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SOUTH DAKOTA STATE UNIVERSITY®
AGRONOMY, HORTICULTURE, & PLANT SCIENCE DEPARTMENT

2020 South Dakota Winter Wheat Variety Trial Results Winner

Jonathan Kleinjan | SDSU Extension Crop Production Associate
Sunish Sehgal | SDSU Winter Wheat Breeder
Kevin Kirby | Agricultural Research Manager
Shawn Hawks | Agricultural Research Manager

Cooperator: Jorgensen Land and Cattle
Location: 43.499167°, -99.866222°
Soil Type: Millboro silty clay, 0-3% slopes + Witten silty clay, 0-3% slopes
Previous crop: oats
Tillage: no-till
Row spacing: 8"
Seeding Rate: 1.2 million PLS/acre
Fertilizer:
 -Starter: 10 gal 10-34-0, (intensive only: + 4 gal SG7-25-5 + 0.5 gal InFuze)
 -Other: 42 gal/acre 28-0-0 applied on 4/8/20
Herbicide:
 -Burndown: 32 oz/acre RT3 + 16 oz/acre 2-4,D LV6 + 8 oz/acre Firestone
 -Post: 16 oz/acre Bronate + 16 oz/acre GoldSky
Fungicide: 0.5 gal SG Shift + 6.5 oz Prosaro @ Feekes 10.5
Date seeded: 9/27/2009
Date harvested: 7/15/2020
Notes: Excellent growing conditions.

Table 1. 2020 winter wheat variety performance trial results (average of 4 replications) at Winner, SD. Entries are sorted by overall 3-year yield. Varieties yielding in the top 1/3 of each trial are shaded light blue.

Variety	Height (in)	Lodging* (1-5)	Test Wt (lbs)	Protein %	2018 (bu/a)	2019 (bu/a)	2020 (bu/a)	2-year (bu/a)	3-year (bu/a)
Winner	32	1.0	60.3	11.9	91.2	75.9	94.6	85.2	87.2
WB4462	35	1.0	60.9	12.5	94.8	72.1	90.8	81.4	85.9
Draper	32	1.0	60.2	12.3	85.6	74.0	90.8	82.4	83.4
WB-Grainfield	32	1.0	60.0	12.6	85.9	70.7	90.0	80.3	82.2
Ideal	33	1.0	61.4	12.4	83.1	74.7	88.8	81.7	82.2
Keldin	34	1.0	61.1	12.3	78.3	72.4	93.3	82.8	81.3
Redfield	32	1.0	61.0	13.0	81.9	70.6	89.5	80.0	80.7
Overland	33	1.0	61.2	12.5	81.5	70.1	89.8	79.9	80.5
SY Monument	33	1.0	58.7	12.0	72.4	78.2	89.9	84.0	80.1
Cowboy	32	1.0	60.6	11.1	83.8	73.7	82.7	78.2	80.1
Oahe	38	1.5	62.0	12.2	80.1	70.8	87.4	79.1	79.4
Thompson	36	1.0	61.5	12.9	80.3	68.2	86.8	77.5	78.4
SY Sunrise	31	1.3	60.1	12.1	67.9	72.6	92.6	82.6	77.7
Langin	29	1.7	59.9	11.4	78.0	67.9	87.0	77.4	77.6
Expedition	34	1.0	59.9	12.7	73.9	56.2	83.4	69.8	71.2
SY 517 CL	30	2.2	62.1	12.9	69.7	60.3	82.9	71.6	71.0
WB4595	31	1.0	62.4	11.8	-	73.4	88.9	81.1	-
SY Wolverine	29	1.0	59.9	12.6	-	69.7	88.7	79.2	-
NW13493	31	1.3	61.0	12.3	-	71.6	85.5	78.5	-
WB4309	34	1.0	60.2	12.5	-	-	98.5	-	-
CP7909	32	1.8	60.6	11.1	-	-	90.2	-	-
NE14696	36	1.0	60.9	12.9	-	-	90.1	-	-
LCS Diesel	32	1.3	61.7	12.6	-	-	89.5	-	-
Guardian	30	1.0	61.5	12.3	-	-	89.2	-	-
Crescent AX	31	1.8	61.0	11.6	-	-	86.3	-	-
LCS Helix AX	29	1.0	60.3	11.9	-	-	86.2	-	-
CP7017CAX	31	1.3	59.8	11.2	-	-	85.3	-	-
CP7010	30	1.2	62.5	11.5	-	-	84.6	-	-
AP 18AX	30	1.0	59.4	11.4	-	-	84.1	-	-
Flathead	32	1.0	60.2	12.7	-	-	83.3	-	-
Northern	35	1.0	60.9	13.0	-	-	82.3	-	-
14NORD-1	38	1.0	63.1	13.1	-	-	80.4	-	-
CP7050CAX	31	1.0	62.0	12.2	-	-	78.6	-	-
MTF 1435	40	1.2	58.8	13.0	-	-	66.8	-	-
Trial Average#	33	1.2	60.9	12.3	80.1	70.4	87.1	79.6	79.9
LSD (0.05)†	1.9	0.9	0.8	0.7	10.1	7.2	7.0	-	-
C.V. %‡	3.6	-	0.9	4.2	9.0	7.4	5.8	-	-

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

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.