

Evaluation of Generic Clethodim - Study 2.

02-2C-M-Grass

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, barnyardgrass control was similar between equivalent rates of Select and generic clethodim at all evaluation timings. Tank mixing Cobra with Select or generic clethodim did not reduce barnyardgrass control. Tank mixing Storm with Select or generic clethodim did not reduce barnyardgrass control at 7, 14 or 21 days after treatment. However a 12 to 13% reduction in control was observed with these tank mixtures at 28 days after treatment. Both Raptor and FirstRate reduced barnyardgrass control when when tank mixed with Select or generic clethodim, especially at the later evaluation timings. In general, barnyardgrass control was similar between Select and generic clethodim when the products were applied alone or in tank mixtures.

HERBICIDES

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

WEEDS

barnyardgrass
 waterhemp, common

CROP

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Evaluation of Generic Clethodim - Study 2.

Project Code: 02-2C-M-Grass 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. ECHCG	barnyardgrass	Echinochloa crus-galli (L.) Beauv.
2. AMATA	waterhemp, common	Amaranthus rudis Sauer

Crop 1:	GLXMA soybean	Variety:	Asgrow 4602 RR
Planting Method:	Seeded	Planting Date:	6-21-02
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:	TRAZW, 2002				

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

Soil Name:	Weir	% OM:	1.5	pH:	6.5	CEC:	8
Texture:	Silt loam	Fert. Level:	P1: 88 LB/A, K: 265 LB/A				

APPLICATION DESCRIPTION

A

Application Date:	7-1-02
Time of Day:	18:30
Application Method:	Spray
Application Timing:	2-6"GR
Applic. Placement:	BROFOL
Air Temp., Unit:	96 F
% Relative Humidity:	36
Wind Velocity, Unit:	0 MPH
Soil Moisture:	BELNOR
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage:	GLXMA VC
Height, Unit:	1-2 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code:	ECHCG
Stage(leaves):	2-10
Height(inches):	4-12
Density:	Low
Weed 2 Code:	AMATA
Stage(leaves):	2-20
Height(inches):	2-10
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:

This study was not harvested.

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Weed Code		GLXMA				ECHCG				AMATA											
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	ECHCG	ECHCG	ECHCG	ECHCG	AMATA	AMATA	AMATA	AMATA								
Rating Data Type		Injury	Injury	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control								
Rating Unit		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Date		7-8-02	7-15-02	7-22-02	7-29-02	7-8-02	7-15-02	7-22-02	7-29-02	7-8-02	7-15-02	7-22-02	7-29-02								
Trt-Eval Interval		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 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				
2	CLETHODIM-AGAN	2	EC	0.0625	LB A/A	4	OZ/A	2-6"GR	A	0	0	0	0	68	90	94	98	0	0	0	0
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	70	90	93	98	0	0	0	0
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	70	92	94	99	0	0	0	0
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	72	95	98	99	0	0	0	0
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	72	98	98	99	0	0	0	0
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	67	89	90	97	0	0	0	0
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	68	91	93	98	0	0	0	0
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	70	90	91	98	0	0	0	0
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	72	91	93	99	0	0	0	0
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	72	94	96	99	0	0	0	0
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	68	92	95	99	0	0	0	0
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	70	96	96	99	0	0	0	0
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	16	12	7	0	82	97	99	99	95	99	99	99
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						ECHCG	ECHCG	ECHCG	ECHCG	AMATA	AMATA	AMATA	AMATA								
Crop Code						GLXMA	GLXMA	GLXMA	GLXMA	Control	Control	Control	Control								
Rating Data Type						Injury	Injury	Injury	Injury	Percent	Percent	Percent	Percent								
Rating Unit						7-8-02	7-15-02	7-22-02	7-29-02	7-8-02	7-15-02	7-22-02	7-29-02								
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								
Trt-Eval Interval						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 No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	App Code												
15	SELECT	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	16	15	10	7								
15	COBRA	2	EC	0.195	LB A/A	12.5	OZ/A	2-6"GR	A	72	90	92	97								
15	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	98	98	98	98								
16	CLETHODIM-AGAN	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	0								
16	RAPTOR	1	AS	0.039	LB A/A	5	OZ/A	2-6"GR	A	72	88	85	72								
16	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	0	0	0	0								
17	SELECT	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	3								
17	RAPTOR	1	AS	0.039	LB A/A	5	OZ/A	2-6"GR	A	67	87	83	73								
17	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	0	0	0	0								
18	CLETHODIM-AGAN	2	EC	0.125	LB A/A	8	OZ/A	2-6"GR	A	17	15	9	7								
18	STORM	4	EC	0.75	LB A/A	1.5	PT/A	2-6"GR	A	77	92	92	86								
18	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	96	96	92	85								
19	SELECT	2	EC	0.125	LB A/A	8	OZ/A	2-6"GR	A	17	15	9	2								
19	STORM	4	EC	0.75	LB A/A	1.5	PT/A	2-6"GR	A	76	92	95	85								
19	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	95	94	91	88								
20	CLETHODIM-AGAN	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	0								
20	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	2-6"GR	A	70	86	87	96								
20	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	0	0	0	0								
21	SELECT	2	EC	0.094	LB A/A	6	OZ/A	2-6"GR	A	0	0	0	2								
21	FIRSTRATE	84	WG	0.0157	LB A/A	0.3	OZ/A	2-6"GR	A	70	86	87	93								
21	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	2-6"GR	A	0	0	0	0								
22	NONTREATED									0	0	0	0								
LSD (P=.05)										1.2	2.1	1.8	2.3	6.0	3.6	4.8	4.7	1.1	1.0	1.2	4.1
Replicate F										0.741	0.241	0.251	0.589	0.430	0.918	1.051	1.349	1.537	1.609	2.677	1.891
Replicate Prob(F)										0.4827	0.7866	0.7789	0.5595	0.6535	0.4070	0.3585	0.2705	0.2270	0.2123	0.0805	0.1636
Treatment F										230.871	60.552	31.418	6.467	100.908	470.468	272.776	304.673	9105.085	12911.653	7709.730	663.730
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	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. DA-A = days after 2-6"GR application.