

General Foliar Fungicide Screen in Soybean.

Project Code: 07-VRC-screen Location: Tamms, IL  
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Tamms IL 62988 USA  
 Trial Status: Final Updated: 1-24-08

**Objective:**

Evaluate various fungicides applied in soybean for disease management and yield enhancement.

Crop 1: GLXMA soybean Variety: AG 4703  
 Planting Method: Seeded Planting Date: 4-30-07  
 Rate: 75 lb/A Depth: 1.0 IN  
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 5  
 Tillage Type: Reduced-Till Study Design: Randomized complete block  
 Previous Crop, Year: GLXMA, 2006  
 Field Prep./Maintenance: N 0 LB/A, P205 100 LB/A, K20 100 LB/A

**APPLICATION DESCRIPTION**

	A	B	C
Application Date:	6-20-07	7-2-07	7-23-07
Time of Day:	17:00	11:15	15:00
Application Method:	Spray	Spray	Spray
Application Timing:	R1	R3	R5
Applic. Placement:	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	85 F	83 F	86 F
% Relative Humidity:	60	56	40
Wind Velocity, Unit:	1 MPH	3 MPH	5 MPH
% Cloud Cover:	0	10	10

**CROP STAGE AT EACH APPLICATION**

	A	B	C
Crop 1 Code, Stage:	GLXMA R1	GLXMA R3	GLXMA R5
Height, Unit:	16 IN	24 IN	54 IN

**APPLICATION EQUIPMENT**

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

**NOTES:**

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Weed Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	Insect	FROEYE	FROEYE	FROEYE	FROEYE	FROEYE
Rating Data Type	Percent	Sever0-9	Sever0-9	Sever0-9	Sever0-9	Sever0-9
Rating Unit	6-20-07	6-20-07	7-9-07	7-16-07	7-23-07	8-3-07
Rating Date	0 DA-A	0 DA-A	7 DA-B	14 DA-B	0 DA-C	11 DA-C
Trt-Eval Interval						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	1 a	1.0 a	3.4 a	3.6 a	6.2 a	7.4 a
1	NONTREATED									1 a	1.0 a	3.4 a	3.6 a	6.2 a	7.4 a
2	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	1 a	1.0 a	3.0 ab	3.6 a	5.6 ab	7.4 a
3	DOMARK	1.9	ME	0.0594	lb ai/a	4.0	fl oz/a	R3	B	1 a	1.0 a	2.6 ab	2.6 ab	2.8 d	5.4 b
4	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	1 a	1.0 a	0.5 e	0.6 efg	1.2 e	3.8 cd
4	HEADLINE	2.09	EC	0.049	lb ai/a	3.0	fl oz/a	R3	B						
5	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	1 a	1.0 a	1.4 cd	1.4 c-f	1.0 e	4.8 bc
5	QUADRI	2.08	SC	0.0487	lb ai/a	3.0	fl oz/a	R3	B						
6	COBRA	2	EC	0.094	lb ai/a	6.0	fl oz/a	R1	A	1 a	1.0 a	2.2 bc	2.4 bc	5.4 abc	6.0 ab
6	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R1	A						
7	HEADLINE	2.09	EC	0.098	lb ai/a	6.0	fl oz/a	R3	B	1 a	1.0 a	0.8 de	0.2 g	1.0 e	3.4 cd
7	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	B						
8	PUNCH	3.3	EC	0.103	lb ai/a	4.0	fl oz/a	R3	B	1 a	1.2 a	1.6 cd	1.8 bcd	4.0 cd	6.0 ab
9	PUNCH	3.3	EC	0.077	lb ai/a	3.0	fl oz/a	R3	B	1 a	1.0 a	1.2 de	0.4 fg	0.6 e	3.6 cd
9	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	B						
10	QUADRI	2.08	SC	0.0975	lb ai/a	6.0	fl oz/a	R3	B	1 a	1.0 a	0.5 e	0.6 efg	0.8 e	3.8 cd
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	B						
11	QUADRI	2.08	SC	0.0975	lb ai/a	6.0	fl oz/a	R3	B	1 a	1.2 a	1.2 de	0.8 d-g	0.8 e	3.2 de
11	WARRIOR	1	CS	0.0195	lb ai/a	2.5	fl oz/a	R3	B						
12	ABSOLUTE	4	L	0.156	lb ai/a	5.0	fl oz/a	R3	B	1 a	1.2 a	1.6 cd	1.6 b-e	0.6 e	0.0 f
13	STRATEGO	2.08	EC	0.162	lb ai/a	10	fl oz/a	R3	B	1 a	1.0 a	0.8 de	0.6 efg	0.2 e	1.8 e
13	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	B						
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	R3	B	1 a	1.2 a	3.4 a	1.8 bcd	4.6 bc	6.2 ab
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	R5	C						
LSD (P=.05)										0.0	0.30	0.91	1.04	1.47	1.44
Replicate F										0.000	1.560	0.813	1.394	1.117	1.908
Replicate Prob(F)										1.0000	0.1988	0.5227	0.2488	0.3586	0.1229
Treatment F										0.000	0.800	10.160	9.490	17.865	17.068
Treatment Prob(F)										1.0000	0.6571	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	SDS	SDS	SDS	SDS	SDS	SDS	Injury	Injury	Leaves
Rating Data Type	% Incid	Sever0-9	% Incid	Sever0-9	% Incid	Sever0-9	Percent	Percent	Percent
Rating Unit	7-9-07	7-9-07	7-16-07	7-16-07	7-23-07	7-23-07	7-9-07	7-16-07	10-2-07
Rating Date	7 DA-B	7 DA-B	14 DA-B	14 DA-B	0 DA-C	0 DA-C	7 DA-B	14 DA-B	EOS
Trt-Eval Interval									

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	3 a	0.2 a	5 abc	0.8 ab	4 bc	1.0 ab	0 a	0 a	1 f
1	NONTREATED									3 a	0.2 a	5 abc	0.8 ab	4 bc	1.0 ab	0 a	0 a	1 f
2	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	0 a	0.0 a	4 bc	0.8 ab	4 bc	0.8 ab	0 a	0 a	1 f
3	DOMARK	1.9	ME	0.0594	lb ai/a	4.0	fl oz/a	R3	B	1 a	0.2 a	7 abc	1.2 ab	8 abc	1.4 ab	0 a	0 a	3 def
4	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	0 a	0.0 a	3 bc	0.8 ab	5 bc	0.8 ab	0 a	0 a	10 abc
4	HEADLINE	2.09	EC	0.049	lb ai/a	3.0	fl oz/a	R3	B									
5	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	0 a	0.4 a	13 a	1.4 a	13 ab	1.0 ab	0 a	0 a	6 cde
5	QUADRI	2.08	SC	0.0487	lb ai/a	3.0	fl oz/a	R3	B									
6	COBRA	2	EC	0.094	lb ai/a	6.0	fl oz/a	R1	A	0 a	0.0 a	2 bc	0.2 b	0 c	0.0 b	0 a	0 a	1 f
6	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R1	A									
7	HEADLINE	2.09	EC	0.098	lb ai/a	6.0	fl oz/a	R3	B	1 a	0.4 a	2 bc	1.2 ab	4 bc	0.6 ab	0 a	0 a	11 ab
7	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	B									
8	PUNCH	3.3	EC	0.103	lb ai/a	4.0	fl oz/a	R3	B	0 a	0.0 a	1 c	0.6 ab	2 bc	0.6 ab	0 a	0 a	2 ef
9	PUNCH	3.3	EC	0.077	lb ai/a	3.0	fl oz/a	R3	B	3 a	0.4 a	10 ab	1.0 ab	14 ab	1.8 a	0 a	0 a	13 a
9	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	B									
10	QUADRI	2.08	SC	0.0975	lb ai/a	6.0	fl oz/a	R3	B	2 a	0.6 a	2 bc	0.2 b	12 abc	0.8 ab	0 a	0 a	6 cde
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	B									
11	QUADRI	2.08	SC	0.0975	lb ai/a	6.0	fl oz/a	R3	B	1 a	0.2 a	1 c	0.6 ab	0 c	0.0 b	0 a	0 a	4 def
11	WARRIOR	1	CS	0.0195	lb ai/a	2.5	fl oz/a	R3	B									
12	ABSOLUTE	4	L	0.156	lb ai/a	5.0	fl oz/a	R3	B	0 a	0.0 a	5 abc	0.8 ab	12 abc	1.2 ab	0 a	0 a	7 bcd
13	STRATEGO	2.08	EC	0.162	lb ai/a	10	fl oz/a	R3	B	1 a	0.4 a	10 abc	0.6 ab	18 a	1.0 ab	0 a	0 a	10 abc
13	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	B									
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	R3	B	0 a	0.0 a	1 c	1.2 ab	4 bc	1.2 ab	0 a	0 a	2 ef
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	R5	C									
LSD (P=.05)										3.6	0.63	8.9	1.09	12.2	1.68	0.0	0.0	4.9
Replicate F										1.165	1.658	1.047	1.187	0.850	1.004	0.000	0.000	5.726
Replicate Prob(F)										0.3371	0.1739	0.3922	0.3274	0.5002	0.4138	1.0000	1.0000	0.0007
Treatment F										0.725	0.877	1.518	0.892	1.726	0.676	0.000	0.000	5.648
Treatment Prob(F)										0.7308	0.5810	0.1426	0.5660	0.0828	0.7766	1.0000	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Weed Code	GLXMA	GLXMA	GLXMA	GLXMA
Crop Code	GRESTE	STEPOD	Moisture	Yield
Rating Data Type	Percent	Sever0-5	Percent	bu/A
Rating Unit	10-2-07	10-2-07	10-2-07	10-2-07
Rating Date	EOS	EOS	EOS	EOS
Trt-Eval Interval				

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	NONTREATED									2 e	3.6 a	13.1 b	30 g
2	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	2 e	3.6 a	13.2 ab	36 ef
3	DOMARK	1.9	ME	0.0594	lb ai/a	4.0	fl oz/a	R3	B	5 de	2.8 a-d	13.2 ab	36 ef
4	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	15 bc	2.6 bcd	13.2 ab	42 bcd
4	HEADLINE	2.09	EC	0.049	lb ai/a	3.0	fl oz/a	R3	B				
5	DOMARK	1.9	ME	0.0445	lb ai/a	3.0	fl oz/a	R3	B	11 cd	3.0 a-d	13.4 ab	42 bcd
5	QUADRI	2.08	SC	0.0487	lb ai/a	3.0	fl oz/a	R3	B				
6	COBRA	2	EC	0.094	lb ai/a	6.0	fl oz/a	R1	A	2 e	3.2 abc	13.3 ab	34 fg
6	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	R1	A				
7	HEADLINE	2.09	EC	0.098	lb ai/a	6.0	fl oz/a	R3	B	20 ab	2.4 cd	13.4 ab	43 abc
7	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	B				
8	PUNCH	3.3	EC	0.103	lb ai/a	4.0	fl oz/a	R3	B	4 de	3.4 ab	13.2 ab	38 c-f
9	PUNCH	3.3	EC	0.077	lb ai/a	3.0	fl oz/a	R3	B	26 a	2.4 cd	13.6 a	40 b-e
9	HEADLINE	2.09	EC	0.0735	lb ai/a	4.5	fl oz/a	R3	B				
10	QUADRI	2.08	SC	0.0975	lb ai/a	6.0	fl oz/a	R3	B	12 bcd	2.2 d	13.1 b	39 b-f
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	R3	B				
11	QUADRI	2.08	SC	0.0975	lb ai/a	6.0	fl oz/a	R3	B	6 de	2.8 a-d	13.2 ab	44 ab
11	WARRIOR	1	CS	0.0195	lb ai/a	2.5	fl oz/a	R3	B				
12	ABSOLUTE	4	L	0.156	lb ai/a	5.0	fl oz/a	R3	B	17 bc	2.8 a-d	13.1 b	48 a
13	STRATEGO	2.08	EC	0.162	lb ai/a	10	fl oz/a	R3	B	18 abc	2.2 d	13.1 b	38 def
13	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	R3	B				
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	R3	B	5 de	3.4 ab	13.3 ab	39 c-f
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	R5	C				
LSD (P=.05)										8.7	0.89	0.44	5.4
Replicate F										7.559	0.766	5.453	2.963
Replicate Prob(F)										0.0001	0.5520	0.0010	0.0280
Treatment F										6.488	2.474	0.871	5.678
Treatment Prob(F)										0.0001	0.0105	0.5873	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Valent, BASF, DuPont, Syngenta, Bayer.
2. Ratings: CI at 7, 14 + 21 DAT.  
 DI/DS and soybean defoliation at 7 day intervals after application.  
 DI/DS and % insect damage at application.
3. Yield, moisture, test weight.
4. FROEYE = Frog eye leafspot. Sever0-9 = Severity, rating scale 0-9.  
 Insect = Insect damage. SDS = Soybean sudden death syndrome. % Incid = Percent incidence.  
 DA-A = Days after R1 application. 0 DA-A = At application A.  
 Leaves = Percent leaves remaining on the plant at harvest. EOS = End of season, at harvest.  
 GRESTE = Green stem. STEPOD = Stem and pod diseases, consisting of anthracnose and pod and stem blight.  
 Sever0-5 as; 0 = no observable disease, 5 = almost completely black with sporulation.
5. Injury rating at 7 DAT was also 19 DA-A. There was no observable soybean injury following the 7 and 14 DA-B ratings.
5. Harvested 10-2-07, (2) 30 inch rows by 20 ft.