

# Wheat

Southern Illinois University

Wheat Fungicide Trial.

Trial ID: 12-4-W100

Location: Belleville Res. Center

Investigator: Bryan Young

## General Trial Information

**Study Director:** Bryan Young  
**Investigator:** Bryan Young **Title:** Professor

**Trial Status:** F - one-year/final  
**Initiation Date:** 10-14-11

## Trial Location

**City:** Belleville  
**State/Prov.:** IL  
**Postal Code:** 62221  
**Country:** USA

## Objectives:

Evaluate early and late fungicide applications in winter wheat, especially for control of leaf rust, striped rust, head scab and powdery mildew.

## Personnel

**Study Director:** Bryan Young  
**Investigator:** Bryan Young **Title:** Professor  
**Affiliation:** Southern Illinois University  
**Address:** 1205 Lincoln Drive - AG 176 - MC 4415  
**Location:** Carbondale IL  
**Postal Code:** 62901 **E-mail:** bgyoung@siu.edu  
**Phone No.:** 618-453-7679 **Mobile No.:** 618-713-6471

## Crop Description

**Crop 1:** TRZAW Triticum aestivum (winter) Winter wheat  
**Variety:** P25R62  
**BBCH Scale:** BCER **Planting Date:** 10-14-11  
**Planting Method:** SEEDED Seeded **Rate, Unit:** 1.4 millionS/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 7.5 IN

## Pest Description

**Pest 1 Type:** W **Code:** NA

## Site and Design

**Plot Width, Unit:** 10 FT **Site Type:** FIELD field  
**Plot Length, Unit:** 30 FT  
**Plot Area, Unit:** 300 FT2 **Tillage Type:** REDTIL reduced-till  
**Replications:** 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	BRSNN	2011

## Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P205 0 LB/A, K20 0 LB/A
2.	Spring: N 85 LB/A, P205 0 LB/A, K20 0 LB/A

## Soil Description

**% OM:** 1.5 **Texture:** SIL SILT LOAM  
**pH:** 7.1 **Soil Name:** PIERRON  
**CEC:** 6 **Fert. Level:** \_ P1: 81 LB/A, K: 234 LB/A

## Additional Measured Elements

Element	Quantity	Unit
P1	81	LB/A
K	234	LB/A

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Application Description				
	A	B	C	D
Application Date:	3-26-12	4-4-12	4-10-12	4-24-12
Time of Day:	10:00	12:00	14:00	9:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FK6	FK9	FK10	FK10.51
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK	RFK
Air Temperature, Unit:	62 F	64 F	71 F	60 F
% Relative Humidity:	63	93	23	52
Wind Velocity, Unit:	5 MPH	0 MPH	3 MPH	3 MPH
Wind Direction:	E	N	W	W
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	46 F	51 F	59 F	59 F
Soil Moisture:	ABONOR	ABONOR	NORMAL	ABONOR
% Cloud Cover:	0	100	0	100
Next Rain Occurred On:	3-27-12	4-4-12	4-11-12	4-25-12

Crop Stage At Each Application				
	A	B	C	D
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	FK6	FK9	FK10	FK10.51
Height, Unit:	14 IN	26 IN	31 IN	38 IN
Height Minimum, Maximum:	12 14	24 26	30 31	36 38

Pest Stage At Each Application				
	A	B	C	D
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA	NA

Application Equipment				
	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								TRZAW 6-6-12 Moisture Percent	TRZAW 6-6-12 Test wt. lb/bu	TRZAW 6-6-12 Yield bu/A	TRZAW Injury Percent 7DAT	TRZAW Injury Percent 14DAT	TRZAW Injury Percent 28DAT	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Other Rate	Other Rate	Growth Unit Stage	Appl Code						
1	TOPGUARD	1.04	SC	0.081 lb ai/a		10 fl oz/a	FK10	C	13.2 a	57.6 a	78 a	0 a	0 a	0 a
2	TOPGUARD	1.04	SC	0.114 lb ai/a		14 fl oz/a	FK10	C	13.0 a	57.7 a	79 a	0 a	0 a	0 a
3	TOPGUARD KOVERALL NIS (ACTIVATOR 90)	1.04 75 100	SC WG SL	0.081 lb ai/a 1.125 lb ai/a 0.25 % v/v		10 fl oz/a 1.5 lb/a 0.25 % ai/v	FK10 FK10 FK10	C C C	13.1 a	57.7 a	79 a	0 a	0 a	0 a
4	TOPGUARD KOVERALL NIS (ACTIVATOR 90)	1.04 75 100	SC WG SL	0.114 lb ai/a 1.5 lb ai/a 0.25 % v/v		14 fl oz/a 2 lb/a 0.25 % ai/v	FK10 FK10 FK10	C C C	13.1 a	57.7 a	81 a	0 a	0 a	0 a
5	PROSARO	3.52	SC	0.165 lb ai/a		6 fl oz/a	FK10	C	13.0 a	57.7 a	78 a	0 a	0 a	0 a
6	NONTREATED								13.0 a	57.7 a	81 a	0 a	0 a	0 a
7	STRATEGO YLD NIS (ACTIVATOR 90)	4.18 100	SC SL	0.065 lb ai/a 0.125 % v/v		2 fl oz/a 0.125 % ai/v	FK6 FK6	A A	12.9 a	57.7 a	82 a	0 a	0 a	0 a
8	STRATEGO YLD NIS (ACTIVATOR 90)	4.18 100	SC SL	0.13 lb ai/a 0.125 % v/v		4 fl oz/a 0.125 % ai/v	FK6 FK6	A A	12.9 a	57.8 a	81 a	0 a	0 a	0 a
9	STRATEGO YLD NIS (ACTIVATOR 90) PROSARO NIS (ACTIVATOR 90)	4.18 100 3.52 100	SC SL SC SL	0.065 lb ai/a 0.125 % v/v 0.179 lb ai/a 0.125 % v/v		2 fl oz/a 0.125 % ai/v 6.5 fl oz/a 0.125 % ai/v	FK6 FK6 FK10.51 FK10.51	A A D D	13.0 a	57.7 a	87 a	0 a	0 a	0 a
10	PROSARO NIS (ACTIVATOR 90)	3.52 100	SC SL	0.138 lb ai/a 0.125 % v/v		5 fl oz/a 0.125 % ai/v	FK9 FK9	B B	13.1 a	57.6 a	83 a	0 a	0 a	0 a
11	PROSARO NIS (ACTIVATOR 90)	3.52 100	SC SL	0.179 lb ai/a 0.125 % v/v		6.5 fl oz/a 0.125 % ai/v	FK10.51 FK10.51	D D	13.2 a	57.6 a	83 a	0 a	0 a	0 a
12	QUILT XCEL NIS (ACTIVATOR 90)	2.2 100	SC SL	0.18 lb ai/a 0.125 % v/v		10.5 fl oz/a 0.125 % v/v	FK10.51 FK10.51	D D	13.3 a	57.5 a	82 a	0 a	0 a	0 a
LSD (P=.05)								0.29	0.16	5.4	0.0	0.0	0.0	
Standard Deviation								0.20	0.11	3.7	0.0	0.0	0.0	
CV								1.52	0.19	4.57	0.0	0.0	0.0	
Replicate F								0.418	2.693	2.245	0.000	0.000	0.000	
Replicate Prob(F)								0.7414	0.0620	0.1014	1.0000	1.0000	1.0000	
Treatment F								1.408	1.933	1.747	0.000	0.000	0.000	
Treatment Prob(F)								0.2155	0.0709	0.1058	1.0000	1.0000	1.0000	

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								DISEASE TRZAW	DISEASE TRZAW	DISEASE TRZAW	DISEASE TRZAW	DISEASE TRZAW 5-15-12 Incidence Percent	DISEASE TRZAW 5-15-12 Severity Percent	
								Incidence Percent	Severity Percent	Incidence Percent	Severity Percent	Incidence Percent	Severity Percent	
								14DAT	14DAT	28DAT	28DAT	21DA-D	21DA-D	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	TOPGUARD	1.04	SC	0.081 lb ai/a		10 fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
2	TOPGUARD	1.04	SC	0.114 lb ai/a		14 fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
3	TOPGUARD KOVERALL NIS (ACTIVATOR 90)	1.04 75 100	SC WG SL	0.081 lb ai/a 1.125 lb ai/a 0.25 % v/v		10 fl oz/a 1.5 lb/a 0.25 % ai/v	FK10 FK10 FK10	C C C	0 a	0 a	0 a	0 a	0 a	0 a
4	TOPGUARD KOVERALL NIS (ACTIVATOR 90)	1.04 75 100	SC WG SL	0.114 lb ai/a 1.5 lb ai/a 0.25 % v/v		14 fl oz/a 2 lb/a 0.25 % ai/v	FK10 FK10 FK10	C C C	0 a	0 a	0 a	0 a	0 a	0 a
5	PROSARO	3.52	SC	0.165 lb ai/a		6 fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
6	NONTREATED								0 a	0 a	0 a	0 a	0 a	0 a
7	STRATEGO YLD NIS (ACTIVATOR 90)	4.18 100	SC SL	0.065 lb ai/a 0.125 % v/v		2 fl oz/a 0.125 % ai/v	FK6 FK6	A A	0 a	0 a	0 a	0 a	0 a	0 a
8	STRATEGO YLD NIS (ACTIVATOR 90)	4.18 100	SC SL	0.13 lb ai/a 0.125 % v/v		4 fl oz/a 0.125 % ai/v	FK6 FK6	A A	0 a	0 a	0 a	0 a	0 a	0 a
9	STRATEGO YLD NIS (ACTIVATOR 90) PROSARO NIS (ACTIVATOR 90)	4.18 100 3.52 100	SC SL SC SL	0.065 lb ai/a 0.125 % v/v 0.179 lb ai/a 0.125 % v/v		2 fl oz/a 0.125 % ai/v 6.5 fl oz/a 0.125 % ai/v	FK6 FK6 FK10.51 FK10.51	A A D D	0 a	0 a	0 a	0 a	0 a	0 a
10	PROSARO NIS (ACTIVATOR 90)	3.52 100	SC SL	0.138 lb ai/a 0.125 % v/v		5 fl oz/a 0.125 % ai/v	FK9 FK9	B B	0 a	0 a	0 a	0 a	0 a	0 a
11	PROSARO NIS (ACTIVATOR 90)	3.52 100	SC SL	0.179 lb ai/a 0.125 % v/v		6.5 fl oz/a 0.125 % ai/v	FK10.51 FK10.51	D D	0 a	0 a	0 a	0 a	0 a	0 a
12	QUILT XCEL NIS (ACTIVATOR 90)	2.2 100	SC SL	0.18 lb ai/a 0.125 % v/v		10.5 fl oz/a 0.125 % v/v	FK10.51 FK10.51	D D	0 a	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)									0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation									0.0	0.0	0.0	0.0	0.0	0.0
CV									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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Trial Comments

1. Protocol: Cheminova (FTRZAWTG1201.PRT), Bayer.
2. Ratings: CI as chlorosis, necrosis, stunting, and overall at 7 and 14 days after each application.  
Cercospora leaf spot ratings as percents at 14 day intervals and 14 and 21 days after the last application.  
Rate other diseases if present (leaf rust, striped rust, head scab and powdery mildew).  
Record disease incidence and severity in nontreated each time.
3. Yield a must, and grain grading if possible.  
RECORD RAINFALL THE FIRST WEEK PRIOR TO APPLICATION.  
Rainfall (inch) for the first week prior to the FK6, FK9, FK10, and FK10.51 applications was 0.59, 0.45, 0.70, and 2.35, respectively.  
RECORD DATE & AMOUNT OF FIRST RAINFALL FOLLOWING APPLICATION.  
Rainfall (inch) for the first rainfall following the FK6, FK9, FK10, and FK10.51 applications was 0.13, 0.22, 0.57, and 0.5, respectively.  
Date of first rainfall following the FK6, FK9, FK10, and FK10.51 applications was on 3-26-12, 4-9-12, 4-11-12, and 4-24-12, respectively.  
RECORD RAINFALL THROUGHOUT THE DURATION OF THE TRIAL.  
RECORD TEMPERATURE AND RELATIVE HUMIDITY THROUGHOUT THE DURATION OF THE TRIAL.  
See link to weather for the Belleville Research Center.
4. Plots were scouted throughout the growing season for leaf and head diseases with none found at any time.
5. DAT = Days after treatment.  
Ratings at 7 days after the FK6, FK9, FK10, and FK10.51 applications were on 4-2-12, 4-11-12, 4-17-12, and 5-1-12, respectively.  
Ratings at 14 days after the FK6, FK9, FK10, and FK10.51 applications were on 4-9-12, 4-18-12, 4-24-12, and 5-8-12, respectively.  
Ratings at 28 days after the FK6, FK9, FK10, and FK10.51 applications were on 4-23-12, 5-2-12, 5-8-12, and 5-22-12, respectively.
6. On 5-15-12, at 21 days after the last application, there was no disease in any plots, not in the nontreated, not in the any of the earlier application timing plots.
7. Harvested 6-6-12, 4.375 ft by 27 ft.