



2024 South Dakota Winter Wheat Forage Trial Results

Sunish Sehgal | SDSU Winter Wheat Breeder

Warren Rusche | Assistant Professor & SDSU Extension Feedlot Management Specialist

Kevin Kirby | Agricultural Research Manager

Shawn Hawks | Agricultural Research Manager

Location: Brookings, SD (44.40764°, -96.78792°)

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 lbs of N as UAN in fall and 101.5 lbs of N as NAU in spring applied as liquid broadcast

Herbicide:

- Burndown: 36 oz/acre Tomahawk + 27 oz/acre 2,4-D
- Post: 1.5 pt/acre Bison and 24 oz Prowl H2O

Fungicide: none

Date seeded: 9/19/2023

Date harvested: 6/29/2024

Location: Pierre, SD (Dakota Lakes Research Farm)

(44.292795°, -99.990924°)

Soil Type: Millboro silt loam, 0-3% slopes

Previous crop: pea

Tillage: no-till

Row spacing: 7.5"

Seeding Rate: 1.2 million PLS/acre

Fertilizer:

- Starter: 10 gal/acre, 10-34-0
- Other: 26 1-0-0-2.6S @ 25 gal/ac (UAN (90%) + ATS (10%)) on 4.24.24

Herbicide:

- Burndown: Glyphosate @ 26 oz/acre Curtail-M @ 26 oz/ac on 9/11/2023
- Post: none

Fungicide: none

Date seeded: 9/19/2023

Date harvested: 6/18/2024

Notes:

- Wheat plots were harvested at milk to early-dough stage with a Swift LTD forage plot harvester.
- Plot sub-samples were weighed and dried for 72 hours at 140°F.
- Dried hay samples were sent to Dairyland Labs (Arcadia, WI) for NIR analysis.



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2024 South Dakota Winter Wheat Forage Trial Results Brookings

Table 1. 2024 winter wheat forage trial results (average of 3 replications) at Brookings, SD.

Variety Information			Yield & Nutritional Performance							
Variety	Origin†- Year	Height (inches)	DM ¹ (T/A)	CP ² (%DM)	ADF ³ (%DM)	NDF ⁴ (%DM)	NE L ⁵ (Mcal/ cwt)	NE G ⁶ (Mcal/ cwt)	NE M ⁷ (Mcal/ cwt)	RFV ⁸
AP Baldy ^{awnless}	AP-23	34	3.5	11.6	31.8	47.1	65.8	39.1	65.7	127.1
LCH16ACC403-1	LCS-24	36	4.0	11.1	35.3	51.2	62.7	35.4	61.6	111.6
LCS CHROME	LCS-15	37	3.7	10.8	38.1	55.8	58.8	30.6	56.4	99.4
MTF 1435 ^{awnless}	MT-18	41	4.4	11.1	33.3	49.5	64.5	37.4	63.9	118.7
OAHE	SD-16	41	4.0	10.5	36.0	53.2	61.1	33.2	59.2	106.3
SD22B105-2 ^{awnless}	SD-24	36	3.7	11.7	36.3	53.6	60.5	33.0	59.0	105.3
SD22D122-5 ^{awnless}	SD-24	33	3.7	12.0	31.8	46.1	64.4	37.7	64.1	131.5
SD22D122-8 ^{awnless}	SD-24	37	4.3	10.9	33.8	49.2	62.9	35.5	61.8	118.8
SY MONUMENT	AP-15	33	3.5	11.6	32.2	48.6	63.8	36.8	63.2	122.7
T173 ^{awnless}	MT-09	40	4.4	10.4	35.5	50.7	63.5	35.9	62.2	113.0
WB4440 ^{awnless}	WB-24	38	4.1	12.0	32.5	47.2	64.9	38.2	64.8	126.7
WB4540 ^{awnless}	WB-24	35	4.6	12.2	31.1	46.2	66.2	39.9	66.6	130.9
WINNER	SD-19	36	4.6	11.5	32.5	49.3	64.6	37.8	64.3	120.4
Trial Average	-	36	4.1	11.3	33.7	49.6	63.6	36.4	62.8	118.6
LSD (0.05)§	-	2.4	0.5	1.2	4.2	5.9	3.6	4.5	4.9	20.6
CV	-	3.9	7.9	6.2	7.4	7.1	3.4	7.3	4.7	10.4

† AP - AgriPro; ALS - LCS - Limagrain Cereal Seeds; MT - Montana; SD - South Dakota; WB- WestBred; and year release/tested.
 § Value required (≥LSD) to determine if varieties are significantly different from one another.
¹ Tons per acre of dry matter (DM).
² Crude protein as a percentage of DM.
³ Acid detergent fiber as a % of dry matter. Generally samples with lower ADF are considered higher quality.
⁴ Neutral detergent fiber as a % of dry matter. Generally samples with lower NDF are considered higher quality.
⁵ Net energy, lactation - an estimate of energy value for dairy cattle diets. (Mcal/cwt, DM basis)
⁶ Net energy, gain - an estimate of energy value to support beef cattle growth. (Mcal/cwt, DM basis)
⁷ Net energy, maintenance - an estimate of energy value for meeting maintenance needs of beef cattle. (Mcal/cwt, DM basis).
⁸ Relative feed value - a value representing how well a forage will be consumed and digested.



2024 South Dakota Winter Wheat Forage Trial Results Pierre

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Table 2. 2024 winter wheat forage trial results (average of 3 replications) at Pierre, SD.

Variety Information			Yield & Nutritional Performance							
Variety	Origin†- Year	Height (inches)	DM ¹ (T/A)	CP ² (%DM)	ADF ³ (%DM)	NDF ⁴ (%DM)	NE L ⁵ (Mcal/ cwt)	NE G ⁶ (Mcal/ cwt)	NE M ⁷ (Mcal/ cwt)	RFV ⁸
AP Baldy ^{awnless}	AP-23	35	4.2	10.3	31.3	48.8	68.4	41.7	68.6	123.2
LCH16ACC403-1	LCS-24	41	4.9	10.1	35.4	52.8	64.2	36.8	63.2	108.1
LCS CHROME	LCS-15	38	4.3	10.7	33.6	51.2	65.4	38.5	65.0	114.6
MTF 1435 ^{awnless}	MT-18	41	4.7	11.8	31.9	49.9	65.7	39.3	65.9	119.7
OAHE	SD-16	41	4.8	9.8	36.1	54.4	63.3	35.7	61.9	103.9
SD22B105-2 ^{awnless}	SD-24	38	4.1	10.5	34.9	52.6	64.0	36.9	63.2	109.1
SD22D122-5 ^{awnless}	SD-24	38	4.8	10.2	31.5	47.3	66.5	39.5	66.2	128.2
SD22D122-8 ^{awnless}	SD-24	39	4.8	9.4	33.6	49.6	66.5	39.2	65.8	117.7
SY MONUMENT	AP-15	37	4.4	9.9	32.9	52.0	65.6	38.5	65.0	113.6
T173 ^{awnless}	MT09	44	4.3	9.8	36.0	53.8	63.6	36.0	62.3	105.4
WB4440 ^{awnless}	WB-24	37	4.9	10.9	30.4	47.1	68.6	42.2	69.1	128.9
WB4540 ^{awnless}	WB-24	36	4.3	9.8	32.7	48.8	66.9	39.9	66.6	121.4
WINNER	SD-19	37	4.7	10.5	32.3	48.8	66.7	39.9	66.6	121.4
WB4309	WB-19	37	4.8	10.4	32.7	49.8	65.1	38.0	64.5	118.6
WB4422	WB-22	37	4.4	11.1	33.5	50.4	66.1	39.4	66.1	116.1
Trial Average	-	38	4.6	10.4	33.2	50.5	65.8	38.8	65.3	116.7
LSD (0.05)§	-	2.7	0.7	2.0	3.1	4.0	3.2	4.1	4.5	13.9
CV	-	4.2	8.3	10.7	5.3	4.5	2.8	6.0	3.9	6.7

† AP - AgriPro; ALS - LCS - Limagrain Cereal Seeds; MT - Montana; SD - South Dakota; WB- WestBred; and year release/tested.
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