

Hard Red Winter Wheat

Performance of winter wheat varieties, with and without fungicide¹ on yield and agronomic traits, Forman, 2011.

Varieties	Heading Date		1000 K Weight		Protein		Test Weight		Yield	
	No Fung	Fung	No Fung	Fung	No Fung	Fung	No fung	Fung	No Fung	Fung
	Date		(gm)		(%)		(lb/ bu)		(bu/a)	
Accipiter	6/24	6/25	23.3	25.1	13.0	14.2	48.5	54.5	28.3	43.2
Art	6/16	6/17	23.7	24.5	14.0	13.9	49.6	54.2	35.0	44.6
Boomer	6/26	6/25	22.3	26.0	15.0	13.9	49.2	53.7	31.0	39.2
CDC Falcon	6/24	6/24	26.0	23.3	13.8	14.0	46.6	52.5	26.9	40.2
Carter	6/22	6/20	20.9	22.6	14.9	14.5	47.9	53.4	27.4	41.0
Darrell	6/22	6/22	24.9	31.9	13.9	14.1	51.0	54.2	32.3	41.2
Decade	6/17	6/18	21.9	23.7	13.6	13.9	49.6	51.8	32.8	43.7
Expedition	6/16	6/16	24.9	30.4	13.6	14.1	49.2	54.7	33.5	43.0
Hawken	6/17	6/17	22.7	23.6	14.3	14.7	48.0	52.5	30.5	38.9
Ideal	6/22	6/22	24.3	27.3	14.0	12.9	49.1	54.7	34.7	48.3
Jerry	6/25	6/24	26.1	28.9	15.0	14.6	52.1	54.2	31.7	30.9
Lyman	6/18	6/17	26.1	28.6	14.1	14.2	52.5	56.2	31.8	46.1
Millennium	6/23	6/23	23.0	27.8	14.0	14.1	50.5	54.2	30.2	43.8
Overland	6/18	6/18	23.3	26.1	13.6	14.2	51.6	54.7	39.6	49.7
Peregrine	6/24	6/23	22.8	26.5	13.6	13.2	51.7	54.5	33.3	45.7
Striker	6/23	6/23	20.5	23.2	14.3	15.0	49.5	53.8	24.9	37.2
SY Wolf	6/17	6/17	23.1	27.8	13.5	13.7	47.9	51.2	32.2	40.7
WB Matlock	6/24	6/24	28.2	27.7	14.6	14.5	51.6	56.4	35.8	43.6
Wesley	6/17	6/18	22.5	26.1	14.6	15.0	44.6	49.2	24.4	34.1
Yellowstone	6/25	6/25	22.2	22.6	14.0	14.4	48.7	44.6	21.3	32.5
Mean	6/21	6/20	23.6	26.2	14.1	14.2	49.5	53.2	30.9	41.4
c.v.	0.0		11.1		3.6		2.6		14.8	
LSD 0.05	1.6		4.4		0.8		2.2		8.6	

1-Fungicides consisted of Stratego at 4 fl oz/acre at the 4 lf stage and Prostaro at 6.5 fl oz/acre at Feekes 10.51

joel.ransom@ndsu.edu

Effect of winter wheat variety and fungicide¹ on lodging and disease development, Forman, ND, 2011.

Varieties	Leaf Diseases (%)		Leaf Rust (%)		FHB Severity ² (%)		DON ³ (ppm)	
	No Fung	Fung	No Fung	Fung	No Fung	Fung	No Fung	Fung
Accipiter	24.5	4.3	0.7	0.0	15.1	0.5	5.2	1.1
Art	16.2	3.8	0.0	0.0	2.3	1.2	3.3	1.7
Boomer	9.9	7.3	0.3	0.0	3.6	0.1	5.1	1.2
CDC Falcon	24.5	8.5	0.3	0.0	8.8	0.3	5.8	0.9
Carter	12.7	9.6	5.0	0.0	1.2	0.9	5.2	1.4
Darrell	10.3	6.1	0.7	0.0	4.3	0.5	5.1	1.2
Decade	29.6	3.6	19.0	0.0	10.2	2.0	8.6	5.6
Expedition	38.0	9.1	1.3	0.0	4.1	2.2	8.0	3.7
Ideal	13.1	6.3	0.0	0.0	6.2	2.2	8.3	2.3
Hawken	19.9	3.7	0.3	0.0	17.5	4.2	6.5	2.7
Jerry	9.9	3.9	1.0	0.0	1.0	0.4	3.3	1.3
Lyman	20.9	4.5	0.0	0.0	2.7	0.5	2.6	1.0
Millennium	12.6	7.9	0.7	0.0	4.6	0.2	6.6	2.3
Overland	26.0	4.9	0.3	0.0	2.2	0.6	3.9	1.4
Peregrine	4.9	1.3	0.3	0.0	2.0	0.1	4.3	1.0
Striker	17.3	7.2	0.0	0.0	2.9	0.5	5.9	0.7
SY Wolf	9.6	2.9	0.0	0.0	11.9	2.5	6.5	2.5
WB Matlock	10.9	10.7	1.0	0.0	3.9	0.1	2.8	0.8
Wesley	23.9	15.7	0.0	0.0	13.1	4.6	8.1	3.4
Yellowstone	33.0	11.1	1.7	0.0	8.1	1.4	14.5	1.9
Mean	18.4	6.6	1.6	0.0	6.3	1.2	6.0	1.9
c.v.	66.7		526.0		91.0		34.8	
LSD 0.05	13.4		6.9		5.5		2.2	

1-Fungicides consisted of Stratego at 4 fl oz/acre at the 4 lf stage and Prostaro at 6.5 fl oz/acre at Feekes 10.51
 2- FHB Field Severity = Fusarium Head Blight severity (percent heads infected by the percent of spikelets infected).
 3- DON = deoxynivalenol or Vomitoxin which is produced by the Fusarium fungus that causes FHB.

Winter Wheat Variety by Fungicide Trials, John Lukach

Winter Wheat Varieties by Fungicide, Langdon 2011

Variety	Yield		Fungicide Increase	Test Wt.		Fungicide Increase	Protein	
	With Fungicide	No Fungicide		With Fungicide	No Fungicide		With Fungicide	No Fungicide
	bu/a	bu/a		lb/bu	lb/bu		%	%
SD06158	74.0	70.7	3.3	62.3	61.6	0.7	11.5	11.1
Ideal	73.7	69.6	4.1	61.3	60.7	0.6	11.5	11.5
CDC Falcon	73.4	67.6	5.8	60.7	59.9	0.7	11.4	11.5
Jerry	72.9	65.1	7.8	60.4	59.7	0.8	11.9	12.0
Peregrine	72.0	70.7	1.3	61.0	60.9	0.2	11.2	11.1
Decade	71.7	65.5	6.2	61.6	60.9	0.8	12.3	11.5
Art	69.6	66.8	2.7	61.8	61.2	0.7	13.0	13.0
Carter	66.7	57.6	9.2	61.3	60.4	0.8	12.4	12.5
Lyman	66.7	57.9	8.8	61.0	60.7	0.4	13.3	13.4
Accipiter	65.4	57.9	7.5	60.4	59.4	1.0	11.7	11.7
Overland	65.2	59.7	5.6	61.3	60.8	0.5	12.0	11.9
Millennium	65.2	60.4	4.7	60.7	60.2	0.5	12.3	12.3
Darrell	65.1	57.7	7.4	60.8	60.4	0.4	12.5	12.0
Boomer	64.1	60.3	3.8	60.2	58.9	1.4	12.1	12.0
SD05W030	63.5	56.7	6.8	59.9	58.5	1.4	12.7	12.8
WB Matlock	63.2	54.8	8.4	60.8	60.1	0.7	12.8	13.0
Striker	63.2	55.3	7.9	61.5	60.4	1.1	12.3	12.4
Yellowstone	63.1	51.2	11.9	58.8	57.4	1.4	12.2	11.9
Hawken	62.9	51.1	11.8	60.1	59.1	1.0	13.1	13.3
SY Wolf	62.6	59.0	3.6	61.1	60.5	0.6	12.4	12.2
Exp, Meridian	60.8	51.1	9.6	55.1	53.1	2.0	13.0	13.2
Expedition	59.9	52.7	7.1	60.6	60.1	0.5	12.3	12.2
Wesley	59.2	54.7	4.5	60.5	59.7	0.8	13.3	12.6
Isd 5%	5.1			0.6			0.4	
CV	13.4			1.7			1.0	
Average	66.3	59.7	6.5	60.6	59.8	0.8	12.3	12.2
Min	59.2	51.1	1.3	55.1	53.1	0.2	11.2	11.1
Max	74.0	70.7	11.9	62.3	61.6	2.0	13.3	13.4

Fungicides applied:

Stratego 4 oz/A at 5-6 leaf stage (all varieties sprayed the same date)
 Prosaro 6.5 fl oz/A at early flower (multiple spray dates at each location on 3 day intervals) to handle maturity differences

Winter Wheat Varieties by Fungicide, Devils Lake 2011

Variety	Yield		Fungicide Increase bu/a	Test Wt.		Twt. Wt. Increase lb/bu	Protein	
	With Fungicide bu/a	No Fungicide bu/a		With Fungicide lb/bu	No Fungicide lb/bu		With Fungicide %	No Fungicide %
Overland	90.5	77.8	12.7	61.5	60.4	1.1	12.6	12.3
SY Wolf	88.2	80.9	7.3	62.2	61.8	0.4	11.9	11.9
Darrell	87.9	77.4	10.6	61.1	60.9	0.2	11.7	11.5
Accipiter	87.5	70.2	17.3	61.7	60.4	1.3	11.0	11.2
Decade	86.4	75.3	11.1	61.2	60.5	0.8	12.0	12.1
Millennium	85.5	76.0	9.5	61.1	60.5	0.5	12.1	12.0
WB Matlock	84.7	73.8	10.9	61.8	60.4	1.4	12.6	12.7
Art	82.3	74.4	7.8	60.9	59.9	1.0	12.2	12.4
Hawken	81.9	69.4	12.5	61.7	60.6	1.1	12.5	12.7
CDC Falcon	81.1	76.2	4.9	60.0	59.0	1.0	11.7	11.8
Lyman	80.7	71.3	9.4	61.9	61.4	0.5	13.2	12.7
Boomer	79.7	73.5	6.3	59.8	58.2	1.6	11.9	12.1
Jerry	76.7	72.4	4.3	60.7	59.8	0.9	12.3	12.1
Striker	74.9	67.4	7.5	61.2	59.6	1.6	12.0	12.1
Isd 5%	5.9			0.7			0.5	
CV	25.0			3.2			2.1	
Average	83.4	74.0	9.4	61.2	60.2	1.0	12.1	12.1
Min	74.9	67.4	4.3	59.8	58.2	0.2	11.0	11.2
Max	90.5	80.9	17.3	62.2	61.8	1.6	13.2	12.7

Fungicides applied:

Stratego 4 oz/A at 5-6 leaf stage (all varieties sprayed the same date)
 Prosaro 6.5 fl oz/A at early flower (multiple spray dates at each location on 3 day intervals) to handle maturity differences

Winter Wheat Varieties by Fungicide, Willow City 2011

Variety	Yield		Yield Fungicide Increase	Test Wt.		Test Wt. Fungicide Increase	Protein	
	With Fungicide	No Fungicide		With Fungicide	No Fungicide		With Fungicide	No Fungicide
	bu/a	bu/a	bu/a	lb/bu	lb/bu	lb/bu	lb/bu	%
Decade	92.5	78.7	13.8	60.2	58.9	1.2	11.7	11.9
SY Wolf	92.1	82.5	9.6	59.8	59.4	0.4	12.7	12.8
Overland	91.7	79.6	12.1	60.4	59.9	0.5	11.7	11.7
Art	91.2	72.8	18.5	61.0	59.1	1.9	12.7	12.8
Accipiter	91.2	62.9	28.3	60.7	58.4	2.3	11.7	12.1
Lyman	90.2	75.7	14.5	61.4	60.9	0.5	12.9	12.5
Darrell	89.6	83.5	6.1	60.1	59.8	0.2	12.2	12.5
Millennium	89.3	69.0	20.3	61.1	59.9	1.2	12.2	11.9
CDC Falcon	85.4	60.4	25.0	59.8	56.7	3.0	12.0	12.7
Boomer	83.1	59.6	23.5	59.4	57.1	2.3	12.2	12.6
WB Matlock	82.9	63.1	19.8	60.4	59.6	0.8	12.9	12.7
Striker	81.4	54.9	26.5	60.3	57.3	3.0	12.7	12.7
Jerry	79.8	66.1	13.7	60.1	59.0	1.2	12.3	12.4
Isd 5%	4.4			0.5			0.4	
CV	20.1			2.2			2.0	
Average	87.7	69.9	17.8	60.4	58.9	1.4	12.3	12.4
Min	79.8	54.9	6.1	59.4	56.7	0.2	11.7	11.7
Max	92.5	83.5	28.3	61.4	60.9	3.0	12.9	12.8

Fungicides applied:

Stratego 4 oz/A at 5-6 leaf stage (all varieties sprayed the same date)
 Prosaro 6.5 fl oz/A at early flower (multiple spray dates at each
 location on 3 day intervals) to handle maturity differences

Winter Wheat Varieties by Fungicide, NEND 3 Site Average, 2011

Variety	Yield		Fungicide Increase	Twt Wt.		Fungicide Increase	Protein	
	With Fungicide	No Fungicide		With Fungicide	No Fungicide		With Fungicide	No Fungicide
	bu/a		bu/a	lb/bu		lb/bu	%	%
Decade	83.5	73.1	10.4	61.0	60.1	0.9	12.0	11.8
Overland	82.5	72.4	10.1	61.1	60.4	0.7	12.1	12.0
Accipiter	81.3	63.7	17.7	60.9	59.4	1.5	11.4	11.7
Art	81.0	71.3	9.7	61.2	60.1	1.2	12.7	12.7
SY Wolf	81.0	74.1	6.8	61.0	60.6	0.5	12.3	12.3
Darrell	80.9	72.9	8.0	60.6	60.4	0.3	12.1	12.0
Millennium	80.0	68.5	11.5	60.9	60.2	0.8	12.2	12.1
CDC Falcon	80.0	68.1	11.9	60.1	58.6	1.6	11.7	12.0
Lyman	79.2	68.3	10.9	61.4	61.0	0.5	13.1	12.9
WB Matlock	76.9	63.9	13.0	61.0	60.0	1.0	12.8	12.8
Jerry	76.5	67.9	8.6	60.4	59.5	1.0	12.2	12.1
Boomer	75.6	64.5	11.2	59.8	58.0	1.8	12.1	12.3
Striker	73.2	59.2	14.0	61.0	59.1	1.9	12.3	12.4
Average	79.4	68.3	11.1	60.8	59.8	1.0	12.2	12.2
Min	73.2	59.2	6.8	59.8	58.0	0.3	11.4	11.7
Max	83.5	74.1	17.7	61.4	61.0	1.9	13.1	12.9

Fungicides applied:

Stratego 4 oz/A at 5-6 leaf stage (all varieties sprayed the same date)
 Prosaro 6.5 fl oz/A at early flower (multiple spray dates at each location on 3 day intervals) to handle maturity differences

Fungicide Timing Experiments on Winter Wheat, 2011 (Data from John Lukach)

All seed had Proceed seed treatment applied at 7.5 oz/100 lb rate

Fungicide Timing for Disease Control in CDC Falcon Winter Wheat 2011 - Willow City, ND, Bottineau C									
Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
No Fungicide	No Fungicide	No Fungicide	1	57.1	56.9	4.7	70.0	0.6	0.8
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2	84.4	60.1	1.3	8.3	0.1	0.7
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	78.3	59.6	2.0	13.3	0.1	0.3
No Fungicide	Stratego 8 oz	No Fungicide	4	75.3	59.0	1.7	16.7	0.4	1.0
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	80.0	60.1	2.3	13.3	0.1	0.7
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	76.0	59.3	2.7	26.7	0.1	0.5
		Exp. Mean		75.2	59.2	2.4	24.7	0.2	0.7
		C.V. %		4.4	0.4	30.5	17.2	85.3	76.2
		Lsd 5%		6.0	0.4	1.4	7.7	ns	ns

NIS = Induce 0.125% v/v

Fungicide Timing for Disease Control in Hawken Winter Wheat 2011 - Devils Lake, ND, Ramsey Count									
Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld. Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
No Fungicide	No Fungicide	No Fungicide	1	86.3	59.2	46.7	86.7	0.6	2.5
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2	86.7	60.0	30.0	43.3	0.2	1.7
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	85.3	59.9	20.0	40.0	0.0	1.2
No Fungicide	Stratego 8 oz	No Fungicide	4	82.3	58.7	46.7	70.0	0.4	2.2
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	89.5	60.2	26.7	36.7	0.2	1.2
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	91.4	60.6	20.0	50.0	0.2	1.2
		Exp. Mean		86.9	59.8	31.7	54.4	0.3	1.6
		C.V. %		4.9	1.4	36.0	24.1	101.9	51.9
		Lsd 5%		ns	ns	20.8	23.9	ns	ns

NIS = Induce 0.125% v/v

Fungicide Timing for Disease Control in Accipiter Winter Wheat 2011 - Devils Lake, ND, Ramsey Coun

Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld. Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
No Fungicide	No Fungicide	No Fungicide	1	87.8	60.4	70.0	96.7	0.9	1.7
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2	101.2	61.5	10.0	43.3	0.0	0.2
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	102.0	61.3	13.3	66.7	0.1	0.7
No Fungicide	Stratego 8 oz	No Fungicide	4	85.5	60.6	83.3	98.3	1.3	2.0
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	92.9	61.0	20.0	63.3	0.1	1.0
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	90.1	61.2	26.7	83.3	0.4	1.2
Exp. Mean				93.3	61.0	37.2	75.3	0.5	1.1
C.V. %				7.7	1.0	20.6	14.9	94.7	44.8
Lsd 5%				ns	ns	14.0	20.5	0.8	0.9

NIS = Induce 0.125% v/v

Averages of Above Three Experiments

Fungicide Timing for Disease Control in Winter Wheat 2011 (Three exp average)

Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld. Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2	90.8	60.5	13.8	31.6	0.1	0.9
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	88.5	60.3	11.8	40.0	0.1	0.7
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	87.5	60.4	16.3	37.8	0.1	1.0
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	85.8	60.4	16.5	53.3	0.2	1.0
No Fungicide	Stratego 8 oz	No Fungicide	4	81.0	59.4	43.9	61.7	0.7	1.7
No Fungicide	No Fungicide	No Fungicide	1	77.1	58.8	40.5	84.5	0.7	1.7
Exp. Mean				85.1	60.0	23.8	51.5	0.3	1.2

Fungicide Timing for Disease Control in CDC Falcon Winter Wheat 2011 - Langdon, ND, Cavalier Cour

Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld. Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
No Fungicide	No Fungicide	No Fungicide	1	69.3	58.6	45.0	82.5	0.3	2.5
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2						
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	78.9	61.0	12.5	37.5	0.1	1.1
No Fungicide	Stratego 8 oz	No Fungicide	4	74.2	59.5	35.0	65.0	0.4	2.0
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	78.9	60.7	12.5	35.0	0.1	0.9
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	75.1	60.0	22.5	42.5	0.2	1.8
Exp. Mean				75.3	60.0	25.5	52.5	0.2	1.7
C.V. %				6.2	1.2	41.0	21.3	141.6	66.0
Lsd 5%				ns	1.1	14.1	14.8	0.6	ns

NIS= Induce 0.125% v/v

Fungicide Timing for Disease Control in Hawken Winter Wheat 2011 - Langdon, ND, Cavalier County									
Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld. Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
No Fungicide	No Fungicide	No Fungicide	1	71.2	58.5	23.3	70.0	0.6	2.2
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2						
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	77.1	59.7	13.3	36.7	0.2	1.5
No Fungicide	Stratego 8 oz	No Fungicide	4	63.9	58.8	33.3	43.3	0.9	2.7
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	78.0	59.8	10.0	33.3	0.1	2.0
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	70.5	60.3	33.3	56.7	0.2	1.3
		Exp. Mean		72.1	59.4	22.6	48.0	0.4	1.9
		C.V. %		10.6	1.1	51.0	42.2	113.7	29.0
		Lsd 5%		ns	1.1	ns	ns	ns	ns

NIS = Induce 0.125% v/v

Data for 5 trts taken from larger Langdon 2011 experiment

Five Experiment averages

Fungicide Timing for Disease Control in Winter Wheat 2011 - 5 site Average NEND									
Fungicide Timing					Test	Flag	F-1	FHB	Tomb
Herbicide	Flag	Early flower	Trt	Yield	Wt.	Necr.	Necr.	Fld. Sev.	stone
5 to 6 leaf	Feekes 9	Feekes 10.51		bu/a	lb/bu	%	%	%	%
Stratego 4 oz	No Fungicide	Prosaro 6.5 oz + NIS	3	84.3	60.3	12.2	38.8	0.1	1.0
No Fungicide	No Fungicide	Prosaro 6.5 oz + NIS	5	83.9	60.4	14.3	36.3	0.1	1.2
No Fungicide	No Fungicide	Folicur 4 oz/a + NIS	6	80.6	60.3	21.0	51.8	0.2	1.2
No Fungicide	Stratego 8 oz	No Fungicide	4	76.2	59.3	40.0	58.7	0.7	2.0
No Fungicide	No Fungicide	No Fungicide	1	74.3	58.7	37.9	81.2	0.6	1.9
Stratego 4 oz	Stratego 4 oz	Prosaro 6.5 oz + NIS	2						
		Exp. Mean		79.9	59.8	25.1	53.4	0.3	1.4

2011 Winter Wheat Variety Trial - Continuously Cropped - No-till Mandan

Cooperator: USDA-ARS, Northern Great Plains Research Lab., Mandan

This trial was partially funded by Ducks Unlimited, Bismarck

Variety	----- No Foliar Fungicide -----				----- Foliar Fungicide*-----				Grain Yield		Average Yield	
	Plant Ht	Test Weight	Grain Pro	Grain Yield	Plant Ht	Test Weight	Grain Pro	Grain Yield	2009	2010	2 yr	3 yr
	inch	lbs/bu	%	bu/A	inch	lbs/bu	%	----- bushels per acre -----				
Decade	34	50.6		25.0	33	51.4		30.0	92.3	49.6	39.8	57.3
Overland	33	50.5		22.8	35	52.9		34.0	84.4	51.4	42.7	56.6
Lyman	33	--		14.7	35	52.2		25.8	87.5	47.3	36.6	53.5
Millennium	39	49.9		17.6	36	52.9		33.0	77.7	51.1	42.0	53.9
Art	33	49.4		20.7	32	51.9		31.9	80.4	44.7	38.3	52.3
Peregrine	34	51.9		19.3	34	52.1		22.7	86.0	44.5	33.6	51.1
Boomer	36	--		9.6	33	50.1		22.1	81.8	48.3	35.2	50.7
Wesley	32	--		12.6	32	48.8		19.6	81.7	50.1	34.8	50.5
Hawken	31	48.7		17.1	26	50.4		20.1	83.2	45.9	33.0	49.7
Darrell	37	--		13.7	33	50.9		21.9	77.1	48.9	35.4	49.3
Radiant	39	--		13.6	36	51.5		20.6	85.7	38.4	29.5	48.2
Accipiter	36	--		13.5	36	51.6		19.2	80.8	44.4	31.8	48.1
Jerry	33	--		9.3	35	50.0		19.7	76.3	47.0	33.4	47.7
Falcon	34	--		13.7	36	51.1		23.9	78.7	40.7	32.2	47.8
Striker	28	--		11.1	32	51.5		22.4	74.0	41.4	31.9	45.9
Yellowstone	34	--		2.7	32	46.8		11.4	75.7	47.5	29.4	44.9
Carter	31	--		12.0	33	50.5		19.5		40.0	29.8	
SY Wolf	29	52.3		31.9	33	51.7		32.2				
SY503CL2	31	--		16.0	33	52.3		31.2				
Expedition	33	48.2		18.3	34	52.0		29.4				
WB Matlock	32	--		13.8	34	52.9		21.4				
SD05118-1	33	50.1		17.4	34	51.8		31.5				
PST-44	30	--		10.6	34	47.1		11.3				
PST-45	31	--		13.3	31	49.0		16.3				
PST-46	33	44.9		15.0	32	46.5		15.4				
Trial Mean	33	49.6		15.4	33	51.1		23.5	81.3	45.1	--	--
C.V. %	--	--	--	--	6.4	1.9		24.2	7.1	15.4	--	--
LSD .05	--	--	--	--	4	1.6		9.3	8.1	9.8	--	--
LSD .01	--	--	--	--	4	2.1		12.4	10.8	12.9	--	--

*Foliar fungicides: 5 oz/A Stratego applied on June 4 (jointing) and 8.2 oz/A Prosaro on July 1 (flowering).

Planting Date: September 28, 2010

Harvest Date: August 22, 2011

Seeding Rate: 1 million live seeds / acre (approx. 1.4 bu/A).

Previous Crop: hrsw.

Note: The 2011 trial sustained severe foliar and head disease infestations. The 2010 trial sustained significant nitrogen deficiency causing relatively poor yields.

2011 Winter Wheat Varietal Response to Foliar Applied Fungicides Mandan

Cooperator: USDA-ARS, Northern Great Plains Research Lab., Mandan

This trial was partially funded by Ducks Unlimited, Bismarck

Observations by Brandi Herauf, IPM Scout, Dickinson Res. Ext. Center

Variety	----- Untreated -----						----- Treated* -----					
	Tan Spot		Septoria		Bac Blight		Tan Spot		Septoria		Bac Blight	
	Inc	Sev	Inc	Sev	Inc	Sev	Inc	Sev	Inc	Sev	Inc	Sev
	----- % Flag Leaf -----											
Jerry	40	1	100	95	0	0	90	2	20	50	50	1
Decade	10	1	100	100	0	0	80	1	30	10	90	20
Falcon	20	20	100	95	0	0	30	1	20	20	90	40
Accipiter	60	2	60	80	40	10	70	1	10	50	70	10
Peregrine	80	10	80	80	40	10	90	2	0	0	70	20
Expedition	0	0	100	100	0	0	20	1	40	80	50	10
Darrell	10	1	100	95	10	5	50	1	20	50	90	20
Lyman	0	0	100	100	0	0	70	1	40	40	50	5
SD05118-1	40	10	70	85	10	50	90	2	20	80	90	60
Millennium	0	0	100	100	0	0	80	1	40	90	60	60
Wesley	30	1	100	95	10	60	60	1	10	100	70	40
Overland	0	0	100	100	0	0	60	1	20	40	70	20
Yellowstone	20	1	100	95	0	0	80	2	60	50	40	20
Carter	10	1	70	100	10	80	60	1	60	60	40	5
Boomer	10	1	100	100	0	0	60	1	20	20	50	10
Striker	0	0	100	100	0	0	40	1	30	10	50	10
WB Matlock	0	0	100	100	0	0	80	1	70	30	20	40
Hawken	10	1	90	100	10	2	30	1	70	90	60	10
Art	0	0	100	100	0	0	50	1	40	80	60	10
SY Wolf	60	2	40	20	40	50	100	1	40	10	50	60
Radiant	50	20	60	50	30	20	100	2	0	0	90	30
AP503CL2	0	0	100	100	0	0	40	1	10	100	80	10
PST-44	70	20	70	60	40	20	50	1	0	0	90	70
PST-45	60	5	70	60	30	3	50	1	40	60	50	50
PST-46	30	1	20	5	100	50	60	1	10	5	80	50

*Foliar fungicides: 5 oz/A Stratego applied on June 4 (jointing) and 8.2 oz/A Prosaro applied on July 1 (flowering).

Inc = percentage of flag leaves showing infection.

Sev = percentage of flag leaf surface infected with disease.

Date of Observation: July 21, 2011

Previous Crop: hrsw.

Performance of winter wheat varieties, with and without fungicide¹ on yield and agronomic traits, Prosper, 2011.

Varieties	Heading Date		Plant Height		1000 K Weight		Protein		Test Weight		Yield	
	No Fung	Fung	No Fung	Fung	No Fung	Fung	No Fung	Fung	No Fung	Fung	No Fung	Fung
	Date		(cm)		(gm)		(%)		(lb/bu)		(bu/a)	
Accipiter	6/22	6/22	82.7	89.0	25.5	28.6	13.2	12.8	50.1	53.0	27.7	37.6
Art	6/9	6/10	81.0	88.0	27.8	26.1	15.0	14.6	49.6	51.0	24.8	34.4
Boomer	6/15	6/17	85.0	87.3	25.3	27.4	14.5	15.1	48.1	51.0	21.5	32.6
CDC Falcon	6/16	6/17	83.3	87.0	20.1	26.4	15.0	13.7	47.8	51.3	22.1	30.1
Carter	6/17	6/16	78.7	75.7	26.0	20.4	15.1	14.9	48.7	50.7	21.8	30.2
Darrell	6/14	6/14	90.0	91.3	28.4	29.2	14.3	14.3	49.7	52.9	28.3	40.8
Decade	6/17	6/16	85.7	84.3	27.3	29.4	15.0	14.3	47.3	50.1	25.6	36.5
Expedition	6/10	6/10	94.3	86.3	28.4	33.1	13.9	13.2	51.0	54.1	29.5	47.8
Hawken	6/11	6/8	77.3	79.3	28.4	29.5	15.8	14.9	49.2	51.2	18.2	35.7
Ideal	6/17	6/17	81.7	90.3	23.9	27.5	13.1	14.1	49.6	51.1	30.4	34.2
Jerry	6/16	6/17	95.7	93.3	28.6	27.9	14.4	14.0	49.9	52.4	31.6	44.6
Lyman	6/11	6/12	87.7	93.7	29.8	34.2	14.4	14.1	52.3	53.8	33.7	38.0
Millennium	6/16	6/16	92.3	98.3	23.1	29.8	13.9	14.2	51.0	52.0	32.4	40.9
Overland	6/14	6/15	87.0	92.0	25.6	30.3	14.4	14.0	50.8	53.5	32.4	49.2
Peregrine	6/18	6/17	100.0	99.7	27.8	27.2	12.9	13.5	52.5	53.7	34.9	39.3
Radiant	6/19	6/18	98.0	97.0	23.8	27.5	12.7	12.7	49.3	51.1	28.7	33.5
Striker	6/18	6/17	82.0	81.3	23.3	24.7	13.9	14.0	46.5	51.2	17.0	35.4
SY Wolf	6/14	6/14	81.0	82.3	27.6	29.1	14.8	13.2	50.0	52.6	34.6	48.7
WB Matlock	6/19	6/18	85.7	87.3	29.3	28.3	14.1	14.3	51.2	53.9	26.5	45.9
Wesley	6/9	6/16	85.7	83.3	28.1	28.6	14.5	14.1	46.4	49.7	26.9	31.0
Yellowstone	6/22	6/18	85.7	89.3	20.4	24.7	14.6	13.8	43.0	47.6	12.1	28.1
Mean	6/15	6/15	86.7	88.4	26.1	28.1	14.3	14.0	49.2	51.8	26.7	37.8
c.v.	0.0		9.7		15.3		6.2		4.1		25.4	
LSD 0.05	1.3		13.6		6.9		1.4		3.3		13.1	

¹Fungicides consisted of Stratego at 4 fl oz/acre at the 4 lf stage and Prosoar at 6.5 fl oz/acre at Feekes 10.51

joel.ransom@ndsu.edu

Effect of winter wheat variety and fungicide¹ on lodging and disease development, Prosper ND, 2011.

Varieties	Lodging (0-9)		FHB Severity ² (%)		DON ³ (ppm)	
	No Fung	Fung	No Fung	Fung	No Fung	Fung
Accipiter	2.3	2.3	6.8	1.7	8.3	4.1
Art	6.0	5.0	11.9	1.3	1.5	1.1
Boomer	6.3	3.3	5.7	4.3	4.1	3.6
CDC Falcon	2.7	2.3	13.8	10.1	4.9	4.2
Carter	6.7	5.3	0.7	0.1	1.5	1.0
Darrell	4.7	4.7	8.3	0.5	1.7	2.3
Decade	4.3	3.7	5.3	0.4	3.5	5.5
Expedition	6.3	3.7	8.2	0.5	2.7	1.7
Hawken	4.7	5.0	17.8	6.2	1.8	0.8
Ideal	4.0	4.7	4.0	3.7	3.6	3.4
Jerry	4.7	4.3	2.8	0.1	3.7	2.7
Lyman	8.0	6.3	0.9	4.1	1.1	1.5
Millennium	5.3	4.0	6.2	0.7	2.0	2.1
Overland	6.7	5.3	8.2	0.3	2.4	1.6
Peregrine	4.3	3.7	1.5	0.6	3.7	2.7
Radiant	1.3	1.0	8.5	3.6	9.3	6.4
Striker	3.7	2.0	17.8	7.6	9.0	6.1
SY Wolf	2.7	1.7	21.1	4.5	4.6	1.9
WB Matlock	2.7	4.3	3.2	0.4	4.0	1.7
Wesley	3.0	3.3	9.8	6.8	4.1	3.2
Yellowstone	3.7	2.0	11.5	6.5	6.5	6.7
Mean	4.5	3.7	8.3	3.0	4.0	3.0
c.v.	46.0		126.0		56.4	
LSD 0.05	3.0		11.2		3.2	

1-Fungicides consisted of Stratego at 4 fl oz/acre at the 4 If stage and Prosoaro at 6.5 fl oz/acre at Feekes 10.51
 2- FHB Field Severity = Fusarium Head Blight severity (percent heads infected by the percent of spikelets infected).
 3- DON = deoxynivalenol or Vomitoxin which is produced by the Fusarium fungus that causes FHB.