

Winter Triticale Forage Variety Trial – 2026 Season – SDSU Southeast Research Farm

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INTRODUCTION

This report reviews forage yield data from a winter triticale forage variety trial conducted at the Southeast Research Farm in Beresford, South Dakota in 2026. Relatively dry weather in the fall followed by an open winter with little snow cover resulted in separation of lines based on ability to overwinter in the 2025/26 growing season at Beresford.

METHODS

Plots were direct seeded into soybean stubble on Sept. 25, 2025 using a small plot drill. Plots were 25 by 5' in size and were laid out in a randomized complete block design. Fertilizer was applied at a rate of 30-25-0-15 NPKS on Oct. 24, 2025 and an additional application of 9-45-0 was made on Nov. 21, 2025. In the following spring, 50 lb/ac of N as urea was applied on March 24, 2026. Visual ratings of percent stand were made on Nov. 25, 2025 and April 9, 2026. Plots were also rated for relative vigor on the April 9th date. Plots were harvested when most of the lines were in the late boot stage on May 29, 2026 using a small plot forage harvester. Subsamples of each line were dried for estimation of percent dry matter and this was used with whole plot fresh weight to calculate dry matter yields on a per acre basis. Hay, and silage, yields were estimated using values 15%, and 65% moisture, respectively. Data were analyzed using standard ANOVA with SAS statistical software. A rye line ('Hazlet') was included as a check in the trial.

RESULTS

There was sufficient moisture to establish the plots, but overall soil moisture was low in the fall of 2025, limiting crop development going into winter (Table 1). The winter in turn was open, with very little snow cover. This created some separation among the lines in stand loss over the winter (Table 2). Across the trial, including the rye check, dry matter yields averaged 3359 lb per acre. The top-yielding lines in this trial were 'T-Showtime', 'Showtime', 'CPX126', 'EXP7-13-2-1', and 'FX1001'. Forage yields in 2026 were substantially better than what was observed in 2025 (average yield 1889 lb per acre – the 2025 crop was affected by severe drought stress during establishment), but were only about half as good as the banner 2024 season when the average forage yield in the winter triticale forage trial was 6840 lb per acre of dry matter.

Table 1. Monthly precipitation and average maximum and minimum temperatures, along with departure from the 74-year average, observed at the SDSU Southeast Research Farm in Beresford, South Dakota, from September 2025 through June 2026. Note the below-average rainfall in the fall, along with very little January or February moisture (i.e. snowfall) coupled with below-average temperatures in February.

Month	Precipitation Sept 2025 – June 2026 (inches)	Departure from Avg. (inches)	2025 Average Air Temps. (°F)		Departure from Average (F)	
			Maximum	Minimum	Maximum	Minimum
September	0.91	-1.82	79.6	54.2	+3.6	+4.5
October	1.08	-0.84	68.7	43.2	+5.3	+5.7
November	0.84	-0.27	48.2	27.7	+2.6	+3.9
December	0.53	-0.16	32.6	14.0	+1.5	+2.1
January	0.02	-0.44	31.0	8.3	+2.8	+2.2
February	0.00	-0.74	45.6	17.0	-3.0	-6.8
March	0.38	-1.07	55.5	25.7	+10.5	+2.7
April	3.91	1.38	61.2	34.9	+1.2	-0.2
May	2.63	-0.87	73.6	47.2	0.0	+0.5
June	3.99	0.34	82.0	59.5	+2.8	+2.1
Total	20.11					

Table 2. Fall and spring stand ratings, spring relative vigor rating, height at harvest, Feeke's stage at harvest, dry matter yield, and estimated hay and silage yields for 19 lines of winter triticale evaluated with a rye check in a variety trial at the Southeast Research Farm, Beresford, South Dakota, in the 2026 growing season. Plots were planted on Sept. 25, 2025 and harvested on May 15, 2026. Visual ratings of percent stand were made in the fall on Nov. 25, 2025. Ratings of percent stand and relative vigor were made the following spring on April 9, 2026. Plots were laid in a randomized complete block design with 4 replications. Plots were harvested with a small plot forage harvester. The two lowest yielding lines overwintered very poorly and did not produce a recoverable yield in the 2026 growing season. Data were analyzed using ANOVA and lines were compared for yield against the highest yielding triticale line in the trial.

LINE	Fall Stand Rating	Spring Stand Rating	Relative Vigor	Height	Feeke's Stage	Dry Matter Yield	Hay Yield	Silage Yield
	(%)	(%)	(1 to 10)	(cm)		(lb/ac)	(tons/ac)	(tons/ac)
Hazlet Rye	88.1	89.5	9.8	107.5	10.52	7338	4.32	10.48
T-Showtime	93.3	74.0	6.3	70.0	10.2	5036	2.96	7.19
Showtime	86.6	74.3	5.8	68.8	10.2	4978	2.93	7.11
CP X126	87.0	70.8	5.0	71.3	10.4	4907	2.89	7.01
Exp 7-13-2-1	93.5	76.0	7.0	67.5	10.5	4776	2.81	6.82
FX1001	86.4	66.3	6.5	75.0	10.2	4418	2.60	6.31
CP X488	84.8	68.3	5.8	62.5	10.4	4141	2.44	5.92
CP X021	88.1	68.0	6.3	62.5	10.4	3821	2.25	5.46
FX 1002	75.9	43.8	4.8	71.3	10.2	3767	2.22	5.38
Exp 938	88.0	58.5	4.5	60.0	10.1	3630	2.14	5.19
CP X005A	86.9	48.3	3.5	66.3	10.4	3404	2.00	4.86
HK10	85.8	51.0	4.3	58.8	10.2	3325	1.96	4.75
Exp 209	88.5	65.8	4.5	67.5	10.4	2955	1.74	4.22
CP X226	85.5	50.5	3.0	57.5	10.3	2778	1.63	3.97
CP X257U	84.1	52.3	4.3	60.0	10.3	2685	1.58	3.84
CP X223	81.8	36.3	2.5	58.8	10.4	2302	1.35	3.29
KT 13064	84.0	20.3	2.8	51.3	10.0	1490	0.88	2.13
CP X252	81.5	17.5	2.3	50.0	10.3	1441	0.85	2.06
13053/HK1	88.9	0.5	0.5	---	---	0	0.00	0.00
2021 V03	<u>87.0</u>	<u>3.0</u>	<u>1.0</u>	---	---	<u>0</u>	<u>0.00</u>	<u>0.00</u>
<i>Mean</i>	86.3	51.7	4.5	60.3	----	3359	1.98	4.80
<i>CV (%)</i>	4.2	20.0	18.3	16.2		18	18.30	18.30
<i>LSD (0.10)</i>	4.3	12.2	1.0	11.6		727	0.45	1.04