

Liberty Adjuvant Study in Corn - Soil Service.

Project Code: 07-21N-W70 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. AMBTR	ragweed, giant	Ambrosia trifida 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, P2O5 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: 7:30
 Application Method: Spray
 Application Timing: 6"W
 Applic. Placement: BROFOL
 Air Temp., Unit: 74 F
 % Relative Humidity: 92
 Wind Velocity, Unit: 0-1 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: AMBTR
 Stage(leaves): 6-8
 Height(inches): 5-8
 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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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ZEAMX Injury Percent	ZEAMX Injury Percent	SETFA Control Percent	SETFA Control Percent	XANST Control Percent	XANST Control Percent	ABUTH Control Percent	ABUTH Control Percent				
						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	NONTREATED									0 a	0 a	0 d	0 c				
2	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	97 c	96 a				
3	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	99 a	97 a				
3	AMS	100	DRY	3	lb ai/a	3	lb/a	6"W	A			94 a	93 a				
4	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	98 b	94 a				
4	SOIL BOOST PLUS	100	LIQ	16	fl oz/a	16	fl oz/a	6"W	A			89 b	88 b				
5	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	98 b	96 a				
5	LANDOIL	100	LIQ	22	fl oz/a	22	fl oz/a	6"W	A			93 ab	93 a				
6	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	0 a	0 a	98 b	96 a				
6	SOIL BOOST PLUS	100	LIQ	16	fl oz/a	16	fl oz/a	6"W	A			89 bc	87 b				
6	LANDOIL	100	LIQ	22	fl oz/a	22	fl oz/a	6"W	A			87 bc	87 bc				
LSD (P=.05)										0.0	0.0	0.6	3.6	4.5	3.1	5.6	3.4
Replicate F										0.000	0.000	1.667	1.050	1.011	0.056	1.275	0.260
Replicate Prob(F)										1.0000	1.0000	0.2373	0.3856	0.3982	0.9457	0.3212	0.7763
Treatment F										0.000	0.000	48029.337	1124.774	703.779	1403.225	435.179	1222.701
Treatment Prob(F)										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	AMBTR Control Percent	AMBTR Control Percent				
						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	NONTREATED									0 c	0 c
2	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	96 a	96 a
3	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	97 a	96 a
3	AMS	100	DRY	3	lb ai/a	3	lb/a	6"W	A		
4	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	96 a	94 a
4	SOIL BOOST PLUS	100	LIQ	16	fl oz/a	16	fl oz/a	6"W	A		
5	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	96 a	95 a
5	LANDOIL	100	LIQ	22	fl oz/a	22	fl oz/a	6"W	A		
6	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	6"W	A	91 b	90 b
6	SOIL BOOST PLUS	100	LIQ	16	fl oz/a	16	fl oz/a	6"W	A		
6	LANDOIL	100	LIQ	22	fl oz/a	22	fl oz/a	6"W	A		
LSD (P=.05)										3.0	3.0
Replicate F										0.649	1.276
Replicate Prob(F)										0.5435	0.3209
Treatment F										1714.163	1681.527
Treatment Prob(F)										0.0001	0.0001

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

Trial Comments

1. Protocol: Soil Service.
2. Ratings: CI/WC at 14 + 28 DAT.
3. DA-A = Days after 6"W application.