

Forage played catch-up in 2006

Most of Oklahoma had good conditions for wheat sowing in the fall of 2006. Conditions for forage growth immediately after sowing, however, were not that good. Wheat that had adequate moisture emerged rapidly but did not grow much in the weeks following emergence. Rains came to most areas of the state in late October and early November and fall wheat forage production quickly resumed and kept up with grazing.

North-central Oklahoma probably had the roughest conditions for forage growth in the fall of 2006. Rainfall was absent from much of this area until late winter. As a result, much of the wheat did not emerge until late winter and grazing was not an option.



The Results

This year, for the first time, we have direct comparisons of wheat forage production in conventional and no-till production systems (Table 1). All sites averaged over 1 ton per acre of wheat forage. Many of the most popular varieties were within the top statistical grouping in our conventional-till plots at Stillwater and El Reno, but the top grouping was a little smaller at our no-till site at El Reno (forage yields that are within the top statistical grouping at a site are shaded).

The one-year (Table 1) and three-year (Table 2) data both clearly show that Oklahoma wheat producers have a wide variety of wheat cultivars to choose from when it comes to grazing. Some of the newcomers to the fall forage trials such as Duster and Centerfield held their own with the perennial top performers like Fannin. The most popular variety in the state, Jagger, performed respectably at all sites but failed to reach the top statistical grouping at any site.

In 2006 the El Reno conventional till plots averaged 3,330 lb/A which topped the no-till plots to the tune of 1,070 lb/A of forage. This is not to say that the no-till forage production was low. In fact, the no-till forage production at El Reno averaged 2,260 lb/A, which is in the ball park of what our forage trials normally produce. It is also important to consider that our no-till plots reached first hollow stem an average of four days later than the conventional-till plots (Table 3).

At this stage in our research we can not definitively determine why forage production was lower in the no-till plots. It is likely that our lack of a rotation decreased our forage production. All plots at El Reno will be sown following canola in 2007, so we will be able to test this hypothesis in future years. It will also be interesting to see if the two systems perform differently when forage production is limited by moisture or when top forage production is under 1 ton per acre.

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 and Stillwater, OK. All plots were sown at 120 lb/A. Conventional-till plots received 50 lb/ac of 18-46-0 in furrow at planting and no-till plots received 5 gal/A of 10-34-0 at planting. Additional location information is listed below.

Location information						
	Planting date	Sampling date	N	pH	P	K
El Reno	9-12-06	12-11-06	160	6.0	120	355
Stillwater	9-19-04	12-13-06	105	5.4	138	430

Funding provided by:



Cooperators

Jeff Edwards, Richard Austin, Melanie Inda, Brett Carver, and Brad Tipton, Oklahoma State University, Department of Plant and Soil Sciences.

Bornemann Farms, El Reno, Oklahoma

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

A handwritten signature in black ink, appearing to read 'Jeff Edwards'.

Dr. Jeff Edwards
Small Grains Extension Specialist, Oklahoma State University

Southern Region

SARE

Table 1. Fall forage production by winter wheat varieties sown in 2006 at El Reno and Stillwater, OK.

Seed source	Variety	Location				Average
		Stillwater	El Reno	El Reno	No-till diff [†]	
			Conv. Till	No Till		
lb/ac						
Oklahoma	Duster	2400 [‡]	3650	2790	-860	2950
Oklahoma	Okfield	2480	3470	2590	-880	2850
Oklahoma	Centerfield	2380	3580	2420	-1160	2790
AgriPro	Fannin	2460	3590	2120	-1470	2720
Kansas	Fuller	2450	3410	2210	-1200	2690
Westbred	Shocker	2210	3310	2520	-790	2680
Oklahoma	2174	2420	3530	2080	-1450	2680
Oklahoma	Deliver	2530	3390	2060	-1330	2660
Johnstons	JEI 110	2350	3240	2330	-910	2640
AgriPro	Doans	2400	3330	2170	-1160	2630
Kansas	Danby	2380	3460	2020	-1440	2620
Oklahoma	OK Bullet	2270	3070	2430	-640	2590
Kansas	Overley	2210	3200	2350	-850	2590
Oklahoma	Endurance	2240	3290	2190	-1100	2570
AgriPro	Cutter	2200	3320	2160	-1160	2560
Agseco	Protection CL	2310	3250	2080	-1170	2550
AgriPro	Jagalene	2310	3240	2080	-1160	2540
Westbred	Santa Fe	2020	3300	2230	-1070	2520
AgriPro	TAM 111	2290	2970	2150	-820	2470
Kansas	Jagger	2200	2940	2190	-750	2440
	Average	2330	3330	2260	-1070	2640
	LSD	310	490	490	500	330

[†] No-till difference = no-till forage minus conventional-till forage

[‡] Shaded numbers are not statistically different from the highest-yielding variety within a column

Table 2. Fall forage production by winter wheat varieties sown in 2004, 2005, and 2006 at El Reno, OK.

Seed source	Variety	2006	2-Year	3-Year
			Average	Average
		lb/ac		
Oklahoma	Deliver	3390 [†]	2870	2860
Johnstons	JEI 110	3240	2980	2800
Oklahoma	Endurance	3290	2840	2800
AgriPro	Cutter	3320	2690	2760
Oklahoma	2174	3530	2860	2750
AgriPro	Jagalene	3240	2650	2580
Kansas	Overley	3200	2500	2460
Kansas	Jagger	2940	2580	2430
AgriPro	Fannin	3590	3140	-
Oklahoma	OK Bullet	3070	2960	-
AgriPro	TAM 111	2970	2430	-
Average		3330	2770	2680
LSD		490	410	390

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

Table 3. Occurrence of first hollow stem (day of year) for winter wheat varieties sown in 2006 at El Reno and Stillwater, OK.

Seed source	Variety	El Reno	El Reno	No-till	
		Stillwater	Conv. Till	No Till	
		DOY [‡]			
Oklahoma	Duster	64	68	72	4
Oklahoma	Okfield	71	72	71	-1
Oklahoma	Centerfield	74	57	65	8
AgriPro	Fannin	57	75	75	0
Kansas	Fuller	57	57	65	8
Westbred	Shocker	59	57	65	8
Oklahoma	2174	74	75	75	0
Oklahoma	Deliver	71	75	75	0
Johnstons	JEI 110	71	70	72	2
AgriPro	Doans	71	68	72	4
Kansas	Danby	74	57	60	3
Oklahoma	OK Bullet	68	70	70	0
Kansas	Overley	57	57	65	8
Oklahoma	Endurance	74	68	72	4
AgriPro	Cutter	57	69	74	5
Agseco	Protection CL	54	57	59	2
AgriPro	Jagalene	57	57	66	9
Westbred	Santa Fe	57	59	61	2
AgriPro	TAM 111	71	72	75	3
Kansas	Jagger	57	68	69	1
Average		65	65	69	4

[†] No-till difference = no-till DOY minus conventional till DOY

[‡] DOY = Day Of Year; for example, March 1 is DOY # 60