

Bayer Corn Herbicide Programs.

Project Code: 05-51W-MS80 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:

Evaluate the performance of various herbicide programs in corn from Bayer.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	CYPES nutsedge, yellow	Cyperus esculentus L.
3.	AMBTR ragweed, giant	Ambrosia trifida L.
4.	ABUTH velvetleaf	Abutilon theophrasti Medicus
5.	AMATA waterhemp, common	Amaranthus rudis Sauer

Crop 1: ZEAMX corn, field Variety: P33P69 LL
 Planting Method: Seeded Planting Date: 5-6-05
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 27 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: Weir % OM: 2.2 pH: 6.5 CEC: 11
 Texture: Silt loam Fert. Level: P1: 94 LB/A, K: 396 LB/A

APPLICATION DESCRIPTION

	A	B	C
Application Date:	05-06-05	05-20-05	05-25-05
Time of Day:	16:00	9:00	9:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	1-3"W	3-4"W
Applic. Placement:	BROSIO	BROFOL	BROFOL
Air Temp., Unit:	76 F	66 F	64 F
% Relative Humidity:	30	96	60
Wind Velocity, Unit:	5 MPH	11 MPH	7-10 MPH
Soil Moisture:	NORMAL	ABONOR	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V2-V3	ZEAMX V4
Height, Unit:	NA NA	3-4 IN	5-6 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:		SETFA	SETFA
Stage (leaves):		3-4	3-5
Height (inches):		1-3	1-4
Density:		Medium	Medium
Weed 2 Code:		CYPES	CYPES
Stage (leaves):		3-6	4-7
Height (inches):		2-4	3-5
Density:		Medium	Medium
Weed 3 Code:		AMBTR	AMBTR
Stage (leaves):		4-6	4-6
Height (inches):		1-3	3-5
Density:		Low	Medium
Weed 4 Code:		ABUTH	ABUTH
Stage (leaves):		2-4	3-4
Height (inches):		1-3	2-4
Density:		High	High
Weed 5 Code:		AMATA	AMATA
Stage (leaves):		2-4	3-6
Height (inches):		0.5-1	1-3
Density:		Low	Medium

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	8003	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

NOTES:

Bayer Corn Herbicide Programs.

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Weed Code								SETFA	SETFA						
Crop Code								ZEAMX	ZEAMX						
Rating Data Type								Yield	Injury						
Rating Unit								bu/A	Percent						
Rating Date								10-17-05	05-20-05						
Trt-Eval Interval								14 DA-A	7 DAPO						
								28 DA-A	28 DA-C						
								56 DA-C	06-22-05						
								28 DA-C	07-20-05						
								Control	Control						
								Percent	Percent						
1	NONTREATED							26	0	0	0	0	0	0	
2	BALANCE PRO	4 SC	0.047 lb ai/a	1.5 fl oz/a	PRE	A		189	0	2	2	0	0	98	97
2	LIBERTY	1.67 EC	0.417 lb ai/a	32 fl oz/a	3-4"W	C									
2	AATREX	90 WG	0.5 lb ai/a	0.556 lb/a	3-4"W	C									
2	AMS	100 DRY	3.0 lb/a	3 lb/a	3-4"W	C									
3	BALANCE PRO	4 SC	0.047 lb ai/a	1.5 fl oz/a	PRE	A		165	0	3	3	2	0	98	98
3	OPTION	35 WG	0.0328 lb ai/a	1.5 oz/a	3-4"W	C									
3	DESTINY MSO	100 LIQ	1.5 pt/a	1.5 pt/a	3-4"W	C									
3	28% UAN	100 LIQ	1.5 qt/a	1.5 qt/a	3-4"W	C									
4	BALANCE PRO	4 SC	0.07 lb ai/a	2.25 fl oz/a	PRE	A		90	0	0	0	0	0	89	88
4	DEFINE	4 SC	0.375 lb ai/a	12 fl oz/a	PRE	A									
5	RADIUS	4 SC	0.656 lb ai/a	21 fl oz/a	PRE	A		94	0	0	0	0	0	96	97
6	BALANCE PRO	4 SC	0.078 lb ai/a	2.5 fl oz/a	PRE	A		147	0	0	0	0	0	62	63
6	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	PRE	A									
7	BALANCE PRO	4 SC	0.07 lb ai/a	2.25 fl oz/a	PRE	A		133	0	0	0	0	0	83	82
7	DEFINE	4 SC	0.375 lb ai/a	12 fl oz/a	PRE	A									
7	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	PRE	A									
8	DEFINE	4 SC	0.375 lb ai/a	12 fl oz/a	PRE	A		203	0	4	4	0	0	96	97
8	LIBERTY	1.67 EC	0.417 lb ai/a	32 fl oz/a	3-4"W	C									
8	AATREX	90 WG	0.5 lb ai/a	0.556 lb/a	3-4"W	C									
8	AMS	100 DRY	3.0 lb/a	3 lb/a	3-4"W	C									
9	DEFINE	4 SC	0.375 lb ai/a	12 fl oz/a	PRE	A		188	0	6	6	3	0	95	94
9	OPTION	35 WG	0.0328 lb ai/a	1.5 oz/a	3-4"W	C									
9	DISTINCT	70 WG	0.175 lb ai/a	4 oz/a	3-4"W	C									
9	DESTINY MSO	100 LIQ	1.5 pt/a	1.5 pt/a	3-4"W	C									
9	28% UAN	100 LIQ	1.5 qt/a	1.5 qt/a	3-4"W	C									
10	LIBERTY	1.67 EC	0.417 lb ai/a	32 fl oz/a	1-3"W	B		158	0	0	0	0	0	92	92
10	AATREX	90 WG	0.5 lb ai/a	0.556 lb/a	1-3"W	B									
10	AMS	100 DRY	3.0 lb/a	3 lb/a	1-3"W	B									
11	DEFINE	4 SC	0.68 lb ai/a	21.7 fl oz/a	PRE	A		178	0	4	4	0	0	92	92
11	BUCTRIL+ATRAZINE	3 L	0.75 lb ai/a	2 pt/a	3-4"W	C									
12	BALANCE PRO	4 SC	0.07 lb ai/a	2.25 fl oz/a	PRE	A		194	0	3	3	0	0	57	53
12	BUCTRIL+ATRAZINE	3 L	0.75 lb ai/a	2 pt/a	3-4"W	C									
13	OPTION	35 WG	0.0328 lb ai/a	1.5 oz/a	3-4"W	C		202		5	5	4	0	92	92
13	DISTINCT	70 WG	0.175 lb ai/a	4 oz/a	3-4"W	C									
13	DESTINY MSO	100 LIQ	1.5 pt/a	1.5 pt/a	3-4"W	C									
13	28% UAN	100 LIQ	1.5 qt/a	1.5 qt/a	3-4"W	C									
14	LIBERTY	1.67 EC	0.417 lb ai/a	32 fl oz/a	1-3"W	B		198	0	5	0	0	0	95	96
14	AATREX	90 WG	0.5 lb ai/a	0.556 lb/a	1-3"W	B									
14	AMS	100 DRY	3.0 lb/a	3 lb/a	1-3"W	B									
14	LIBERTY	1.67 EC	0.365 lb ai/a	28 fl oz/a	3-4"W	C									
14	AMS	100 DRY	3.0 lb/a	3 lb/a	3-4"W	C									
15	LEXAR	3.7 L	2.78 lb ai/a	3 qt/a	PRE	A		169	0	0	0	0	0	73	73
16	CINCH ATZ	5.5 L	1.03 lb ai/a	1.5 pt/a	PRE	A		204	0	0	0	0	0	96	96
16	STEADFAST	75 WG	0.035 lb ai/a	0.75 oz/a	3-4"W	C									
16	CALLISTO	4 SC	0.047 lb ai/a	1.5 fl oz/a	3-4"W	C									
16	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	3-4"W	C									
16	PRIME OIL COC	100 LIQ	1.0 % v/v	1 % v/v	3-4"W	C									
16	AMS	100 DRY	2.0 lb/a	2 lb/a	3-4"W	C									
LSD (P=05)								32.6	0.0	2.0	2.0	2.3	0.0	25.2	25.3
Replicate F								1.647	0.000	0.309	0.309	0.422	0.000	1.710	1.852
Replicate Prob(F)								0.2095	1.0000	0.7364	0.7364	0.6593	1.0000	0.1980	0.1744
Treatment F								20.068	0.000	9.040	10.056	2.581	0.000	8.453	8.442
Treatment Prob(F)								0.0001	1.0000	0.0001	0.0001	0.0132	1.0000	0.0001	0.0001

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						CYPES	CYPES	AMBTR	AMBTR	ABUTH	ABUTH	AMATA	AMATA				
Weed Code	Crop Code					Control	Control	Control	Control	Control	Control	Control	Control				
Rating Data Type	Rating Unit					Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent				
Rating Date	Trt-Eval Interval					06-22-05	07-20-05	06-22-05	07-20-05	06-22-05	07-20-05	06-22-05	07-20-05				
						28 DA-C	56 DA-C	28 DA-C	56 DA-C	28 DA-C	56 DA-C	28 DA-C	56 DA-C				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code								
1	NONTREATED									0	0	0	0	0	0	0	0
2	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A	67	68	94	92	98	96	99	99
2	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W C								
2	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W C								
2	AMS	100	DRY	3.0	lb/a	3	lb/a	3-4"	W C								
3	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A	48	43	70	60	98	98	80	78
3	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	3-4"	W C								
3	DESTINY MSO	100	LIQ	1.5	pt/a	1.5	pt/a	3-4"	W C								
3	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W C								
4	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A	35	33	20	13	47	40	70	70
4	DEFINE	4	SC	0.375	lb ai/a	12	fl oz/a	PRE	A								
5	RADIUS	4	SC	0.656	lb ai/a	21	fl oz/a	PRE	A	38	30	23	12	43	38		
6	BALANCE PRO	4	SC	0.078	lb ai/a	2.5	fl oz/a	PRE	A	37	32	55	43	66	63	99	99
6	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	A								
7	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A	33	30	65	57	85	80	99	99
7	DEFINE	4	SC	0.375	lb ai/a	12	fl oz/a	PRE	A								
7	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	A								
8	DEFINE	4	SC	0.375	lb ai/a	12	fl oz/a	PRE	A	48	43	96	95	98	98	98	98
8	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	3-4"	W C								
8	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	3-4"	W C								
8	AMS	100	DRY	3.0	lb/a	3	lb/a	3-4"	W C								
9	DEFINE	4	SC	0.375	lb ai/a	12	fl oz/a	PRE	A	83	82	97	96	95	94	95	95
9	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	3-4"	W C								
9	DISTINCT	70	WG	0.175	lb ai/a	4	oz/a	3-4"	W C								
9	DESTINY MSO	100	LIQ	1.5	pt/a	1.5	pt/a	3-4"	W C								
9	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W C								
10	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	1-3"	W B	40	37	70	55	43	42	77	76
10	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	1-3"	W B								
10	AMS	100	DRY	3.0	lb/a	3	lb/a	1-3"	W B								
11	DEFINE	4	SC	0.68	lb ai/a	21.7	fl oz/a	PRE	A	45	45	98	98	91	90	99	99
11	BUCTRIL+ATRAZINE	3	L	0.75	lb ai/a	2	pt/a	3-4"	W C								
12	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A	30	25	95	94	97	96	99	99
12	BUCTRIL+ATRAZINE	3	L	0.75	lb ai/a	2	pt/a	3-4"	W C								
13	OPTION	35	WG	0.0328	lb ai/a	1.5	oz/a	3-4"	W C	85	87	92	92	95	95	82	80
13	DISTINCT	70	WG	0.175	lb ai/a	4	oz/a	3-4"	W C								
13	DESTINY MSO	100	LIQ	1.5	pt/a	1.5	pt/a	3-4"	W C								
13	28% UAN	100	LIQ	1.5	qt/a	1.5	qt/a	3-4"	W C								
14	LIBERTY	1.67	EC	0.417	lb ai/a	32	fl oz/a	1-3"	W B	80	80	88	88	96	96	98	98
14	AATREX	90	WG	0.5	lb ai/a	0.556	lb/a	1-3"	W B								
14	AMS	100	DRY	3.0	lb/a	3	lb/a	1-3"	W B								
14	LIBERTY	1.67	EC	0.365	lb ai/a	28	fl oz/a	3-4"	W C								
14	AMS	100	DRY	3.0	lb/a	3	lb/a	3-4"	W C								
15	LEXAR	3.7	L	2.78	lb ai/a	3	qt/a	PRE	A	73	73	85	76	98	98	99	99
16	CINCH ATZ	5.5	L	1.03	lb ai/a	1.5	pt/a	PRE	A	87	87	99	99	99	99	99	99
16	STEADFAST	75	WG	0.035	lb ai/a	0.75	oz/a	3-4"	W C								
16	CALLISTO	4	SC	0.047	lb ai/a	1.5	fl oz/a	3-4"	W C								
16	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	3-4"	W C								
16	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	3-4"	W C								
16	AMS	100	DRY	2.0	lb/a	2	lb/a	3-4"	W C								
LSD (P=05)										17.1	19.7	10.3	11.8	15.0	18.8	16.3	18.6
Replicate F										3.149	2.524	0.017	0.075	2.193	2.912	1.721	1.555
Replicate Prob(F)										0.0573	0.0970	0.9834	0.9281	0.1291	0.0699	0.2011	0.2326
Treatment F										17.564	14.860	78.279	68.742	32.190	21.784	21.362	16.577
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Bayer.
2. Ratings: CI 14 DA "A" and 7 DA POST applications; CI for all treatments at 26-44 DAT.
WC at 45-59 DAT.
3. Yield if possible.
4. DA-A = Days after PRE application. DAPO = Days after postemergence applications.
Ratings on 5-20-05 were prior to any postemergence application.
Ratings at 7 days after 1-3"W and 3-4"W applications were on 5-27-05 and 6-1-05, respectively.
Ratings on 6-3-05 at 28 days after PRE application were also 9 and 14 days after 1-3"W and 3-4"W application respectively.
Ratings on 6-22-05 at 28 days after 3-4"W application were also 33 days after 1-3"W application.
Ratings on 7-20-05 at 56 days after 3-4"W application were also 61 days after 1-3"W application.
5. AMATA control ratings not possible in all plots as other weeds reduced AMATA population.
6. Harvested 10-17-05, (2) 30 inch rows by 24 ft.