South Dakota State University
College of Agriculture, Food and Environmental Sciences

South Dakota State University Extension
South Dakota Agricultural Experiment Station at SDSU

2021 South Dakota Winter Wheat Variety Trial Results Onida

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Cooperator:	Tom Young
Location:	44.706626°, -100.405171°
Soil Type:	Agar silt loam, 0-2% slopes
Previous crop:	spring wheat
Tillage:	no-till
Row spacing:	8"
Seeding Rate:	1.2 million PLS/acre
Fertilizer:	
-Starter:	10 gal/acre 10-34-0
-Other:	70-0-0 as UAN spring-applied
Herbicide:	
-Burndown:	not reported
-Post:	16 oz/acre PerfectMatch
Fungicide:	none
Date seeded:	9/16/2020
Date harvested:	7/20/2021
Notes:	Very dry throughout the growing season.

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Table 1. 2021 winter wheat variety performance trial results (average of four replications) at Onida, South Dakota. Entries are sorted by overall three-year yield. Varieties yielding in the top third of the trial are shaded light blue.

Variety	Height (in)	Lodging* (1-5)	Test Wt (lbs/bu)	Protein %	2019 (bu/a)#	2020 (bu/a)	2021 (bu/a)	2-year (bu/a)	3-year (bu/a)
Langin	29	1.5	59.4	13.2	82.9	106.3	59.2	82.8	82.8
Winner	29	1.3	58.6	14.2	83.0	106.6	57.0	81.8	82.2
Overland	32	1.5	59.5	13.3	80.9	102.8	62.4	82.6	82.0
Ideal	31	1.0	59.7	13.6	81.8	98.3	61.6	80.0	80.6
Oahe	34	2.0	59.1	13.4	79.5	102.7	59.4	81.0	80.5
WB4462	32	2.0	58.2	13.8	79.9	102.1	57.7	79.9	79.9
SD Andes	27	1.0	61.0	13.5	78.2	96.1	62.6	79.4	79.0
Draper	30	1.0	58.0	13.7	75.9	100.1	60.0	80.0	78.6
SY Wolverine	29	1.0	59.8	13.2	81.5	89.3	65.1	77.2	78.6
Redfield	27	1.0	58.5	14.6	77.9	98.1	50.5	74.3	75.5
Thompson	32	1.5	59.0	14.6	77.5	92.1	54.2	73.2	74.6
Cowboy	29	1.0	58.1	13.7	78.5	93.0	50.7	71.9	74.1
Expedition	31	1.8	58.5	14.4	74.9	92.2	53.3	72.8	73.5
SY 517 CL2	28	1.0	59.8	14.6	76.4	93.0	48.7	70.9	72.7
CP7017AX	29	1.0	58.8	13.3	-	110.9	62.3	86.6	-
CP7909	30	1.8	57.0	13.0	-	104.5	62.5	83.5	-
LCS Helix AX	28	1.5	60.7	13.1	-	108.8	54.2	81.5	-
Guardian	31	2.3	60.7	13.2	-	95.1	64.9	80.0	-
WB4309	31	1.8	57.9	13.4	-	99.5	59.9	79.7	-
CP7050AX	30	1.0	61.2	13.8	-	103.7	55.2	79.4	-
Crescent AX	30	1.3	60.3	14.0	-	104.9	51.7	78.3	-
AP 18AX	29	1.0	57.8	14.1	-	96.3	56.7	76.5	-
ND Noreen	30	1.0	60.2	14.4	-	91.4	50.5	70.9	-
Whistler	30	2.0	58.7	13.3	-	-	67.5	-	-
AP Bigfoot	29	1.3	58.6	14.3	-	-	59.7	-	-
LCS Steel AX	30	1.0	58.7	13.1	-	-	59.6	-	-
LCS Julep	29	1.0	61.4	14.1	-	-	59.6	-	-
MS Iceman	28	1.0	60.6	15.2	-	-	57.3	-	-
AP Clair	29	1.0	58.6	14.1	-	-	55.8	-	-
LCS Chrome	30	1.0	58.5	14.6	-	-	54.8	-	-
LCS Photon AX	30	1.0	61.5	14.0	-	-	54.7	-	-
CP7869	29	1.0	59.3	13.9	-	-	50.1	-	-
Trial Average#	30	1.3	58.9	14.0	78.7	98.1	57.4	78.4	78.2
LSD (0.05)†	-	-	4.8	0.8	5.5	5.6	6.0	-	-
C.V. %‡	-	-	5.8	3.9	5.0	4.1	7.5	-	-

* Lodging score: 1, perfectly standing; to 5, completely flat.
# Trial averages may include values from experimental lines that are not reported.
† Value required (≥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.