

Glyphosate, Carfentrazone, and 2,4-D burndown products.

Project Code: 07-1-EE60 Location: Belleville Research Center
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final Updated: 1-23-08**Objective:**

Evaluate burndown herbicide products that utilize glyphosate, carfentrazone, and 2,4-D.

Weed Code	Common Name	Scientific Name
1.	ERICA horseweed	Conyza canadensis (L.) Crong.
2.	STEME chickweed, common	Stellaria media (L.) Vill.
3.	HORPU barley, little	Hordeum pusillum Nutt.

Crop 1:	GLXMA soybean	Variety:	Asgrow 4404 RR/STS
Planting Method:	Seeded	Planting Date:	5-21-07
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, 2006				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 100 LB/A				

Soil Name:	Weir	% OM:	1.6	pH:	6.7	CEC:	8
Texture:	Silt loam	Fert. Level:	P1: 96 LB/A, K: 327 LB/A				

APPLICATION DESCRIPTION

A	
Application Date:	4-27-07
Time of Day:	17:00
Application Method:	Spray
Application Timing:	BD6-8"W
Applic. Placement:	BROFOL
Air Temp., Unit:	70 F
% Relative Humidity:	44
Wind Velocity, Unit:	5 MPH
Dew Presence (Y/N):	N
Soil Moisture:	NORMAL
% Cloud Cover:	50

CROP STAGE AT EACH APPLICATION

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

WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code:	ERICA
Stage(leaves):	10-16
Height(inches):	2-4
Density:	Medium
Weed 2 Code:	STEME
Stage(leaves):	20-30+
Height(inches):	5-7
Density:	High
Weed 3 Code:	HORPU
Stage(leaves):	6-10
Height(inches):	7-9
Density:	High

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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Weed Code	ERICA	ERICA	STEME	STEME	HORPU	HORPU
Crop Code						
Rating Data Type	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	5-2-07	5-12-07	5-2-07	5-12-07	5-2-07	5-12-07
Trt-Eval Interval	5 DA-A	15 DA-A	5 DA-A	15 DA-A	5 DA-A	15 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED									0 e	0 d	0 d	0 c	0 e	0 d
2	RAGE D-TECH	4	EC	0.375	lb ai/a	0.75	pt/a	BD6-8"W	A	40 d	57 c	42 c	53 b	0 e	0 d
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	BD6-8"W	A						
3	RAGE D-TECH	4	EC	0.25	lb ai/a	0.5	pt/a	BD6-8"W	A	60 a	99 a	60 a	99 a	70 a	99 a
3	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	BD6-8"W	A						
3	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	BD6-8"W	A						
4	2,4-D LV4	3.8	EC	0.475	lb ai/a	1	pt/a	BD6-8"W	A	48 c	60 c	42 c	55 b	0 e	0 d
4	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	BD6-8"W	A						
5	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	BD6-8"W	A	48 c	99 a	60 a	99 a	68 ab	99 a
5	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	BD6-8"W	A						
6	2,4-D LV4	3.8	EC	0.475	lb ai/a	1	pt/a	BD6-8"W	A	57 ab	99 a	60 a	99 a	68 ab	99 a
6	ROUNDUP ORIG MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	BD6-8"W	A						
6	AMS	100	DRY	2.0	% w/w	17	lb/100 gal	BD6-8"W	A						
7	LI 6211	8	SL	11	fl oz/a	11	fl oz/a	BD6-8"W	A	52 bc	90 b	52 b	99 a	62 cd	96 ab
7	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
8	LI 6211	8	SL	11	fl oz/a	11	fl oz/a	BD6-8"W	A	53 abc	96 a	60 a	99 a	60 d	95 bc
8	SALVO	5	EC	0.39	lb ai/a	10	fl oz/a	BD6-8"W	A						
8	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
9	MAKAZE	3	SL	0.375	lb ae/a	16	fl oz/a	BD6-8"W	A	52 bc	88 b	58 ab	99 a	62 cd	93 bc
9	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
10	MAKAZE	3	SL	0.375	lb ae/a	16	fl oz/a	BD6-8"W	A	53 abc	99 a	57 ab	99 a	62 cd	93 bc
10	SALVO	5	EC	0.39	lb ai/a	10	fl oz/a	BD6-8"W	A						
10	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
11	LI 6212	8	SL	16	fl oz/a	16	fl oz/a	BD6-8"W	A	47 cd	98 a	57 ab	99 a	65 bc	95 bc
11	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
12	LI 6212	8	SL	16	fl oz/a	16	fl oz/a	BD6-8"W	A	57 ab	99 a	58 ab	99 a	63 cd	93 bc
12	SALVO	5	EC	0.39	lb ai/a	10	fl oz/a	BD6-8"W	A						
12	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
13	LI 6230 B	100	DRY	0.25	oz/a	0.25	oz/a	BD6-8"W	A	50 bc	90 b	60 a	99 a	62 cd	93 bc
13	MAKAZE	3	SL	0.375	lb ae/a	16	fl oz/a	BD6-8"W	A						
13	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
13	LIBERATE	100	LIQ	0.25	% v/v	0.25	% v/v	BD6-8"W	A						
14	LI 6230 B	100	DRY	0.25	oz/a	0.25	oz/a	BD6-8"W	A	60 a	98 a	60 a	99 a	62 cd	92 c
14	MAKAZE	3	SL	0.375	lb ae/a	16	fl oz/a	BD6-8"W	A						
14	SALVO	5	EC	0.39	lb ai/a	10	fl oz/a	BD6-8"W	A						
14	CHOICE WM	100	LIQ	0.5	% v/v	0.5	% v/v	BD6-8"W	A						
14	LIBERATE	100	LIQ	0.25	% v/v	0.25	% v/v	BD6-8"W	A						

LSD (P=.05)	7.1	5.1	7.6	3.3	4.0	3.8
Replicate F	6.650	0.876	2.201	1.988	3.276	0.398
Replicate Prob(F)	0.0046	0.4283	0.1309	0.1572	0.0538	0.6757
Treatment F	37.501	250.338	38.964	668.834	399.707	985.722
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: FMC, Loveland.
2. Ratings: WC 5 and 15 DAT.
3. BD6-8"W = Burndown at 6-8 inch weeds. DA-A = Days after BD6-8"W.
 Burndown application must be at least 7 days before planting.
4. After the final evaluation an appropriate herbicide treatment can be applied for the remainder of the season.
5. Not harvested.