

Southern Illinois University

Clethodim Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-5D
 Location: Belleville Res. Center
 Investigator: Bryan Young

General Trial Information	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Trial Status: F - one-year/final	
Initiation Date: 6-4-12	
Trial Location	
City: Belleville	
State/Prov.: IL	
Postal Code: 62221	
Country: USA	

Objectives: Evaluate the effect of Interlock and spray nozzles on the efficacy of grass control with clethodim.

Personnel	
Study Director: Bryan Young	Title: Professor
Investigator: Bryan Young	
Affiliation: Southern Illinois University	
Address: 1205 Lincoln Drive - AG 176 - MC 4415	
Location: Carbondale IL	
Postal Code: 62901	E-mail: bgyoung@siu.edu
Phone No.: 618-453-7679	Mobile No.: 618-713-6471

Crop Description	
Crop 1: GLXMA Glycine max Soybean	Description: RR2Y
Variety: AG3832	Planting Date: 6-4-12
BBCH Scale: BSOY	Rate, Unit: 75 LB/A
Planting Method: SEEDED Seeded	
Depth, Unit: 1 IN	
Row Spacing, Unit: 30 IN	

Pest Description	
Pest 1 Type: W Code: SETFA - Setaria faberi Herrm.	Common Name: foxtail, giant
Pest 2 Type: W Code: PANDI - Panicum dichotomiflorum Michx.	Common Name: panicum, fall

Site and Design	
Plot Width, Unit: 10 FT	Site Type: FIELD field
Plot Length, Unit: 40 FT	
Plot Area, Unit: 400 FT2	Tillage Type: REDTIL reduced-till
Replications: 3	Study Design: RACOB� Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance	
No.	Maintenance Treatment Name
1.	N 0 LB/A, P205 0 LB/A, K20 150 LB/A

Soil Description	
% OM: 1.7	Texture: SIL SILT LOAM
pH: 6.9	Soil Name: WINFIELD
CEC: 6	

Additional Measured Elements		
Element	Quantity	Unit
P1	96	LB/A
K	304	LB/A

Moisture and Weather Conditions	
Overall Moisture Conditions:	BELNOR below normal
Closest Weather Station: ICN - Belleville IL	Distance, Unit: 0.5 MI

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Application Description

	A
Application Date:	7-18-12
Time of Day:	7:00
Application Method:	Spray
Application Timing:	8"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	81 F
% Relative Humidity:	79
Wind Velocity, Unit:	1 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	84 F
Soil Moisture:	BELNOR
% Cloud Cover:	80
Next Rain Occurred On:	7-29-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	R1
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	R1
Height, Unit:	10 IN
Height Minimum, Maximum:	9 10

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	7
Stage Minimum, Percent:	2
Stage Maximum, Percent:	14
Height, Unit:	8 IN
Height Minimum, Maximum:	2 12
Density, Unit:	1 FT2
Pest 2 Code, Type, Scale:	PANDI W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	10
Height, Unit:	6 IN
Height Minimum, Maximum:	2 12
Density, Unit:	0.8 FT2

Application Equipment

	A
Appl. Equipment:	C02 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

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Pest Code	Crop Code	Rating Date	Rating Type	Rating Unit	Rating Timing	Trt-Eval Interval	GLXMA 7-25-12 Injury Percent	GLXMA 8-1-12 Injury Percent	GLXMA 8-15-12 Injury Percent
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Unit	Growth Stage	Appl Code	
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v		8"W 8"W	A A	0 a 0 a 0 a
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v		8"W 8"W 8"W	A A A	0 a 0 a 0 a
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v		8"W 8"W	A A	0 a 0 a 0 a
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v		8"W 8"W 8"W	A A A	0 a 0 a 0 a
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v		8"W 8"W	A A	0 a 0 a 0 a
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v		8"W 8"W 8"W	A A A	0 a 0 a 0 a
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v		8"W 8"W	A A	0 a 0 a 0 a
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v		8"W 8"W 8"W	A A A	0 a 0 a 0 a
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v		8"W 8"W	A A	0 a 0 a 0 a
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v		8"W 8"W 8"W	A A A	0 a 0 a 0 a
LSD (P=.05)							0.0	0.0	0.0
Standard Deviation							0.0	0.0	0.0
CV							0.0	0.0	0.0
Replicate F							0.000	0.000	0.000
Replicate Prob(F)							1.0000	1.0000	1.0000
Treatment F							0.000	0.000	0.000
Treatment Prob(F)							1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Code	SETFA	SETFA	SETFA	PANDI	PANDI	PANDI		
Crop Code	7-25-12	8-1-12	8-15-12	7-25-12	8-1-12	8-15-12		
Rating Date	Control	Control	Control	Control	Control	Control		
Rating Type	Percent	Percent	Percent	Percent	Percent	Percent		
Rating Unit	7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A		
Rating Timing								
Trt-Eval Interval								
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate	Growth Stage	Appl Code
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v	8"W 8"W	A A	
								22 a
								20 a
								28 ab
								22 a
								20 a
								23 a
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v	8"W 8"W 8"W	A A A	
								27 a
								19 a
								22 c
								27 a
								19 a
								20 a
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v	8"W 8"W	A A	
								27 a
								27 a
								29 a
								27 a
								27 a
								25 a
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v	8"W 8"W 8"W	A A A	
								28 a
								19 a
								23 bc
								28 a
								19 a
								22 a
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v	8"W 8"W	A A	
								27 a
								22 a
								25 abc
								27 a
								25 a
								20 a
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v	8"W 8"W 8"W	A A A	
								25 a
								22 a
								29 a
								25 a
								22 a
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v	8"W 8"W	A A	
								27 a
								18 a
								22 c
								27 a
								18 a
								19 a
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v	8"W 8"W 8"W	A A A	
								27 a
								23 a
								25 abc
								27 a
								23 a
								23 a
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH ARROW COC (PRIME OIL)	2 EC 100 SL		0.0625 lb ai/a 1 % v/v	4 fl oz/a 1 % v/v	8"W 8"W	A A	
								27 a
								23 a
								25 abc
								27 a
								23 a
								22 a
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH ARROW INTERLOCK COC (PRIME OIL)	2 EC 100 SL 100 SL		0.0625 lb ai/a 4 fl oz/a 1 % v/v	4 fl oz/a 4 fl oz/a 1 % v/v	8"W 8"W 8"W	A A A	
								27 a
								22 a
								23 bc
								27 a
								22 a
								22 a
LSD (P=.05)								4.9
Standard Deviation								2.9
CV								10.97
Replicate F								3.135
Replicate Prob(F)								0.0679
Treatment F								1.135
Treatment Prob(F)								0.3893
								8.0
								4.7
								21.84
								2.104
								0.1510
								0.806
								0.6165
								5.3
								3.1
								12.19
								0.131
								0.8781
								2.597
								0.0405
								4.9
								2.9
								10.97
								3.170
								0.0661
								1.004
								0.4717
								5.1
								3.0
								13.47
								1.502
								0.2493
								1.389
								0.2637

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Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14 and 28 DAT.
3. Nozzle type/size, application PSI, and application speed are per treatment, see treatment list
4. Not harvested.