

Balance Pro and USA 2005 for Weed Control in Corn.

Project Code: 04-51E-MN80 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: 8-30-04

Objective:

To determine the best rate and ratio of isoxaflutole with atrazine and flufenacet compared with competitive products.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. PANDI	panicum, fall	Panicum dichotomiflorum Michx.
3. CYPES	nutsedge, yellow	Cyperus esculentus L.
4. AMBTR	ragweed, giant	Ambrosia trifida L.
5. IPOSS	morningglory, species	Ipomoea sp.
6. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1: ZEAMX corn, field Variety: P33P69 LL
Planting Method: Seeded Planting Date: 5-11-04
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, 2003

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

Soil Name: Weir % OM: 2.2 pH: 6.7 CEC: 11
Texture: Silt loam Fert. Level: P1: 90 LB/A, K: 409 LB/A

APPLICATION DESCRIPTION

A
Application Date: 5-13-04
Time of Day: 10:00
Application Method: Spray
Application Timing: PRE
Applic. Placement: BROSOI
Air Temp., Unit: 71 F
% Relative Humidity: 96
Wind Velocity, Unit: 5 MPH
Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

A
Weed 1 Code: SETFA
Weed 2 Code: PANDI
Weed 3 Code: CYPES
Weed 4 Code: AMBTR
Weed 5 Code: IPOSS
Weed 6 Code: AMATA

APPLICATION EQUIPMENT

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

NOTES:

Southern Illinois University

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Weed Code		ZEAMX			SETFA			PANDI			CYPES									
Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	Injury Percent	Injury Percent	Injury Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A			
1	NONTREATED								0	0	0	0	0	0	0	0	0			
2	BALANCE PRO	4 SC		0.047 LB A/A	1.5 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
2	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A	A							73	82	77			
3	BALANCE PRO	4 SC		0.086 LB A/A	2.75 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
3	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A	A							76	91	87			
4	BALANCE PRO	4 SC		0.039 LB A/A	1.25 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
4	DEFINE	4 SC		0.375 LB A/A	12 OZ/A	PRE	A	A							67	87	92			
5	CAMIX	3.67 EC		2.3 LB A/A	2.5 QT/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
6	BALANCE PRO	4 SC		0.078 LB A/A	2.5 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
6	DEFINE	4 SC		0.375 LB A/A	12 OZ/A	PRE	A	A							89	97	95			
7	BALANCE PRO	4 SC		0.039 LB A/A	1.25 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
7	DEFINE	4 SC		0.375 LB A/A	12 OZ/A	PRE	A	A							86	95	93			
7	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A	A												
8	LUMAX	3.94 L		2.46 LB A/A	2.5 QT/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
9	BALANCE PRO	4 SC		0.07 LB A/A	2.25 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
9	DEFINE	4 SC		0.375 LB A/A	12 OZ/A	PRE	A	A							75	80	86			
9	AATREX	90 WG		1.0 LB A/A	1.11 LB/A	PRE	A	A												
10	LUMAX	3.94 L		2.96 LB A/A	3.0 QT/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
11	BALANCE PRO	4 SC		0.07 LB A/A	2.25 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
11	HARNESS XTRA	5.6 L		2.8 LB A/A	2.0 QT/A	PRE	A	A							99	97	97			
12	USA 2005	4 SC		0.625 LB A/A	20 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
13	USA 2005	4 SC		0.625 LB A/A	20 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
13	AATREX	90 WG		1 LB A/A	1.11 LB/A	PRE	A	A							90	90	94			
14	USA 2005	4 SC		0.625 LB A/A	20 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
14	AATREX	90 WG		1.5 LB A/A	1.67 LB/A	PRE	A	A							99	97	97			
15	USA 2005	4 SC		0.5 LB A/A	16 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
16	USA 2005	4 SC		0.5 LB A/A	16 OZ/A	PRE	A	A	0	0	0	99	99	99	99	99	99			
16	AATREX	90 WG		1.5 LB A/A	1.67 LB/A	PRE	A	A							83	88	83			
LSD (P=.05)									0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.4	0.0	25.9	13.8	16.4
Replicate F									0.000	0.000	0.000	0.967	0.967	0.000	0.967	3.346	0.000	0.100	0.493	0.603
Replicate Prob(F)									1.0000	1.0000	1.0000	0.3923	0.3923	1.0000	0.3923	0.0493	1.0000	0.9053	0.6155	0.5540
Treatment F									0.000	0.000	0.000	85231.383	85231.383	0.000	85231.383	32752.451	0.000	7.361	24.895	17.599
Treatment Prob(F)									1.0000	1.0000	1.0000	0.0001	0.0001	1.0000	0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

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Weed Code	AMBTR	AMBTR	AMBTR	IPOSS	IPOSS	IPOSS	AMATA	AMATA	AMATA
Crop Code									
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	5-27-04	6-10-04	7-8-04	5-27-04	6-10-04	7-8-04	5-27-04	6-10-04	7-8-04
Trt-Eval Interval	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A	14 DA-A	28 DA-A	56 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
1	NONTREATED									0	0	0	0	0	0	0	0	0	0
2	BALANCE PRO	4	SC	0.047	LB A/A	1.5	OZ/A	PRE	A	99	94	88	99	98	95	99	99	99	96
2	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A										
3	BALANCE PRO	4	SC	0.086	LB A/A	2.75	OZ/A	PRE	A	98	96	90	99	98	98	99	99	99	95
3	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A										
4	BALANCE PRO	4	SC	0.039	LB A/A	1.25	OZ/A	PRE	A	97	88	78	97	97	90	99	99	99	97
4	DEFINE	4	SC	0.375	LB A/A	12	OZ/A	PRE	A										
5	CAMIX	3.67	EC	2.3	LB A/A	2.5	QT/A	PRE	A	98	94	86	99	98	97	99	99	99	99
6	BALANCE PRO	4	SC	0.078	LB A/A	2.5	OZ/A	PRE	A	98	95	90	99	96	95	99	99	99	99
6	DEFINE	4	SC	0.375	LB A/A	12	OZ/A	PRE	A										
7	BALANCE PRO	4	SC	0.039	LB A/A	1.25	OZ/A	PRE	A	98	93	82	99	96	94	99	99	99	99
7	DEFINE	4	SC	0.375	LB A/A	12	OZ/A	PRE	A										
7	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A										
8	LUMAX	3.94	L	2.46	LB A/A	2.5	QT/A	PRE	A	98	93	87	99	97	96	99	99	99	99
9	BALANCE PRO	4	SC	0.07	LB A/A	2.25	OZ/A	PRE	A	99	93	80	99	99	97	99	99	99	93
9	DEFINE	4	SC	0.375	LB A/A	12	OZ/A	PRE	A										
9	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A										
10	LUMAX	3.94	L	2.96	LB A/A	3.0	QT/A	PRE	A	99	95	91	99	97	95	99	99	99	99
11	BALANCE PRO	4	SC	0.07	LB A/A	2.25	OZ/A	PRE	A	99	97	90	99	98	92	99	99	99	99
11	HARNESS XTRA	5.6	L	2.8	LB A/A	2.0	QT/A	PRE	A										
12	USA 2005	4	SC	0.625	LB A/A	20	OZ/A	PRE	A	98	94	91	99	95	94	99	99	99	99
13	USA 2005	4	SC	0.625	LB A/A	20	OZ/A	PRE	A	98	95	88	99	98	95	99	99	99	99
13	AATREX	90	WG	1	LB A/A	1.11	LB/A	PRE	A										
14	USA 2005	4	SC	0.625	LB A/A	20	OZ/A	PRE	A	99	96	93	99	96	95	99	99	99	99
14	AATREX	90	WG	1.5	LB A/A	1.67	LB/A	PRE	A										
15	USA 2005	4	SC	0.5	LB A/A	16	OZ/A	PRE	A	95	90	73	99	97	95	99	99	99	96
16	USA 2005	4	SC	0.5	LB A/A	16	OZ/A	PRE	A	99	93	89	99	98	96	99	99	99	99
16	AATREX	90	WG	1.5	LB A/A	1.67	LB/A	PRE	A										
LSD (P=.05)										2.1	3.7	11.8	0.9	1.9	6.2	0.0	0.5	2.5	
Replicate F										0.974	2.301	1.559	2.128	5.263	0.402	0.000	0.230	0.434	
Replicate Prob(F)										0.3896	0.1182	0.2274	0.1373	0.0112	0.6729	1.0000	0.7958	0.6520	
Treatment F										1170.035	346.959	29.659	5795.371	1390.630	123.881	0.000	20266.352	778.676	
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000	0.0001	0.0001	

Trial Comments

1. Protocol: Bayer.
2. Ratings: CI and WC 14, 28 and 56 DAT.
3. DA-A = Days after PRE application.