

Interaction of Soybean Fungicides with Raptor and Flexstar.

Project Code: 05-BP-RapFlex-Int 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:** 11-03-05**Objective:**

Determine any interaction of Raptor and Flexstar with soybean fungicides that may be possible tank-mixtures in non-GMO 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:** 07-01-05  
**Time of Day:** 10:00  
**Application Method:** Spray  
**Application Timing:** V5-V6  
**Applic. Placement:** BROFOL  
**Air Temp., Unit:** 86 F  
**% Relative Humidity:** 69  
**Wind Velocity, Unit:** 6-10 MPH  
**Soil Moisture:** NORMAL**CROP STAGE AT EACH APPLICATION****A****Crop 1 Code, Stage:** GLXMA V5  
**Height, Unit:** 10-11 IN**APPLICATION EQUIPMENT****A****Appl. Equipment:** CO2 sprayer  
**Operating Pressure:** 30-40 PSI  
**Nozzle Type:** Flat fan  
**Nozzle Size:** 8002  
**Boom Length, Unit:** 7.5 FT  
**Spray Volume, Unit:** 15 GPA**NOTES:**

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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  
Moisture Test wt. Yield Injury Injury Injury Injury  
Percent lb/bu bu/A Percent Percent Percent Percent  
10-13-05 10-13-05 10-13-05 07-08-05 07-15-05 07-22-05 07-29-05  
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	GLXMA Moisture Percent	GLXMA Test wt. lb/bu	GLXMA Yield bu/A	GLXMA Injury Percent	GLXMA Injury Percent	GLXMA Injury Percent	GLXMA Injury Percent
1	NONTREATED									12.3	51.6	39	0	0	0	0
2	RAPTOR	1	AS	0.0312	lb ai/a	4	fl oz/a	V5-V6	A	12.4	51.9	36	2	0	0	0
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
2	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
3	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	V5-V6	A	12.2	51.6	39	22	5	1	0
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
3	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
4	QUADRIS	2.08	F	0.0975	lb ai/a	6	fl oz/a	V5-V6	A	12.5	52.0	38	0	0	0	0
4	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
5	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	V5-V6	A	12.4	51.8	42	0	0	0	0
5	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	V5-V6	A							
6	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	V5-V6	A	12.6	51.6	39	0	0	0	0
6	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	V5-V6	A							
7	BRAVO WEATHER STIK	6	L	0.94	lb ai/a	20	fl oz/a	V5-V6	A	12.3	51.7	36	0	0	0	0
8	RAPTOR	1	AS	0.0312	lb ai/a	4	fl oz/a	V5-V6	A	12.6	52.1	35	3	0	0	0
8	QUADRIS	2.08	F	0.0975	lb ai/a	6	fl oz/a	V5-V6	A							
8	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
8	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
9	RAPTOR	1	AS	0.0312	lb ai/a	4	fl oz/a	V5-V6	A	12.4	51.9	38	0	0	0	0
9	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	V5-V6	A							
9	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
9	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
10	RAPTOR	1	AS	0.0312	lb ai/a	4	fl oz/a	V5-V6	A	12.5	51.4	35	1	0	0	0
10	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	V5-V6	A							
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
10	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
11	RAPTOR	1	AS	0.0312	lb ai/a	4	fl oz/a	V5-V6	A	12.5	52.0	33	1	0	0	0
11	BRAVO WEATHER STIK	6	L	0.94	lb ai/a	20	fl oz/a	V5-V6	A							
11	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
11	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
12	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	V5-V6	A	12.3	51.4	36	19	5	1	0
12	QUADRIS	2.08	F	0.0975	lb ai/a	6	fl oz/a	V5-V6	A							
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
12	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
13	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	V5-V6	A	12.3	51.7	39	21	5	1	0
13	HEADLINE	2.09	EC	0.098	lb ai/a	6	fl oz/a	V5-V6	A							
13	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
13	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
14	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	V5-V6	A	12.5	52.1	34	23	6	0	0
14	FOLICUR	3.6	F	0.112	lb ai/a	4	fl oz/a	V5-V6	A							
14	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
14	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
15	FLEXSTAR	1.88	EC	0.294	lb ai/a	20	fl oz/a	V5-V6	A	12.5	52.5	31	35	7	1	0
15	BRAVO WEATHER STIK	6	L	0.94	lb ai/a	20	fl oz/a	V5-V6	A							
15	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	V5-V6	A							
15	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	V5-V6	A							
LSD (P=.05)										0.32	0.56	5.7	2.7	1.6	0.7	0.0
Replicate F										8.338	2.109	65.913	1.699	1.952	5.559	0.000
Replicate Prob(F)										0.0002	0.1139	0.0001	0.1819	0.1359	0.0026	1.0000
Treatment F										1.231	2.375	2.061	156.129	24.369	2.647	0.000
Treatment Prob(F)										0.2905	0.0159	0.0397	0.0001	0.0001	0.0075	1.0000

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

GLXMA FROEYE	GLXMA FROEYE	GLXMA SDS	GLXMA SDS	GLXMA BROSPO	GLXMA BROSPO
% Incid	Sever0-9	% Incid	Sever0-9	% Incid	Sever0-5
08-26-05	08-26-05	08-26-05	08-26-05	08-26-05	08-26-05
56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A	56 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA FROEYE % Incid	GLXMA FROEYE Sever0-9	GLXMA SDS % Incid	GLXMA SDS Sever0-9	GLXMA BROSPO % Incid	GLXMA BROSPO Sever0-5
1	NONTREATED									46	3.8	0	0.0	100	3.25
2	RAPTOR	1 AS		0.0312	lb ai/a	4	fl oz/a	V5-V6	A	58	3.0	0	0.0	100	3.50
2	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
2	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
3	FLEXSTAR	1.88 EC		0.294	lb ai/a	20	fl oz/a	V5-V6	A	47	3.3	3	0.3	100	3.75
3	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
3	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
4	QUADRIS	2.08 F		0.0975	lb ai/a	6	fl oz/a	V5-V6	A	20	1.5	4	0.8	100	2.25
4	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
5	HEADLINE	2.09 EC		0.098	lb ai/a	6	fl oz/a	V5-V6	A	28	2.5	6	1.0	100	3.00
5	ACTIVATOR 90	100 LIQ		0.125	% v/v	0.125	% v/v	V5-V6	A						
6	FOLICUR	3.6 F		0.112	lb ai/a	4	fl oz/a	V5-V6	A	31	3.0	1	0.3	100	3.75
6	ACTIVATOR 90	100 LIQ		0.125	% v/v	0.125	% v/v	V5-V6	A						
7	BRAVO WEATHER STIK	6 L		0.94	lb ai/a	20	fl oz/a	V5-V6	A	23	1.3	1	0.3	100	3.75
8	RAPTOR	1 AS		0.0312	lb ai/a	4	fl oz/a	V5-V6	A	10	1.5	3	0.5	100	2.50
8	QUADRIS	2.08 F		0.0975	lb ai/a	6	fl oz/a	V5-V6	A						
8	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
8	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
9	RAPTOR	1 AS		0.0312	lb ai/a	4	fl oz/a	V5-V6	A	30	2.3	0	0.0	100	2.75
9	HEADLINE	2.09 EC		0.098	lb ai/a	6	fl oz/a	V5-V6	A						
9	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
9	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
10	RAPTOR	1 AS		0.0312	lb ai/a	4	fl oz/a	V5-V6	A	21	2.3	0	0.0	100	2.75
10	FOLICUR	3.6 F		0.112	lb ai/a	4	fl oz/a	V5-V6	A						
10	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
10	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
11	RAPTOR	1 AS		0.0312	lb ai/a	4	fl oz/a	V5-V6	A	20	2.0	3	0.5	100	3.50
11	BRAVO WEATHER STIK	6 L		0.94	lb ai/a	20	fl oz/a	V5-V6	A						
11	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
11	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
12	FLEXSTAR	1.88 EC		0.294	lb ai/a	20	fl oz/a	V5-V6	A	15	0.8	3	1.3	100	2.00
12	QUADRIS	2.08 F		0.0975	lb ai/a	6	fl oz/a	V5-V6	A						
12	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
12	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
13	FLEXSTAR	1.88 EC		0.294	lb ai/a	20	fl oz/a	V5-V6	A	24	1.5	0	0.0	100	2.50
13	HEADLINE	2.09 EC		0.098	lb ai/a	6	fl oz/a	V5-V6	A						
13	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
13	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
14	FLEXSTAR	1.88 EC		0.294	lb ai/a	20	fl oz/a	V5-V6	A	50	3.8	3	0.5	100	3.75
14	FOLICUR	3.6 F		0.112	lb ai/a	4	fl oz/a	V5-V6	A						
14	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
14	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
15	FLEXSTAR	1.88 EC		0.294	lb ai/a	20	fl oz/a	V5-V6	A	10	1.0	8	2.0	100	3.75
15	BRAVO WEATHER STIK	6 L		0.94	lb ai/a	20	fl oz/a	V5-V6	A						
15	PRIME OIL COC	100 LIQ		1.0	% v/v	1	% v/v	V5-V6	A						
15	28% UAN	100 LIQ		2.5	% v/v	2.5	% v/v	V5-V6	A						
LSD (P=.05)										25.2	1.53	5.7	1.58	0.0	1.038
Replicate F										1.642	0.246	2.114	2.054	0.000	1.632
Replicate Prob(F)										0.1942	0.8638	0.1128	0.1209	1.0000	0.1965
Treatment F										2.834	3.281	1.307	1.068	0.000	2.901
Treatment Prob(F)										0.0046	0.0014	0.2440	0.4120	1.0000	0.0038

Trial Comments

1. Protocol: ISPOB.
2. Ratings: Crop response 7, 14, and 28 DAT; disease control at 21 DAT.
3. Yield.
4. 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.
5. DA-A = Days after V5-V6 application.  
FROEYE = Frog eye leafspot. SDS = Soybean sudden death syndrome. BROSPO = Septoria brown spot.  
% Incid = Percent incidence. Sever0-5 and Sever0-9 = Severity, rating scales of 0-5 and 0-9, respectively.
6. Harvested 10-13-05, (2) 30 inch rows by 24 ft.