

## Impact Corn Herbicide Evaluation.

Project Code: 05-24B-W40 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: 11-14-05

**Objective:**

To compare the performance of Impact to other postemergence commercial standards when used in sequential weed control programs in field corn.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	AMBTR ragweed, giant	Ambrosia trifida L.
3.	AMATA waterhemp, common	Amaranthus rudis Sauer
4.	AMBEL ragweed, common	Ambrosia artemisiifolia L.

Crop 1: ZEAMX corn, field Variety: 33P71 CL  
Planting Method: Seeded Planting Date: 5-5-05  
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, 2004

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 100 LB/A

Soil Name: Rushville % OM: 2.3 pH: 6 CEC: 12  
Texture: Silt loam Fert. Level: P1: 83 LB/A, K: 446 LB/A

**APPLICATION DESCRIPTION**

	A	B
Application Date:	05-06-05	05-24-05
Time of Day:	14:30	7:30
Application Method:	Spray	Spray
Application Timing:	PRE	2-4"W
Applic. Placement:	BROSOI	BROFOL
Air Temp., Unit:	76 F	62 F
% Relative Humidity:	30	70
Wind Velocity, Unit:	5 MPH	8 MPH
Soil Moisture:	NORMAL	NORMAL

**CROP STAGE AT EACH APPLICATION**

	A	B
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V4
Height, Unit:	NA NA	7-8 IN

**WEED STAGE AT EACH APPLICATION**

	A	B
Weed 1 Code:		SETFA
Stage (leaves):		4-5
Height (inches):		1-5
Density:		Medium
Weed 2 Code:		AMBTR
Stage (leaves):		4-6
Height (inches):		3-5
Density:		Medium
Weed 4 Code:		AMBEL
Stage (leaves):		4-6
Height (inches):		1-3
Density:		Low

**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	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

**NOTES:**

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Weed Code		Crop Code		ZEAMX				SETFA	SETFA	SETFA					
Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	Yield	Injury	Injury	Injury	Control	Control	Control					
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	10-14-05	06-07-05	06-21-05	07-19-05	06-07-05	06-21-05	07-19-05
				bu/A	Percent	Percent	Percent	Percent	14 DA-B	28 DA-B	56 DA-B	14 DA-B	28 DA-B	56 DA-B	
1	NONTREATED								0	0	0	0	0	0	0
2	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	64	0	0	0	80	55	50
3	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	164	0	0	0	90	70	63
3	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"	W B							
3	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"	W B							
3	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"	W B							
3	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"	W B							
4	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	199	0	0	0	97	94	81
4	CALLISTO	4 SC		0.094 lb ai/a	3 fl oz/a		2-4"	W B							
4	AATREX	90 WG		0.25 lb ai/a	4.44 oz/a		2-4"	W B							
4	PRIME OIL COC	100 LIQ		1.0 % v/v	1 % v/v		2-4"	W B							
4	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"	W B							
5	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	183	0	0	0	97	79	77
5	DISTINCT	70 WG		0.175 lb ai/a	4 oz/a		2-4"	W B							
5	ACTIVATOR 90	100 LIQ		0.25 % v/v	0.25 % v/v		2-4"	W B							
5	28% UAN	100 LIQ		1.25 % v/v	1.25 % v/v		2-4"	W B							
6	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	203	0	0	0	99	96	94
6	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"	W B							
6	ACCENT	75 WG		0.031 lb ai/a	0.66 oz/a		2-4"	W B							
6	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"	W B							
6	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"	W B							
6	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"	W B							
7	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	210	0	0	0	98	98	97
7	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"	W B							
7	STEADFAST	75 WG		0.035 lb ai/a	0.75 oz/a		2-4"	W B							
7	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"	W B							
7	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"	W B							
7	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"	W B							
8	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	194	0	0	0	98	98	96
8	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"	W B							
8	OPTION	35 WG		0.033 lb ai/a	1.51 oz/a		2-4"	W B							
8	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"	W B							
8	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"	W B							
8	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"	W B							
LSD (P=.05)									43.3	0.0	0.0	0.0	8.5	20.0	19.3
Replicate F									0.922	0.000	0.000	0.000	2.625	1.903	0.939
Replicate Prob(F)									0.4204	1.0000	1.0000	1.0000	0.1076	0.1858	0.4144
Treatment F									29.261	0.000	0.000	0.000	146.742	25.962	26.394
Treatment Prob(F)									0.0001	1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

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Weed Code				AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA					
Crop Code				Control	Control	Control	Control	Control	Control					
Rating Data Type				Percent	Percent	Percent	Percent	Percent	Percent					
Rating Unit				06-07-05	06-21-05	07-19-05	06-07-05	06-21-05	07-19-05					
Rating Date				14 DA-B	28 DA-B	56 DA-B	14 DA-B	28 DA-B	56 DA-B					
Trt-Eval Interval														
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED								0	0	0	0	0	0
2	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	82	72	63	99	99	99
3	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	97	97	95	99	99	99
3	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B						
3	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B						
3	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B						
3	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B						
4	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	97	98	98	99	99	99
4	CALLISTO	4 SC		0.094 lb ai/a	3 fl oz/a		2-4"W	B						
4	AATREX	90 WG		0.25 lb ai/a	4.44 oz/a		2-4"W	B						
4	PRIME OIL COC	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B						
4	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B						
5	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	97	94	93	99	99	99
5	DISTINCT	70 WG		0.175 lb ai/a	4 oz/a		2-4"W	B						
5	ACTIVATOR 90	100 LIQ		0.25 % v/v	0.25 % v/v		2-4"W	B						
5	28% UAN	100 LIQ		1.25 % v/v	1.25 % v/v		2-4"W	B						
6	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	97	97	97	99	99	99
6	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B						
6	ACCENT	75 WG		0.031 lb ai/a	0.66 oz/a		2-4"W	B						
6	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B						
6	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B						
6	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B						
7	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	97	98	98	99	99	99
7	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B						
7	STEADFAST	75 WG		0.035 lb ai/a	0.75 oz/a		2-4"W	B						
7	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B						
7	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B						
7	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B						
8	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	97	96	96	99	99	99
8	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B						
8	OPTION	35 WG		0.033 lb ai/a	1.51 oz/a		2-4"W	B						
8	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B						
8	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B						
8	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B						
LSD (P=.05)									3.5	10.5	12.7	0.4	0.0	0.0
Replicate F									1.155	0.241	0.491	1.000	0.000	0.000
Replicate Prob(F)									0.3435	0.7887	0.6220	0.3927	1.0000	1.0000
Treatment F									862.954	97.653	67.827	88125.149	0.000	0.000
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

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Weed Code	AMBEL	AMBEL	AMBEL
Crop Code			
Rating Data Type	Control	Control	Control
Rating Unit	Percent	Percent	Percent
Rating Date	06-07-05	06-21-05	07-19-05
Trt-Eval Interval	14 DA-B	28 DA-B	56 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code			
1	NONTREATED								0	0	0
2	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	91	93	93
3	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	99	99	99
3	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B			
3	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B			
3	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B			
3	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B			
4	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	99	99	99
4	CALLISTO	4 SC		0.094 lb ai/a	3 fl oz/a		2-4"W	B			
4	AATREX	90 WG		0.25 lb ai/a	4.44 oz/a		2-4"W	B			
4	PRIME OIL COC	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B			
4	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B			
5	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	99	99	99
5	DISTINCT	70 WG		0.175 lb ai/a	4 oz/a		2-4"W	B			
5	ACTIVATOR 90	100 LIQ		0.25 % v/v	0.25 % v/v		2-4"W	B			
5	28% UAN	100 LIQ		1.25 % v/v	1.25 % v/v		2-4"W	B			
6	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	99	99	99
6	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B			
6	ACCENT	75 WG		0.031 lb ai/a	0.66 oz/a		2-4"W	B			
6	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B			
6	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B			
6	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B			
7	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	99	99	99
7	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B			
7	STEADFAST	75 WG		0.035 lb ai/a	0.75 oz/a		2-4"W	B			
7	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B			
7	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B			
7	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B			
8	BICEP II MAGNUM	5.5 L		2.2 lb ai/a	3.2 pt/a		PRE	A	99	99	99
8	IMPACT	2.8 SC		0.016 lb ai/a	0.73 fl oz/a		2-4"W	B			
8	OPTION	35 WG		0.033 lb ai/a	1.51 oz/a		2-4"W	B			
8	AATREX	90 WG		0.5 lb ai/a	8.9 oz/a		2-4"W	B			
8	DESTINY MSO	100 LIQ		1.0 % v/v	1 % v/v		2-4"W	B			
8	28% UAN	100 LIQ		2.5 % v/v	2.5 % v/v		2-4"W	B			
LSD (P=.05)									5.7	6.8	6.8
Replicate F									1.080	0.940	0.940
Replicate Prob(F)									0.3664	0.4138	0.4138
Treatment F									334.833	238.182	238.182
Treatment Prob(F)									0.0001	0.0001	0.0001

## Trial Comments

1. Protocol: AMVAC.
2. CI/WC 14, 28 and 56 DA "B" for all plots.
3. Yield, destroy grain.
4. DA-B = Days after 2-4"W application.
5. Harvested 10-14-05, (2) 30 inch rows by 25 ft.