVALUATION OF HERBICIDE PREMIXES WITHOUT ATRAZINE, 2011

Trial ID: C0511 Study Dir.: Andy Chomas
Conducted: CAMPUS Investigator: Christy Sprague

Date Planted: 5/10/2011 Row Spacing: 30 IN
Variety: DKC 46-61 No. of Reps: 4
Population: 31,500 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

Application Timing: A PRE B POST
Date Treated: 5/10/2011 6/6/2011
Time Treated: 7:40 PM 9:40 AM
% Cloud Cover: 95 5
Air Temp., Unit: 65 F 79 F
% Relative Humidity: 54 49
Wind Speed/Unit/Dir: 7 mph SE 7 mph SW
Soil Temp., Unit: 60 F 67 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 3 5

Crop Stage at Each Application

Height (In.): A B
Stage (L): 9-12 (11)
6:V3-4 (4)

Weed Stage at Each Application

Height (In.): A B
Stage (L): 1-9 (5) \*
1-5 (4)
Height (In.): 1-5 (3)
Stage (L): 2-8 (6)
Height (In.): 1-4 (2)
Stage (L): 2-7 (6)
Height (In.): 2-4 (3)
Stage (L): 2-6 (4)
Height (In.): 1-4 (3)
Stage (L): 2-4 (3)

Weed Density (plants/sq. ft.)

1
Date: 6/6/2011
Weed Name: ANGR
Density: 35
Date: 6/6/2011
Weed Name: CHEAL
Density: 13
Date: 6/6/2011
Weed Name: AMARE
Density: 2
Date: 6/6/2011
Weed Name: AMBEL
Density: .3
Date: 6/6/2011
Weed Name: ABUTH
Density: 5

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								ANGR	CHEAL	AMARE	AMBEL	ABUTH	
Crop Code								ZEAMX					
Rating Data Type								injury	control	control	control	control	
Rating Unit								percent	percent	percent	percent	percent	
Rating Date								6/20/2011	6/20/2011	6/20/2011	6/20/2011	6/20/2011	
Trt-Eval Interval								14 DAPO	14 DAPO	14 DAPO	14 DAPO	14 DAPO	
# Subsamples, Dec.								0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
1	Degree Xtra	4	L	2.5	qt/a	PRE	A	0	95	95	99	94	85
1	Balance FLEXX	2	SC	5	fl oz/a	PRE	A						
1	Atrazine	4	L	1	pt/a	PRE	A						
2	Corvus	2.6	SC	4.5	fl oz/a	PRE	A	0	71	95	98	97	86
2	Atrazine	4	L	1	pt/a	PRE	A						
3	SureStart	4.18	SE	3	pt/a	POST	B	0	98	97	100	100	91
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
4	Callisto	4	SC	3	fl oz/a	POST	B	0	97	100	100	99	98
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
4	Ammonium Sulfate	100	DF	1	% w/v	POST	B						
5	Laudis	3.5	SC	3	fl oz/a	POST	B	0	98	98	100	100	95
5	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
6	Lumax	3.94	SE	3	qt/a	POST	B	0	100	100	100	100	98
6	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
6	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
7	Halex GT	4.39	L	2	qt/a	POST	B	0	99	100	100	100	98
7	Activator 90		L	0.25	% v/v	POST	B						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
8	Warrant	4	L	3	pt/a	POST	B	0	99	99	100	100	98
8	Callisto	4	SC	3	fl oz/a	POST	B						
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	POST	B	0	99	100	100	100	98
9	Callisto	4	SC	3	fl oz/a	POST	B						
9	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
10	SureStart	4.18	SE	2	pt/a	POST	B	0	99	99	100	100	100
10	Callisto	4	SC	3	fl oz/a	POST	B						
10	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
10	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
11	SureStart	4.18	SE	3	pt/a	POST	B	0	100	100	99	99	98
11	Callisto	4	SC	3	fl oz/a	POST	B						
11	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
11	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
12	SureStart	4.18	SE	1.75	pt/a	POST	B	0	100	100	100	100	95
12	Laudis	3.5	SC	2	fl oz/a	POST	B						
12	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
12	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
13	SureStart	4.18	SE	2	pt/a	POST	B	0	100	98	100	100	93
13	Laudis	3.5	SC	2	fl oz/a	POST	B						
13	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
13	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						

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Weed Code								ANGR	CHEAL	AMARE	AMBEL	ABUTH	
Crop Code								ZEAMX					
Rating Data Type								injury	control	control	control	control	
Rating Unit								percent	percent	percent	percent	percent	
Rating Date								6/20/2011	6/20/2011	6/20/2011	6/20/2011	6/20/2011	
Trt-Eval Interval								14 DAPO	14 DAPO	14 DAPO	14 DAPO	14 DAPO	
# Subsamples, Dec.								0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code						
14	SureStart	4.18	SE	3	pt/a	POST	B	1	99	100	100	102	96
14	Laudis	3.5	SC	2	fl oz/a	POST	B						
14	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
14	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
15	SureStart	4.18	SE	3	pt/a	POST	B	4	100	100	100	100	95
15	Atrazine	4	L	1	qt/a	POST	B						
15	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
15	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
16	Untreated						B	0	0	0	0	0	0
LSD (P=.05)								1.9	3.2	3.9	1.6	4.2	5.9
Standard Deviation								1.3	2.3	2.7	1.1	2.9	4.1
CV								421.64	2.49	2.93	1.16	3.13	4.66

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code	ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX
Crop Code						
Rating Data Type	control	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	10/18/2011
Trt-Eval Interval	49 DAPO	49 DAPO	49 DAPO	49 DAPO	49 DAPO	HARVEST
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX
1	Degree Xtra	4	L	2.5	qt/a	PRE	A	83	98	98	93	86	221
1	Balance FLEXX	2	SC	5	fl oz/a	PRE	A						
1	Atrazine	4	L	1	pt/a	PRE	A						
2	Corvus	2.6	SC	4.5	fl oz/a	PRE	A	65	90	98	94	94	208
2	Atrazine	4	L	1	pt/a	PRE	A						
3	SureStart	4.18	SE	3	pt/a	POST	B	96	94	100	100	96	226
3	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
3	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
4	Callisto	4	SC	3	fl oz/a	POST	B	76	99	100	100	100	228
4	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
4	Ammonium Sulfate	100	DF	1	% w/v	POST	B						
5	Laudis	3.5	SC	3	fl oz/a	POST	B	79	86	100	100	83	223
5	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
5	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
6	Lumax	3.94	SE	3	qt/a	POST	B	97	99	100	100	100	220
6	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
6	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
7	Halex GT	4.39	L	2	qt/a	POST	B	96	99	100	100	100	234
7	Activator 90		L	0.25	% v/v	POST	B						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
8	Warrant	4	L	3	pt/a	POST	B	91	98	100	100	100	218
8	Callisto	4	SC	3	fl oz/a	POST	B						
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	POST	B	90	100	100	100	99	226
9	Callisto	4	SC	3	fl oz/a	POST	B						
9	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
10	SureStart	4.18	SE	2	pt/a	POST	B	98	100	100	100	100	223
10	Callisto	4	SC	3	fl oz/a	POST	B						
10	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
10	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
11	SureStart	4.18	SE	3	pt/a	POST	B	98	100	100	100	100	224
11	Callisto	4	SC	3	fl oz/a	POST	B						
11	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
11	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
12	SureStart	4.18	SE	1.75	pt/a	POST	B	96	99	100	100	96	233
12	Laudis	3.5	SC	2	fl oz/a	POST	B						
12	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
12	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
13	SureStart	4.18	SE	2	pt/a	POST	B	97	98	100	100	98	226
13	Laudis	3.5	SC	2	fl oz/a	POST	B						
13	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
13	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						

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Crop Code						ZEAMX
Rating Data Type	control	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	10/18/2011
Trt-Eval Interval	49 DAPO	49 DAPO	49 DAPO	49 DAPO	49 DAPO	HARVEST
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ANGR	CHEAL	AMARE	AMBEL	ABUTH	ZEAMX
14	SureStart	4.18	SE	3	pt/a	POST	B	99	100	100	100	99	230
14	Laudis	3.5	SC	2	fl oz/a	POST	B						
14	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
14	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
15	SureStart	4.18	SE	3	pt/a	POST	B	98	100	100	100	99	214
15	Atrazine	4	L	1	qt/a	POST	B						
15	Roundup PowerMAX	4.5	SL	22	fl oz/a	POST	B						
15	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
16	Untreated						B	0	0	0	0	0	131
LSD (P=.05)								5.8	6.3	2.4	6.7	7.7	27.2
Standard Deviation								4.1	4.4	1.7	4.7	5.4	19.0
CV								4.79	4.86	1.83	5.08	5.94	8.73

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.