

MSU Weed Science Research Program

GLYPHOSATE TANK-MIX PARTNER COMPARISONS, 2008

Trial ID: C1508
 Conducted: CAMPUS

Study Dir.:
 Investigator: Wesley Everman

Date Planted: 4/30/08 **Row Spacing:** 30 IN
Variety: DKC 46-60 **No. of Reps:** 4
Population: 30,000 S/A **% OM:** 2.7
Soil Type: Clay Loam **pH:** 6.4
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

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

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	Annual Grass	
2.	CHEAL	Common lambsquarters	Chenopodium album L.
3.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
4.	AMBEL	RAGWEEED, COMMON	AMBROSIA ELATIOR L.
5.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

	A	B	C
Application Timing:	PRE	MP	LP
Date Treated:	4/30/08	6/5/08	6/18/08
Time Treated:	3:45 PM	4:00 PM	9:30 AM
% Cloud Cover:	10	90	90
Air Temp., Unit:	56 F	90 F	59 F
% Relative Humidity:	30	70	75
Wind Speed/Unit/Dir:	5 mph SW	4 mph SW	5 mph SW
Soil Temp., Unit:	60 F	70 F	60 F
Soil/Leaf Surface M:	0 0	5 5	5 5
Soil Moist (1=w 5=d):	4	2	5

Crop Stage at Each Application

	A	B	C
Crop Name:	ZEAMX	ZEAMX	ZEAMX
Height (In.):	7-9(8)	8-10(9)	17-20(19)
Stage (L):	V4-5(5)7L	V4-5(5)7L	V7-8(7)9L

Weed Stage at Each Application

	A	B	C
Weed 1 Name:	ANGR	ANGR	ANGR
Height (In.):	1-6(5)	4-6(5)	.5-1(2)
Stage (L):	3-6(5)	3-5(4)	(2)
Weed 2 Name:	CHEAL	CHEAL	CHEAL
Height (In.):	.5-6(4)	1-5(3)	.5-2(1)
Stage (L):	Cot-7(6)	4-8(6)	4-6(4)
Weed 3 Name:	AMARE	AMARE	AMARE
Height (In.):	1-4(1)	1-2(1)	.5-2(1)
Stage (L):	1-4(3)	4-5(4)	(4)
Weed 4 Name:	AMBEL	AMBEL	AMBEL
Height (In.):	1-4(3)	1-4(3)	.5-2(1)
Stage (L):	2-6(6)	4-6(6)	2-4(4)
Weed 5 Name:	ABUTH	ABUTH	ABUTH
Height (In.):	1.5-2(2)	2-3(2)	1-2(2)
Stage (L):	3-5(3)	3-5(4)	2-4(2)

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Weed Density (plants/sq. ft.)

	1	2
Date:	4/30/08	6/5/08
Weed Name:	ANGR	ANGR
Density:		35
Date:	4/30/08	6/5/08
Weed Name:	CHEAL	CHEAL
Density:		17
Date:	4/30/08	6/5/08
Weed Name:	AMARE	AMARE
Density:		0
Date:	4/30/08	6/5/08
Weed Name:	AMBEL	AMBEL
Density:		7
Date:	4/30/08	6/5/08
Weed Name:	ABUTH	ABUTH
Density:		1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	CUB	3.5	FF	8003	18"	20"	100"	20	H2O	30
B	CUB	3.5	FF	8003	23"	20"	100"	20	H2O	30
C	CUB	3.5	FF	8003	30"	20"	100"	20	H2O	30

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Weed Code								anгр	cheal	datst	ambel	abuth	anгр
Crop Code						ZEAMX							
Rating Data Type						injury		control	control	control	control	control	control
Rating Unit						percent		percent	percent	percent	percent	percent	percent
Rating Date						6/5/08		6/5/08	6/5/08	6/5/08	6/5/08	6/5/08	7/30/08
Trt-Eval Interval						AT MP		AT MP	AT MP	AT MP	AT MP	AT MP	42 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7
1	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	0	97	97	87	67	65	86
1	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
1	Ammonium Sulfate	100	DF	2	% w/w	MP							
2	Degree Xtra	4	L	2	qt/a	PRE	0	92	96	70	50	59	92
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
2	Ammonium Sulfate	100	DF	2	% w/w	MP							
3	Guardsman Max	5	L	2.5	pt/a	PRE	3	93	94	81	60	61	93
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
3	Ammonium Sulfate	100	DF	2	% w/w	MP							
4	Lexar	3.7	L	2	qt/a	PRE	0	87	100	89	85	94	91
4	Touchdown Total	4.17	L	24	fl oz/a	MP							
4	Ammonium Sulfate	100	DF	2	% w/w	MP							
5	Bicep II Magnum	5.5	L	1.45	qt/a	PRE	0	79	89	64	39	43	40
5	Callisto	4	SC	3	fl oz/a	MP							
5	Ammonium Sulfate	100	DF	2	% w/w	MP							
6	Atrazine	4	L	1	qt/a	PRE	0	23	94	89	66	65	56
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
6	Ammonium Sulfate	100	DF	2	% w/w	MP							
7	SureStart	4.16	EW	1.23	pt/a	PRE	0	93	95	71	83	68	92
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
7	Ammonium Sulfate	100	DF	2	% w/w	MP							
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							43
8	Ammonium Sulfate	100	DF	2	% w/w	MP							
9	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							93
9	Ammonium Sulfate	100	DF	2	% w/w	MP							
9	Roundup PowerMAX	4.5	L	22	fl oz/a	LP							
9	Ammonium Sulfate	100	DF	2	% w/w	LP							
10	Define	60	DF	6.9	oz/a	PRE	0	97	99	95	98	94	91
10	Balance Pro	4	SC	2	fl oz/a	PRE							
10	Roundup PowerMAX	4.5	L	22	fl oz/a	MP							
10	Ammonium Sulfate	100	DF	2	% w/w	MP							
11	Non-Treated						0	0	0	0	0	0	0
LSD (P=.05)							2.4	18.3	10.7	30.1	15.0	15.5	13.5
Standard Deviation							1.7	12.5	7.3	20.6	10.3	10.6	9.3
CV							600.0	17.07	8.63	28.73	16.93	17.45	13.25

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Weed Code	cheal	datst	amare	ambel	abuth	
Crop Code						ZEAMX
Rating Data Type	control	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	10/19/08
Trt-Eval Interval	42 DA-C	42 DA-C	42 DA-C	42 DA-C	42 DA-C	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	8	9	10	11	12	13
1	Harness Xtra 5.6	5.6	L	1.5	qt/a	PRE	100	98	100	73	93	162
1	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
1	Ammonium Sulfate	100	DF	2	% w/w	MP						
2	Degree Xtra	4	L	2	qt/a	PRE	98	99	98	72	95	160
2	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
2	Ammonium Sulfate	100	DF	2	% w/w	MP						
3	Guardsman Max	5	L	2.5	pt/a	PRE	98	91	100	69	93	165
3	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
3	Ammonium Sulfate	100	DF	2	% w/w	MP						
4	Lexar	3.7	L	2	qt/a	PRE	100	100	100	90	100	159
4	Touchdown Total	4.17	L	24	fl oz/a	MP						
4	Ammonium Sulfate	100	DF	2	% w/w	MP						
5	Bicep II Magnum	5.5	L	1.45	qt/a	PRE	100	100	100	90	100	159
5	Callisto	4	SC	3	fl oz/a	MP						
5	Ammonium Sulfate	100	DF	2	% w/w	MP						
6	Atrazine	4	L	1	qt/a	PRE	100	98	98	71	100	164
6	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
6	Ammonium Sulfate	100	DF	2	% w/w	MP						
7	SureStart	4.16	EW	1.23	pt/a	PRE	93	78	100	71	98	154
7	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
7	Ammonium Sulfate	100	DF	2	% w/w	MP						
8	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	63	71	28	61	98	135
8	Ammonium Sulfate	100	DF	2	% w/w	MP						
9	Roundup PowerMAX	4.5	L	22	fl oz/a	MP	100	100	100	99	100	163
9	Ammonium Sulfate	100	DF	2	% w/w	MP						
9	Roundup PowerMAX	4.5	L	22	fl oz/a	LP						
9	Ammonium Sulfate	100	DF	2	% w/w	LP						
10	Define	60	DF	6.9	oz/a	PRE	100	93	100	93	100	149
10	Balance Pro	4	SC	2	fl oz/a	PRE						
10	Roundup PowerMAX	4.5	L	22	fl oz/a	MP						
10	Ammonium Sulfate	100	DF	2	% w/w	MP						
11	Non-Treated						0	0	0	0	0	24
LSD (P=.05)							4.4	11.4	3.7	12.4	4.5	26.5
Standard Deviation							3.0	7.9	2.6	8.6	3.1	18.3
CV							3.53	9.38	3.08	11.95	3.48	12.64