

The fall of 2005 was tough

The fall/winter of 2005/2006 will go down as the driest on record for many areas of Oklahoma. In fact, in most areas of the state an early-October rain was the only moisture received during the entire wheat forage production season. As a result, much of the wheat that was “dusted in” in late September did not emerge until later and forage production was below normal.

Diseases were generally not a problem in the fall of 2005. Insect pest problems in 2005/2006 included white grubs, fall armyworms, and greenbugs, with fall armyworm impacting the greatest number of acres. In fact, a few fields were lost to fall armyworm, but the majority of growers with fall armyworm infestations sprayed insecticides early enough to save their crop.

While wheat performance was generally less than desirable, cattle performance on wheat pasture in the fall/winter of 2005 was above average. Reports of average daily gains greater than 3 lbs/day were not uncommon and market conditions remained favorable throughout the season.



What is RFP?

We included *relative forage production (RFP)* again this year as another way of evaluating varieties over the long haul (Table 1). Relative forage production is a standardized measurement in which we divided the yield of each plot by the overall mean on a location-by-year basis. So, a variety with an RFP of 1 is average in its forage production potential, an RFP less than 1 indicates below-average forage production potential and an RFP greater than 1 indicates above-average forage production potential. This reduces the confounding effect of differing forage production potential among years and locations and is a way of ranking varieties using long-term data.

A column listing the number of *location-years* for each variety is included in addition to RFP (Table 1). The RFP data presented in Table 1 were compiled using fall forage measurements from the OSU variety trials over the past four years. One location in one year constitutes a location-year, so the number of location-years for a variety indicates the number of separate variety trials it has been included in over the past four years. It is important to consider the number of location-years a variety has been evaluated, as the greater this number the more reliable the RFP.

Finally, we included first hollow stem (FHS) measurements from demonstration plots at Stillwater. These data are presented in day of year (DOY) format. Remember that this is the same as days after January 1, so if a variety reached FHS on DOY 60, it reached FHS on March 1st.

About the OSU variety trials

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. Similar to previous years, the forage trials are conducted under the umbrella of the Oklahoma State University winter wheat variety trials.

Nonirrigated fall forage variety trials were sown at El Reno, Frederick, and Perkins, OK. However, due to late sowing and severe drought, plots were abandoned at Frederick. All plots were sown at 120 lb/ac into a conventionally-tilled seedbed and received 50 lb/ac of 18-46-0 in furrow at planting. Additional location information is listed below.

A single-sampling-date methodology was used to provide an accurate representation of the forage production ability of varieties tested. Data were collected by hand-clipping wheat plants at the soil surface in two separate one-meter-by-one-row samples. Samples were then dried and weighed.

Location information					
	Planting date	Sampling date	pH	P	K
El Reno	9-20-04	12-13-05	5.5	106	328
Perkins	9-21-04	11-22-05	5.8	40	291

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For more information visit the OSU small grains web site at www.wheat.okstate.edu



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Table 1. Fall forage production, relative forage production (RFP), and date of first hollow stem of winter wheat varieties sown in 2005 at El Reno and Perkins, OK.

Seed source	Variety	Location			RFP [†]	Location Years [‡]	First hollow stem DOY [§]
		El Reno	Perkins	Average			
		-----lb/ac-----					
Oklahoma	OK Bullet	2800 [¶]	2580	2690	1.1	2	66
AgriPro	Fannin	2700	2690	2690	1.1	8	60
Johnstons Inc.	JEl 110	2790	2570	2680	1.1	2	66
Oklahoma	Deliver	2550	2820	2680	1.1	5	69
Oklahoma	Endurance	2480	2650	2560	1.0	5	69
Westbred	Santa Fe	2460	2540	2500	1.1	2	54
Oklahoma	Okfield	2190	2500	2340	1.0	2	66
Oklahoma	Ok101	2350	2330	2340	1.0	14	66
Oklahoma	Custer	2230	2460	2340	1.0	14	60
Oklahoma	2174	2130	2510	2320	1.0	14	69
AgriPro	TAM 111	2040	2550	2300	1.0	2	66
Kansas	Overley	2020	2430	2230	0.9	8	66
AgriPro	Jagalene	2070	2290	2180	1.0	14	66
Kansas	Jagger	2320	1940	2130	1.0	14	60
AgriPro	Cutter	2020	2190	2110	0.9	14	60
AgriPro	AP 502CL	1880	2260	2070	0.9	8	60
Oklahoma	Intrada (W)	-	-	-	1.1	10	66
	Mean	2310	2460	2380	-		64
	LSD	590	260	330	0.1		

[†] Relative forage production is a standardized measurement in which yield of each plot was divided by the overall mean on a location-by-year basis.

[‡] One location in one year constitutes a location-year, so the number of location-years for a variety indicates the number of separate variety trials it has been included in over the past three years. For example, a variety included at three locations in 2004 and one location in 2005 would have 4 location-years.

[§] DOY = day of year (i.e. days after January 1) that first hollow stem was reached

[¶] Shaded cells within a column are not statistically different from the highest-yielding variety within that column

Table 2. Fall forage production of winter wheat varieties sown in 2004 and 2005 at El Reno, OK.

Source	Variety	Year		2 -Year Average
		2004	2005	
-----lb/ac-----				
AgriPro	Fannin	2920 [†]	2700	2810
Oklahoma	Endurance	2840	2480	2660
Oklahoma	Deliver	2700	2550	2630
Oklahoma	Ok101	2580	2350	2470
AgriPro	Cutter	2860	2020	2440
Oklahoma	Custer	2410	2230	2320
Oklahoma	2174	2450	2130	2290
AgriPro	Jagalene	2380	2070	2230
Kansas	Jagger	2080	2320	2200
Kansas	Overley	2340	2020	2180
AgriPro	AP 502CL	2170	1880	2030
Mean		2480	2230	2390
LSD		430	590	370

[†] Shaded cells within a column are not statistically different from the highest-yielding variety within that column

Table 3. Fall forage production of winter wheat varieties sown in 2004 and 2005 at Perkins, OK.

Source	Variety	Year		2 -Year Average
		2004	2005	
-----lb/ac-----				
AgriPro	Fannin	3230 [†]	2690	2960
Oklahoma	Deliver	2730	2820	2780
AgriPro	Cutter	3000	2190	2600
Oklahoma	Endurance	2530	2650	2590
Oklahoma	Custer	2680	2460	2570
AgriPro	Jagalene	2710	2290	2500
Oklahoma	Ok101	2640	2330	2490
Oklahoma	2174	2230	2510	2370
AgriPro	AP 502CL	2460	2260	2360
Kansas	Overley	2080	2430	2260
Kansas	Jagger	2310	1940	2130
Mean		2600	2420	2510
LSD		460	260	290

[†] Shaded cells within a column are not statistically different from the highest-yielding variety within that column