



2022 South Dakota Oat Forage Trial Results

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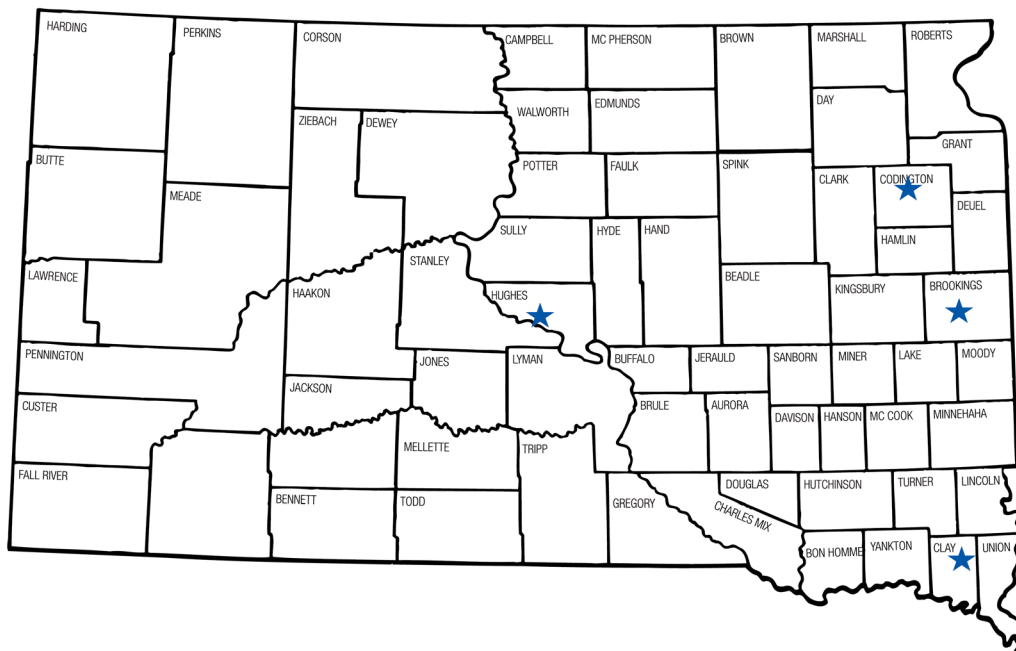


Table 1. Cultural characteristics for the 2022 oat forage trials.

| Location | Planting date | Previous crop | Fertility | Herbicide | Harvest date |
|-------------|---------------|---------------|---------------------|---------------------------|--------------|
| Beresford | 4/21/22 | corn | 90 lb/acre 30-10-10 | 1.5 pt/acre Bison | 7/5/22 |
| Pierre | 3/24/22 | field peas | 35 GPA 28-0-0S | none | 6/27/22 |
| South Shore | 5/11/22 | soybeans | 90 lb/acre 30-10-10 | 1.5 pt/acre WildCard Xtra | 7/14/22 |
| Volga | 4/22/22 | soybeans | 90 lb/acre 30-10-10 | 1.5 pt/acre Bison | 7/8/22 |

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 Cumberland Valley Analytical Service (Waynesboro, PA) for NIR analysis.

Notes: These trials were funded in part by the General Mills Foundation.



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Table 2. 2022 oat forage trial results at four locations in SD (average of 3 replications).

| Variety Information | | | | Yield Performance | | | | | | |
|----------------------|------------------|--------------------|--------------------|-------------------|--------------------|----------------------|-----------------|--------------------|-----------------|-----------------|
| Variety | Origin†- Year | 2022 | | 2022 | | | | | Multi-year | |
| | | Height (inches) | Heading (days)‡ | Volga (T/A)¶ | Beresford (T/A) | South Shore (T/A) | Pierre (T/A) | Statewide (T/A) | 2-year (T/A) | 3-year (T/A) |
| Deon | MN-13 | 39 | 178 | 3.7 | 2.8 | 3.7 | 3.7 | 3.5 | 3.0 | 3.4 |
| Goliath | SD-12 | 42 | 179 | 3.5 | 2.7 | 3.4 | 3.0 | 3.2 | 2.8 | 3.2 |
| Hayden | SD-14 | 38 | 177 | 4.0 | 2.7 | 3.5 | 3.9 | 3.5 | 3.0 | 3.4 |
| Jerry | ND-94 | 39 | 176 | 3.8 | 2.5 | 3.8 | 3.6 | 3.4 | 3.0 | 3.4 |
| MN Pearl | MN-18 | 37 | 179 | 3.5 | 2.7 | 3.6 | 3.2 | 3.3 | 2.7 | 3.2 |
| Rockford | ND-09 | 39 | 178 | 3.6 | 2.9 | 3.7 | 3.3 | 3.3 | 2.9 | 3.3 |
| Rushmore | SD-19 | 38 | 176 | 4.0 | 2.7 | 3.7 | 3.7 | 3.5 | 3.0 | 3.4 |
| SD Buffalo | SD-21 | 37 | 175 | 3.9 | 2.8 | 3.7 | 3.5 | 3.5 | 2.9 | 3.3 |
| Warrior | SD-18 | 36 | 176 | 4.1 | 2.7 | 3.9 | 3.6 | 3.6 | 3.0 | 3.4 |
| Trial Average | - | 39 | 178 | 3.8 | 2.8 | 3.6 | 3.5 | 3.4 | 2.9 | 3.3 |
| LSD (0.05)§ | - | - | - | 0.3 | 0.3 | 0.4 | 0.6 | 0.2 | 0.2 | 0.2 |

† MN - Minnesota; ND - North Dakota; SD - South Dakota; and year of release.
‡ Julian days, Note: for reference, in 2022, 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.



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Table 3. Nutrition characteristics for oat forage varieties (average of 2020-2021).

| 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 | 11.9 | 51.5 | 0.66 | 0.42 | 0.68 | 116.3 |
| Goliath | 11.9 | 51.8 | 0.67 | 0.44 | 0.71 | 116.6 |
| Hayden | 11.8 | 51.1 | 0.67 | 0.44 | 0.71 | 119.1 |
| Jerry | 11.8 | 49.9 | 0.67 | 0.44 | 0.70 | 122.5 |
| MN Pearl | 11.8 | 47.8 | 0.69 | 0.46 | 0.73 | 129.4 |
| Rockford | 12.1 | 52.9 | 0.65 | 0.41 | 0.68 | 112.5 |
| Rushmore | 12.2 | 47.8 | 0.68 | 0.46 | 0.73 | 128.0 |
| SD Buffalo | 11.4 | 49.2 | 0.68 | 0.45 | 0.72 | 123.4 |
| Warrior | 11.4 | 48.1 | 0.68 | 0.45 | 0.72 | 129.4 |
| Trial Average | 11.8 | 50.0 | 0.7 | 0.4 | 0.7 | 121.9 |
| LSD (0.05)§ | NS | 2.4 | 0.02 | 0.02 | 0.03 | 7.4 |

§ 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.