



2023 South Dakota Oat Forage Trial Results

Jonathan Kleinjan | SDSU Extension Agronomist

Melanie Caffè | SDSU Oat Breeder

Nick Hall | Agricultural Research Manager

Warren Rusche | Assistant Professor & SDSU Extension Feedlot Specialist

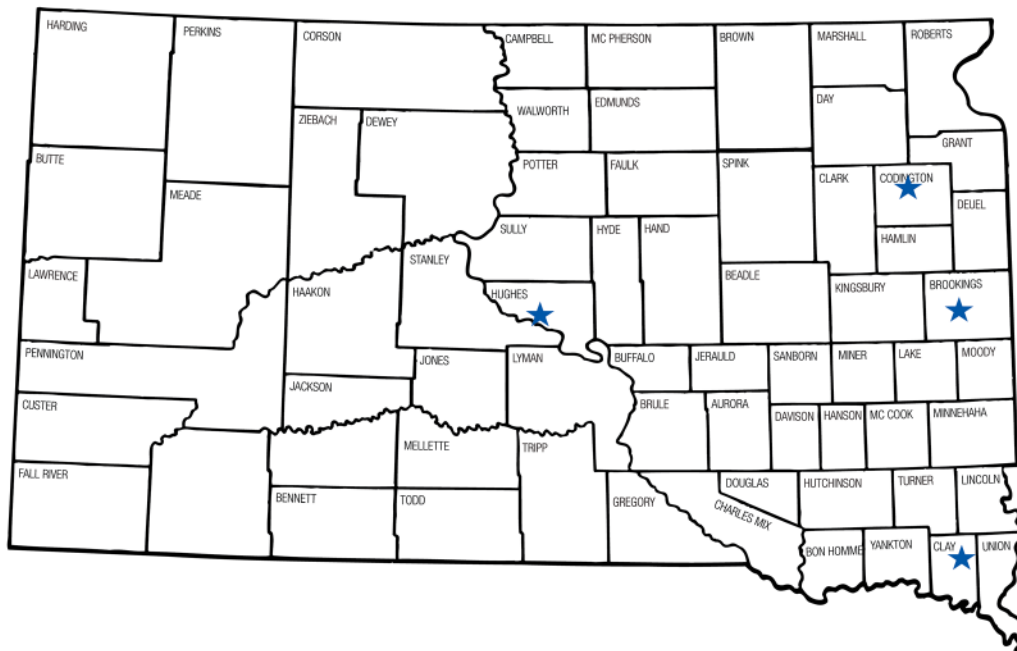


Table 1. Cultural characteristics for the 2023 oat forage trials.

Location	Planting date	Previous crop	Fertility	Herbicide	Harvest date
Beresford	data not reported due to drought conditions				
Pierre	4/18/23	soybeans	20 GPA 26.1-0-0-2.6S	1 pt/acre Bromoxynil	6/26/23
South Shore	5/2/23	soybeans	100-0-50	1.5 pt/acre Bronate	6/28/23
Volga	4/24/23	soybeans	100-30-30	1 pt/acre Bromac	6/28/23

Procedure: All plots were planted at the rate of 1.2 million PLS/acre.
Oat 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
Samples were sent to Dairyland Labs (Arcadia, WI) for NIR analysis.

Notes: These trials were funded in part by the General Mills Foundation and the South Dakota Crop



2023 South Dakota Oat Forage Trial Results

**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

Table 2. 2023 oat forage trial results at four locations in SD (average of 3 replications).

Variety Information				Yield Performance						
Variety	Origin†- Year	2023		2023					Multi-year	
		Height (inches)	Heading (days)‡	Beresford (T/A)	Pierre (T/A)	South Shore (T/A)	Volga (T/A)	Statewide (T/A)	2-year (T/A)	3-year (T/A)
Deon	MN-13	28	169	not	2.7	1.7	1.4	1.9	2.8	2.7
Goliath	SD-12	33	170	reported	2.4	1.6	1.7	1.9	2.6	2.5
Hayden	SD-14	27	169	-	2.2	2.0	1.3	1.8	2.8	2.7
Jerry	ND-94	28	165	-	2.4	2.0	1.3	1.9	2.8	2.7
Rockford	MN-18	27	169	-	2.1	1.8	1.2	1.7	2.6	2.5
Rushmore	ND-09	27	165	-	2.6	1.9	1.3	1.9	2.9	2.7
SD Buffalo	SD-19	26	166	-	2.2	1.7	1.4	1.8	2.8	2.6
Warrior	SD-21	26	164	-	2.3	1.9	1.3	1.9	2.9	2.7
Trial Average	-	-	-	-	2.4	1.8	1.3	1.9	2.8	2.6
LSD (0.05)§	-	-	-	-	0.5	0.6	0.5	0.3	0.2	0.2

† MN - Minnesota; ND - North Dakota; SD - South Dakota; and year of release.
‡ Julian days, Note: for reference, in 2023, July 1 is 182 days Julian.
¶ Tons per acre of dry matter (DM).
§ Value required (≥LSD) to determine if varieties are significantly different from one another.



2023 South Dakota Oat Forage Trial Results

**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

Table 3. Nutrition characteristics for oat forage varieties (average of all locations).

Variety	CP ¹ (%DM)	NDF ² (%DM)	NE L ³ (Mcal/cwt)	NE G ⁴ (Mcal/cwt)	NE M ⁵ (Mcal/cwt)	RFV ⁶
Deon	11.8	55.1	63.86	37.11	63.51	104.2
Goliath	11.5	55.6	64.18	37.33	63.76	102.5
Hayden	11.1	58.0	62.65	35.43	61.65	98.1
Jerry	11.8	54.4	64.51	37.85	64.33	105.3
Rockford	11.7	58.1	62.75	35.81	62.07	97.3
Rushmore	10.8	53.2	65.62	38.70	65.28	109.0
SD Buffalo	11.3	54.9	64.71	37.93	64.42	105.2
Warrior	11.6	50.5	66.42	39.98	66.70	116.4
Trial Average	11.6	54.9	64.1	37.2	63.7	105.1
LSD (0.05)§	1.0	2.5	1.84	2.40	2.60	6.9

§ Value required (\geq LSD) to determine if varieties are significantly different from one another.

¹ Crude protein as a percentage of DM.

² Neutral detergent fiber as a % of dry matter. Generally samples with lower NDF are considered higher quality.

³ Net energy, lactation - an estimate of energy value for dairy cattle diets. (Mcal/cwt, DM basis)

⁴ Net energy, gain - an estimate of energy value to support beef cattle growth. (Mcal/cwt, DM basis)

⁵ Net energy, maintenance - an estimate of energy value for meeting maintenance needs of beef cattle. (Mcal/cwt, DM basis).

⁶ Relative feed value - a value representing how well a forage will be consumed and digested.