

MSU Weed Science Research Program

WEED CONTROL IN CORN WITH GWN-3404, 2009

Trial ID: C1009
 Conducted: CAMPUS

Study Dir.: Andy Chomas
 Investigator: Wesley Everman

Date Planted: 5/7/09 **Row Spacing:** 30 IN
Variety: DEKALB 46-60 **No. of Reps:** 3
Population: 31,000 S/A **% OM:** 2.9
Soil Type: Loam **pH:** 6.4
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 Plant.

Crop and Weed Description

Weed	Code	Common Name	Scientific Name
1.	ANGR	Annual Grass species	
2.	CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
3.	AMARE	PIGWEEED, REDROOT	AMARANTHUS RETROFLEXUS L.
4.	ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
Crop	Code	Common Name	
1.	ZEAMX	CORN, FIELD	

Application Description

	A	B
Application Timing:	PRE	POST
Date Treated:	5/7/09	6/10/09
Time Treated:	8:45 PM	9:15 AM
% Cloud Cover:	100	50
Air Temp., Unit:	60 F	62 F
% Relative Humidity:	56	72
Wind Speed/Unit/Dir:	2 mph W	5 mph E
Soil Temp., Unit:	60 F	60 F
Soil/Leaf Surface M:		5
Soil Moist (1=w 5=d):	3	2

Crop Stage at Each Application

	A	B
Crop Name:	ZEAMX	ZEAMX
Height (In.):		7-11(9)
Stage (L):		6:V4-5(4)

Weed Stage at Each Application

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

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Weed Density (plants/sq. ft.)

	1	2
Date:	5/7/09	6/10/09
Weed Name:	ANGR	ANGR
Density:	3	
Date:	5/7/09	6/10/09
Weed Name:	CHEAL	CHEAL
Density:	31	
Date:	5/7/09	6/10/09
Weed Name:	AMARE	AMARE
Density:	<1	
Date:	5/7/09	6/10/09
Weed Name:	AMBEL	AMBEL
Density:	0	
Date:	5/7/09	6/10/09
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	19"	20"	100"	20	H2O	30
B	CUB	3.5	FF	8003	22"	20"	100"	20	H2O	30

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Weed Code	ANGR	CHEAL	AMARE	ABUTH		
Crop Code	ZEAMX				ZEAMX	ZEAMX
Rating Data Type	injury	control	control	control	injury	injury
Rating Unit	percent	percent	percent	percent	percent	percent
Rating Date	6/10/09	6/10/09	6/10/09	6/10/09	6/17/09	6/24/09
Trt-Eval Interval	AT POST	AT POST	AT POST	AT POST	7 DAPO	14 DAPO
ARM Action Codes						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	1	2	3	4	5	6	7
1	Dual II Magnum	7.64	L	0.66	pt/a	PRE	0	78	63	87	56	15	0
1	GWN-3404		DF	0.75	oz/a	POST							
1	Activator 90		L	0.25	% v/v	POST							
1	Ammonium Sulfate	100	DF	4	lb/a	POST							
2	Dual II Magnum	7.64	L	0.66	pt/a	PRE	0	80	60	80	48	15	0
2	GWN-3404		DF	0.75	oz/a	POST							
2	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
2	Activator 90		L	0.125	% v/v	POST							
2	Ammonium Sulfate	100	DF	4	lb/a	POST							
3	Dual II Magnum	7.64	L	0.66	pt/a	PRE	0	80	63	83	47	2	0
3	Impact	2.8	SC	0.503	fl oz/a	POST							
3	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	POST							
4	Non-Treated						0	0	0	0	0	0	0
5	Dual II Magnum	7.64	L	0.66	pt/a	PRE	0	83	65	85	69	0	0
5	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	POST							
6	Dual II Magnum	7.64	L	0.66	pt/a	PRE	0	87	66	78	60	0	0
LSD (P=.05)							0.0	10.6	10.9	12.2	15.1	2.1	0.0
Standard Deviation							0.0	5.8	6.0	6.7	8.3	1.2	0.0
CV							0.0	8.6	11.29	9.8	17.8	22.33	0.0

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Weed Code	ANGR	CHEAL	AMARE	ABUTH	ZEAMX	ANGR	CHEAL
Crop Code							
Rating Data Type	control	control	control	control	injury	control	control
Rating Unit	percent	percent	percent	percent	percent	percent	percent
Rating Date	6/24/09	6/24/09	6/24/09	6/24/09	7/8/09	7/8/09	7/8/09
Trt-Eval Interval	14 DAPO	14 DAPO	14 DAPO	14 DAPO	28 DAPO	28 DAPO	28 DAPO
ARM Action Codes							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	8	9	10	11	12	13	14
1	Dual II Magnum	7.64	L	0.66	pt/a	PRE	68	100	100	100	0	68	97
1	GWN-3404		DF	0.75	oz/a	POST							
1	Activator 90		L	0.25	% v/v	POST							
1	Ammonium Sulfate	100	DF	4	lb/a	POST							
2	Dual II Magnum	7.64	L	0.66	pt/a	PRE	99	99	100	100	0	92	99
2	GWN-3404		DF	0.75	oz/a	POST							
2	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
2	Activator 90		L	0.125	% v/v	POST							
2	Ammonium Sulfate	100	DF	4	lb/a	POST							
3	Dual II Magnum	7.64	L	0.66	pt/a	PRE	98	100	100	99	0	92	91
3	Impact	2.8	SC	0.503	fl oz/a	POST							
3	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	POST							
4	Non-Treated						0	0	0	0	0	0	0
5	Dual II Magnum	7.64	L	0.66	pt/a	PRE	99	99	100	100	0	92	86
5	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	POST							
6	Dual II Magnum	7.64	L	0.66	pt/a	PRE	75	20	33	7	0	75	0
LSD (P=.05)							11.2	15.1	26.1	8.5	0.0	7.7	5.2
Standard Deviation							6.1	8.3	14.3	4.7	0.0	4.2	2.9
CV							8.38	11.86	19.85	6.93	0.0	6.07	4.61

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Weed Code	AMARE	ABUTH	ANGR	CHEAL	AMARE	ABUTH	
Crop Code							ZEAMX
Rating Data Type	control	control	control	control	control	control	yield
Rating Unit	percent	percent	percent	percent	percent	percent	bu/ac
Rating Date	7/8/09	7/8/09	8/11/09	8/11/09	8/11/09	8/11/09	11/5/09
Trt-Eval Interval	28 DAPO	28 DAPO	62DAPO	62DAPO	62DAPO	62DAPO	HARVEST
ARM Action Codes							

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	15	16	17	18	19	20	21
1	Dual II Magnum	7.64	L	0.66	pt/a	PRE	98	100	52	97	100	97	224
1	GWN-3404		DF	0.75	oz/a	POST							
1	Activator 90		L	0.25	% v/v	POST							
1	Ammonium Sulfate	100	DF	4	lb/a	POST							
2	Dual II Magnum	7.64	L	0.66	pt/a	PRE	100	99	79	95	100	98	241
2	GWN-3404		DF	0.75	oz/a	POST							
2	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
2	Activator 90		L	0.125	% v/v	POST							
2	Ammonium Sulfate	100	DF	4	lb/a	POST							
3	Dual II Magnum	7.64	L	0.66	pt/a	PRE	97	93	82	73	93	85	235
3	Impact	2.8	SC	0.503	fl oz/a	POST							
3	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
3	Ammonium Sulfate	100	DF	8.5	lb/100 gal	POST							
4	Non-Treated						0	0	0	0	0	0	90
5	Dual II Magnum	7.64	L	0.66	pt/a	PRE	97	90	80	72	90	90	244
5	Roundup PowerMAX	4.5	L	22	fl oz/a	POST							
5	Ammonium Sulfate	100	DF	8.5	lb/100 gal	POST							
6	Dual II Magnum	7.64	L	0.66	pt/a	PRE	33	0	68	0	52	0	216
LSD (P=.05)							12.1	7.7	12.6	6.9	5.5	13.6	31.5
Standard Deviation							6.6	4.2	6.9	3.8	3.0	7.5	17.3
CV							9.38	6.63	11.51	6.76	4.16	12.12	8.31