

One Pass Burndown and Residual in No-Till Corn.

00-2A-MW90

OBJECTIVE: Evaluate combinations of ICIA5676 and ZA1296 to standard no-till corn programs.

SUMMARY: No corn injury was observed for any treatment. ICIA 5676/ ZA 1296 controlled 50 to 93% of giant foxtail compared to 94 to 99% from Fulltime treatments. All treatments controlled at least 90% of common ragweed, velvetleaf, and marestalk. Common waterhemp control was excellent from all treatments except Epic plus Gramoxone Extra + Weedone 638. Tank mixing Aatrex with Epic improved common waterhemp control. ICIA 5676/ ZA 1296 treatments controlled 95 to 99% of yellow nutsedge compared to 83 to 95% from comparison treatments.

Corn yield ranged from 58 bu/A in nontreated plots to 201 bu/A. A reduction in corn yield was observed in plots treated with ICIA5676/ ZA 1296 at 5 pt/A, possibly due to inadequate control of giant foxtail.

HERBICIDES

AATREX 90 WG
 BICEP II MAGNUM 5.5 L
 DEGREE EXTRA 4 L
 EPIC 58 WG
 FIELDMASTER 4.25 L
 FULTIME 4 SC
 GRAMOXONE EXTRA 2.5 SL
 GUARDSMAN 5 L
 ICIA5676/ZA1296 3.5 CS
 TOUCHDOWN 3 SL
 WEEDONE 638 2.8 EC

WEEDS

FOXTAIL, GIANT
 HORSEWEED
 NUTSEDGE, YELLOW
 RAGWEED, COMMON
 VELVETLEAF
 WATERHEMP, COMMON

CROP

CORN, FIELD

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

One Pass Burndown and Residual in No-Till Corn.

Project Code: 00-2A-MW90 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
2. ERICA	HORSEWEED	CONYZA CANADENSIS (L.) CRONG.
3. SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.
4. AMATA	WATERHEMP, COMMON	AMARANTHUS RUDIS SAUER
5. CYPES	NUTSEGE, YELLOW	CYPERUS ESCULENTUS L.
6. ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDICUS

Crop 1:	ZEAMX CORN, FIELD	Variety:	P33G28 LL
Planting Method:	SEEDED	Planting Date:	May-12-00
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:	NO-TILL	Study Design:	RCB		
Previous Crop, Year:	GLXMA, 1999	Fertilizer applied:	N 150 LB/A,	P ₂ O ₅ 0 LB/A,	K ₂ O 0 LB/A

Soil Name:	WEIR	% OM:	2.3	pH:	6.5	CEC:	10
Texture:	SILT LOAM	P ₁ :	78 LB/A,	K:	402 LB/A		

APPLICATION DESCRIPTION

A
 Application Date: May-15-00
 Time of Day: 8:30
 Application Method: SPRAY
 Application Timing: PRE
 Applic. Placement: BROFOL
 Air Temp., Unit: 60 F
 % Relative Humidity: 98
 Wind Velocity, Unit: 0-2 MPH
 Soil Moisture: NORMAL
 % Cloud Cover: 20

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

A
 Weed 1 Code: AMBEL
 Stage(leaves): 6-8
 Height(inches): 3-8
 Density: HIGH

Weed 2 Code: ERICA
 Stage(leaves): 10+
 Height(inches): 6-10
 Density: LOW

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO, SPRAY
 Operating Pressure: 40 PSI
 Nozzle Type: FLAT FAN
 Nozzle Size: 8003
 Boom Length, Unit: 7.33 FT
 Spray Volume, Unit: 20 GPA

NOTES:

Harvested Oct-09-00 (2) 30 inch rows by 25 ft.

TABLE. ONE PASS BURNDOWN AND RESIDUAL IN NO-TILL CORN. PROJECT CODE:00-2A-MW90

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	ZEAMX				CONTROL, DAYS AFTER PRE																	
								INJURY, DA PRE				SETFA				ERICA				AMBEL				CYPES		AMATA		ABUTH	
								7	14	28	49	7	14	28	49	7	14	28	49	7	14	28	49	28	49	28	49	28	49
BU/A	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%							
1 ICIA5676/ZA1296	3.5 CS	2.19 LB A/A	5.0 PT/A	PRE A	162	0	0	0	0	68	78	65	50	72	99	99	99	99	99	97	95	96	95	99	99	99	99		
1 PRIME OIL COC	100 LIQ	1.0 % V/V	1.0 %V/V	PRE A																									
2 ICIA5676/ZA1296	3.5 CS	1.75 LB A/A	4.0 PT/A	PRE A	185	0	0	0	0	99	99	82	78	93	99	99	99	99	99	96	90	97	96	99	98	99	99		
2 TOUCHDOWN	3 SL	0.56 LB AE/A	1.5 PT/A	PRE A																									
2 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	PRE A																									
3 ICIA5676/ZA1296	3.5 CS	1.97 LB A/A	4.5 PT/A	PRE A	181	0	0	0	0	99	99	92	93	98	99	99	99	99	99	98	95	96	99	99	96	99	98		
3 TOUCHDOWN	3 SL	0.56 LB AE/A	1.5 PT/A	PRE A																									
3 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	PRE A																									
4 ICIA5676/ZA1296	3.5 CS	2.19 LB A/A	5.0 PT/A	PRE A	173	0	0	0	0	99	99	87	77	95	99	99	99	99	99	97	96	92	98	99	95	99	99		
4 TOUCHDOWN	3 SL	0.56 LB AE/A	1.5 PT/A	PRE A																									
4 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	PRE A																									
5 ICIA5676/ZA1296	3.5 CS	1.75 LB A/A	4.0 PT/A	PRE A	177	0	0	0	0	99	98	88	80	98	99	99	99	99	99	98	92	96	99	99	97	98	96		
5 GRAMOXONE EXTRA	2.5 SL	0.625 LB A/A	2.0 PT/A	PRE A																									
5 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									
6 ICIA5676/ZA1296	3.5 CS	1.97 LB A/A	4.5 PT/A	PRE A	177	0	0	0	0	99	98	88	82	99	99	99	99	99	99	98	92	95	98	99	99	99	97		
6 GRAMOXONE EXTRA	2.5 SL	0.625 LB A/A	2.0 PT/A	PRE A																									
6 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									
7 ICIA5676/ZA1296	3.5 CS	2.19 LB A/A	5.0 PT/A	PRE A	195	0	0	0	0	99	99	93	85	96	99	99	99	99	99	97	95	96	99	99	95	99	98		
7 GRAMOXONE EXTRA	2.5 SL	0.625 LB A/A	2.0 PT/A	PRE A																									
7 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									
8 FIELDMASTER	4.25 L	4.25 LB A/A	4.0 QT/A	PRE A	187	0	0	0	0	99	99	96	94	95	99	99	99	99	99	99	96	93	89	99	98	99	95		
8 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	PRE A																									
9 FULTIME	4 SC	3.25 LB A/A	3.25 QT/A	PRE A	184	0	0	0	0	99	99	98	98	99	99	99	99	99	99	99	99	93	93	99	98	97	95		
9 GRAMOXONE EXTRA	2.5 SL	0.78 LB A/A	2.5 PT/A	PRE A																									
9 WEEDONE 638	2.8 EC	0.5 LB A/A	1.43 PT/A	PRE A																									
9 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									
10 FULTIME	4 SC	3.5 LB A/A	3.5 QT/A	PRE A	201	0	0	0	0	99	99	99	98	99	99	99	99	99	99	99	99	94	95	99	96	99	96		
10 GRAMOXONE EXTRA	2.5 SL	0.78 LB A/A	2.5 PT/A	PRE A																									
10 WEEDONE 638	2.8 EC	0.5 LB A/A	1.43 PT/A	PRE A																									
10 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									
11 FULTIME	4 SC	3.25 LB A/A	3.25 QT/A	PRE A	189	0	0	0	0	99	99	99	96	98	99	99	99	99	99	99	98	88	88	99	96	99	98		
11 AATREX	90 WG	0.7 LB A/A	12.4 OZ/A	PRE A																									
11 GRAMOXONE EXTRA	2.5 SL	0.78 LB A/A	2.5 PT/A	PRE A																									
11 WEEDONE 638	2.8 EC	0.5 LB A/A	1.43 PT/A	PRE A																									
11 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									
12 EPIC	58 WG	0.544 LB A/A	15.0 OZ/A	PRE A	176	0	0	0	0	99	99	96	96	99	99	99	99	99	99	95	90	85	83	90	72	99	98		
12 GRAMOXONE EXTRA	2.5 SL	0.78 LB A/A	2.5 PT/A	PRE A																									
12 WEEDONE 638	2.8 EC	0.5 LB A/A	1.43 PT/A	PRE A																									
12 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	PRE A																									

(CONTINUED)

TABLE. ONE PASS BURNDOWN AND RESIDUAL IN NO-TILL CORN. PROJECT CODE:00-2A-MW90 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	ZEAMX				CONTROL, DAYS AFTER PRE																		
								INJURY, DA PRE				SETFA				ERICA				AMBEL				CYPES		AMATA		ABUTH		
								7	14	28	49	7	14	28	49	7	14	28	49	7	14	28	49	28	49	28	49	28	49	
13 BICEP II MAGNUM	5.5 L	2.89	LB A/A	2.1 QT/A	PRE	A	195	0	0	0	0	99	99	99	96	96	99	99	99	99	99	99	97	97	93	99	99	99	94	
13 AATREX	90 WG	0.4	LB A/A	7.1 OZ/A	PRE	A																								
13 GRAMOXONE EXTRA	2.5 SL	0.78	LB A/A	2.5 PT/A	PRE	A																								
13 WEEDONE 638	2.8 EC	0.5	LB A/A	1.43 PT/A	PRE	A																								
13 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25 %V/V	PRE	A																								
14 GUARDSMAN	5 L	2.8	LB A/A	4.5 PT/A	PRE	A	188	0	0	0	0	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	95
14 AATREX	90 WG	0.5	LB A/A	8.9 OZ/A	PRE	A																								
14 GRAMOXONE EXTRA	2.5 SL	0.78	LB A/A	2.5 PT/A	PRE	A																								
14 WEEDONE 638	2.8 EC	0.5	LB A/A	1.43 PT/A	PRE	A																								
14 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25 %V/V	PRE	A																								
15 FIELDMASTER	4.25 L	4.25	LB A/A	4.0 QT/A	PRE	A	189	0	0	0	0	99	99	98	96	96	99	99	99	99	99	99	99	99	83	83	99	96	99	95
15 AATREX	90 WG	0.5	LB A/A	8.9 OZ/A	PRE	A																								
15 AMS	100 DRY	2.0	% W/W	17.0 LB/100 GAL	PRE	A																								
16 DEGREE EXTRA	4 L	3.0	LB A/A	3.0 QT/A	PRE	A	184	0	0	0	0	99	99	99	99	98	99	99	99	99	99	99	99	99	92	93	99	99	99	97
16 AATREX	90 WG	1.0	LB A/A	1.11 LB/A	PRE	A																								
16 GRAMOXONE EXTRA	2.5 SL	0.78	LB A/A	2.5 PT/A	PRE	A																								
16 WEEDONE 638	2.8 EC	0.5	LB A/A	1.43 PT/A	PRE	A																								
16 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25 %V/V	PRE	A																								
17 EPIC	58 WG	0.544	LB A/A	15.0 OZ/A	PRE	A	191	0	0	0	0	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	97
17 AATREX	90 WG	1.0	LB A/A	1.11 LB/A	PRE	A																								
17 GRAMOXONE EXTRA	2.5 SL	0.78	LB A/A	2.5 PT/A	PRE	A																								
17 WEEDONE 638	2.8 EC	0.5	LB A/A	1.43 PT/A	PRE	A																								
17 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25 %V/V	PRE	A																								
18 NONTREATED							58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LSD							27	0	0	0	0	15	10	10	11	10	0.5	0	0	0	0	2	5	8	8	2	7	1	4	
P							0.01	1.0	1.0	1.0	1.0	0.01	0.01	0.01	0.01	0.01	0.01	1.0	1.0	1.0	1.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	

1. PROTOCOL: ZENECA "NO-TILL WEED CONTROL IN CORN" AND " NO-TILL FIELD CORN WEED CONTROL".
2. RATING DATES:
7 DAT, 14 DAT, 28 DAT, AND 49 DAT ON MAY-22-00, MAY-29-00, JUN-12-00, AND JUL-3-00, RESPECTIVELY.