



2022 South Dakota Winter Wheat Variety Trial Results Brookings

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Cooperator: SDSU Farm Department, Jack Ingemansen, manager.
Location: 44.320884°, -96.771016°
Soil Type: Barnes clay loams, 0-2% slopes
Previous crop: oats
Tillage: no-till
Row spacing: 8"
Seeding Rate: 1.2 million PLS/acre
Fertilizer:
-Starter: 90 lbs/acre 30-10-10
-Other: 50-0-0 fall applied as UAN, 80-60-40-20 spring applied as liquid broadcast
Herbicide:
-Burndown: 36 oz Tomahawk + 27 oz 2,4-D
-Post: 2 pt Brox 2EC
Fungicide: 6.5 oz Prosaro at flowering (Feekes 10.5.1)
Date seeded: 9/16/2021
Date harvested: 7/19/2022 and 7/21/22 (fungicide-treated)
Notes: This trial location is set up with a split-plot design. All varieties are tested without (Table 1) and with (Table 2) fungicide.



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Table 1. 2022 winter wheat variety performance trial results (average of 4 replications) at Brookings, SD. Entries are sorted by overall 3-year yield. Varieties yielding in the top 1/3 of the trial are bolded and shaded light blue.

Variety	Height (in)	Lodging* (1-5)	Test Wt (lbs)	Protein (%)#	2020 (bu/a)#	2021 (bu/a)	2022 (bu/a)	2-year (bu/a)	3-year (bu/a)
Winner	36	1.8	59.3	12.9	93.9	90.2	69.2	79.7	84.4
CP7017AX	36	2.3	58.2	12.2	88.1	89.1	73.8	81.5	83.7
SD Midland	38	1.0	60.1	12.7	87.4	91.6	72.0	81.8	83.7
WB4309	38	1.0	60.2	12.1	89.7	88.8	72.4	80.6	83.6
LCS Helix AX	37	1.3	59.3	12.3	90.9	88.5	70.8	79.7	83.4
CP7909	37	2.5	61.1	12.6	90.7	86.5	69.6	78.1	82.3
SY Wolverine	34	1.0	59.5	12.6	85.0	87.1	74.0	80.5	82.0
Draper	38	1.0	58.5	12.8	87.9	85.1	69.5	77.3	80.8
SD Andes	36	1.0	58.6	13.1	87.9	89.5	63.3	76.4	80.2
AP 18AX	36	1.3	58.7	12.7	88.6	83.6	67.9	75.8	80.1
Redfield	36	1.5	58.7	14.0	88.3	87.0	63.2	75.1	79.5
Crescent AX	39	2.3	59.7	12.4	91.2	76.3	68.6	72.5	78.7
Ideal	37	2.8	58.9	13.7	84.8	88.2	62.8	75.5	78.6
CP7050AX	39	1.3	60.1	13.6	86.9	73.2	67.0	70.1	75.7
Expedition	40	2.0	58.9	13.9	87.1	77.5	60.9	69.2	75.2
AP Clair	35	1.0	60.1	12.7	-	90.5	72.6	81.5	-
LCS Steel AX	37	1.0	59.0	12.1	-	92.5	64.6	78.6	-
AP Bigfoot	36	1.3	59.0	12.7	-	87.8	65.8	76.8	-
LCS Julep	36	1.0	61.4	13.0	-	83.0	68.8	75.9	-
LCS Photon AX	38	1.0	60.5	13.3	-	81.8	69.6	75.7	-
MS Iceman	35	1.0	62.3	13.7	-	82.1	68.5	75.3	-
LCS Chrome	38	1.0	59.1	13.5	-	86.3	61.9	74.1	-
CP7869	36	2.3	59.3	12.5	-	83.6	63.1	73.3	-
WB4422	37	1.0	59.8	13.4	-	-	72.4	-	-
Viking 211	37	1.3	59.1	12.5	-	-	68.7	-	-
CPX72166AX	39	2.3	59.7	12.1	-	-	67.5	-	-
Byrd CL Plus	39	2.5	58.2	12.6	-	-	65.5	-	-
MS Maverick	36	2.0	57.5	13.4	-	-	62.7	-	-
Kivari AX	36	3.5	56.6	11.7	-	-	60.6	-	-
WB4510CLP	36	1.0	58.7	12.6	-	-	59.6	-	-
Trial Average#	37	1.6	59.4	12.9	87.5	86.1	67.1	76.7	80.8
LSD (0.05)†	-	-	-	-	5.0	8.3	3.2	-	-
C.V. %‡	-	-	-	-	4.1	6.9	3.4	-	-

* 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.



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2022 South Dakota Winter Wheat Variety Trial Results Brookings with fungicide

Table 2. 2022 winter wheat variety performance trial results with fungicide (average of 4 replications) at Brookings, SD. Entries are sorted by overall 3-year yield. Varieties yielding in the top 1/3 of the trial are bolded and shaded light blue.

Variety	Height (in)	Lodging* (1-5)	Test Wt (lbs)	Protein %	2020 (bu/a)	2021 (bu/a)	2022 (bu/a)	2-year (bu/a)	3-year (bu/a)
Winner	not	not	59.5	12.6	95.5	93.8	70.6	82.2	86.6
SD Andes	reported	reported	59.6	13.0	91.1	94.3	67.3	80.8	84.2
SD Midland	-	-	59.6	12.7	91.0	93.0	67.4	80.2	83.8
WB4309	-	-	60.1	12.3	93.1	88.1	70.1	79.1	83.8
SY Wolverine	-	-	59.3	12.8	89.9	89.3	71.2	80.3	83.5
Redfield	-	-	59.2	13.6	91.5	91.8	63.6	77.7	82.3
Draper	-	-	59.0	12.4	89.6	88.8	68.4	78.6	82.3
CP7017AX	-	-	58.0	12.1	89.1	88.8	68.0	78.4	82.0
CP7909	-	-	60.9	12.2	92.8	82.4	68.9	75.6	81.3
LCS Helix AX	-	-	59.5	12.2	89.9	82.4	69.7	76.1	80.7
Ideal	-	-	59.8	13.3	86.0	92.3	62.1	77.2	80.1
AP 18AX	-	-	58.0	12.5	90.1	83.7	66.4	75.1	80.1
Crescent AX	-	-	59.8	12.0	92.6	77.5	67.1	72.3	79.1
CP7050AX	-	-	60.6	13.1	89.7	77.4	64.0	70.7	77.0
Expedition	-	-	58.3	13.5	82.0	79.3	60.1	69.7	73.8
AP Clair	-	-	60.8	12.6	-	97.8	72.0	84.9	-
LCS Steel AX	-	-	58.6	12.4	-	92.9	66.9	79.9	-
CP7869	-	-	59.3	12.0	-	94.1	63.9	79.0	-
AP Bigfoot	-	-	59.6	12.5	-	90.5	66.5	78.5	-
LCS Julep	-	-	61.4	12.9	-	83.9	66.6	75.2	-
MS Iceman	-	-	62.6	13.4	-	79.6	67.0	73.3	-
LCS Photon AX	-	-	60.2	13.5	-	75.3	70.2	72.7	-
LCS Chrome	-	-	59.5	13.4	-	79.3	62.5	70.9	-
WB4422	-	-	61.1	13.4	-	-	74.5	-	-
Byrd CL Plus	-	-	58.1	12.3	-	-	66.6	-	-
MS Maverick	-	-	58.8	13.0	-	-	63.8	-	-
Viking 211	-	-	59.0	12.6	-	-	63.5	-	-
CPX72166AX	-	-	59.1	12.2	-	-	63.1	-	-
Kivari AX	-	-	58.3	11.3	-	-	61.7	-	-
WB4510CLP	-	-	58.3	12.5	-	-	59.4	-	-
Trial Average#	-	-	59.6	12.8	88.5	88.7	66.4	76.9	81.4
LSD (0.05)†	-	-	-	-	4.9	8.1	3.3	-	-
C.V. %‡	-	-	-	-	3.9	6.5	3.1	-	-

* 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.

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