
Oklahoma Small Grains Variety Performance Tests 2013 - 2014



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Protein data will be reported in a separate publication in September 2014 and posted at

www.wheat.okstate.edu

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2014 WHEAT CROP OVERVIEW

At the time of writing this report, 2014 Oklahoma wheat production is estimated to be approximately 51 million bushels, which is roughly half of 2013 production (Table 1). Oklahoma has not seen wheat production this low since the 43 million bushel crop of 1957, and with any luck, production will not be this low again for at least another 60 years.

	2013	2014
Harvested Acres	3.4 million	3.0 million
Yield (bu/ac)	31	17
Total bushels	105 million	51 million

The 2013-2014 wheat production season had a good start in central Oklahoma. Topsoil moisture was short in September, but October rains resulted in favorable conditions for wheat emergence and establishment. In addition, many areas had a fair amount of stored soil moisture from the summer of 2013. This stored soil moisture allowed sites such as Chickasha and Lahoma to produce 43 and 47 bu/ac average wheat yield on less than eight inches of rainfall during the growing season. Stored soil moisture also contributed to adequate forage production at grazed sites such as Marshall Dual-Purpose, but production of a forage crop did not leave behind enough moisture to fuel much of a grain crop.

The multi-year drought never released its stranglehold on western Oklahoma during the 2013-2014 wheat production season. Small rains here or there allowed most producers to obtain an acceptable stand of wheat, but moisture was never sufficient to spur tillering or leaf area development. Early winter snowfall made for a few bright spots for forage production in southwestern Oklahoma, but this moisture was quickly utilized by growing wheat plants and dry conditions soon returned. As a result, many fields in southwestern and western Oklahoma were abandoned and not taken to harvest.

The winter of 2013-2014 wasn't just dry; it was cold too. Young, drought-stressed wheat plants had difficulty dealing with the cold, windy conditions, and winterkill was common in late-sown wheat.

Winterkill was also common in grazed wheat that was stressed by heavy grazing pressure and inadequate soil moisture. Considerable winterkill was also present in no-till wheat without adequate seed to soil contact in northwestern Oklahoma. The inadequate seed to soil contact was generally the result of heavy residue from the previous year's wheat crop.

While the wheat crop did not appear to be on its way to bumper production, most producers hoped for a turnaround similar to 2013 and topdressed in late winter. Unlike the spring of 2013, however, the rains never came and much of this topdress N applied did not make it into the soil until the crop was at boot stage or later.

The cold winter delayed the onset of first hollow stem by about five days as compared to 2013 and 25 days as compared to 2012. Despite a slow start to the spring, wheat in southern Oklahoma was near heading when a hard freeze occurred the morning of April 15, 2014. As expected, drought stressed wheat in advanced stages in southwestern Oklahoma suffered severe freeze damage; however, injury from the 2014 spring freeze did not always follow the "rule of thumb" guidelines used by agronomists. Many areas that received small amounts of rain just prior to the freeze seemed to escape widespread injury, regardless of growth stage. In southcentral Oklahoma, injury seemed to be most severe on later maturing varieties that were approximately Feekes GS 7 to booting, while earlier-maturing varieties that were just starting to head escaped freeze injury. Wheat that was barely past two nodes in northern Oklahoma suffered severe injury, while more advanced wheat in central Oklahoma endured similar temperatures with minimal injury.

There were relatively few insect or disease issues to deal with during the 2013-2014 wheat production season. Winter grain mite and/or brown wheat mite infestations proved to be too much for some drought stressed wheat fields in northcentral and northwestern Oklahoma. Some fields already devastated by the drought were left unsprayed, while others still showing some sign of yield potential were treated.

Other than a rare siting of a single leaf rust pustule, there was no foliar disease in Oklahoma in 2014. The lack of foliar disease is evidenced by the lack of response to foliar fungicides at either Chickasha or Lahoma. These two sites provided a rare opportunity in 2014 to observe yield impacts of foliar fungicides in the absence of disease, as most years we report at least light or negligible foliar disease at these sites. While foliar disease was not an issue in 2014, wheat streak mosaic virus was an issue for many producers. This disease has historically been most prevalent in northwestern Oklahoma and the Panhandle. Wheat streak mosaic virus was confirmed in several fields downstate this year, however, and it is likely that some fields affected by wheat streak mosaic virus were not identified as such because it is sometimes difficult to distinguish wheat streak mosaic virus symptoms from those of severe drought stress. The wheat variety testing program was not immune from this disease, and we lost our Kildare location to wheat streak mosaic virus.

Warmer temperatures in May hastened crop maturity and the Oklahoma wheat harvest began near Frederick on May 22, 2014. By the first week of June, harvest was in full swing, only to be delayed by rain shortly thereafter. Harvest resumed across most of the state by June 13 and was mostly completed by June 30. The exceptions being some waterlogged areas in northern Oklahoma. The Cherokee Mesonet site, for example, reported 5.1 inches of rainfall from October 1, 2013 to May 31, 2014, but the same site received 10 inches of rain from June 1 to June 30, 2014.

Methods

Seed was packaged and planted in the same condition as it was delivered from the respective seed companies. Most seed was treated with an insecticide plus fungicide seed treatment, but the formulation and rate of seed treatment used was not confirmed or reported in this document.

Conventional plots were eight rows wide with six-inch row spacing and were sown with a Hege small plot cone seeder. No-till plots were seven rows wide with 7.5-inch row spacing and were sown

with a Great Plains no-till drill modified for cone-seeded, small-plot research. Plots were 25 feet long at planting and were trimmed to 20 feet at harvest with the plot combine. Wheel tracks were included in the plot area for yield calculation, for a total plot width of 59 inches. Experimental design for all sites other than Lahoma was a randomized complete block with four replications. Lahoma was a split-block arrangement of a randomized complete block with four replications where whole plots were fungicide treated or nontreated and sub-plots were wheat variety.

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 Marshall dual-purpose (DP) trial, Walters, and forage trials were sown at 120 lb/ac. All other locations were sown at 60 lb/ac. Grazing pressure, nitrogen fertilization, and insect and weed control decisions were made on a location-by-location basis and reflect standard management practices for the area.

Plots were harvested with a Hege 140 or Winterstieger Delta small plot combine. When sample size allowed for grain moisture measurement on individual plots, grain yields were corrected to 12% moisture. Grain moisture at all sites was generally below 11% and maximum and minimum grain moisture for all plots at a location typically ranged no more than 1%. Alva, Cherokee, and Kildare plots were harvested, but data are not reported as the coefficient of variation (c.v.) exceeded 25.

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

Website: www.wheat.okstate.edu

Blog: www.osuwheat.com

Twitter: [@OSU_smallgrains](https://twitter.com/OSU_smallgrains)

2014 Oklahoma Wheat Variety Performance Test Summary

Variety	Afton	Balko	Chickasha	Chickasha IWM	Goodwell Irrigated	Hooker	Homestead	Kingfisher
	-----grain yield (bu/ac)-----							
Armour	-	-	50	46	61	-	-	-
Billings	64	11	36	39	67	41	23	28
Brawl CL Plus	-	13	47	44	76	37	28	30
Byrd	-	13	48	44	62	39	29	45
Centerfield	-	-	40	42	60	-	-	-
CJ	50	-	35	37	32	-	-	-
Deliver	-	-	47	52	63	-	-	32
Doans	49	13	38	39	50	30	22	35
Doublestop CL Plus	59	16	39	44	59	35	27	36
Duster	64	14	50	49	69	41	24	48
Endurance	46	15	43	44	59	38	24	37
Everest	54	10	49	47	60	39	25	37
Gallagher	49	12	45	39	60	27	27	37
Garrison	49	12	46	43	62	36	20	34
Greer	55	13	45	45	60	29	23	43
Iba	58	16	49	45	74	44	28	43
Jackpot	57	14	46	47	55	38	24	38
LCH11-109	-	-	39	45	74	-	-	-
LCH11-1117	-	-	40	42	67	-	-	-
LCH11-1130	-	-	46	44	74	-	-	-
LCS Mint	59	17	44	45	58	42	32	35
LCS Wizard	55	13	50	47	64	30	24	26
Mace	-	10	-	-	59	28	-	-
OK Bullet	-	-	36	43	65	-	-	-
OK Rising	-	-	39	42	59	-	-	-
Pete	-	-	35	40	65	-	-	-
Ruby Lee	53	13	44	48	57	37	29	35
SY Llano	56	-	36	34	43	-	-	-
SY Southwind	-	-	39	41	-	-	-	-
T153	-	-	42	42	67	-	-	-
T154	-	-	46	45	64	-	27	-
T158	62	14	40	38	74	40	30	38
TAM 112	-	13	47	43	72	35	-	-
TAM 113	-	15	43	49	65	44	-	-
WB-Cedar	54	-	48	48	67	-	28	32
WB-Grainfield	57	15	42	44	63	42	26	37
WB-Redhawk	-	-	43	34	46	-	-	-
WB4458	58	16	41	40	64	45	31	29
Winterhawk	-	14	45	48	71	37	-	32
OK10126	60	-	40	39	71	-	-	-
OK08707W-19C13	-	11	-	-	64	-	-	-
OK09125	-	18	47	45	48	41	31	39
OK09520	-	-	43	48	71	-	26	30
OK10728W	-	-	-	-	60	-	28	-
OK10805W	-	14	38	41	58	-	23	-
OK11754WF	58	-	-	-	-	-	27	-
Mean	56	14	43	43	62	37	26	36
LSD (0.05)	8	3	7	11	11	6	7	9

2014 Oklahoma Wheat Variety Performance Test Summary

Variety	Lahoma	Lahoma Fungicide	Marshall Dual Purpose	Marshall Grain Only	McLoud	Thomas	Walters
	-----grain yield (bu/ac)-----						
Armour	44	39	-	-	-	-	-
Billings	43	42	11	20	31	12	-
Brawl CL Plus	42	40	21	25	34	10	29
Byrd	50	51	22	25	33	10	28
Centerfield	44	44	-	-	-	-	-
CJ	32	31	-	-	-	-	-
Deliver	52	45	-	-	32	12	-
Doans	42	40	16	23	32	17	27
Doublestop CL Plus	41	41	20	22	30	13	29
Duster	48	45	22	28	30	9	35
Endurance	43	39	18	22	32	11	29
Everest	42	44	17	21	32	13	33
Gallagher	55	49	15	18	34	16	33
Garrison	46	41	18	21	36	13	26
Greer	50	48	17	25	31	11	28
Iba	44	39	22	24	33	11	31
Jackpot	45	44	19	21	29	18	30
LCH11-109	49	48	-	-	-	-	-
LCH11-1117	49	46	-	-	-	-	-
LCH11-1130	49	44	-	-	-	-	-
LCS Mint	42	40	17	22	36	12	25
LCS Wizard	48	46	16	23	36	15	28
Mace	-	-	-	-	-	-	-
OK Bullet	48	48	-	-	-	-	-
OK Rising	49	48	-	-	-	-	-
Pete	40	39	-	-	-	-	-
Ruby Lee	49	49	18	23	37	14	37
SY Llano	52	49	-	-	-	-	-
SY Southwind	43	43	-	-	-	-	-
T153	55	50	-	-	-	-	-
T154	46	47	19	24	-	-	-
T158	48	48	18	23	30	14	30
TAM 112	47	45	-	-	-	-	25
TAM 113	42	36	-	-	-	-	25
WB-Cedar	52	44	15	21	36	14	-
WB-Grainfield	42	41	19	26	34	12	28
WB-Redhawk	49	41	-	-	-	-	-
WB4458	54	53	15	21	32	16	27
Winterhawk	53	46	-	-	35	11	32
OK10126	48	50	-	-	30	-	-
OK08707W-19C13	-	-	-	-	-	-	-
OK09125	52	47	23	24	-	18	29
OK09520	48	43	17	21	-	14	-
OK10728W	50	51	17	26	-	-	-
OK10805W	41	37	-	-	-	-	30
OK11754WF	47	46	-	-	-	-	-
Mean	47	44	18	23	33	13	29
LSD_(0.05)	8	7	4	4	4	4	7

Afton Wheat Variety Trial

Cooperator: Greg Leonard		Tillage: Conventional till			
Soil type: Parsons silt loam		Management: Grain only			
Planting date: 10/25/2013		Previous crop: Corn			
Harvest date: 06/18/2014		Soil test: pH = 7.0, P = 153, K = 341			
Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			--lb/bu--
OGI	Duster	64	52	44	60.6
OGI	Billings	64	51	48	62.5
LCS	T158	62	56	-	61.9
OGI	Doublestop CL Plus	59	56	-	63.1
LCS	LCS Mint	59	-	-	64.3
OGI	Iba	58	47	42	61.8
WestBred	WB4458	58	-	-	62.7
Syngenta	Jackpot	57	53	44	61.3
WestBred	WB-Grainfield	57	-	-	61.2
Syngenta	SY Southwind	56	-	-	60.9
Syngenta	Greer	55	48	40	59.3
LCS	LCS Wizard	55	-	-	60.1
WestBred	WB-Cedar	54	61	56	62.1
KWA	Everest	54	54	56	65.8
OGI	Ruby Lee	53	55	49	62.0
Syngenta	CJ	50	48	45	61.6
OGI	Garrison	49	49	47	60.2
Syngenta	Doans	49	47	45	60.4
OGI	Gallagher	49	49	50	59.8
OSU	Endurance	46	47	39	60.1
	OSU Experimentals				
	OK10126	60	-	-	61.5
	OK11754WF	58	-	-	59.7
	Mean	56	52	47	61.5
	LSD _(0.05)	8	7	6	3.9

Notes: Grain yields adjusted to 12% moisture

Balko Wheat Variety Trial

Cooperator: Teryl Rorabaugh	Tillage: No-till
Soil type: Ulysses-Richfield complex	Management: Grain only
Planting date: 09/25/2013	Previous crop: Sorghum/Fallow
Harvest date: 06/24/2014	Soil test: pH = 7.9, P = 34, K = 673

Source	Variety	Grain Yield	
		2013-14	2-Year
		-----bu/ac-----	
LCS	LCS Mint	17	-
WestBred	WB4458	16	-
OGI	Iba	16	23
OGI	Doublestop CL Plus	16	-
AGSECO	TAM 113	15	21
OSU	Endurance	15	21
WestBred	WB-Grainfield	15	-
LCS	T158	14	21
WestBred	Winterhawk	14	21
Syngenta	Jackpot	14	20
OGI	Duster	14	20
CWRF	Byrd	13	-
Watley	TAM 112	13	20
Syngenta	Greer	13	18
CWRF	Brawl CL Plus	13	-
LCS	LCS Wizard	13	-
Syngenta	Doans	13	21
OGI	Ruby Lee	13	22
OGI	Gallagher	12	20
OGI	Garrison	12	17
OGI	Billings	11	19
KWA	Everest	10	-
UNL	Mace	10	15
OSU Experimentals			
	OK09125	18	-
	OK10805W	14	-
	OK08707W-19C13	11	-
	Mean	14	20
	LSD _(0.05)	3	2

Notes: Grain samples were too small to measure test weight. Plots received approximately 7.4 inches of rain from planting to maturity. This severe, season-long drought greatly reduced grain yield.

Chickasha Regional Wheat Variety Trial

Cooperator: OSU South Central Research Station		Tillage: Conventional till
Soil type: Dale silt loam	Previous crop: Wheat hay	Planting date: 10/22/2013
Soil test: pH = 6.0, P = 43, K = 328	Management: Grain only	Harvest date: 06/13/2014
Nitrogen: 116 lb/ac soil test + 40 lb/ac topdress on 01/30/2014		

Source	Variety	Grain Yield		Test Weight
		2013-14	2-Year	2013-14
		-----bu/ac-----		--lb/bu--
LCS	LCS Wizard	50	66	57.1
OGI	Duster	50	58	56.5
WestBred	Armour	50	62	57.5
KWA	Everest	49	65	56.6
OGI	Iba	49	60	58.1
WestBred	WB-Cedar	48	60	57.7
CWRF	Byrd	48	59	56.4
CWRF	Brawl CL Plus	47	62	58.5
OSU	Deliver	47	63	58.4
Watley	TAM 112	47	-	56.2
LCS	LCH11-1130	46	-	53.2
OGI	Garrison	46	58	55.5
Syngenta	Jackpot	46	53	54.9
LCS	T154	46	58	56.5
Syngenta	Greer	45	54	53.1
WestBred	Winterhawk	45	63	57.6
OGI	Gallagher	45	58	55.1
LCS	LCS Mint	44	57	55.8
OGI	Ruby Lee	44	58	57.1
OSU	Endurance	43	61	53.3
AGSECO	TAM 113	43	49	56.0
WestBred	WB-Redhawk	43	50	57.4
WestBred	WB-Grainfield	42	62	53.2
LCS	T153	42	56	57.0
WestBred	WB4458	41	54	56.1
OGI	Centerfield	40	54	55.8
LCS	LCH11-1117	40	-	60.2
LCS	T158	40	57	58.9
Syngenta	SY Southwind	39	-	57.4
OGI	OK Rising	39	-	55.7
OGI	Doublestop CL Plus	39	59	56.3
LCS	LCH11-109	39	-	53.0
Syngenta	Doans	38	57	55.4
OGI	Billings	36	51	53.9
OGI	OK Bullet	36	51	58.2
Syngenta	SY Llano	36	-	55.4
OGI	Pete	35	51	59.0
Syngenta	CJ	35	50	56.2
OSU Experimentals				
	OK09125	47	58	53.9
	OK09520	43	-	53.9
	OK10126	40	-	54.2
	OK10805W	38	-	54.3
Mean		43	57	56.1
LSD _(0.05)		7	5	2.9

Notes: Grain yields adjusted to 12% moisture. Plots received approximately 7.8 inches of rain from planting to harvest. A freeze event occurred on April 15, but freeze injury was less than 10%.

Chickasha Intensive Wheat Management Variety Trial

Cooperator: OSU South Central Research Station		Tillage: Conventional till
Soil type: Dale silt loam	Previous crop: Wheat hay	Planting date: 10/22/2013
Soil test: pH = 6.0, P = 43, K = 328	Management: Grain only	Harvest date: 06/13/2014
Nitrogen: 116 lb/ac soil test + 40 lb/ac topdress on 01/30/2014 + 40 lb/ac topdress 03/26/2014		
Fungicide: 4 oz/ac Propimax on 3/26/14 followed by 10.5 oz/ac Quilt Xcel on 04/08/2014		

Source	Variety	Grain Yield	Test Weight
		2013-14	2013-14
		--bu/ac--	--lb/bu--
OSU	Deliver	52	58.2
OGI	Duster	49	56.3
AGSECO	TAM 113	49	57.1
OGI	Ruby Lee	48	58.4
WestBred	WB-Cedar	48	59.0
WestBred	Winterhawk	48	57.1
KWA	Everest	47	57.3
Syngenta	Jackpot	47	57.5
LCS	LCS Wizard	47	57.5
WestBred	Armour	46	56.4
OGI	Iba	45	57.1
LCS	LCS Mint	45	56.9
Syngenta	Greer	45	54.6
LCS	LCH11-109	45	53.0
LCS	T154	45	59.7
CWRF	Byrd	44	54.6
OSU	Endurance	44	53.8
CWRF	Brawl CL Plus	44	57.5
WestBred	WB-Grainfield	44	54.0
LCS	LCH11-1130	44	55.6
OGI	Doublestop CL Plus	44	57.6
OGI	Garrison	43	55.7
OGI	OK Bullet	43	57.6
Watley	TAM 112	43	53.7
OGI	Centerfield	42	55.8
LCS	T153	42	57.1
OGI	OK Rising	42	56.3
LCS	LCH11-1117	42	59.3
Syngenta	SY Southwind	41	57.4
WestBred	WB4458	40	57.0
OGI	Pete	40	58.1
Syngenta	Doans	39	57.9
OGI	Gallagher	39	55.7
OGI	Billings	39	56.5
LCS	T158	38	56.7
Syngenta	CJ	37	57.9
Syngenta	SY Llano	34	59.4
WestBred	WB-Redhawk	34	57.8
OSU Experimentals			
	OK09520	48	55.1
	OK09125	45	55.0
	OK10805W	41	54.5
	OK10126	39	54.5
Mean		43	56.6
LSD _(0.05)		11	2.7

Notes: Grain yields adjusted to 12% moisture. Plots received approximately 7.8 inches of rain from planting to harvest. A freeze event occurred on April 15, but freeze injury was less than 10%.

Chickasha Standard vs. Intensive Wheat Management Comparison

Cooperator: OSU South Central Research Station

Previous crop: Wheat hay

Planting date: 10/22/2013

Harvest date: 06/13/2014

Management: Grain only

Intensive Wheat Management (IWM) plots received 40 lb/ac additional topdress N, 4 oz/ac Propimax at jointing and 10.5 oz/ac Quilt Xcel at heading

Source	Variety	Grain Yield			Test Weight		
		Standard	IWM	<i>Diff.</i>	Standard	IWM	<i>Diff.</i>
		-----bu/ac-----			-----lb/bu-----		
LCS	LCS Wizard	50	47	-3	57.1	57.5	0.4
OGI	Duster	50	49	-1	56.5	56.3	-0.2
WestBred	Armour	50	46	-4	57.5	56.4	-1.1
KWA	Everest	49	47	-2	56.6	57.3	0.7
OGI	Iba	49	45	-4	58.1	57.1	-1.0
WestBred	WB-Cedar	48	48	0	57.7	59.0	1.3
CWRF	Byrd	48	44	-4	56.4	54.6	-1.8
CWRF	Brawl CL Plus	47	44	-3	58.5	57.5	-1.0
OSU	Deliver	47	52	5	58.4	58.2	-0.2
Watley	TAM 112	47	43	-4	56.2	53.7	-2.5
LCS	LCH11-1130	46	44	-2	53.2	55.6	2.4
OGI	Garrison	46	43	-3	55.5	55.7	0.2
Syngenta	Jackpot	46	47	1	54.9	57.5	2.6
LCS	T154	46	45	-1	56.5	59.7	3.2
Syngenta	Greer	45	45	0	53.1	54.6	1.5
WestBred	Winterhawk	45	48	3	57.6	57.1	-0.5
OGI	Gallagher	45	39	-6	55.1	55.7	0.6
LCS	LCS Mint	44	45	1	55.8	56.9	1.1
OGI	Ruby Lee	44	48	4	57.1	58.4	1.3
OSU	Endurance	43	44	1	53.3	53.8	0.5
AGSECO	TAM 113	43	49	6	56.0	57.1	1.1
WestBred	WB-Redhawk	43	34	-9	57.4	57.8	0.4
WestBred	WB-Grainfield	42	44	2	53.2	54.0	0.8
LCS	T153	42	42	0	57.0	57.1	0.1
WestBred	WB4458	41	40	-1	56.1	57.0	0.9
OGI	Centerfield	40	42	2	55.8	55.8	0.0
LCS	LCH11-1117	40	42	2	60.2	59.3	-0.9
LCS	T158	40	38	-2	58.9	56.7	-2.2
Syngenta	SY Southwind	39	41	2	57.4	57.4	0.0
OGI	OK Rising	39	42	3	55.7	56.3	0.6
OGI	Doublestop CL Plus	39	44	5	56.3	57.6	1.3
LCS	LCH11-109	39	45	6	53.0	53.0	0.0
Syngenta	Doans	38	39	1	55.4	57.9	2.5
OGI	Billings	36	39	3	53.9	56.5	2.6
OGI	OK Bullet	36	43	7	58.2	57.6	-0.6
Syngenta	SY Llano	36	34	-2	55.4	59.4	4.0
OGI	Pete	35	40	5	59.0	58.1	-0.9
Syngenta	CJ	35	37	2	56.2	57.9	1.7
OSU Experimentals							
	OK09125	47	45	-2	53.9	55.0	1.1
	OK09520	43	48	5	53.9	55.1	1.2
	OK10126	40	39	-1	54.2	54.5	0.3
	OK10805W	38	41	3	54.3	54.5	0.2
Mean		43	43	0	56.1	56.6	0.5
LSD _(0.05)		7	11	NS	2.9	2.7	NS

Notes: Grain yields adjusted to 12% moisture. Differences in yield and test weight between standard and IWM treatments were nonsignificant. Plots received approximately 7.8 inches of rain from planting to harvest. A freeze event occurred on April 15, but freeze injury was less than 10%.

Goodwell Irrigated Regional Wheat Variety Trial

Cooperator: OK Panhandle Research & Extension Center **Tillage:** Conventional till
Soil type: Richfield clay loam **Management:** Grain only
Planting date: 10/07/2013 **Total irrigation:** 10.4 in **Previous crop:** Wheat/Fallow
Harvest date: 06/29/2014 **Total rainfall:** 5.6 in **Soil test:** pH = 7.4, P = 24, K = 961

Source	Variety	Grain Yield				Test Weight
		2013-14 --bu/ac--	Freeze Inj. 0 - 10	2-Year -----bu/ac-----	3-Year	2013-14 --lb/bu--
CWRF	Brawl CL Plus	76	0	62	-	59.5
OGI	Iba	74	1	64	62	59.8
LCS	T158	74	0	59	60	59.3
LCS	LCH11-109	74	1	-	-	57.1
LCS	LCH11-1130	74	1	-	-	58.0
Watley	TAM 112	72	0	-	-	59.5
WestBred	Winterhawk	71	1	63	61	59.6
OGI	Duster	69	0	58	54	58.6
WestBred	WB-Cedar	67	0	51	59	57.4
LCS	T153	67	0	52	55	58.1
OGI	Billings	67	0	53	57	57.2
LCS	LCH11-1117	67	0	-	-	59.4
OGI	OK Bullet	65	2	52	-	59.8
OGI	Pete	65	0	49	-	56.1
AGSECO	TAM 113	65	1	56	50	59.5
WestBred	WB4458	64	0	55	-	56.3
LCS	T154	64	1	52	-	58.7
LCS	LCS Wizard	64	0	60	-	59.3
WestBred	WB-Grainfield	63	1	59	-	59.8
OSU	Deliver	63	0	53	-	54.8
CWRF	Byrd	62	1	54	-	59.1
OGI	Garrison	62	0	53	49	57.2
WestBred	Armour	61	0	48	45	58.6
Syngenta	Greer	60	1	51	48	58.6
OGI	Centerfield	60	6	-	-	56.3
OGI	Gallagher	60	0	53	57	57.1
KWA	Everest	60	1	51	-	58.8
OGI	Doublestop CL Plus	59	0	52	-	58.0
OGI	OK Rising	59	0	45	-	57.9
OSU	Endurance	59	2	52	49	58.6
UNL	Mace	59	1	50	41	57.7
LCS	LCS Mint	58	0	57	-	59.6
OGI	Ruby Lee	57	3	51	52	59.2
Syngenta	Jackpot	55	0	49	49	56.5
Syngenta	Doans	50	6	44	43	58.2
WestBred	WB-Redhawk	46	1	42	-	58.4
Syngenta	SY Llano	43	0	-	-	58.1
Syngenta	CJ	32	2	36	37	59.3
OSU Experimentals						
	OK09520	71	2	-	-	57.1
	OK10126	71	0	-	-	59.0
	OK08707W-19C13	64	2	-	-	58.1
	OK10728W	60	0	-	-	58.1
	OK10805W	58	4	-	-	59.5
	OK09125	48	1	47	-	57.5
<hr/>						
	Mean	62	1	53	51	58.3
	LSD _(0.05)	11	2	7	5	1.6

Notes: A hail storm on 06/24/14 resulted in 10 - 15% hail damage to all plots. Freeze injury is reported on a 0 - 10 scale with 0 representing no freeze injury and 10 representing severe injury. Ratings were taken three weeks after an 04/15/14 freeze event.

Homestead Wheat Variety Trial

Cooperator: Brook Strader
Soil type: Canadian fine sandy loam
Planting date: 10/22/2013
Harvest date: 06/06/2014

Tillage: No-till
Management: Grain only
Previous crop: Wheat
Soil test: pH = 5.7, P = 29, K = 285

Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			----lb/bu----
LCS	LCS Mint	32	-	-	61.6
WestBred	WB4458	31	-	-	61.6
LCS	T158	30	43	-	63.9
CWRF	Byrd	29	-	-	62.2
OGI	Ruby Lee	29	43	48	62.4
OGI	Iba	28	43	48	62.7
WestBred	WB-Cedar	28	34	43	60.3
CWRF	Brawl CL Plus	28	-	-	64.9
OGI	Gallagher	27	44	50	62.2
LCS	T154	27	39	-	61.0
OGI	Doublestop CL Plus	27	45	-	62.8
WestBred	WB-Grainfield	26	-	-	60.2
KWA	Everest	25	42	47	62.2
Syngenta	Jackpot	24	41	46	60.8
OGI	Duster	24	37	39	63.5
LCS	LCS Wizard	24	-	-	62.4
OSU	Endurance	24	37	41	61.7
Syngenta	Greer	23	41	45	59.9
OGI	Billings	23	37	44	61.6
Syngenta	Doans	22	35	40	62.9
OGI	Garrison	20	40	42	63.3
OSU Experimentals					
	OK09125	31	46	-	62.7
	OK10728W	28	-	-	64.8
	OK11754WF	27	-	-	62.1
	OK09520	26	-	-	63.2
	OK10805W	23	-	-	63.0
Mean		26	40	44	62.3
LSD _(0.05)		6	4	3	NS

Notes: Plots received approximately 6.4 inches of rain from planting to harvest. This severe, season-long drought combined with a freeze event on April 15 greatly reduced grain yield.

Hooker Wheat Variety Trial

Cooperator: Dan and Earnest Herald
Soil type: Dalhart fine sandy loam
Planting date: 09/25/2013
Harvest date: 06/24/2014

Tillage: No-till
Management: Grain only
Previous crop: Wheat/fallow
Soil test: pH = 7.4, P = 180, K = 1030

Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			--lb/bu--
WestBred	WB4458	45	-	-	56.7
AGSECO	TAM 113	44	36	34	58.5
OGI	Iba	44	37	37	57.9
LCS	LCS Mint	42	-	-	58.7
WestBred	WB-Grainfield	42	-	-	57.7
OGI	Duster	41	37	36	57.7
OGI	Billings	41	35	34	54.5
LCS	T158	40	35	33	58.6
CWRF	Byrd	39	-	-	58.1
KWA	Everest	39	-	-	57.6
Syngenta	Jackpot	38	32	33	57.3
OSU	Endurance	38	35	35	58.8
CWRF	Brawl CL Plus	37	-	-	58.7
WestBred	Winterhawk	37	34	34	59.3
OGI	Ruby Lee	37	31	33	58.7
OGI	Garrison	36	34	33	56.7
OGI	Doublestop CL Plus	35	-	-	58.9
Watley	TAM 112	35	35	-	57.9
Syngenta	Doans	30	28	31	57.8
LCS	LCS Wizard	30	-	-	58.8
Syngenta	Greer	29	30	29	56.9
UNL	Mace	28	28	29	56.1
OGI	Gallagher	27	24	28	55.7
OSU Experimentals					
	OK09125	41	-	-	55.9
Mean		37	33	33	57.6
LSD _(0.05)		7	5	3	1.1

Notes: Plots received approximately 4.6 inches of rain from planting to maturity. This severe, season-long drought reduced grain yield.

Kingfisher Wheat Variety Trial

Cooperator: Rodney Mueggenborg

Soil type: Tillman silt loam

Planting date: 10/10/2013

Harvest date: 06/16/2014

Tillage: Conventional till

Management: Grain only

Previous crop: Wheat

Soil test: pH = 6.9, P = 38, K = 400

Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			----lb/bu----
OGI	Duster	48	46	50	58.5
CWRF	Byrd	45	-	-	58.7
OGI	Iba	43	45	49	58.5
Syngenta	Greer	43	44	49	56.6
LCS	T158	38	41	-	58.8
Syngenta	Jackpot	38	40	47	58.1
KWA	Everest	37	35	42	58.2
OGI	Gallagher	37	39	48	57.8
OSU	Endurance	37	39	45	58.0
WestBred	WB-Grainfield	37	-	-	58.4
OGI	Doublestop CL Plus	36	37	43	59.6
LCS	LCS Mint	35	-	-	58.4
OGI	Ruby Lee	35	37	46	58.7
Syngenta	Doans	35	37	43	59.2
OGI	Garrison	34	36	41	57.1
WestBred	Winterhawk	32	32	32	59.5
OSU	Deliver	32	-	-	58.6
WestBred	WB-Cedar	32	34	44	57.4
CWRF	Brawl CL Plus	30	-	-	58.4
WestBred	WB4458	29	-	-	56.2
OGI	Billings	28	34	44	57.7
LCS	LCS Wizard	26	-	-	58.1
OSU Experimentals					
	OK09125	39	44	-	57.1
	OK09520	30	-	-	57.6
Mean		36	39	45	58.1
LSD _(0.05)		9	5	4	0.6

Notes: Plots received approximately 8.4 inches of rain from planting to crop maturity. This severe, season-long drought combined with a freeze event on April 15 reduced grain yield.

Lahoma Regional Wheat Variety Trial

Cooperator: North Central Research Station	Tillage: Conventional till
Soil type: Pond Creek silt loam	Management: Grain only
Planting date: 10/09/2013	Previous crop: Wheat
Harvest date: 06/16/2014	Soil test: pH = 5.9, P = 42, K = 366

Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			----lb/bu----
OGI	Gallagher	55	60	59	58.3
LCS	T153	55	56	-	57.9
WestBred	WB4458	54	58	-	57.6
WestBred	Winterhawk	53	57	-	61.3
OSU	Deliver	52	52	51	58.8
WestBred	WB-Cedar	52	58	58	56.3
Syngenta	SY Llano	52	-	-	61.2
Syngenta	Greer	50	58	55	57.4
CWRF	Byrd	50	57	-	59.3
LCS	LCH11-1117	49	-	-	59.0
LCS	LCH11-1130	49	-	-	55.8
OGI	OK Rising	49	-	-	58.6
OGI	Ruby Lee	49	58	52	59.4
WestBred	WB-Redhawk	49	54	-	57.4
LCS	LCH11-109	49	-	-	57.8
LCS	T158	48	56	-	57.2
LCS	LCS Wizard	48	54	-	61.0
OGI	Duster	48	51	49	59.3
OGI	OK Bullet	48	54	51	59.7
Watley	TAM 112	47	-	-	57.9
LCS	T154	46	55	-	57.7
OGI	Garrison	46	50	44	58.0
Syngenta	Jackpot	45	53	53	57.6
OGI	Centerfield	44	51	-	58.7
OGI	Iba	44	52	53	60.3
WestBred	Armour	44	52	44	56.4
OGI	Billings	43	50	50	58.9
Syngenta	SY Southwind	43	-	-	58.3
OSU	Endurance	43	52	51	57.8
WestBred	WB-Grainfield	42	54	-	57.0
AGSECO	TAM 113	42	49	-	58.5
LCS	LCS Mint	42	52	-	58.7
CWRF	Brawl CL Plus	42	52	-	59.3
KWA	Everest	42	52	50	57.4
Syngenta	Doans	42	46	46	58.1
OGI	Doublestop CL Plus	41	52	52	57.7
OGI	Pete	40	46	42	59.6
Syngenta	CJ	32	46	47	58.1
OSU Experimentals					
	OK09125	52	60	-	58.8
	OK10728W	50	-	-	57.3
	OK10126	48	-	-	58.4
	OK09520	48	-	-	58.2
	OK11754WF	47	-	-	58.7
	OK10805W	41	-	-	61.1
	Mean	47	53	51	58.4
	LSD _(0.05)	8	5	4	2.7

Notes: Grain yields adjusted to 12% moisture. Plots received approximately 6.3 inches of rain from planting to harvest. A freeze event occurred on April 15, but freeze injury was less than 20%.

Lahoma Regional Wheat Variety Trial - Fungicide Treated

Cooperator: North Central Research Station

Tillage: Conventional till

Soil type: Pond Creek silt loam

Management: Grain only

Planting date: 10/09/2013

Previous crop: Wheat

Harvest date: 06/16/2014

Soil test: pH = 5.9, P = 42, K = 366

Fungicide = 9 oz/A Twinline + 1% v/v COC on 2 May 2014

Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			----lb/bu----
WestBred	WB4458	53	59	-	58.3
CWRF	Byrd	51	64	-	59.6
LCS	T153	50	58	-	58.6
OGI	Gallagher	49	61	62	58.0
Syngenta	SY Llano	49	-	-	61.3
OGI	Ruby Lee	49	62	63	58.2
LCS	LCH11-109	48	-	-	58.4
OGI	OK Bullet	48	57	55	61.0
Syngenta	Greer	48	60	60	56.1
OGI	OK Rising	48	-	-	59.6
LCS	T158	48	58	-	58.0
LCS	T154	47	58	-	57.1
WestBred	Winterhawk	46	56	-	60.1
LCS	LCS Wizard	46	57	-	58.3
LCS	LCH11-1117	46	-	-	59.1
OSU	Deliver	45	51	50	59.4
OGI	Duster	45	54	56	58.5
Watley	TAM 112	45	-	-	57.9
WestBred	WB-Cedar	44	58	63	56.0
OGI	Centerfield	44	54	-	58.9
Syngenta	Jackpot	44	57	60	58.0
KWA	Everest	44	56	57	59.3
LCS	LCH11-1130	44	-	-	57.0
Syngenta	SY Southwind	43	-	-	57.6
OGI	Billings	42	52	56	58.2
OGI	Garrison	41	54	58	57.4
WestBred	WB-Redhawk	41	52	-	58.3
WestBred	WB-Grainfield	41	55	-	58.4
OGI	Doublestop CL Plus	41	52	56	57.4
CWRF	Brawl CL Plus	40	53	-	59.0
LCS	LCS Mint	40	54	-	58.7
Syngenta	Doans	40	47	48	59.0
WestBred	Armour	39	54	54	57.1
OSU	Endurance	39	50	52	56.7
OGI	Iba	39	53	57	57.6
OGI	Pete	39	49	53	59.9
AGSECO	TAM 113	36	51	-	58.8
Syngenta	CJ	31	46	49	59.2
OSU Experimentals					
	OK10728W	51	-	-	56.7
	OK10126	50	-	-	59.1
	OK09125	47	59	-	56.3
	OK11754WF	46	-	-	58.8
	OK09520	43	-	-	57.8
	OK10805W	37	-	-	59.2
Mean		44	55	56	58.4
LSD _(0.05)		7	5	3	1.8

Notes: Grain yields adjusted to 12% moisture. Plots received approximately 6.3 inches of rain from planting to harvest. A freeze event occurred on April 15, but freeze injury was less than 20%.

Lahoma Regional Wheat Variety Trial - Fungicide vs No Fungicide Comparison

Cooperator: North Central Research Station

Tillage: Conventional till

Planting date: 10/09/2013

Soil type: Pond Creek silt loam

Management: Grain only

Harvest date: 06/16/2014

Previous crop: Wheat

Soil test: pH = 5.2, P = 56, K = 436

Fungicide = 9 oz/ac Twinline+ 1% v/v COC on 2 May 2014

Source	Variety	Grain Yield						Test Weight		
		2013-14			2-Year			2013-14		
		No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.
		-----bu/ac-----						-----lb/bu-----		
OGI	Gallagher	55	49	-6	60	61	1	58.3	58.0	-0.3
LCS	T153	55	50	-5	56	58	2	57.9	58.6	0.7
WestBred	WB4458	54	53	-1	58	59	1	57.6	58.3	0.7
WestBred	Winterhawk	53	46	-7	57	56	-1	61.3	60.1	-1.2
OSU	Deliver	52	45	-7	52	51	-1	58.8	59.4	0.6
WestBred	WB-Cedar	52	44	-8	58	58	0	56.3	56.0	-0.3
Syngenta	SY Llano	52	49	-3	-	-	-	61.2	61.3	0.1
Syngenta	Greer	50	48	-2	58	60	2	57.4	56.1	-1.3
CWRF	Byrd	50	51	1	57	64	7	59.3	59.6	0.3
LCS	LCH11-1117	49	46	-3	-	-	-	59.0	59.1	0.1
LCS	LCH11-1130	49	44	-5	-	-	-	55.8	57.0	1.2
OGI	OK Rising	49	48	-1	-	-	-	58.6	59.6	1.0
OGI	Ruby Lee	49	49	0	58	62	4	59.4	58.2	-1.2
WestBred	WB-Redhawk	49	41	-8	54	52	-2	57.4	58.3	0.9
LCS	LCH11-109	49	48	-1	-	-	-	57.8	58.4	0.6
LCS	T158	48	48	0	56	58	2	57.2	58.0	0.8
LCS	LCS Wizard	48	46	-2	54	57	3	61.0	58.3	-2.7
OGI	Duster	48	45	-3	51	54	3	59.3	58.5	-0.8
OGI	OK Bullet	48	48	0	54	57	3	59.7	61.0	1.3
Watley	TAM 112	47	45	-2	-	-	-	57.9	57.9	0.0
LCS	T154	46	47	1	55	58	3	57.7	57.1	-0.6
OGI	Garrison	46	41	-5	50	54	4	58.0	57.4	-0.6
Syngenta	Jackpot	45	44	-1	53	57	4	57.6	58.0	0.4
OGI	Centerfield	44	44	0	51	54	3	58.7	58.9	0.2
OGI	Iba	44	39	-5	52	53	1	60.3	57.6	-2.7
WestBred	Armour	44	39	-5	52	54	2	56.4	57.1	0.7
OGI	Billings	43	42	-1	50	52	2	58.9	58.2	-0.7
Syngenta	SY Southwind	43	43	0	-	-	-	58.3	57.6	-0.7
OSU	Endurance	43	39	-4	52	50	-2	57.8	56.7	-1.1
WestBred	WB-Grainfield	42	41	-1	54	55	1	57.0	58.4	1.4
AGSECO	TAM 113	42	36	-6	49	51	2	58.5	58.8	0.3
LCS	LCS Mint	42	40	-2	52	54	2	58.7	58.7	0.0
CWRF	Brawl CL Plus	42	40	-2	52	53	1	59.3	59.0	-0.3
KWA	Everest	42	44	2	52	56	4	57.4	59.3	1.9
Syngenta	Doans	42	40	-2	46	47	1	58.1	59.0	0.9
OGI	Doublestop CL Plus	41	41	0	52	52	0	57.7	57.4	-0.3
OGI	Pete	40	39	-1	46	49	3	59.6	59.9	0.3
Syngenta	CJ	32	31	-1	46	46	0	58.1	59.2	1.1
OSU Experimentals										
	OK09125	52	47	-5	60	59	-1	58.8	56.3	-2.5
	OK10728W	50	51	1	-	-	-	57.3	56.7	-0.6
	OK10126	48	50	2	-	-	-	58.4	59.1	0.7
	OK09520	48	43	-5	-	-	-	58.2	57.8	-0.4
	OK11754WF	47	46	-1	-	-	-	58.7	58.8	0.1
	OK10805W	41	37	-4	-	-	-	61.1	59.2	-1.9
	Mean	47	44	-3	53	55	2	58.4	58.4	0.0
	LSD _(0.05)	8	7	NS	5	5	NS	2.7	1.8	NS

Notes: Grain yields adjusted to 12% moisture. Differences in yield and test weight between fungicide treated and nontreated cultivars was nonsignificant. Plots received approximately 6.3 inches of rain from planting to harvest. A freeze event occurred on April 15, but freeze injury was less than 20%.

Marshall Dual Purpose Wheat Variety Trial

Cooperator: Fuxa Farms

Tillage: Conventional till

Soil type: Kirkland silt loam

Management: Dual purpose

Planting date: 09/23/2013

Previous crop: Wheat

Harvest date: 06/11/2014

Soil test: pH = 5.6, P = 71, K = 397

Source	Variety	Grain Yield		
		2013-14	2-Year	3-Year
		-----bu/ac-----		
OGI	Iba	22	37	41
OGI	Duster	22	34	39
CWRF	Byrd	22	-	-
CWRF	Brawl CL Plus	21	-	-
OGI	Doublestop CL Plus	20	35	-
LCS	T154	19	36	-
WestBred	WB-Grainfield	19	-	-
Syngenta	Jackpot	19	34	35
LCS	T158	18	34	-
OSU	Endurance	18	34	37
OGI	Garrison	18	30	27
OGI	Ruby Lee	18	34	35
KWA	Everest	17	33	35
LCS	LCS Mint	17	-	-
Syngenta	Greer	17	32	32
Syngenta	Doans	16	30	36
LCS	LCS Wizard	16	-	-
WestBred	WB-Cedar	15	32	36
WestBred	WB4458	15	-	-
OGI	Gallagher	15	28	31
OGI	Billings	11	25	29
	OSU Experimentals			
	OK09125	23	33	-
	OK10728W	17	-	-
	OK09520	17	-	-
	Mean	18	33	34
	LSD _(0.05)	4	3	3

Notes: Cattle were removed when Duster reached first hollow stem. Grain samples were too small to measure test weight. Plots received approximately 8.8 inches of rain from planting to harvest. This severe, season-long drought combined with a freeze event on April 15 greatly reduced grain yield.

Marshall Grain-Only Wheat Variety Trial

Cooperator: Fuxa Farms	Tillage: Conventional till
Soil type: Kirkland silt loam	Management: Dual purpose
Planting date: 10/21/2013	Previous crop: Wheat
Harvest date: 06/11/2014	Soil test: pH = 5.6, P = 71, K = 397

Source	Variety	Grain Yield		
		2013-14	2-Year	3-Year
		-----bu/ac-----		
OGI	Duster	28	37	40
WestBred	WB-Grainfield	26	-	-
CWRF	Brawl CL Plus	25	-	-
Syngenta	Greer	25	40	41
CWRF	Byrd	25	-	-
LCS	T154	24	40	-
OGI	Iba	24	39	43
LCS	LCS Wizard	23	-	-
LCS	T158	23	38	-
Syngenta	Doans	23	33	37
OGI	Ruby Lee	23	37	38
OSU	Endurance	22	39	42
OGI	Doublestop CL Plus	22	36	39
LCS	LCS Mint	22	-	-
KWA	Everest	21	39	39
WestBred	WB4458	21	-	-
OGI	Garrison	21	37	32
Syngenta	Jackpot	21	34	37
WestBred	WB-Cedar	21	37	47
OGI	Billings	20	34	41
OGI	Gallagher	18	36	42
OSU Experimentals				
	OK10728W	26	-	-
	OK09125	24	39	-
	OK09520	21	-	-
Mean		23	37	40
LSD _(0.05)		4	3	3

Notes: Grain samples were too small to collect a sufficient number of test weight samples for analysis and reporting. Plots received approximately 5.2 inches of rain from planting to harvest. This severe, season-long drought combined with a freeze event on April 15 greatly reduced grain yield.

Marshall Grain Only and Dual Purpose Wheat Variety Trials

Cooperator: Fuxa Farms

Tillage: Conventional Till

Previous crop: Wheat

Soil type: Kirkland silt loam

Soil test: pH = 5.7, P = 71, K = 397

Planting date: 09/23/2013 (Dual Purpose) & 10/21/2013 (Grain Only)

Harvest date: 06/11/2014

Grain Yield

Source	Variety	2013 - 2014			2-Year			3-Year		
		Grain Only	Dual Purpose	<i>Diff.</i>	Grain Only	Dual Purpose	<i>Diff.</i>	Grain Only	Dual Purpose	<i>Diff.</i>
-----bu/ac-----										
OGI	Duster	28	22	-7	37	34	-3	40	39	-1
WestBred	WB-Grainfield	26	19	-7	-	-	-	-	-	-
CWRF	Brawl CL Plus	25	21	-4	-	-	-	-	-	-
Syngenta	Greer	25	17	-8	40	32	-7	41	32	-9
CWRF	Byrd	25	22	-3	-	-	-	-	-	-
LCS	T154	24	19	-5	40	36	-4	-	-	-
OGI	Iba	24	22	-2	39	37	-3	43	41	-3
LCS	LCS Wizard	23	16	-7	-	-	-	-	-	-
LCS	T158	23	18	-4	38	34	-3	-	-	-
Syngenta	Doans	23	16	-7	33	30	-3	37	36	-1
OGI	Ruby Lee	23	18	-5	37	34	-3	38	35	-2
OSU	Endurance	22	18	-4	39	34	-6	42	37	-5
OGI	Doublestop CL Plus	22	20	-2	36	35	0	39	-	-
LCS	LCS Mint	22	17	-5	-	-	-	-	-	-
KWA	Everest	21	17	-4	39	33	-6	39	35	-4
WestBred	WB4458	21	15	-6	-	-	-	-	-	-
OGI	Garrison	21	18	-3	37	30	-6	32	27	-5
Syngenta	Jackpot	21	19	-2	34	34	-1	37	35	-2
WestBred	WB-Cedar	21	15	-5	37	32	-6	47	36	-10
OGI	Billings	20	11	-9	34	25	-9	41	29	-12
OGI	Gallagher	18	15	-3	36	28	-7	42	31	-11
OSU Experimentals										
	OK10728W	26	17	-9	-	-	-	-	-	-
	OK09125	24	23	-1	39	33	-6	-	-	-
	OK09520	21	17	-4	-	-	-	-	-	-
Mean		23	18	-5	37	33	-5	40	34	-5
LSD _(0.05)			4			3			3	

McCloud Wheat Variety Trial

Cooperator: Gerod McKinley	Tillage: Conventional till
Soil type: Keokuk silt loam	Management: Grain only
Planting date: 11/19/2013	Previous crop: Soybean
Harvest date: 06/18/2014	Soil test: pH = 5.2, P = 53, K = 156

Source	Variety	Grain Yield			Test Weight
		2013-14	2-Year	3-Year	2013-14
		-----bu/ac-----			--lb/bu--
OGI	Ruby Lee	37	43	53	59.4
OGI	Garrison	36	48	56	55.5
WestBred	WB-Cedar	36	45	54	54.3
LCS	LCS Mint	36	-	-	56.7
LCS	LCS Wizard	36	-	-	55.7
WestBred	Winterhawk	35	-	-	57.4
CWRF	Brawl CL Plus	34	-	-	55.8
OGI	Gallagher	34	43	54	55.8
WestBred	WB-Grainfield	34	-	-	56.0
CWRF	Byrd	33	-	-	54.6
OGI	Iba	33	46	53	54.5
WestBred	WB4458	32	-	-	54.5
KWA	Everest	32	46	55	58.7
OSU	Deliver	32	-	-	56.3
OSU	Endurance	32	46	52	53.4
Syngenta	Doans	32	44	47	56.6
OGI	Billings	31	43	53	55.1
Syngenta	Greer	31	40	50	55.1
OGI	Doublestop CL Plus	30	45	-	55.9
OGI	Duster	30	44	47	55.5
LCS	T158	30	42	-	54.3
Syngenta	Jackpot	29	45	53	55.6
OSU Experimentals					
	OK10126	30	-	-	53.1
	Mean	33	44	52	55.6
	LSD _(0.05)	4	6	6	3.1

Thomas Wheat Variety Trial

Cooperator: Brownie Browne	Tillage: Conventional till
Soil type: Pond Creek silt loam	Management: Grain only
Planting date: 10/17/2013	Previous crop: Wheat
Harvest date: 06/04/2014	Soil test: pH = 5.2, P = 101, K = 519

Source	Variety	Grain Yield		
		2013-14	2-Year	3-Year
		-----bu/ac-----		
Syngenta	Jackpot	18	16	19
Syngenta	Doans	17	15	21
OGI	Gallagher	16	16	18
WestBred	WB4458	16	-	-
LCS	LCS Wizard	15	-	-
OGI	Ruby Lee	14	15	19
LCS	T158	14	15	-
WestBred	WB-Cedar	14	16	-
KWA	Everest	13	15	19
OGI	Garrison	13	14	15
OGI	Doublestop CL Plus	13	-	-
LCS	LCS Mint	12	-	-
OSU	Deliver	12	-	-
WestBred	WB-Grainfield	12	-	-
OGI	Billings	12	11	18
WestBred	Winterhawk	11	15	20
Syngenta	Greer	11	11	14
OSU	Endurance	11	14	14
OGI	Iba	11	11	20
CWRF	Brawl CL Plus	10	-	-
CWRF	Byrd	10	-	-
OGI	Duster	9	11	15
OSU Experimentals				
	OK09125	18	16	-
	OK09520	14	-	-
	Mean	13	14	18
	LSD _(0.05)	4	2	5

Notes: Grain samples were too small to measure test weight. Plots received approximately 8.6 inches of rain from planting to harvest. This severe, season-long drought combined with a freeze event on April 15 greatly reduced grain yield.

Walters Wheat Variety Trial

Cooperator: Kinder Farms

Soil type: Tillman-Foard complex

Planting date: 09/24/2013

Harvest date: 06/03/2014

Tillage: No-till

Management: Dual Purpose

Previous crop: Canola

Soil test: pH = 4.6, P = 122, K = 435

Source	Variety	Grain Yield	Test Weight	Hessian Fly*
		2013-14	2013-14	1-10 scale
		--bu/ac---	--lb/bu--	
OGI	Ruby Lee	37	63.3	3
OGI	Duster	35	61.6	1
OGI	Gallagher	33	61.1	1
KWA	Everest	33	61.5	2
WestBred	Winterhawk	32	64.6	4
OGI	Iba	31	63.8	2
LCS	T158	30	60.5	4
Syngenta	Jackpot	30	61.5	3
CWRF	Brawl CL Plus	29	62.2	4
OSU	Endurance	29	61.3	4
OGI	Doublestop CL Plus	29	62.0	3
LCS	LCS Wizard	28	61.2	1
WestBred	WB-Grainfield	28	58.9	5
CWRF	Byrd	28	57.6	3
Syngenta	Greer	28	58.2	4
Syngenta	Doans	27	61.7	2
WestBred	WB4458	27	60.1	5
OGI	Garrison	26	62.2	5
AGSECO	TAM 113	25	64.7	4
Watley	TAM 112	25	59.6	3
LCS	LCS Mint	25	66.1	5
	OSU Experimentals			
	OK10805W	30	61.0	2
	OK09125	29	59.3	5
	Mean	29	61.5	3
	LSD _(0.05)	7	3.7	1

*Hessian fly ratings taken just prior to harvest using a 1 - 10 scale with 1 indicating no injury and 10 indicating severe injury

2014 Oklahoma Wheat Variety Performance Tests -- Heading Date and Plant Height

	Chickasha Goodwell												
	Stillwater	Afton	Balko	Chickasha	IWM	Irrigated	Homestead	Hooker	Kingfisher	Lahoma	McLoud	Thomas	Walters
50% heading	-----plant height at harvest - inches-----												
Armour	4/21	-	13	23	22	24	-	-	-	22	-	-	-
Billings	4/21	19	16	18	18	25	20	20	26	23	15	25	-
Brawl CL Plus	4/23	-	14	28	27	28	23	24	19	22	17	23	23
Byrd	4/24	-	14	27	25	22	23	22	22	23	19	22	21
Centerfield	4/23	23	-	28	26	26	-	-	-	24	-	-	-
CJ	4/23	-	-	26	25	25	-	-	-	22	-	-	-
Deliver	4/21	-	-	24	22	28	-	-	25	22	22	18	-
Doans	4/21	23	17	25	25	27	21	22	23	22	17	21	19
Doublestop CL Plus	4/23	26	14	28	28	28	28	23	20	23	22	21	24
Duster	4/23	23	13	24	27	28	20	23	25	23	17	24	24
Endurance	4/21	21	13	22	24	26	21	23	24	23	17	18	24
Everest	4/17	22	16	25	24	24	21	20	22	22	15	22	20
Gallagher	4/23	22	14	24	23	23	20	21	24	23	15	23	21
Garrison	4/23	24	16	27	25	27	19	20	26	22	19	25	22
Greer	4/23	24	15	23	24	26	23	22	22	24	17	19	21
Iba	4/23	24	14	24	23	25	22	21	24	23	16	21	22
Jackpot	4/21	22	16	26	25	26	22	22	25	24	18	22	20
LCH11-109	4/24	-	-	21	24	23	-	-	-	21	-	-	-
LCH11-1117	4/21	-	-	26	25	24	-	-	-	23	-	-	-
LCH11-1130	4/23	-	-	26	26	25	-	-	-	24	-	-	-
LCS Mint	4/24	26	14	24	27	26	24	25	19	21	20	22	22
LCS Wizard	4/23	22	12	23	24	26	23	21	17	21	15	20	21
Mace	-	-	18	-	-	25	-	19	-	-	-	-	-
OK Bullet	4/23	-	-	27	28	30	-	-	-	24	-	-	-
OK Rising	4/23	-	-	25	26	26	-	-	-	24	-	-	-
Pete	4/17	-	-	23	23	22	-	-	-	21	-	-	-
Ruby Lee	4/21	26	15	26	27	30	22	22	28	24	17	25	27
Sy Llano	4/21	-	-	22	22	21	-	-	-	22	-	-	-
SY Southwind	4/23	20	-	24	23	-	-	-	-	21	-	-	-
T153	4/21	-	-	25	27	22	-	-	-	22	-	-	-
T154	4/21	-	-	25	26	23	23	-	-	22	-	-	-
T158	4/23	22	14	22	27	24	24	20	24	24	15	19	19
TAM 112	4/21	-	14	24	25	27	-	21	-	23	-	-	21
TAM 113	4/24	-	17	27	23	28	-	24	-	25	-	-	23
WB-Cedar	4/17	21	-	25	25	22	21	-	26	22	16	20	-
WB-Grainfield	4/23	23	16	25	24	25	22	22	25	23	20	21	23
WB-Redhawk	4/21	-	16	23	26	28	-	-	-	23	-	-	-
WB4458	4/23	25	-	23	24	28	25	23	25	23	19	20	22
Winterhawk	4/23	-	-	25	24	24	-	22	23	21	20	20	21
OK08707W-19C13	4/23	-	16	-	-	28	-	-	-	-	-	-	-
OK09125	4/23	-	14	26	27	28	27	24	16	23	-	19	23
OK09520	4/23	-	-	25	25	-	23	-	16	22	-	19	-
OK10126	4/23	24	-	26	28	25	-	-	-	20	20	-	-
OK10728W	4/21	-	-	-	-	25	24	-	-	25	-	-	-
OK10805W	4/23	-	17	27	26	27	23	-	-	21	-	-	22
OK11754WF	4/24	23	-	-	-	-	24	-	-	23	-	-	-
Average	4/22	23	15	25	25	26	23	22	23	23	18	21	22

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Current Report

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Fall forage production and date of first hollow stem in winter wheat varieties during the 2013-2014 crop year

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Introduction

Fall forage production potential is just one consideration in deciding which wheat 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 slight advantages in 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, fall forage production is generally not the most important selection criteria used by Oklahoma wheat growers, but it is one that should be considered.

Fall forage production by winter wheat is determined by genetic potential, management, and environmental factors. The purpose of this publication is to quantify some of the genetic differences in forage production potential and grazing duration among the most popular wheat varieties grown in Oklahoma. Management factors such as planting date, seeding rate, and soil fertility are very influential and are frequently more important than variety in determining forage production. Environmental factors such as rainfall 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 wheat 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 are conducted under the umbrella of the Oklahoma State University Small Grains Variety Performance Tests at our Chickasha and Stillwater, OK test sites. Weather data for these two sites are provided in Figures 1 and 2.

A randomized complete block design with four replications was used at each site. Forage was measured by hand clipping two 1-m by 1-row samples approximately ½ inch above the soil surface at random sites within each plot. Samples were then placed in a forced-air dryer for approximately 7 days and weighed. All plots were sown at 120 lb/A in a conventionally-tilled seedbed and received 50 lb/ac of 18-46-0 in furrow at planting. Fertility, planting date, and harvest date information are provided in Table 1.

Results

As was the case across most of Oklahoma, our wheat plots were sown into dry topsoil in late September. Soils in southwest and northwest Oklahoma were extremely dry due to multiple years of drought, and wheat pasture was short in these areas of the state. Summer rainfall provided ample subsoil moisture in the central part of the state, but topsoil was largely dry through September. Rains fell across much of the state in October and provided the fuel needed to build wheat pasture. Unfortunately, these October rains would be the only significant rainfall events most of the Oklahoma wheat crop would receive (Figures 1 and 2).

Fall forage production by winter wheat at Stillwater and Chickasha averaged 3,240 and 2,580 pounds per acre, respectively (Tables 2 and 3). As indicated earlier in this publication there was a large group of varieties at Stillwater and Chickasha that produced statistically equivalent forage yield, and producers are encouraged to consider two and three year averages when available.

First hollow stem data are reported in 'day of year' (day) format (Table 4). To provide reference, keep in mind that March 1 is day 60. Average occurrence of first hollow stem at Stillwater in 2014 was day 77. This was approximately five days later than 2013 and 25 days later than in 2012 and was the result of much cooler than normal temperatures. Unlike previous years, there was only about ten days difference among varieties in occurrence of first hollow stem.

Acknowledgments

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Seed Sources and Abbreviations

AGSECO = AGSECO Inc.
CWRWF = Colorado Wheat Research Foundation
KWA = Kansas Wheat Alliance
LCS = Limagrain Cereal Seeds
OGI = Oklahoma Genetics Inc.
OSU = Oklahoma State University
Syngenta = Syngenta Seeds
Watley = Watley Seeds

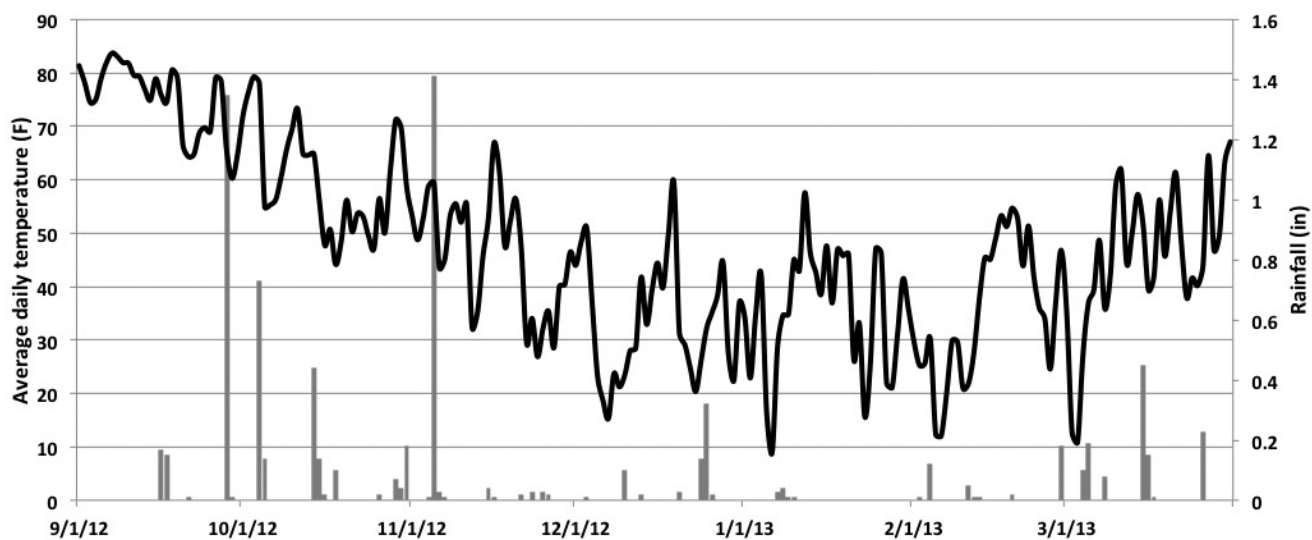


Figure 1. Average daily temperature (line graph) and rainfall (bar chart) from September 1, 2013 to March 31, 2014 at Stillwater, OK. Weather data courtesy Oklahoma Mesonet.

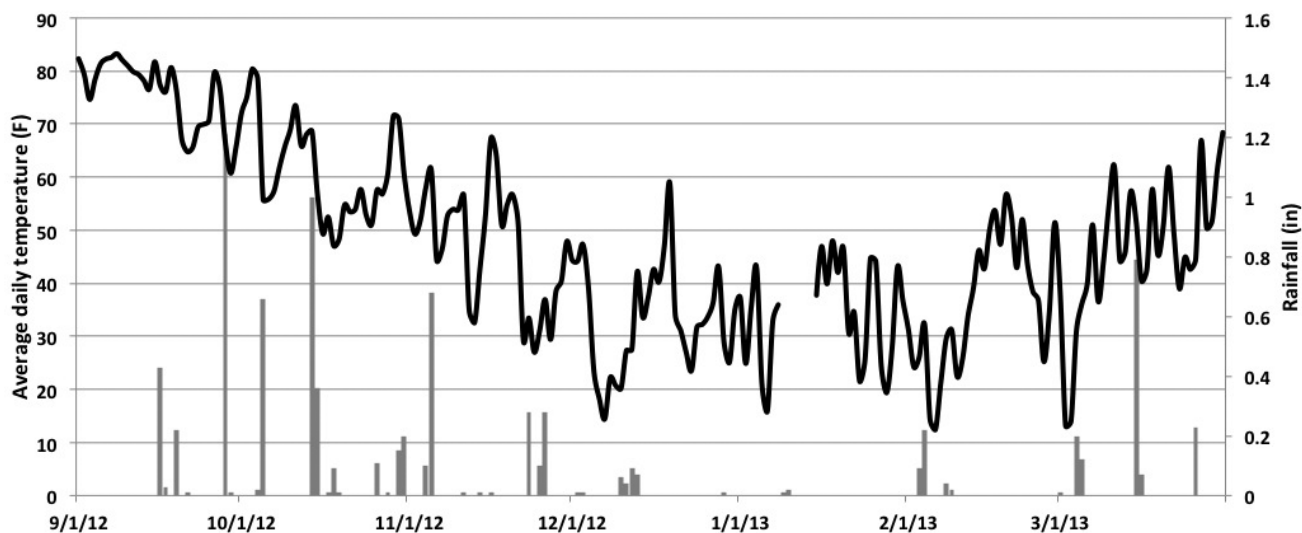


Figure 2. Average daily temperature (line graph) and rainfall (bar chart) from September 1, 2013 to March 31, 2014 at Chickasha, OK. Weather data courtesy Oklahoma Mesonet.

Table 1. Location information.

	<i>Planting date</i>	<i>Sampling date</i>	<i>pH</i>	<i>N</i>	<i>P</i>	<i>K</i>
Chickasha	09/25/13	12/02/13	6.9	176	54	364
Stillwater	09/20/13	11/26/13	5.6	180	79	311

Table 2. Fall forage production by winter wheat varieties at Stillwater, OK during the 2013-2014 production year.

Source	Variety	2013-2014	2-Year	3-Year
-----lbs dry forage/acre-----				
Syngenta	SY Llano	4,100	-	-
AGSECO	TAM 113	4,090	3,160	3,220
OGI	Billings	3,850	3,200	3,250
LCS	LCS Mint	3,690	-	-
OGI	Duster	3,670	3,180	3,300
OGI	Gallagher	3,650	3,230	3,500
LCS	T154	3,640	3,040	-
Syngenta	Doans	3,610	-	-
WestBred	WB4458	3,610	2,920	-
Syngenta	Jackpot	3,600	3,060	3,150
WestBred	WB-Cedar	3,560	3,240	3,250
OSU	Deliver	3,470	2,770	3,010
WestBred	Winterhawk	3,470	2,780	3,020
OGI	Garrison	3,350	3,100	3,210
Watley	TAM 112	3,230	-	-
OGI	Doublestop CL Plus	3,200	3,020	-
OGI	Pete	3,160	2,810	3,020
Syngenta	CJ	3,130	2,810	2,980
LCS	LCS Wizard	3,120	2,950	-
WestBred	Armour	3,110	3,000	3,100
LCS	LCH11-1117	3,110	-	-
OGI	Centerfield	3,090	2,820	3,120
OGI	OK Bullet	3,090	2,630	2,820
Syngenta	SY Southwind	3,090	-	-
OSU	Endurance	3,080	3,080	3,310
KWA	Everest	3,050	2,810	3,010
Syngenta	Greer	3,040	2,840	2,960
LCS	LCH11-1130	3,040	-	-
LCS	T158	3,020	2,760	3,000
CWRF	Brawl CL Plus	2,980	2,860	-
OGI	Ruby Lee	2,980	2,610	2,900
LCS	T153	2,960	2,840	3,090
OGI	Iba	2,930	2,770	3,030
WestBred	WB-Grainfield	2,910	2,920	-
WestBred	WB-Redhawk	2,850	2,590	-
LCS	LCH11-109	2,750	2,990	-
OGI	OK Rising	2,720	2,720	-
CWRF	Byrd	2,670	2,590	-
OSU Experimentals	OK09125	2,800	2,540	-
Average		3,240	2,900	3,110
LSD (0.05)		750	500	400

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

Table 3. Fall forage production by winter wheat varieties at Chickasha, OK during the 2013-2014 production year.

Source	Variety	2013-2014	
		2014	2-Year
<i>--lbs dry forage/acre--</i>			
OGI	Duster	2,920	2,920
OGI	Gallagher	2,920	3,010
LCS	T158	2,900	2,580
CWRF	Brawl CL Plus	2,830	-
KWA	Everest	2,750	2,750
OGI	Doublestop CL Plus	2,700	-
WestBred	Winterhawk	2,680	-
LCS	LCS Mint	2,660	-
OSU	Endurance	2,630	2,620
WestBred	WB-Cedar	2,590	2,630
CWRF	Byrd	2,540	-
Syngenta	Jackpot	2,540	2,460
WB-Grainfield	WB-Grainfield	2,530	-
WestBred	WB4458	2,520	-
OGI	Iba	2,460	2,460
LCS	LCS Wizard	2,440	-
OGI	Billings	2,420	-
OGI	Ruby Lee	2,420	2,430
OSU	Deliver	2,410	2,200
Syngenta	Greer	2,380	2,480
Syngenta	Doans	2,210	-
OGI	Garrison	2,160	2,220
OSU Experimentals			
	OK09125	2,760	-
Average		2,580	2,560
LSD		430	290

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

Table 4. Occurrence of first hollow stem (day of year) for winter wheat varieties sown in 2013 and measured in 2014 at Stillwater, OK.

Source	Variety	Stillwater
		<i>--day of year--</i>
Syngenta	SY Llano	72
WestBred	WB-Cedar	72
OGI	Billings	74
Syngenta	CJ	74
KWA	Everest	74
OGI	Gallagher	74
Syngenta	Jackpot	74
OGI	OK Bullet	74
OGI	OK Rising	74
Syngenta	SY Southwind	74
LCS	T153	74
Watley	TAM 112	74
AGSECO	TAM 113	74
WestBred	Armour	77
CWRF	Byrd	77
OSU	Deliver	77
Syngenta	Doans	77
OGI	Duster	77
OSU	Endurance	77
OGI	Garrison	77
Syngenta	Greer	77
LCS	LCH11-109	77
LCS	LCH11-1117	77
LCS	LCH11-1130	77
LCS	LCS Wizard	77
OGI	Pete	77
LCS	T154	77
WestBred	WB-Redhawk	77
WestBred	WB4458	77
WestBred	Winterhawk	77
OGI	Doublestop CL Plus	80
OGI	Iba	80
LCS	LCS Mint	80
OGI	Ruby Lee	80
LCS	T158	80
WestBred	WB-Grainfield	80
CWRF	Brawl CL Plus	83
OGI	Centerfield	83
OSU Experimentals		
	OK11754WF	69
	OK10728W	74
	OK09520	77
	OK08707W-19C13	80
	OK09125	83
	OK10805W	83
	OK10126	86
Average		77

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