

Liberty Plus Callisto Tank Mixtures.

Project Code: 05-51W-S70 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 11-14-05

Objective:

Determine ratio of Liberty plus Callisto tank-mixtures for broadspectrum weed control.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. CYPES	nutsedge, yellow	Cyperus esculentus L.
3. AMATA	waterhemp, common	Amaranthus rudis Sauer
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus
5. PANDI	panicum, fall	Panicum dichotomiflorum Michx.

Crop 1: ZEAMX corn, field **Variety:** 33P69 LL
 Planting Method: Seeded **Planting Date:** 5-6-05
 Rate: 28000 S/A **Depth:** 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 27 FT **Reps:** 3
 Tillage Type: Reduced-Till **Study Design:** Randomized complete block
 Previous Crop, Year: GLXMA, 2004

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 100 LB/A

Soil Name: Weir **% OM:** 2.2 **pH:** 6.5 **CEC:** 11
 Texture: Silt loam **Fert. Level:** P1: 94 LB/A, K: 396 LB/A

APPLICATION DESCRIPTION

A
 Application Date: 05-27-05
 Time of Day: 8:00
 Application Method: Spray
 Application Timing: 3-4"W
 Applic. Placement: BROFOL
 Air Temp., Unit: 70 F
 % Relative Humidity: 42
 Wind Velocity, Unit: 5-10 MPH
 Soil Moisture: BELNOR

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: ZEAMX V4-V5
 Height, Unit: 8-10 IN

WEED STAGE AT EACH APPLICATION

A
 Weed 1 Code: SETFA
 Stage (leaves): 3-4
 Height (inches): 1-6
 Density: Medium
 Weed 2 Code: CYPES
 Stage (leaves): 3-6
 Height (inches): 4-8
 Density: Medium
 Weed 3 Code: AMATA
 Stage (leaves): 5-11
 Height (inches): 1-4
 Density: Medium
 Weed 4 Code: ABUTH
 Stage (leaves): 3-4
 Height (inches): 2-6
 Density: Medium
 Weed 5 Code: PANDI
 Stage (leaves): 3-4
 Height (inches): 1-4
 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:

Liberty Plus Callisto Tank Mixtures.

Project Code: 05-51W-S70 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ZEAMX Injury Percent	ZEAMX Injury Percent	ZEAMX Injury Percent	SETFA Control Percent	SETFA Control Percent	CYPES Control Percent	CYPES Control Percent			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code	06-03-05 7 DA-A	06-10-05 14 DA-A	07-01-05 35 DA-A	06-10-05 14 DA-A	07-01-05 35 DA-A		
1	NONTREATED								0	0	0	0	0		
2	AE F039866 00	1.67	SL	0.26 lb ai/a	20	fl oz/a	3-4"W	A	0	0	0	43	47		
2	CALLISTO	4	SC	0.094 lb ai/a	3	fl oz/a	3-4"W	A				47	43		
2	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
3	OPTION	35	WG	0.0328 lb ai/a	1.5	oz/a	3-4"W	A	12	0	0	92	96		
3	CALLISTO	4	SC	0.047 lb ai/a	1.5	fl oz/a	3-4"W	A				45	72		
3	DESTINY MSO	100	LIQ	1.5 pt/a	1.5	pt/a	3-4"W	A							
3	28% UAN	100	LIQ	1.5 qt/a	1.5	qt/a	3-4"W	A							
4	LIBERTY	1.67	EC	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	67	92		
4	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A				22	40		
5	AE F039866 00	1.67	SL	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	95	95		
5	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A				35	47		
6	AE F039866 00	1.67	SL	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	93	95		
6	AATREX	90	WG	0.5 lb ai/a	0.556	lb/a	3-4"W	A				53	47		
6	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
7	AE F039866 00	1.67	SL	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	92	92		
7	CALLISTO	4	SC	0.0312 lb ai/a	1	fl oz/a	3-4"W	A				47	65		
7	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
8	AE F039866 00	1.67	SL	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	95	91		
8	CALLISTO	4	SC	0.047 lb ai/a	1.5	fl oz/a	3-4"W	A				42	40		
8	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
9	AE F039866 00	1.67	SL	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	92	95		
9	CALLISTO	4	SC	0.0625 lb ai/a	2	fl oz/a	3-4"W	A				43	65		
9	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
10	AE F039866 00	1.67	SL	0.417 lb ai/a	32	fl oz/a	3-4"W	A	0	0	0	93	93		
10	CALLISTO	4	SC	0.094 lb ai/a	3	fl oz/a	3-4"W	A				60	60		
10	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
11	DEFINE	4	SC	0.5 lb ai/a	16	fl oz/a	3-4"W	A	8	4	0	23	32		
11	BUCTRIL+ATRAZINE	3	L	0.56 lb ai/a	1.5	pt/a	3-4"W	A				13	47		
12	DEFINE	4	SC	0.5 lb ai/a	16	fl oz/a	3-4"W	A	7	5	0	48	23		
12	BUCTRIL+ATRAZINE	3	L	0.56 lb ai/a	1.5	pt/a	3-4"W	A				43	60		
12	CALLISTO	4	SC	0.0312 lb ai/a	1	fl oz/a	3-4"W	A							
13	DEFINE	4	SC	0.5 lb ai/a	16	fl oz/a	3-4"W	A	15	15	0	25	23		
13	BUCTRIL	2	EC	0.5 lb ai/a	2	pt/a	3-4"W	A				43	68		
13	CALLISTO	4	SC	0.0312 lb ai/a	1	fl oz/a	3-4"W	A							
14	CALLISTO	4	SC	0.094 lb ai/a	3	fl oz/a	3-4"W	A	0	0	0	23	27		
14	PRIME OIL COC	100	LIQ	1.0 % v/v	1	% v/v	3-4"W	A				37	80		
14	AMS	100	DRY	3 lb/a	3	lb/a	3-4"W	A							
LSD (P=.05)									1.9	0.5	0.0	21.3	10.8	14.8	15.7
Replicate F									0.355	1.000	0.000	1.024	5.626	2.845	0.129
Replicate Prob(F)									0.7042	0.3816	1.0000	0.3732	0.0093	0.0763	0.8794
Treatment F									65.809	548.789	0.000	22.253	95.451	9.922	13.315
Treatment Prob(F)									0.0001	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001

Liberty Plus Callisto Tank Mixtures.

Project Code: 05-51W-S70 Location: Belleville Research Center
Investigator: Bryan Young

Weed Code	AMATA	AMATA	ABUTH	ABUTH	PANDI	PANDI
Crop Code	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	06-10-05	07-01-05	06-10-05	07-01-05	06-10-05	07-01-05
Rating Date	14 DA-A	35 DA-A	14 DA-A	35 DA-A	14 DA-A	35 DA-A
Trt-Eval Interval						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	AMATA 06-10-05 14 DA-A	AMATA 07-01-05 35 DA-A	ABUTH 06-10-05 14 DA-A	ABUTH 07-01-05 35 DA-A	PANDI 06-10-05 14 DA-A	PANDI 07-01-05 35 DA-A
1	NONTREATED									0	0	0	0	0	0
2	AE F039866 00	1.67	SL	0.26	lb ai/a	20	fl oz/a	3-4"	W A	99	99	99	99	27	13
2	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	3-4"	W A						
2	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
3	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	3-4"	W A	96	95	99	99	93	80
3	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	3-4"	W A						
3	DESTINY MSO	100	LIQ	1.5	pt/a	1.5	pt/a	3-4"	W A						
3	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A						
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A	73	78	85	86	32	33
4	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
5	AE F039866 00	1.67	SL	0.417	lb ai/a	32	fl oz/a	3-4"	W A	80	90	85	89	57	50
5	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
6	AE F039866 00	1.67	SL	0.417	lb ai/a	32	fl oz/a	3-4"	W A	99	99	99	93	48	47
6	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A						
6	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
7	AE F039866 00	1.67	SL	0.417	lb ai/a	32	fl oz/a	3-4"	W A	98	98	99	99	28	38
7	CALLISTO	4	SC	0.0312	lb ai/a	1	fl oz/a	3-4"	W A						
7	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
8	AE F039866 00	1.67	SL	0.417	lb ai/a	32	fl oz/a	3-4"	W A	98	96	99	99	47	43
8	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	3-4"	W A						
8	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
9	AE F039866 00	1.67	SL	0.417	lb ai/a	32	fl oz/a	3-4"	W A	98	98	99	98	60	65
9	CALLISTO	4	SC	0.0625	lb ai/a	2	fl oz/a	3-4"	W A						
9	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
10	AE F039866 00	1.67	SL	0.417	lb ai/a	32	fl oz/a	3-4"	W A	99	99	99	99	58	43
10	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	3-4"	W A						
10	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
11	DEFINE	4	SC	0.5	lb ai/a	16	fl oz/a	3-4"	W A	99	99	99	98	23	10
11	BUCTRIL+ATRAZINE	3	L	0.56	lb ai/a	1.5	pt/a	3-4"	W A						
12	DEFINE	4	SC	0.5	lb ai/a	16	fl oz/a	3-4"	W A	99	99	99	99	23	10
12	BUCTRIL+ATRAZINE	3	L	0.56	lb ai/a	1.5	pt/a	3-4"	W A						
12	CALLISTO	4	SC	0.0312	lb ai/a	1	fl oz/a	3-4"	W A						
13	DEFINE	4	SC	0.5	lb ai/a	16	fl oz/a	3-4"	W A	99	99	99	99	27	13
13	BUCTRIL	2	EC	0.5	lb ai/a	2	pt/a	3-4"	W A						
13	CALLISTO	4	SC	0.0312	lb ai/a	1	fl oz/a	3-4"	W A						
14	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	3-4"	W A	99	99	99	99	23	10
14	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A						
14	AMS	100	DRY	3	lb/a	3	lb/a	3-4"	W A						
LSD (P=.05)										6.4	9.0	7.0	8.4	15.9	18.5
Replicate F										0.743	1.490	0.687	0.148	9.206	0.446
Replicate Prob(F)										0.4856	0.2439	0.5121	0.8629	0.0009	0.6450
Treatment F										145.133	71.488	121.387	81.440	17.818	14.055
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Bayer.
2. CI 7 DAT; CI/WC 14 and 35 DAT.
3. DA-A = Days after 3-4"W application.