

Evaluation of Arrow for Grass Control.

Project Code: 03-24B-W100 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country:	Belleville	IL 62221 USA
Trial Status: Final	Updated:	9-3-03

Objective:

Compare Arrow and Select for crop response, efficacy and potential antagonism when applied with broadleaf herbicides.

Weed Code	Common Name	Scientific Name
1. ZEAMX	corn, volunteer	Zea mays L.
2. SETFA	foxtail, giant	Setaria faberi Herrm.

Crop 1:	ZEAMX corn, field	Variety:	DKC 60-17 RR
Planting Method:	Seeded	Planting Date:	6-19-03
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	27 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2002				

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

Soil Name:	Rushville	% OM:	1.1	pH:	6.3	CEC:	13
Texture:	Silt loam	Fert. Level:	P1: 69 LB/A, K: 298 LB/A				

APPLICATION DESCRIPTION

	A
Application Date:	7-8-03
Time of Day:	19:30
Application Method:	Spray
Application Timing:	12-16"VCN
Applic. Placement:	BROFOL
Air Temp., Unit:	93 F
% Relative Humidity:	48
Wind Velocity, Unit:	0 MPH
Soil Moisture:	NORMAL

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	ZEAMX V6-V8
Height, Unit:	10-16 IN

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code:	ZEAMX
Stage(leaves):	6-8
Height(inches):	10-16
Density:	Medium
Weed 2 Code:	SETFA
Stage(leaves):	3-6
Height(inches):	4-10
Density:	Low

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO2 sprayer
Operating Pressure:	40 PSI
Nozzle Type:	Flat fan
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	20 GPA

NOTES:

See comments regarding application timing.
Not harvested.

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Weed Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	SETFA	SETFA	SETFA	SETFA	SETFA	SETFA
Crop Code												
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-15-03	7-22-03	7-29-03	8-5-03	8-19-03	9-2-03	7-15-03	7-22-03	7-29-03	8-5-03	8-19-03	9-2-03
Trt-Eval Interval	7 DA-A	14 DA-A	21 DA-A	28 DA-A	42 DA-A	56 DA-A	7 DA-A	14 DA-A	21 DA-A	28 DA-A	42 DA-A	56 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
1	ARROW	2	EC	0.0625	LB A/A	4.0	FL OZ/A	12-16"VCN	A	97	99	99	99	99	99	99	99	99	99
1	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
2	ARROW	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
2	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
3	ARROW	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
3	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
4	SELECT	2	EC	0.0625	LB A/A	4.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
5	SELECT	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
6	SELECT	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
6	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
7	ARROW	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
7	FLEXSTAR	1.88	EC	0.294	LB A/A	20	FL OZ/A	12-16"VCN	A										
7	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
8	ARROW	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
8	FLEXSTAR	1.88	EC	0.294	LB A/A	20	FL OZ/A	12-16"VCN	A										
8	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
9	SELECT	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
9	FLEXSTAR	1.88	EC	0.294	LB A/A	20	FL OZ/A	12-16"VCN	A										
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
10	SELECT	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
10	FLEXSTAR	1.88	EC	0.294	LB A/A	20	FL OZ/A	12-16"VCN	A										
10	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
11	ARROW	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	94	99	99	99	99	99	97	99	99	99
11	RAPTOR	1	AS	0.039	LB A/A	5.0	FL OZ/A	12-16"VCN	A										
11	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
12	ARROW	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	96	99	99	99	99	99	98	99	99	99
12	RAPTOR	1	AS	0.039	LB A/A	5.0	FL OZ/A	12-16"VCN	A										
12	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
13	SELECT	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	91	99	99	99	99	99	98	99	99	99
13	RAPTOR	1	AS	0.039	LB A/A	5.0	FL OZ/A	12-16"VCN	A										
13	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										

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Crop Code												
Rating Data Type	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Date	7-15-03	7-22-03	7-29-03	8-5-03	8-19-03	9-2-03	7-15-03	7-22-03	7-29-03	8-5-03	8-19-03	9-2-03
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
14	SELECT	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	91	99	99	99	99	99	97	99	99	99
14	RAPTOR	1	AS	0.039	LB A/A	5.0	FL OZ/A	12-16"VCN	A										
14	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
15	ARROW	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	97	99	99	99	99	99	99	99	99	99
15	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	12-16"VCN	A										
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
16	ARROW	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	99	99	99	99	99	99	99	99	99	99
16	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	12-16"VCN	A										
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
17	SELECT	2	EC	0.094	LB A/A	6.0	FL OZ/A	12-16"VCN	A	97	99	99	99	99	99	98	99	99	99
17	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	12-16"VCN	A										
17	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
18	SELECT	2	EC	0.125	LB A/A	8.0	FL OZ/A	12-16"VCN	A	93	99	99	99	99	99	98	99	99	99
18	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	12-16"VCN	A										
18	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	12-16"VCN	A										
19	NONTREATED									0	0	0	0	0	0	0	0	0	0
LSD (P=.05)										2.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Replicate F										0.136	0.000	0.000	0.000	0.000	0.000	1.884	0.000	0.000	0.000
Replicate Prob(F)										0.8730	1.0000	1.0000	1.0000	1.0000	1.0000	0.1667	1.0000	1.0000	1.0000
Treatment F										978.045	0.000	0.000	0.000	0.000	0.000	18330.512	0.000	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	1.0000	1.0000	1.0000

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Trial Comments

- 1. Protocol: Makhteshim-Agan.
- 2. Ratings: CI and WC at 7, 14,21, 28, 42 and 56 DAT.
- 3. Roundup Ready corn was planted in 30 inch rows.
- 4. Could target application for 4-6" grass, such as giant foxtail.
- 5. This study was originally planned as 03-22-S100.
- 6. DA-A = days after 12-16"VCN application.