HRS wheat variety selection for 2017: Best options from a crowded pool of choices

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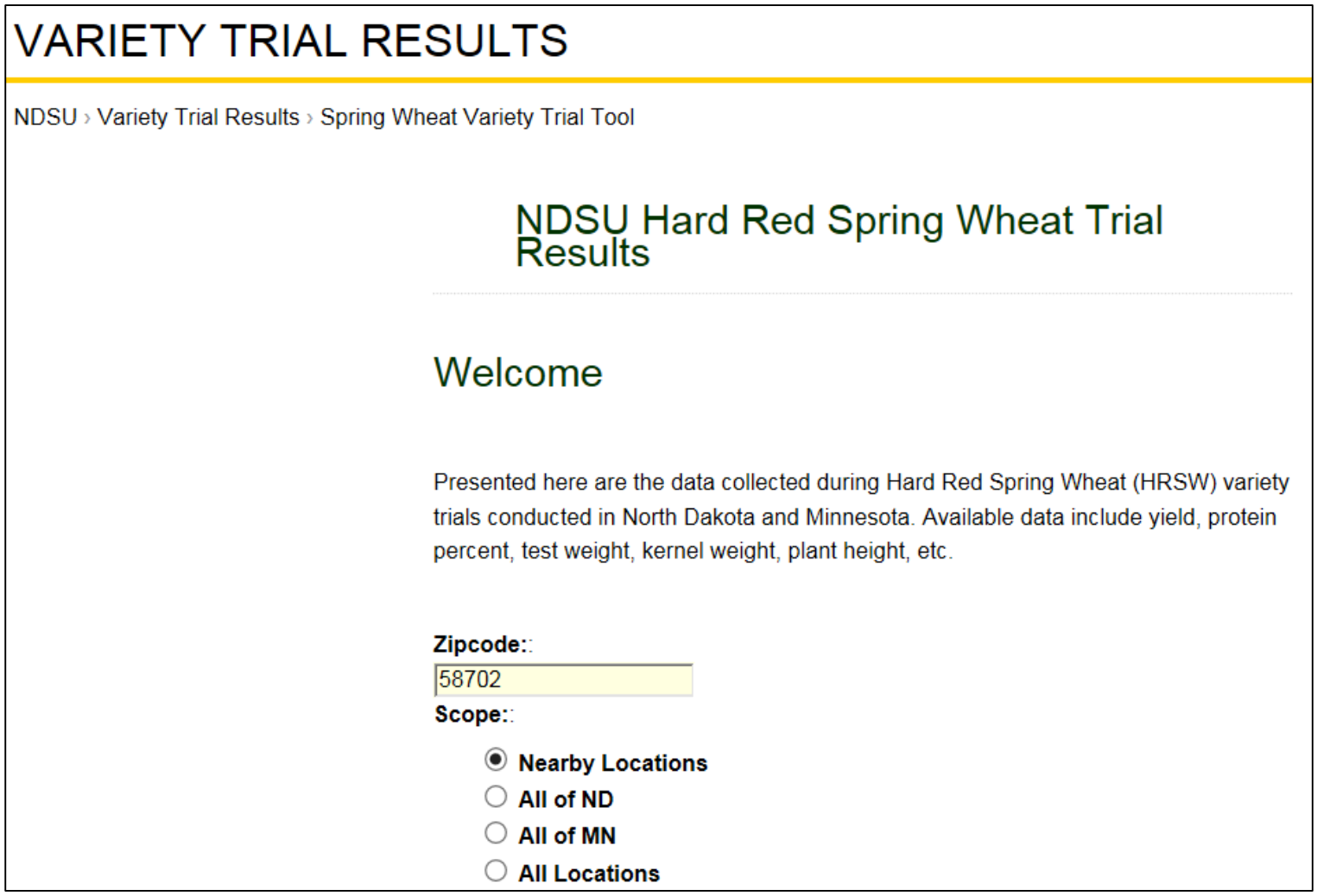
SURPASS
Focus
PREVAIL
FOREFRONT
Spring Wheat
Variety Trial
JENNA
HRS 3361
HRS 3419

Variety Selection Tool

www.ag.ndsu.edu/varietyselectiontool/



Variety Selection Tool

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VARIETY TRIAL RESULTS

NDSU › Variety Trial Results › Spring Wheat Variety Trial Tool › Search Results

test_weight
protein_percent
*bushels_acre

*2016
2015
2014

Search Results

This data is for the time period last_3_years

Yield: Bushels per Acre

The average number of bushels that can be expected from each acre of farmed land.

Variety	1-yr 8 site-years	2-yr 14 site-years	3-yr 20 site-years	Minot (x)	Mohall (x)	McLean County (x)	Cando (x)	Dickinson (x)	Carrington (x)	Langdon (x)	Pekin (x)
Bolles	60.7	60.4	--	70.2	74.2	61.1	77.2	47.5	28.5	62.6	64.1
Boost	61.8	--	--	66.0	76.5	59.4	68.0	52.3	39.3	60.5	72.2
Elgin	64.0	65.0	70.3	80.0	82.3	60.6	76.0	48.5	36.0	64.7	63.6
Faller	69.0	67.8	75.7	84.2	87.5	65.1	87.9	47.1	30.1	79.0	71.1
HRS 3419	70.7	70.2	74.4	83.8	80.0	63.2	93.0	60.5	35.2	78.9	70.6
HRS 3530	69.6	69.9	--	73.5	84.7	66.0	91.7	59.1	23.7	78.1	79.8
LCS Prime	68.1	--	--	77.7	82.9	68.4	80.0	60.5	31.4	68.7	75.4
Prevail	63.6	64.3	69.7	64.2	75.6	60.6	83.4	57.5	32.2	65.9	69.7
Prosper	70.5	68.2	--	93.8	87.7	62.8	82.5	55.0	28.9	77.8	75.3
SY Ingmar	68.0	67.5	72.0	84.6	82.2	62.6	76.2	56.7	38.0	70.0	73.6

North Dakota
Hard Red Spring Wheat
Variety Trial Results for 2016 and Selection Guide

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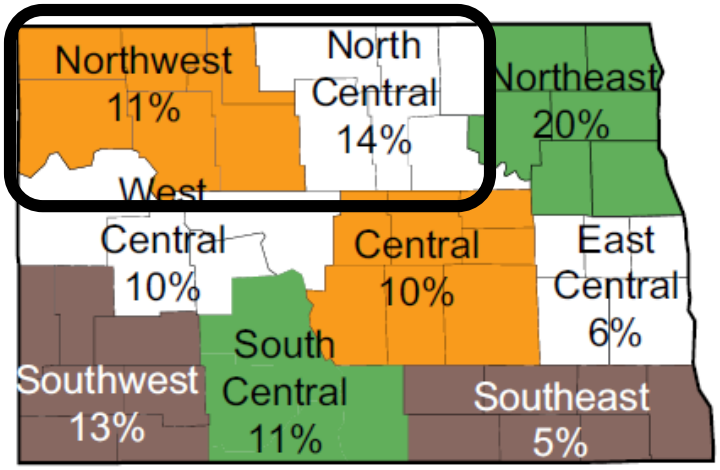
Hard red spring (HRS) wheat was harvested from 6.2 million acres in 2016, down slightly from 2015. The average yield of spring wheat was 47 bushels/acre (bu/a), a bushel lower than last year.

SY Soren was the most popular HRS wheat variety in 2016, occupying 15.4 percent of the planted acreage, followed by SY Ingmar (11.5), Elgin-ND (8.7), Barlow (8) Glenn (7.9), Faller (7.3) and Prosper (6.6). SY Soren and SY Ingmar were released by Syngenta/AgriPro. All other varieties are NDSU releases.

Spring wheat generally was planted early in 2016 due to an early spring. Temperatures were moderate during much of the growing season, which helped the development of relatively high yield potential. We did not experience the yield losses due to yellow rust that we saw in 2015. Scab caused elevated levels of DON (deoxynivalenol, commonly

NORTH DAKOTA 2016 SHARE OF PLANTED ACRES BY NASS DISTRICT

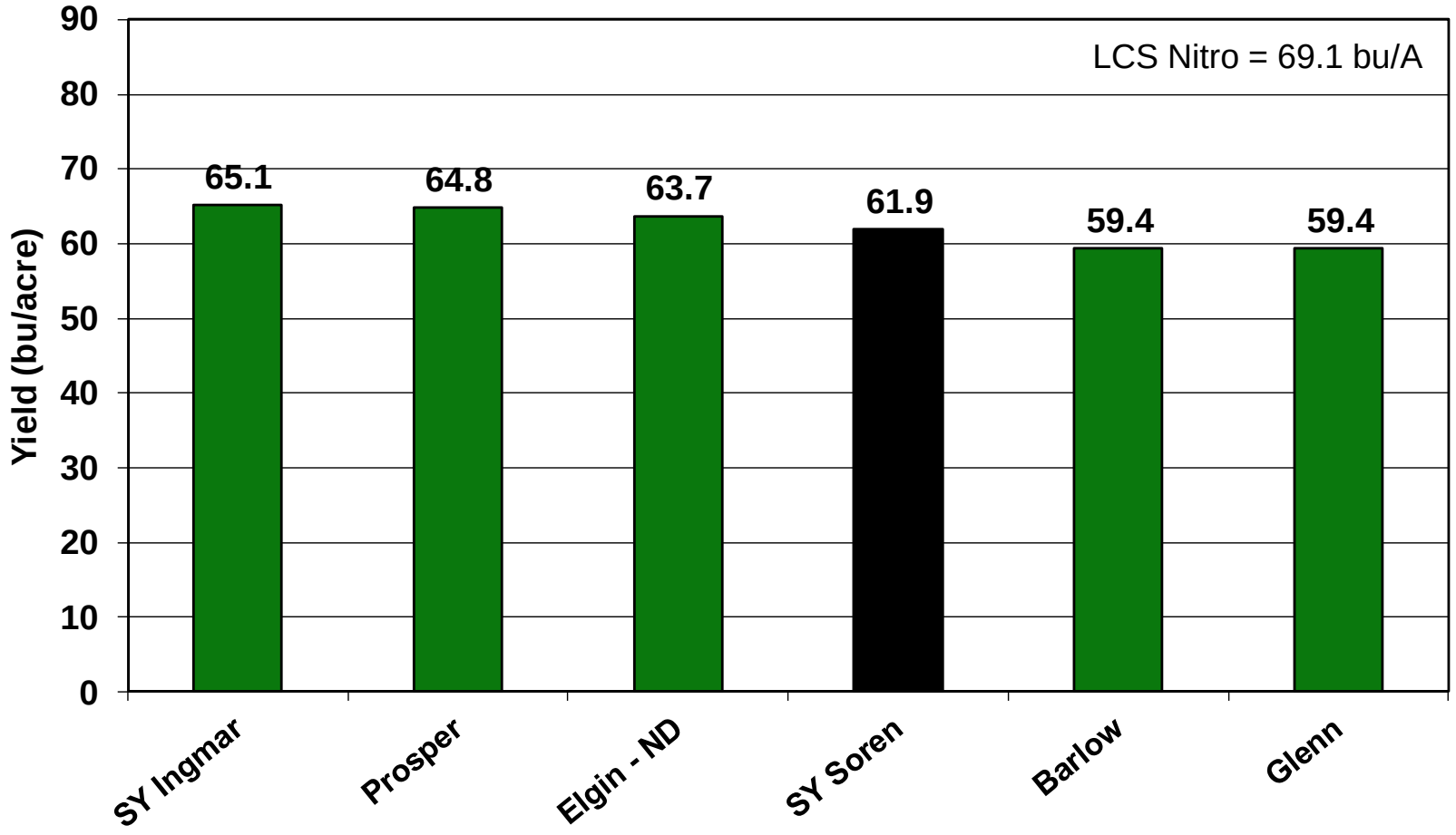


TOP 3 ND VARIETIES BY CROP DISTRICT

	First	Second	Third
	percentage (%)		
Northwest	Barlow (18.1)	SY Ingmar (16.3)	SY Soren (15.2)
North Central	SY Soren (18.9)	SY Ingmar (12.5)	Prosper (10.4)
Northeast	Faller (20.9)	Linkert (12.3)	SY Ingmar (12.2)
West Central	Glenn (14.3)	SY Soren (14.1)	Elgin-ND (13.7)
Central	SY Soren (18.8)	SY Ingmar (17.5)	Elgin-ND (13.5)
East Central	SY Soren (19.0)	Linkert (18.2)	WB Mayville (11.7)
Southwest	SY Soren (20.1)	Barlow (15.6)	Elgin-ND (15.4)
South Central	SY Soren (20.7)	Glenn (14.5)	SY Ingmar (14.2)
Southeast	SY Soren (17.3)	Prosper (16.7)	SY Ingmar (12.4)

Yield of ‘popular’ HRS wheat varieties in western ND*, 2014-16 (12 site-years)

*Dickinson, Hettinger, Minot and Williston



2015 HRSW varieties

Variety	Origin
Bolles	Univ of MN
Focus	SDSU
HRS 3530	Croplan
LCS Nitro	Limagrain
LCS Pro	Limagrain
Prestige	Pulse-USA
SY Valda	Syngenta/Agripro
WB9653	WestBred

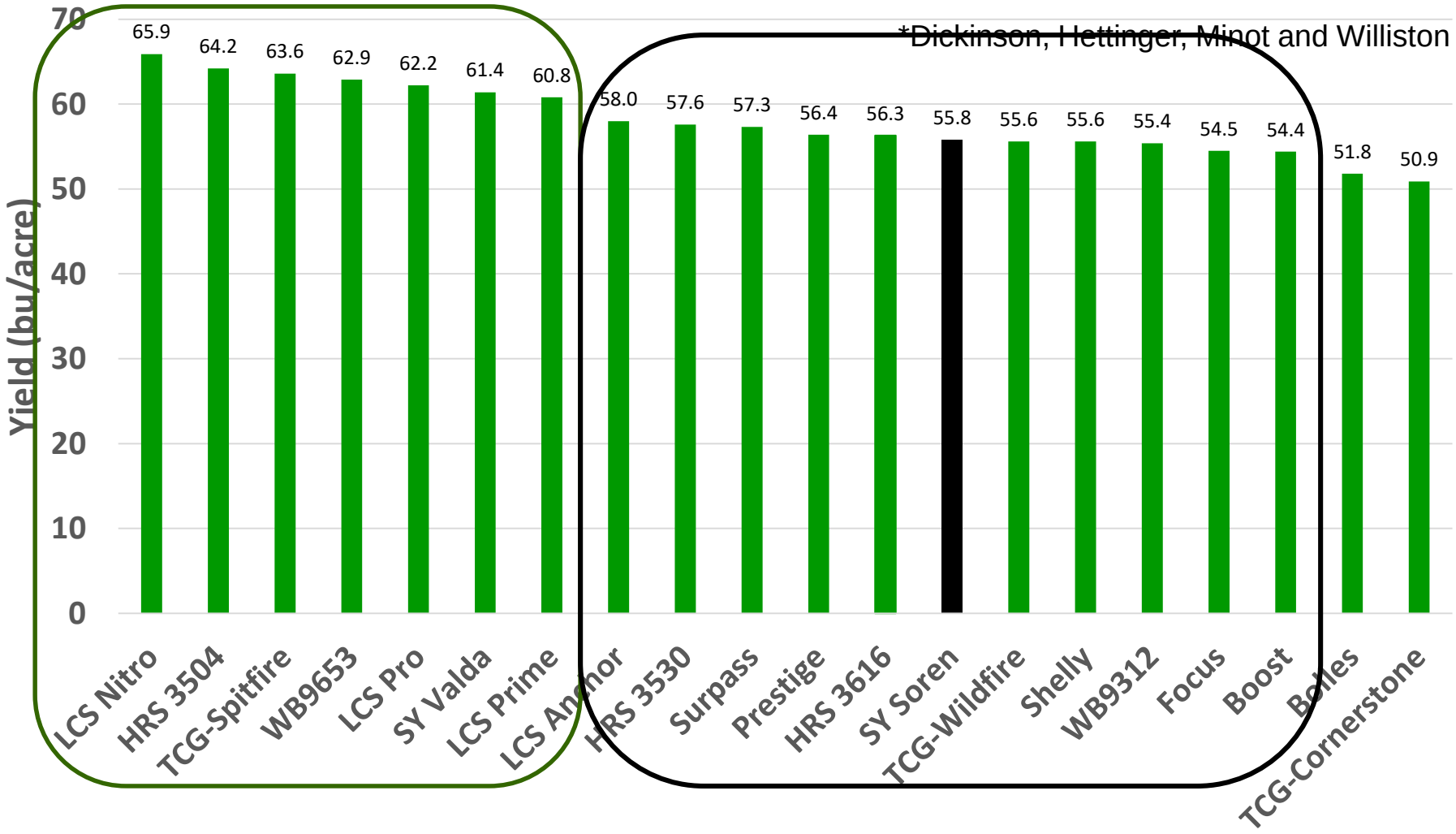
2015 HRSW varieties (continued)

Variety	Origin
TCG-Spitfire **TCG-Wildfire** **TCG-Cornerstone**	21st Century Genetics
HRS 3504	Croplan
LCS Prime	Limagrain

2016 HRSW varieties

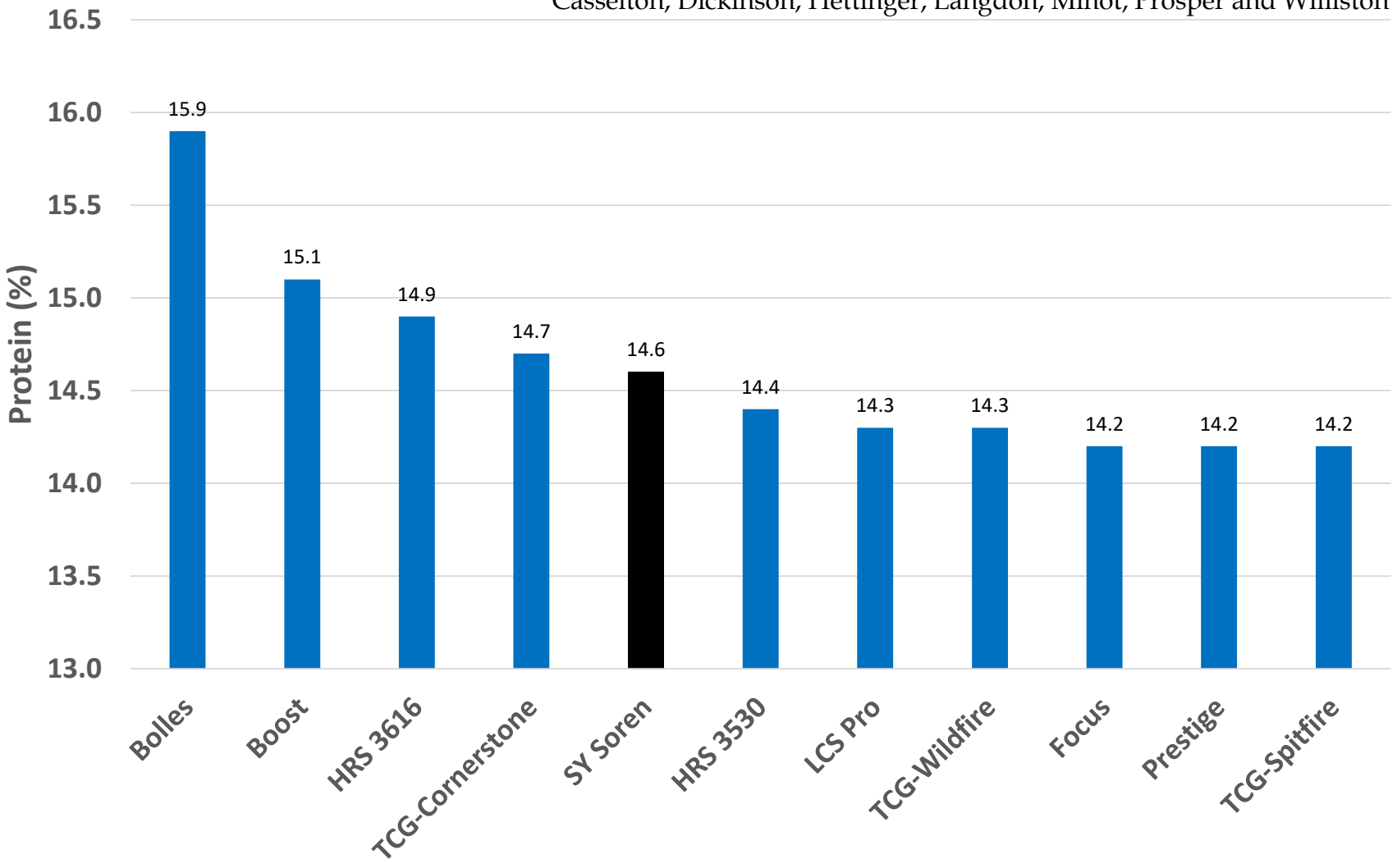
Variety	Origin
Boost	SDSU
HRS 3616	Croplan
LCS Anchor	Limagrain
Shelly	U of M
Surpass	SDSU
WB9312	WestBred

Yield of 2015-16 released HRS wheat varieties, western North Dakota, 2016 (4 sites)*



2015-16 released HRS wheat varieties with **protein** ≥ 14%, North Dakota, 2016 (7 sites*)

*Casselton, Dickinson, Hettinger, Langdon, Minot, Prosper and Williston



2015-16 released HRS wheat varieties with **yield** > SY Soren **and protein** ≥ 14%, ND, 2016

- HRS 3530, HRS 3616, LCS Pro, Prestige, TCG-Spitfire

2015-16 released HRS wheat variety **tolerance to disease** (NDSU ratings*)

Variety	FHB (scab)	Leaf rust		Stripe rust	
	MR	R	MR	R	MR
Bolles			x		x
Boost	x				
Focus	x				
LCS Prime	x				
LCS Nitro		x			x
Surpass	x				
SY Valda	x	x			
WB9312			x		
WB9653			x		

*ratings not available for all varieties

Scab (FHB) – HRSW variety tolerance

Boost	
Focus	
Forefront	
Glenn	
HRS 3419	
LCS Prime	
MS Stingray	
RB07	
Rollag	
Surpass	
SY Valda	
WB9507	**MR**

HRSW Variety: Straw Strength

1=strongest
9=weakest

2	3	4	5	6
HRS 3419	HRS 3361	Brennan	Elgin-ND	Barlow
Linkert	LCS Iguaca	Glenn	Faller	WB Digger
Samson	Norden	HRS 3378	Forefront	
Vantage	Rollag	Jenna	LCS Albany	
	Prestige	Prevail	LCS Breakaway	
	HRS 3504	SY Igmar	LCS Powerplay	
	LCS Anchor	SY Rowyn	MS Chevelle	
		WB Mayville	Prosper	
		Bolles	RB07	
		HRS 3530	WB9507	
		LCS Nitro	**Focus**	
		SY Valda	**LCS Pro**	
		WB9653		
		HRS 3616		
		LCS Prime		
		TCG-Cornerstone		
		TSG-Spitfire		

Consider 2 or more varieties for 2017 production in <u>western ND</u> from the following list (based on NDSU tests):

'Established' (≤ 2014):

- **SY Ingmar and SY Rowyn -** high yield x protein x straw strength
- Rollag - yield x high protein x straw strength x MR scab
- Faller - high yield

'New' (2015-16):

- **SY Valda** - high yield x straw strength x MR scab
- LCS Nitro, HRS 3504 and WB9653 - high yield x straw strength
- LCS Pro - high yield x protein
- HRS 3530, HRS 3616 and Prestige - *yield* x protein x straw strength

2017 HRSW variety releases

- NDSU: **ND VitPro** (ND825)
  - ✓ strong straw; high TW, protein and vitreous kernels
  - ✓ R leaf rust and M scab

- U of Minn: **Lang** (MN10261-1)
  - ✓ high TW and protein
  - ✓ good combination of overall disease resistance

ND VitPro

Table 2. Western North Dakota Agronomic Data (2014-2016)

Obs.	17	16	11	5	17	17	17
Line	Days to Heading	Plant Height	Lodging	Kernel Weight	Test Weight	Grain Yield	Grain Protein
ND VitPro	**59.5**	**34.5**	**1.4**	**34.7**	**60.3**	**61.5**	**15.2**
Barlow	59.3	35.4	2.0	34.5	59.8	61.5	14.8
Bolles	62.4	34.2	1.7	34.1	58.2	59.6	15.9
Boost	62.7	34.4	1.9	34.1	58.9	61.7	14.8
Elgin-ND	61.2	36.5	1.7	32.1	58.4	65.0	14.6
Faller	62.4	34.9	1.9	36.4	58.3	68.3	13.6
Glenn	59.4	35.8	1.7	33.6	60.5	60.1	15.0
LCS Breakaway	59.2	32.1	1.3	33.5	60.3	63.4	14.7
Linkert	60.5	31.4	0.4	35.9	59.2	63.3	15.1

Lang and VitPro

Lang

VitPro

North Central Research Extension Center

2016 Hard Red Spring Wheat Variety Trial

Variety	Days to Head	Plant Height	Lodgin	Test Weigh	Protein	Grain Yield 2014	2015	2016
	DAP[1]	inches	0-9[2]	lbs/bu	%	bu/A		
LCS Nitro	56	31	0	60.4	13.3	64.6	83.3	109.1
MS Stingray	60	33	0	55.5	12.2	75.1	84.9	99.1
Prosper	56	34	1	60.8	14.2	74.7	78.8	93.8
HRS3361	54	31	0	60.1	14.4	56.6	70.6	90.2
TCG Spitfire	57	32	0	58.6	14.3	.	.	87.7
WB9653	55	28	0	60.5	14.0		73.0	87.5
LCS Breakaway	52	31	1	61.9	15.0	63.1	70.2	86.9
MS Chevelle	52	29	1	61.2	13.4	65.0	68.8	86.7
Redstone	59	33	0	60.3	13.2		74.8	86.2
RB07	52	32	1	61.1	15.0	61.1	73.5	85.4
SY Ingmar	55	30	0	61.1	14.4	68.1	81.3	84.6
Duclair	54	33	2	59.6	14.6	66.6	72.5	84.4
Faller	56	33	1	60.1	13.8	76.4	82.4	84.2
HRS3419	59	31	0	59.5	13.3	67.7	82.2	83.8
HRS3504	55	29	0	60.1	14.5		74.1	83.6
LCS Pro	53	36	1	61.6	14.9	64.2	69.1	81.2
MN10261-1	**56**	**34**	**0**	**61.6**	**15.8**			**80.6**
Velva	53	34	0	59.1	14.4	66.2	65.7	80.0
Elgin ND	54	37	1	60.6	14.9	62.3	72.5	80.0
ND825	**52**	**31**	**0**	**61.9**	**15.4**			**79.5**
LCS Prime	51	32	1	61.4	13.0		72.4	77.7
Linkert	53	28	0	60.8	15.4	61.1	68.6	77.5
WB9312	53	28	0	61.3	12.8	.	.	77.3
SY Valda	54	29	0	57.4	14.0		88.3	77.1
Glenn	51	33	1	63.2	15.0	57.5	68.0	76.4
HRS3616	55	31	0	60.9	15.4	.	.	75.6

Questions or Comments?