

2020 South Dakota Spring Wheat Variety Trial Results Regional Summaries

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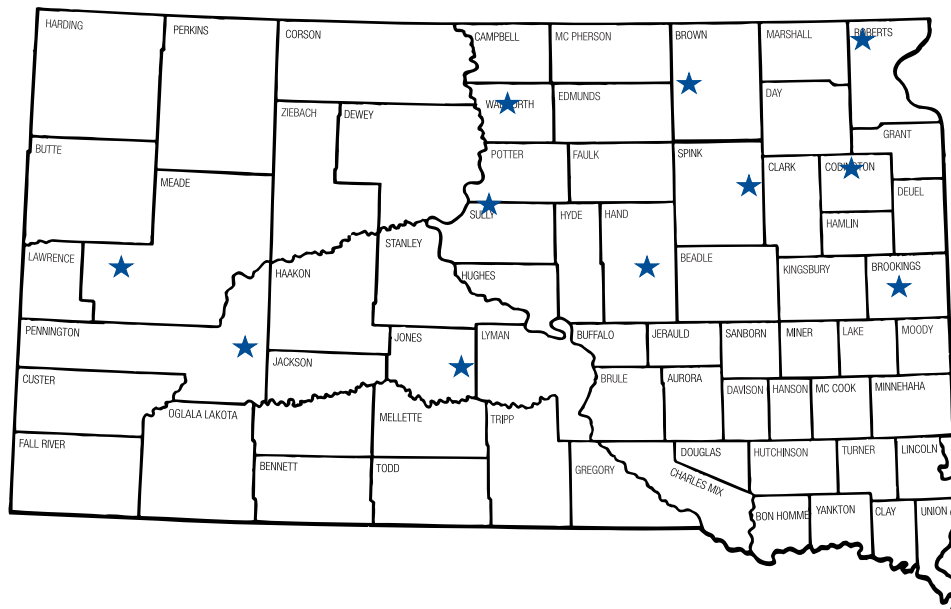
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Eastern trial locations: Claire City, Frankfort, South Shore, Volga

Central trial locations: Aberdeen, Agar, Miller, Selby

Western trial locations: Draper, Sturgis, Wall

Individual trial location results can be accessed online at:
<https://extension.sdstate.edu/spring-wheat-variety-trial-results>

The 2020 small grain growing season in South Dakota was characterized by a relatively early spring planting followed by good growing conditions in many areas of the state. Yields at some trial locations, especially Volga, were negatively impacted by heat during flowering and grain fill. Harvest progressed fairly rapidly and produced average to above-average yields in most areas of the state. There were no widespread disease outbreaks in the spring wheat crop.

Spring wheat variety characteristics and disease ratings are reported in Tables 1 & 2. Multi-year yield results for eastern, central, and western South Dakota are reported in Tables 3-5, respectively. Wheat is somewhat unique as the total revenue received by the producer is a combination of yield and a protein premium (discount). In some years high-protein varieties may actually provide more revenue than high-yielding varieties. An effort to quantify this is presented in Table 6.

Spring wheat yields from the South Dakota State University Crop Performance Testing (CPT) program averaged 61 bu/acre in eastern SD (Claire City, Frankfort, South Shore, and Volga), ranging from 52 bu/acre at Volga to 68 bu/acre at Claire City. Varieties yielding in the top 1/3 of the eastern SD trials over the past three years were **CP3530**, **LCS Trigger**, **Prevail**, **SY Ingmar**, **SY Rustler**, **SY Valda**, **WB9590**, and **WB9719**. Promising varieties with a good two-year yield average include **AP Murdock** and **MN-Torgy**. Yields in central South Dakota (Aberdeen, Agar, Miller, and Selby) averaged 67 bu/acre, ranging from 61 bu/acre at Agar to 75 bu/acre at Aberdeen. Varieties yielding in the top 1/3 of the central SD trials over the past three years were **Advance**, **CP3530**, **Driver**, **LCS Cannon**, **LCS Trigger**, **Shelly**, **SY Valda**, and **WB9719**. Promising varieties in central SD with a good two-year yield average include **AP Murdock**, **MN-Torgy**, **SY 611 CL2**, and **CP3915**. The trials in western SD averaged 49 bu/acre, ranging from 33 bu/acre at Wall to 65 bu/acre at Sturgis. Varieties yielding in the top 1/3 over three years in western SD were **CP3530**, **LCS Cannon**, **LCS Rebel**, **LCS Trigger**, **MN-Washburn**, **Shelly**, **Surpass**, and **SY Valda**. The protein content of the crop averaged 15.0%, 16.5%, and 15.1% in eastern, central, and western SD, respectively. Detailed trial results, including height and lodging notes for each location are available at: <https://extension.sdstate.edu/spring-wheat-variety-trial-results>.

Consider as much performance information as possible when selecting a variety and give more weight to information from trials close to home, as some varieties may be better suited to certain geographic areas. Also pay close attention to relative performance over many locations. This type of performance is an indication of "yield stability." Good yield stability refers to the ability of a variety exhibit high yield potential at many locations over years. For example, a variety that ranks in the upper 40% at all locations exhibits better yield stability than a variety that is number one for yield at one location but ranks in the lower 40% at some other locations. Performance over multiple years is also very important. Growing conditions in a single season may favor certain varieties, providing a poor representation of yield potential over time. A good rule of thumb is to plant 65%-75% of your acres to varieties with a proven track record (i.e. a good multi-year average) and plant the remaining 25%-35% to a promising new variety.

It is important to remember that varieties may differ by 5 bu/acre or even more and still be statistically similar. This is due to inherent variability in the environment and the yield testing process. Varieties that are statistically similar to the top performing variety at each location can be calculated by subtracting the least significant difference (LSD) value from the top performing variety. The LSD is a statistic used to determine if varieties are truly different from one another.

The coefficient of variation (CV) listed at the bottom of each data column, which is often expressed as a percentage of a given trait mean, is a relative measure of the amount of test variation for that trait. Generally, in yield trials, a CV of 15% is considered acceptable and a CV of 10% or less indicates good quality data. Higher variability (and thus higher CVs) can be caused by several environmental factors, such as stand loss due to residue cover or heavy precipitation, and reduces the ability to detect true varietal differences.

Table 1. List of spring wheat varieties tested in 2020 along with origin, agronomic, and grain quality characteristics.

Variety	Testing and Origin		Agronomic Characteristics			Grain Quality	
	Years tested in SD trials	Origin†-Year	Relative Heading (days)‡	Relative Height (inches)‡	2019 Lodging Score§	Relative Test Wt. (lb/bu)#	Relative Protein (%)#
Advance	5+	SD-11	4	-5	3.0	0.8	-0.6
AP Murdock	2	AP-19	2	-5	2.0	-0.6	0.0
Bolles	5+	MN-15	6	-2	2.1	-0.7	1.7
Boost	5+	SD-15	6	-2	2.2	-0.1	0.5
CP3099A	new	WI-20	7	1	1.4	-2.8	-1.8
CP3530	5+	WI-16	4	0	2.5	-0.3	0.3
CP3888	3	WI-18	4	-3	2.0	-0.9	0.0
CP3903	new	WI-20	2	-3	2.1	0.0	0.1
CP3910	new	WI-20	2	-4	2.5	0.8	0.2
CP3915	2	WI-19	6	-3	2.3	1.1	0.0
Driver	4	SD-19	4	-1	1.8	0.9	-0.4
Focus	5+	SD-15	0	0	1.9	0.8	0.7
Forefront	5+	SD-11	0	1	2.6	0.1	0.3
Lang-MN	5+	MN-17	4	-2	1.8	0.3	0.4
LCS Buster	new	LCS-20	7	-1	1.9	-1.3	-1.6
LCS Cannon	3	LCS-18	0	-5	2.4	1.6	-0.3
LCS Rebel	4	LCS-17	2	-1	2.8	0.7	0.6
LCS Trigger	5+	LCS-15	7	-1	1.9	0.4	-1.6
MN-Torgy	2	MN-20	3	-5	1.7	0.5	0.4
MN-Washburn	3	MN-19	5	-4	1.6	-0.1	-0.3
MS Barracuda	3	MS-18	0	-5	2.3	-0.2	0.4
MS Chevelle	5+	MS-14	3	-5	2.4	-0.3	-0.7
MS Rancho	new	MS-20	2	-4	2.0	-1.2	-0.5
ND Frohberg	new	ND-20	4	-1	2.1	0.3	0.3
Prevail	5+	SD-13	1	-5	2.0	-0.1	-0.4
Shelly	5+	MN-16	6	-5	1.9	0.2	-0.6
Surpass	5+	SD-15	1	-4	2.5	-0.5	0.1
SY 611 CL2	2	AP-18	3	-5	1.8	1.2	0.1
SY Ingmar	5+	AP-14	5	-3	1.6	0.5	0.6
SY Rustler	5+	AP-16	1	-5	2.1	-0.8	0.0
SY Valda	5+	AP-15	4	-4	2.0	0.7	-0.1
WB9479	4	WB-18	2	-6	1.4	-0.5	1.2
WB9590	4	WB-18	3	-7	1.4	-0.5	0.7
WB9606	new	WB-20	5	-3	2.0	0.1	-1.0
WB9719	4	WB-18	5	-4	1.9	1.5	-0.1

† AP, AgriPro; LCS, Limagrain Cereal Seeds; MN, Minnesota; MS, Meridian Seeds; ND, North Dakota; SD- South Dakota; WI, Winfield; WB, WestBred; and – (Year of Release).

‡ Difference in days to heading and height compared to Focus (2020 eastern and central locations - Julian date 168 and 33 inches).

§ Lodging score: 1, perfectly standing; to 5, completely flat (eastern and central locations).

Test weight and protein as compared to the overall trial averages - 59.1 lb/bu & 15.5%

Table 2. Spring wheat variety disease ratings.

Variety	Disease Ratings†					
	Stripe Rust	Stem Rust	Leaf Rust	Tan Spot	Bacterial Leaf Streak	Fusarium Head Blight
Advance	MS	R-MR	6	6	3	3
AP Murdock	nr	-	3	6	5	3
Bolles	MS	-	3	7	4	1
Boost	S	-	4	5	1	2
CP3099A	-	-	-	-	-	9
CP3530	S	(R)§	3-4	6	3	2
CP3888	-	-	4	6	5	3
CP3903	-	-	-	-	-	2
CP3910	-	-	-	-	-	2
CP3915	-	-	4	5	3	2
Driver	-	-	3	7	3	1
Focus	S	-	4	5	3	1
Forefront	MS	R-MR	6	5	2	2
Lang-MN	MS	(R)	3	7	2	2
LCS Buster	-	(R)	(R)	-	(R)	9
LCS Cannon	-	-	5	5	4	4
LCS Rebel	S	-	6	7	3	2
LCS Trigger	MS	(R)	3	5	1	2
MN-Torgy	-	-	3-4	6	5	3
MN-Washburn	-	(R)	4	6	4	2
MS Barracuda	MR	-	5	6	8	4
MS Chevelle	MR	(MR)	4	7	7	3
MS Ranchero	(R)	(MR)	(MR)	(MS)	(S)	5
ND Frohberg	(MR)	(R-MR)	(MR)	-	(MR)	2
Prevail	MR	MR	3	7	2	2
Shelly	MR	-	6	7	2	2
Surpass	S	-	4	7	3	2
SY 611 CL2	-	-	4	6	2	2
SY Ingmar	S	(R)#	3	5	4	2
SY Rustler	MS	(MR)	3	6	4	3
SY Valda	S	(R)	4	7	3	1
WB9479	MS	(R)	4	5	2	4
WB9590	S	(R)	4	6	3	4
WB9606	(MS)	(MR)	MS	MS	MS	5
WB9719	S	(R)	3	6	3	2

† Disease ratings: R, resistant; MR, moderately resistant; MS, moderately susceptible; S, susceptible; or 1, most resistant to 9, most susceptible. A dash (-) signifies no rating provided/available.

Note: Ratings are a combination of program ratings, field observations, and field and/or greenhouse nursery screenings.

§ Estimated rankings (X) based on information provided by the program that submitted the variety.

Table 3. 2018-2020 spring wheat variety performance trial results for testing sites in eastern South Dakota. Varieties ranking in the top 1/3 of each trial category are shaded light blue.

Variety	2018	2019	2020			2-year			3-year		
	Yield (bu/a)	Yield (bu/a)	Yield (bu/a)	Test Wt (lbs)	Protein %	Yield (bu/a)	Test Wt (lbs)	Protein %	Yield (bu/a)	Test Wt (lbs)	Protein %
LCS Trigger	60.6	46.3	72.3	60.7	13.2	59.3	57.0	13.6	59.7	57.4	13.9
CP3530	54.2	48.7	65.9	60.7	14.9	57.3	57.5	15.8	56.3	57.0	16.3
SY Valda	51.9	49.8	63.8	60.9	14.9	56.8	56.9	15.5	55.2	57.2	15.9
SY Ingmar	53.1	50.9	58.6	60.8	15.7	54.8	57.6	16.1	54.2	58.0	16.3
Prevail	50.9	47.0	61.5	59.8	14.4	54.3	57.6	14.9	53.1	57.4	15.3
WB9590	53.1	46.1	58.9	59.3	16.1	52.5	56.4	16.5	52.7	56.1	16.8
WB9719	52.9	43.6	61.1	61.6	15.1	52.3	58.1	15.4	52.5	58.1	15.7
SY Rustler	49.2	48.6	59.2	59.5	15.0	53.9	56.8	15.7	52.3	56.7	16.1
Driver	49.0	40.9	65.1	61.5	14.9	53.0	57.1	15.6	51.7	57.1	15.9
Surpass	47.8	47.0	59.1	58.9	15.5	53.1	56.5	16.0	51.3	56.1	16.4
Advance	45.6	43.6	64.6	61.0	14.5	54.1	57.4	15.1	51.2	57.0	15.5
Forefront	47.8	47.0	58.6	60.5	15.3	52.8	58.0	15.8	51.1	57.6	16.2
Shelly	48.3	38.4	65.6	60.1	14.2	52.0	56.3	15.2	50.8	56.2	15.5
Boost	47.8	43.7	58.5	60.6	15.4	51.1	57.4	16.0	50.0	57.3	16.2
CP3888	48.9	39.1	62.0	58.8	15.3	50.5	55.5	16.0	50.0	56.1	16.3
LCS Cannon	51.4	38.0	60.2	61.5	14.6	49.1	58.0	15.5	49.8	58.0	16.0
WB9479	47.8	44.8	56.1	59.4	16.5	50.5	56.3	16.9	49.6	56.1	17.2
MN-Washburn	48.8	37.6	61.4	59.5	14.5	49.5	56.0	15.3	49.2	56.2	15.7
Focus	47.5	41.2	58.7	60.7	15.6	50.0	58.0	16.2	49.1	57.8	16.7
Lang-MN	47.7	39.6	59.4	60.9	15.4	49.5	57.7	16.1	48.9	57.4	16.5
MS Chevelle	49.5	36.2	58.9	59.5	14.3	47.5	55.9	14.9	48.2	56.1	15.2
Bolles	46.9	36.3	59.0	59.8	16.6	47.7	56.1	17.6	47.4	55.8	18.0
MS Barracuda	48.5	35.3	56.8	59.5	15.7	46.0	56.2	16.8	46.9	55.9	16.9
LCS Rebel	47.9	37.0	54.9	60.7	15.8	45.9	57.8	16.4	46.6	57.9	16.7
AP Murdock	-	48.3	63.4	59.5	14.7	55.8	57.0	15.1	-	-	-
MN-Torgy	-	46.2	63.4	59.9	15.3	54.8	56.9	16.0	-	-	-
SY 611 CI2	-	44.6	60.8	60.9	15.2	52.7	57.5	15.8	-	-	-
CP3915	-	43.8	60.0	60.7	15.0	51.9	57.6	15.6	-	-	-
LCS Buster	-	-	68.8	59.1	13.3	-	-	-	-	-	-
WB9606	-	-	62.4	59.9	13.6	-	-	-	-	-	-
ND Frohberg	-	-	58.2	60.6	15.2	-	-	-	-	-	-
CP3903	-	-	57.1	59.7	15.4	-	-	-	-	-	-
CP3099A	-	-	56.9	55.5	13.2	-	-	-	-	-	-
MS Ranchero	-	-	56.9	58.0	14.9	-	-	-	-	-	-
CP3910	-	-	56.5	60.2	15.3	-	-	-	-	-	-
Trial Average#	49.5	43.7	60.8	60	15	52.1	57.1	15.8	51.2	56.9	16.1
LSD(0.05)†	3.0	6.6	1.9	0.6	0.2	7.9	1.5	0.7	5.8	1.1	0.4
C.V.%‡	8.8	7.7	4.8	1.4	1.6	6.5	1.7	2.4	7.0	1.8	2.2

Trial averages may include values from experimental lines that are not reported.

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

‡ C.V. is a measure of variability or experimental error, 15% or less is considered acceptable.

Table 4. 2018-2020 spring wheat variety performance trial results for testing sites in central South Dakota. Varieties ranking in the top 1/3 of each trial category are shaded light blue.

Variety	2018	2019	2020			2-year			3-year		
	Yield (bu/a)	Yield (bu/a)	Yield (bu/a)	Test Wt (lbs)	Protein %	Yield (bu/a)	Test Wt (lbs)	Protein %	Yield (bu/a)	Test Wt (lbs)	Protein %
LCS Trigger	60.1	64.3	81.5	59.6	14.3	72.9	58.9	14.3	68.6	58.7	14.4
SY Valda	57.9	55.8	72.1	58.8	16.5	64.0	57.7	16.4	61.9	57.9	16.3
CP3530	52.3	58.0	72.7	58.3	16.6	65.3	58.1	16.9	61.0	57.8	16.8
WB9719	55.7	54.3	70.4	59.2	16.3	62.3	58.6	16.1	60.1	58.6	16.3
Shelly	52.4	53.5	70.5	58.8	15.5	62.0	58.4	15.6	58.8	58.1	15.7
Advance	52.6	52.3	70.3	60.0	15.8	61.3	58.5	15.9	58.4	58.6	15.9
Driver	52.4	51.9	70.8	59.7	16.3	61.4	58.9	16.3	58.4	58.6	16.3
LCS Cannon	51.4	55.4	68.3	60.4	16.5	61.8	60.0	16.2	58.4	59.6	16.3
MS Chevelle	54.2	49.6	68.8	58.7	15.6	59.2	57.9	15.6	57.5	58.0	15.7
MN-Washburn	51.7	47.8	70.4	58.7	16.1	59.1	58.1	16.1	56.6	58.0	16.2
WB9590	51.4	53.7	64.6	57.7	17.3	59.2	57.6	17.2	56.6	57.4	17.4
Prevail	52.3	54.1	63.3	58.5	15.9	58.7	58.4	15.7	56.6	58.7	15.9
SY Rustler	52.4	53.2	63.9	57.9	16.8	58.5	57.5	16.6	56.5	57.7	16.6
SY Ingmar	52.6	52.0	64.5	59.6	16.9	58.2	59.3	16.9	56.4	59.1	16.9
CP3888	52.6	49.1	67.1	58.2	16.4	58.1	57.1	16.6	56.3	57.4	16.6
LCS Rebel	52.7	50.7	64.2	59.0	17.2	57.4	58.8	17.2	55.9	58.7	17.2
Surpass	51.3	52.6	63.3	57.7	16.8	57.9	57.5	16.8	55.7	57.4	16.7
Lang-MN	51.0	52.3	62.5	58.4	17.3	57.4	58.1	17.0	55.3	58.7	17.1
MS Barracuda	47.6	51.9	62.2	58.5	17.1	57.0	58.1	17.0	53.9	58.2	17.0
Boost	49.3	47.7	63.0	58.5	16.6	55.3	57.9	16.7	53.3	57.9	16.8
Focus	48.5	50.5	60.2	58.8	17.4	55.3	58.6	17.1	53.1	58.8	17.1
WB9479	50.1	48.6	59.8	57.5	18.0	54.2	57.0	17.8	52.8	57.3	17.9
Forefront	48.4	50.0	58.5	58.4	16.9	54.3	58.7	16.8	52.3	58.7	16.8
Bolles	46.7	46.6	61.9	57.5	18.1	54.3	56.7	18.3	51.7	56.5	18.5
AP Murdock	-	60.6	67.5	58.5	16.2	64.0	58.5	16.1	-	-	-
MN-Torgy	-	57.6	69.3	59.2	16.9	63.5	58.9	16.7	-	-	-
SY 611 Cl2	-	54.1	70.0	60.0	16.3	62.1	59.2	16.4	-	-	-
CP3915	-	54.2	69.8	59.9	16.4	62.0	59.4	16.4	-	-	-
LCS Buster	-	-	81.1	57.9	14.4	-	-	-	-	-	-
CP3099A	-	-	74.4	56.7	14.7	-	-	-	-	-	-
WB9606	-	-	70.3	58.7	15.4	-	-	-	-	-	-
CP3910	-	-	68.3	59.1	16.5	-	-	-	-	-	-
MS Rancho	-	-	64.9	57.4	15.9	-	-	-	-	-	-
ND Frohberg	-	-	63.4	59.1	16.7	-	-	-	-	-	-
CP3903	-	-	62.5	58.4	16.6	-	-	-	-	-	-
Trial Average#	51.0	51.8	67.2	58.7	16.5	59.9	58.3	16.5	56.9	58.2	16.5
LSD(0.05)†	3.9	2.1	1.8	0.5	0.3	6.2	1.3	0.5	4.2	0.9	0.4
C.V.%‡	6.7	5.1	3.8	1.1	2.4	4.1	1.7	2.2	4.9	2.1	2.4

Trial averages may include values from experimental lines that are not reported.

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

‡ C.V. is a measure of variability or experimental error, 15% or less is considered acceptable.

Table 5. 2018-2020 spring wheat variety performance trial results for testing sites in western South Dakota. Varieties ranking in the top 1/3 of each trial category are shaded light blue.

Variety	2018	2019	2020			2-year			3-year		
	Yield (bu/a)	Yield (bu/a)	Yield (bu/a)	Test Wt (lbs)	Protein %	Yield (bu/a)	Test Wt (lbs)	Protein %	Yield (bu/a)	Test Wt (lbs)	Protein %
LCS Trigger	49.2	43.4	55.3	58.0	14.2	49.4	57.6	15.9	49.3	56.3	13.6
SY Valda	48.4	53.2	46.3	59.6	15.0	49.7	57.2	15.2	49.3	57.7	14.6
CP3530	47.3	43.4	50.1	57.1	16.0	46.7	57.5	16.5	46.9	55.4	15.0
LCS Cannon	46.0	45.4	49.1	59.9	14.7	47.2	57.0	15.6	46.8	58.9	14.6
MN-Washburn	43.8	47.2	49.3	58.8	15.1	48.3	59.0	16.2	46.8	56.5	14.8
Surpass	42.5	48.8	48.1	59.0	14.8	48.4	57.4	15.3	46.5	57.1	15.0
Shelly	45.4	43.7	48.6	58.9	15.1	46.1	58.9	16.4	45.9	56.6	14.2
WB9719	41.3	45.4	49.5	60.8	15.0	47.5	57.6	15.8	45.4	58.3	15.0
LCS Rebel	41.5	42.0	52.2	59.6	15.5	47.1	59.5	15.1	45.2	57.6	15.4
WB9590	42.9	44.8	47.9	58.8	15.2	46.3	57.5	16.2	45.2	56.9	15.2
SY Rustler	39.6	47.0	47.8	57.5	14.7	47.4	57.5	16.1	44.8	56.7	14.7
Lang-MN	40.7	40.8	52.6	58.9	15.2	46.7	57.9	15.7	44.7	56.4	14.9
Driver	41.1	39.6	53.2	58.8	14.3	46.4	57.9	15.6	44.6	58.2	14.5
MS Barracuda	39.3	47.4	46.3	58.6	15.0	46.8	56.8	15.4	44.3	56.4	15.0
Prevail	41.7	43.9	45.4	58.6	15.1	44.6	56.4	15.7	43.6	56.6	15.0
CP3888	42.4	35.5	53.0	57.4	15.0	44.2	56.4	16.2	43.6	56.6	14.6
SY Ingmar	38.3	41.5	50.3	58.3	15.7	45.9	58.3	15.8	43.4	57.6	15.9
Forefront	37.4	38.0	52.2	58.8	15.3	45.1	59.0	16.3	42.5	57.1	15.4
Advance	41.1	42.3	43.5	58.6	14.6	42.9	56.9	14.9	42.3	56.5	14.4
MS Chevelle	38.8	37.2	49.5	58.1	14.7	43.4	56.6	15.5	41.8	56.9	14.3
Focus	40.4	38.7	43.6	60.2	15.7	41.1	58.3	14.9	40.9	57.5	15.8
WB9479	39.2	40.7	41.9	58.9	15.6	41.3	58.9	15.3	40.6	56.6	15.8
Bolles	35.8	31.7	47.5	57.7	17.0	39.6	57.2	15.7	38.3	56.0	15.6
Boost	36.4	34.7	41.4	57.7	16.2	38.0	59.1	15.4	37.5	56.5	15.7
CP3915	-	45.2	48.6	59.9	15.3	46.9	56.9	15.4	-	-	-
SY 611 CI2	-	42.4	48.6	59.8	15.5	45.5	57.6	15.3	-	-	-
AP Murdock	-	44.7	43.5	57.2	15.6	44.1	57.9	15.0	-	-	-
MN-Torgy	-	38.0	48.5	59.5	15.7	43.3	57.1	14.4	-	-	-
CP3099A	-	-	60.2	56.5	13.3	-	-	-	-	-	-
LCS Buster	-	-	56.7	56.3	14.0	-	-	-	-	-	-
CP3910	-	-	55.0	60.2	15.3	-	-	-	-	-	-
WB9606	-	-	51.0	58.9	14.7	-	-	-	-	-	-
CP3903	-	-	48.7	59.1	14.8	-	-	-	-	-	-
MS Ranchero	-	-	48.6	58.1	14.3	-	-	-	-	-	-
ND Frohberg	-	-	47.1	58.3	15.7	-	-	-	-	-	-
Trial Average#	40.7	39.7	48.9	58.6	15.1	46.4	57.7	15.6	44.2	57.0	15.0
LSD(0.05)†	3.5	6.9	3.8	0.9	0.6	8.5	2.1	1.2	5	1.4	0.7
C.V.%‡	10.8	10.8	8.0	1.5	4.2	8.6	3.1	7.1	9.6	3.3	6.1

Trial averages may include values from experimental lines that are not reported.

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

‡ C.V. is a measure of variability or experimental error, 15% or less is considered acceptable.

Table 6. 2018-2020 revenue calculations for spring wheat varieties tested in South Dakota. Varieties ranking in the top 1/3 of each trial category are shaded light blue.

Variety	2018	2019	2020	2-year	3-year
LCS Trigger	\$331.51	\$258.14	\$347.06	\$302.60	\$312.24
SY Valda	\$333.60	\$280.49	\$311.61	\$296.05	\$308.57
CP3530	\$324.56	\$270.80	\$324.41	\$297.60	\$306.59
WB9590	\$326.50	\$260.71	\$295.89	\$278.30	\$294.37
WB9719	\$313.63	\$250.69	\$310.03	\$280.36	\$291.45
SY Ingmar	\$299.61	\$259.29	\$299.13	\$279.21	\$286.01
Shelly	\$303.57	\$237.71	\$313.17	\$275.44	\$284.82
Surpass	\$293.18	\$265.16	\$292.00	\$278.58	\$283.45
LCS Cannon	\$302.11	\$244.74	\$302.66	\$273.70	\$283.17
SY Rustler	\$292.94	\$264.27	\$291.98	\$278.12	\$283.06
Driver	\$287.87	\$235.11	\$321.95	\$278.53	\$281.65
MN-Washburn	\$295.19	\$233.82	\$308.95	\$271.39	\$279.32
Advance	\$291.12	\$241.44	\$302.79	\$272.12	\$278.45
Prevail	\$291.61	\$253.20	\$289.39	\$271.29	\$278.06
AP Murdock	\$281.73	\$247.02	\$298.57	\$272.79	\$275.77
CP3888	\$291.14	\$221.44	\$311.84	\$266.64	\$274.81
LCS Rebel	\$294.13	\$234.29	\$295.56	\$264.93	\$274.66
Lang-MN	\$283.33	\$237.63	\$299.50	\$268.56	\$273.49
Forefront	\$287.70	\$241.20	\$290.56	\$265.88	\$273.15
WB9479	\$300.60	\$245.31	\$273.03	\$259.17	\$272.98
MS Barracuda	\$285.10	\$243.43	\$283.87	\$263.65	\$270.80
Focus	\$292.80	\$235.38	\$280.26	\$257.82	\$269.48
MS Chevelle	\$292.58	\$213.26	\$299.90	\$256.58	\$268.58
Boost	\$275.06	\$214.65	\$281.14	\$247.89	\$256.95
MN-Torgy	-	\$254.92	\$311.78	\$283.35	-
Bolles	-	\$268.95	\$291.93	\$280.44	-
CP3915	-	\$254.49	\$305.59	\$280.04	-
SY 611 CI2	-	\$251.34	\$308.02	\$279.68	-
CP3099A	-	\$226.67	\$317.31	\$271.99	-
LCS Buster	-	-	\$343.26	-	-
WB9606	-	-	\$309.23	-	-
CP3910	-	-	\$308.64	-	-
ND Frohberg	-	-	\$289.87	-	-
MS Ranchero	-	-	\$289.53	-	-
CP3903	-	-	\$288.71	-	-
Trial Average	\$298.80	\$246.40	\$302.55	\$274.23	\$281.74

Note: Revenue calculations use the statewide average yield and protein values for each variety. A base price of \$5.00/bu is used along with the protein premium/discount schedule from Agtegra® Cooperative for each given year.