



# 2022 South Dakota Winter Wheat Forage Trial Results

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**Location:** Brookings, SD (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/acre Tomahawk + 27 oz/acre 2,4-D  
- Post: 2 pt/acre Brox 2EC  
**Fungicide:** none  
**Date seeded:** 9/16/21  
**Date harvested:** 6/23/22  
**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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Table 1. 2022 winter wheat forage trial results (average of 3 replications) at Brookings, SD.

Variety Information				Yield & Nutritional Performance						
Variety	Origin†- Year	Height (inches)	Heading (days)‡	DM <sup>1</sup> (T/A)	CP <sup>2</sup> (%DM)	NDF <sup>3</sup> (%DM)	NE L <sup>4</sup> (Mcal/ cwt)	NE G <sup>5</sup> (Mcal/ cwt)	NE M <sup>6</sup> (Mcal/ cwt)	RFV <sup>7</sup>
980980-4	AP-exp	37	163	3.9	11.4	53.3	60.0	32.3	58.2	110.8
LCS Chrome	LCS-15	41	163	4.1	11.6	57.4	56.9	28.6	54.2	99.3
MTF 1435	MT-18	42	167	3.8	10.6	61.7	54.9	25.8	51.2	89.7
Oahe	SD-16	41	163	4.3	10.3	59.4	55.9	26.9	52.3	94.5
SY Monument	AP-15	37	163	4.2	10.1	59.0	54.6	25.2	50.5	94.2
T173	LCS-12	44	164	4.1	9.8	61.6	53.6	23.8	49.0	88.5
Willow Creek	MT-09	44	168	3.0	10.9	65.5	51.6	21.9	46.9	80.5
Winner	SD-19	39	163	4.0	12.1	54.2	59.6	32.1	58.0	108.6
<b>Trial Average</b>	-	41	-	3.9	10.9	59.0	55.9	27.1	52.5	95.8
<b>LSD (0.05)§</b>	-	-	-	0.5	1.6	5.2	3.6	4.7	5.1	12.7

† AP - AgriPro; ALS - LCS - Limagrain Cereal Seeds; MT - Montana; SD - South Dakota.  
‡ Julian days, Note: for reference, in 2022, June 1 is 152 days Julian.  
§ Value required (≥LSD) to determine if varieties are significantly different from one another.  
<sup>1</sup> Tons per acre of dry matter (DM).  
<sup>2</sup> Crude protein as a percentage of DM.  
<sup>3</sup> Neutral detergent fiber as a % of dry matter. Generally samples with lower NDF are considered higher quality.  
<sup>4</sup> Net energy, lactation - an estimate of energy value for dairy cattle diets. (Mcal/cwt, DM basis)  
<sup>5</sup> Net energy, gain - an estimate of energy value to support beef cattle growth. (Mcal/cwt, DM basis)  
<sup>6</sup> Net energy, maintenance - an estimate of energy value for meeting maintenance needs of beef cattle. (Mcal/cwt, DM basis).  
<sup>7</sup> Relative feed value - a value representing how well a forage will be consumed and digested.