

Common Lambsquarters Control under Challenging Conditions.

Project Code: 04-2C-E60 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 8-31-04

Objective:

Evaluate glyphosate formulations and other herbicide alternatives for control of common lambsquarters under challenging temperature conditions.

Weed Code	Common Name	Scientific Name
1. CHEAL	lambsquarters, common	Chenopodium album L.

Crop 1:	GLXMA soybean	Variety:	AG 4403 RR
Planting Method:	Seeded	Planting Date:	6-11-04
Rate:	75 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	28 FT	Reps:	3
Tillage Type:	No-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2003				

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Name: Weir	% OM: 1.6	pH: 6.4	CEC: 8
Texture: Silt loam	Fert. Level: P1: 92 LB/A,	K: 365 LB/A	

APPLICATION DESCRIPTION

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A	
Application Date:	5-15-04
Time of Day:	8:00
Application Method:	Spray
Application Timing:	6"LQ
Applic. Placement:	BROFOL
Air Temp., Unit:	52 F
% Relative Humidity:	80
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N
Soil Moisture:	ABONOR

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

WEED STAGE AT EACH APPLICATION	
A	
Weed 1 Code:	CHEAL
Stage(leaves):	10+
Height(inches):	4-8
Density:	Medium

APPLICATION EQUIPMENT

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A	
Appl. Equipment:	CO2 sprayer
Operating Pressure:	40 PSI
Nozzle Type:	Flat fan
Nozzle Size:	TT 110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

NOTES:

There was no dew present at application.

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Weed Code	CHEAL	CHEAL
Crop Code		
Rating Data Type	Control	Control
Rating Unit	Percent	Percent
Rating Date	5-29-04	6-12-04
Trt-Eval Interval	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	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	6"LQ	A	99	100
1	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
2	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	6"LQ	A	100	100
3	ROUNDUP W-MAX	4.5	SL	1.12	LB AE/A	32	FL OZ/A	6"LQ	A	99	100
3	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
4	ROUNDUP ORIGINAL MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	6"LQ	A	99	100
4	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	6"LQ	A		
4	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
5	TOUCHDOWN	3	SL	0.75	LB AE/A	32	FL OZ/A	6"LQ	A	99	100
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
6	CLEAROUT 41 PLUS	3	L	0.75	LB AE/A	32	FL OZ/A	6"LQ	A	100	100
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
7	GLYPHOMAX PLUS	3	SL	0.75	LB AE/A	32	FL OZ/A	6"LQ	A	98	100
7	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
8	GLY STAR PLUS	3	SL	0.75	LB AE/A	32	FL OZ/A	6"LQ	A	90	99
8	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
9	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	6"LQ	A	99	100
9	HARMONY GT	75	WG	0.0025	LB A/A	0.0533	OZ/A	6"LQ	A		
10	CALLISTO	4	SC	0.05	LB A/A	1.6	FL OZ/A	6"LQ	A	99	100
10	AATREX	90	WG	0.5	LB A/A	0.556	LB/A	6"LQ	A		
10	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	6"LQ	A		
10	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	6"LQ	A		
11	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	6"LQ	A	100	100
11	AIM	2	EW	0.0078	LB A/A	0.5	FL OZ/A	6"LQ	A		
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	6"LQ	A		
12	NONTREATED									0	0
LSD (P=.05)										1.3	0.6
Replicate F										1.320	1.000
Replicate Prob(F)										0.2875	0.3840
Treatment F										4296.160	22473.727
Treatment Prob(F)										0.0001	0.0001

Trial Comments

1. Protocol: Monsanto.
2. Ratings: WC 14 and 28 DAT.
3. DA-A = days after 6"LQ application.
4. Testing parameters:

Target application to lambquarters when the average height is approximately 6 inches. If stressful conditions outlined below do not occur, delay application until they do (within reason). If lambquarters is approaching 6 inches and the conditions below occur, treat early (growing conditions are the most important factor we are trying to evaluate).

Environmental conditions: Daytime temperatures should be approximately 60 degrees or higher for a few days (3 to 5) prior to a cold front moving through. If a cold front moves through and the temperature drops 20 degrees or more, make the application the day after the cold front moves through.