

## LSU Northeast Research Station

Evaluation of metoachlor formulations.

Trial ID: SJ05C016  
Location:Study Dir.:  
Investigator: Bill Williams**GENERAL TRIAL INFORMATION**

Investigator: Bill Williams

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

**Conclusions:** Overall, the best annual grass control was observed in plots treated with Bicep II Magnum. Metolachlor formulations had little effect on barnyardgrass control. Higher rates of Trizmet II (generic Bicep II Magnum) and Mee-Too-Alachlor (generic Dual II Magnum) were required to control signalgrass, crabgrass and yellow foxtail equivalent to their name brand counterparts. Even at the higher rates, Trizmet II and Mee-Too-Alachlor often resulted in less control of certain grass species late in the season. Differences between treatments for corn yield were not observed.

**CROP AND WEED DESCRIPTION**

Weed Code	Common Name	Scientific Name
1. ECHCG	Barnyardgrass, common	Echinochloa crus-galli
2. BRAPP	Signalgrass, broadleaf	Brachiaria platyphylla
3. DIGSA	Crabgrass, large	Digitaria sanguinalis
4. SETGL	Setaria gluaca	Foxtail, yellow
5. ABUTH	Velvetleaf	Abutilon theophrasti
6. AGrass	Annual grasses	n/a

Crop 1: ZEAMX CORN, FIELD

Variety: DeKalb 6971

Planting Date: 4/14/05

Planting Method: BEDDED

Rate: 30000 LB/A

Depth: 2 "

Row Spacing: 40 "

Seed Bed: FINE/TRASHY

Soil Moisture: DRY

Emergence Date: 4/22/05

**SITE AND DESIGN**

Plot Width, Unit: 6.67 FT

Plot Length, Unit: 30 FT

Reps: 3

Site Type: FIELD

Tillage Type: NO-TILL

Study Design: RANDOMIZED COMPLETE BLOCK

**SOIL DESCRIPTION**

% Sand: 34	% OM: 0.6	Texture: Silty loam
% Silt: 54	pH: 5.3	Soil Name: Commerce
% Clay: 12	CEC: 6.3	Fert. Level: EXCELLENT

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**MOISTURE CONDITIONS**

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	4/26/05	3:00 AM	1.04	in	Rainfall	0	n/a
2.	4/27/05	8:30 AM	0.04	in	Rainfall	0	n/a
3.	4/30/05	3:00 AM	0.21	in	Rainfall	0	n/a
4.	5/10/05	6:30 PM	0.25	in	Rainfall	0	n/a
5.	5/15/05	5:30 PM	0.46	in	Rainfall	0	n/a
6.	5/25/05	8:00 PM	0.78	in	Rainfall	0	n/a
7.	5/29/05	1:00 AM	0.63	in	Rainfall	0	n/a
8.	5/30/05	11:00 A	1.51	in	Rainfall	0	n/a
9.	5/31/05	8:00 PM	0.26	in	Rainfall	0	n/a
10.	6/2/05	4:00 PM	0.04	in	Rainfall	0	n/a
11.	6/6/05	7:00 PM	0.39	in	Rainfall	0	n/a
12.	6/18/05	11:00 A	0.42	in	Rainfall	0	n/a
13.	7/3/04	6:00 PM	0.06	in	Rainfall	0	n/a
14.	7/6/05	1:30 PM	1.6	in	Rainfall	0	n/a
15.	7/8/05	1:45 PM	0.93	in	Rainfall	0	n/a
16.	7/10/05	1:00 PM	0.04	in	Rainfall	0	n/a
17.	7/14/05	2:00 PM	0.44	in	Rainfall	0	n/a
18.	7/16/05	10:00 P	0.04	in	Rainfall	0	n/a
19.	7/17/05	1:00 PM	0.25	in	Rainfall	0	n/a
20.	7/18/05	7:00 PM	0.05	in	Rainfall	0	n/a
21.	7/22/05	2:30 PM	0.15	in	Rainfall	0	n/a
22.	8/4/05	3:30 PM	0.27	in	Rainfall	0	n/a
23.	8/5/05	8:00 PM	0.45	in	Rainfall	0	n/a
24.	8/6/05	6:00 PM	0.25	in	Rainfall	0	n/a
25.	8/16/05	6:00 PM	1.31	in	Rainfall	0	n/a
26.	8/22/05	9:00 PM	0.05	in	Rainfall	0	n/a

Overall Moisture Conditions: Dry

Closest Weather Station: Northeast Research Station

Distance: 0.25 Unit: MI

**APPLICATION DESCRIPTION****A**

Application Date: 4/15/05  
 Time of Day: 10:00  
 Application Method: SPRAY  
 Application Timing: PRE  
 Applic. Placement: BROSOI  
 Air Temp., Unit: 69 F  
 % Relative Humidity: 50  
 Wind Velocity, Unit: 4.5 N  
 Soil Temp., Unit: 75 F  
 Soil Moisture: dry  
 % Cloud Cover: 60

**CROP STAGE AT EACH APPLICATION****A**

Crop 1 Code, Stage: ZEAMX n/a  
 Stage Scale: n/a

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**WEED STAGE AT EACH APPLICATION****A**

**Weed 1 Code, Stage:** ECHCG n/a  
**Stage Scale:** n/a  
**Weed 2 Code, Stage:** BRAPP n/a  
**Stage Scale:** n/a  
**Weed 3 Code, Stage:** DIGSA n/a  
**Stage Scale:** n/a  
**Weed 4 Code, Stage:** SETGL n/a  
**Stage Scale:** n/a  
**Weed 5 Code, Stage:** ABUTH n/a  
**Stage Scale:** n/a  
**Weed 6 Code, Stage:** AGras n/a  
**Stage Scale:** n/a

**APPLICATION EQUIPMENT****A**

**Appl. Equipment:** Tractor  
**Operating Pressure:** 34  
**Nozzle Type:** Ven  
**Nozzle Size:** 11002  
**Nozzle Spacing, Unit:** 20 "  
**Nozzles/Row:** 2  
**Carrier:** Water  
**Spray Volume, Unit:** 15 GPA  
**Propellant:** CO2

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Trial ID: SJ05C016  
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Weed Code	AGrass	ECHCG	ECHCG	ECHCG
Crop Code				
Part Rated	PLATOT P	PLATOT P	PLATOT P	PLATOT P
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%
Rating Date	4/28/05	5/26/05	6/6/05	7/25/05
Trt-Eval Interval	13 DA-A	41 DA-A	52 DA-A	101 DA-A
ARM Action Codes				
# Subsamples, Dec.				

Trt No.	Treatment Name	Rate	Grow Stg	1	2	3	4
1	Bicep II Magnum	2	QT/A PRE	92	a 93	a 95	a 95 a
2	Trizmet II	2	QT/A PRE	73	c 92	a 87	b 87 b
3	Trizmet II	2.6	QT/A PRE	80	b 88	a 95	a 95 a
4	Dual II Magnum	1.5	PT/A PRE	80	b 93	a 93	a 93 a
	Atrazine	1.5	QT/A PRE				
5	Mee-Too-Alcachlor	1.0	PT/A PRE	60	d 92	a 87	b 87 b
	Atrazine	1.5	QT/A PRE				
6	Mee-Too-Alcachlor	2.0	PT/A PRE	80	b 90	a 90	ab 90 ab
	Atrazine	1.5	QT/A PRE				
7	Atrazine	1.5	QT/A PRE	53	e 73	b 0	c 0 c
LSD (P=.05)				5.6	9.7	5.9	5.9
Bartlett's X2				0.984	5.322	2.539	2.539
P(Bartlett's X2)				0.611	0.503	0.281	0.281

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.

LSU Northeast Research Station

Weed Code	BRAPP	BRAPP	BRAPP	BRAPP
Crop Code				
Part Rated	PLATOT P	PLATOT P	PLATOT P	PLATOT P
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%
Rating Date	5/12/05	5/26/05	6/6/05	7/25/05
Trt-Eval Interval	27 DA-A	41 DA-A	52 DA-A	101 DA-A
ARM Action Codes				
# Subsamples, Dec.				

Trt No.	Treatment Name	Rate	Grow Unit	Stg	5	6	7	8	
1	Bicep II Magnum	2	QT/A	PRE	95	a 85	a 90	a 90	a
2	Trizmet II	2	QT/A	PRE	90	b 82	a 80	b 80	b
3	Trizmet II	2.6	QT/A	PRE	95	a 88	a 93	a 93	a
4	Dual II Magnum	1.5	PT/A	PRE	95	a 82	a 80	b 80	b
	Atrazine	1.5	QT/A	PRE					
5	Mee-Too-Alcachlor	1.0	PT/A	PRE	95	a 63	b 67	c 67	c
	Atrazine	1.5	QT/A	PRE					
6	Mee-Too-Alcachlor	2.0	PT/A	PRE	95	a 83	a 77	b 77	b
	Atrazine	1.5	QT/A	PRE					
7	Atrazine	1.5	QT/A	PRE	87	c 0	c 0	d 0	d
LSD (P=.05)					1.9	8.6	5.1	5.1	
Bartlett's X2					0.0	3.306	0.961	0.961	
P(Bartlett's X2)					.	0.653	0.811	0.811	

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

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LSU Northeast Research Station

Weed Code	DIGSA	DIGSA	DIGSA	SETGL
Crop Code				
Part Rated	PLATOT P	PLATOT P	PLATOT P	PLATOT P
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%
Rating Date	4/28/05	5/12/05	5/26/05	4/28/05
Trt-Eval Interval	13 DA-A	27 DA-A	41 DA-A	13 DA-A
ARM Action Codes				
# Subsamples, Dec.				

Trt No.	Treatment Name	Rate	Grow Unit	Stg	9	10	11	12			
1	Bicep II Magnum	2	QT/A PRE	93	a	95	a	90	a	93	a
2	Trizmet II	2	QT/A PRE	80	b	80	b	83	a	70	c
3	Trizmet II	2.6	QT/A PRE	83	b	83	b	88	a	80	b
4	Dual II Magnum	1.5	PT/A PRE	90	a	90	a	90	a	80	b
	Atrazine	1.5	QT/A PRE								
5	Mee-Too-Alcachlor	1.0	PT/A PRE	60	c	57	c	53	b	57	d
	Atrazine	1.5	QT/A PRE								
6	Mee-Too-Alcachlor	2.0	PT/A PRE	80	b	80	b	88	a	80	b
	Atrazine	1.5	QT/A PRE								
7	Atrazine	1.5	QT/A PRE	57	c	50	d	0	c	57	d
LSD (P=.05)				6.2		5.3		11.6		5.6	
Bartlett's X2				0.984		0.0		0.569		0.984	
P(Bartlett's X2)				0.611		1.00		0.989		0.611	

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.

LSU Northeast Research Station

Weed Code	SETGL	SETGL	SETGL	ABUTH
Crop Code				
Part Rated	PLATOT P	PLATOT P	PLATOT P	PLATOT P
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%
Rating Date	5/12/05	6/6/05	7/25/05	5/12/05
Trt-Eval Interval	27 DA-A	52 DA-A	101 DA-A	27 DA-A
ARM Action Codes				
# Subsamples, Dec.				

Trt No.	Treatment Name	Rate	Grow Unit	Stg	13	14	15	16	
1	Bicep II Magnum	2	QT/A PRE	95	a	95	a	95	a
2	Trizmet II	2	QT/A PRE	67	c	57	c	53	c
3	Trizmet II	2.6	QT/A PRE	83	b	70	b	67	b
4	Dual II Magnum	1.5	PT/A PRE	83	b	77	b	70	b
	Atrazine	1.5	QT/A PRE						
5	Mee-Too-Alcachlor	1.0	PT/A PRE	53	d	47	d	50	c
	Atrazine	1.5	QT/A PRE						
6	Mee-Too-Alcachlor	2.0	PT/A PRE	80	b	77	b	70	b
	Atrazine	1.5	QT/A PRE						
7	Atrazine	1.5	QT/A PRE	37	e	0	e	0	d
LSD (P=.05)				9.2		7.3		7.6	0.0
Bartlett's X2				0.0		0.0		0.816	0.0
P(Bartlett's X2)				1.00		1.00		0.665	.

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				ABUTH	ABUTH	ABUTH				
Crop Code							ZEAMX	ZEAMX		
Part Rated				PLATOT P	PLATOT P	PLATOT P	GRAIN C	GRAIN C		
Rating Data Type				CONTROL	CONTROL	CONTROL	Lb/plt	YIELD		
Rating Unit				%	%	%	13% Mst	BU		
Rating Date				5/26/05	6/6/05	7/25/05	9/8/05	9/8/05		
Trt-Eval Interval				41 DA-A	52 DA-A	101 DA-A	146 DA-A	146 DA-A		
ARM Action Codes								TY1		
# Subsamples, Dec.								0		
Trt Treatment			Rate	Grow						
No. Name			Rate Unit	Stg	17	18	19	20	21	
1	Bicep II Magnum	2	QT/A	PRE	95	a 70	a 70	a 23	a 143	a
2	Trizmet II	2	QT/A	PRE	93	a 70	a 70	a 25	a 155	a
3	Trizmet II	2.6	QT/A	PRE	95	a 70	a 70	a 25	a 154	a
4	Dual II Magnum	1.5	PT/A	PRE	95	a 70	a 70	a 24	a 148	a
	Atrazine	1.5	QT/A	PRE						
5	Mee-Too-Alcachlor	1.0	PT/A	PRE	93	a 70	a 70	a 23	a 144	a
	Atrazine	1.5	QT/A	PRE						
6	Mee-Too-Alcachlor	2.0	PT/A	PRE	95	a 70	a 70	a 23	a 146	a
	Atrazine	1.5	QT/A	PRE						
7	Atrazine	1.5	QT/A	PRE	93	a 70	a 70	a 22	a 136	a
LSD (P=.05)					2.7	0.0	0.0	4.3	26.8	
Bartlett's X2					0.0	0.0	0.0	1.367	1.367	
P(Bartlett's X2)					1.00	.	.	0.968	0.968	

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.

Column 21: TY1 = 6.28233\*[20]