

Wheat Fungicides and Weed Control

Southern Illinois University

DuPont Fungicides in Winter Wheat - Demonstration.

Trial ID: 13-11C-M40 Location: Belleville Res. Center Trial Year: 2013
Investigator: Bryan Young

Trial Status: F one-year/final Initiation Date: 11-1-12 Completion Date: 7-6-13	Trial Location
City: Belleville Country: USA State/Prov.: Illinois IL Postal Code: 62221 USAIL 42.5083389 - 36.9702949 -87.0199279 - -91.5130844	

Objectives: Demonstrate use of fungicides in winter wheat.
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Study Director: Bryan Young Organization: Southern Illinois University Address: 1205 Lincoln Drive - AG 176 - MC 4415 City+State/Prov: Carbondale IL Postal Code: 62901 Country: USA	Title: Professor Phone No.: 618-453-7679 Mobile No.: 618-713-6471 E-mail: bgyoung@siu.edu
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Crop 1: TRZAW Variety: P25R62 Planting Rate, Unit: 1.5 millionS/A Depth, Unit: 1 IN Row Spacing, Unit: 7.5 IN	Crop Description Triticum aestivum (winter) Winter wheat BBCH Scale: BCER Planting Date: 11-1-12 Planting Method: SEEDED
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Pest 1 Type: D Code: SEPTSP Common Name: Septoria sp. Description: Septoria leaf blotch	Pest Description
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Treated Plot Width: 7.5 FT Total Plot Width: 10 FT Treated Plot Length: 60 FT Total Plot Length: 60 FT Replications: 1 Untreated Arrangement: INCLUDED single control randomized in each block	Site and Design Site Type: FIELD Experimental Unit: 1 PLOT Tillage Type: NOTILL no-till Study Design: NONRAN Non-Randomized						
<table><tr><th>No.</th><th>Previous Crop</th><th>Year</th></tr><tr><td>1.</td><td>NON-CROP</td><td>2012</td></tr></table>	No.	Previous Crop	Year	1.	NON-CROP	2012	
No.	Previous Crop	Year					
1.	NON-CROP	2012					

<table><tr><th>No.</th><th>Maintenance Product Name</th></tr><tr><td>1.</td><td>Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A</td></tr><tr><td>2.</td><td>Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A</td></tr></table>	No.	Maintenance Product Name	1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A	2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A	Maintenance
No.	Maintenance Product Name						
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A						
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A						

% OM: 2.9 Texture: SIL silt loam pH: 6.4 Soil Name: Bethalto CEC: 12	Soil Description									
<table><tr><th>Element</th><th>Quantity</th><th>Unit</th></tr><tr><td>P1</td><td>57</td><td>lb/A</td></tr><tr><td>K</td><td>275</td><td>lb/A</td></tr></table>	Element	Quantity	Unit	P1	57	lb/A	K	275	lb/A	Additional Measured Elements
Element	Quantity	Unit								
P1	57	lb/A								
K	275	lb/A								

Overall Moisture Conditions: ABONOR Closest Weather Station: ICN - Belleville IL	Moisture and Weather Conditions Distance, Unit: 0.5 MI																																																																		
<table><tr><th>No.</th><th>Date</th><th>Amount</th><th>Unit</th><th>Type</th><th>Type Description</th><th>Interval</th><th>Unit</th><th>Min Temp</th><th>Max Temp</th><th>Temp Unit</th></tr><tr><td>1.</td><td>10-5-12</td><td>1.35</td><td>IN</td><td>RAIN</td><td>rain</td><td>1</td><td>DAY</td><td></td><td></td><td></td></tr><tr><td>2.</td><td>10-7-12</td><td></td><td></td><td></td><td></td><td>7</td><td>DAY</td><td>34</td><td>77</td><td>F</td></tr><tr><td>3.</td><td>10-14-12</td><td></td><td></td><td></td><td></td><td>7</td><td>DAY</td><td>44</td><td>80</td><td>F</td></tr><tr><td>4.</td><td>10-14-12</td><td>0.73</td><td>IN</td><td>RAIN</td><td>rain</td><td>1</td><td>DAY</td><td></td><td></td><td></td></tr><tr><td>5.</td><td>10-17-12</td><td>0.61</td><td>IN</td><td>RAIN</td><td>rain</td><td>1</td><td>DAY</td><td></td><td></td><td></td></tr></table>	No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit	1.	10-5-12	1.35	IN	RAIN	rain	1	DAY				2.	10-7-12					7	DAY	34	77	F	3.	10-14-12					7	DAY	44	80	F	4.	10-14-12	0.73	IN	RAIN	rain	1	DAY				5.	10-17-12	0.61	IN	RAIN	rain	1	DAY				
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6.	10-21-12					7	DAY	34	81	F
7.	10-22-12	0.68	IN	RAIN	rain	2	DAY			
8.	10-25-12	0.41	IN	RAIN	rain	2	DAY			
9.	10-28-12					7	DAY	33	61	F
10.	11-4-12					7	DAY	28	76	F
11.	11-5-12	0.09	IN	RAIN	rain	3	DAY			
12.	11-11-12					7	DAY	25	67	F
13.	11-11-12	1.54	IN	RAIN	rain	2	DAY			
14.	11-18-12					7	DAY	23	67	F
15.	11-22-12	0.23	IN	RAIN	rain	1	DAY			
16.	11-25-12					7	DAY	22	67	F
17.	12-2-12					7	DAY	31	71	F
18.	12-4-12	0.1	IN	RAIN	rain	1	DAY			
19.	12-9-12					7	DAY	20	60	F
20.	12-9-12	0.18	IN	RAIN	rain	2	DAY			
21.	12-15-12	0.44	IN	RAIN	rain	1	DAY			
22.	12-16-12					7	DAY	19	56	F
23.	12-20-12	5.07	IN	RAIN	rain	1	DAY			
24.	12-23-12					7	DAY	14	52	F
25.	12-28-12	0.26	IN	RAIN	rain	1	DAY			
26.	12-30-12					7	DAY	10	41	F
27.	12-31-12	0.11	IN	RAIN	rain	1	DAY			
28.	1-6-13					7	DAY	18	62	F
29.	1-10-13	0.72	IN	RAIN	rain	2	DAY			
30.	1-12-13	1.84	IN	RAIN	rain	2	DAY			
31.	1-13-13					7	DAY	16	64	F
32.	1-20-13					7	DAY	10	45	F
33.	1-27-13					7	DAY	7	67	F
34.	1-29-13	2.36	IN	RAIN	rain	3	DAY			
35.	2-3-13					7	DAY	22	57	F
36.	2-3-13	0.2	IN	RAIN	rain	2	DAY			
37.	2-7-13	0.13	IN	RAIN	rain	1	DAY			
38.	2-10-13					7	DAY	21	58	F
39.	2-10-13	0.74	IN	RAIN	rain	2	DAY			
40.	2-17-13					7	DAY	16	54	F
41.	2-18-13	0.12	IN	RAIN	rain	1	DAY			
42.	2-21-13	0.39	IN	RAIN	rain	2	DAY			
43.	2-24-13					7	DAY	17	49	F
44.	2-26-13	0.8	IN	RAIN	rain	3	DAY			
45.	3-3-13					7	DAY	19	66	F
46.	3-10-13					7	DAY	25	68	F
47.	3-10-13	0.71	IN	RAIN	rain	2	DAY			
48.	3-17-13					7	DAY	19	53	F
49.	3-17-13	1.43	IN	RAIN	rain	3	DAY			
50.	3-24-13					7	DAY	22	60	F
51.	3-24-13	0.41	IN	RAIN	rain	1	DAY			
52.	3-30-13	0.13	IN	RAIN	rain	1	DAY			
53.	3-31-13					7	DAY	27	71	F
54.	4-7-13					7	DAY	34	82	F
55.	4-10-13	1.4	IN	RAIN	rain	2	DAY			
56.	4-14-13					7	DAY	31	82	F
57.	4-16-13	1.05	IN	RAIN	rain	2	DAY			
58.	4-18-13	5.2	IN	RAIN	rain	1	DAY			
59.	4-21-13					7	DAY	35	72	F
60.	4-23-13	1.35	IN	RAIN	rain	2	DAY			
61.	4-27-13	0.3	IN	RAIN	rain	2	DAY			
62.	4-28-13					7	DAY	41	83	F
63.	5-3-13	3.07	IN	RAIN	rain	4	DAY			
64.	5-5-13					7	DAY	46	80	F
65.	5-9-13	0.35	IN	RAIN	rain	2	DAY			

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66.	5-12-13					7	DAY	39	92	F
67.	5-16-13	0.55	IN	RAIN	rain	2	DAY			
68.	5-19-13					7	DAY	45	88	F
69.	5-20-13	0.67	IN	RAIN	rain	2	DAY			
70.	5-26-13					7	DAY	56	86	F
71.	5-27-13	1.23	IN	RAIN	rain	2	DAY			
72.	5-30-13	0.51	IN	RAIN	rain	3	DAY			
73.	5-31-13	3.46	IN	RAIN	rain	2	DAY			
74.	6-2-13					7	DAY	50	80	F
75.	6-9-13					7	DAY	59	94	F
76.	6-10-13	0.48	IN	RAIN	rain	2	DAY			
77.	6-16-13					7	DAY	61	90	F
78.	6-17-13	2.16	IN	RAIN	rain	3	DAY			
79.	6-23-13					7	DAY	64	92	F
80.	6-23-13	5.33	IN	RAIN	rain	2	DAY			
81.	6-26-13	0.46	IN	RAIN	rain	1	DAY			
82.	6-29-13	0.19	IN	RAIN	rain	2	DAY			
83.	6-30-13					7	DAY	61	86	F
84.	7-2-13	2.08	IN	RAIN	rain	2	DAY			

Application Description

	A	B	C
Application Date:	4-22-13	5-8-13	5-20-13
Appl. Start Time:	9:00	11:00	7:00
Appl. Stop Time:	9:30	11:30	7:30
Application Method:	Spray	Spray	Spray
Application Timing:	POST	FLAG	FK10.5
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK
Air Temperature, Unit:	58 F	78 F	65 F
% Relative Humidity:	53	38	97
Wind Velocity, Unit:	3 MPH	0 MPH	0 MPH
Wind Direction:	SE		
Dew Presence (Y/N):	N	N	N
Soil Temperature, Unit:	54 F	60 F	69 F
Soil Moisture:	ABONOR	ABONOR	ABONOR
% Cloud Cover:	0	0	0
Next Moisture Occurred On:	4-23-13	5-9-13	5-20-13
Time to Next Moisture, Unit:	25 HR	25 HR	16 HR

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	TRZAW	TRZAW	TRZAW
Stage Scale Used:	FEEKES	FEEKES	FEEKES
Stage Majority, Percent:	FK6	FK9	FK10.5
Stage Minimum, Percent:	FK5	FK9	FK10.5
Stage Maximum, Percent:	FK6	FK9	FK10.5
Height, Unit:	14 IN	30 IN	36 IN
Height Minimum, Maximum:	12 14	28 30	36 36

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SEPTSP D	SEPTSP D	SEPTSP D
Stage Majority, Percent:	NA	NA	NA

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Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	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 7-6-13 Moisture Percent	TRZAW 7-6-13 Test wt. lb/bu	TRZAW 7-6-13 Yield bu/A	TRZAW 5-29-13 Injury Percent 21 DA-B	SEPTSP TRZAW 5-29-13 Incidence Percent 21 DA-B	SEPTSP TRZAW 5-29-13 Severity Percent 21 DA-B	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	HARMONY EXTRA SG NIS (ACTIVATOR 90) PZX74 NIS (ACTIVATOR 90)	50 SG 100 SL 280 SC 100 SL		0.028 lb ai/a 0.25 % v/v 0.091 lb ai/a 0.25 % v/v		0.9 oz/a 0.25 % v/v 5 fl oz/a 0.25 % v/v		POST POST FLAG FLAG	A A B B	13.8	53.8	68	0	0.0	0.0
2	HARMONY EXTRA SG KOCIDE 3000 NIS (ACTIVATOR 90) PZX74 NIS (ACTIVATOR 90)	50 SG 46.1 WG 100 SL 280 SC 100 SL		0.028 lb ai/a 0.346 lb ai/a 0.25 % v/v 0.091 lb ai/a 0.25 % v/v		0.9 oz/a 0.75 lb/a 0.25 % v/v 5 fl oz/a 0.25 % v/v		POST POST POST FK10.5 C FK10.5 C	A A A C C	13.5	53.9	65	0	0.0	0.0
3	HARMONY EXTRA SG APPROACH NIS (ACTIVATOR 90)	50 SG 2.08 SC 100 SL		0.028 lb ai/a 0.0975 lb ai/a 0.25 % v/v		0.9 oz/a 6 fl oz/a 0.25 % v/v		POST POST POST	A A A	13.5	54.0	66	0	0.0	0.0
4	HARMONY EXTRA SG KOCIDE 3000 NIS (ACTIVATOR 90) PROSARO 421 SC NIS (ACTIVATOR 90)	50 SG 46.1 WG 100 SL 3.52 SC 100 SL		0.028 lb ai/a 0.346 lb ai/a 0.25 % v/v 0.179 lb ai/a 0.25 % v/v		0.9 oz/a 0.75 lb/a 0.25 % v/v 6.5 fl oz/a 0.25 % v/v		POST POST POST FK10.5 C FK10.5 C	A A A C C	12.8	54.5	65	0	0.0	0.0
5	HARMONY EXTRA SG NIS (ACTIVATOR 90) APPROACH NIS (ACTIVATOR 90)	50 SG 100 SL 2.08 SC 100 SL		0.028 lb ai/a 0.25 % v/v 0.0975 lb ai/a 0.25 % v/v		0.9 oz/a 0.25 % v/v 6 fl oz/a 0.25 % v/v		POST POST FLAG FLAG	A A B B	13.5	54.0	71	0	0.0	0.0
6	HARMONY EXTRA SG NIS (ACTIVATOR 90) HEADLINE SC NIS (ACTIVATOR 90)	50 SG 100 SL 2.08 SC 100 SL		0.028 lb ai/a 0.25 % v/v 0.0975 lb ai/a 0.25 % v/v		0.9 oz/a 0.25 % v/v 6 fl oz/a 0.25 % v/v		POST POST FLAG FLAG	A A B B	13.4	54.0	62	0	0.0	0.0
7	NONTREATED									13.5	54.0	66	0	0.0	0.0
LSD (P=.05)									.	.	.	.	.	.	.
Standard Deviation									.	.	.	.	.	.	.
CV									.	.	.	.	.	.	.

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									SEPTSP	SEPTSP		
Crop Code									TRZAW	TRZAW		
Rating Date									6-12-13	6-12-13		
Rating Type									Incidence	Severity		
Rating Unit									Percent	Percent		
Rating Timing												
Trt-Eval Interval									35 DA-B	35 DA-B		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	HARMONY EXTRA SG	50	SG	0.028 lb ai/a		0.9 oz/a		POST	A	2.0	5.0	
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		POST	A			
	PZX74	280	SC	0.091 lb ai/a		5 fl oz/a		FLAG	B			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		FLAG	B			
2	HARMONY EXTRA SG	50	SG	0.028 lb ai/a		0.9 oz/a		POST	A	2.0	5.0	
	KOCIDE 3000	46.1	WG	0.346 lb ai/a		0.75 lb/a		POST	A			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		POST	A			
	PZX74	280	SC	0.091 lb ai/a		5 fl oz/a		FK10.5	C			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		FK10.5	C			
3	HARMONY EXTRA SG	50	SG	0.028 lb ai/a		0.9 oz/a		POST	A	2.0	5.0	
	APROACH	2.08	SC	0.0975 lb ai/a		6 fl oz/a		POST	A			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		POST	A			
4	HARMONY EXTRA SG	50	SG	0.028 lb ai/a		0.9 oz/a		POST	A	1.0	1.0	
	KOCIDE 3000	46.1	WG	0.346 lb ai/a		0.75 lb/a		POST	A			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		POST	A			
	PROSARO 421 SC	3.52	SC	0.179 lb ai/a		6.5 fl oz/a		FK10.5	C			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		FK10.5	C			
5	HARMONY EXTRA SG	50	SG	0.028 lb ai/a		0.9 oz/a		POST	A	2.0	5.0	
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		POST	A			
	APROACH	2.08	SC	0.0975 lb ai/a		6 fl oz/a		FLAG	B			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		FLAG	B			
6	HARMONY EXTRA SG	50	SG	0.028 lb ai/a		0.9 oz/a		POST	A	2.0	1.0	
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		POST	A			
	HEADLINE SC	2.08	SC	0.0975 lb ai/a		6 fl oz/a		FLAG	B			
	NIS (ACTIVATOR 90)	100	SL	0.25 % v/v		0.25 % v/v		FLAG	B			
7 NONTREATED											2.0	10.0
LSD (P=.05)											.	.
Standard Deviation											.	.
CV											.	.

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Trial Comments

1. Protocol: DuPont (USA-13-293) Demonstration.
2. Ratings: Diseases 21 DA-B rate all plots, 42 DA-B if needed.
3. Yield.
4. Application A (POST) is Harmony Extra SG application window for winter wheat.
5. SEPTSP was Septoria leaf blotch.
6. Harvested 7-6-13, 4.375 ft by 57 ft.