

Glyphosate and 2,4-D Burndown.

Project Code: 03-11B-E90 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 7-18-03

Objective:

Determine the benefit of 2,4-D with glyphosate for control of
 marestalk and evaluate various 2,4-D formulations.

Weed Code	Common Name	Scientific Name
1. AMBTR	ragweed, giant	Ambrosia trifida L.
2. SETFA	foxtail, giant	Setaria faberi Herrm.
3. XANST	cocklebur, common	Xanthium strumarium L.
4. AMBEL	ragweed, common	Ambrosia artemisiifolia L.
5. POLPY	smartweed, Pennsylvania	Polygonum pennsylvanicum L.

Crop 1: GLXMA soybean Variety: Asgrow 4403 RR
 Planting Method: Seeded Planting Date: 6-18-03
 Rate: 75 lb/A Depth: 1.0 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 25 FT Reps: 3
 Tillage Type: No-Till Study Design: Randomized complete block
 Previous Crop, Year: ZEAMX, 2002

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name: Ebbert % OM: 1.5 pH: 6.5 CEC: 13
 Texture: Silt loam Fert. Level: P1: 96 LB/A, K: 265 LB/A

APPLICATION DESCRIPTION

A

Application Date: 6-1-03
 Time of Day: 9:00
 Application Method: Spray
 Application Timing: 14EPP
 Applic. Placement: BROFOL
 Air Temp., Unit: 55 F
 % Relative Humidity: 80
 Wind Velocity, Unit: 3 MPH
 Soil Moisture: ABONOR

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: AMBTR
 Stage(leaves): 10+
 Height(inches): 4-36
 Density: High

Weed 2 Code: SETFA
 Stage(leaves): 5-6
 Height(inches): 4-6
 Density: Medium

Weed 3 Code: XANST
 Stage(leaves): 5-6
 Height(inches): 4-6
 Density: Medium

Weed 4 Code: AMBEL
Stage(leaves): 10+
Height(inches): 6-12
Density: Medium

Weed 5 Code: POLPY
Stage(leaves): 5-6
Height(inches): 4-6
Density: Low

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: 8003
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 20 GPA

NOTES:
Not harvested.

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Crop Code											
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Injury
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	6-15-03	7-1-03	6-15-03	7-1-03	6-15-03	7-1-03	6-15-03	7-1-03	6-15-03	7-1-03	7-2-03
Trt-Eval Interval	14 DA-A	30 DA-A	14 DA-A	30 DA-A	14 DA-A	30 DA-A	14 DA-A	30 DA-A	14 DA-A	30 DA-A	14 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
1	NONTREATED									0	0	0	0	0	0	0	0	0		
2	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	53	47	99	99	99	53	87	90	60	47	0
3	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	98	90	99	93	99	50	99	83	85	53	0
3	SALVAN	5	EC	0.5	LB A/A	0.8	PT/A	14EPP	A											
4	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	96	93	99	96	99	77	99	95	77	50	0
4	SALVO	5	EC	0.5	LB A/A	12.8	FL OZ/A	14EPP	A											
5	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	98	96	99	95	99	67	96	85	83	43	0
5	SALVO	5	EC	0.31	LB A/A	8	FL OZ/A	14EPP	A											
6	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	98	92	99	93	99	67	95	88	88	60	0
6	SAVANA	2.5	EC	0.5	LB A/A	25.6	FL OZ/A	14EPP	A											
6	LI 700	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											
7	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	99	90	99	98	99	57	93	90	80	50	0
7	SAVANA	2.5	EC	0.312	LB A/A	16	FL OZ/A	14EPP	A											
7	LI 700	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											
8	AGH 02001	4.128	EC	0.516	LB A/A	1	PT/A	14EPP	A	98	99	0	0	99	77	80	53	27	17	0
8	PREFERENCE	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											
8	AMS	100	DRY	1.0	% W/W	1	% W/W	14EPP	A											
9	AGH 02001	4.128	EC	0.516	LB A/A	1	PT/A	14EPP	A	96	93	0	0	80	70	83	43	20	13	0
9	CLASS ACT NG	100	LIQ	2.5	% V/V	2.5	% V/V	14EPP	A											
10	CORNERSTONE	3	SL	0.75	LB AE/A	32	FL OZ/A	14EPP	A	99	83	99	93	99	33	99	77	98	50	0
10	AGH 02001	4.128	EC	0.516	LB A/A	1	PT/A	14EPP	A											
10	CLASS ACT NG	100	LIQ	2.5	% V/V	2.5	% V/V	14EPP	A											
11	CORNERSTONE	3	SL	0.75	LB AE/A	32	FL OZ/A	14EPP	A	98	93	99	96	99	50	99	90	98	43	0
11	AGH 02001	4.128	EC	0.516	LB A/A	1	PT/A	14EPP	A											
11	CLASS ACT NG	100	LIQ	2.5	% V/V	2.5	% V/V	14EPP	A											
11	PLACEMENT	100	LIQ	12	FL OZ/A	12	FL OZ/A	14EPP	A											
12	CORNERSTONE	3	SL	0.75	LB AE/A	32	FL OZ/A	14EPP	A	77	17	99	99	99	47	98	93	70	60	0
12	CLASS ACT NG	100	LIQ	2.5	% V/V	2.5	% V/V	14EPP	A											
13	2,4-D LV6	5.6	EC	0.23	LB A/A	0.33	PT/A	14EPP	A	98	93	0	0	50	67	17	27	0	0	0
13	PREFERENCE	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											
14	AGH 02007	5.6	EC	0.23	LB A/A	0.33	PT/A	14EPP	A	95	96	0	0	50	63	20	30	0	0	0
14	PREFERENCE	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											

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Crop Code											Injury
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Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	6-15-03	7-1-03	6-15-03	7-1-03	6-15-03	7-1-03	6-15-03	7-1-03	6-15-03	7-1-03	7-2-03
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
15	2,4-D LV6	5.6	EC	0.47	LB A/A	0.67	PT/A	14EPP	A	88	99	0	0	33	60	13	53	0	0	
15	PREFERENCE	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											
16	AGH 02007	5.6	EC	0.47	LB A/A	0.67	PT/A	14EPP	A	89	98	0	0	50	53	17	23	10	27	
16	PREFERENCE	100	LIQ	0.25	% V/V	0.25	% V/V	14EPP	A											
17	ROUNDUP W-MAX	4.5	SL	0.75	LB AE/A	21.3	FL OZ/A	14EPP	A	96	90	99	98	99	53	96	57	85	33	
17	SALVAN	5	EC	0.25	LB A/A	6.4	FL OZ/A	14EPP	A											
18	BUCCANEER PLUS	3	SL	0.75	LB AE/A	32	FL OZ/A	14EPP	A	87	67	99	99	99	63	80	23	88	73	
18	SALVAN	5	EC	0.25	LB A/A	6.4	FL OZ/A	14EPP	A											
LSD (P=.05)										11.9	15.0	0.0	4.4	6.0	15.4	7.3	14.6	13.8	14.9	0.0
Replicate F										0.034	1.520	0.000	1.163	1.000	1.069	2.522	0.731	0.274	1.735	0.000
Replicate Prob(F)										0.9666	0.2331	1.0000	0.3248	0.3784	0.3545	0.0953	0.4888	0.7619	0.1917	1.0000
Treatment F										35.115	31.259	0.000	1001.462	212.406	11.117	217.485	36.444	67.159	21.551	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

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Trial Comments

1. Protocol: Van Diest, UAP, Agrilience.
2. DA-A = days after 14EPP application. DAP = days after planting.
3. Planting was delayed due to wet field conditions.
Herbicide application was delayed in hopes of getting a good stand of horseweed.
In lieu of horseweed, herbicide applications were made when weeds reached such a size that they presented challenging burndown conditions.