

Liberty Adjuvant Study in Corn - Soil Service.

Project Code: 06-10C-ME50 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:** 8-15-06

Objective:

Evaluate adjuvant products from Soil Service for use with Liberty compared to the standard adjuvant ammonium sulfate.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	CYPES nutsedge, yellow	Cyperus esculentus L.
3.	XANST cocklebur, common	Xanthium strumarium L.
4.	AMATA waterhemp, common	Amaranthus rudis Sauer
5.	IPOSS morningglory, species	Ipomoea sp.
6.	ABUTH velvetleaf	Abutilon theophrasti Medicus

Crop 1: ZEAMX corn, field **Variety:** 33K44 HX
Planting Method: Seeded **Planting Date:** 5-27-06
Rate: 28000 S/A **Depth:** 1.5 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 24 FT **Reps:** 3
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: GLXMA, 2005
Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 100 LB/A

Soil Name: Weir **% OM:** 2.1 **pH:** 5.6 **CEC:** 12
Texture: Silt loam **Fert. Level:** P1: 80 LB/A, K: 435 LB/A

APPLICATION DESCRIPTION

A
Application Date: 6-16-06
Time of Day: 9:00
Application Method: Spray
Application Timing: 4-6"W
Applic. Placement: BROFOL
Air Temp., Unit: 78 F
% Relative Humidity: 94
Wind Velocity, Unit: 3 MPH
Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

A
Crop 1 Code, Stage: ZEAMX V5
Height, Unit: 14-16 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	SETFA
Stage (leaves):	5-6
Height (inches):	5-6
Density:	Medium
Weed 2 Code:	CYPES
Stage (leaves):	5-6
Height (inches):	4-6
Density:	High
Weed 3 Code:	XANST
Stage (leaves):	5-6
Height (inches):	4-7
Density:	High
Weed 4 Code:	AMATA
Stage (leaves):	4-6
Height (inches):	3-4
Density:	Low
Weed 5 Code:	IPOSS
Stage (leaves):	10+
Height (inches):	4-6
Density:	Medium
Weed 6 Code:	ABUTH
Stage (leaves):	3-5
Height (inches):	3-5
Density:	Low

APPLICATION EQUIPMENT

A
Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: XR 110015
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 10 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	CYPES Control Percent	CYPES Control Percent	XANST Control Percent	XANST Control Percent
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DA-A	28 DA-A	14 DA-A	28 DA-A
1	NONTREATED									0	0	0	0
2	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	0	0	98	98
3	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	0	0	98	98
3	AMS	100	DRY	3.5	lb/a	35	lb/100 gal	4-6"W	A			37	12
4	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	0	0	98	98
4	SOIL BOOST PLUS	100	LIQ	1	pt/a	1	pt/a	4-6"W	A			35	8
5	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	0	0	98	98
5	SOIL BOOST PLUS	100	LIQ	1	pt/a	1	pt/a	4-6"W	A			40	12
5	20-0-0-8	100	LIQ	1	qt/a	1	qt/a	4-6"W	A				
6	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	0	0	98	98
6	SOIL BOOST PLUS	100	LIQ	1	pt/a	1	pt/a	4-6"W	A			35	12
6	20-0-0-8	100	LIQ	1	qt/a	1	qt/a	4-6"W	A				
6	LANDOIL	100	LIQ	22	fl oz/a	22	fl oz/a	4-6"W	A				
7	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	0	0	98	98
7	NTENSE	100	LIQ	0.25	% v/v	1	qt/100 gal	4-6"W	A			37	7
LSD (P=.05)						0.0	0.0	0.0	0.6	7.8	4.7	1.2	1.5
Replicate F						0.000	0.000	0.000	0.462	2.660	4.800	0.000	0.276
Replicate Prob(F)						1.0000	1.0000	1.0000	0.6410	0.1106	0.0294	1.0000	0.7636
Treatment F						0.000	0.000	0.000	39803.852	29.546	9.143	9198.358	5907.587
Treatment Prob(F)						1.0000	1.0000	1.0000	0.0001	0.0001	0.0007	0.0001	0.0001

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DA-A	28 DA-A
1	NONTREATED									0	0
2	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	98	98
3	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	98	98
3	AMS	100	DRY	3.5	lb/a	35	lb/100 gal	4-6"W	A		
4	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	99	99
4	SOIL BOOST PLUS	100	LIQ	1	pt/a	1	pt/a	4-6"W	A		
5	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	97	98
5	SOIL BOOST PLUS	100	LIQ	1	pt/a	1	pt/a	4-6"W	A		
5	20-0-0-8	100	LIQ	1	qt/a	1	qt/a	4-6"W	A		
6	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	97	97
6	SOIL BOOST PLUS	100	LIQ	1	pt/a	1	pt/a	4-6"W	A		
6	20-0-0-8	100	LIQ	1	qt/a	1	qt/a	4-6"W	A		
6	LANDOIL	100	LIQ	22	fl oz/a	22	fl oz/a	4-6"W	A		
7	LIBERTY	1.67	EC	0.287	lb ai/a	22	fl oz/a	4-6"W	A	98	98
7	NTENSE	100	LIQ	0.25	% v/v	1	qt/100 gal	4-6"W	A		
LSD (P=.05)						2.0	1.6	8.0	13.5	6.5	4.7
Replicate F						3.130	0.400	3.059	3.526	1.439	1.250
Replicate Prob(F)						0.0805	0.6789	0.0844	0.0624	0.2824	0.3277
Treatment F						3200.472	4918.115	154.529	29.052	227.602	442.262
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Soil Service.
2. Ratings: CI/WC 14 + 28 DAT.
3. DA-A = Days after 4-6"W application.
4. IPOSS was IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
5. Not harvested.