

Acetochlor Plus Atrazine Mixtures with Isoxaflutole.

Project Code: 05-10B-W160 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 efficacy and crop tolerance of MANA acetochlor plus atrazine and MANA acetochlor plus atrazine tank-mixed with Balance Pro.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	CYPES nutsedge, yellow	Cyperus esculentus L.
3.	XANST cocklebur, common	Xanthium strumarium L.
4.	ABUTH velvetleaf	Abutilon theophrasti Medicus

Crop 1: ZEAMX corn, field Variety: 33P65 RR
 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: 24 FT Reps: 4
 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 pH: 6.2 CEC: 11
 Texture: Silt loam Fert. Level: P1: 88 LB/A, K: 445 LB/A

APPLICATION DESCRIPTION

A
 Application Date: 05-06-05
 Time of Day: 11:15
 Application Method: Spray
 Application Timing: PRE
 Applic. Placement: BROSIO
 Air Temp., Unit: 75 F
 % Relative Humidity: 30
 Wind Velocity, Unit: 5 MPH
 Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

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

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:

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Weed Code		Crop Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		ZEAMX	ZEAMX	ZEAMX	SETFA	SETFA	SETFA	SETFA	
												Injury	Injury	Injury	Control	Control	Control	Control	
												Percent	Percent	Percent	Percent	Percent	Percent	Percent	
												05-26-05	06-09-05	06-23-05	05-20-05	06-03-05	06-17-05	07-01-05	
												14 DAE	28 DAE	42 DAE	14 DA-A	28 DA-A	42 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	MAN-ACE	6.4	EC	0.8	lb ai/a	1	pt/a	PRE	A	0	0	0	80	68	0	0			
2	MAN-ACE	6.4	EC	1.2	lb ai/a	1.5	pt/a	PRE	A	0	0	0	88	94	48	20			
3	MAN-ACE	6.4	EC	1.6	lb ai/a	2	pt/a	PRE	A	0	0	0	89	96	72	55			
4	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	0	0	0	87	93	48	8			
5	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	0	0	0	90	97	73	36			
6	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	0	0	0	90	97	78	66			
7	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	0	0	0	89	93	55	13			
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A										
8	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	0	0	0	88	95	48	10			
8	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A										
9	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	0	0	0	89	96	68	36			
9	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A										
10	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	0	0	0	90	97	77	63			
10	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A										
11	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	0	0	0	90	98	68	54			
11	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A										
12	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	0	0	0	90	97	74	50			
12	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A										
13	AATREX	90	WG	0.41	lb ai/a	0.456	lb/a	PRE	A	0	0	0	3	0	0	0			
14	AATREX	90	WG	0.61	lb ai/a	0.68	lb/a	PRE	A	0	0	0	3	6	0	0			
15	AATREX	90	WG	0.81	lb ai/a	0.9	lb/a	PRE	A	0	0	0	10	0	0	0			
16	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A	0	0	0	0	0	0	0			
17	BALANCE PRO	4	SC	0.07	lb ai/a	2.24	fl oz/a	PRE	A	0	0	0	0	0	0	0			
18	NONTREATED									0	0	0	0	0	0	0			
LSD (P=.05)											0.0	0.0	0.0	5.8	15.9	20.3	26.6		
Replicate F											0.000	0.000	0.000	1.072	0.573	0.303	1.669		
Replicate Prob(F)											1.0000	1.0000	1.0000	0.3693	0.6354	0.8229	0.1854		
Treatment F											0.000	0.000	0.000	407.593	64.705	21.905	7.109		
Treatment Prob(F)											1.0000	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001		

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Weed Code	CYPES	CYPES	CYPES	CYPES	XANST	XANST	XANST	XANST
Crop Code	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	05-20-05	06-03-05	06-17-05	07-01-05	05-20-05	06-03-05	06-17-05	07-01-05
Rating Date	14 DA-A	28 DA-A	42 DA-A	56 DA-A	14 DA-A	28 DA-A	42 DA-A	56 DA-A
Trt-Eval Interval								

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	CYPES	CYPES	CYPES	CYPES	XANST	XANST	XANST	XANST
1	MAN-ACE	6.4	EC	0.8	lb ai/a	1	pt/a	PRE	A	40	28	0	0	33	20	0	0
2	MAN-ACE	6.4	EC	1.2	lb ai/a	1.5	pt/a	PRE	A	61	38	30	0	48	30	0	0
3	MAN-ACE	6.4	EC	1.6	lb ai/a	2	pt/a	PRE	A	58	40	28	0	39	34	0	0
4	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	51	35	23	0	41	24	0	0
5	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	60	40	21	0	48	39	0	0
6	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	68	40	7	0	60	53	0	0
7	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	60	35	24	0	55	54	8	0
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A								
8	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	59	33	29	0	68	55	14	0
8	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A								
9	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	53	33	18	0	68	55	4	1
9	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A								
10	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	64	34	16	0	56	50	6	0
10	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A								
11	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	61	40	20	0	65	59	4	0
11	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A								
12	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	65	43	6	0	68	75	28	7
12	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A								
13	AATREX	90	WG	0.41	lb ai/a	0.456	lb/a	PRE	A	8	0	6	0	10	0	1	0
14	AATREX	90	WG	0.61	lb ai/a	0.68	lb/a	PRE	A	20	0	8	0	19	5	1	0
15	AATREX	90	WG	0.81	lb ai/a	0.9	lb/a	PRE	A	20	0	10	0	25	5	6	0
16	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A	15	0	0	0	8	3	0	0
17	BALANCE PRO	4	SC	0.07	lb ai/a	2.24	fl oz/a	PRE	A	5	0	3	0	9	8	3	0
18	NONTREATED									0	0	0	0	0	0	0	0
LSD (P=.05)										20.0	11.7	15.9	0.0	12.5	13.2	14.4	4.6
Replicate F										2.919	15.590	23.778	0.000	4.045	0.932	1.572	0.874
Replicate Prob(F)										0.0429	0.0001	0.0001	1.0000	0.0118	0.4320	0.2076	0.4605
Treatment F										11.557	18.753	3.496	0.000	27.675	27.318	1.856	0.972
Treatment Prob(F)										0.0001	0.0001	0.0003	1.0000	0.0001	0.0001	0.0457	0.5017

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Weed Code	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	05-20-05	06-03-05	06-17-05	07-01-05
Trt-Eval Interval	14 DA-A	28 DA-A	42 DA-A	56 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	ABUTH 05-20-05 14 DA-A	ABUTH 06-03-05 28 DA-A	ABUTH 06-17-05 42 DA-A	ABUTH 07-01-05 56 DA-A
1	MAN-ACE	6.4	EC	0.8	lb ai/a	1	pt/a	PRE	A	24	5	0	0
2	MAN-ACE	6.4	EC	1.2	lb ai/a	1.5	pt/a	PRE	A	30	10	0	0
3	MAN-ACE	6.4	EC	1.6	lb ai/a	2	pt/a	PRE	A	20	13	0	0
4	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	30	10	0	0
5	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	31	15	0	0
6	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	28	23	0	0
7	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	53	43	4	0
7	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A				
8	ACETO+ATRAZ	5.28	L	1.21	lb ai/a	1.83	pt/a	PRE	A	76	48	14	0
8	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A				
9	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	55	43	3	5
9	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A				
10	ACETO+ATRAZ	5.28	L	1.81	lb ai/a	2.74	pt/a	PRE	A	60	38	14	0
10	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A				
11	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	56	43	8	0
11	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A				
12	ACETO+ATRAZ	5.28	L	2.41	lb ai/a	3.66	pt/a	PRE	A	75	71	34	7
12	BALANCE PRO	4	SC	0.07	lb ai/a	2.25	fl oz/a	PRE	A				
13	AATREX	90	WG	0.41	lb ai/a	0.456	lb/a	PRE	A	3	0	3	0
14	AATREX	90	WG	0.61	lb ai/a	0.68	lb/a	PRE	A	3	3	1	0
15	AATREX	90	WG	0.81	lb ai/a	0.9	lb/a	PRE	A	13	3	5	0
16	BALANCE PRO	4	SC	0.047	lb ai/a	1.5	fl oz/a	PRE	A	26	5	0	0
17	BALANCE PRO	4	SC	0.07	lb ai/a	2.24	fl oz/a	PRE	A	36	13	1	0
18	NONTREATED									0	0	0	0
LSD (P=.05)										12.1	12.3	13.8	5.8
Replicate F										6.007	3.815	1.496	0.672
Replicate Prob(F)										0.0014	0.0153	0.2266	0.5730
Treatment F										30.528	23.008	3.029	0.927
Treatment Prob(F)										0.0001	0.0001	0.0011	0.5485

Trial Comments

1. Protocol: MANA.
2. Ratings: CI 14, 28 and 42 days after emergence, WC 14, 28, 42 and 56 after application.
3. DAE = Days after emergence. DA-A = Days after PRE application.