

Control of Volunteer Roundup Ready Corn.

Project Code: 07-HRC-WU12-SS-PL Location: Horticulture Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA
 Trial Status: Final Updated: 1-24-08

Objective:

Evaluate adjuvants for tank-mixing glyphosate and Select for control of volunteer Roundup Ready corn.

Weed Code	Common Name	Scientific Name
1.	ZEAMX corn, volunteer	Zea mays L.
2.	AMATA waterhemp, common	Amaranthus rudis Sauer
3.	IPOHE morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.

Crop 1:	ZEAMX corn, field	Variety:	33K44
Planting Method:	Seeded	Planting Date:	5-24-07
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:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2006				
Field Prep./Maintenance:	N 166 LB/A, P205 92 LB/A, K20 90 LB/A				

	% OM:	1.6	pH:	6.5	CEC:	8
Texture:	Silt loam	Fert. Level:	P1:	47 LB/A,	K:	265 LB/A

APPLICATION DESCRIPTION

A

Application Date: 6-20-07
 Time of Day: 8:00
 Application Method: Spray
 Application Timing: 12-18"CN
 Applic. Placement: BROFOL
 Air Temp., Unit: 68 F
 % Relative Humidity: 83
 Wind Velocity, Unit: 0-1 MPH
 Dew Presence (Y/N): N
 Soil Temp., Unit: 74 F
 Soil Moisture: NORMAL
 % Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMX V5
 Height, Unit: 18-22 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code: ZEAMX
 Stage(leaves): 5
 Height(inches): 18-22
 Density: Medium

Weed 2 Code: AMATA
 Stage(leaves): 7-9
 Height(inches): 4-8
 Density: High

Weed 3 Code: IPOHE
 Stage(leaves): 7-8
 Height(inches): 4-6
 Density: Low

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 sprayer
 Operating Pressure: 40 PSI
 Nozzle Type: Flat fan
 Nozzle Size: XR 8002
 Boom Length, Unit: 7.5 FT
 Spray Volume, Unit: 15 GPA

NOTES:

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										ZEAMX	ZEAMX	AMATA	AMATA	IPOHE	IPOHE
										Control	Control	Control	Control	Control	Control
										Percent	Percent	Percent	Percent	Percent	Percent
										7-4-07	7-18-07	7-4-07	7-18-07	7-4-07	7-18-07
										14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED									0 d	0 d	0 c	0 d	0 d	0 c
2	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A	86 ab	97 a	0 c	0 d	0 d	0 c
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	12-18"	CN A						
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	86 b	90 ab	80 ab	55 bc	72 bc	57 ab
3	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
3	PX 400	100	LIQ	0.5	% v/v	0.5	% v/v	12-18"	CN A						
4	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	78 c	51 c	74 b	52 c	67 c	47 b
4	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
4	PL 708	100	LIQ	0.5	% v/v	0.5	% v/v	12-18"	CN A						
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	81 c	56 c	88 a	60 ab	75 abc	52 ab
5	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
5	PL 712	100	LIQ	0.5	% v/v	0.5	% v/v	12-18"	CN A						
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	89 ab	93 ab	80 ab	55 bc	72 bc	52 ab
6	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
6	EXPSX2	100	LIQ	0.5	% v/v	0.5	% v/v	12-18"	CN A						
7	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	90 a	89 b	88 a	60 ab	83 a	60 a
7	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
7	EXPSX2	100	LIQ	0.5	% v/v	0.5	% v/v	12-18"	CN A						
7	LANDOIL	100	LIQ	26	fl oz/a	26	fl oz/a	12-18"	CN A						
8	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	89 ab	87 b	83 ab	62 ab	77 ab	55 ab
8	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
8	EXPSX2	100	LIQ	0.5	% v/v	0.5	% v/v	12-18"	CN A						
8	LANDOIL	100	LIQ	26	fl oz/a	26	fl oz/a	12-18"	CN A						
8	SOIL BOOST PLUS	100	LIQ	16	fl oz/a	16	fl oz/a	12-18"	CN A						
9	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	12-18"	CN A	87 ab	88 b	92 a	63 a	77 ab	58 ab
9	SELECT	2	EC	0.0625	lb ai/a	4	fl oz/a	12-18"	CN A						
9	LANDOIL	100	LIQ	26	fl oz/a	26	fl oz/a	12-18"	CN A						
9	SOIL BOOST PLUS	100	LIQ	16	fl oz/a	16	fl oz/a	12-18"	CN A						
LSD (P=.05)										4.2	7.6	12.0	8.3	9.6	13.1
Replicate F										2.335	0.331	5.667	1.720	0.213	5.024
Replicate Prob(F)										0.1289	0.7229	0.0138	0.2106	0.8105	0.0203
Treatment F										432.666	157.604	87.076	86.800	108.464	31.024
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: So-il Service, Precision Labs.
2. WC 14 + 28 DAT.
3. DA-A = Days after 12-18"CN application.