

Laudis Tank-Mixtures in Liberty Link Corn.

Project Code: 07-51W-MS60 Location: Belleville Reseach Center

Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA

Trial Status: Final Updated: 1-23-08

**Objective:**

Evaluate the efficacy of Laudis tank-mixtures in Liberty Link corn compared with competitive tank-mix partners.

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

Crop 1:	ZEAMX corn, field	Variety:	33K44
Planting Method:	Seeded	Planting Date:	5-22-07
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:	ZEAMX, 2006				
Field Prep./Maintenance:	N 150 LB/A, P205 0 LB/A, K20 100 LB/A				

Soil Name:	Weir	% OM:	2.1	pH:	6.8	CEC:	11
Texture:	Silt loam	Fert. Level:	P1: 92 LB/A, K: 336 LB/A				

**APPLICATION DESCRIPTION**

APPLICATION DESCRIPTION		A
Application Date:	6-11-07	
Time of Day:	10:00	
Application Method:	Spray	
Application Timing:	3-4"W	
Applic. Placement:	BROFOL	
Air Temp., Unit:	76 F	
% Relative Humidity:	74	
Wind Velocity, Unit:	0 MPH	
Soil Moisture:	NORMAL	
% Cloud Cover:	100	

**CROP STAGE AT EACH APPLICATION**

CROP STAGE AT EACH APPLICATION		A
Crop 1 Code, Stage:	ZEAMX V4	
Height, Unit:	12 IN	

**WEED STAGE AT EACH APPLICATION**

WEED STAGE AT EACH APPLICATION		A
Weed 1 Code:	SETFA	
Stage(leaves):	2-4	
Height(inches):	1-4	
Density:	Low	
Weed 2 Code:	PANDI	
Stage(leaves):	2-4	
Height(inches):	1-4	
Density:	Low	
Weed 3 Code:	AMBTR	
Stage(leaves):	4-8	
Height(inches):	1-6	
Density:	High	
Weed 4 Code:	ABUTH	
Stage(leaves):	3-6	
Height(inches):	2-4	
Density:	High	
Weed 5 Code:	AMATA	
Stage(leaves):	2-6	
Height(inches):	1-3	
Density:	Medium	
Weed 6 Code:	CYPES	
Stage(leaves):	3-8	
Height(inches):	3-5	
Density:	Medium	

**APPLICATION EQUIPMENT**

APPLICATION EQUIPMENT		A
Appl. Equipment:	CO2 sprayer	
Operating Pressure:	40 PSI	
Nozzle Type:	Flat fan	
Nozzle Size:	XR 8002	
Boom Length, Unit:	7.5 FT	
Spray Volume, Unit:	15 GPA	

NOTES:

Laudis Tank-Mixtures in Liberty Link Corn.

Project Code: 07-51W-MS60 Location: Belleville Reseach Center  
 Investigator: Bryan Young

Weed Code	ZEAMX					SETFA	SETFA	SETFA
Crop Code	Moisture	Yield	Injury	Injury	Injury	Control	Control	Control
Rating Data Type	Percent	bu/A	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	10-5-07	10-5-07	6-18-07	7-9-07	8-6-07	6-18-07	7-9-07	8-6-07
Rating Date	7 DA-A			28 DA-A	56 DA-A	7 DA-A	28 DA-A	56 DA-A
Trt-Eval Interval								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code																
1	NONTREATED									14.7	b	38	b	0	a	0	a	0	a	0	d	0	d	0	c
2	LAUDIS	3.5	SC	0.0547	lb ai/a	2	fl oz/a	3-4"	W A	16.1	a	191	a	0	a	0	a	0	a	98	a	95	abc	99	a
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A																
2	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
3	CALLISTO	4	SC	0.0625	lb ai/a	2.0	fl oz/a	3-4"	W A	16.3	a	177	a	0	a	0	a	0	a	96	ab	92	c	99	a
3	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A																
3	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
4	IMPACT	2.8	SC	0.0109	lb ai/a	0.5	fl oz/a	3-4"	W A	15.7	ab	188	a	0	a	0	a	0	a	98	a	93	bc	99	a
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A																
4	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
5	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A	15.8	ab	174	a	0	a	0	a	0	a	99	a	95	abc	99	a
5	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A																
5	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
6	LAUDIS	3.5	SC	0.0547	lb ai/a	2	fl oz/a	3-4"	W A	16.3	a	193	a	0	a	0	a	0	a	99	a	95	abc	98	a
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A																
6	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A																
6	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
7	CALLISTO	4	SC	0.0625	lb ai/a	2.0	fl oz/a	3-4"	W A	16.6	a	198	a	0	a	0	a	0	a	99	a	93	bc	98	a
7	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A																
7	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A																
7	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
8	IMPACT	2.8	SC	0.0109	lb ai/a	0.5	fl oz/a	3-4"	W A	16.0	a	194	a	0	a	0	a	0	a	98	a	95	abc	92	b
8	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A																
8	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A																
8	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A																
9	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	15.9	ab	175	a	0	a	0	a	0	a	92	c	96	ab	98	a
9	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A																
9	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A																
10	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	15.5	ab	183	a	0	a	0	a	0	a	93	bc	93	bc	99	a
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W A																
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A																
10	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A																
11	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	15.7	ab	183	a	0	a	0	a	0	a	98	a	99	a	99	a
11	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W A																
11	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A																
11	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A																
LSD (P=.05)										1.30		29.1		0.0		0.0		0.0		3.3		4.6		2.5	
Replicate F										0.512		1.373		0.000		0.000		0.000		0.596		0.613		1.000	
Replicate Prob(F)										0.6067		0.2763		1.0000		1.0000		1.0000		0.5605		0.5517		0.3855	
Treatment F										1.341		21.009		0.000		0.000		0.000		695.440		335.270		1187.110	
Treatment Prob(F)										0.2756		0.0001		1.0000		1.0000		1.0000		0.0001		0.0001		0.0001	

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

Laudis Tank-Mixtures in Liberty Link Corn.

Project Code: 07-51W-MS60 Location: Belleville Reseach Center  
 Investigator: Bryan Young

Weed Code	PANDI	PANDI	PANDI	AMBTR	AMBTR	AMBTR	ABUTH	ABUTH	ABUTH
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	6-18-07	7-9-07	8-6-07	6-18-07	7-9-07	8-6-07	6-18-07	7-9-07	8-6-07
Rating Date	7 DA-A	28 DA-A	56 DA-A	7 DA-A	28 DA-A	56 DA-A	7 DA-A	28 DA-A	56 DA-A
Trt-Eval Interval									

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
1	NONTREATED									0 d	0 c	0 d	0 b	0 c	0 d	0 b	0 d	0 c	
2	LAUDIS	3.5	SC	0.0547	lb ai/a	2	fl oz/a	3-4"	W A	96 a	85 b	86 b	99 a	95 b	93 bc	99 a	95 abc	99 a	
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A										
2	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
3	CALLISTO	4	SC	0.0625	lb ai/a	2.0	fl oz/a	3-4"	W A	98 a	85 b	90 ab	99 a	95 ab	96 ab	99 a	96 ab	99 a	
3	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A										
3	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
4	IMPACT	2.8	SC	0.0109	lb ai/a	0.5	fl oz/a	3-4"	W A	95 a	90 ab	88 b	99 a	92 b	96 ab	99 a	92 bc	99 a	
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A										
4	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
5	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A	99 a	89 ab	95 a	99 a	93 b	96 ab	99 a	91 c	95 b	
5	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A										
5	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
6	LAUDIS	3.5	SC	0.0547	lb ai/a	2	fl oz/a	3-4"	W A	99 a	93 a	95 a	99 a	95 b	96 ab	99 a	97 a	99 a	
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A										
6	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A										
6	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
7	CALLISTO	4	SC	0.0625	lb ai/a	2.0	fl oz/a	3-4"	W A	95 a	90 ab	94 a	99 a	99 a	99 a	99 a	99 a	99 a	
7	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A										
7	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A										
7	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
8	IMPACT	2.8	SC	0.0109	lb ai/a	0.5	fl oz/a	3-4"	W A	95 a	87 b	77 c	99 a	95 ab	92 c	99 a	95 abc	99 a	
8	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A										
8	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A										
8	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A										
9	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	33 c	0 c	0 d	99 a	99 a	99 a	99 a	98 a	99 a	
9	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A										
9	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A										
10	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	37 c	0 c	0 d	99 a	99 a	99 a	99 a	99 a	99 a	
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W A										
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A										
10	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A										
11	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	43 b	0 c	0 d	99 a	99 a	99 a	99 a	99 a	99 a	
11	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W A										
11	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A										
11	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A										
LSD (P=.05)										5.8	5.9	4.7	0.0	4.3	3.2	0.0	4.8	2.3	
Replicate F										4.859	0.023	2.709	0.000	2.591	0.981	0.000	0.348	1.000	
Replicate Prob(F)										0.0191	0.9774	0.0910	1.0000	0.0999	0.3924	1.0000	0.7103	0.3855	
Treatment F										339.415	501.543	799.329	0.000	400.963	740.976	0.000	320.447	1436.161	
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	0.0001	0.0001	1.0000	0.0001	0.0001	

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

Laudis Tank-Mixtures in Liberty Link Corn.

Project Code: 07-51W-MS60 Location: Belleville Reseach Center  
 Investigator: Bryan Young

Weed Code	AMATA	AMATA	AMATA	CYPES	CYPES	CYPES
Crop Code	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	6-18-07	7-9-07	8-6-07	6-18-07	7-9-07	8-6-07
Rating Date	7 DA-A	28 DA-A	56 DA-A	7 DA-A	28 DA-A	56 DA-A
Trt-Eval Interval						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED									0 b	0 c	0 d	0 e	0 d	0 d
2	LAUDIS	3.5	SC	0.0547	lb ai/a	2	fl oz/a	3-4"	W A	99 a	93 ab	95 c	78 c	50 c	72 c
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A						
2	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
3	CALLISTO	4	SC	0.0625	lb ai/a	2.0	fl oz/a	3-4"	W A	99 a	98 a	96 bc	87 ab	84 ab	82 b
3	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A						
3	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
4	IMPACT	2.8	SC	0.0109	lb ai/a	0.5	fl oz/a	3-4"	W A	99 a	90 b	96 bc	85 ab	83 ab	83 b
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A						
4	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
5	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A	99 a	99 a	99 a	87 a	88 ab	90 a
5	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A						
5	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
6	LAUDIS	3.5	SC	0.0547	lb ai/a	2	fl oz/a	3-4"	W A	99 a	99 a	99 a	89 a	80 ab	90 a
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A						
6	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A						
6	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
7	CALLISTO	4	SC	0.0625	lb ai/a	2.0	fl oz/a	3-4"	W A	99 a	98 a	98 ab	88 a	89 a	92 a
7	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A						
7	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A						
7	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
8	IMPACT	2.8	SC	0.0109	lb ai/a	0.5	fl oz/a	3-4"	W A	99 a	99 a	98 ab	84 ab	82 ab	82 b
8	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W A						
8	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W A						
8	N-PAK AMS	100	LIQ	2.5	% v/v	2.5	% v/v	3-4"	W A						
9	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	99 a	99 a	99 a	68 d	77 b	90 a
9	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A						
9	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A						
10	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	99 a	99 a	99 a	77 c	87 ab	90 a
10	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W A						
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A						
10	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A						
11	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	3-4"	W A	99 a	98 a	98 ab	82 bc	85 ab	90 a
11	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W A						
11	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W A						
11	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W A						
LSD (P=.05)										0.0	6.0	2.4	5.2	11.4	3.5
Replicate F										0.000	2.719	3.095	3.000	3.742	0.000
Replicate Prob(F)										1.0000	0.0902	0.0674	0.0725	0.0417	1.0000
Treatment F										0.000	208.615	1280.134	212.615	47.597	510.182
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: Bayer (DLC).
2. Ratings: CI/WC at 7, 28 + 56 DAT.
3. Yield.
4. Photos of all treatments is requested.
5. DA-A = Days after 3-4"W application.
6. PANDI (fall panicum) populations were low throughout the study area, thus lack of PANDI control did not severely impact yield.
7. Harvested 10-5-07, (2) 30 inch rows by 24 ft.