

General Adjuvant by Nozzle Evaluation for Fungicides on Soybean.

Project Code: 05-BP-GenAdjvant Location: Brookport, IL
Investigator: Bryan Young**Investigator:** Bryan Young, Associate Professor, Southern Illinois University**City State Zip Country:** Brookport IL 62910 USA
Trial Status: Final **Updated:** 11-02-05**Objective:**Determine the influence of adjuvant and nozzle on
fungicide efficacy in soybean.**Crop 1:** GLXMA soybean **Variety:** P94M70 RR
Planting Method: Seeded **Planting Date:** 5-23-05
Rate: 75 lb/A **Depth:** 1.0 IN
Row Spacing: 30 IN**Plot Width, Unit:** 10 FT **Plot Length, Unit:** 30 FT **Reps:** 4
Tillage Type: Reduced-Till **Study Design:** Randomized complete block
Previous Crop, Year: GLXMA, 2004**APPLICATION DESCRIPTION****A****Application Date:** 07-28-05
Time of Day: 13:30
Application Method: Spray
Application Timing: R3
Applic. Placement: BROFOL
Air Temp., Unit: 84 F
% Relative Humidity: 45
Wind Velocity, Unit: 1-2 MPH
Soil Moisture: NORMAL**CROP STAGE AT EACH APPLICATION****A****Crop 1 Code, Stage:** GLXMA R3
Height, Unit: 32 IN**APPLICATION EQUIPMENT****A****Appl. Equipment:** CO2 sprayer
Operating Pressure: 50 PSI
Nozzle Type: See trt list
Nozzle Size: 110015
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 15 GPA**NOTES:**

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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Moisture Percent 10-13-05	GLXMA Test wt. lb/bu 10-13-05	GLXMA Yield bu/A 10-13-05	GLXMA Injury Percent 08-04-05 7 DA-A	GLXMA Injury Percent 08-11-05 14 DA-A	GLXMA Injury Percent 08-18-05 21 DA-A	GLXMA FROEYE % Incid 09-09-05 43 DA-A	GLXMA FROEYE Sever0-9 09-09-05 43 DA-A
1	NONTREATED									10.6	50.7	54	0	0	0	100	4.5
2	XR 11002 NOZZLES									10.6	50.8	62	0	0	0	100	2.0
2	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
2	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
3	XR 11002 NOZZLES									10.7	51.3	63	0	1	0	100	1.8
3	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
3	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A								
4	XR 11002 NOZZLES									10.6	50.9	63	0	0	0	100	1.8
4	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
4	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R3	A								
5	XR 11002 NOZZLES									10.4	50.3	57	0	2	0	100	2.0
5	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
5	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
5	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	A								
6	XR 11002 NOZZLES									10.5	50.5	59	0	2	0	100	1.8
6	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
6	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
6	HI-PER-OIL	100	LIQ	0.5	% v/v	0.5	% v/v	R3	A								
7	XR 11002 NOZZLES									10.5	50.5	61	0	1	0	100	2.3
7	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
7	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
7	TRANSFUSION	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A								
8	XR 11002 NOZZLES									10.4	50.1	59	0	0	0	100	1.5
8	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
8	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
8	PX056A	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A								
9	XR 11002 NOZZLES									10.5	50.2	61	0	1	0	100	2.3
9	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
9	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
9	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A								
10	XR 11002 NOZZLES									10.6	51.0	61	0	1	0	100	1.5
10	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
10	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
10	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A								
10	SOIL BOOST PLUS	100	LIQ	1.25	% v/v	1.25	% v/v	R3	A								
11	XR 11002 NOZZLES									10.5	50.8	55	0	2	0	100	1.8
11	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
11	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
11	LANDOIL	100	LIQ	1.0	gal/a	1	gal/a	R3	A								
12	AI 11002 NOZZLES									10.6	51.0	61	0	0	0	100	1.8
12	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
12	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
13	AI 11002 NOZZLES									10.5	50.6	62	0	1	0	100	2.0
13	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
13	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
13	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A								
14	AI 11002 NOZZLES									10.6	51.1	63	0	0	0	100	2.0
14	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
14	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
14	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R3	A								
15	AI 11002 NOZZLES									10.7	51.3	62	0	4	0	100	1.5
15	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
15	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
15	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	A								

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

GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA
 Moisture Test wt. Yield Injury Injury Injury FROEYE FROEYE
 Percent lb/bu bu/A Percent Percent Percent % Incid Sever0-9
 10-13-05 10-13-05 10-13-05 08-04-05 08-11-05 08-18-05 09-09-05 09-09-05
 7 DA-A 14 DA-A 21 DA-A 43 DA-A 43 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Moisture Percent	GLXMA Test wt. lb/bu	GLXMA Yield bu/A	GLXMA Injury Percent	GLXMA Injury Percent	GLXMA Injury Percent	GLXMA FROEYE % Incid	GLXMA FROEYE Sever0-9
16	AI 11002 NOZZLES									10.5	50.8	63	0	2	0	100	1.5
16	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
16	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
16	HI-PER-OIL	100	LIQ	0.5	% v/v	0.5	% v/v	R3	A								
17	AI 11002 NOZZLES									10.4	50.4	65	0	0	0	100	1.3
17	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
17	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
17	TRANSFUSION	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A								
18	AI 11002 NOZZLES									10.3	49.9	62	0	0	0	100	1.8
18	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
18	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
18	PX056A	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A								
19	AI 11002 NOZZLES									10.4	49.8	62	0	2	0	100	1.8
19	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
19	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
19	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A								
20	AI 11002 NOZZLES									10.4	50.3	62	0	2	0	100	1.3
20	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
20	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
20	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A								
20	SOIL BOOST PLUS	100	LIQ	1.25	% v/v	1.25	% v/v	R3	A								
21	AI 11002 NOZZLES									10.5	50.4	56	0	1	0	100	1.5
21	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A								
21	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A								
21	LANDOIL	100	LIQ	1.0	gal/a	1	gal/a	R3	A								
LSD (P=.05)										0.34	1.34	6.4	0.0	1.1	0.0	0.0	1.24
Replicate F										0.887	0.632	8.817	0.000	2.329	0.000	0.000	6.291
Replicate Prob(F)										0.4529	0.5971	0.0001	1.0000	0.0834	1.0000	1.0000	0.0009
Treatment F										0.794	0.815	1.747	0.000	5.976	0.000	0.000	2.311
Treatment Prob(F)										0.7098	0.6866	0.0565	1.0000	0.0001	1.0000	1.0000	0.0066

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Weed Code		GLXMA	GLXMA
Crop Code		BROSPO	BROSPO
Rating Data Type		% Incid	Sever0-5
Rating Unit		09-09-05	09-09-05
Rating Date		43 DA-A	43 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									100	4.50
2	XR 11002 NOZZLES									100	2.75
2	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
2	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
3	XR 11002 NOZZLES									100	2.50
3	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
3	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A		
4	XR 11002 NOZZLES									100	2.75
4	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
4	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R3	A		
5	XR 11002 NOZZLES									100	2.50
5	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
5	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
5	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	A		
6	XR 11002 NOZZLES									100	2.50
6	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
6	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
6	HI-PER-OIL	100	LIQ	0.5	% v/v	0.5	% v/v	R3	A		
7	XR 11002 NOZZLES									100	2.25
7	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
7	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
7	TRANSFUSION	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A		
8	XR 11002 NOZZLES									100	2.50
8	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
8	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
8	PX056A	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A		
9	XR 11002 NOZZLES									100	3.00
9	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
9	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
9	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A		
10	XR 11002 NOZZLES									100	2.50
10	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
10	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
10	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A		
10	SOIL BOOST PLUS	100	LIQ	1.25	% v/v	1.25	% v/v	R3	A		
11	XR 11002 NOZZLES									100	2.50
11	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
11	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
11	LANDOIL	100	LIQ	1.0	gal/a	1	gal/a	R3	A		
12	AI 11002 NOZZLES									100	2.00
12	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
12	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
13	AI 11002 NOZZLES									100	2.25
13	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
13	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
13	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A		
14	AI 11002 NOZZLES									100	2.25
14	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
14	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
14	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R3	A		
15	AI 11002 NOZZLES									100	3.00
15	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
15	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
15	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	A		

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Weed Code	GLXMA	GLXMA
Crop Code	BROSPO	BROSPO
Rating Data Type	% Incid	Sever0-5
Rating Unit	09-09-05	09-09-05
Rating Date	43 DA-A	43 DA-A
Trt-Eval Interval		

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code		
16	AI 11002 NOZZLES									100	2.00
16	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
16	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
16	HI-PER-OIL	100	LIQ	0.5	% v/v	0.5	% v/v	R3	A		
17	AI 11002 NOZZLES									100	2.50
17	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
17	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
17	TRANSFUSION	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A		
18	AI 11002 NOZZLES									100	2.00
18	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
18	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
18	PX056A	100	LIQ	0.125	% v/v	0.125	% v/v	R3	A		
19	AI 11002 NOZZLES									100	2.75
19	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
19	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
19	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A		
20	AI 11002 NOZZLES									100	2.25
20	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
20	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
20	LANDOIL	100	LIQ	1.0	pt/a	1	pt/a	R3	A		
20	SOIL BOOST PLUS	100	LIQ	1.25	% v/v	1.25	% v/v	R3	A		
21	AI 11002 NOZZLES									100	2.75
21	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	A		
21	FOLICUR	3.6	F	0.084	lb ai/a	3	fl oz/a	R3	A		
21	LANDOIL	100	LIQ	1.0	gal/a	1	gal/a	R3	A		
	LSD (P=.05)									0.0	1.183
	Replicate F									0.000	12.381
	Replicate Prob(F)									1.0000	0.0001
	Treatment F									0.000	1.612
	Treatment Prob(F)									1.0000	0.0795

Trial Comments

1. Protocol: SIU/BGY.
2. Ratings: CI 7, 14, and 21 DAT; Disease incidence and severity at 21 DAT.
3. Yield.
4. Spraying instructions: maintain 50 PSI for all treatments, change nozzles per treatment list.
5. Blanket preemergence application of Dual II + Firstrate at 1.67 pt/A + 0.6 oz/A, followed by a postemergence application of Roundup Weathermax at 22 oz/A, plus handweeding as needed.
6. Plots were evaluated for disease incidence and severity at 21 and 28 DAT with little to no observable disease symptoms, probably due to hot and dry field conditions.
7. DA-A = Days after R3 application.
 FROEYE = Frog eye leafspot. BROSPO = Septoria brown spot.
 % Incid = Percent incidence. Sever0-5 and Sever0-9 = Severity, rating scales of 0-5 and 0-9, respectively.
8. Harvested 10-13-05, (2) 30 inch rows by 24 ft.