

Buctril + atrazine combinations with Callisto.

Project Code: 03-10B-W100 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA  
 Trial Status: Final Updated: 9-2-03

**Objective:**

Evaluate crop response and weed control for combinations of Buctril + atrazine plus Callisto at different rates and adjuvant systems.

Weed Code	Common Name	Scientific Name
1.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
2.	XANST cocklebur, common	Xanthium strumarium L.
3.	AMATA waterhemp, common	Amaranthus rudis Sauer
4.	ABUTH velvetleaf	Abutilon theophrasti Medicus
5.	SETFA foxtail, giant	Setaria faberi Herrm.

Crop 1:	ZEAMX corn, field	Variety:	Pioneer 33P69LL
Planting Method:	Seeded	Planting Date:	6-5-03
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	24 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2002				

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name:	Weir	% OM:	1.6	pH:	6.3	CEC:	12
Texture:	Silt loam	Fert. Level:	P1: 82 LB/A, K: 274 LB/A				

**APPLICATION DESCRIPTION**

A

Application Date:	6-30-03
Time of Day:	9:00
Application Method:	Spray
Application Timing:	5-6"W
Applic. Placement:	BROFOL
Air Temp., Unit:	74 F
% Relative Humidity:	88
Wind Velocity, Unit:	0 MPH
Soil Moisture:	NORMAL
% Cloud Cover:	0

**CROP STAGE AT EACH APPLICATION**

A

Crop 1 Code, Stage:	ZEAMX V4
Height, Unit:	9 IN

**WEED STAGE AT EACH APPLICATION**

A

Weed 1 Code:	AMBEL
Stage(leaves):	2-8
Height(inches):	2-6
Density:	Medium
Weed 2 Code:	XANST
Stage(leaves):	2-12
Height(inches):	2-8
Density:	Medium
Weed 3 Code:	AMATA
Stage(leaves):	2-8
Height(inches):	2-4
Density:	Low

Weed 4 Code: ABUTH  
Stage(leaves): 4-8  
Height(inches): 2-6  
Density: Low

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 sprayer  
Operating Pressure: 40 PSI  
Nozzle Type: Flat fan  
Nozzle Size: 8002  
Boom Length, Unit: 7.5 FT  
Spray Volume, Unit: 20 GPA

NOTES:  
Not harvested.

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Weed Code	SETFA	SETFA	AMBEL	AMBEL	XANST	XANST	AMATA	AMATA	ABUTH	ABUTH
Crop Code	ZEAMX	ZEAMX								
Rating Data Type	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-7-03	7-14-03	7-7-03	7-28-03	7-7-03	7-28-03	7-7-03	7-28-03	7-7-03	7-28-03
Trt-Eval Interval	7 DA-A	14 DA-A	7 DA-A	28 DA-A	7 DA-A	28 DA-A	7 DA-A	28 DA-A	7 DA-A	28 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
1	NONTREATED									0	0	0	0	0	0	0	0	0	0
2	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	8	5	62	58	99	99	99	96	99	96
3	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	9	5	53	47	99	99	99	97	99	96
3	PRIME OIL COC	100 LIQ		1.0	% V/V	1	% V/V	5-6"	W A										
3	28% UAN	100 LIQ		2.5	% V/V	2.5	% V/V	5-6"	W A										
4	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	7	5	67	57	99	99	99	95	99	99
4	CALLISTO	4 SC		0.0078	LB A/A	0.25	FL OZ/A	5-6"	W A										
5	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	7	5	83	77	99	99	96	87	99	99
5	CALLISTO	4 SC		0.0078	LB A/A	0.25	FL OZ/A	5-6"	W A										
5	PRIME OIL COC	100 LIQ		1.0	% V/V	1	% V/V	5-6"	W A										
5	28% UAN	100 LIQ		2.5	% V/V	2.5	% V/V	5-6"	W A										
6	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	8	5	63	56	99	99	99	93	99	99
6	CALLISTO	4 SC		0.0156	LB A/A	0.5	FL OZ/A	5-6"	W A										
7	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	10	5	85	78	99	99	98	90	99	99
7	CALLISTO	4 SC		0.0156	LB A/A	0.5	FL OZ/A	5-6"	W A										
7	PRIME OIL COC	100 LIQ		1.0	% V/V	1	% V/V	5-6"	W A										
7	28% UAN	100 LIQ		2.5	% V/V	2.5	% V/V	5-6"	W A										
8	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	8	5	80	70	99	99	99	95	99	99
8	CALLISTO	4 SC		0.0234	LB A/A	0.75	FL OZ/A	5-6"	W A										
9	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	8	5	82	73	99	99	99	93	99	99
9	CALLISTO	4 SC		0.0234	LB A/A	0.75	FL OZ/A	5-6"	W A										
9	PRIME OIL COC	100 LIQ		1.0	% V/V	1	% V/V	5-6"	W A										
9	28% UAN	100 LIQ		2.5	% V/V	2.5	% V/V	5-6"	W A										
10	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	7	5	73	65	99	99	96	87	99	99
10	CALLISTO	4 SC		0.0312	LB A/A	1.0	FL OZ/A	5-6"	W A										
11	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	11	5	78	70	99	99	96	90	99	99
11	CALLISTO	4 SC		0.0312	LB A/A	1.0	FL OZ/A	5-6"	W A										
11	PRIME OIL COC	100 LIQ		1.0	% V/V	1	% V/V	5-6"	W A										
11	28% UAN	100 LIQ		2.5	% V/V	2.5	% V/V	5-6"	W A										
12	BUCTRIL+ATRAZINE	3 L		0.75	LB A/A	2.0	PT/A	5-6"	W A	9	5	80	70	99	99	99	95	99	99
12	CALLISTO	4 SC		0.047	LB A/A	1.5	FL OZ/A	5-6"	W A										

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Crop Code	ZEAMX	ZEAMX										
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Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-7-03	7-14-03	7-7-03	7-28-03	7-7-03	7-28-03	7-7-03	7-28-03	7-7-03	7-28-03	7-7-03	7-28-03
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
13	BUCTRIL+ATRAZINE	3	L	0.75	LB A/A	2.0	PT/A	5-6"W	A	9	5	78	65	99	99	99	97	99	99	99	
13	CALLISTO	4	SC	0.047	LB A/A	1.5	FL OZ/A	5-6"W	A												
13	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	5-6"W	A												
13	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	5-6"W	A												
14	BUCTRIL+ATRAZINE	3	L	0.375	LB A/A	1.0	PT/A	5-6"W	A	8	5	53	42	99	99	95	87	99	99	99	
14	CALLISTO	4	SC	0.0312	LB A/A	1.0	FL OZ/A	5-6"W	A												
14	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	5-6"W	A												
14	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	5-6"W	A												
15	BUCTRIL+ATRAZINE	3	L	0.375	LB A/A	1.0	PT/A	5-6"W	A	8	5	60	48	99	99	98	95	99	99	99	
15	CALLISTO	4	SC	0.047	LB A/A	1.5	FL OZ/A	5-6"W	A												
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	5-6"W	A												
15	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	5-6"W	A												
16	BUCTRIL	2	EC	0.312	LB A/A	1.25	PT/A	5-6"W	A	8	5	30	30	99	99	90	76	99	99	99	
16	CALLISTO	4	SC	0.047	LB A/A	1.5	FL OZ/A	5-6"W	A												
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	5-6"W	A												
16	28% UAN	100	LIQ	2.5	% V/V	2.5	% V/V	5-6"W	A												
LSD (P=.05)										3.2	0.0	23.8	23.6	0.0	0.0	4.5	9.6	0.0	5.5	0.0	3.5
Replicate F										3.278	0.000	0.568	0.071	0.000	0.000	1.701	2.862	0.000	2.089	0.000	4.529
Replicate Prob(F)										0.0516	1.0000	0.5726	0.9320	1.0000	1.0000	0.1996	0.0729	1.0000	0.1415	1.0000	0.0191
Treatment F										4.299	0.000	7.477	6.124	0.000	0.000	243.184	50.034	0.000	166.369	0.000	410.903
Treatment Prob(F)										0.0003	1.0000	0.0001	0.0001	1.0000	1.0000	0.0001	0.0001	1.0000	0.0001	1.0000	0.0001

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Trial Comments

1. Protocol: Bayer.
2. Ratings: CI 7 and 14 DAT and at canopy closure; WC 7 and 28 DAT and at canopy closure.
3. Blanket PRE application of Dual II Magnum at 0.5 pt/A applied 10 ft wide to all plots including the nontreated on 6-5-03.
4. DA-A = days after 5-6"W application.