

Control of Yellow Nutsedge with Preemergence Corn Herbicides.

00-10C-M120

OBJECTIVE: Determine the effectiveness of various preemergence herbicide programs for control of yellow nutsedge.

SUMMARY: Little to no corn injury was observed from any treatment. Yellow nutsedge control was greatest with Bicep II Magnum and ICIA 5676/ZA 1296 plus Aatrex at 42 days after treatment (DAT). Epic controlled only 60 to 65% of yellow nutsedge. Increasing the Guardsman rate from 4 to 5 pt/A increased yellow nutsedge control from 63 to 85%. All treatments provided excellent control of giant foxtail and common ragweed at 42 DAT.

Corn yield ranged from 96 bu/A in nontreated plots to 150 bu/A. Corn yield was only 122 and 124 bu/A in plots treated with Epic and Guardsman at 4 pt/A, respectively. These yield reductions are likely due to poor yellow nutsedge control.

HERBICIDES

AATREX 90 WG
 AXIOM AT 75 WG
 BALANCE PRO 4 SC
 BICEP II MAGNUM 5.5 L
 BICEP II MAGNUM TR 4.59 L
 DEGREE EXTRA 4 L
 EPIC 58 WG
 FULTIME 4 SC
 GUARDSMAN 5 L
 HARNESS XTRA 5.6 L
 HORNET 68.5 WG
 ICIA5676/ZA1296 3.5 CS
 PRINCEP 90 WG

WEEDS

COCKLEBUR, COMMON
 FOXTAIL, GIANT
 MORNINGGLORY, SPECIES
 NUTSEDGE, YELLOW
 RAGWEED, COMMON
 VELVETLEAF

CROP

CORN, FIELD

Bryan Young and Byron Hendrix

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Control of Yellow Nutsedge with Preemergence Corn Herbicides.

Project Code: 00-10C-M120 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.
2. CYPES	NUTSEGE, YELLOW	CYPERUS ESCULENTUS L.
3. IPOSS	MORNINGGLORY, SPECIES	IPOMOEA SP.
4. AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
5. XANST	COCKLEBUR, COMMON	XANTHIUM STRUMARIUM L.
6. ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDICUS

Crop 1:	ZEAMX CORN, FIELD	Variety:	P33G28 LL
Planting Method:	SEEDED	Planting Date:	May-4-00
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	30 FT	Reps:	3
Tillage Type:	REDUCED-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:	2.4	pH:	6.1	CEC:	11
Texture:	SILT LOAM	P ₁ :	78 LB/A,	K:	413 LB/A		

APPLICATION DESCRIPTION

	A
Application Date:	May-8-00
Time of Day:	8:00
Application Method:	SPRAY
Application Timing:	PRE
Applic. Placement:	BROSOL
Air Temp., Unit:	78 F
% Relative Humidity:	98
Wind Velocity, Unit:	5 MPH

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code:	NA

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-02-00, (2) 30 inch rows by 21 ft.

TABLE. CONTROL OF YELLOW NUTSEDGE WITH PREEMERGENCE CORN HERBICIDES. PROJECT CODE:00-10C-M120

TREATMENT	FORM.	RATE	UNIT	PROD	RATE	APPL	APPL	CODE	YIELD	ZEAMX INJURY			CONTROL, DAYS AFTER TREATMENT																		
										DA PRE			SETFA			CYPES			AMBEL			XANST			ABUTH			IPOHE		IPOSS	
										21	42	70	21	42	70	21	42	70	21	42	70	21	42	70	21	42	70	21	42	70	21
1 NONTREATED									96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2 BICEP II MAGNUM	5.5 L	2.89	LB A/A	4.2	PT/A	PRE	A		131	0	0	0	99	99	99	83	93	93	98	99	99	97	90	88	98	89	86	93	72	68	
3 GUARDSMAN	5 L	2.5	LB A/A	4.0	PT/A	PRE	A		124	0	0	0	99	99	99	72	63	62	99	98	98	93	70	70	99	88	88	93	72	65	
4 HARNESS XTRA	5.6 L	2.8	LB A/A	4.0	PT/A	PRE	A		132	0	0	0	99	99	99	85	82	78	99	99	99	95	81	78	99	95	98	93	70	63	
5 DEGREE EXTRA	4 L	3.0	LB A/A	6.0	PT/A	PRE	A		134	0	0	0	99	99	99	72	78	78	99	99	99	95	73	72	99	94	94	93	77	72	
6 FULTIME	4 SC	2.75	LB A/A	5.5	PT/A	PRE	A		133	0	0	0	99	99	99	73	75	73	99	99	99	93	78	78	98	88	87	93	65	62	
7 FULTIME	4 SC	2.75	LB A/A	5.5	PT/A	PRE	A		127	0	0	0	99	99	99	83	87	83	98	99	99	99	98	92	99	97	97	92	63	57	
7 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	PRE	A																								
8 AXIOM AT	75 WG	1.97	LB A/A	42.0	OZ/A	PRE	A		126	0	0	0	99	99	99	83	80	80	99	99	99	95	77	77	98	96	96	93	77	70	
9 BALANCE PRO	4 SC	0.075	LB A/A	2.4	OZ/A	PRE	A		137	2	0	0	96	99	99	77	67	68	98	99	99	95	93	93	99	93	93	92	75	70	
9 AATREX	90 WG	1.0	LB A/A	1.11	LB/A	PRE	A																								
10 EPIC	58 WG	0.363	LB A/A	10.0	OZ/A	PRE	A		122	2	0	0	99	99	99	70	60	58	98	99	99	98	87	87	99	95	96	90	30	30	
11 BICEP II MAGNUM	5.5 L	2.89	LB A/A	4.2	PT/A	PRE	A		142	0	0	0	99	99	99	82	87	88	99	99	99	96	87	87	99	93	93	93	83	78	
11 BALANCE PRO	4 SC	0.0313	LB A/A	1.0	OZ/A	PRE	A																								
12 HARNESS XTRA	5.6 L	2.8	LB A/A	4.0	PT/A	PRE	A		136	0	0	0	99	99	99	87	82	80	99	99	99	96	96	95	99	95	95	93	78	73	
12 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	PRE	A																								
13 BICEP II MAGNUM	5.5 L	2.89	LB A/A	4.2	PT/A	PRE	A		146	0	0	0	99	99	99	80	87	87	99	99	99	99	99	98	97	94	93	93	85	78	
13 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	PRE	A																								
14 BICEP II MAGNUM	5.5 L	2.89	LB A/A	4.2	PT/A	PRE	A		150	0	0	0	99	99	99	77	85	85	99	99	99	96	89	88	99	94	94	93	83	75	
14 PRINCEP	90 WG	1.0	LB A/A	1.11	LB/A	PRE	A																								
15 BICEP II MAGNUM TR	4.59 L	2.3	LB A/A	4.0	PT/A	PRE	A		129	0	0	0	99	98	98	85	90	90	99	96	96	90	73	72	99	96	96	93	67	62	
16 GUARDSMAN	5 L	3.125	LB A/A	5.0	PT/A	PRE	A		145	2	0	0	99	99	99	80	85	83	99	99	99	96	85	85	99	91	91	95	75	72	
17 FULTIME	4 SC	3.3	LB A/A	6.6	PT/A	PRE	A		137	2	0	0	99	99	99	90	87	87	98	99	99	97	80	80	99	96	96	95	73	70	
18 EPIC	58 WG	0.544	LB A/A	15.0	OZ/A	PRE	A		141	3	0	0	98	99	99	73	65	60	98	99	99	93	76	76	99	97	97	92	47	42	
19 HARNESS XTRA	5.6 L	3.5	LB A/A	5.0	PT/A	PRE	A		138	0	0	0	99	99	99	70	63	63	98	99	99	94	73	73	99	99	99	93	63	57	
20 ICIA5676/ZA1296	3.5 CS	2.19	LB A/A	5.0	PT/A	PRE	A		146	0	0	0	99	99	99	92	93	93	99	99	99	98	98	96	99	99	99	93	85	87	
20 AATREX	90 WG	1.0	LB A/A	1.11	LB/A	PRE	A																								
LSD									25	2	0	0	1	1	1	13	18	19	2	2	2	5	23	23	1	10	10	4	18	19	
P									0.06	0.1	1.0	1.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	

1. PROTOCOL: NOVARTIS SPC01A.
 2. RATING DATES:
 21 DA PRE, 42 DA PRE, AND 70 DA PRE ON MAY-29-00, JUN-19-00, AND JUL-17-00, RESPECTIVELY.