

**EXTENSION****CR-2141**

Fall forage production and first hollow stem date for wheat varieties during the 2025–2026 crop year

August 2026

Introduction

Fall forage production potential is one of the major considerations in deciding which variety to plant. Dual-purpose wheat producers, for example, may find varietal characteristics such as grain yield after grazing and disease resistance to be more important selection criteria than an advantage in early forage production potential. Forage-only producers might place more importance on planting an awnless wheat variety or one that germinates readily in hot soil conditions. Ultimately though, fall forage production is a selection criterion that should be considered.

Fall forage production potential is determined by genetics, management and environmental factors. The purpose of this publication is to quantify some of the genetic differences in wheat forage production potential and grazing duration among the most popular varieties grown in Oklahoma. Management factors such as planting date, seeding rate and soil fertility are very influential and are sometimes more important than variety selection in determining forage production. Environmental factors such as rainfall amount and distribution and temperature also play a heavy role in dictating how much fall forage is produced. All of these factors along with yield potential after grazing and the individual producer's preferences will determine which variety is best suited for a particular field.

Site descriptions and methods

The objective of the fall forage variety trials is to give producers an indication of the fall forage production ability of wheat varieties commonly grown throughout the state of Oklahoma. The forage trials were conducted under the Oklahoma State University's Small Grains Variety Performance Tests. During the 2025–2026 growing season, forage trials were conducted at the Chickasha and Stillwater test sites. Additionally, first hollow stem measurements were collected at both sites in 2026. Weather data for each location are provided in Figures 1 and 2.

A randomized complete block design with four replications was used at each site. Plots at each location were established in a conventionally tilled seedbed. At planting, 5 gal/acre of 10-34-0 was applied in seed furrow at Stillwater and Chickasha. Due to severe drought conditions at planting, 0.5 inches of irrigation were applied on October 7, 8, 9 and 17 in Stillwater to support seed germination and emergence. The seeding rate at both locations was 120 lbs/acre. Forage was measured by hand clipping two, 1-m by 1-row samples approximately ½ inch above the soil surface from the interior rows within each plot. There was only one forage sampling date at each location (Table 1). All samples were placed in a forced-air dryer after collection for approximately seven days and weighed. Fertility, planting date and forage sampling date information is provided in Table 1.

The Stillwater trial included both ungrazed and simulated grazed plots, while the Chickasha trial consisted of ungrazed plots only. In the simulated grazing treatment, plants were mowed to a height of 2.5 inches on January 3, 15 and 28, as well as February 10 and 28, March 6 and 12. First hollow stem sampling began at the end of January at both locations and was conducted every three to four days by variety until all varieties reached first hollow stem. Plant samples were collected for each variety by digging an approximately eight-inch section of row and selecting ten plants randomly from this sample. The largest tiller on each plant was split longitudinally, and the hollow stem below the developing grain head was measured. Varieties were considered to be at first hollow stem when the average measurement of the ten plant samples was 1.5 cm (5/8 inch) or greater. For more information on first hollow stem, refer to [PSS-2147 First hollow stem: A critical wheat growth stage for dual-purpose producers](#).

Results

As indicated in Figures 1 and 2, the 2025–2026 fall forage production season was marked by moderate temperatures and extremely low rainfall. The 1-inch irrigation applied shortly after planting the trial in Stillwater helped with crop establishment and enabled the crop to take advantage of the rainfall that arrived later in October. This contributed to the low-moderate level of fall forage production observed in our fields in Stillwater. The average fall forage production at Stillwater was 1,192 lbs/acre, and values ranged from 723 to 1,764 lbs/acre (Table 2). Average forage production at Chickasha was 3038 lbs/acre, and values ranged from 1,542 to 4,233 lbs/acre (Table 3).

First hollow stem data are reported in ‘day of year’ (day) format for the winter wheat varieties in Table 4. To provide a reference, keep in mind that March 1 is day 60. The fall and winter months were characterized by dry conditions in Stillwater with winter temperatures above normal. Supplemental irrigation helped crops to emerge by mid-October (later than usual, but earlier than many places under drought in the state) resulted in good plant development. The average winter wheat first hollow stem date at Stillwater ungrazed plots was day 60 (March 1). This was 17 days earlier than 2025 (March 18), 11 days earlier than 2024 (February 17) and 5 days earlier than the 20-year average (March 6). There was a 14-day difference between the earliest and latest varieties at Stillwater compared to an 18-day difference in 2025, and 21-day difference in 2024. The average winter wheat first hollow stem date for the Chickasha location was 57 (Feb 26), this was 14 days earlier than 2025 (Mar 12), 1 day earlier than 2024 (Feb 27) and 10 days earlier than the 20-year average (March 6). There was a 14-day difference between the earliest and latest varieties at this location, compared to a 14-day difference in 2025 and 13-day difference in 2024.

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Seed sources and abbreviations

AgriPro = AgriPro|Syngenta Seeds

AGSECO = AGSECO Inc.

Croplan = Croplan Seed

Nutrien = Nutrien Ag Solutions

LCS = Limagrain Cereal Seeds

OGI = Oklahoma Genetics Inc.

OSU = Oklahoma State University

PlainsGold = PlainsGold Seeds

WestBred = WestBred Wheat

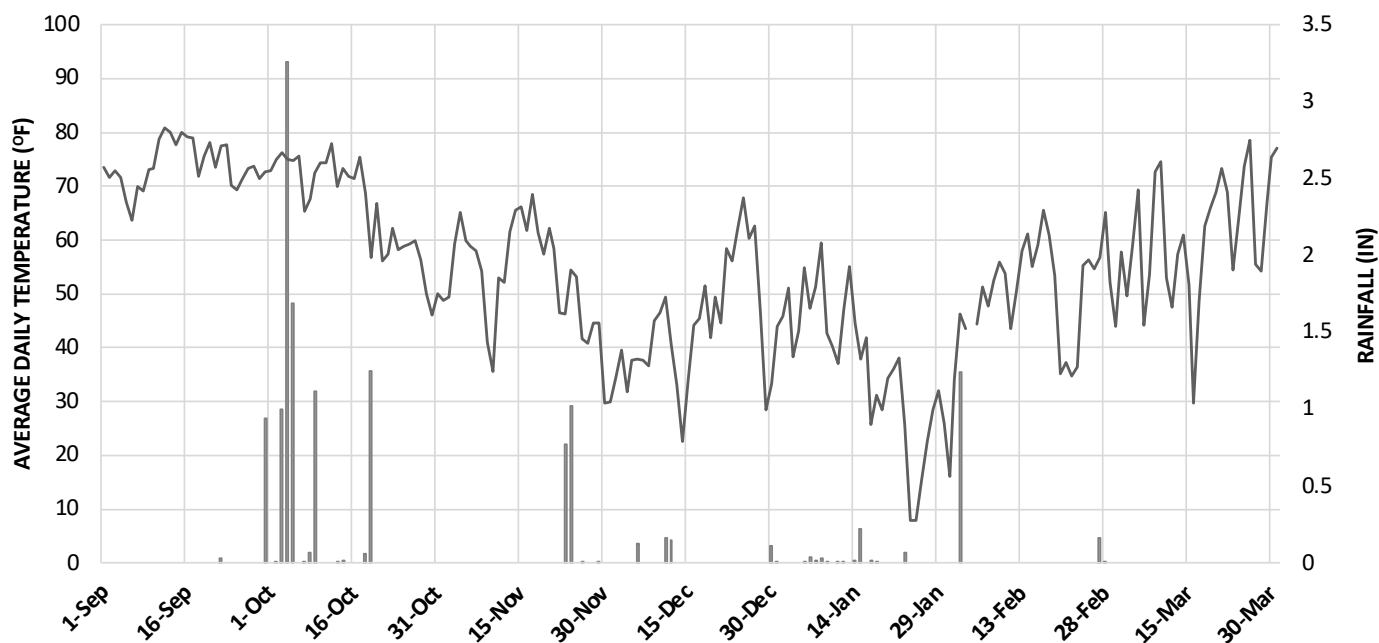


Figure 1. Average daily temperature (line graph) and rainfall (bar chart) from September 1, 2025 to March 31, 2026, at Stillwater, OK. Weather data courtesy Oklahoma Mesonet.

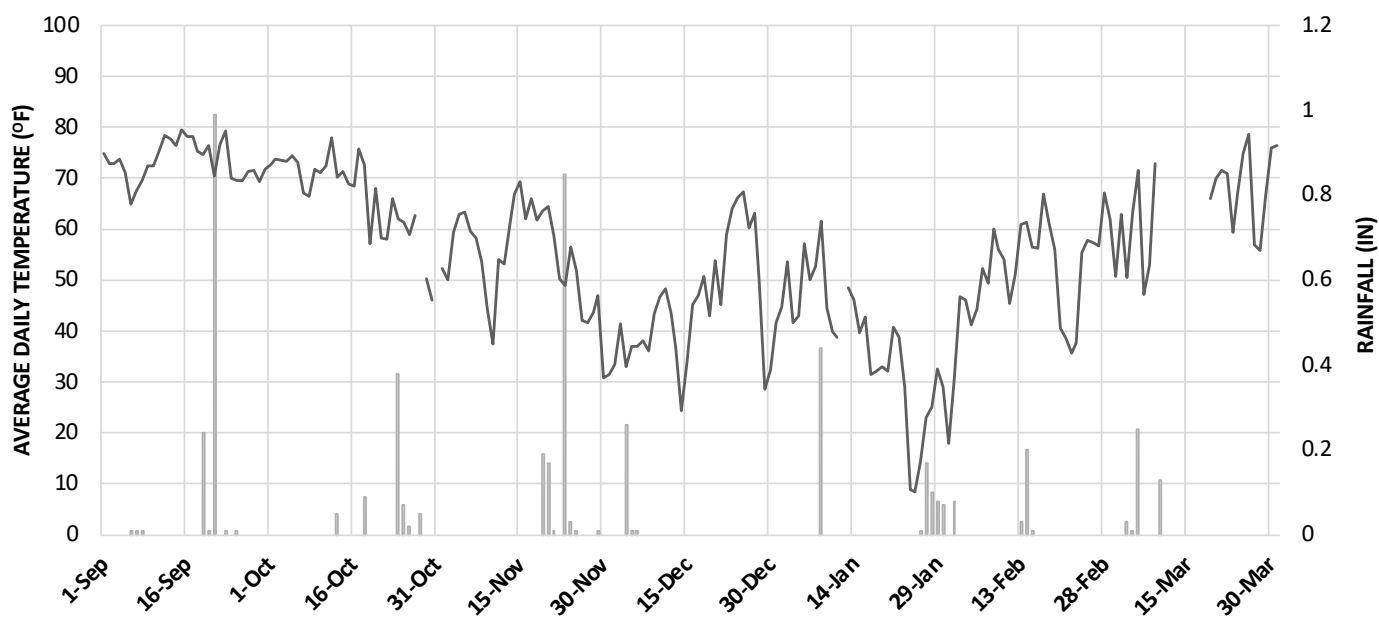


Figure 2. Average daily temperature (line graph) and rainfall (bar chart) from September 1, 2025 to March 31, 2026, at Chickasha, OK. Weather data courtesy Oklahoma Mesonet.

Table 1. The locations, planting and forage sampling dates, and pre-plant soil test information of the trials.

	Planting date	Sampling date	pH	nitrate-N (lbs/ac)	STP	STK
Chickasha	9/25/25	12/3/25	7.5	38	37	397
Stillwater	10/10/25	12/2/25	6.1	14	50	270

Notes: STP: soil test P index; STK: soil test K index

Table 2. Fall forage production for the winter wheat varieties at Stillwater, OK during the 2025–2026 production year and 2 and 3-year averages

Licensee	Variety	2025	2-Year	3-Year
		-----lbs dry forage/acre-----		
OGI	Showdown	1764	1664	2159
OGI	Paradox	1648	1859	2495
Nutrien	Cavalry	1636	--	--
WestBred	WB4445CLP	1610	1591	--
PlainsGold	Kivari AX	1459	1591	2502
OGI	Wyatt	1441	1410	1424
OGI	Gallagher	1414	--	--
OGI	Doublestop CL+	1394	--	--
OGI	Smith's Gold	1388	--	--
AgriPro	AP Tango	1378	--	--
AgriPro	AP Sunbird	1378	1415	2076
AgriPro	AP Stocky	1328	--	--
OGI	Orange Blossom CL+	1301	1492	1663
Croplan	CP7599CLP	1292	--	--
WestBred	WB4650	1288	--	--
Nutrien	Ramsay	1288	--	--
LCS	LCS Turnpike CL+	1268	--	--
LCS	LCS Gaucho CL+	1266	--	--
LCS	LCS Highnoon	1209	--	--
Croplan	CP7017AX	1209	1272	--
OGI	Scab Stryker	1200	1448	2025
OGI	OK Corral	1183	1173	2042
OGI	High Cotton	1089	1506	2087
Nutrien	Milestone	1047	--	--
Croplan	CP7869	1042	1013	--
LCS	LCS Caballero AX	1009	--	--
LCS	LCS Gaucho CL+	1266	--	--
WestBred	WB4459AX	931	--	--
OGI	Green Hammer	839	1125	1959
LCS	LCS Warbird AX	772	--	--
PlainsGold	Sheridan	723	1177	--

Licensee	Variety	2025	2-Year	3-Year
Experimentals				
OSU	OK23D89031X	1247	--	--
OSU	OK21DTR1705-91	1130	1392	--
PlainsGold	CO19410R	994	--	--
OSU	OK23D89055X	902	--	--
	Mean	1192	1409	2043
	LSD (0.05)	421	381	579

Notes: Shaded values are not statistically different from the highest-yielding variety within a column. Double-dashes "--" = data not available.

Table 3. Fall forage production for the winter wheat varieties at Chickasha, OK during the 2025–2026 production year and 2 and 3-year averages

Licensee	Variety	2025	2-Year	3-Year
		-----lbs dry forage/acre-----		
Croplan	CP7017AX	4233	3126	--
OGI	High Cotton	4133	3371	2511
AgriPro	AP Sunbird	4052	3111	--
OGI	Smith's Gold	3832	--	--
AgriPro	AP Stocky	3645	--	--
AgriPro	AP Tango	3599	--	--
OGI	Orange Blossom CL+	3556	2866	--
OGI	OK Corral	3537	2923	2324
Nutrien	Milestone	3517	--	--
OGI	Green Hammer	3225	2755	2089
OGI	Showdown	3167	2537	1908
Nutrien	Cavalry	2988	--	--
PlainsGold	Kivari AX	2975	2692	2080
LCS	LCS Gaucho CL+	2879	--	--
OGI	Wyatt	2756	2566	--
LCS	LCS Warbird AX	2752	--	--
WestBred	WB4445CLP	2708	2521	--
LCS	LCS Highnoon	2413	--	--
Nutrien	Ramsay	2402	--	--
WestBred	WB4459AX	2256	--	--
PlainsGold	Sheridan	2147	2194	--
Croplan	CP7599CLP	2081	--	--
LCS	LCS Cowie AX	2006	2125	--
WestBred	WB4650	1542	--	--
Experimentals				
OSU	OK21PS821	3672	--	--
PlainsGold	CO19410R	3372	--	--
OSU	OK21DTR1705-91	2570	2330	--
	Mean	3038	2701	2182
	LSD (0.05)	1007	690	439

Notes: Shaded values are not statistically different from the highest-yielding variety within a column. Double-dashes "--" = data not available.

Table 4. Occurrence of first hollow stem (day of year) for the winter wheat varieties sown in 2025 and measured in 2026 at Stillwater and Chickasha, OK.

			Stillwater	Chickasha
Licensee	Variety	Non-grazed	Grazed	Non-grazed
		----- day of year -----		
OGI	Doublestop CL+	68	71	--
Nutrien	Ramsay	68	68	64
LCS	LCS Warbird AX	64	64	64
LCS	LCS Highnoon	64	64	61
PlainsGold	Sheridan	64	68	64
WestBred	WB4459AX	64	64	61
OGI	Showdown	61	61	54
OGI	High Cotton	61	64	50
OGI	Paradox	61	64	--
AgriPro	AP Tango	61	68	54
Croplan	CP7017AX	61	64	54
Croplan	CP7599CLP	61	61	61
Croplan	CP7869	61	64	--
Nutrien	Milestone	61	64	54
LCS	LCS Cowie AX	61	64	61
LCS	LCS Turnpike CL+	61	61	--
LCS	LCS Gaucho CL+	61	61	61
WestBred	WB4445CLP	61	64	61
OGI	Wyatt	61	64	61
OGI	Gallagher	57	61	--
OGI	Smith's Gold	57	61	50
OGI	Orange Blossom CL+	57	61	50
OGI	OK Corral	57	61	50
AgriPro	AP Stocky	57	64	61
AgriPro	AP Sunbird	57	61	57
Nutrien	Cavalry	57	68	57
LCS	LCS Caballero AX	57	64	--
PlainsGold	Kivari AX	57	61	50
WestBred	WB4650	57	61	54
OGI	Green Hammer	54	64	50
OGI	Scab Stryker	54	61	--

			Stillwater	Chickasha
	Experimental			
OSU	OK21PS821	64	64	61
PlainsGold	CO19410R	64	68	64
OSU	OK21DTR1705-91	61	64	61
OSU	OK23D89055X	61	61	--
OSU	OK23D89031X	61	61	--
PlainsGold	CO20022RC	61	64	--
	Average	60	64	57

Notes: Double-dashes "--" = data not available.



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