

Headline Rate and Timing Study in Soybean.

Project Code: 05-4-W70 Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 11-01-05

Objective:

Determine the optimal rate and timing of Headline for disease control and yield enhancement in soybean.

Weed Code Common Name Scientific Name
 1. NA crop tolerance only

Crop 1: GLXMA soybean **Variety:** Asgrow 4403 RR
Planting Method: Seeded **Planting Date:** 5-12-05
Rate: 75 lb/A **Depth:** 1.0 IN
Row Spacing: 30 IN

Plot Width, Unit: 10 FT **Plot Length, Unit:** 26 FT **Reps:** 5
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: NONE , 2004

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

Soil Name: Weir **% OM:** 1.6 **pH:** 6 **CEC:** 7
Texture: Silt loam **Fert. Level:** P1: 85 LB/A, K: 323 LB/A

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	07-07-05	07-11-05	07-25-05	08-03-05
Time of Day:	13:30	10:00	9:00	9:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	R1	R2	R3	R4
Applic. Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	86 F	73 F	80 F	85 F
% Relative Humidity:	36	96	84	45
Wind Velocity, Unit:	3 MPH	5 MPH	0 MPH	3-5 MPH
Soil Moisture:	ABONOR	BELNOR	NORMAL	BELNOR

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GLXMA R1	GLXMA R2	GLXMA R3	GLXMA R4
Height, Unit:	12 IN	11-13 IN	20-21 IN	31-32 IN

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	60 PSI	60 PSI	60 PSI	60 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA

NOTES:

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Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

GLXMA 80% LD DAP
 GLXMA Moisture Percent
 GLXMA Yield bu/A
 GLXMA Disease % Incid
 GLXMA Disease % Sever
 10-07-05 10-07-05
 21 DAT 21 DAT

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA 80% LD DAP	GLXMA Moisture Percent	GLXMA Yield bu/A	GLXMA Disease % Incid	GLXMA Disease % Sever
1	NONTREATED									134	11.9	47	0	0
2	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R1	A	137	12.2	50	0	0
2	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R1	A					
3	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R2	B	136	12.0	50	0	0
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
4	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R3	C	139	12.1	49	0	0
4	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	C					
5	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	R4	D	136	12.0	53	0	0
5	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R4	D					
6	HEADLINE	2.09	EC	0.059	lb ai/a	3.6	fl oz/a	R2	B	138	12.1	55	0	0
6	METCONAZOLE	0.75	SL	0.0357	lb ai/a	6.1	fl oz/a	R2	B					
6	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
7	HEADLINE	2.09	EC	0.072	lb ai/a	4.4	fl oz/a	R2	B	137	12.1	55	0	0
7	METCONAZOLE	0.75	SL	0.045	lb ai/a	7.7	fl oz/a	R2	B					
7	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
8	HEADLINE	2.09	EC	0.077	lb ai/a	4.7	fl oz/a	R2	B	139	12.1	51	0	0
8	TEBUCONAZOLE	3.6	FL	0.09	lb ai/a	3.2	fl oz/a	R2	B					
8	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
9	HEADLINE	2.09	EC	0.059	lb ai/a	3.6	fl oz/a	R2	B	138	12.0	52	0	0
9	TEBUCONAZOLE	3.6	FL	0.09	lb ai/a	3.2	fl oz/a	R2	B					
9	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
10	TEBUCONAZOLE	3.6	FL	0.09	lb ai/a	3.2	fl oz/a	R2	B	134	12.0	51	0	0
10	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
11	HEADLINE	2.09	EC	0.147	lb ai/a	9	fl oz/a	R2	B	138	12.0	54	0	0
11	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R2	B					
LSD (P=.05)										3.2	0.24	6.0	0.0	0.0
Replicate F										0.798	1.853	3.808	0.000	0.000
Replicate Prob(F)										0.5334	0.1377	0.0103	1.0000	1.0000
Treatment F										2.476	0.919	1.461	0.000	0.000
Treatment Prob(F)										0.0205	0.5257	0.1903	1.0000	1.0000

Trial Comments

1. Protocol: BASF.
2. Ratings: Disease incidence and severity at 21 DAT, leaf retention.
3. Yield and grain moisture.
4. For treatments 1-5 and 11; If Asian soybean rust is present within 200 miles at or after any planned application, overspray treatments 1-5 and 11 with 7.7 oz/A of Caramba (spray all plots in treatments 1-5 and 11 at the same time).
5. For each treatment; if needed, make a second and/or a third application of 7.7 oz/A Caramba at 14-21 days after the initial application depending upon conditions and growth stage.
6. Blanket PRE application of Dual II Magnum at 1.27 lbai/A applied 10 ft wide to all plots including the nontreated (add Firstrate if necessary for broadleaf control) was applied 5-13-05, Firstrate added at 0.031bai/A.
7. Application instructions: Spray pressure is 60 PSI, and use the specified tips.
8. 80% LD = 80 percent leaf drop. DAP = Days after planting. DAT = Days after treatment.
 % Incid and % Sever = Percent incidence and severity, respectively.
 No observable disease symptoms at any time.
9. Harvested 10-7-05, (2) 30 inch rows by 23 ft.