

## Evaluation of Generic Clethodim - Study 1.

02-51E-S110

**OBJECTIVE:** Evaluate the efficacy of a generic clethodim compared to Select.

**SUMMARY:** The purpose of this study was to compare grass control from the currently marketed formulation of clethodim (Select) to a generic version of this product. In general, volunteer corn and giant foxtail control was similar between the two clethodim formulations when applied with Prime Oil at 1 qt/A. When Prime Oil and AMS was added to Select and generic clethodim, volunteer corn control was slightly greater with Select at 7 and 14 days after treatment (DAT). However by 21 DAT, there was no difference in volunteer corn control between these two treatments. Tank mixing Cobra, Raptor, or FirstRate with Select and generic clethodim tended to reduce control of volunteer corn. This study suggests that generic clethodim will provide grass control similar to Select when applied alone or in tank mixtures with broadleaf herbicides.

**HERBICIDES**

CLETHODIM-AGAN 2 EC  
COBRA 2 EC  
FIRSTRATE 84 WG  
RAPTOR 1 AS  
SELECT 2 EC  
STORM 4 EC

**WEEDS**

corn, volunteer  
foxtail, giant

**CROP**

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

## Evaluation of Generic Clethodim - Study 1.

Project Code: 02-51E-S110 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA  
 Trial Status: Final Updated: 10-31-02

**Objective:**

Evaluate the efficacy of a generic clethodim compared to Select.

**Weed Code Common Name Scientific Name**

1. ZEAMX corn, volunteer Zea mays L.
2. SETFA foxtail, giant Setaria faberi Herrm.

Crop 1: GLXMA soybean Variety: Asgrow 4602 RR  
 Planting Method: Seeded Planting Date: 6-4-02  
 Rate: 75 lb/A Depth: 1.0 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: ZEAMX, 2001

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 200 LB/A

Soil Name: Weir % OM: 1.7 pH: 7.1 CEC: 11  
 Texture: Silt loam Fert. Level: P1: 84 LB/A, K: 172 LB/A

**APPLICATION DESCRIPTION****A**

Application Date: 6-28-02  
 Time of Day: 14:30  
 Application Method: Spray  
 Application Timing: 2-6"GR  
 Applic. Placement: BROFOL  
 Air Temp., Unit: 88 F  
 % Relative Humidity: 44  
 Wind Velocity, Unit: 5-10 MPH  
 Soil Moisture: NORMAL  
 % Cloud Cover: 20

**CROP STAGE AT EACH APPLICATION****A**

Crop 1 Code, Stage: GLXMA V2  
 Height, Unit: 6 IN

**WEED STAGE AT EACH APPLICATION****A**

Weed 1 Code: ZEAMX  
 Stage(leaves): 6-8  
 Height(inches): 18-24  
 Density: High

Weed 2 Code: SETFA  
 Stage(leaves): 2-10  
 Height(inches): 2-8  
 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:**

This study was not harvested.

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Weed Code		ZEAMX ZEAMX ZEAMX ZEAMX SETFA SETFA SETFA SETFA																			
Crop Code		GLXMA GLXMA GLXMA GLXMA				Control Control Control Control				Control Control Control Control											
Rating Data Type		Injury Injury Injury Injury				Percent Percent Percent Percent				Percent Percent Percent Percent											
Rating Unit		7-5-02 7-12-02 7-19-02 7-26-02				7-5-02 7-12-02 7-19-02 7-26-02				7-5-02 7-12-02 7-19-02 7-26-02											
Rating Date		7 DA-A 14 DA-A 21 DA-A 28 DA-A				7 DA-A 14 DA-A 21 DA-A 28 DA-A				7 DA-A 14 DA-A 21 DA-A 28 DA-A											
Trt-Eval Interval																					
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	CLETHODIM-AGAN	2 EC	0.0625 LB A/A	4 OZ/A	2-6"GR A					0	0	0	0	37	67	85	84	42	80	90	92
2	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
3	CLETHODIM-AGAN	2 EC	0.094 LB A/A	6 OZ/A	2-6"GR A					0	0	0	0	43	73	85	88	55	80	92	93
3	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
4	CLETHODIM-AGAN	2 EC	0.125 LB A/A	8 OZ/A	2-6"GR A					0	0	0	0	50	70	83	91	53	80	88	99
4	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
5	CLETHODIM-AGAN	2 EC	0.187 LB A/A	12 OZ/A	2-6"GR A					0	0	0	0	45	77	87	96	50	80	92	99
5	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
6	CLETHODIM-AGAN	2 EC	0.25 LB A/A	16 OZ/A	2-6"GR A					0	0	0	0	47	77	89	98	63	85	94	99
6	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
7	SELECT	2 EC	0.0625 LB A/A	4 OZ/A	2-6"GR A					0	0	0	0	40	72	85	86	42	80	92	95
7	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
8	SELECT	2 EC	0.094 LB A/A	6 OZ/A	2-6"GR A					0	0	0	0	38	72	85	88	48	82	92	95
8	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
9	SELECT	2 EC	0.125 LB A/A	8 OZ/A	2-6"GR A					0	0	0	0	40	70	85	96	48	82	93	99
9	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
10	SELECT	2 EC	0.187 LB A/A	12 OZ/A	2-6"GR A					0	0	0	0	45	72	87	94	38	75	90	99
10	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
11	SELECT	2 EC	0.25 LB A/A	16 OZ/A	2-6"GR A					0	0	0	0	38	72	92	97	40	78	95	98
11	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
12	CLETHODIM-AGAN	2 EC	0.094 LB A/A	6 OZ/A	2-6"GR A					0	0	0	0	38	68	88	95	57	78	93	99
12	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
12	AMS	100 DRY	4.0 LB/A	4 LB/A	2-6"GR A																
13	SELECT	2 EC	0.094 LB A/A	6 OZ/A	2-6"GR A					0	0	0	0	53	82	92	94	55	78	95	98
13	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																
13	AMS	100 DRY	4.0 LB/A	4 LB/A	2-6"GR A																
14	CLETHODIM-AGAN	2 EC	0.094 LB A/A	6 OZ/A	2-6"GR A					20	10	5	2	58	63	75	65	72	77	94	93
14	COBRA	2 EC	0.195 LB A/A	12.5 OZ/A	2-6"GR A																
14	PRIME OIL COC	100 LIQ	1.0 QT/A	1 QT/A	2-6"GR A																

Weed Code	GLXMA	GLXMA	GLXMA	GLXMA	ZEAMX	ZEAMX	ZEAMX	ZEAMX	SETFA	SETFA	SETFA	SETFA
Crop Code	Injury	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	7-5-02	7-12-02	7-19-02	7-26-02	7-5-02	7-12-02	7-19-02	7-26-02	7-5-02	7-12-02	7-19-02	7-26-02
Rating Date	7 DA-A	14 DA-A	21 DA-A	28 DA-A	7 DA-A	14 DA-A	21 DA-A	28 DA-A	7 DA-A	14 DA-A	21 DA-A	28 DA-A
Trt-Eval Interval												

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
15	SELECT	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	20	8	3	2	63	67	77	66	63	73	93	93
15	COBRA	2	EC	0.195	LB A/A	12.5	OZ/A	2-6"GR	A												
15	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
16	CLETHODIM-AGAN	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	0	40	62	82	86	38	73	83	92
16	RAPTOR	1	AS	0.039	LB A/A	5	OZ/A	2-6"GR	A												
16	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
17	SELECT	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	0	33	63	85	85	28	68	95	95
17	RAPTOR	1	AS	0.039	LB A/A	5	OZ/A	2-6"GR	A												
17	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
18	CLETHODIM-AGAN	2	EC	0.125	LB A/A	8	OZ/A	2-6"GR	A	10	0	0	2	63	70	80	74	73	83	95	95
18	STORM	4	EC	0.75	LB A/A	1.5	PT/A	2-6"GR	A												
18	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
19	SELECT	2	EC	0.125	LB A/A	8	OZ/A	2-6"GR	A	7	1	1	0	50	65	83	73	72	85	93	93
19	STORM	4	EC	0.75	LB A/A	1.5	PT/A	2-6"GR	A												
19	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
20	CLETHODIM-AGAN	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	0	37	58	80	83	33	70	87	90
20	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	2-6"GR	A												
20	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
21	SELECT	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	0	38	63	82	84	40	72	90	93
21	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	2-6"GR	A												
21	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A												
22	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0
LSD (P=.05)										2.0	1.2	1.2	1.8	11.5	9.5	6.0	5.0	17.7	7.3	5.2	2.9
Replicate F										1.000	1.472	1.472	1.000	0.218	2.011	4.518	2.647	0.880	2.845	0.075	2.247
Replicate Prob(F)										0.3765	0.2410	0.2410	0.3765	0.8052	0.1465	0.0167	0.0826	0.4224	0.0694	0.9279	0.1182
Treatment F										75.286	43.468	9.391	0.905	15.168	40.300	142.553	240.603	9.846	83.853	223.837	782.069
Treatment Prob(F)										0.0001	0.0001	0.0001	0.5866	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Makhteshim-Agan.
2. Blanket EPOST application of Python at 1.0 oz/A applied to 1 inch weeds on 6-4-02.
3. Plant "volunteer" corn by "splitting" soybean rows.
4. DA-A = days after 2-6"GR application.