

Fusarium Head Blight - Uniform Fungicide Trials on Wheat.

Trial ID: 09-ARC-5B

Location: Agronomy Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 10-31-08

Objectives: Evaluate application timing for several fungicide for control of fusarium head blight in winter wheat.

Crop 1: TRZAW Winter wheat Variety: P25R47
 Planting Method: SEEDED Planting Date: 10-31-08
 Rate, Unit: 1.3 mil. S/A Depth, Unit: 1 IN
 Row Spacing, Unit: 7.5 IN

Plot Width, Unit: 5 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: NO-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2008

Field Prep./Maintenance: N 18 LB/A, P205 46 LB/A, K2O 120 LB/A on 10-27-08 and N 95 LB/A as 32% UAN on 3-4-09

% OM: 1.6 Texture: SILT LOAM
 pH: 6.1 Soil Name: WEIR
 CEC: 10 Fert. Level: P1: 26 LB/A, K: 177 LB/A

	Application Description									
	A		B		C		D		E	
Application Date:	04-28-09	05-04-09	05-07-09	05-11-09	05-15-09					
Time of Day:	8:00	17:00	10:00	12:00	10:00					
Application Method:	Spray	Spray	Spray	Spray	Spray					
Application Timing:	FK9	FK10	FK10.5	FK10.51	5DA-D					
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL					
Applied By:	JLM	JLM	JLM	JLM	JLM					
Air Temperature, Unit:	64 F	68 F	72 F	68 F	77 F					
% Relative Humidity:	85	50	80	51	74					
Wind Velocity, Unit:	2 MPH	3 MPH	1 MPH	3 MPH	5 MPH					
Wind Direction:	W	E	W	NE	SSW					
Dew Presence (Y/N):	Y	N	Y	N	N					
Soil Temperature, Unit:	60 F	59 F	63 F	55 F	60 F					
Soil Moisture:	ABONOR	ABONOR	ABONOR	ABONOR	ABONOR					
% Cloud Cover:	100	100	100	10	35					

	04-28-09	05-04-09	05-07-09	05-11-09	05-15-09
Crop stage at application:	9	FK 10	FK 10.4	FK 10.51	FK 10.54
Height Min, Max (inch):	20	24 24	28 26	30 30	34 30

Pest Stage At Each Application
 Application Date: 04-28-08 05-04-09 05-07-09 05-11-09 05-15-09

	Application Equipment									
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer					
Operating Pressure:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI					
Nozzle Type:	TwinFlFan	TwinFlFan	TwinFlFan	TwinFlFan	TwinFlFan					
Nozzle Size:	XR 110015	XR 110015	XR 110015	XR 110015	XR 110015					
Boom Length, Unit:	5 FT	5 FT	5 FT	5 FT	5 FT					
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA	20 GPA					

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										HEADSCAB	HEADSCAB	TNST/SEP	TNST/SEP
										TRZAW	TRZAW	TRZAW	TRZAW
										06-19-09	06-19-09	06-19-09	06-04-09
										Moisture	Test wt.	Yield	Incidence
										Percent	lb/bu	bu/A	Percent
										SoftDough	SoftDough	SoftDough	SoftDough
										28 DA-C	28 DA-C	28 DA-C	28 DA-C
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl					
No.	Name	Conc	Type	Unit	Rate	Rate	Stage	Code					
1	NONTREATED									12.1 cd	51.1 bc	85 cde	64 a
2	PROLINE	4 SC		0.094 lb ai/a	3 fl oz/a		FK10.51 D			14.4 a	52.7 a	105 a	23 d
2	CARAMBA	0.75 SC		0.041 lb ai/a	7 fl oz/a		FK10.51 D						2 de
2	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10.51 D						90 c
3	PROSARO	3.52 SC		0.179 lb ai/a	6.5 fl oz/a		FK10.5 C						
3	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10.5 C			13.9 ab	52.0 ab	89 bcd	52 ab
4	PROSARO	3.52 SC		0.179 lb ai/a	6.5 fl oz/a		FK10.51 D						6 cde
4	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10.51 D			12.6 bcd	52.8 a	96 abc	92 abc
5	PROSARO	3.52 SC		0.179 lb ai/a	6.5 fl oz/a		5 DA-D E						3 bc
5	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		5 DA-D E			13.5 abc	52.7 a	94 abc	4 de
6	CARAMBA	0.75 SC		0.079 lb ai/a	13.5 fl oz/a		FK10.5 C						91 bc
6	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10.5 C			12.5 bcd	51.9 ab	81 de	2 e
7	CARAMBA	0.75 SC		0.079 lb ai/a	13.5 fl oz/a		FK10.51 D						95 abc
7	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10.51 D			13.4 abc	49.2 d	63 f	2 e
8	CARAMBA	0.75 SC		0.079 lb ai/a	13.5 fl oz/a		5 DA-D E						95 abc
8	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		5 DA-D E			13.4 abc	52.7 a	99 ab	3 de
9	HEADLINE	2.09 EC		0.098 lb ai/a	6 fl oz/a		FK10 B						99 a
9	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10 B			51 ab	7 bcd		5 abc
10	HEADLINE	2.09 EC		0.098 lb ai/a	6 fl oz/a		FK10.5 C						
10	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK10.5 C			12.2 cd	50.9 bc	79 de	11 ab
11	HEADLINE	2.09 EC		0.098 lb ai/a	6 fl oz/a		FK9 A						94 abc
11	ACTIVATOR 90	100 SL		0.125 % v/v	0.125 % v/v		FK9 A			12.4 cd	50.6 c	81 de	96 abc
12	NONTREATED									11.8 d	50.9 bc	76 e	3 bc
LSD (P=.05)										1.52	1.19	12.4	15.2
Replicate F										1.106	0.540	12.275	2.123
Replicate Prob(F)										0.3621	0.6588	0.0001	0.1182
Treatment F										2.539	7.952	7.774	0.0176
Treatment Prob(F)										0.0237	0.0001	0.0001	0.0002

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

Trial Comments

1. Protocol: University of Illinois - Bradley.
2. Ratings: DI/DS, based on 50 heads per plot, at soft dough.
3. Yield, seed samples send to Carl Bradley.
4. Spread inoculum at flag leaf, 2 weeks before heading.
5. Application timings, FK10.5 (C) should be approximately 5 days before the FK10.51 (D).
6. Test wt. = Test weight. HEADSCAB = Head scab (fusarium head blight).
TNST/SEP = Tan spot and/or septoria leaf blotch on the flag leaf (80% tan spot and 20% septoria leaf blotch).
No leaf rust was found. No stripe rust was found.
7. Treatment 9, yield was compromised by possible tank contamination, yield not reported.
8. Harvested 6-19-09, (6) 7.5 inch rows by 27.5 ft.