

## EPP and PRE Corn Herbicide Comparison.

Project Code: 03-21N-E200 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA  
 Trial Status: Final Updated: 9-3-03

**Objective:**

Evaluate various total PRE programs in corn and determine the influence of application timing.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	XANST cocklebur, common	Xanthium strumarium L.
3.	AMBEL ragweed, common	Ambrosia artemisiifolia L.

Crop 1: ZEAMX corn, field Variety: Pioneer 33P69LL  
 Planting Method: Seeded Planting Date: 5-23-03  
 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: Split-plot  
 Previous Crop, Year: GLXMA, 2002

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name: Ebbert % OM: 1.4 pH: 5.7 CEC: 14  
 Texture: Silt loam Fert. Level: P1: 97 LB/A, K: 291 LB/A

**APPLICATION DESCRIPTION**

	A	B
Application Date:	4-29-03	5-24-03
Time of Day:	11:00	14:00
Application Method:	Spray	Spray
Application Timing:	14EPP	PRE
Applic. Placement:	BROSIOI	BROSIOI
Air Temp., Unit:	74 F	68 F
% Relative Humidity:	62	52
Wind Velocity, Unit:	0 MPH	0 MPH
Soil Moisture:	ABONOR	NORMAL

**CROP STAGE AT EACH APPLICATION**

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX NA
Height, Unit:	NA NA	NA NA

**APPLICATION EQUIPMENT**

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8003	8003
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

**NOTES:**

Not harvested.

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Weed Code	SETFA	SETFA	SETFA	XANST	XANST	XANST	AMBEL	AMBEL	AMBEL	ZEAMX
Crop Code										
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control	Injury
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date			8-15-03			8-15-03			8-15-03	6-13-03
Trt-Eval Interval	14 DAT	28 DAT	83 DA-B	14 DAT	28 DAT	83 DA-B	14 DAT	28 DAT	83 DA-B	V2-V3

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	Injury Percent
1	TILLAGE 14EPP									100	50	0	100	28	0	100	50	0	0
1	NONTREATED																		
2	TILLAGE 14EPP									100	100	100	100	93	50	100	100	100	0
2	DEGREE XTRA	4	L	3.2	LB A/A	3.2	QT/A	14EPP	A										
3	TILLAGE 14EPP									100	100	100	100	94	62	100	100	100	0
3	DEGREE XTRA	4	L	3.2	LB A/A	3.2	QT/A	14EPP	A										
3	BALANCE PRO	4	SC	0.07	LB A/A	2.24	FL OZ/A	14EPP	A										
4	TILLAGE 14EPP									100	100	90	100	92	0	100	100	100	0
4	KEYSTONE	5.25	L	3.68	LB A/A	2.8	QT/A	14EPP	A										
5	TILLAGE 14EPP									100	100	93	100	88	17	100	100	100	0
5	GUARDSMAN MAX	5	L	2.5	LB A/A	2	QT/A	14EPP	A										
6	TILLAGE 14EPP									100	100	100	100	93	17	100	100	100	0
6	BICEP II MAGNUM	5.5	L	2.9	LB A/A	2.1	QT/A	14EPP	A										
7	TILLAGE 14EPP									100	100	100	100	87	17	100	100	100	0
7	LUMAX	3.94	L	2.96	LB A/A	3	QT/A	14EPP	A										
8	TILLAGE 14EPP									100	100	93	100	90	50	100	100	100	0
8	EPIC	58	WG	0.47	LB A/A	13	OZ/A	14EPP	A										
9	TILLAGE 14EPP									100	100	100	100	97	67	100	100	100	0
9	DEGREE XTRA	4	L	3.2	LB A/A	3.2	QT/A	14EPP	A										
9	HORNET	68.5	WG	0.214	LB A/A	5	OZ/A	14EPP	A										
10	TILLAGE 14EPP									100	100	97	100	91	17	100	100	100	0
10	HARNESS XTRA	5.6	L	3.36	LB A/A	2.4	QT/A	14EPP	A										
11	TILLAGE AT PLANTING									0	0	0	0	0	0	0	0	0	0
11	NONTREATED																		
12	TILLAGE AT PLANTING									100	100	100	93	82	70	100	100	100	0
12	HARNESS XTRA	5.6	L	3.36	LB A/A	2.4	QT/A	PRE	B										
13	TILLAGE AT PLANTING									100	100	100	96	85	77	100	100	100	0
13	HARNESS XTRA	5.6	L	2.52	LB A/A	1.8	QT/A	PRE	B										
13	BALANCE PRO	4	SC	0.07	LB A/A	2.24	FL OZ/A	PRE	B										
14	TILLAGE AT PLANTING									100	100	100	93	92	93	100	100	100	0
14	HARNESS XTRA	5.6	L	2.52	LB A/A	1.8	QT/A	PRE	B										
14	HORNET	68.5	WG	0.214	LB A/A	5	OZ/A	PRE	B										

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Crop Code										ZEAMX
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Rating Date			8-15-03			8-15-03			8-15-03	6-13-03
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15	TILLAGE AT PLANTING 15 KEYSTONE	5.25	L	3.68	LB A/A	2.8	QT/A	PRE	B	100	100	100	89	78	58	100	100	100	0
16	TILLAGE AT PLANTING 16 GUARDSMAN MAX	5	L	2.5	LB A/A	2	QT/A	PRE	B	100	100	100	87	78	67	100	100	100	0
17	TILLAGE AT PLANTING 17 BICEP II MAGNUM	5.5	L	2.9	LB A/A	2.1	QT/A	PRE	B	100	100	100	90	80	67	100	100	100	0
18	TILLAGE AT PLANTING 18 LUMAX	3.94	L	2.96	LB A/A	3	QT/A	PRE	B	100	100	100	95	90	82	100	100	100	0
19	TILLAGE AT PLANTING 19 EPIC	58	WG	0.47	LB A/A	13	OZ/A	PRE	B	100	100	100	80	75	50	100	100	100	0
20	TILLAGE AT PLANTING 20 DEGREE XTRA 20 BALANCE PRO	4 4	L SC	3.2 0.07	LB A/A LB A/A	3.2 2.24	QT/A FL OZ/A	PRE PRE	B B	100	100	100	95	85	75	100	100	100	0
LSD (P=.05)										0.0	18.4	6.9	5.5	19.2	26.2	0.0	18.4	0.0	0.0
Replicate F										0.000	1.000	4.147	0.042	1.763	0.408	0.000	1.000	0.000	0.000
Replicate Prob(F)										1.0000	0.3774	0.0235	0.9587	0.1852	0.6681	1.0000	0.3774	1.0000	1.0000
Treatment F										0.000	14.368	161.096	132.895	12.514	10.868	0.000	14.368	0.000	0.000
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	1.0000	1.0000

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Trial Comments

1. Protocol: Monsanto.
2. Ratings: CI at V2-V3; WC 14 and 28 DA each application and 84 DA planting.
3. No yield.
4. Tillage at 14EPP was prior to spraying on 4-28-03.
5. DAT = days after treatment. DA-B = days after PRE application. V2-V3 = Corn stage at rating date.  
    14 days after 14EPP and PRE was on 5-13-03 and 6-7-03, respectively.  
    28 days after 14EPP and PRE was on 5-27-03 and 6-21-03, respectively.