

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

Project Code: 07-21N-MW80 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. XANST	cocklebur, common	Xanthium strumarium L.
3. ABUTH	velvetleaf	Abutilon theophrasti Medicus
4. AMATA	waterhemp, common	Amaranthus rudis Sauer

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, K2O 100 LB/A

Soil Name: Ebbert % OM: 2.7 pH: 6.4 CEC: 14
 Texture: Silt loam Fert. Level: P1: 80 LB/A, K: 342 LB/A

APPLICATION DESCRIPTION

A
 Application Date: 6-26-07
 Time of Day: 8:00
 Application Method: Spray
 Application Timing: 6"W
 Applic. Placement: BROFOL
 Air Temp., Unit: 74 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 1-2 MPH
 Dew Presence (Y/N): Y
 Soil Moisture: ABONOR
 % Cloud Cover: 100

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: ZEAMX V5-V6
 Height, Unit: 20 IN

WEED STAGE AT EACH APPLICATION

A
 Weed 1 Code: SETFA
 Stage(leaves): 4-10
 Height(inches): 4-8
 Density: High
 Weed 2 Code: XANST
 Stage(leaves): 6-8
 Height(inches): 4-8
 Density: Medium
 Weed 3 Code: ABUTH
 Stage(leaves): 4-6
 Height(inches): 5-8
 Density: Medium
 Weed 4 Code: AMATA
 Stage(leaves): 8-12
 Height(inches): 4-8
 Density: Medium

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:

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					ZEAMX			SETFA	SETFA	XANST	XANST	ABUTH	ABUTH					
					Injury	Injury	Injury	Control	Control	Control	Control	Control	Control					
					Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent					
					7-3-07	7-10-07	7-24-07	7-10-07	7-24-07	7-10-07	7-24-07	7-10-07	7-24-07					
					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	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	97 b	95 c	93 bc	96 a	95 a
1	AMS	100	DRY	2	lb ai/a	2	lb/a	6"W	A									
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	98 ab	98 a	96 ab	99 a	97 a
2	PX 400	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
3	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	98 ab	95 bc	92 c	99 a	97 a
3	PX 900 HPH	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	98 a	97 abc	95 abc	99 a	97 a
4	PX 900 HPH	100	LIQ	1	% v/v	1	% v/v	6"W	A									
5	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	97 ab	98 ab	96 ab	98 a	97 a
5	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	98 ab	99 a	97 a	98 a	97 a
6	PL 712	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
7	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	0 a	0 a	0 a	99 a	98 ab	98 a	96 ab	98 a	97 a
7	PL 708	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
8	NONTREATED									0 a	0 a	0 a	0 b	0 c	0 d	0 d	0 b	0 b
LSD (P=.05)										0.0	0.0	0.0	0.5	0.7	2.8	3.1	3.5	2.9
Replicate F										0.000	0.000	0.000	0.467	9.000	1.277	1.405	0.855	0.186
Replicate Prob(F)										1.0000	1.0000	1.0000	0.6365	0.0031	0.3094	0.2778	0.4463	0.8324
Treatment F										0.000	0.000	0.000	41085.805	21421.967	1378.430	1109.263	918.661	1304.547
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Weed Code					AMATA			AMATA										
Crop Code																		
Rating Data Type					Control			Control										
Rating Unit					Percent			Percent										
Rating Date					7-10-07			7-24-07										
Trt-Eval Interval					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	0.417	lb ai/a	32	fl oz/a	6"W	A	95 b	97 b							
1	AMS	100	DRY	2	lb ai/a	2	lb/a	6"W	A									
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	99 a	99 a							
2	PX 400	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
3	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	99 a	99 a							
3	PX 900 HPH	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
4	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	99 a	99 a							
4	PX 900 HPH	100	LIQ	1	% v/v	1	% v/v	6"W	A									
5	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	98 ab	98 ab							
5	PX 07TN	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	99 a	98 a							
6	PL 712	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
7	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	6"W	A	99 a	99 a							
7	PL 708	100	LIQ	0.5	% v/v	0.5	% v/v	6"W	A									
8	NONTREATED									0 c	0 c							
LSD (P=.05)										2.9	1.6							
Replicate F										2.064	3.573							
Replicate Prob(F)										0.1638	0.0557							
Treatment F										1350.295	4266.602							
Treatment Prob(F)										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.