

Weed Control with Permit.

Project Code: 07-ARC-3-W80 Location: Agronomy 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: 1-23-08

Objective:

Determine the level of efficacy of Permit and Yukon versus competitive standards on common pokeweed and other species.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. CYPES	nutsedge, yellow	Cyperus esculentus L.
3. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
4. CHEAL	lambsquarters, common	Chenopodium album L.
5. XANST	cocklebur, common	Xanthium strumarium L.

Crop 1: ZEAMX corn, field Variety: 33P70 RR2
 Planting Method: Seeded Planting Date: 4-23-07
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 4
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: GLXMA, 2006
 Field Prep./Maintenance: N 148 LB/A, P205 46 LB/A, K20 60 LB/A

Soil Name: Weir % OM: 1.1 pH: 6.7 CEC: 9.1
 Texture: Silt loam Fert. Level: P1: 65 LB/A, K: 227 LB/A

APPLICATION DESCRIPTION

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Application Date: 5-18-07
 Time of Day: 11:00
 Application Method: Spray
 Application Timing: 6"W
 Applic. Placement: BROFOL
 Air Temp., Unit: 64 F
 % Relative Humidity: 60
 Wind Velocity, Unit: 0-5 MPH
 Dew Presence (Y/N): N
 Soil Temp., Unit: 60 F
 Soil Moisture: NORMAL
 % Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

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Crop 1 Code, Stage: ZEAMX V4-V5
 Height, Unit: 6-9 IN

WEED STAGE AT EACH APPLICATION

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Weed 1 Code: SETFA
 Stage(leaves): 4-6
 Height(inches): 4-6
 Density: Low

Weed 2 Code: CYPES
 Stage(leaves): 3-9
 Height(inches): 3-6
 Density: Medium

Weed 3 Code: AMBEL
 Stage(leaves): 3-7
 Height(inches): 1-6
 Density: High

Weed 4 Code: CHEAL
 Stage(leaves): 2-10
 Height(inches): 1-4
 Density: Medium

Weed 5 Code: XANST
 Stage(leaves): 3-9
 Height(inches): 2-7
 Density: High

APPLICATION EQUIPMENT

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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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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	ZEAMX Injury Percent	ZEAMX Injury Percent	SETFA Control Percent	SETFA Control Percent	CYPES Control Percent	CYPES Control Percent	AMBEL Control Percent	AMBEL Control Percent
										6-1-07	6-15-07	6-1-07	6-15-07	6-1-07	6-15-07	6-1-07	6-15-07
										14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
1	PERMIT	75	WG	0.0314	lb ai/a	0.67	oz/a	6"W	A	0 a	0 a	0 c	0 c	46 b	64 a	80 b	91 b
1	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A								
1	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A								
2	YUKON	67.5	WG	0.169	lb ai/a	4.0	oz/a	6"W	A	0 a	0 a	0 c	0 c	57 a	68 a	80 b	95 ab
2	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A								
2	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A								
3	CALLISTO	4	SC	0.094	lb ai/a	3.0	fl oz/a	6"W	A	0 a	0 a	0 c	0 c	40 b	37 c	98 a	99 a
3	AATREX	4	L	0.33	lb ai/a	10.6	fl oz/a	6"W	A								
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	6"W	A								
3	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A								
4	STATUS	56	WG	0.175	lb ai/a	5	oz/a	6"W	A	0 a	0 a	11 b	55 b	14 c	24 d	76 b	96 ab
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A								
4	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A								
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6"W	A	0 a	0 a	99 a	98 a	48 ab	53 b	95 a	97 a
5	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A								
5	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A								
6	NONTREATED									0 a	0 a	0 c	0 c	0 d	0 e	0 c	0 c
LSD (P=.05)										0.0	0.0	1.7	3.8	10.3	6.5	8.0	5.0
Replicate F										0.000	0.000	0.867	0.972	1.400	0.152	1.403	0.967
Replicate Prob(F)										1.0000	1.0000	0.4831	0.4356	0.2871	0.9265	0.2864	0.4376
Treatment F										0.000	0.000	5259.384	1107.567	43.235	148.627	191.076	562.823
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	CHEAL Control Percent	CHEAL Control Percent	XANST Control Percent	XANST Control Percent
										6-1-07	6-15-07	6-1-07	6-15-07
										14 DA-A	28 DA-A	14 DA-A	28 DA-A
1	PERMIT	75	WG	0.0314	lb ai/a	0.67	oz/a	6"W	A	0 c	0 c	88 b	91 b
1	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A				
1	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A				
2	YUKON	67.5	WG	0.169	lb ai/a	4.0	oz/a	6"W	A	73 b	78 b	82 c	93 b
2	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A				
2	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A				
3	CALLISTO	4	SC	0.094	lb ai/a	3.0	fl oz/a	6"W	A	99 a	99 a	94 a	98 a
3	AATREX	4	L	0.33	lb ai/a	10.6	fl oz/a	6"W	A				
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	6"W	A				
3	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A				
4	STATUS	56	WG	0.175	lb ai/a	5	oz/a	6"W	A	73 b	83 b	85 bc	94 b
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A				
4	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A				
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6"W	A	97 a	96 a	99 a	99 a
5	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	6"W	A				
5	AMS	100	DRY	2.5	lb ai/a	2.5	lb/a	6"W	A				
6	NONTREATED									0 c	0 c	0 d	0 c
LSD (P=.05)										3.9	6.7	5.3	3.0
Replicate F										1.067	1.710	0.567	0.290
Replicate Prob(F)										0.3968	0.2141	0.6465	0.8321
Treatment F										1248.250	453.763	463.746	1535.320
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

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

Trial Comments

1. Protocol: Gowan (D-PER-07-21-1) study repeated at 07-YRC-Poke.
2. Ratings: CI/WC 14 + 28 DAT.
3. No yield.
4. Photos appreciated.
5. DA-A = Days after 6"W application.
6. Not harvested.