

## Liberty Link Corn Tolerance to Glufosinate Formulations.

Project Code: 06-2A-E55 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:** 11-28-06

**Objective:**

Assess the tolerance of Liberty Link corn to formulations of glufosinate.

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. AMBEL	ragweed, common	Ambrosia artemisiifolia L.

**Crop 1:** ZEAMX corn, field **Variety:** 33K44  
**Planting Method:** Seeded **Planting Date:** 5-23-06  
**Rate:** 28000 S/A **Depth:** 1.5 IN  
**Row Spacing:** 30 IN

**Plot Width, Unit:** 10 FT **Plot Length, Unit:** 28 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:** 1.6 **pH:** 6.2 **CEC:** 7  
**Texture:** Silt loam **Fert. Level:** P1: 93 LB/A, K: 448 LB/A

**APPLICATION DESCRIPTION**

**A**  
**Application Date:** 6-8-06  
**Time of Day:** 8:00  
**Application Method:** Spray  
**Application Timing:** V3-V4  
**Applic. Placement:** BROFOL  
**Air Temp., Unit:** 74 F  
**% Relative Humidity:** 86  
**Wind Velocity, Unit:** 1-3 MPH  
**Soil Moisture:** ADEQUATE

**CROP STAGE AT EACH APPLICATION**

**A**  
**Crop 1 Code, Stage:** ZEAMX V3  
**Height, Unit:** 10 IN

**WEED STAGE AT EACH APPLICATION**

**A**  
**Weed 1 Code:** SETFA  
**Stage (leaves):** 2-3  
**Height (inches):** 2-3  
**Density:** Medium  
**Weed 2 Code:** XANST  
**Stage (leaves):** 4-6  
**Height (inches):** 2-4  
**Density:** Medium  
**Weed 3 Code:** ABUTH  
**Stage (leaves):** 2-3  
**Height (inches):** 1-2  
**Density:** Low  
**Weed 4 Code:** AMBEL  
**Stage (leaves):** 2-4  
**Height (inches):** 0.5-2  
**Density:** Low

**APPLICATION EQUIPMENT**

**A**  
**Appl. Equipment:** CO2 sprayer  
**Operating Pressure:** 40 PSI  
**Nozzle Type:** Flat fan  
**Nozzle Size:** 8002  
**Boom Length, Unit:** 7.5 FT  
**Spray Volume, Unit:** 20 GPA

**NOTES:**

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	ZEAMX Moisture Percent 10-11-06	ZEAMX Yield bu/A 10-11-06	ZEAMX Injury Percent 6-15-06 7 DA-A	ZEAMX Injury Percent 6-22-06 14 DA-A	ZEAMX Injury Percent 7-13-06 35 DA-A	SETFA Control Percent 6-15-06 7 DA-A	SETFA Control Percent 6-22-06 14 DA-A	SETFA Control Percent 7-13-06 35 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED									16.5	94	0	
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	V3-V4	A	16.7	130	0	
2	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
3	LIBERTY	1.67	EC	0.835	lb ai/a	64	fl oz/a	V3-V4	A	16.8	143	0	
3	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
4	AE F039866	2.34	SL	0.42	lb ai/a	22.9	fl oz/a	V3-V4	A	17.3	140	0	
4	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
5	AE F039866	2.34	SL	0.84	lb ai/a	46	fl oz/a	V3-V4	A	17.0	154	0	
5	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	V3-V4	A	16.8	142	0	
6	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	V3-V4	A			0	
6	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
7	AE F039866	2.34	SL	0.42	lb ai/a	22.9	fl oz/a	V3-V4	A	17.2	149	0	
7	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	V3-V4	A			0	
7	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
8	ROUNDUP W-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V3-V4	A	17.0	146	0	
8	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A			0	
LSD (P=.05)										0.64	24.6	0.0	
Replicate F										1.328	1.995	0.000	
Replicate Prob(F)										0.2965	0.1729	1.0000	
Treatment F										1.420	5.287	0.000	
Treatment Prob(F)										0.2725	0.0040	1.0000	

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		XANST	XANST	XANST	ABUTH	ABUTH	ABUTH	AMBEL	AMBEL	AMBEL
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent
1	NONTREATED									0	0	0	0	0	0	0	0	0	0	0
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	V3-V4	A	99	97	95	99	97	96	99	99	99	99	99
2	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
3	LIBERTY	1.67	EC	0.835	lb ai/a	64	fl oz/a	V3-V4	A	99	97	95	99	98	97	99	99	99	99	99
3	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
4	AE F039866	2.34	SL	0.42	lb ai/a	22.9	fl oz/a	V3-V4	A	99	97	95	99	97	96	99	99	99	99	99
4	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
5	AE F039866	2.34	SL	0.84	lb ai/a	46	fl oz/a	V3-V4	A	99	96	93	99	97	96	99	99	99	99	99
5	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
6	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	V3-V4	A	99	98	96	99	98	98	99	99	99	99	99
6	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	V3-V4	A											
6	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
7	AE F039866	2.34	SL	0.42	lb ai/a	22.9	fl oz/a	V3-V4	A	99	96	96	99	98	96	99	99	99	99	99
7	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	V3-V4	A											
7	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
8	ROUNDUP W-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V3-V4	A	99	97	94	99	98	96	99	99	99	99	99
8	AMS	100	DRY	3.0	lb ai/a	3	lb/a	V3-V4	A											
LSD (P=.05)										0.0	1.4	3.2	0.0	1.7	2.6	0.0	0.0	0.5		
Replicate F										0.000	4.817	1.455	0.000	0.902	0.790	0.000	0.000	2.333		
Replicate Prob(F)										1.0000	0.0256	0.2667	1.0000	0.4281	0.4731	1.0000	1.0000	0.1335		
Treatment F										0.000	5407.771	1007.375	0.000	3669.964	1539.559	0.000	0.000	51357.255		
Treatment Prob(F)										1.0000	0.0001	0.0001	1.0000	0.0001	0.0001	1.0000	1.0000	0.0001		

Trial Comments

1. Protocol: Bayer (JNM).
2. Ratings: CI/WC 7, 14 + 35 DAT.
3. Yield, if possible.
4. Blanket PRE application of Balance Pro + Aatrex at 1.5 oz/A + 0.5 lbai/A was applied to all plots including the nontreated, 7.5 ft wide, maintaining lefts and rights, on 5-24-06.
5. DA-A = Days after V3-V4 application.
6. Harvested 10-11-06, (2) 30 inch rows by 25 ft.