



OKLAHOMA SMALL GRAINS VARIETY PERFORMANCE TESTS 2007-2008



J.T. Edwards
R.D. Kochenower
R.E. Austin
B.F. Carver
R.M. Hunger
J.D. Ladd

Partial funding provided by



OKLAHOMA STATE UNIVERSITY DEPARTMENT OF PLANT AND SOIL SCIENCES

PRODUCTION TECHNOLOGY REPORT

PT-2008-2

Vol.20 No. 2

ACKNOWLEDGMENTS

The assistance of the following individuals, companies, and organizations is gratefully acknowledged

Funding was provided by

Oklahoma Wheat Commission & Oklahoma Wheat Research Foundation
USDA-CSREES
Southern Region SARE

State/Area Extension Staff

Roger Gribble, OSU Area Agronomist – Northwest District
Bob Woods, OSU Area Agronomist – Northeast District
Mark Gregory, OSU Area Agronomist – Southwest District

County Staff

Thomas Puffinbarger, Alfalfa County Extension Educator
Rick Nelson, Beaver County Extension Educator
Greg Hartman, Beckham County Extension Educator
David Nowlin, Caddo County Extension Educator
Brad Tipton, Canadian County Extension Educator
Justin Barr, Ellis County Extension Educator
Scott Price, Grant County Extension Educator
Darrell McBee, Harper County Extension Educator
Gary Strickland, Jackson County Extension Educator
Ryan Sproul, Kay County Extension Educator
Keith Boevers, Kingfisher County Extension Educator
Jim Rhodes, Major County Extension Educator
Steve Kraich, Texas County Extension Educator
Aaron Henson, Tillman County Extension Educator
Kourtney Coats, Woods County Extension Educator

Station Superintendents

Erich Wehrenberg, Agronomy Research Station, Stillwater
Ray Sidwell, North Central Research Station, Lahoma
Lawrence Bohl, Oklahoma Panhandle Research and Extension Center, Goodwell
Rodney Farris, Eastern Research Station, Haskell
Jim Kountz, Wheat Pasture Research Unit, Marshall

Student Workers

Dillon Butchee, Jerret Sanders, Jared Austin, and John Dollar

The following donated materials (seed, fertilizer, etc.) for variety trials

AgriPro Wheat, Vernon, TX
WestBred LLC, Haven, KS

Farmer cooperators for each location are listed in the heading of variety trial results. In addition, we thank the following who donated land, resources and time, but whose variety trial location was not harvestable due to environmental factors such as drought.

Cassidy Farms, Frederick
NRCS, Buffalo

CONTENTS

Wheat crop overview.....	3
Variety comparison chart.....	5
Summary of all locations.....	6
2008 results by location	
Alva.....	8
Apache.....	9
Cherokee.....	10
Elk City.....	11
El Reno Conventional-Till	12
El Reno No-Till	13
Gage.....	14
Haskell.....	15
Homestead.....	16
Hooker.....	17
Keyes.....	18
Kildare.....	19
Kingfisher.....	20
Lamont.....	21
Lahoma.....	22
Marshall.....	23
Olustee.....	24
Plant height, lodging scores, and heading dates.....	25
Production Technology Report 2008-1 <i>Fall forage production by winter wheat varieties in Oklahoma 2007</i>	26

Protein data will be reported in a separate publication in August of 2008

**This and other wheat-related publications can be
found at:**

www.wheat.okstate.edu

2008 WHEAT CROP OVERVIEW

Planting conditions in the fall of 2007 were favorable for most of the state. As is usually the case in Oklahoma, some areas lacked for moisture. A large area around Frederick, OK, for example, did not receive sufficient rainfall for wheat emergence until late winter. Rains finally came to this part of the state, however, and most producers were able to salvage a respectable wheat crop.

The Oklahoma Panhandle and parts of northwestern Oklahoma were dry in 2007 as well. Dryland grain yields in this region ranged from the teens in Cimarron County to the mid-twenties in Beaver County. Needless to say, dryland wheat production in the Panhandle and areas west of Buffalo, OK was far from the bumper crop produced in that region in 2007.

Many farmers in northcentral Oklahoma had to contend with extremely dense stands of volunteer wheat. There was some debate as to how to best handle this issue. Some growers delayed planting, hoping that most of the volunteer had emerged prior to the last tillage operation. Others simply planted and hoped that winterkill would remove most of the volunteer from fields. By the end of the season, the volunteer was still present in many fields but had little effect on final grain yield. Wheat plants compensated for the volunteer by tillering less and producing smaller heads.

Fall forage production in the OSU variety testing program ranged from 1,550 to 2,570 lb/ac at Stillwater and 1,180 to 3,000 lb/ac at El Reno. Regardless of the location, there were several varieties that produced acceptable forage yield. It is also important to view forage production data in conjunction with yield performance after grazing.

Even though there was adequate fall forage production around the state, many dual-purpose wheat producers reduced stocking rates or chose to forgo grazing altogether. This was a result of the record-high futures prices for wheat grain. Likewise, many producers chose to terminate grazing earlier than normal, and the bulk of cattle were pulled from wheat pasture by March 1. Average occurrence of first hollow stem among varieties in the OSU testing program at Stillwater was March 12.

Conventional-till and no-till grazed plots at El Reno, OK yielded 2 and 9 bu/ac more than non-grazed

plots. This is in contrast to an average 8 bu/ac yield loss associated with grazing at our Marshall location. These contrasting results further demonstrate that a large portion of the yield penalty associated with grazing wheat is due to planting date. Both grazed and non-grazed plots at El Reno were sown 17 September. So, plots were sown at an optimal date for dual-purpose wheat production but an earlier-than-optimal date for grain-only production. Grazing likely benefited these early-sown plots through removal of excess fall growth. At the Wheat Pasture Research Unit at Marshall, however, we compare grazed vs. non-grazed plots as management systems. Grazed plots were sown 18 September and non-grazed were sown 30 October. Grazed wheat sown at the earlier date yielded 8 bu/ac less than late-sown non-grazed plots. This was partly due to the yield penalty from grazing but was also due to the penalty of an earlier-than-optimal sowing date for grain-only production.

High nitrogen prices impacted fertility choices in 2007 and 2008. Most top-dress nitrogen applications to wheat in Oklahoma are made in January and February. The majority of the top wheat producing areas of the state were still very dry at this time and the crop was not well developed. So, many producers chose to reduce top-dress nitrogen applications and a few chose not to top-dress at all. Favorable environmental conditions during grain fill and adequate mineralization from soil organic matter compensated to some degree for reduced nitrogen applications.

Grass weeds were plentiful during the 2007-2008 crop year. In fact, feral rye pressure was severe enough that some fields were abandoned and cut for hay. There are several possibilities as to why grass weed pressure was higher this crop year. The inability to harvest several acres last year, however, is probably the leading culprit. Since these acres were not harvested for grain, the grass weed seed was not removed from the field and the soil seed bank was overflowing with grass weed seed. Whatever the reason, grass weed pressure was high enough that it will take several years of crop rotation and sound weed management strategies to reduce weed numbers to acceptable levels.

Insect pests frequently observed this year included Hessian fly, greenbugs, bird cherry oat aphids, and wheat stem maggot. Some of these pests reached economic thresholds in localized areas and insecticides were used.

Even though aphid numbers were low during most of the production year, barley yellow dwarf (BYD) was a common problem during 2008. Most of the BYD observed was the result of late-winter or early-spring aphid infestations because leaf discoloration (yellowing from the leaf tip down the leaf) and only slight to moderate stunting were observed.

Symptoms indicative of High Plains Virus and Wheat Streak Mosaic Virus (WSMV) were evident in isolated fields in 2007-2008. The large amount of volunteer wheat present was probably a big factor in the occurrence of these two diseases, as the wheat curl mite (vector for these diseases) needs a green bridge to survive the summer.

Some fields showing yellowing and stunting were incorrectly diagnosed as having WSMV. While field symptoms closely resembled WSMV, repeated lab tests showed that no WSMV was present in these fields. It was determined that the culprit was likely either chloride deficiency or related to rapid changes in temperature.

Another disease that was commonly misdiagnosed on varieties such as Doans and Duster was tan spot. Growers reported seeing yellow and brown necrotic lesions on these varieties. Tan spot was first tentatively identified as the probable cause, but repeated lab tests showed no tan spot to be present. It was determined that the yellowing and necrosis on these varieties was due to a physiological speckling that can sometimes be induced by prolonged cool conditions followed by hot conditions or by chloride deficiency. Similar observations were reported from many states north and east of Oklahoma as the season progressed.

Powdery mildew, leaf rust, stripe rust, and even stem rust were all present during 2008. Only leaf rust, however, approached levels that warranted fungicide application. Many fields were treated with a fungicide, but it is likely that the high grain prices had just as much influence on these decisions as wheat foliar disease reports.

There was one confirmed case of Fusarium head blight (a.k.a. head scab) in 2008. This was in a field near Billings where wheat had been no-tilled into corn residue. The field was not a complete loss, but it is likely that losses were in the 30 to 40% range.

Foliar fungicide application had no effect on grain yield at Apache in 2008, but increased grain yields by an average of 13 bu/ac at Lahoma. This difference in response to foliar fungicides was not a result of products applied or timing of application; rather, it is a reflection of the incidence and severity of disease at each location.

Average air temperatures during grain fill were cooler than normal, which provided ample opportunity for some of the late-emerging wheat to catch up. Summer-like conditions, however, prevailed in late May and temperatures soared to above 100 F. Wheat ripened quickly and harvest crews began rolling throughout the southwest during the last week of May.

Grain yields were much better than expected. Reports of grain yields in the 70 to 80 bu/ac range were not uncommon, and there were a few reports of yields in excess of 100 bu/ac. Harvest was slowed to a halt by rains the first week of June and then continued in an intermittent fashion the remainder of the season. Late-season rains reduced test weights and 90 mph straight-line winds resulted in severe shatter losses.

Methods

Cultural Practices. Conventional plots were eight rows wide with six-inch row spacing. No-till plots were seven rows wide with 7.5-inch row spacing. Plots were either 20 or 40 feet long depending on location. Conventional till plots received 50 lb/ac of 18-46-0 in-furrow at planting. No-till plots received 5 gal/ac of 10-34-0 at planting. The El Reno, Marshall dual-purpose (DP), and Cherokee locations were sown at 120 lb/ac. Marshall grain-only (GO) and Homestead sites were sown at 90 lb/ac to compensate for late sowing. All other locations were sown at 60 lb /ac. Grazing pressure, nitrogen fertilization and insect and weed control decisions were all made on a location-by-location basis and reflect standard management practices for the area.

Additional information on the Web

A copy of this publication as well as additional variety information and more information on wheat management can be found at

www.wheat.okstate.edu

Wheat Variety Comparison Chart

Production Technology Vol. 18, No. 6 rev. 1

www.wheat.okstate.edu

July, 2007

Source	Entry	Lodging	First Hollow Stem	Maturity	High-temp germ. sensitivity	Coleoptile Length	Acid Soil Tolerance	Hessian Fly	Wheat Streak Mosaic†	Septoria	Soil-borne Mosaic	Leaf Rust	Stripe Rust	Powdery Mildew	Tan Spot	Variety Protection
HARD RED WINTER WHEAT VARIETIES																
AgriPro	AP502 CL	3	VE	VE	2	1	4	S	-	3	3	4	4	1	2	P-94
AgriPro	Cutter	4	VE	M	4	3	1	S	3	3	1	4	1	4	4	P-94
AgriPro	Doans	2	M	M	-	-	2	S	-	2	2	1	1	2	-	P-94
AgriPro	Dumas	1	E	E	2	4	4	S	-	3	4	3	-	3	2	P-94
AgriPro	Fannin	2	VE	VE	3	1	1	-	-	-	1	1	1	2	-	P-94
AgriPro	Jagalene	2	E	E	3	2	2	S	3	2	1	4	1	4	3	P-94
AGSECO	7853	3	VE	M	3	4	2	-	-	2	1	3	-	2	-	N
CSU	Above	2	VE	VE	2	2	4	-	3	3	4	4	4	1	2	P-94
CSU	Hatcher	3	-	M	-	2	3	-	-	-	-	3	2	-	-	P-94
CSU	Ripper	1	-	VE	-	2	4	S	-	-	-	4	4	-	-	P-94
KSU	Karl 92	3	E	E	2	4	3	-	-	2	1	4	-	1	2	P
KSU	2137	1	L	L	3	4	1	S	3	3	2	3	4	2	3	P-94
KSU	2145	2	E	E	2	2	3	PR	4	2	1	1	2	3	4	P-94
KSU	Fuller	2	VE	E	-	-	3	-	3	3	1	1	1	3	3	A-94
KSU	Ike	3	VL	L	2	2	4	PR	-	1	4	4	-	2	-	P-94
KSU	Jagger	3	VE	VE	1	2	1	S	3	1	1	4	1	4	2	P-94
KSU	Overley	1	VE	VE	4	3	2	S	3	2	1	3	1	4	2	A-94
NE	Scout 66	4	-	L	-	1	4	-	-	3	4	4	-	3	-	N
OSU	Triumph 64	4	L	M	4	1	4	-	-	4	4	4	-	3	1	N
OSU	2174	1	VL	L	4	3	3	PR	4	2	1*	2	2	1	4	P-94
OSU	Chisholm	2	L	E	3	3	3	PR	-	3	4	4	1	3	4	N
OSU	Centerfield	2	L	M	4	3	3	PR	-	-	2	2	2	1	4	A-94
OSU	Custer	2	E	E	1	3	4	-	-	3	4	3	4	1	3	N
OSU	Deliver	3	L	M	2	4	4	-	-	2	1	1	1	1	3	A-94
OSU	Duster	3	M	M	1	3	1	R	-	3	1	1	2	2	4	A-94
OSU	Endurance	2	VL	M	1	2	1	S	4	3	2*	2	2	2	3	A-94
OSU	OK Bullet	1	E	E	1	2	2	S	3	2	2	3	1	3	3	A-94
OSU	Ok101	2	E	VE	1	4	1	S	-	3	2	3	3	4	4	N
OSU	Ok102	1	VL	L	4	1	3	PR	-	3	1	2	4	2	4	N
OSU	Okfield	2	M	L	4	1	3	PR	-	3	4	3	3	1	3	A-94
TX	Lockett	4	E	VL	1	-	2	S	-	-	4	2	3	-	-	P-94
TX	TAM 107	3	E	M	3	2	4	-	-	3	4	4	-	1	-	P
TX	TAM 110	2	VE	VE	2	1	4	S	3	3	4	4	4	1	4	P-94
TX	TAM 111	3	M	M	3	1	3	S	3	2	3	3	1	3	3	P-94
TX	TAM 112	4	-	E	-	1	1	S	3	-	-	3	4	1	-	P-94
TX	TAM 303	2	-	E	-	1	-	S	-	-	-	1	3	1	-	A-94
WestBred	Shocker	2	VE	E	4	3	2	S	4	2	1	1	2	2	2	P-94
WestBred	Santa Fe	2	VE	E	1	2	2	S	3	1	1	1	2	3	2	P-94
HARD WHITE WHEAT VARIETIES																
KSU	Danby	3	VL	M	4	3	3	-	3	4	4	4	1	4	4	A-94
KSU	Heyne	3	VE	M	1	-	1	-	-	2	1	1	-	2	-	P-94
KSU	Lakin	2	VL	M	1	4	3	-	-	4	2	3	4	4	3	P-94
KSU	RonL	3	L	M	-	3	4	S	1	4	1	3	1	2	4	P-94
KSU	Trego	4	L	M	2	3	4	S	3	3	2	4	4	3	4	P-94
OSU	Guymon	3	VE	L	1	4	3	S	-	2	1	3	4	3	3	A-94
OSU	Intrada	4	E	E	1	3	3	S	-	3	2	3	3	4	2	N

General:

1 = Excellent
4 = Poor

Maturity & First Hollow Stem

VE = Very Early
E = Early
M = Medium
L = Late
VL = Latest

Coleoptile:

1 = Longest
4 = Shortest

Hessian Fly

S = Susceptible
PR = Partially resistant
R = Resistant

Variety Protection:

N = Not protected
P = Protected PVPA - 1970
P - 94 = Protected PVPA - 1994
A-94 = PVPA - 1994 applied for

* reaction presented is to soilborne mosaic; reaction to spindle streak is a '3'

† Ratings for wheat streak mosaic virus adapted from K-STATE publication MF-991, Erick De Wolf author.

Acknowledgments: The authors greatly appreciate the input of Erick De Wolf, KSU; Jackie Rudd, TAMU; Sid Perry, WestBred; Scott Haley, CSU; David Worrall, AgriPro; and Joe Martin, KSU for their comments and input in the revision of this publication

Oklahoma State University, Department of Plant and Soil Sciences, Production Technology Report PT 2006-6 rev. 1

Jeff Edwards - Small Grains Extension; Bob Hunger - Plant Pathology Extension; Brett Carver - Wheat Breeding; and Tom Royer - Extension Entomologist

2008 Oklahoma Wheat Variety Trial Summary

Variety	Alva	Apache	Apache fungicide	Cherokee	Elk City	El Reno Conv Till DP	El Reno Conv Till GO	El Reno No-Till DP	El Reno No-Till GO	Gage	Haskell
-----bu/ac-----											
Centerfield	59	54	53	47	26	57	52	81	65	36	50
Danby (W)	-	-	-	-	-	-	-	-	-	-	-
Deliver	61	47	53	48	21	66	53	83	72	34	55
Doans	63	61	55	50	26	64	51	71	66	39	52
Duster	65	71	67	55	28	87	85	94	87	41	62
Endurance	60	55	53	55	30	74	74	82	78	41	66
Fannin	54	50	49	37	27	45	57	58	58	30	61
Fuller	69	68	67	47	29	69	69	95	78	40	59
Guymon (W)	-	-	-	-	-	-	-	-	-	-	-
Jackpot	66	61	53	49	25	64	55	86	70	41	52
Jagalene	58	64	60	52	24	57	55	79	70	40	43
Jagger	59	60	63	51	25	61	59	84	65	35	47
Mace	-	-	-	-	-	-	-	-	-	-	-
OK Bullet	60	63	54	50	30	59	65	81	78	38	50
OK Rising (W)	63	59	56	-	23	-	-	-	-	37	-
Okfield	58	58	62	42	26	68	62	76	65	36	54
Overley	55	57	57	39	18	49	45	55	53	36	46
Santa Fe	60	59	60	51	25	65	69	84	82	36	53
Shocker	58	61	67	48	21	57	55	78	69	33	47
TAM 111	62	-	-	-	27	-	-	-	-	40	-
TAM 112	-	-	-	-	-	-	-	-	-	-	-
TAM 203		58	61	-	-	-	-	-	-	-	-
TAM 304		-	-	-	-	-	-	-	-	-	58
OK00514-05806	-	52	58	-	31	-	-	-	-	-	-
OK00611W	56	-	-	-	-	-	-	-	-	-	-
OK02405	-	-	-	-	26	-	-	-	-	-	-
OK03305	60	66	61	-	26	-	-	-	-	-	-
OK03522	60	60	61	-	29	-	-	-	-	-	-
OK04505	62	63	55	-	-	-	-	-	-	-	-
OK05737W	64	-	-	-	-	-	-	-	-	34	-
OK05903C	-	-	-	-	-	-	-	-	-	-	-
OK07S110	-	-	-	-	-	-	-	-	-	-	-
STARS 0601W	-	-	-	-	-	-	-	-	-	-	-
Eve Barley	-	-	-	-	-	-	-	-	-	-	-
Va 125 Barley	-	-	-	-	-	-	-	-	-	-	-
Mean	61	59	58	48	26	63	61	79	70	37	53
LSD_(0.05)	5	8	9	8	2	11	10	7	11	4	5

2008 Oklahoma Wheat Variety Trial Summary

Variety	Homestead Conv Till	Homestead No-Till	Hooker	Keyes	Kildare	Kingfisher	Lamont	Lahoma	Lahoma fungicide	Marshall grazed	Marshall non-grazed	Olustee
	-----bu/ac-----											
Centerfield	33	41	-	-	43	56	46	60	69	52	59	51
Danby (W)	-	-	25	22	-	-	-	-	-	-	-	-
Deliver	31	40	25	23	50	47	48	68	75	54	62	53
Doans	32	40	-		48	57	65	71	75	52	64	51
Duster	32	46	24	25	53	65	67	65	79	60	71	50
Endurance	34	42	26	25	54	62	51	66	74	60	67	53
Fannin	34	30	-	-	44	51	57	68	80	52	62	49
Fuller	36	49	27	18	60	61	69	73	80	59	73	59
Guymon (W)	-	-	25	28	-	-	-	-	-	-	-	-
Jackpot	42	47	-	-	51	60	71	80	96	61	76	56
Jagalene	28	34	28	25	45	55	44	43	71	46	41	56
Jagger	34	39	24	14	44	56	46	47	74	57	49	56
Mace	-	-	24	23	-	-	-	-	-	-	-	-
OK Bullet	34	39	26	24	41	58	51	52	73	55	60	55
OK Rising (W)	-	-	-	19	39	55	51	59	76	49	62	-
Okfield	33	43	-	-	44	53	44	52	72	51	56	49
Overley	27	33	-	-	43	54	58	66	75	59	69	55
Santa Fe	38	41	-	-	60	54	62	72	77	54	64	57
Shocker	32	38	-	-	56	49	55	81	84	54	65	53
TAM 111	-	-	27	30	-	-	-	-	-	-	-	-
TAM 112	-	-	27	30	-	-	-	-	-	-	-	-
TAM 203	-	-	-	-	-	61	-	78	84	62	72	59
TAM 304	-	-	-	-	56	-	69	-	-	-	-	-
OK00514-05806	-	-	-	-	41	-	48	50	74	-	-	-
OK00611W	-	-	-	-	44	56	50	61	74	-	62	-
OK02405	-	-	-	-	-	-	-	-	-	-	-	50
OK03305	-	-	-	-	-	58	-	-	-	-	-	52
OK03522	-	-	-	-	45	54	63	77	79	57	67	-
OK04505	-	-	-	-	56	-	59	69	78	58	65	52
OK05737W	-	-	-	-	39	61	-	55	77	-	-	-
OK05903C	-	-	-	-	-	-	-	-	-	54	-	47
OK07S110	-	-	-	-	-	-	-	59	65	-	-	-
STARS 0601W	-	-	22	12	-	-	-	-	-	-	-	-
Eve Barley	-	-	-	-	-	-	-	-	-	25	57	-
Va 125 Barley	-	-	-	-	-	-	-	-	-	39	55	-
Mean	33	40	25	23	48	56	56	64	77	55	63	53
LSD _(0.05)	8	8	3	5	9	5	8	6	7	8	7	6

Alva Variety Trial

Cooperator: Wes Mallory	Tillage: Conventional till
Soil type: Grant silt loam	Management: Grain only
Planting date: 10-12-07	Previous crop: Wheat
Harvest date: 06-12-08	Soil test information: pH = 5.8, P = 79, K = 502

Source	Variety	Grain Yield			Test Weight
		2007-08	2-Year	3-Year	2007-08
		-----bu/ac-----			---lb/bu---
Kansas	Fuller	69	51	-	59
AgriPro	Jackpot	66	-	-	58
Oklahoma	Duster	65	50	44	58
AgriPro	Doans	63	48	-	60
Oklahoma	OK Rising (W)	63	47	41	57
Texas	TAM 111	62	45	40	59
Oklahoma	Deliver	61	48	41	60
Oklahoma	Endurance	60	47	41	58
Oklahoma	OK Bullet	60	47	42	59
WestBred	Santa Fe	60	47	42	58
Kansas	Jagger	59	40	38	57
Oklahoma	Centerfield	59	48	-	59
AgriPro	Jagalene	58	38	36	59
Oklahoma	Okfield	58	41	37	58
WestBred	Shocker	58	46	-	57
Kansas	Overley	55	45	41	58
AgriPro	Fannin	54	42	38	59
Experimentals					
	OK05737W	64	-	-	57
	OK04505	62	-	-	58
	OK03305	60	-	-	58
	OK03522	60	-	-	58
	OK00611W	56	44	40	57
	Mean	61	46	40	58
	LSD _(0.05)	5	3	3	1

(W) = Hard white wheat variety

Apache Variety Trial

Cooperator: Bryan Vail
 Soil type: Hollister Silt Loam
 Planting date: 10-11-07
 Harvest date: 06-04-08

Management: Grain only
 Soil test information: pH = 6.4, P = 40 , K = 402
 Previous crop: Wheat
 Fungicide = Stratego @ 10 oz/ac on April 18, 2008

Source	Variety	Grain Yield									Test Weight		
		2007-08			2-Year			3-Year			2007-08		
		No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.
		-----bu/ac-----									-----lb/bu-----		
Oklahoma	Duster	71	67	-4	49	49	0	-	-	-	63	64	0
Kansas	Fuller	68	67	-1	-	-	-	-	-	-	63	64	0
AgriPro	Jagalene	64	60	-4	51	48	-3	50	50	0	64	64	0
Oklahoma	OK Bullet	63	54	-9	49	44	-5	50	47	-3	63	62	-1
AgriPro	Jackpot	61	53	-8	-	-	-	-	-	-	63	63	0
WestBred	Shocker	61	67	6	-	-	-	-	-	-	62	63	1
AgriPro	Doans	61	55	-6	-	-	-	-	-	-	64	64	0
Kansas	Jagger	60	63	3	47	48	1	49	50	1	62	63	1
WestBred	Santa Fe	59	60	1	45	46	1	-	-	-	63	63	0
Oklahoma	OK Rising (W)	59	56	-3	37	38	1	-	-	-	62	62	0
Texas	TAM 203	58	61	3	-	-	-	-	-	-	61	61	0
Oklahoma	Okfield	58	62	4	42	44	2	-	-	-	61	62	1
Kansas	Overley	57	57	0	45	46	1	51	53	2	63	63	0
Oklahoma	Endurance	55	53	-2	43	42	-1	45	47	2	62	62	0
Oklahoma	Centerfield	54	53	-1	-	-	-	-	-	-	62	62	0
AgriPro	Fannin	50	49	-1	37	37	0	41	40	-1	63	63	0
Oklahoma	Deliver	47	53	6	37	41	4	39	42	3	63	63	0
	Experimentals												
	OK00514-05806	52	58	6	-	-	-	-	-	-	62	63	1
	OK03522	60	61	1	-	-	-	-	-	-	64	64	0
	OK04505	63	55	-8	-	-	-	-	-	-	62	62	0
	OK03305	66	61	-5	-	-	-	-	-	-	63	63	0
	Mean	59	58	-1	44	44	0	46	47	1	63	63	0
	LSD [†] _(0.05)	8	9	NS [‡]	5	5	NS	4	4	NS	1	1	NS

[†] LSD = least significant difference for comparing two means within a column

(W) = Hard white wheat variety

[‡] Differences between nontreated and fungicide-treated plots were nonsignificant

Cherokee Variety Trial

Cooperator: Kenneth Failes

Tillage: Conventional till

Soil type: Dale silt loam

Management: Dual Purpose[†]

Planting date: 10-01-07

Previous crop: Wheat

Harvest date: 06-12-08

Soil test information: pH = 6.2, P = 76, K = 710

Source	Variety	Grain Yield			Test Weight
		2007-08	2-Year	3-Year	2007-08
		-----bu/ac-----			-----lb/bu-----
Oklahoma	Duster	55	41	30	57
Oklahoma	Endurance	55	47	33	56
AgriPro	Jagalene	52	33	26	58
Kansas	Jagger	51	35	30	56
WestBred	Santa Fe	51	42	31	56
AgriPro	Doans	50	39	-	59
Oklahoma	OK Bullet	50	40	30	59
AgriPro	Jackpot	49	-	-	57
WestBred	Shocker	48	41	-	56
Oklahoma	Deliver	48	41	28	58
Kansas	Fuller	47	41	-	56
Oklahoma	Centerfield	47	40	-	57
Oklahoma	Okfield	42	37	27	55
Kansas	Overley	39	35	28	57
AgriPro	Fannin	37	33	24	58
Mean		48	39	29	57
LSD _(0.05)		8	5	3	1

[†]Management was grain-only in 2006-2007

Elk City Variety Trial

Cooperator: Carl Simon	Tillage: Conventional till
Soil type: Grandfield sandy loam	Management: Grain Only
Planting date: 10-02-07	Previous crop: Wheat
Harvest date: 06-05-08	Soil test information: pH = 5.3, P = 51, K = 352

Source	Variety	Grain Yield [†]			Test Weight
		2007-08	2-Year	3-Year	2007-08
		----bu/ac----			----lb/bu----
Oklahoma	OK Bullet	30	45	43	62
Oklahoma	Endurance	30	42	38	61
Kansas	Fuller	29	43	-	63
Oklahoma	Duster	28	35	34	62
Texas	TAM 111	27	35	-	61
AgriPro	Fannin	27	41	37	63
AgriPro	Doans	26	42	-	63
Oklahoma	Centerfield	26	36	-	61
Oklahoma	Okfield	26	32	32	58
Kansas	Jagger	25	32	33	62
AgriPro	Jackpot	25	-	-	62
WestBred	Santa Fe	25	38	37	63
AgriPro	Jagalene	24	29	32	62
Oklahoma	OK Rising (W)	23	43	-	60
Oklahoma	Deliver	21	42	37	61
WestBred	Shocker	21	38	-	62
Kansas	Overley	18	34	34	62
Experimentals					
	OK00514-05806	31	-	-	61
	OK03522	29	-	-	61
	OK02405	26	-	-	59
	OK03305	26	41	-	62
	Mean	26	38	36	62
	LSD _(0.05)	2	2	2	1

[†] A hail storm the last week of May caused shattering and lodging in all plots. Losses were estimated at 30%.

EI Reno Conventional-Till Variety Trial

Cooperator: Bornemann Farms
Soil type: Pond creek silt loam
Planting date: 09-17-07
Harvest date: 06-23-08

Tillage: Conventional till
Fungicide: All plots received Stratego at GS 9
Previous crop: Canola
Soil test information: pH = 4.7, P = 102, K = 328

Source	Variety	Grain Yield						Test Weight			
		2007-08			2-year			3-Year	Non-grazed		
		Grazed [†]	Non-grazed	Diff.	Grazed	Non-grazed	Diff.	Grazed	Grazed	Non-grazed	Diff.
		-----bu/ac-----						-----lb/bu-----			
Oklahoma	Duster	87	85	-2	53	56	3	50	60	61	1
Oklahoma	Endurance	74	74	0	46	49	3	43	59	60	1
Kansas	Fuller	69	69	0	43	47	4	-	59	61	2
Oklahoma	Okfield	68	62	-6	42	39	-3	41	58	59	1
Oklahoma	Deliver	66	53	-13	43	37	-6	42	59	60	1
WestBred	Santa Fe	65	69	4	39	45	6	39	59	60	1
AgriPro	Doans	64	51	-13	43	36	-7	-	59	61	2
AgriPro	Jackpot	64	55	-9	-	-	-	-	59	59	0
Kansas	Jagger	61	59	-2	34	39	5	36	60	61	1
Oklahoma	OK Bullet	59	65	6	38	43	5	40	60	62	2
Oklahoma	Centerfield	57	52	-5	36	32	-4	-	58	61	3
AgriPro	Jagalene	57	58	1	32	38	6	35	60	60	0
WestBred	Shocker	57	55	-2	36	38	2	-	58	60	2
Kansas	Overley	49	45	-4	32	38	6	36	58	61	3
AgriPro	Fannin	45	57	12	26	38	12	26	59	61	2
	Mean	63	61	-2	39	41	2	39	59	60	1
	LSD _(0.05)	11	10	12	8	5	7	5	1	1	1

[†] Dual-purpose plots were grazed from 20 November 2007 to 20 February 2008 for a total of 93 days. Stocking rate was 0.52 head per acre. Average daily gain was 1.82 lb/hd/day.

El Reno No-Till Variety Trial

Cooperator: Bornemann Farms	Tillage: No-till
Soil type: Pond creek silt loam	Fungicide: All plots received Stratego at GS 9
Planting date: 09-17-07	Previous crop: Canola
Harvest date: 06-23-08	Soil test information: pH = 4.7, P = 116, K = 264

Source	Variety	Grain Yield						Test Weight		
		2007-08			2-year			Non-		
		Grazed [†]	Non-grazed	<i>Diff.</i>	Grazed	Non-grazed	<i>Diff.</i>	Grazed	grazed	<i>Diff.</i>
		-----bu/ac-----						-----lb/bu-----		
Kansas	Fuller	95	78	-17	58	54	-4	60	62	2
Oklahoma	Duster	94	87	-7	56	56	0	59	61	2
AgriPro	Jackpot	86	70	-16	-	-	-	59	61	2
WestBred	Santa Fe	84	82	-2	49	55	6	59	61	2
Kansas	Jagger	84	65	-19	47	44	-3	60	62	2
Oklahoma	Deliver	83	72	-11	50	46	-4	59	61	2
Oklahoma	Endurance	82	78	-4	51	52	1	58	61	3
Oklahoma	Centerfield	81	65	-16	47	39	-8	59	61	2
Oklahoma	OK Bullet	81	78	-3	50	53	3	60	62	2
AgriPro	Jagalene	79	70	-9	45	45	0	59	60	1
WestBred	Shocker	78	69	-9	46	47	1	59	61	2
Oklahoma	Okfield	76	65	-11	45	40	-5	57	60	3
AgriPro	Doans	71	66	-5	50	47	-3	60	62	2
AgriPro	Fannin	58	58	0	33	40	7	60	63	3
Kansas	Overley	55	53	-2	37	43	6	59	61	2
	Mean	79	70	-9	47	47	0	59	61	2
	LSD _(0.05)	7	11	12	4	6	5	1	1	1

[†] Dual-purpose plots were grazed from 20 November 2007 to 20 February 2008 for a total of 93 days. Stocking rate was 0.52 head per acre. Average daily gain was 1.82 lb/hd/day.

Gage Variety Trial

Cooperator: Curtis Torrance

Tillage: Conventional till

Soil type: St. Paul silt loam

Management: Dual Purpose

Planting date: 09-27-07

Previous crop: Wheat

Harvest date: 06-16-08

Soil test information: pH = 7.4, P = 41, K = 611

Source	Variety	Grain Yield			Test Weight
		2007-08	2-Year [†]	3-Year	2007-08
		-----bu/ac-----			-----lb/bu-----
AgriPro	Jackpot	41	-	-	58
Oklahoma	Duster	41	46	34	56
Oklahoma	Endurance	41	46	35	57
AgriPro	Jagalene	40	40	30	59
Kansas	Fuller	40	47	-	57
Texas	TAM 111	40	44	34	58
AgriPro	Doans	39	41	-	60
Oklahoma	OK Bullet	38	43	35	59
Oklahoma	OK Rising (W)	37	42	-	58
WestBred	Santa Fe	36	39	31	56
Oklahoma	Okfield	36	40	30	56
Kansas	Overley	36	39	30	58
Oklahoma	Centerfield	36	38	-	57
Kansas	Jagger	35	37	29	57
Oklahoma	Deliver	34	42	32	58
WestBred	Shocker	33	35	-	57
AgriPro	Fannin	30	34	25	57
Experimentals					
	OK05737W	34	-	-	55
Mean		37	41	31	57
LSD _(0.05)		4	4	3	1

[†]Plots were not grazed in 2006-7

Haskell Variety Trial

Cooperator: Eastern Research Station	Tillage: Conventional till
Soil type: Taloka silt loam	Management: Grain only
Planting date: 11-01-07	Previous crop: Wheat
Harvest date: 06-24-08	Soil test information: pH = 6.3, P = 36, K = 163

Source	Variety	Grain Yield			Test Weight
		2007-08	2-Year	3-Year	2007-08
		-----bu/ac-----			-----lb/bu-----
Oklahoma	Endurance	66	57	60	55
Oklahoma	Duster	62	56	-	55
AgriPro	Fannin	61	49	54	56
Kansas	Fuller	59	-	-	56
Texas	TAM 304	58	-	-	51
Oklahoma	Deliver	55	46	46	56
Oklahoma	Okfield	54	48	-	54
WestBred	Santa Fe	53	48	-	54
AgriPro	Doans	52	-	-	57
AgriPro	Jackpot	52	-	-	55
Oklahoma	Centerfield	50	47	-	55
Oklahoma	OK Bullet	50	49	-	55
Kansas	Jagger	47	46	42	54
WestBred	Shocker	47	-	-	54
Kansas	Overley	46	45	38	56
AgriPro	Jagalene	43	44	49	54
	Mean	53	49	48	55
	LSD _(0.05)	5	4	4	1

Homestead Variety Trial

Cooperator: Brook Strader

Management: Grain only

Soil type: Canadian fine sandy loam

Tillage: Conventional till and No-till

Planting date: 10-09-07

Previous crop: Grain sorghum

Harvest date: 06-18-08

Soil test information: pH = 5.7, P = 43, K = 171

Source	Variety	Grain Yield			Test Weight		
		2007-08			2007-08		
		Coventional till	No till	<i>Diff.</i>	Conventional till	No till	<i>Diff.</i>
		-----bu/ac-----			-----lb/bu-----		
AgriPro	Jackpot	42	47	5	55	56	1
WestBred	Santa Fe	38	41	3	55	56	1
Kansas	Fuller	36	49	13	56	56	0
Oklahoma	Endurance	34	42	8	55	55	0
AgriPro	Fannin	34	30	-4	57	57	0
Kansas	Jagger	34	39	5	56	56	0
Oklahoma	OK Bullet	34	39	5	57	57	0
Oklahoma	Centerfield	33	41	8	55	56	1
Oklahoma	Okfield	33	43	10	54	55	1
AgriPro	Doans	32	40	8	57	57	0
Oklahoma	Duster	32	46	14	54	56	2
WestBred	Shocker	32	38	6	55	56	1
Oklahoma	Deliver	31	40	9	55	56	1
AgriPro	Jagalene	28	34	6	55	56	1
Kansas	Overley	27	33	6	56	56	0
	Mean	33	40	7	55	56	1
	LSD _(0.05)	8	8	10	1	1	1

Hooker Variety Trial

Cooperator: Dan Herald

Tillage: No-till

Soil type: Dalhart fine sandy loam

Management: Grain only

Planting date: 09-29-07

Previous crop: Grain sorghum

Harvest date: 06-25-08

Source	Variety	Grain Yield		Test Weight
		2007-08	2-Year	2007-08
		----bu/ac----		----lb/bu----
AgriPro	Jagalene	28	43	54
Kansas	Fuller	27	-	53
Texas	TAM 111	27	46	55
Texas	TAM 112	27	-	54
Oklahoma	Endurance	26	48	54
Oklahoma	OK Bullet	26	47	54
Oklahoma	Deliver	25	-	54
Kansas	Danby (W)	25	43	56
Oklahoma	Guymon (W)	25	-	55
Kansas	Jagger	24	43	53
Oklahoma	Duster	24	52	53
Nebraska	Mace	24	-	54
Experimentals				
	STARS 0601W	22	-	56
Mean		25	46	54
LSD _(0.05)		3	4	1

(W) = Hard white wheat variety

Keyes Variety Trial

Cooperator: J.B. Stewart
Soil type: Richfield clay loam
Planting date: 09-27-07
Harvest date: 06-28-08

Tillage: Minimum-till
Management: Grain only
Previous crop: Grain sorghum

Source	Variety	Grain Yield		Test Weight
		2007-08	2-Year	2007-08
		----bu/ac----	----lb/bu-----	
Texas	TAM 111	30	49	61
Texas	TAM 112	30	-	61
Oklahoma	Guymon (W)	28	-	62
Oklahoma	Duster	25	48	60
Oklahoma	Endurance	25	47	60
AgriPro	Jagalene	25	45	60
Oklahoma	OK Bullet	24	47	60
Oklahoma	Deliver	23	-	60
Nebraska	Mace	23	-	59
Kansas	Danby (W)	22	48	62
Oklahoma	OK Rising (W)	19	-	59
Kansas	Fuller	18	-	59
Kansas	Jagger	14	38	58
Experimentals				
	STARS 0601W	12	-	59
Mean		23	46	60
LSD _(0.05)		5	4	1

(W) = Hard white wheat variety

Kildare Variety Trial

Cooperator: Don Schieber	Tillage: No-till
Soil type: Tabler Silt Loam	Management: Grain only
Planting date: 11-02-07	Previous crop: Wheat
Harvest date: 06-24-08	Soil test information: pH = 5.8, P = 69, K = 508

Source	Variety	Grain Yield 2007-08 ----bu/ac----	Test Weight 2007-08 ----lb/bu-----
WestBred	Santa Fe	60	59
Kansas	Fuller	60	60
WestBred	Shocker	56	60
Texas	TAM 304	56	55
Oklahoma	Endurance	54	58
Oklahoma	Duster	53	57
AgriPro	Jackpot	51	60
Oklahoma	Deliver	50	60
AgriPro	Doans	48	61
AgriPro	Jagalene	45	58
Oklahoma	Okfield	44	57
Kansas	Jagger	44	57
AgriPro	Fannin	44	60
Kansas	Overley	43	58
Oklahoma	Centerfield	43	57
Oklahoma	OK Bullet	41	56
Oklahoma	OK Rising (W)	39	56
	Experimentals		
	OK04505	56	57
	OK03522	45	58
	OK00611W	44	56
	OK00514-05806	41	56
	OK05737W	39	53
	Mean	48	58
	LSD _(0.05)	9	2

(W) = Hard white wheat variety

Kingfisher Variety Trial

Cooperator: Rodney Mueggenborg	Tillage: Conventional till
Soil type: Renfro clay loam	Management: Grain only
Planting date: 10-30-07	Previous crop: Wheat
Harvest date: 06-13-08	Soil test information: pH = 6.2, P = 38, K = 434

Source	Variety	Grain Yield			Test Weight
		2007-08	2-Year	3-Year	2007-08
		-----bu/ac-----			-----lb/bu-----
Oklahoma	Duster	65	58	46	59
Oklahoma	Endurance	62	53	47	57
Texas	TAM 203	61	-	-	56
Kansas	Fuller	61	57	-	59
AgriPro	Jackpot	60	-	-	58
Oklahoma	OK Bullet	58	54	46	59
AgriPro	Doans	57	48	-	59
Kansas	Jagger	56	48	45	58
Oklahoma	Centerfield	56	44	-	59
Oklahoma	OK Rising (W)	55	53	45	55
AgriPro	Jagalene	55	48	43	59
WestBred	Santa Fe	54	52	45	58
Kansas	Overley	54	52	45	58
Oklahoma	Okfield	53	48	43	57
AgriPro	Fannin	51	47	38	60
WestBred	Shocker	49	48	-	59
Oklahoma	Deliver	47	44	38	59
Experimentals					
	OK05737W	61	57	-	58
	OK03305	58	-	-	60
	OK00611W	56	-	-	57
	OK03522	54	53	-	59
	Mean	56	51	44	58
	LSD _(0.05)	5	4	4	2

(W) = Hard white wheat variety

Lamont Variety Trial

Cooperator: Kirby Farms	Tillage: Conventional till
Soil type: Pond creek silt loam	Management: Grain only
Planting date: 10-10-07	Previous crop: Wheat
Harvest date: 06-26-08	Soil test information: pH = 5.3, P = 33, K = 323

Source	Variety	Grain Yield		Test Weight
		2007-08	2-Year	2007-08
		-----bu/ac----		-----lb/bu-----
AgriPro	Jackpot	71	-	60
Kansas	Fuller	69	-	60
Texas	TAM 304	69	-	58
Oklahoma	Duster	67	59	59
AgriPro	Doans	65	-	61
WestBred	Santa Fe	62	55	59
Kansas	Overley	58	51	59
AgriPro	Fannin	57	47	61
WestBred	Shocker	55	-	59
Oklahoma	Endurance	51	44	56
Oklahoma	OK Bullet	51	49	59
Oklahoma	OK Rising (W)	51	47	57
Oklahoma	Deliver	48	42	60
Oklahoma	Centerfield	46	43	59
Kansas	Jagger	46	49	57
AgriPro	Jagalene	44	47	57
Oklahoma	Okfield	44	41	57
Experimentals				
	OK03522	63	-	60
	OK04505	59	-	58
	OK00611W	50	47	57
	OK00514-05806	48	-	60
	Mean	56	48	59
	LSD _(0.05)	8	5	1

(W) = Hard white wheat variety

Lahoma Variety Trial

Cooperator: North Central Research Station

Management: Grain only

Soil type: Pond Creek Silt Loam

Soil test information: pH = 6.0, P = 33, K = 348

Planting date: 10-25-07

Previous crop: Wheat

Harvest date: 06-16-08

Fungicide = Quilt @ 14 oz/ac on April 28, 2008

Source	Variety	Grain Yield									Test Weight		
		2007-08			2-Year			3-Year			2007-08		
		No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.
		-----bu/ac-----									-----lb/bu-----		
WestBred	Shocker	81	84	3	-	-	-	-	-	-	57	58	1
AgriPro	Jackpot	80	96	16	-	-	-	-	-	-	57	59	2
Texas	TAM 203	78	84	6	-	-	-	-	-	-	56	57	2
Kansas	Fuller	73	80	7	-	-	-	-	-	-	58	59	2
WestBred	Santa Fe	72	77	5	70	72	2	-	-	-	57	59	2
AgriPro	Doans	71	75	4	-	-	-	-	-	-	60	61	1
AgriPro	Fannin	68	80	12	65	73	8	63	70	7	58	60	2
Oklahoma	Deliver	68	75	8	62	68	6	60	65	6	59	60	1
Oklahoma	Endurance	66	74	8	69	71	2	64	68	3	55	57	2
Kansas	Overley	66	75	9	71	74	3	68	71	2	56	59	3
Oklahoma	Duster	65	79	14	70	76	6	-	-	-	56	58	2
Oklahoma	Centerfield	60	69	9	-	-	-	-	-	-	57	59	2
Oklahoma	OK Rising (W)	59	76	17	-	-	-	-	-	-	53	57	4
Oklahoma	Okfield	52	72	20	56	67	11	-	-	-	54	58	4
Oklahoma	OK Bullet	52	73	21	63	73	10	-	-	-	55	60	5
Kansas	Jagger	47	74	26	57	73	16	57	71	14	53	57	4
AgriPro	Jagalene	43	71	27	57	73	17	58	71	12	54	59	5
	Experimentals												
	OK00514-05806	50	74	24	-	-	-	-	-	-	55	60	5
	OK00611W	61	74	13	-	-	-	-	-	-	54	57	4
	OK03522	77	79	2	-	-	-	-	-	-	59	60	1
	OK04505	69	78	10	-	-	-	-	-	-	56	57	2
	OK05737W	55	77	22	-	-	-	-	-	-	53	57	4
	OK07S110	59	65	5	-	-	-	-	-	-	60	60	1
	Mean	64	77	13	64	72	8	62	69	7	56	59	3
	LSD _(0.05)	6	7	7	5	5	5	3	4	6	1	1	1

(W) = Hard white wheat variety

Marshall Variety Trial

Cooperator: Henry Fuxa

Soil type: Kirkland silt loam

Planting date: Dual purpose = 09-18-07; Grain only = 10-30-07

Harvest date: 06-05-08

Tillage: Conventional till

Management: Grain only and Dual purpose

Previous crop: Wheat

Soil test information: pH = 5.5, P = 40, K = 307

Source	Variety	Grain Yield									Test Weight	
		2007-08			2-Year			3-Year			2007-08	
		Dual purpose [†]	Grain only	Diff.	Dual purpose	Grain only	Diff.	Dual purpose [‡]	Grain only	Diff.	Dual purpose	Grain only
		-----bu/ac-----									--lb/bu---	
Texas	TAM 203	62	72	10	-	-	-	-	-	-	60	60
AgriPro	Jackpot	61	76	15	-	-	-	-	-	-	62	63
Oklahoma	Duster	60	71	11	41	48	7	37	44	7	61	60
Oklahoma	Endurance	60	67	7	40	45	5	35	41	6	58	55
Kansas	Fuller	59	73	14	39	54	15	-	-	-	62	61
Kansas	Overley	59	69	10	38	46	8	34	41	7	62	62
Kansas	Jagger	57	49	-8	33	34	1	30	34	4	60	56
Oklahoma	OK Bullet	55	60	5	38	47	9	36	41	5	61	60
WestBred	Santa Fe	54	64	10	37	45	8	33	42	9	61	61
Oklahoma	Deliver	54	62	8	34	45	11	29	36	7	59	59
WestBred	Shocker	54	65	11	40	44	4	-	-	-	61	60
AgriPro	Doans	52	64	12	36	48	12	-	-	-	62	62
AgriPro	Fannin	52	62	10	33	45	12	28	39	11	61	61
Oklahoma	Centerfield	52	59	7	30	39	9	-	-	-	58	57
Oklahoma	Okfield	51	56	5	32	35	3	29	33	4	57	54
Oklahoma	OK Rising (W)	49	62	13	34	52	18	30	45	15	60	60
AgriPro	Jagalene	46	41	-5	29	30	1	27	32	5	60	56
	Experimentals											
	OK00611W	-	62	-	-	-	-	-	-	-	-	60
	OK04505	58	65	7	-	-	-	-	-	-	59	59
	OK03522	57	67	10	-	-	-	-	-	-	61	61
	OK05903C	54	-	-	-	-	-	-	-	-	59	-
	Hulless Barley [§]											
	VA 125	39	55	16	-	-	-	-	-	-	55	59
	Eve	25	57	32	-	-	-	-	-	-	57	59
	Mean [¶]	55	63	8	36	44	8	32	39	7	60	59
	LSD _(0.05)	8	7	8	5	5	6	5	5	6	1	1

[†] Dual-purpose plots were grazed from 15 November 2007 to 7 March 2008 for a total of 113 days. Stocking density was 0.56 hd/acre. Steers were fed 2.5 lb of pelleted soybean hulls/day. ADG was 2.65 lb/hd/day which was 0.21 lb/hd/day more than steers not fed the soybean hull ration.

[‡] Due to insect damage and overall poor growth, the early-sown (normally dual-purpose) plots were not grazed in 2005-06.

[§] Hulless barley yields calculated using 60 lb bushel weight

[¶] Means do not include hulless barley data

Olustee Variety Trial

Cooperator: Larry Bassel

Tillage: Conventional till

Soil type: Foard silt loam

Management: Grain only

Planting date: 10-04-07

Previous crop: Wheat

Harvest date: 06-04-08

Soil test information: pH = 5.6, P = 48, K = 1229

Source	Variety	Grain Yield			Test Weight
		2007-08	2-Year	3-Year	2007-08
		-----bu/ac-----			-----lb/bu-----
Kansas	Fuller	59	60	-	63
Texas	TAM 203	59	-	-	60
WestBred	Santa Fe	57	58	-	62
Kansas	Jagger	56	55	56	62
AgriPro	Jagalene	56	53	55	63
AgriPro	Jackpot	56	-	-	61
Oklahoma	OK Bullet	55	57	55	63
Kansas	Overley	55	59	59	62
WestBred	Shocker	53	54	-	62
Oklahoma	Deliver	53	50	48	62
Oklahoma	Endurance	53	51	52	61
AgriPro	Doans	51	51	-	62
Oklahoma	Centerfield	51	49	-	61
Oklahoma	Duster	50	49	-	62
Oklahoma	Okfield	49	47	-	61
AgriPro	Fannin	49	50	47	63
Experimentals					
	OK03305	52	56	-	62
	OK04505	52	-	-	61
	OK02405	50	-	-	60
	OK05903C	47	-	-	62
Mean		53	53	53	62
LSD _(0.05)		6	3	3	1

Plant height, lodging score, and heading date for selected variety trials in Oklahoma in 2008

Variety	Lodging					Shattering							Plant Height								
	Cherokee	Haskell	Kildare	Lahoma	Lamont	Cherokee	EI Reno Conv.	EI Reno No-til	Gage	Haskell	kingfisher	Lahoma	Alva	Apache	EI Reno Conv.	EI Reno No-til	Homestead Conv. Till	Homestead No-til	Hooker	Kingfisher	Olustee
	-----0 - 10 scale [†] -----												-----inches-----								
Centerfield	2	3	5	3	1	1	0	1	1	0	1	0	25	31	33	35	24	24	-	29	31
Danby (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-
Deliver	5	7	4	4	7	2	1	1	1	0	1	1	29	31	34	34	24	27	26	30	31
Doans	5	4	9	5	9	1	7	8	1	1	1	0	28	34	35	33	25	28	-	32	33
Duster	4	7	7	5	8	1	2	1	0	1	1	1	28	32	31	33	23	26	27	31	31
Endurance	4	4	2	3	2	1	3	5	1	1	2	1	28	31	34	33	25	26	26	30	31
Fannin	3	5	8	3	8	3	8	9	3	2	2	1	27	32	32	36	29	30	-	30	30
Fuller	3	5	8	4	7	1	1	1	0	0	1	1	26	33	34	33	24	28	25	30	30
Guymon (W)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-
Jackpot	4	2	2	5	6	3	6	3	2	1	3	2	27	34	34	34	27	29	-	32	33
Jagalene	4	3	5	3	5	2	1	2	1	0	1	1	30	32	33	33	24	26	25	30	32
Jagger	4	5	8	3	7	2	3	5	1	2	2	1	26	33	33	35	26	28	25	30	31
Mace	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-
OK Bullet	2	3	7	3	0	2	2	6	1	0	1	1	28	35	34	34	27	29	26	31	33
OK Rising (W)	-	-	3	1	2	-	-	-	2	-	1	1	28	33	-	-	-	-	-	32	-
Okfield	5	3	3	3	2	2	1	4	1	1	1	1	30	34	35	35	26	29	-	32	32
Overley	3	1	5	3	1	5	8	9	3	4	4	2	29	35	35	36	27	27	-	31	33
Santa Fe	5	5	6	3	7	2	1	4	2	1	3	1	26	33	33	34	24	26	-	31	30
Shocker	4	4	4	5	7	3	6	9	2	3	3	1	25	32	33	36	25	27	-	31	32
TAM 111	-	-	-	-	-	-	-	-	2	-	-	-	29	-	-	-	-	-	28	-	-
TAM 112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-
TAM 203	-	-	-	-	-	-	-	-	-	-	1	1	-	33	-	-	-	-	-	30	32
TAM 304	-	6	8	4	7	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
OK00514-05806	-	-	8	3	1	-	-	-	-	-	-	0	-	34	-	-	-	-	-	-	-
OK00611W	-	-	5	2	1	-	-	-	-	-	2	1	29	-	-	-	-	-	-	31	-
OK02405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
OK03305	-	-	-	-	-	-	-	-	-	-	1	-	27	32	-	-	-	-	-	30	30
OK03522	-	-	9	3	5	-	-	-	-	-	1	1	25	34	-	-	-	-	-	30	-
OK04505	-	-	8	3	6	-	-	-	-	-	-	1	27	32	-	-	-	-	-	-	31
OK05737W	-	-	7	2	-	-	-	-	2	-	1	1	29	-	-	-	-	-	-	31	-
OK05903C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
OK07S110	-	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
STARS 0601W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-

[†] Scale of 0 - 10 with 0 representing no lodging or shattering and 10 representing severe lodging or shattering



Fall Forage Production by Winter Wheat Varieties in Oklahoma

2007

Fall forage production by winter wheat is determined by several factors. Planting date and seeding rate are the two most influential factors that can be controlled by the farmer. Similarly, soil fertility plays a role in determining fall forage production by wheat. Environmental factors such as rainfall and temperature also play a heavy role in dictating how much fall forage is produced.

Wheat varieties differ in their ability to produce fall forage. To quantify these differences, the OSU small grains variety testing program measures fall forage production by wheat varieties. When evaluating these data it is important to remember that fall forage production is only part of the dual-purpose production system. First hollow stem, for example, will determine how long wheat can be grazed and has a large influence on the total amount of forage that might be harvested from a field.

Since occurrence of first hollow stem is so important, we also measure this phenological event at our Stillwater and El Reno locations (Table 1). Varieties differed by as much as 17 days in occurrence of first hollow stem in 2008. In 2007 we noted a delay in the onset of first hollow stem in our no-till plots at El Reno. While some differences were noted in 2008 too, the differences between conventional till and no-till were not as large as those recorded in 2007.

Table 1. Occurrence of first hollow stem (day of year) for winter wheat varieties sown in 2007 at El Reno and Stillwater, OK.

Seed source	Variety	Still-water	El	El	No-till diff
			Reno Con	Reno No Till	
-----DOY-----					
Oklahoma	Centerfield	78	83	83	0
Oklahoma	Custer	73	-	-	-
Kansas	Danby	80	-	-	-
Oklahoma	Deliver	75	77	77	0
AgriPro	Doans	73	74	77	3
Oklahoma	Duster	78	77	77	0
Oklahoma	Endurance	80	83	78	-5
AgriPro	Fannin	63	62	62	
Kansas	Fuller	64	74	72	-2
Oklahoma	Guymon	73	-	-	-
AgriPro	Jackpot	68	68	62	-6
AgriPro	Jagalene	78	80	74	-6
Kansas	Jagger	66	72	70	-2
Kansas	Lakin	80	-	-	-
Oklahoma	OK Bullet	75	80	78	-2
Oklahoma	Okfield	75	80	83	3
Kansas	Overley	64	74	72	-2
Westbred	Santa Fe	73	66	70	4
Westbred	Shocker	69	66	62	-4
AgriPro	TAM 111	75	-	-	-
Watley seed	TAM 112	67	-	-	-
AgriPro	TAM 203	66	-	-	-
Scott seed	TAM 304	67	-	-	-
Average		72	74	73	-1

Seed Treatment

We have evaluated the effect of various seed treatments on grain yield before, but this year we evaluated the effect of a fungicide seed treatment, Charter® from BASF, on forage yield (Figure 1.). Fungicide-treated wheat seed generally produced more forage than non-treated wheat seed. The increase associated with fungicide-seed-treatment was not always statistically significant, and varied by location. We will evaluate similar treatments in the future to see if this trend holds over time.

Fall Forage Data

Fall forage production ranged from 1,550 to 2,570 lb/ac at Stillwater and 1,180 to 3,000 lb/ac at El Reno (Table 2.). Centerfield, Duster, Okfield and TAM 304 were the top forage producers at Stillwater. Top forage producers at El Reno conventional till included Deliver, Doans, Duster, Endurance, Fannin, Jackpot and Santa Fe. OK Bullet, Overley and Shocker were also in the top grouping in the El Reno no-till test.

Regardless of the location, there were several varieties that produced acceptable forage yield. Several years of testing fall forage production by wheat have revealed that there are always a few shining stars at the top and a few varieties at the bottom, but most varieties fall in the middle range and have adequate forage production. Poor forage production by a variety can generally be overcome by planting earlier or increasing seeding rate. It is also important to view forage production data in conjunction with yield performance after grazing.

Figure 1. Effect of 3.1 fl oz per 100 wt Charter® fungicide seed treatment on fall forage production by four winter wheat varieties at El Reno and Stillwater, OK in 2007

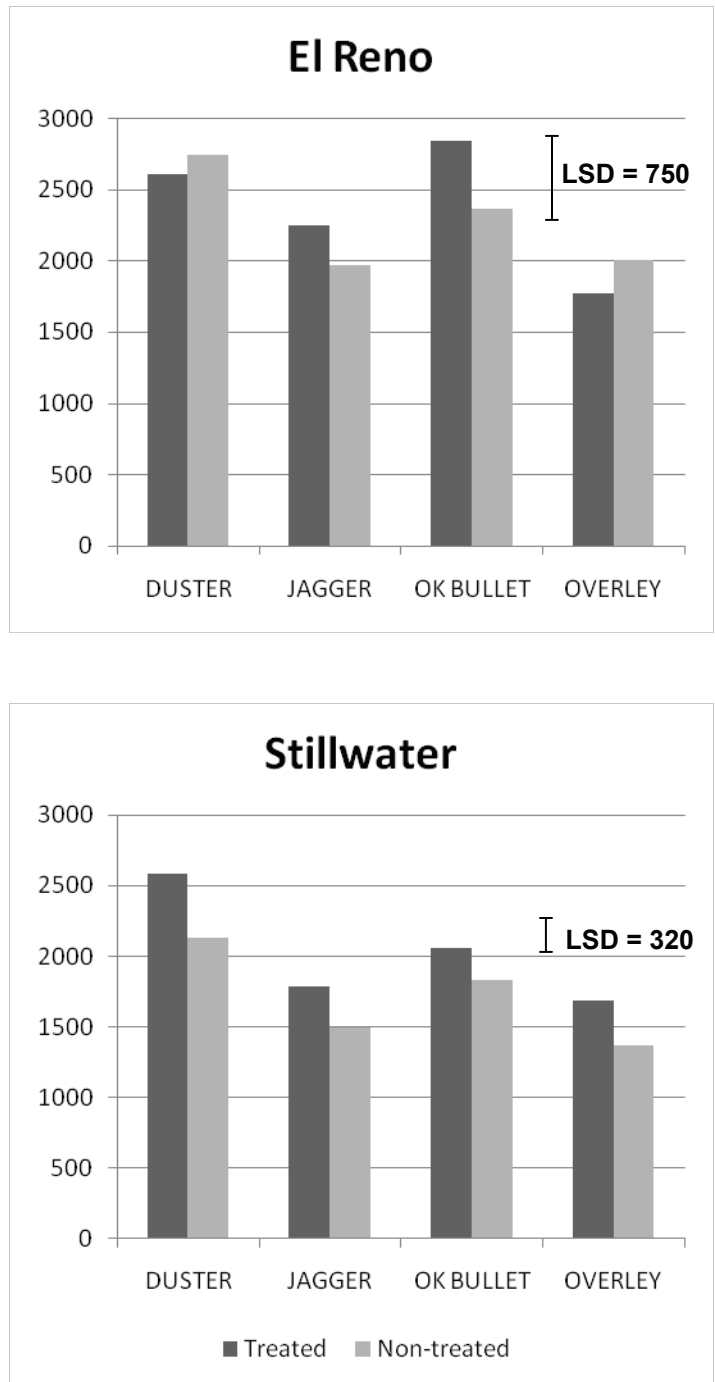


Table 2. Fall forage production by winter wheat varieties sown in 2007 at Stillwater and El Reno, OK

Seed source	Variety	Stillwater	El Reno Conv. Till	El Reno No-till	No-till Diff
-----lb/ac-----					
Oklahoma	Centerfield	2440 [†]	1880	1380	-500
Oklahoma	Deliver	2010	2800	2220	-580
AgriPro	Doans	1860	2800	1730	-1070
Oklahoma	Duster	2320	2740	1750	-990
Oklahoma	Endurance	1820	2810	1820	-990
AgriPro	Fannin	2050	3000	1890	-1110
Kansas	Fuller	1860	2140	1560	-580
AgriPro	Jackpot	1970	2840	1960	-880
AgriPro	Jagalene	1550	1980	1180	-800
Kansas	Jagger	1270	1970	1340	-630
Oklahoma	OK Bullet	2170	2370	1710	-660
Oklahoma	Okfield	2280	2270	1590	-680
Kansas	Overley	1950	2000	1720	-280
Westbred	Santa Fe	1580	2650	1620	-1030
Westbred	Shocker	1900	2220	1770	-450
AgriPro	TAM 111	2060	-	-	-
AgriPro	TAM 203	1740	-	-	-
Scott Seed	TAM 304	2570	-	-	-
Average		1970	2430	1680	-750
LSD		330	570		

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

This is the second year that our fall forage production has been less in no-till than in conventional-till plots. No-till plots produced an average of 750 lb/ac less forage than conventional till plots in 2007. When two-year average data are evaluated (Table 3—next page) no-till plots average 870 lb/ac less forage than conventional-till plots. Anecdotal evidence suggests the decreased forage production might be offset by increased load-bearing strength of no-till fields. This increased load bearing strength decreases the amount of mud created by hoof traffic and decreases the maintenance energy required for cattle to move through the field. This hypothesis is not tested in our current experiment, however, and our data show thus far that fall forage production is lower in no-till systems than in conventional-till systems. We will continue to measure this parameter in coming years to see if the trend reverses.

Table 3. Fall forage production by winter wheat varieties sown in 2006 and 2007 at Stillwater and El Reno, OK

Seed source	Variety	Stillwater	El Reno	El Reno	No-till Diff
			Conv. Till	No-till	
-----lb/ac-----					
Oklahoma	Centerfield	2410†	2630	1860	-770
Oklahoma	Deliver	2270	2990	2130	-860
AgriPro	Doans	2130	2990	1940	-1050
Oklahoma	Duster	2360	3060	2160	-900
Oklahoma	Endurance	2030	3000	2000	-1000
AgriPro	Fannin	2250	3290	1930	-1360
Kansas	Fuller	2160	2660	1780	-880
AgriPro	Jagalene	1930	2600	1640	-960
Kansas	Jagger	1730	2400	1730	-670
Oklahoma	OK Bullet	2220	2740	1980	-760
Oklahoma	Okfield	2380	2750	2010	-740
Kansas	Overley	2080	2490	1980	-510
Westbred	Santa Fe	1800	3010	1870	-1140
Westbred	Shocker	2050	2730	2070	-660
AgriPro	TAM 111	2180	2820	2070	-750
Average		2130	2810	1940	-870
LSD		270	450		

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



Southern Region SARE

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	pH	P	K
El Reno	9-17-07	12-06-07	4.7	116	264
Stillwater	9-14-08	12-04-07	5.7	50	369

Cooperators

Jeff Edwards, Richard Austin, Brett Carver, Brad Tipton, Dillon Butchee, and Jerret Sanders, 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

Jeff Edwards, PhD
Small Grains Extension Specialist, Oklahoma State University

**This and other wheat-related
publications can be found at**

www.wheat.okstate.edu