

Option Adjuvant Study - Agrilience.

Project Code: 06-ARC-4-W105 Location: Agronomy Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA
Trial Status: Final **Updated:** 8-14-06

Objective:

Evaluate various oil-based adjuvants with Option for postemergence applications in corn.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
3. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	ZEAMX corn, field	Variety:	P31G96 RR/HX
Planting Method:	Seeded	Planting Date:	4-20-06
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	23 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2005				
Field Prep./Maintenance:	N 130 LB/A, P205 0 LB/A, K20 0 LB/A				

Soil Name:	Weir	% OM:	1.7	pH:	6	CEC:	8.2
Texture:	Silt loam	Fert. Level:	P1: 64 LB/A, K: 319 LB/A				

APPLICATION DESCRIPTION

A

Application Date:	5-27-06
Time of Day:	10:00
Application Method:	Spray
Application Timing:	6"W
Applic. Placement:	BROFOL
Air Temp., Unit:	86 F
% Relative Humidity:	47
Wind Velocity, Unit:	5 MPH
Dew Presence (Y/N):	N
Soil Moisture:	BELNOR
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:	ZEAMX V3
Height, Unit:	6-8 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	SETFA
Stage(leaves):	4-8
Height(inches):	6-11
Density:	Low
Weed 2 Code:	AMBEL
Stage(leaves):	8-14
Height(inches):	6-10
Density:	High
Weed 3 Code:	AMATA
Stage(leaves):	10-20
Height(inches):	4-8
Density:	Medium

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:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	SETFA	SETFA	AMBEL	AMBEL	AMATA	AMATA	ZEAMX	ZEAMX
						Control Percent 6-10-06 14 DA-A	Control Percent 6-24-06 28 DA-A	Control Percent 6-10-06 14 DA-A	Control Percent 6-24-06 28 DA-A	Control Percent 6-10-06 14 DA-A	Control Percent 6-24-06 28 DA-A	Injury Percent 6-10-06 14 DA-A	Injury Percent 6-24-06 28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
1	NONTREATED							0		0		0	0
2	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		75	47
2	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		47	50
3	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		88	90
3	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		70	77
3	DESTINY MSO	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		92	93
3	N-PAK AMS	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		0	0
4	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		87	91
4	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		72	82
4	DESTINY MSO	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		93	93
4	ALLIANCE	100 LIQ		1.25	% v/v	1.25	% v/v	6"	W	A		0	0
5	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		88	91
5	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		70	75
5	DESTINY MSO	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		92	93
5	ALLIANCE	100 LIQ		2.0	% v/v	2	% v/v	6"	W	A		0	0
6	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		93	87
6	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		89	72
6	DESTINY MSO	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		96	94
6	CLASS ACT NG	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		12	8
7	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		87	78
7	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		63	77
7	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		87	93
7	N-PAK AMS	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		0	0
8	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		85	79
8	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		53	75
8	SUPERB HC	100 LIQ		0.5	% v/v	0.5	% v/v	6"	W	A		83	93
8	N-PAK AMS	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		0	0
9	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		85	85
9	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		70	80
9	NEWTONE	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		88	95
10	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		86	88
10	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		72	82
10	AG 05006	100 LIQ		0.5	% v/v	0.5	% v/v	6"	W	A		90	97
10	N-PAK AMS	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		0	0
11	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		85	92
11	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		72	84
11	AG 05006	100 LIQ		0.75	% v/v	0.75	% v/v	6"	W	A		85	97
11	N-PAK AMS	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		0	0
12	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		85	93
12	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		68	78
12	AG 05006	100 LIQ		1.0	% v/v	1	% v/v	6"	W	A		83	90
12	N-PAK AMS	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		0	0
13	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		89	87
13	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		73	77
13	AG 05055	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		83	90
14	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		89	93
14	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		75	86
14	AG 06048	100 LIQ		2.5	% v/v	2.5	% v/v	6"	W	A		88	96
15	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		68	75
15	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		50	67
15	AG 06068	100 LIQ		0.5	% v/v	0.5	% v/v	6"	W	A		82	88
16	OPTION	35 WG		0.0164	lb ai/a	0.75	oz/a	6"	W	A		87	78
16	CALLISTO	4 SC		0.047	lb ai/a	1.5	fl oz/a	6"	W	A		52	60
16	AG 06069	100 LIQ		0.5	% v/v	0.5	% v/v	6"	W	A		82	93

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Weed Code		SETFA	SETFA	AMBEL	AMBEL	AMATA	AMATA	ZEAMX	ZEAMX								
Crop Code								Injury	Injury								
Rating Data Type		Control	Control	Control	Control	Control	Control	Percent	Percent								
Rating Unit		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Date		6-10-06	6-24-06	6-10-06	6-24-06	6-10-06	6-24-06	6-10-06	6-24-06								
Trt-Eval Interval		14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A								
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code								
17	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	6"W	A	83	85	50	70	85	93	0	0
17	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	6"W	A								
17	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	6"W	A								
17	AG 02013	100	LIQ	4.0	fl oz/a	4	fl oz/a	6"W	A								
17	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	6"W	A								
18	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	6"W	A	87	83	52	62	82	89	0	0
18	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	6"W	A								
18	AG 06022	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A								
18	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	6"W	A								
19	OPTION	35	WG	0.0164	lb ai/a	0.75	oz/a	6"W	A	87	90	81	83	92	92	0	0
19	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	6"W	A								
19	AG 06023	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A								
19	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	6"W	A								
LSD (P=.05)										10.9	9.8	15.7	13.5	7.3	7.7	1.1	0.7
Replicate F										0.296	2.871	1.069	5.333	2.184	2.454	0.972	0.972
Replicate Prob(F)										0.7460	0.0700	0.3542	0.0095	0.1281	0.1006	0.3882	0.3882
Treatment F										28.785	41.991	12.264	17.082	66.095	65.468	47.639	62.222
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Agrilience.
2. Ratings: CI/WC 14 + 28 DAT.
3. DA-A = Days after 6"W application.
4. Not harvested.