

Cheminova Asian Soybean Rust Study - 1.

Project Code: 05-BP-Cheminova 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:

Evaluate flutriafol for management of Asian soybean rust.

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	B	C	D
Application Date:	07-21-05		08-12-05	08-19-05
Time of Day:	11:00		13:00	10:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	R3	14DA-A	21DA-A	28DA-A
Applic. Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	90 F		94 F	88 F
% Relative Humidity:	60		49	88
Wind Velocity, Unit:	2-3 MPH		3-4 MPH	2-3 MPH
Soil Moisture:	ABONOR		ABONOR	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GLXMA R3	GLXMA NA	GLXMA R5	GLXMA R5
Height, Unit:	22 IN	NA NA	38 IN	40-45 IN

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 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
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 Trt-Eval Interval

GLXMA GLXMA GLXMA
 Moisture Test wt. Yield
 Percent lb/bu bu/A
 10-13-05 10-13-05 10-13-05

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Moisture Percent	Test wt. lb/bu	Yield bu/A
1	NONTREATED									16.0	53.0	44
2	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	16.1	53.6	45
3	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.7	53.1	45
3	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	21DA-A	C			
4	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.9	53.5	47
4	FLUTRIAFOL	1	SC	0.086	lb ai/a	11	fl oz/a	21DA-A	C			
5	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.6	53.0	45
5	FLUTRIAFOL	1	SC	0.109	lb ai/a	14	fl oz/a	21DA-A	C			
6	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.8	53.3	46
6	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	28DA-A	D			
7	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.9	53.3	47
7	FLUTRIAFOL	1	SC	0.086	lb ai/a	11	fl oz/a	28DA-A	D			
8	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	16.2	53.7	48
8	FLUTRIAFOL	1	SC	0.109	lb ai/a	14	fl oz/a	28DA-A	D			
9	TEBUCONAZOLE	3.6	FL	0.084	lb ai/a	3	fl oz/a	R3	A	15.6	53.1	48
9	TEBUCONAZOLE	3.6	FL	0.084	lb ai/a	3	fl oz/a	14DA-A	B			
9	SEE COMMENT #5											
10	TEBUCONAZOLE	3.6	FL	0.112	lb ai/a	4	fl oz/a	R3	A	15.8	53.3	48
10	TEBUCONAZOLE	3.6	FL	0.112	lb ai/a	4	fl oz/a	14DA-A	B			
10	SEE COMMENT #5											
11	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.9	52.8	49
11	T-METHYL	4.5	L	0.21	lb ai/a	6	fl oz/a	R3	A			
11	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	21DA-A	C			
11	T-METHYL	4.5	L	0.21	lb ai/a	6	fl oz/a	21DA-A	C			
12	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	15.7	53.2	48
12	T-METHYL	4.5	L	0.35	lb ai/a	10	fl oz/a	R3	A			
12	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	21DA-A	C			
12	T-METHYL	4.5	L	0.35	lb ai/a	10	fl oz/a	21DA-A	C			
LSD (P=.05)										0.64	0.84	4.2
Replicate F										1.982	3.510	41.079
Replicate Prob(F)										0.1358	0.0259	0.0001
Treatment F										0.780	0.788	1.213
Treatment Prob(F)										0.6574	0.6502	0.3174

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GLXMA Injury Percent 07-28-05 7 DA-A	GLXMA Injury Percent 08-04-05 14 DA-A	GLXMA Injury Percent 08-11-05 21 DA-A	GLXMA Injury Percent 08-19-05 7 DA-C	GLXMA Injury Percent 08-26-05 7 DA-D	GLXMA Injury Percent 09-02-05 14 DA-D
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA Injury Percent 07-28-05 7 DA-A	GLXMA Injury Percent 08-04-05 14 DA-A	GLXMA Injury Percent 08-11-05 21 DA-A	GLXMA Injury Percent 08-19-05 7 DA-C	GLXMA Injury Percent 08-26-05 7 DA-D	GLXMA Injury Percent 09-02-05 14 DA-D
1	NONTREATED									0	0	0	0	0	0
2	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
3	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
3	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		21DA-A	C						
4	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
4	FLUTRIAFOL	1 SC		0.086	lb ai/a	11 fl oz/a		21DA-A	C						
5	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
5	FLUTRIAFOL	1 SC		0.109	lb ai/a	14 fl oz/a		21DA-A	C						
6	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
6	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		28DA-A	D						
7	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
7	FLUTRIAFOL	1 SC		0.086	lb ai/a	11 fl oz/a		28DA-A	D						
8	FLUTRIAFOL	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
8	FLUTRIAFOL	1 SC		0.109	lb ai/a	14 fl oz/a		28DA-A	D						
9	TEBUCONAZOLE	3.6 FL		0.084	lb ai/a	3 fl oz/a		R3	A	0	0	0	0	0	0
9	TEBUCONAZOLE	3.6 FL		0.084	lb ai/a	3 fl oz/a		14DA-A	B						
9	SEE COMMENT #5														
10	TEBUCONAZOLE	3.6 FL		0.112	lb ai/a	4 fl oz/a		R3	A	0	0	0	0	0	0
10	TEBUCONAZOLE	3.6 FL		0.112	lb ai/a	4 fl oz/a		14DA-A	B						
10	SEE COMMENT #5														
11	IMPACT	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
11	T-METHYL	4.5 L		0.21	lb ai/a	6 fl oz/a		R3	A						
11	IMPACT	1 SC		0.0547	lb ai/a	7 fl oz/a		21DA-A	C						
11	T-METHYL	4.5 L		0.21	lb ai/a	6 fl oz/a		21DA-A	C						
12	IMPACT	1 SC		0.0547	lb ai/a	7 fl oz/a		R3	A	0	0	0	0	0	0
12	T-METHYL	4.5 L		0.35	lb ai/a	10 fl oz/a		R3	A						
12	IMPACT	1 SC		0.0547	lb ai/a	7 fl oz/a		21DA-A	C						
12	T-METHYL	4.5 L		0.35	lb ai/a	10 fl oz/a		21DA-A	C						
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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GLXMA FROEYE % Incid 08-11-05 21 DA-A	GLXMA FROEYE Sever0-9 08-11-05 21 DA-A	GLXMA FROEYE % Incid 09-09-05 21 DA-D	GLXMA FROEYE Sever0-9 09-09-05 21 DA-D	GLXMA BROSPO % Incid 09-09-05 21 DA-D	GLXMA BROSPO Sever0-5 09-09-05 21 DA-D	GLXMA STEPOD Sever0-9 10-13-05 55 DA-D
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Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	GLXMA FROEYE % Incid 08-11-05 21 DA-A	GLXMA FROEYE Sever0-9 08-11-05 21 DA-A	GLXMA FROEYE % Incid 09-09-05 21 DA-D	GLXMA FROEYE Sever0-9 09-09-05 21 DA-D	GLXMA BROSPO % Incid 09-09-05 21 DA-D	GLXMA BROSPO Sever0-5 09-09-05 21 DA-D	GLXMA STEPOD Sever0-9 10-13-05 55 DA-D
1	NONTREATED									6	0.8	100	3.5	100	4.25	7.0
2	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	3.3	100	3.75	6.3
3	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	4.0	100	4.00	4.5
3	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	21DA-A	C							
4	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	3.8	100	4.00	6.8
4	FLUTRIAFOL	1	SC	0.086	lb ai/a	11	fl oz/a	21DA-A	C							
5	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	3.5	100	3.50	5.5
5	FLUTRIAFOL	1	SC	0.109	lb ai/a	14	fl oz/a	21DA-A	C							
6	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	4.0	100	3.50	5.8
6	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	28DA-A	D							
7	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	3	0.5	100	3.8	100	3.25	4.8
7	FLUTRIAFOL	1	SC	0.086	lb ai/a	11	fl oz/a	28DA-A	D							
8	FLUTRIAFOL	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	3.5	100	3.25	5.3
8	FLUTRIAFOL	1	SC	0.109	lb ai/a	14	fl oz/a	28DA-A	D							
9	TEBUCONAZOLE	3.6	FL	0.084	lb ai/a	3	fl oz/a	R3	A	0	0.0	100	3.3	100	3.50	6.8
9	TEBUCONAZOLE	3.6	FL	0.084	lb ai/a	3	fl oz/a	14DA-A	B							
9	SEE COMMENT #5															
10	TEBUCONAZOLE	3.6	FL	0.112	lb ai/a	4	fl oz/a	R3	A	1	0.3	100	4.0	100	3.50	7.3
10	TEBUCONAZOLE	3.6	FL	0.112	lb ai/a	4	fl oz/a	14DA-A	B							
10	SEE COMMENT #5															
11	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	1.8	100	3.25	4.5
11	T-METHYL	4.5	L	0.21	lb ai/a	6	fl oz/a	R3	A							
11	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	21DA-A	C							
11	T-METHYL	4.5	L	0.21	lb ai/a	6	fl oz/a	21DA-A	C							
12	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	R3	A	0	0.0	100	3.3	100	3.50	5.0
12	T-METHYL	4.5	L	0.35	lb ai/a	10	fl oz/a	R3	A							
12	IMPACT	1	SC	0.0547	lb ai/a	7	fl oz/a	21DA-A	C							
12	T-METHYL	4.5	L	0.35	lb ai/a	10	fl oz/a	21DA-A	C							
LSD (P=.05)										3.4	0.51	0.0	1.48	0.0	1.077	1.26
Replicate F										1.750	1.122	0.000	0.292	0.000	0.237	3.958
Replicate Prob(F)										0.1759	0.3541	1.0000	0.8312	1.0000	0.8698	0.0163
Treatment F										2.523	2.020	0.000	1.424	0.000	0.773	5.268
Treatment Prob(F)										0.0197	0.0586	1.0000	0.2086	1.0000	0.6636	0.0001

Trial Comments

1. Protocol: Cheminova.
2. Ratings: CI 7 DAT; CI and disease incidence and severity at 14 and 21 DAT.
3. DA-A = Days after application "A".
4. Application timing "C" should be 18-21 days after the first application.
5. For treatments 9+10, the planned 14DA-A application (scheduled for 8-4-05) was delayed until 8-12-05 and thus was applied the same day as the 21DA-A application.
6. 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.
7. Overall there was low occurrence of SDS symptoms, average DI = 30, average DS = 4, as rated on 8-12-05.
8. DA-A = Days after R3 application. DA-C = Days after 21DA-A application. DA-D = Days after 28DA-A application. Ratings at 21 DA-A were prior to the 21DA-A and 28DA-A applications. Ratings at 7 DA-C were prior to the 28DA-A application. Ratings at 7 DA-D were also 14 DA-C. Ratings at 14 DA-D were also 21 DA-C. FROEYE = Frog eye leafspot. BROSPO = Septoria brown spot. STEPOD = Stem and pod diseases, consisting of approximately 95% anthracnose and 5% pod and stem blight. % Incid = Percent incidence. Sever0-5 and Sever0-9 = Severity, rating scales of 0-5 and 0-9, respectively.
9. Harvested 10-13-05, (2) 30 inch rows by 24 ft.