

Postemergence Waterhemp Control in Corn.

00-52-MW80

OBJECTIVE: Evaluate various postemergence corn herbicides for control of common waterhemp.

SUMMARY: None of the herbicides caused corn injury. Hornet and Spirit provided no control of common waterhemp. Aim, Aatrex, Buctril, 2,4-D, Basis Gold, and NorthStar provided 80 to 89% control of common waterhemp. Banvel, Celebrity Plus, Distinct, Roundup Ultra, and ZA-1296 provided 90% or greater control of common waterhemp. Corn yield ranged from 142 to 176 bu/A. Season-long common waterhemp competition reduced yield by 14 to 22%.

HERBICIDES	WEEDS	CROP
AATREX 90 WG AIM 40 WG BASIS GOLD 90 WG BUCTRIL 2 EC CELEBRITY PLUS 70 WG CLARITY 4 EC DISTINCT 70 WG HORNET 68.5 WG NORTHSTAR 47.4 WG RESOURCE 0.86 EC ROUNDUP ULTRA 3 SL SPIRIT 57 WG WEEDAR 64 3.8 EC ZA1296 4 EC	WATERHEMP, COMMON	CORN, FIELD

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SOUTHERN ILLINOIS UNIVERSITY

Postemergence Waterhemp Control in Corn.

Project Code: 00-52-MW80 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code 1. AMATA	Common Name WATERHEMP, COMMON	Scientific Name AMARANTHUS RUDIS SAUER		
Crop 1: Planting Method: Rate: Row Spacing:	ZEAMX CORN, FIELD SEEDED 28000 S/A 30 IN	Variety: Planting Date: Depth:	DK 626 RR May-16-00 1.5 IN	
Plot Width, Unit: Tillage Type: Previous Crop, Year:	10 FT REDUCED-TILL GLXMA, 1999	Plot Length, Unit: Study Design: Fertilizer applied:	25 FT RCB N 150 LB/A,	Reps: 3 P ₂ O ₅ 0 LB/A, K ₂ O 150 LB/A
Soil Name: Texture:	WEIR SILT LOAM	% OM: 1.8 P ₁ : 83 LB/A,	pH: 6.9 K: 302 LB/A	CEC: 12

APPLICATION DESCRIPTION

A
 Application Date: Jun-13-00
 Time of Day: 8:45
 Application Method: SPRAY
 Application Timing: 4"W
 Applic. Placement: BROFOL
 Air Temp., Unit: 82 F
 % Relative Humidity: 85
 Wind Velocity, Unit: 1-3 MPH
 Soil Moisture: NORMAL
 % Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: ZEAMX V5
 Height, Unit: 14-16 IN

WEED STAGE AT EACH APPLICATION

A
 Weed 1 Code: AMATA
 Stage(leaves): 2-10
 Height(inches): 1-6
 Density: HIGH

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO, SPRAY
 Operating Pressure: 40 PSI
 Nozzle Type: FLAT FAN
 Nozzle Size: 8002
 Boom Length, Unit: 7.33 FT
 Spray Volume, Unit: 20 GPA

NOTES:

Harvested Oct-06-00, (2) 30 inch rows by 23 ft.

TABLE. POSTEMERGENCE WATERHEMP CONTROL IN CORN. PROJECT CODE:00-52-MW80

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	ZEAMX INJURY DA 4"W			AMATA CONTROL DAYS AFTER 4"W		
								14	28	56	14	28	56
							BU/A	%	%	%	%	%	%
1 NONTREATED							142	0	0	0	0	0	0
2 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	4"W A	170	0	0	0	80	80	80
2 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
2 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
3 AATREX	90 WG	1.0	LB A/A	1.11	LB/A	4"W A	176	0	0	0	87	85	85
3 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	4"W A							
4 BUCTRIL	2 EC	0.25	LB A/A	1.0	PT/A	4"W A	163	0	0	0	80	80	80
5 RESOURCE	0.86 EC	0.027	LB A/A	4.0	OZ/A	4"W A	171	0	0	0	75	58	58
5 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	4"W A							
6 WEEDAR 64	3.8 EC	0.475	LB A/A	16.0	OZ/A	4"W A	181	0	0	0	90	89	89
7 WEEDAR 64	3.8 EC	0.2375	LB A/A	8.0	OZ/A	4"W A	170	0	0	0	82	85	85
8 WEEDAR 64	3.8 EC	0.1188	LB A/A	4.0	OZ/A	4"W A	160	0	0	0	17	25	25
9 CLARITY	4 EC	0.5	LB A/A	16.0	OZ/A	4"W A	163	0	0	0	90	92	92
9 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
10 CLARITY	4 EC	0.25	LB A/A	8.0	OZ/A	4"W A	160	0	0	0	83	85	85
10 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
11 CLARITY	4 EC	0.125	LB A/A	4.0	OZ/A	4"W A	170	0	0	0	67	67	67
11 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
12 DISTINCT	70 WG	0.2625	LB A/A	6.0	OZ/A	4"W A	173	0	0	0	90	93	94
12 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
12 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
13 DISTINCT	70 WG	0.175	LB A/A	4.0	OZ/A	4"W A	158	0	0	0	90	95	95
13 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
13 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
14 BASIS GOLD	90 WG	0.7875	LB A/A	14.0	OZ/A	4"W A	171	0	0	0	85	83	83
14 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	4"W A							
14 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
15 NORTHSTAR	47.4 WG	0.1484	LB A/A	5.0	OZ/A	4"W A	162	0	0	0	80	80	80
15 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
15 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
16 CELEBRITY PLUS	70 WG	0.206	LB A/A	4.7	OZ/A	4"W A	181	0	0	0	92	90	90
16 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
16 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
17 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	4"W A	145	0	0	0	0	0	0
17 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
17 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
18 ROUNDUP ULTRA	3 SL	0.75	LB AE/A	2.0	PT/A	4"W A	165	0	0	0	98	99	99
18 AMS	100 DRY	1.0	% W/W	1.0	%W/W	4"W A							
19 ZA1296	4 EC	0.094	LB A/A	3.0	OZ/A	4"W A	179	0	0	0	90	93	93
19 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	4"W A							
19 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
20 SPIRIT	57 WG	0.0356	LB A/A	1.0	OZ/A	4"W A	128	0	0	0	0	0	0
20 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	4"W A							
20 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
21 DISTINCT	70 WG	0.0875	LB A/A	2.0	OZ/A	4"W A	167	0	0	0	85	85	85
21 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	4"W A							
21 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	4"W A							
LSD							22	0	0	0	13	18	18
P							0.01	1.0	1.0	1.0	0.01	0.01	0.01

1. PROTOCOL: SIU - RFK/JMY.

2. RATING DATES:

14 DAT, 28 DAT, AND 56 DAT ON JUN-27-00, JUL-11-00, AND AUG-8-00, RESPECTIVELY.