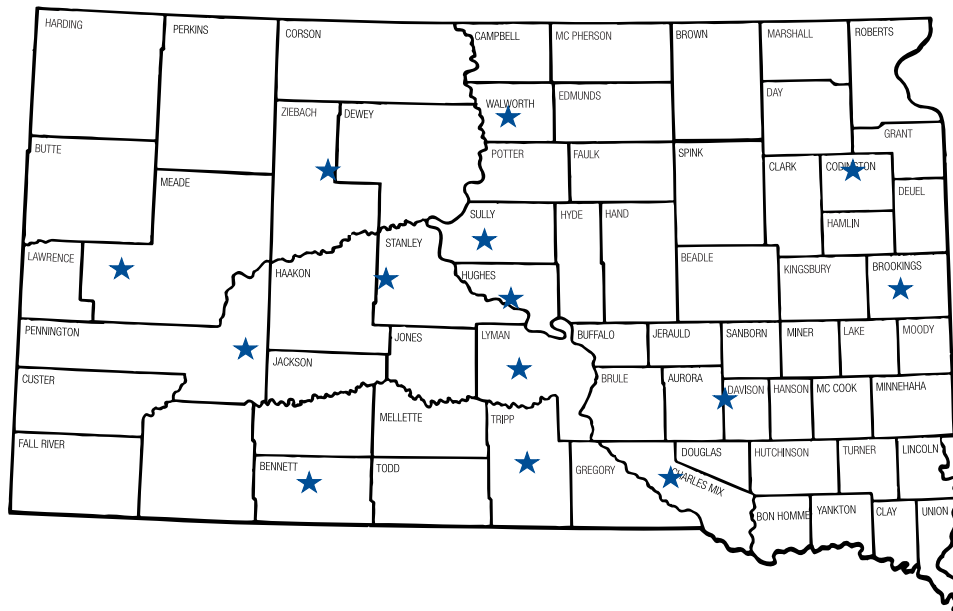




# 2022 South Dakota Winter Wheat Variety Trial Results Regional Summaries

Jonathan Kleinjan | SDSU Extension Agronomist  
 Christopher Graham | SDSU Extension Agronomist  
 Sunish Sehgal | SDSU Winter Wheat Breeder  
 Kevin Kirby | Agricultural Research Manager  
 Shawn Hawks | Agricultural Research Manager  
 Bruce Swan | Agricultural Research Manager  
 Cody Hall | Agricultural Research Assistant



Eastern trial locations: Brookings, Mt. Vernon, Platte, South Shore  
 Central trial locations: Hayes, Onida, Pierre, Selby, Vivian, Winner  
 Western trial locations: Faith/Lantry, Martin, Sturgis, Wall

Individual trial location results can be accessed online at: [extension.sdstate.edu/winter-wheat-variety-trial-results](https://extension.sdstate.edu/winter-wheat-variety-trial-results)



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# 2022 South Dakota Winter Wheat Performance Trial Highlights

Jonathan Kleinjan | SDSU Extension Agronomist

The winter wheat growing season of 2021-2022 in South Dakota was characterized by a relatively dry planting season in the fall of 2021 followed by an open winter. There were concerns about the dry conditions lasting into 2022 but several areas of the state received decent rainfall in late spring. Drought conditions persisted in some areas, predominately west and northwest of Pierre. Heat during flowering and grain fill was also a concern and reduced yields in a few production areas. On the upside, the dry conditions prevalent in 2022 resulted in essentially no disease issues. At harvest, yield reports ranged from 25 bu/acre in areas affected by drought and heat to 100+ bu/acre in areas with ideal growing conditions. Overall, the quality of the crop was very good with high test weights and above average grain protein content.

Albert Lea Seed was a new participant in the South Dakota State University Crop Performance Testing (CPT) winter wheat trials for 2021-2022. Testing continued on several CoAXium® varieties from four separate companies/public programs. These varieties have a natural mutation that confers tolerance to Aggressor® herbicide, providing a new grass control option for wheat producers. There were also two Clearfield® varieties tested from two separate entities.

South Dakota State University CPT winter wheat trials in eastern SD locations (Bookings, Mt. Vernon, Platte, and South Shore) yielded an average of 60 bu/acre, ranging from 49 bu/acre at Platte to 67 bu/acre in Brookings. Varieties yielding in the top 1/3 of the eastern SD trials over three years (2020-2022) were **SD Andes, SD Midland, Winner, SY Wolverine, and Ideal**. A promising variety yielding in the top 1/3 over two years was **AP Clair**.

Yields in central SD (Hayes, Onida, Pierre, Selby, Vivian, and Winner) averaged 67 bu/acre, ranging from 34 bu/acre at Hayes to 90 bu/acre at Vivian. Varieties yielding in the top 1/3 of the central SD trials for 2020-2022 were **CP7017AX, SY Wolverine, WB4309, Winner, and Draper**. Promising varieties yielding in the top 1/3 over two years include **AP Clair, LCS Steel AX, and AP Bigfoot**.

Western SD trial locations (Faith, Sturgis, and Wall) averaged 43 bu/acre, ranging from 30 bu/acre at Faith to 64 bu/acre at Wall. Varieties yielding in the top 1/3 over three years in the western trial locations were **Winner, SD Andes, SD Midland, Ideal, and CP7909**.

The protein content of the crop was very good statewide, averaging 13.8%, 14.1%, and 14.2% in eastern, central and western SD, respectively. Complete trial results, including yield, test weight, protein content, height, and lodging (where measured) for each location are available at: [extension.sdstate.edu/winter-wheat-variety-trial-results](https://extension.sdstate.edu/winter-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. For example, heat during the growing season in 2022 affected some mid-to-late maturing varieties and the absence of significant disease pressure allowed some varieties to perform better than average. 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 winterkill or drought, and reduces the ability to detect true differences between varieties.



## 2022 South Dakota Winter Wheat Variety Trial Results Variety List

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Table 1. List of winter wheat varieties tested in 2021-22 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)‡	Height (inches)	Lodging Score (1-5)§	Winter Hrd.¶	2021 Test Wt. (lb/bu)#	2021 Protein (%)#	Baking Quality††
AP 18AX	3	AP-18	0	31	1.4	A	57.9	13.7	(A)
AP Bigfoot	2	AP-20	2	31	1.2	A	58.8	14.0	(A)
AP Clair	2	AP-18	3	30	1.3	G	58.9	14.1	(G)
Byrd CL Plus	new	PG-18	2	32	1.8	(G-E)‡‡	57.6	13.4	(G)
CP7017AX	3	CP-20	1	30	1.9	A	58.6	13.3	(NR)
CP7050AX	3	CP-20	0	32	1.2	G-E	59.8	14.3	(NR)
CP7869	2	CP-17	1	30	1.7	A	58.7	13.7	(NR)
CP7909	3	CP-18	-2	30	2.0	G	59.1	13.8	(NR)
CP7266AX	new	CP-22	1	32	1.9	(NR)	58.0	13.6	(NR)
Crescent AX	3	PG-18	0	33	2.1	A	58.6	13.7	(G)
Draper	5+	SD-19	2	32	1.4	G-E	57.9	14.1	G
Expedition	5+	SD-02	0	32	1.9	G	58.7	14.5	G
Ideal	5	SD-11	5	32	1.7	G-E	59.1	14.1	A
Kivari AX	new	PG-20	2	31	2.5	(E)	57.6	12.8	(G)
LCS Chrome	2	LCS-15	2	33	1.4	G	58.2	14.6	(G)
LCS Helix AX	3	LCS-19	1	32	1.5	G	59.1	13.5	(E)
LCS Julep	2	LCS-19	1	31	1.3	G	60.3	14.4	(E)
LCS Photon AX	2	LCS-18	-1	31	1.4	A	59.7	14.6	(E)
LCS Steel AX	2	LCS-21	5	33	1.2	A	57.9	13.5	(NR)
MS Iceman	2	MS-21	2	30	1.1	A	59.8	14.8	(A)
MS Maverick	new	MS-20	3	32	2.1	(NR)	58.4	14.1	(NR)
Redfield	5+	SD-13	4	31	1.6	A	58.1	14.5	G
SD Andes	5+	SD-20	5	32	1.3	E	59.1	13.7	A
SD Midland	5+	SD-21	5	33	1.2	E	58.9	14.0	E
SY Wolverine	4	AP-19	1	29	1.2	G-E	59.0	13.8	(G)
Viking 211	new	ALS-20	2	31	2.1	(G)	58.3	13.9	(G)
WB4309	3	WB-19	1	31	1.5	G-E	58.1	14.1	(E)
WB4422	new	WB-22	2	32	1.2	(E)	59.5	14.4	(G)
WB4510CLP	new	WB-20	3	32	1.3	(E)	59.0	14.1	(A)
Winner	5+	SD-19	2	32	1.4	G-E	58.6	14.1	G
<b>Trial Average</b>	-	-	-	<b>30</b>	<b>1.6</b>	-	<b>58.7</b>	<b>14.0</b>	-

† AP - AgriPro; ALS - Albert Lea Seed; CP - Croplan; LCS - Limagrain Cereal Seeds; MS - Meridian Seeds; PG - PlainsGold; SD - South Dakota; WB - WestBred; and - (Year of Release).

‡ Relative heading compared to Expedition (157 days Julian or June 6) in 2022.

§ Lodging score: 1, perfectly standing; to 5, completely flat.

¶ Winter hardiness: E - excellent; G - good; F - fair; P - poor, NR - not reported.

# Test weight (lbs/bu) and protein (%) as averaged from central and eastern SD testing sites.

†† Baking quality: E, excellent; G, good; A, acceptable; P, Poor. Note: SDSU does not typically perform baking quality analysis.

‡‡ Parenthesis designate estimated ratings (X), based on information provided by entity that submitted the variety.



## 2022 South Dakota Winter Wheat Variety Trial Results Disease Ratings

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Table 2. Winter wheat variety disease ratings.

Variety	Disease Ratings†						
	Stripe Rust	Stem Rust	Leaf Rust	WSMV§	Tan Spot	Bacterial Leaf Streak	FHB¶ (Scab)
AP 18AX	2	(NR)‡	7	(4)	3	(5)	7
AP Bigfoot	(3)	(2)	7	(4)	3	(3)	7
AP Clair	(R)	(S)	7	(NR)	7	(NR)	8
Byrd CL Plus	(7)	(8)	8	(3)	8	(NR)	8
CP7017AX	(MR)	(R)	6	(NR)	8	(MR)	7
CP7050AX	(R)	(S)	7	(NR)	8	(MS)	5
CP7869	(R)	(R)	6	(NR)	4	(MS)	7
CP7909	(S)	(MS)	7	(NR)	5	(NR)	3
CP7266AX	(NR)	(NR)	6	(NR)	8	(NR)	6
Crescent AX	(4)	(NR)	7	(2)	7	(NR)	6
Draper	5	MR-MS	7	(NR)	8	7	6
Expedition	7	R	6	S	8	7	4
Ideal	8	MR	4	S	8	5	5
Kivari AX	(8)	(8)	8	(3)	8	(NR)	8
LCS Chrome	(1)	(NR)	7	(NR)	7	(NR)	7
LCS Helix AX	(2)	(1)	7	(1)	4	(NR)	5
LCS Julep	(2)	(4)	4	(1)	7	(NR)	7
LCS Photon AX	(2)	(9)	8	(3)	8	(NR)	4
LCS Steel AX	(7)	(9)	7	(NR)	6	(NR)	6
MS Iceman	(7)	(5)	8	(NR)	7	(NR)	7
MS Maverick	(1)	(5)	6	(NR)	6	(NR)	9
Redfield	5	MR	6	S	8	6	5
SD Andes	1	(NR)	8	(NR)	7	(NR)	4
SD Midland	1	(7)	8	(6)	7	(NR)	4
SY Wolverine	(6)	(2)	7	(4)	4	(3)	6
Viking 211	(NR)	(NR)	NR	(NR)	4	(NR)	7
WB4309	(MR-MS)	(MR-MS)	8	(MS)	8	(MS)	5
WB4422	(8)	(6)	6	(6)	4	(NR)	6
WB4510CLP	(2)	(NR)	NR	(6)	4	(NR)	7
Winner	5	MR	NR	(NR)	6	7	4

† Disease ratings: R, resistant; MR, moderately resistant; MS, moderately susceptible; S, susceptible; or 1, most resistant to 9, most susceptible. Note: SDSU does not perform nursery screenings for all listed pathogens in each growing season.

§ Wheat Streak Mosaic Virus; ¶ Fusarium Head Blight

‡ Parenthesis denote estimated rankings (X) provided by the program that submitted the variety, NR - not reported.



## 2022 South Dakota Winter Wheat Variety Trial Results Eastern Summary

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Table 3. 2020-2022 winter 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 and bolded.

Variety	2020	2021	2022			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 %
SD Andes	<b>81.0</b>	<b>71.8</b>	<b>61.3</b>	58.9	13.5	<b>66.6</b>	60.1	13.1	<b>71.0</b>	60.2	12.9
SD Midland	77.4	<b>72.3</b>	<b>62.4</b>	59.0	13.6	<b>67.4</b>	59.9	13.1	<b>70.7</b>	59.7	13.0
Winner	<b>81.2</b>	<b>69.7</b>	<b>60.8</b>	58.4	13.8	<b>65.2</b>	59.5	13.3	<b>70.4</b>	59.6	13.0
SY Wolverine	<b>79.8</b>	<b>69.0</b>	<b>60.6</b>	58.8	13.6	<b>64.8</b>	59.6	13.4	<b>69.5</b>	59.4	13.2
Ideal	78.3	<b>71.4</b>	59.4	58.9	13.9	<b>65.4</b>	60.3	13.3	<b>69.4</b>	59.9	13.0
WB4309	76.9	<b>71.0</b>	59.5	58.3	13.7	<b>65.3</b>	59.3	13.4	69.2	59.2	13.5
CP7017AX	77.5	66.8	<b>63.0</b>	58.1	12.9	<b>64.9</b>	59.1	12.6	69.0	58.9	12.5
Draper	<b>79.5</b>	66.9	<b>60.6</b>	57.8	13.9	63.7	59.2	13.6	68.6	59.0	13.3
LCS Helix AX	<b>79.2</b>	65.6	<b>60.7</b>	58.8	13.3	63.2	60.2	12.8	68.3	60.4	12.6
Redfield	78.0	67.9	58.8	58.5	14.4	63.4	59.6	14.0	68.1	59.6	13.7
CP7909	76.3	64.7	59.4	59.8	13.3	62.0	60.4	13.1	67.0	60.0	12.8
AP 18AX	75.4	64.0	58.4	57.8	13.6	61.2	58.9	13.3	65.9	58.8	13.0
Crescent AX	77.9	60.8	58.6	58.7	13.4	59.7	59.8	13.4	65.5	59.9	13.2
Expedition	70.2	59.5	57.4	58.9	14.5	58.5	60.0	14.1	62.5	60.0	13.8
CP7050AX	70.1	56.4	56.6	59.3	14.2	56.5	60.2	14.1	61.0	60.3	14.0
AP Clair	-	<b>71.4</b>	<b>60.9</b>	58.9	13.9	<b>66.2</b>	59.7	13.4	-	-	-
AP Bigfoot	-	66.9	<b>61.3</b>	58.6	13.5	64.1	59.5	13.3	-	-	-
LCS Steel AX	-	<b>68.4</b>	59.8	58.3	13.0	64.1	58.8	12.6	-	-	-
CP7869	-	67.5	60.0	58.9	13.2	63.7	59.6	12.7	-	-	-
LCS Julep	-	64.1	59.5	60.1	14.1	61.8	61.4	13.8	-	-	-
LCS Photon AX	-	57.2	59.9	59.5	14.5	58.6	60.3	14.2	-	-	-
MS Iceman	-	60.2	56.8	60.2	14.9	58.5	61.1	14.5	-	-	-
LCS Chrome	-	61.4	55.0	58.2	14.6	58.2	59.3	14.2	-	-	-
WB4422	-	-	<b>63.9</b>	59.4	14.2	-	-	-	-	-	-
Byrd CL Plus	-	-	59.2	57.5	13.2	-	-	-	-	-	-
Viking 211	-	-	59.0	58.2	13.7	-	-	-	-	-	-
MS Maverick	-	-	57.3	58.0	14.0	-	-	-	-	-	-
Kivari AX	-	-	55.2	57.0	12.6	-	-	-	-	-	-
WB4510CLP	-	-	54.7	58.3	13.6	-	-	-	-	-	-
CP7266AX	-	-	54.5	58.0	13.5	-	-	-	-	-	-
<b>Trial Average#</b>	77.6	66.9	59.8	58.7	13.8	63.6	59.9	13.5	68.1	59.7	13.2
<b>LSD(0.05)†</b>	2.2	3	1.7	0.5	0.3	1.7	0.3	0.2	1.4	0.4	0.2
<b>C.V.%‡</b>	4.6	7	4.6	1.2	3.6	6.1	1.2	3.7	5.6	1.6	4.3

# 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.

Note: Eastern trial sites include Brookings, Mt. Vernon, Platte, and South Shore.



## 2022 South Dakota Winter Wheat Variety Trial Results Central Summary

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Table 4. 2021-2022 winter 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 and bolded.

Variety	2020	2021	2022			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 %
CP7017AX	<b>92.3</b>	71.5	<b>71.4</b>	59.1	13.4	<b>71.4</b>	59.3	13.3	<b>78.8</b>	59.7	12.8
SY Wolverine	88.3	<b>76.3</b>	<b>71.3</b>	59.6	13.9	<b>73.6</b>	60.0	13.9	<b>78.8</b>	60.2	13.5
WB4309	<b>89.6</b>	<b>73.4</b>	<b>69.4</b>	58.4	14.1	<b>71.2</b>	58.9	14.1	<b>77.7</b>	59.4	13.7
Winner	<b>92.5</b>	<b>74.4</b>	64.7	59.3	14.5	69.1	59.7	14.2	<b>77.4</b>	60.1	13.6
Draper	88.8	<b>72.3</b>	68.0	58.3	14.2	<b>69.9</b>	58.6	14.2	<b>76.6</b>	59.1	13.7
SD Andes	85.1	71.8	<b>70.4</b>	60.0	14.0	<b>71.1</b>	60.6	14.0	76.0	60.8	13.5
CP7909	88.3	69.3	<b>69.0</b>	58.9	13.7	69.1	59.0	13.7	75.9	59.7	13.0
SD Midland	88.4	70.8	67.2	59.4	14.3	68.9	59.9	14.1	75.8	60.2	13.6
LCS Helix AX	<b>89.6</b>	66.5	<b>69.5</b>	60.2	13.5	68.1	60.8	13.5	75.7	61.0	13.0
Ideal	88.7	<b>71.9</b>	63.7	59.4	14.3	67.5	59.7	14.3	74.9	60.1	13.7
AP 18AX	88.2	68.7	66.5	58.8	13.6	67.5	58.9	13.7	74.8	59.3	13.2
Crescent AX	<b>88.9</b>	62.3	<b>68.6</b>	59.3	13.5	65.7	60.0	13.9	73.9	60.5	13.3
Redfield	86.0	64.1	66.4	58.3	14.6	65.4	59.2	14.6	72.7	59.8	14.1
Expedition	81.7	65.0	63.2	59.0	14.6	64.0	59.6	14.5	70.3	59.9	14.0
CP7050AX	81.9	62.6	64.0	60.4	14.5	63.4	60.9	14.4	69.9	61.3	13.9
AP Clair	-	<b>73.4</b>	<b>69.8</b>	59.4	14.2	<b>71.5</b>	59.8	14.1	-	-	-
LCS Steel AX	-	<b>72.7</b>	<b>68.7</b>	58.6	13.4	<b>70.5</b>	59.1	13.4	-	-	-
AP Bigfoot	-	<b>72.4</b>	68.3	58.8	14.0	<b>70.2</b>	59.1	14.0	-	-	-
LCS Julep	-	69.2	67.1	60.3	14.4	68.1	61.2	14.5	-	-	-
MS Iceman	-	69.2	64.6	60.2	14.7	66.7	60.7	15.0	-	-	-
CP7869	-	67.2	64.0	59.2	14.0	65.5	59.4	13.9	-	-	-
LCS Chrome	-	67.0	64.2	58.1	14.8	65.5	59.0	14.8	-	-	-
LCS Photon AX	-	62.0	63.0	60.4	14.7	62.5	60.9	14.6	-	-	-
WB4422	-	-	<b>74.2</b>	60.2	14.4	-	-	-	-	-	-
Byrd CL Plus	-	-	66.6	57.9	13.4	-	-	-	-	-	-
Kivari AX	-	-	65.5	58.4	12.7	-	-	-	-	-	-
Viking 211	-	-	65.5	58.5	14.3	-	-	-	-	-	-
MS Maverick	-	-	64.8	58.6	14.2	-	-	-	-	-	-
CP7266AX	-	-	62.7	58.3	13.4	-	-	-	-	-	-
WB4510CLP	-	-	58.6	59.7	14.2	-	-	-	-	-	-
<b>Trial Average#</b>	87.9	69.7	66.5	59.1	14.1	68.2	59.7	14.2	75.3	60.1	13.5
<b>LSD(0.05)†</b>	3.0	3.5	2.9	0.9	0.3	2.3	0.4	0.2	1.7	0.3	0.2
<b>C.V.%‡</b>	5.9	8.1	7.8	1.9	3.2	7.9	1.6	3.5	6.9	1.5	3.7

# 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.  
 Note: Central trial sites include Hayes, Onida, Pierre, Selby, Vivian, and Winner.



## 2022 South Dakota Winter Wheat Variety Trial Results Western Summary

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Table 5. 2021-2022 winter 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 and bolded.

Variety	2020	2021	2022			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 %
Winner	<b>68.6</b>	<b>66.6</b>	43.5	58.0	14.1	<b>55.1</b>	58.1	13.2	<b>59.6</b>	58.1	13.0
SD Andes	<b>67.9</b>	<b>66.5</b>	<b>45.8</b>	58.5	13.8	<b>55.3</b>	58.9	13.4	<b>59.5</b>	58.9	13.0
SD Midland	<b>65.9</b>	<b>67.2</b>	<b>44.7</b>	58.2	14.0	<b>55.6</b>	58.3	14.2	<b>59.0</b>	58.2	13.1
Ideal	<b>70.1</b>	59.1	<b>44.7</b>	59.1	14.0	52.1	58.0	13.9	<b>58.1</b>	58.1	13.5
CP7909	62.2	<b>67.1</b>	44.2	58.7	14.3	<b>55.4</b>	58.0	13.8	<b>57.7</b>	57.8	13.4
Draper	63.2	<b>63.2</b>	<b>46.6</b>	57.7	14.1	<b>54.7</b>	57.7	13.7	57.6	57.8	13.4
LCS Helix AX	62.9	<b>64.8</b>	41.6	58.3	13.8	<b>53.4</b>	58.3	13.2	56.6	58.1	12.9
Redfield	59.2	<b>64.5</b>	44.1	57.7	14.5	<b>54.3</b>	58.0	13.2	55.9	57.8	13.8
WB4309	62.1	<b>66.1</b>	40.6	57.6	14.5	52.8	57.8	13.2	55.9	57.6	13.4
CP7017AX	<b>67.5</b>	54.1	<b>45.7</b>	58.6	13.5	49.8	57.3	13.7	55.7	57.1	13.2
Crescent AX	64.2	61.2	38.3	57.8	14.0	49.6	57.9	13.6	54.5	57.7	13.2
SY Wolverine	57.4	61.5	44.4	58.7	13.9	<b>53.0</b>	58.0	13.7	54.4	57.6	13.3
AP 18AX	61.5	58.6	43.5	57.1	13.9	50.9	56.6	13.7	54.4	56.7	13.2
CP7050AX	58.9	57.9	40.4	59.7	14.2	48.5	59.4	14.2	51.9	59.4	13.9
Expedition	46.2	57.7	41.0	58.1	14.4	49.4	58.0	14.1	48.3	57.9	13.7
AP Clair	-	62.9	41.9	58.4	14.2	52.1	57.8	14.0	-	-	-
LCS Steel AX	-	61.8	42.5	56.7	14.1	51.1	57.1	14.5	-	-	-
LCS Chrome	-	60.8	42.2	58.5	14.5	51.0	58.5	14.0	-	-	-
CP7869	-	59.6	41.9	58.0	14.1	49.9	57.4	14.1	-	-	-
MS Iceman	-	56.7	42.1	58.9	14.8	49.6	59.0	14.1	-	-	-
AP Bigfoot	-	58.7	39.3	59.0	14.5	49.2	58.0	14.1	-	-	-
LCS Julep	-	58.8	40.2	60.4	14.6	48.9	59.7	14.2	-	-	-
LCS Photon AX	-	58.7	38.8	59.3	14.5	48.0	59.4	13.9	-	-	-
Kivari AX	-	-	<b>49.2</b>	57.6	13.0	-	-	-	-	-	-
Viking 211	-	-	<b>47.6</b>	58.1	13.7	-	-	-	-	-	-
Byrd CL Plus	-	-	<b>46.0</b>	57.4	13.6	-	-	-	-	-	-
MS Maverick	-	-	<b>45.9</b>	58.6	14.0	-	-	-	-	-	-
WB4422	-	-	<b>44.6</b>	59.0	14.7	-	-	-	-	-	-
CP7266AX	-	-	40.3	57.6	14.0	-	-	-	-	-	-
WB4510CLP	-	-	39.2	59.1	14.4	-	-	-	-	-	-
<b>Trial Average#</b>	62.9	61.0	43.1	58.3	14.2	51.7	58.1	13.9	56.1	57.9	13.3
<b>LSD(0.05)†</b>	4.3	4.7	3.6	0.8	0.5	3.3	0.7	0.6	2.6	0.5	0.4
<b>C.V.%‡</b>	8.5	9.7	12	1.9	4.9	11.1	2.1	7.2	9.9	2	6.8

# 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.

Note: Western trial sites include Lantry/Faith, Martin, Sturgis, and Wall.