

Foliar Fungicides in Wheat.

Trial ID: 10-15-S150

Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 11-06-09

Objectives: Evaluate foliar fungicide programs for control of leaf and head diseases in winter wheat.

Crop 1: TRZAW Winter wheat Variety: Pioneer 25R62
 Planting Method: SEEDED Planting Date: 11-06-09
 Rate, Unit: 1.3 mil. S/A Depth, Unit: 1 IN
 Row Spacing, Unit: 7.5 IN
 Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 30 FT Tillage Type: REDUCED-TILL
 Replications: 4 Study Design: Randomized Complete Block

Prior Crops, Year
 1. GLXMA 2009

Field Prep./Maintenance: N 35 LB/A applied on 11-6-09 and N 85 LB/A applied on 2-1-10.

% OM: 1.8 Texture: SILT LOAM
 pH: 6.8 Soil Name: WINFIELD
 CEC: 9 Fert. Level: P1: 62 LB/A, K: 305 LB/A

	Application Description		
	A	B	C
Application Date:	04-20-10	05-02-10	05-13-10
Time of Day:	9:00	9:00	7:00
Application Method:	Spray	Spray	Spray
Application Timing:	ESPRING	FLAG	FK10.51
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK
Air Temperature, Unit:	60 F	64 F	72 F
% Relative Humidity:	60	92	92
Wind Velocity, Unit:	3 MPH	0 MPH	5 MPH
Soil Moisture:	NORMAL	ABONOR	ABONOR
% Cloud Cover:	0	0	0

	A	B	C
Crop stage at application:	5-6	FK 9	FK 10.51
Height Min, Max (inch):	10 12 20	22 26	32

	A	B	C
Application Date:	04-20-10	05-02-10	05-13-10
Stage Majority (leaves):	NA	NA	NA

	Application Equipment		
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	30 PSI	30 PSI	30 PSI
Nozzle Type:	TwinFlFan	TwinFlFan	TwinFlFan
Nozzle Size:	XR 8001	XR 8001	XR 8001
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

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Pest Code Crop Code Rating Date Rating Data Type Rating Unit Rating Timing Trt-Eval Interval									TRZAW 06-23-10	TRZAW 06-23-10	TRZAW 06-23-10	TRZAW 04-27-10	TRZAW 05-09-10	TRZAW 05-20-10
									Moisture Percent	Test wt. lb/bu	Yield bu/A	Injury Percent	Injury Percent	Injury Percent
												7 DA-A	7 DA-B	7 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									11.7 c	52.1 d	60 c	0 b	0 a
2	STRATEGO PRO	4.17	SC	0.065	lb ai/a	2	fl oz/a	ESPRING A		11.8 abc	52.6 cd	66 ab	0 b	0 a
2	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING A						
2	STRATEGO PRO	4.17	SC	0.13	lb ai/a	4	fl oz/a	FLAG B						
2	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FLAG B						
3	STRATEGO PRO	4.17	SC	0.065	lb ai/a	2	fl oz/a	ESPRING A		12.0 a	54.4 a	68 ab	0 b	0 a
3	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING A						
3	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51 C						
3	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51 C						
4	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51 C		12.1 a	53.9 ab	67 ab		0 a
4	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51 C						
5	CARAMBA	0.75	SC	0.079	lb ai/a	13.5	fl oz/a	FK10.51 C		11.9 abc	53.8 abc	71 a		0 a
5	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51 C						
6	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	ESPRING A		11.7 bc	53.2 a-d	65 bc	2 a	0 a
6	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING A						
6	VERTISAN (LEM17)	1.67	EC	0.13	lb ai/a	10	fl oz/a	FLAG B						
7	VERTISAN (LEM17)	1.67	EC	0.313	lb ai/a	24	fl oz/a	FK10.51 C		11.8 abc	53.6 abc	66 ab		0 a
8	VERTISAN (LEM17)	1.67	EC	0.188	lb ai/a	14.4	fl oz/a	FK10.51 C		12.0 ab	52.8 bcd	66 b		0 a
8	PICOXY	100	SL	5.75	fl oz/a	5.75	fl oz/a	FK10.51 C						
LSD (P=.05)										0.30	1.25	5.0	0.4	0.0
Replicate F										5.262	0.474	30.440	1.000	0.000
Replicate Prob(F)										0.0073	0.7035	0.0001	0.4363	1.0000
Treatment F										2.326	3.263	3.361	81.000	0.000
Treatment Prob(F)										0.0635	0.0166	0.0145	0.0001	1.0000

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

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								LEAFHEAD	LEAFHEAD	LEAFHEAD	LEAFHEAD	SEPTORIA	SEPTORIA
								TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW
								05-11-10	05-11-10	05-23-10	05-23-10	06-03-10	06-03-10
								Incidence	Severity	Incidence	Severity	Incidence	Severity
								Percent	Percent	Percent	Percent	Percent	Percent
								9 DA-B	9 DA-B	9 DA-B	9 DA-B	32 DA-B	32 DA-B
								21 DA-A	21 DA-A	21 DA-B	21 DA-B	21 DA-C	21 DA-C
Trt	Treatment	Form	Form	Rate	Other	Other	Growth	Appl					
No.	Name	Conc	Type	Rate	Unit	Rate	Unit	Stage	Code				
1	NONTREATED									0 a	0 a	0 a	0 a
2	STRATEGO PRO	4.17	SC	0.065	lb ai/a	2	fl oz/a	ESPRING	A	0 a	0 a	0 a	0 a
2	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING	A				
2	STRATEGO PRO	4.17	SC	0.13	lb ai/a	4	fl oz/a	FLAG	B				
2	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FLAG	B				
3	STRATEGO PRO	4.17	SC	0.065	lb ai/a	2	fl oz/a	ESPRING	A	0 a	0 a		0 a
3	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING	A				0 cd
3	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51	C				
3	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51	C				
4	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51	C			0 a	0 d
4	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51	C				
5	CARAMBA	0.75	SC	0.079	lb ai/a	13.5	fl oz/a	FK10.51	C			0 a	0 d
5	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51	C				
6	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	ESPRING	A	0 a	0 a	0 a	0 a
6	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING	A				
6	VERTISAN (LEM17)	1.67	EC	0.13	lb ai/a	10	fl oz/a	FLAG	B				
7	VERTISAN (LEM17)	1.67	EC	0.313	lb ai/a	24	fl oz/a	FK10.51	C			24 a	2 b
8	VERTISAN (LEM17)	1.67	EC	0.188	lb ai/a	14.4	fl oz/a	FK10.51	C			0 a	0 d
8	PICOXY	100	SL	5.75	fl oz/a	5.75	fl oz/a	FK10.51	C				
LSD (P=.05)								0.0	0.0	0.0	0.0	29.8	1.1
Replicate F								0.000	0.000	0.000	0.000	2.405	0.202
Replicate Prob(F)								1.0000	1.0000	1.0000	1.0000	0.0961	0.8938
Treatment F								0.000	0.000	0.000	0.000	1.162	10.575
Treatment Prob(F)								1.0000	1.0000	1.0000	1.0000	0.3649	0.0001

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

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Pest Code										LFRST	LFRST
Crop Code										TRZAW	TRZAW
Rating Date										06-03-10	06-03-10
Rating Data Type										Incidence	Severity
Rating Unit										Percent	Percent
Rating Timing										32 DA-B	32 DA-B
Trt-Eval Interval										21 DA-C	21 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	NONTREATED									90 a	5 a
2	STRATEGO PRO	4.17	SC	0.065	lb ai/a	2	fl oz/a	ESPRING A		1 bc	1 c
2	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING A			
2	STRATEGO PRO	4.17	SC	0.13	lb ai/a	4	fl oz/a	FLAG B			
2	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FLAG B			
3	STRATEGO PRO	4.17	SC	0.065	lb ai/a	2	fl oz/a	ESPRING A		0 d	0 d
3	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING A			
3	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51 C			
3	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51 C			
4	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51 C		0 d	0 d
4	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51 C			
5	CARAMBA	0.75	SC	0.079	lb ai/a	13.5	fl oz/a	FK10.51 C		0 d	0 d
5	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	FK10.51 C			
6	KOCIDE 3000	46.1	WG	0.346	lb ai/a	0.75	lb/a	ESPRING A		2 b	2 b
6	INDUCE	100	SL	0.125	% v/v	0.125	% v/v	ESPRING A			
6	VERTISAN (LEM17)	1.67	EC	0.13	lb ai/a	10	fl oz/a	FLAG B			
7	VERTISAN (LEM17)	1.67	EC	0.313	lb ai/a	24	fl oz/a	FK10.51 C		1 c	1 bc
8	VERTISAN (LEM17)	1.67	EC	0.188	lb ai/a	14.4	fl oz/a	FK10.51 C		1 c	1 c
8	PICOXY	100	SL	5.75	fl oz/a	5.75	fl oz/a	FK10.51 C			
LSD (P=.05)										0.4	0.4
Replicate F										0.396	0.396
Replicate Prob(F)										0.7571	0.7571
Treatment F										50598.286	137.151
Treatment Prob(F)										0.0001	0.0001

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

Trial Comments

1. Protocol: Bayer (FJJ), DuPont.
2. Ratings: CI 7 DAT. DI/DS at 21 DAT, rate all plots at 21 DA-C.
3. Yield, retain grain samples.
4. Blanket postemergence application of Harmony Extra SG (0.75 oz/A) was applied 4-19-10, wheat at FK5.
5. Injury at 7 DA-A was necrotic spotting on lower leaves, rating is percent injury on lower leaves.
LEAFHEAD = Plots were rated for leaf and head diseases with no diseases observed.
SEPTORIA = Septoria leaf spot on flag leaf. LFRST = Leaf rust on flag leaf.
6. Plots were evaluated for head scab (fusarium head blight) on 6-9-10 with no difference between plots, overall head scab infection was low at 1-2%
7. Harvested 6-23-10, (8) 7.5 inch rows by 27 ft.