MSU Weed Science Research Program

WEED CONTROL IN CORN WITH RIMSULFURON AND MESOTRIONE TANK-MIXES, 2011

Trial ID: C0911 Study Dir.: Andy Chomas
Conducted: CAMPUS Investigator: Christy Sprague

Date Planted: 5/10/2011 **Row Spacing:** 30 IN
Variety: GARST 88M51 **No. of Reps:** 4
Population: 30,500 **% OM:** 3.1
Soil Type: LOAM **pH:** 6.0
Plot Size: 10 **X** 35 **FT** **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: Fall Chisel, Spring Field Cultivated X2.
Fertilizer: 300 lbs/A 46-0-0 Braodcast. 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:	9:00 PM	5:40 PM
% Cloud Cover:	100	15
Air Temp., Unit:	60 F	99 F
% Relative Humidity:	55	46
Wind Speed/Unit/Dir:	4 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):		7:V4-5(4)

Weed Stage at Each Application

	A	B
Height (In.):		.25-4(2)*
Stage (L):		1-5(3)
Height (In.):		.5-2(2)
Stage (L):		4-10(6)
Height (In.):		.5-3(2)
Stage (L):		4-8(4)
Height (In.):		.5-2(2)
Stage (L):		2-8(6)
Height (In.):		.5-2(1)
Stage (L):		2-4(3)

Application Equipment

Appl	Sprayer Type	Speed MPH	Nozzle Type	Nozzle Size	Nozzle Height	Nozzle Spacing	Boom 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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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ANGR control percent 5/24/2011 14 DAP 0	CHEAL control percent 5/24/2011 14 DAP 0	ABUTH control percent 5/24/2011 14 DAP 0	ZEAMX injury percent 6/8/2011 28 DAP 0	ANGR control percent 6/8/2011 28 DAP 0	CHEAL control percent 6/8/2011 28 DAP 0
1	Resolve	25	DF	1	oz/a	PRE	A	58	93	100	0	77	99
1	Mesotrione	50	WG	4.5	oz/a	PRE	A						
2	Resolve	25	DF	1.5	oz/a	PRE	A	60	95	95	3	82	100
2	Mesotrione	50	WG	4.5	oz/a	PRE	A						
3	Resolve	25	DF	1	oz/a	PRE	A	50	94	94	3	74	100
3	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A						
3	Mesotrione	50	WG	4.5	oz/a	PRE	A						
4	Resolve	25	DF	1	oz/a	PRE	A	40	93	90	4	76	100
4	Mesotrione	50	WG	4.5	oz/a	PRE	A						
4	Atrazine	4	L	1	qt/a	PRE	A						
5	Resolve	25	DF	1.5	oz/a	PRE	A	61	89	95	1	78	100
5	Mesotrione	50	WG	4.5	oz/a	PRE	A						
5	Atrazine	4	L	1	qt/a	PRE	A						
6	Resolve	25	DF	1	oz/a	PRE	A	48	95	85	0	81	100
6	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A						
6	Mesotrione	50	WG	4.5	oz/a	PRE	A						
6	Atrazine	4	L	1	qt/a	PRE	A						
7	Resolve	25	DF	1	oz/a	PRE	A	51	96	90	0	76	100
7	Mesotrione	50	WG	4.5	oz/a	PRE	A						
7	Atrazine	4	L	1	qt/a	PRE	A						
7	Abundit Extra	3	SL	1	qt/a	POST	B						
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
8	Resolve	25	DF	1.5	oz/a	PRE	A	60	95	95	4	82	100
8	Mesotrione	50	WG	4.5	oz/a	PRE	A						
8	Atrazine	4	L	1	qt/a	PRE	A						
8	Abundit Extra	3	SL	1	qt/a	POST	B						
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
9	Resolve	25	DF	1	oz/a	PRE	A	46	91	100	2	73	100
9	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A						
9	Mesotrione	50	WG	4.5	oz/a	PRE	A						
9	Atrazine	4	L	1	qt/a	PRE	A						
9	Abundit Extra	3	SL	1	qt/a	POST	B						
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
10	Lumax	3.94	SE	3	qt/a	PRE	A	91	96	93	0	98	100
11	Lumax	3.94	SE	3	qt/a	PRE	A	95	99	98	1	98	100
11	Abundit Extra	3	SL	1	qt/a	POST	B						
11	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B						
12	Untreated						B	0	0	0	0	0	0
LSD (P=.05)								17.3	5.6	11.5	2.9	9.1	1.1
Standard Deviation								12.0	3.9	8.0	2.0	6.3	0.7
CV								21.81	4.51	9.25	146.2	8.45	0.8

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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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	AMARE	AMBEL	ABUTH	ANGR	CHEAL	AMARE	AMBEL
Weed Code								AMARE	AMBEL	ABUTH	ANGR	CHEAL	AMARE	AMBEL
Crop Code														
Rating Data Type								control	control	control	control	control	control	control
Rating Unit								percent	percent	percent	percent	percent	percent	percent
Rating Date								6/8/2011	6/8/2011	6/8/2011	7/6/2011	7/6/2011	7/6/2011	7/6/2011
Trt-Eval Interval								28 DAP	28 DAP	28 DAP	56 DAP	56 DAP	56 DAP	56 DAP
# Subsamples, Dec.								0	0	0	0	0	0	0
1	Resolve	25	DF	1	oz/a	PRE	A	98	95	100	74	88	98	93
1	Mesotrione	50	WG	4.5	oz/a	PRE	A							
2	Resolve	25	DF	1.5	oz/a	PRE	A	100	99	100	69	91	100	93
2	Mesotrione	50	WG	4.5	oz/a	PRE	A							
3	Resolve	25	DF	1	oz/a	PRE	A	100	95	100	64	93	98	84
3	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A							
3	Mesotrione	50	WG	4.5	oz/a	PRE	A							
4	Resolve	25	DF	1	oz/a	PRE	A	100	96	100	64	94	100	94
4	Mesotrione	50	WG	4.5	oz/a	PRE	A							
4	Atrazine	4	L	1	qt/a	PRE	A							
5	Resolve	25	DF	1.5	oz/a	PRE	A	100	96	99	75	94	100	96
5	Mesotrione	50	WG	4.5	oz/a	PRE	A							
5	Atrazine	4	L	1	qt/a	PRE	A							
6	Resolve	25	DF	1	oz/a	PRE	A	100	96	99	76	95	100	97
6	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A							
6	Mesotrione	50	WG	4.5	oz/a	PRE	A							
6	Atrazine	4	L	1	qt/a	PRE	A							
7	Resolve	25	DF	1	oz/a	PRE	A	100	95	100	79	93	100	100
7	Mesotrione	50	WG	4.5	oz/a	PRE	A							
7	Atrazine	4	L	1	qt/a	PRE	A							
7	Abundit Extra	3	SL	1	qt/a	POST	B							
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
8	Resolve	25	DF	1.5	oz/a	PRE	A	100	93	100	80	93	100	100
8	Mesotrione	50	WG	4.5	oz/a	PRE	A							
8	Atrazine	4	L	1	qt/a	PRE	A							
8	Abundit Extra	3	SL	1	qt/a	POST	B							
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
9	Resolve	25	DF	1	oz/a	PRE	A	100	100	100	82	97	100	100
9	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A							
9	Mesotrione	50	WG	4.5	oz/a	PRE	A							
9	Atrazine	4	L	1	qt/a	PRE	A							
9	Abundit Extra	3	SL	1	qt/a	POST	B							
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
10	Lumax	3.94	SE	3	qt/a	PRE	A	100	95	100	87	90	95	96
11	Lumax	3.94	SE	3	qt/a	PRE	A	100	95	100	95	98	100	100
11	Abundit Extra	3	SL	1	qt/a	POST	B							
11	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B							
12	Untreated						B	0	0	0	0	0	0	0
LSD (P=.05)								2.3	7.8	1.6	8.5	8.1	4.0	9.2
Standard Deviation								1.6	5.4	1.1	5.9	5.6	2.8	6.4
CV								1.71	6.11	1.24	8.39	6.55	3.04	7.26

Means followed by same letter do not significantly differ (P=.05, LSD)
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Weed Code								ABUTH	
Crop Code									ZEAMX
Rating Data Type								control	yield
Rating Unit								percent	bu/ac
Rating Date								7/6/2011	10/18/2011
Trt-Eval Interval								56 DAP	HARVEST
# Subsamples, Dec.								0	0
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code		
1	Resolve	25	DF	1	oz/a	PRE	A	98	214
1	Mesotrione	50	WG	4.5	oz/a	PRE	A		
2	Resolve	25	DF	1.5	oz/a	PRE	A	93	220
2	Mesotrione	50	WG	4.5	oz/a	PRE	A		
3	Resolve	25	DF	1	oz/a	PRE	A	95	215
3	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A		
3	Mesotrione	50	WG	4.5	oz/a	PRE	A		
4	Resolve	25	DF	1	oz/a	PRE	A	91	220
4	Mesotrione	50	WG	4.5	oz/a	PRE	A		
4	Atrazine	4	L	1	qt/a	PRE	A		
5	Resolve	25	DF	1.5	oz/a	PRE	A	92	218
5	Mesotrione	50	WG	4.5	oz/a	PRE	A		
5	Atrazine	4	L	1	qt/a	PRE	A		
6	Resolve	25	DF	1	oz/a	PRE	A	100	212
6	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A		
6	Mesotrione	50	WG	4.5	oz/a	PRE	A		
6	Atrazine	4	L	1	qt/a	PRE	A		
7	Resolve	25	DF	1	oz/a	PRE	A	87	203
7	Mesotrione	50	WG	4.5	oz/a	PRE	A		
7	Atrazine	4	L	1	qt/a	PRE	A		
7	Abundit Extra	3	SL	1	qt/a	POST	B		
7	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B		
8	Resolve	25	DF	1.5	oz/a	PRE	A	91	210
8	Mesotrione	50	WG	4.5	oz/a	PRE	A		
8	Atrazine	4	L	1	qt/a	PRE	A		
8	Abundit Extra	3	SL	1	qt/a	POST	B		
8	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B		
9	Resolve	25	DF	1	oz/a	PRE	A	95	220
9	Harmony SG 50%	50	SG	0.5	oz/a	PRE	A		
9	Mesotrione	50	WG	4.5	oz/a	PRE	A		
9	Atrazine	4	L	1	qt/a	PRE	A		
9	Abundit Extra	3	SL	1	qt/a	POST	B		
9	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B		
10	Lumax	3.94	SE	3	qt/a	PRE	A	96	229
11	Lumax	3.94	SE	3	qt/a	PRE	A	100	220
11	Abundit Extra	3	SL	1	qt/a	POST	B		
11	Ammonium Sulfate	100	DF	17	lb/100 gal	POST	B		
12	Untreated						B	0	48
LSD (P=.05)								9.1	28.9
Standard Deviation								6.3	20.0
CV								7.3	9.88

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