

Liberty (reduced-rate) Adjuvant Study in Corn - Precision Labs.

Project Code: 07-6C-E65 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: 1-23-08**Objective:**

Compare weed control and crop response from various adjuvants with Liberty herbicide in Liberty Link corn.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. AMBTR	ragweed, giant	Ambrosia trifida L.
3. CHEAL	lambsquarters, common	Chenopodium album L.
4. IPOHE	morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.
5. AMATA	waterhemp, common	Amaranthus rudis Sauer
6. XANST	cocklebur, common	Xanthium strumarium L.

Crop 1:	ZEAMX	corn, field	Variety:	33K44
Planting Method:	Seeded		Planting Date:	6-1-07
Rate:	28000	S/A	Depth:	1.5 IN
Row Spacing:	30	IN		

Plot Width, Unit:	10	FT	Plot Length, Unit:	30	FT	Reps:	3
Tillage Type:	Reduced-Till		Study Design:	Randomized complete block			
Previous Crop, Year:	GLXMA,	2006					
Field Prep./Maintenance:	N 150	LB/A,	P205 0	LB/A,	K20 0	LB/A	

Soil Name:	Stoy	% OM:	2.2	pH:	6.6	CEC:	8
Texture:	Silt loam	Fert. Level:	P1: 94	LB/A,	K: 376	LB/A	

**APPLICATION DESCRIPTION**

Application Date:	6-22-07
Time of Day:	10:30
Application Method:	Spray
Application Timing:	6"W
Applic. Placement:	BROFOL
Air Temp., Unit:	88 F
% Relative Humidity:	64
Wind Velocity, Unit:	1-3 MPH
Dew Presence (Y/N):	N
Soil Moisture:	NORMAL
% Cloud Cover:	0

**CROP STAGE AT EACH APPLICATION**

Crop 1 Code, Stage:	ZEAMX V5
Height, Unit:	15-16 IN

**WEED STAGE AT EACH APPLICATION**

Weed 1 Code:	SETFA
Stage(leaves):	4-10
Height(inches):	5-7
Density:	High
Weed 2 Code:	AMBTR
Stage(leaves):	4-8
Height(inches):	4-8
Density:	Medium
Weed 3 Code:	CHEAL
Stage(leaves):	6-12
Height(inches):	4-8
Density:	High
Weed 4 Code:	IPOHE
Stage(leaves):	Coty-2
Height(inches):	1-3
Density:	Low
Weed 5 Code:	AMATA
Stage(leaves):	8-12
Height(inches):	5-7
Density:	High
Weed 6 Code:	XANST
Stage(leaves):	4-8
Height(inches):	4-7
Density:	Low

**APPLICATION EQUIPMENT**

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:

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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	AMBTR Control Percent	AMBTR Control Percent	CHEAL Control Percent	CHEAL Control Percent
						6-29-07	7-6-07	7-20-07	7-6-07	7-20-07	7-6-07	7-20-07	7-6-07	7-20-07
						7 DA-A	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									
1	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	97 a	97 a	98 a	98 a		
1	AMS	100	DRY	2	lb ai/a	2	lb/a	6"W	A									
2	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	97 ab	98 a	98 a	98 a		
2	PX 400	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
3	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	97 ab	97 a	98 a	98 a		
3	PX 900 HPH	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A						93 b	95 c		
4	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	96 bc	96 b	98 b	98 b		
4	PX 900 HPH	100	LIQ	1	% v/v	1	% v/v	6"W	A						94 ab	97 ab		
5	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	97 ab	97 a	98 ab	98 ab		
5	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A						97 ab	97 ab		
6	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	96 c	97 ab	98 b	98 b		
6	PL 712	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A						93 b	96 bc		
7	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	0 a	97 ab	97 a	98 ab	98 ab		
7	PL 708	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A						98 a	98 a		
8	NONTREATED									0 a	0 a	0 a	0 d	0 c	0 c	0 c		
LSD (P=.05)										0.0	0.0	0.0	0.8	1.6	0.6	0.6	4.9	1.9
Replicate F										0.000	0.000	0.000	0.179	1.584	6.333	6.333	0.952	2.285
Replicate Prob(F)										1.0000	1.0000	1.0000	0.8376	0.2398	0.0110	0.0110	0.4096	0.1384
Treatment F										0.000	0.000	0.000	15141.924	4336.636	28841.860	28841.860	434.549	3073.404
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	IPOHE Control Percent	IPOHE Control Percent	AMATA Control Percent	AMATA Control Percent	XANST Control Percent	XANST Control Percent
						7-6-07	7-20-07	7-6-07	7-20-07	7-6-07	7-20-07
						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							
1	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	92 a	89 a	98 a	98 a	98 a	98 a	
1	AMS	100	DRY	2	lb ai/a	2	lb/a	6"W	A							
2	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	89 a	88 a	98 a	98 a	97 a	98 a	
2	PX 400	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A							
3	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	90 a	89 a	98 a	97 a	98 a	98 a	
3	PX 900 HPH	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A							
4	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	90 a	88 a	97 a	94 b	98 a	98 a	
4	PX 900 HPH	100	LIQ	1	% v/v	1	% v/v	6"W	A							
5	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	89 a	87 a	98 a	98 a	98 a	98 a	
5	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A							
6	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	91 a	89 a	98 a	96 a	98 a	98 a	
6	PL 712	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A							
7	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	89 a	89 a	98 a	98 a	98 a	98 a	
7	PL 708	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A							
8	NONTREATED									0 b	0 b	0 b	0 c	0 b	0 b	
LSD (P=.05)										5.3	6.1	1.2	1.7	0.9	0.7	
Replicate F										17.388	13.895	0.671	0.044	1.195	1.960	
Replicate Prob(F)										0.0002	0.0005	0.5268	0.9571	0.3317	0.1776	
Treatment F										335.308	239.111	8257.042	3729.208	14657.538	24108.643	
Treatment Prob(F)										0.0001	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: Precision Labs.
2. Ratings: CI 7 DAT; CI/WC at 14 + 28 DAT.
3. DA-A = Days after 6"W application.