

Release of 'Prevail' Hard Red Spring Wheat

Prevail is a hard red spring wheat variety developed by the South Dakota Agricultural Experiment Station and will be released in 2014. It was derived as a single spike from within an F₄ population (SD3720/MN98389-A) that was originally created in fall 2002. Prevail was tested as SD4178 in the South Dakota Crop Performance Testing (CPT) trials in 2011 through 2013. Prevail was also evaluated by the Wheat Quality Council in 2012.

Points of note associated with Prevail include:

- 1 High yield potential and Test Weight.
- 2 Adequate grain protein percentage.
- 3 Tall semi-dwarf.
- 4 Moderate levels of resistance to Fusarium Head Blight (FHB).

Prevail is similar to Forefront in maturity and two days earlier than Advance. Test Weight is similar to Select and slightly lower than Brick. Protein content is similar to Advance, but below Forefront and Brick. Prevail is similar in height to Advance and has shown better tolerance to FHB (scab) and better lodging resistance. Bacterial Leaf Streak tolerance is only exceeded by Forefront. Tests carried out at the USDA Spring Wheat Quality Laboratory in Fargo, ND, have demonstrated that most milling and baking quality parameters associated with Prevail are similar to Brick, Select, Faller and Briggs, but superior to Traverse.

There will be a \$0.30/bushel research fee on the sales of Registered and Certified Prevail spring wheat and Plant Variety Protection will be applied for.

Table 1. 2012-13 SDSU-CPT Spring Wheat Trials

Variety	Maturity	Height	Test Weight	Protein %	2011-2013 Yield
<i>Prevail</i>	2	-2	59.3	15.4	53.1
Advance	4	-4	59.5	15.2	53.8
Brick	0	0	59.4	15.6	49.8
Forefront	2	+2	59.6	15.9	52.5
Select	1	-1	59.3	15.8	50.6

Table 2. 2012-13 Spring Wheat Breeder Trials

Variety	2013 East River Yield	2013 West River Yield	FHB % Damaged Kernels	Lodging Score 1-5
<i>Prevail</i>	63	56	13.8	1.36
Advance	64	54	17.9	1.45
Brick	59	55	20.1	1.49
Forefront	63	55	10.0	1.45
Select	58	51	18.5	1.47

Table 3. 2013 SDSU CPT Spring Wheat Yield Trials

Location	<i>Prevail</i>	Advance	Brick	Forefront	Select
Aberdeen	65	62	66	67	64
Selby	73	81	76	80	76
Brookings	62	63	57	62	56
South Shore	67	63	54	62	60
Frankfort	42	50	39	41	32
Miller	67	63	60	63	63
Wall	45	43	51	51	41
Bison	65	58	54	55	55
Ralph	58	62	60	60	57

North Dakota Variety Trials

Hettinger

Hard Red Spring Wheat Variety Trial						Hettinger Research & Extension Center				
Variety	Days to Head	Plant Height	Plant Lodge	Test Weight	Grain Prote	Grain Yield			Average Yield	
						2011	2012	2013	2 yr	3 yr
Prevail (SD4178)	68	36	0	62.4	15.1	in	66.4	75.3		
SY 605CL	67	36	0	63.1	16.2	51.7	80.3	71.8	76.1	67.9
SY Soren	69	32	0	63.0	15.7	48.8	82.2	72.2	77.2	67.7
Samson	69	31	0	61.2	15.0	53.2	79.2	70.4	74.8	67.6
Advance	69	33	4	63.0	14.4	49.0	84.9	67.8	76.4	67.2
Brennan	67	30	1	63.2	16.0	49.9	79.9	69.8	74.8	66.5
WB-Digger	69	37	1	61.8	15.2	38.6	83.5	75.8	79.6	66.0
Velva	70	37	0	59.1	15.8	49.0	79.1	68.0	73.6	65.4
Sabin	70	35	2	62.6	15.9	47.5	82.7	65.4	74.1	65.2
Elgin-ND	71	40	0	61.5	16.2	50.1	77.0	66.7	71.8	64.6
Breaker	70	36	0	61.3	15.4	44.2	76.2	69.0	72.6	63.1
Howard	68	37	1	62.3	15.7	46.1	73.0	69.9	71.4	63.0
Jenna	72	34	0	61.4	15.3	48.9	72.0	67.7	69.8	62.9
SY Tyra	72	30	0	61.8	14.3	39.0	82.5	66.0	74.3	62.5
Forefront	67	39	1	62.8	15.9	46.0	75.7	64.9	70.3	62.2
Linkert	70	30	0	62.4	16.8	45.0	80.4	61.0	70.7	62.1
Norden	69	33	0	62.8	15.3	43.4	76.5	65.8	71.2	61.9
Barlow	68	37	0	62.2	16.1	45.5	71.5	68.2	69.8	61.7
Select	66	36	0	63.6	15.2	44.7	73.1	66.0	69.6	61.3
WB-Mayville	68	30	0	61.4	16.0	41.6	76.6	62.6	69.6	60.3
Prosper	70	36	0	61.3	14.9	40.0	76.6	63.0	69.8	59.9
Rollag	68	32	0	63.0	16.4	35.2	80.4	63.9	72.2	59.8
Steele-ND	70	36	1	61.6	15.2	38.6	72.2	67.3	69.7	59.4
RB07	67	33	0	61.9	16.0	35.8	79.5	62.7	71.1	59.3
Mott	72	39	0	60.6	16.2	39.3	73.2	65.0	69.1	59.2
Glenn	67	37	0	63.1	17.2	39.5	71.4	60.2	65.8	57.0
Vantage	74	34	0	60.8	17.8	37.8	67.6	60.0	63.8	55.1
ND 901CL PLUS	68	36	0	61.7	17.4	38.9	69.0	55.7	62.4	54.5
Faller	70	35	0	59.7	15.0	38.0	68.8	54.4	61.6	53.7
WB-Gunnison	69	32	1	60.4	14.6	30.3	70.3	51.8	61.1	50.8
SY-Rowyn	69	32	0	62.0	14.8	83.7	69.5	76.6		
Trial Mean	69	35	0	62.0	15.7	42.1	75.9	66.1	--	--
C.V. %	1.4	3	217.8	0.9	2.5	6.6	4.6	5.6	--	--
LSD 10%	1	1	1	0.6	0.5	3.5	4.1	4.3	--	--

North Central (Minot)

Hard Red Spring Wheat Variety Trial				North Central Research Extension Center—Minot						
Variety	Days to Head	Plant Height	Lodging	Test Weight	Protein	Grain Yield				
						2011	2012	2013	2	3
	DAP ¹	inches	0-9 ²	lbs/bu	%	-----bu/A-----				
Prevail (SD4178)	51	31	1	61.6	12.5	--	52.4	47.3	49.9	--
Select	51	34	0	62.4	12.4	27.9	58.7	59.9	59.3	48.8
Advance	56	31	1	62.1	12.5	26.5	55.5	59.1	57.3	47.0
LCS Albany	58	31	0	62.5	12.7	30.0	46.9	62.8	54.8	46.6
Faller	58	32	1	61.7	12.3	24.9	47.4	63.4	55.4	45.2
Norden	56	29	0	62.9	12.9	24.3	57.8	53.6	55.7	45.2
Velva	55	33	0	61.1	12.9	27.6	50.6	54.5	52.6	44.2
LCS Power Play	55	31	0	62.0	12.3	21.4	52.6	58.3	55.4	44.1
Forefront	51	36	1	61.8	13.0	39.0	43.4	48.3	45.8	43.6
Mott	55	36	0	61.2	13.6	26.1	47.4	56.6	52.0	43.4
Barlow	52	33	0	62.8	13.2	23.5	50.8	54.5	52.7	42.9
Elgin-ND	57	35	1	61.8	13.3	31.1	38.2	58.3	48.3	42.5
Breaker	57	32	1	62.0	13.6	21.1	52.1	49.9	51.0	41.0
WB Digger	55	32	1	60.9	12.6	21.2	34.5	66.6	50.6	40.8
Vantage	58	32	0	62.6	14.3	25.4	44.9	51.5	48.2	40.6
Brick	50	33	1	62.3	12.7	29.4	32.2	60.2	46.2	40.6
Alsen	55	31	1	61.6	13.9	23.1	50.7	46.7	48.7	40.2
ND901CL Plus	52	34	0	60.5	14.3	23.6	43.1	52.8	47.9	39.8
RB07	53	30	1	62.0	13.4	20.1	46.4	51.4	48.9	39.3
SY Soren	54	28	0	62.1	14.2	28.2	36.4	53.1	44.7	39.2
Freyr	57	32	2	61.2	13.9	20.9	45.6	51.1	48.4	39.2
Jenna	58	31	1	60.8	13.7	28.3	36.2	53.0	44.6	39.2
WB Mayville	55	27	0	59.6	14.2	24.7	42.8	49.2	46.0	38.9
Brennan	52	27	0	61.0	12.9	22.9	48.1	45.4	46.7	38.8
Briggs	51	31	1	61.8	13.0	26.1	27.0	53.3	40.1	35.5
Choteau	57	30	1	59.5	13.2	14.6	46.5	44.3	45.4	35.1
WB Gunnison	57	29	0	60.3	13.2	14.9	37.6	45.7	41.6	32.7
Prosper	57	32	1	62.3	11.5	--	44.2	66.2	55.2	--
Howard	54	33	1	62.6	13.3	--	51.1	54.0	52.6	--
Rollag	56	30	0	62.1	13.9	--	51.0	54.1	52.5	--
Steele-ND	55	33	2	63.1	13.9	--	50.0	54.8	52.4	--
LCS Breakaway	53	29	0	63.3	13.6	--	51.3	53.0	52.2	--
SY Tyra	56	27	0	61.5	12.9	--	47.4	56.9	52.1	--
Samson	56	29	0	60.1	13.3	--	40.7	55.3	48.0	--
Duclair	54	32	0	61.0	13.3	--	39.9	56.1	48.0	--
Glenn	52	32	0	63.7	13.1	--	46.3	48.6	47.5	--
SY605CL	51	33	0	62.0	13.4	--	37.8	55.6	46.7	--
Kelby	53	29	1	61.1	13.8	--	48.7	40.3	44.5	--
Alpine	58	31	1	59.6	13.8	--	36.4	51.2	43.8	--
MS Stingray	60	34	0	60.2	10.6	--	--	61.7	--	--
LCS Iguacu	58	29	0	62.1	12.0	--	--	55.6	--	--
Sabin	57	31	0	61.8	13.5	--	--	50.9	--	--
Linkert	57	28	0	61.4	13.4	--	--	49.3	--	--
SY Rowyn	54	28	0	61.8	13.0	--	--	47.2	--	--
Mean	54	31	1	61.8	13.2	23.4	46.9	54.5	--	--
C.V.%	1.5	3.4	140	1.3	3.3	14.9	8.2	6.4	--	--
LSD 10%	1	1	1	1.0	0.5	8.4	4.5	4.1	--	--

¹DAP = Days after planting.

²Lodging: 0 = none, 9 = lying flat on the ground.

Planted on May 15 with a seeding rate of 1.25 million PLS/A and harvested on September 3.

Previous Crop: 2010 = summer fallow, 2011 & 2012 = field pea

Soil Type: Williams Loam