

General Foliar Fungicide Evaluation in Wheat.

Project Code: 07-23M-E90 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: 1-23-08

Objective:

Evaluate the efficacy of specific fungicides and application strategies for control of foliar and head wheat diseases.

Crop 1: TRZAW wheat, winter Variety: P25R78
 Planting Method: Seeded Planting Date: 10-12-06
 Rate: 1.3 mil. S/A Depth: 1.0 IN
 Row Spacing: 7.5 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, 2006
 Field Prep./Maintenance: N 30 LB/A applied on 10-10-06 and N 85 LB/A applied on 1-30-07.

Soil Name: Rushville % OM: 1.9 pH: 6.6 CEC: 8
 Texture: Silt loam Fert. Level: P1: 98 LB/A, K: 362 LB/A

APPLICATION DESCRIPTION

	A	B	C
Application Date:	4-2-07	4-24-07	5-7-07
Time of Day:	10:00	13:00	8:00
Application Method:	Spray	Spray	Spray
Application Timing:	FK5-6	FK9	FK10.5
Applic. Placement:	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	75 F	82 F	54 F
% Relative Humidity:	35	48	91
Wind Velocity, Unit:	0 MPH	5 MPH	0 MPH
Soil Moisture:	NORMAL	NORMAL	ABONOR

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	TRZAW F5-F6	TRZAW F9	TRZAW F10.5
Height, Unit:	8-10 IN	18-20 IN	28-30 IN

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8001 Twin	XR 8001 Twin
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

NOTES:

General Foliar Fungicide Evaluation in Wheat.

Project Code: 07-23M-E90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

TRZAW TRZAW TRZAW TRZAW TRZAW TRZAW TRZAW TRZAW
 Moisture Test wt. Yield DON TanSpot TanSpot LeafBch LeafBch
 Percent lb/bu bu/A ppm Percent Percent Percent Percent
 6-20-07 6-20-07 6-20-07 6-20-07 5-15-07 5-25-07 5-15-07 5-25-07
 21 DA-B 31 DA-B 21 DA-B 31 DA-B

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	DON ppm	TanSpot Percent	TanSpot Percent	LeafBch Percent	LeafBch Percent
1	NONTREATED									12.1 ab	57.3 ab	71 d	2.40 abc	0 a	3 a	15 a	10 a
2	HEADLINE	2.09	EC	0.049	lb ai/a	3 fl oz/a	FK5-6	A		12.0 abc	57.6 ab	77 a-d	2.68 a	0 a	1 b	10 bcd	6 ab
2	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125 % v/v	FK5-6	A									
3	HEADLINE	2.09	EC	0.049	lb ai/a	3 fl oz/a	FK5-6	A		12.0 abc	57.6 ab	79 abc	2.38 abc	0 a	1 b	7 cde	4 b
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125 % v/v	FK5-6	A									
3	HEADLINE	2.09	EC	0.098	lb ai/a	6 fl oz/a	FK9	B									
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125 % v/v	FK9	B									
4	HEADLINE	2.09	EC	0.098	lb ai/a	6 fl oz/a	FK9	B		12.1 ab	57.9 ab	77 a-d	2.45 ab	0 a	0 b	5 e	1 b
4	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125 % v/v	FK9	B									
5	ABSOLUTE	4	L	0.0625	lb ai/a	2 fl oz/a	FK5-6	A		12.0 abc	57.6 ab	73 cd	2.03 cde	0 a	2 ab	11 abc	11 a
6	ABSOLUTE	4	L	0.078	lb ai/a	2.5 fl oz/a	FK5-6	A		11.9 abc	56.4 bc	74 cd	2.38 abc	0 a	1 b	10 bcd	4 b
7	ABSOLUTE	4	L	0.156	lb ai/a	5 fl oz/a	FK9	B		11.9 abc	57.1 ab	77 a-d	2.28 bcd	0 a	1 b	6 cde	4 b
8	QUILT	1.67	F	0.183	lb ai/a	14 fl oz/a	FK9	B		12.0 abc	57.2 ab	77 a-d	2.30 a-d	0 a	1 b	6 de	4 b
9	QUILT	1.67	F	0.183	lb ai/a	14 fl oz/a	FK10.5	C		12.2 a	58.3 a	78 abc	2.13 b-e	0 a	0 b	8 b-e	3 b
10	TILT	3.6	F	0.056	lb ai/a	2 fl oz/a	FK5-6	A		12.1 ab	57.6 ab	81 a	2.15 b-e	0 a	0 b	6 de	2 b
10	QUILT	1.67	F	0.183	lb ai/a	14 fl oz/a	FK10.5	C									
11	QUILT	1.67	F	0.13	lb ai/a	10 fl oz/a	FK10.5	C		12.1 ab	58.1 a	78 abc	1.85 e	0 a	1 b	8 b-e	5 b
11	TILT	3.6	F	0.056	lb ai/a	2 fl oz/a	FK10.5	C									
12	QUILT	1.67	F	0.13	lb ai/a	10 fl oz/a	FK10.5	C		12.2 a	57.9 ab	81 ab	1.80 e	0 a	0 b	8 b-e	2 b
12	FOLICUR	3.6	F	0.056	lb ai/a	2 fl oz/a	FK10.5	C									
13	FOLICUR	3.6	F	0.112	lb ai/a	4 fl oz/a	FK10.5	C		11.9 bc	57.6 ab	79 abc	1.25 f	0 a	1 b	6 cde	4 b
14	A15909	2.2	SE	0.24	lb ai/a	14 fl oz/a	FK9	B		11.9 abc	57.2 ab	80 abc	2.68 a	0 a	1 b	7 cde	3 b
15	A15909	2.2	SE	0.24	lb ai/a	14 fl oz/a	FK10.5	C		12.2 a	58.0 a	83 a	1.98 de	0 a	0 b	6 de	2 b
16	NONTREATED									11.7 c	55.6 c	74 bcd	2.10 b-e	0 a	3 a	12 ab	11 a
LSD (P=.05)										0.31	1.45	6.9	0.390	0.0	1.3	4.6	5.2
Replicate F										0.626	2.139	3.737	2.099	0.000	5.633	0.022	5.156
Replicate Prob(F)										0.6021	0.1085	0.0176	0.1137	1.0000	0.0023	0.9956	0.0038
Treatment F										1.478	1.705	1.766	6.822	0.000	2.939	2.928	3.013
Treatment Prob(F)										0.1546	0.0844	0.0714	0.0001	1.0000	0.0026	0.0027	0.0021

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

General Foliar Fungicide Evaluation in Wheat.

Project Code: 07-23M-E90 Location: Belleville Research Center
 Investigator: Bryan Young

Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW
GlumeBch	GlumeBch	Scab	Scab	BYD	Rust
Percent	Percent	Percent	Percent	Percent	Percent
5-15-07	5-25-07	5-15-07	5-25-07	5-25-07	5-25-07
21 DA-B	31 DA-B	21 DA-B	31 DA-B	31 DA-B	31 DA-B

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Prod Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code						
1	NONTREATED									12 a	16 ab	2 ab	15 a	6 bc	0 bc
2	HEADLINE	2.09	EC	0.049	lb ai/a		3 fl oz/a	FK5-6	A	7 bc	15 abc	1 ab	11 a-d	6 bc	0 bc
2	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	FK5-6	A						
3	HEADLINE	2.09	EC	0.049	lb ai/a		3 fl oz/a	FK5-6	A	4 bcd	8 d-g	2 ab	12 abc	8 abc	0 c
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	FK5-6	A						
3	HEADLINE	2.09	EC	0.098	lb ai/a		6 fl oz/a	FK9	B						
3	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	FK9	B						
4	HEADLINE	2.09	EC	0.098	lb ai/a		6 fl oz/a	FK9	B	5 bcd	5 fg	1 b	11 a-d	6 bc	0 c
4	ACTIVATOR 90	100	LIQ	0.125	% v/v	0.125	% v/v	FK9	B						
5	ABSOLUTE	4	L	0.0625	lb ai/a		2 fl oz/a	FK5-6	A	7 bcd	19 a	1 b	11 a-d	6 bc	0 bc
6	ABSOLUTE	4	L	0.078	lb ai/a		2.5 fl oz/a	FK5-6	A	5 bcd	11 b-f	2 ab	8 a-e	7 abc	1 ab
7	ABSOLUTE	4	L	0.156	lb ai/a		5 fl oz/a	FK9	B	5 bcd	13 bcd	2 ab	10 a-e	9 abc	0 bc
8	QUILT	1.67	F	0.183	lb ai/a		14 fl oz/a	FK9	B	6 bcd	9 c-g	2 ab	8 b-e	3 c	0 c
9	QUILT	1.67	F	0.183	lb ai/a		14 fl oz/a	FK10.5	C	5 bcd	7 efg	2 ab	10 a-e	9 abc	0 c
10	TILT	3.6	F	0.056	lb ai/a		2 fl oz/a	FK5-6	A	4 cd	5 fg	1 b	7 cde	13 a	0 c
10	QUILT	1.67	F	0.183	lb ai/a		14 fl oz/a	FK10.5	C						
11	QUILT	1.67	F	0.13	lb ai/a		10 fl oz/a	FK10.5	C	6 bcd	7 efg	1 ab	6 cde	11 ab	0 c
11	TILT	3.6	F	0.056	lb ai/a		2 fl oz/a	FK10.5	C						
12	QUILT	1.67	F	0.13	lb ai/a		10 fl oz/a	FK10.5	C	6 bcd	5 fg	3 a	3 e	8 abc	0 c
12	FOLICUR	3.6	F	0.056	lb ai/a		2 fl oz/a	FK10.5	C						
13	FOLICUR	3.6	F	0.112	lb ai/a		4 fl oz/a	FK10.5	C	5 bcd	9 d-g	2 ab	6 cde	3 c	0 c
14	A15909	2.2	SE	0.24	lb ai/a		14 fl oz/a	FK9	B	5 bcd	9 c-g	1 ab	14 ab	7 abc	0 bc
15	A15909	2.2	SE	0.24	lb ai/a		14 fl oz/a	FK10.5	C	3 d	4 g	1 b	5 de	6 bc	0 c
16	NONTREATED									8 ab	11 b-e	2 ab	15 a	7 abc	1 a
LSD (P=.05)										3.8	6.1	1.7	7.1	6.2	0.5
Replicate F										0.485	1.357	1.056	3.764	0.095	0.529
Replicate Prob(F)										0.6946	0.2681	0.3773	0.0171	0.9626	0.6644
Treatment F										2.436	4.239	0.799	2.097	1.320	1.659
Treatment Prob(F)										0.0108	0.0001	0.6723	0.0283	0.2304	0.0957

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

Trial Comments

1. Protocol: BASF, Bayer (KTC), Syngenta (AZ150X).
2. Ratings: C/D/DS 7 + 21 DA both FK9 + FK10.5 applications.
3. Yield - save grain samples for DON level testing.
4. Blank application of Harmony Extra (0.5 oz) plus Warrior (2.6 oz) plus NIS (0.25%) was applied on 3-28-07.
5. HeadScab = Head scab. GlumeBch = Glume blotch. LeafBch = Leaf Blotch. TanSpot = Tan spot. BYD = Barley yellow dwarf.
 DA-B = Days after FK9 application.
 Ratings at 21 and 31 days after FK9 application were also 8 and 18 days after the FK10.5 application.
6. Harvested 6-20-07, (7) 7.5 inch rows by 27 ft.