



Current Report

EXTENSION

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2019-2020 Small Grains Variety Performance Tests

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Wheat Crop Overview

At the time of writing this report, 2020 Oklahoma wheat production is estimated to be approximately 113 million bushels, which is about 3% higher than 2019 production and 62% greater than 2018 production (Table 1). The 4.3 million acres planted in the 2020 crop year represented a 2% increase compared to the previous year and was 14% lower than the previous 10-year average. The number of harvested acres is estimated at 2.70 million, which is 2% lower than in 2019 (Table 1). The statewide average yield is projected at 42 bushels per acre, which could be a new state record. This is 2 bushels per acre higher than the 2019 state average and 11 bushels per acre greater than the previous 10-year average.

Table 1. Oklahoma wheat production for 2018, 2019, and 2020 as estimated by USDA NASS, July 2020.

	2018	2019	2020
Harvested area (million acres)	2.50	2.75	2.70
Yield (bushels/acre)	28	40	42
Total production (million bushels)	70	110	113

For some parts of the state, wheat was planted into good moisture. However, some other regions were extremely dry (central west) and wheat was either not planted in a timely fashion or had limited growth in the fall. On the other hand, wheat planted in northeastern Oklahoma faced emergence issues due to excessive moisture. November was cooler than normal which also limited wheat growth across the state. Most fields where wheat was planted earlier developed crown roots but top growth was less than normal. Many of these fields had thin stands and less forage than desired to feed cattle for dual-purpose producers. Fields planted late were at the 1- to 2-leaf stage with their initial (seminal) roots developing in November. Overall, wheat growth was slower than expected

for a typical year. Moderate temperatures and good moisture in some regions led to good fall forage production but lower than expected production in other regions of the state (for more information see CR 2141, Fall Forage Production and First Hollow Stem Date for Small Grain Varieties during the 2019-2020 Crop Year). No diseases were observed in the fall, but fall armyworm infestations were observed in early-planted wheat in the central region.

Moderate winter temperatures and abundant soil moisture allowed the under-developed wheat to add tillers and develop a canopy. With winter being warmer than normal, first hollow stem arrived about two weeks earlier than the long-term average (March 6th) and almost one month earlier than in 2019 (see CR 2141). As a result, dual-purpose producers worked with a shorter grazing period.

A combination of factors including leaf spot diseases, physiological leaf spotting, and nitrogen deficiency (mostly caused by the loss of nitrogen due to wetness) resulted in yellow wheat in many fields from jointing to the flag leaf stage. Foliar fungal diseases had a slow start in the spring. A low incidence of stripe rust was observed in early March, but leaf spot diseases (tan spot, Septoria) in no-till wheat were the most prevalent diseases in Oklahoma. In addition to these diseases, army cutworms were found in some wheat fields across the state.

Wheat started to head around the end of March and early April in southwest and south-central Oklahoma, which made it susceptible to late-spring freezes. Such a freeze occurred on April 15 when many wheat fields were at flowering, damaging floral tissue and producing sterile heads. In areas with freeze damage, most heads remained green but were "empty" with no grain being formed. Many producers cut wheat for hay. In other areas, lack of water limited grain development. Also, a severe flag leaf burn was observed for some varieties in central to north-central Oklahoma due to genetics and environmental stresses such as freeze and drought.

Cool and moist weather extended into the late spring that promoted widespread development of both rusts (leaf and

stripe) and the leaf spot diseases (Septoria and tan spot). In some instances, severe leaf spotting by Septoria was found in the upper canopy including the flag leaf, which is atypical in Oklahoma. Stripe rust occurred at low pressure and leaf rust came in late in the season mainly in the Northern region. Fusarium head blight (scab) occurred at levels typical for northeastern Oklahoma and was not reported in other parts of the state. Barley yellow dwarf and wheat streak mosaic were sporadic and were confirmed at only a few locations scattered across western Oklahoma. Powdery mildew was observed at low incidence and severity as compared to most years. In summary, diseases were quite active in Oklahoma during 2020 with leaf spots being the most prominent. The mild weather improved yield prospects by the time producers were making fungicide decisions, and many producers chose to protect yield potential with an application. Data from fungicide treated and nontreated variety trial comparisons at Lahoma provide an indication of the impact of foliar disease on grain yield and suggest that applying a foliar fungicide was a profitable decision for many wheat farmers planting varieties susceptible to rusts and Septoria diseases in 2020.

Harvest commenced immediately after Memorial Day weekend. The weather was favorable across the state, and harvest was completed in a month. Grain yields varied from extremely low yields (10 to 20 bushels per acre) in southwest and south-central OK, mostly due to freeze damage, to above-average yields in the central (mid-40s to mid-50s, bushels per acre) and north-central/northwest regions (40 to 60 bushels per acre). Yields on irrigated fields at the Panhandle region varied mostly from 50 to 75 bushels per acre. Test weight was good, and values ranged from 60 to 64 pounds per bushel. Wheat protein ranged from 8.0 to 15.5% across the state, with a state average of 11%.

Testing Methods and Data Interpretation

Testing 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 a fungicide, but the formulation and rate of seed treatment used was not confirmed or reported in this document.

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. Except for dryland locations in the Panhandle, plots were planted 25 feet long and trimmed to 19 feet at harvest with the plot combine. Panhandle dryland locations were 35 feet long at planting and trimmed to 29 feet at harvest. Wheel tracks were included in the plot area for yield calculation, for a total plot width of 60 inches. Experimental design for all sites other than Apache and Lahoma was a randomized complete block with four replications. Apache and Lahoma were a split-plot arrangement of a randomized complete block with four replications where whole plots were fungicide treated or non-treated, and sub-plots were wheat variety.

Plots received 5 gallons per acre of 10-34-0 at planting. The dual-purpose (DP) trials at El Reno and Walters, and forage trials were sown at 120 pounds per acre. The Goodwell irrigated trial was sown at 90 pounds per acre and the other locations in the Panhandle (Balko, Hooker and Keys) were sown at 45 pounds per acre. All other locations were sown at 60 pounds per acre. Grazing intensity, nitrogen fertiliza-

tion, 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 Winterstieger Delta small plot combine. Grain weight, test weight, and moisture content were collected from each plot, and grain yields and protein concentration were corrected to 12% moisture content. Grain moisture at all sites was generally below 12%, and maximum and minimum grain moisture for all plots at a location typically ranged no more than 2%. The plots at Thomas were not harvested due to waterlogging. Plots at Apache and Chickasha were lost due to the severe mid-April freeze.

Data Interpretation

Yield, test weight and protein data for each location and regional summary were analyzed using the appropriate statistical methods. At the bottom of each table, the mean and least significant difference (LSD) values are reported. The LSD is a test statistic that aids in determining whether there is a true difference in yield, test weight, and protein. In this report, one can be 95% confident that the difference between two varieties is real if the difference is greater than the LSD value. Data that is not significant is indicated by "NS." For example, if the LSD value is 4 bushels per acre in a trial which Variety A yielded 30 bushels per acre and Variety B yielded 25, then Variety A would be considered to have a statistically higher yield. However, if Variety C yielded 27 bushels per acre, then Variety A and Variety C would be considered to have a similar yield. In that same example trial, there is a 5% chance that the 4-bushels-per-acre difference between Variety A and Variety B does not truly exist, but random chance caused the 5-bushels-per-acre difference. These chance factors may include differences in fertility, moisture availability, and diseases for example. To aid in determining the varieties with the highest yields, test weights, and proteins, values highlighted in gray do not differ statistically from the highest value within a column. The performance of a variety may vary from year to year, even at the same location. Tests over two or more years and over multiple locations more accurately predict the variety performance.

Additional Information on the Web

A copy of this publication as well as additional information about wheat management can be found at:

Website: www.wheat.okstate.edu

Blog: www.osuwheat.com



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Funding Provided By

Oklahoma Wheat Commission
Oklahoma Wheat Research Foundation
OSU Cooperative Extension Service
OSU Agricultural Experiment Station
Entry fees from participating seed companies

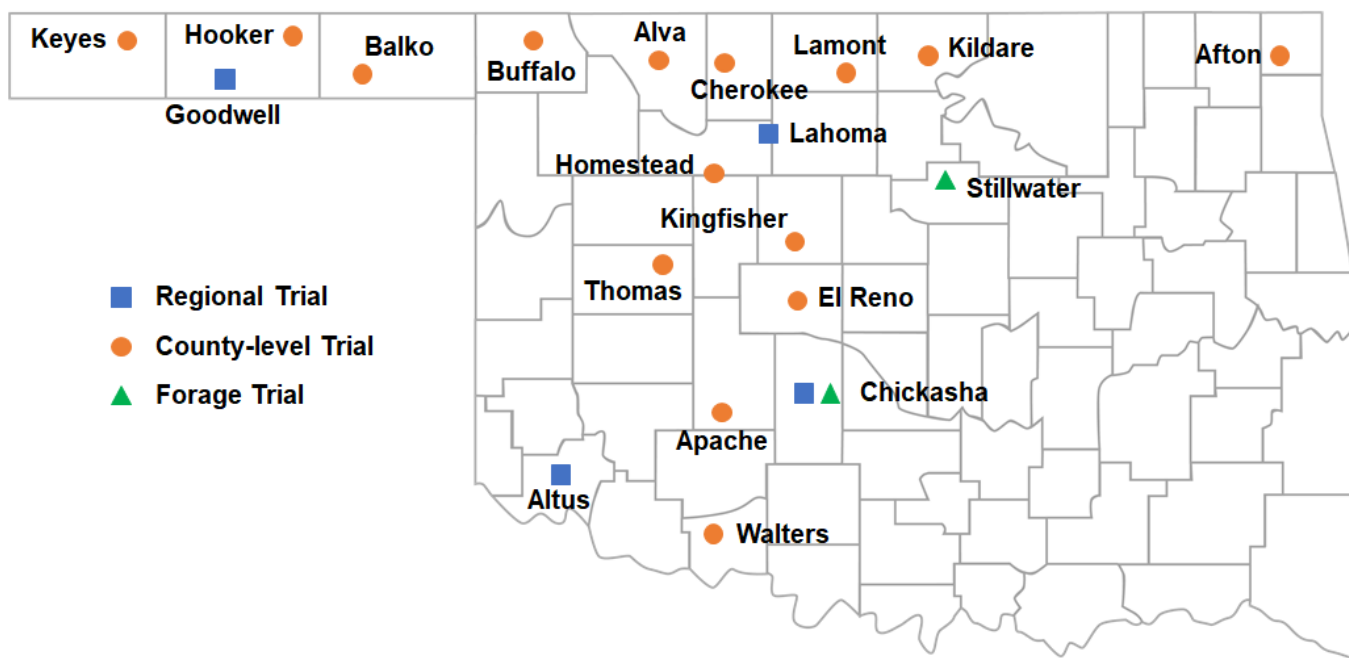


Figure 1. Performance test locations.

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We sincerely thank our variety trial cooperators for donation of land, time and resources. Variety trial cooperators not otherwise listed in this document include:

Bryan Vail, Apache
 Jerad Bradt & Wes Mallory, Alva
 Brownie Brown, Thomas

2019-2020 Oklahoma wheat variety performance tests region summary.

Licensee	Variety	Regional Trial Locations ¹					Southwest
		Central	North Central	Northwest	Panhandle		
-----grain yield (bu/ac)-----							
AGSECO	AG Icon	69	48	93	83	52	-
AgriMAXX	AM Cartwright	-	-	-	-	-	-
AgriMAXX	AM Eastwood	-	-	100	-	49	-
AgriPro	Ap EverRock	63	-	-	-	-	-
OGI	Baker's Ann	60	46	90	88	47	24
OGI	Bentley	63	51	95	93	48	33
AgriPro	Bob Dole	63	52	94	81	46	39
PlainsGold	Canvas	81	-	-	91	61	-
CROPLAN	CP7010	76	-	-	-	-	-
CROPLAN	CP7869	73	-	-	-	-	-
CROPLAN	CP7909	77	-	-	-	-	-
PlainsGold	Crescent AX	64	-	-	86	53	-
OGI	Doublestop CL Plus	74	49	95	86	48	53
OGI	Duster	57	43	-	-	50	37
OGI	Gallagher	67	42	90	82	50	38
OGI	Green Hammer	-	47	91	83	-	32
PlainsGold	Guardian	74	-	-	-	-	-
OGI	Iba	68	-	92	85	55	39
KWA	KS Dallas	65	-	-	-	-	-
KWA	KS Silverado	68	-	-	-	-	-
KWA	KS Western Star	69	-	-	-	-	-
PlainsGold	Langin	59	-	-	93	48	-
LCS	LCS Chrome	67	47	91	80	49	50
LCS	LCS Photon AX	60	-	-	-	-	-
OGI	Lonerider	-	-	-	-	51	-
OGI	OK Corral	72	46	93	87	50	48
OGI	Ruby Lee	-	49	-	-	-	32
OGI	Showdown	73	52	96	93	49	56
OGI	Skydance	-	46	-	-	-	28
OGI	Smith's Gold	63	48	90	89	46	42
OGI	Spirit Rider	-	-	85	-	45	-
AgriPro	SY Achieve CL2	63	-	-	-	-	-
AgriPro	SY Benefit	64	-	-	-	-	-
AgriPro	SY Rugged	70	51	94	86	56	41
AGSECO	TAM 114	68	-	-	88	45	-
WestBred	WB4269	70	52	106	94	48	30
WestBred	WB4401	-	-	-	-	-	-
WestBred	WB4515	72	-	-	-	-	-
WestBred	WB4595	81	-	-	-	-	-
WestBred	WB4699	79	-	101	89	54	-
WestBred	WB4792	78	-	101	90	57	54
KWA	Zenda	66	38	92	87	-	39
Dyna-Gro	Long Branch	-	-	-	-	54	-
OGI	Lonerider	-	-	-	-	51	-
AgriPro	SY Wolverine	-	-	-	-	51	-
OSU Experimentals							
	OCW04S717T-6W	-	55	86	-	-	37
	OK12912C-138407-2	-	48	99	92	-	39
	OK15MASBx7 ARS 8-1	70	43	92	-	48	40
	OK16107117	-	-	-	-	45	-
	OK16729W	64	56	96	87	45	39
	OK168512	-	-	-	81	51	-
	OK16D101089	-	55	89	74	-	34
	OK188608	-	53	-	-	-	33
Mean		69	48	94	87	50	39
LSD (0.05)		7	5	5	7	4	8

1 Data for varieties reported from the Altus, Goodwell Irrigated, Lahoma and Lahoma Fungicide trials are included in this analysis. Data from Chickasha was not included due to severe freeze damage during heading.

2019-2020 Oklahoma wheat variety performance tests summary.

Licensee	Variety	Afton	Altus	Balko	Buffalo	Cherokee	El Reno	Goodwell	
								Irrigated	Homestead
-----grain yield (bu/ac)-----									
AGSECO	AG Icon	-	44	53	80	86	60	42	105
AgriMAXX	AM Cartwright	-	-	-	-	-	-	37	-
AgriMAXX	AM Eastwood	45	-	48	-	88	-	49	113
AgriPro	Ap EverRock	-	35	-	-	-	-	-	-
OGI	Baker's Ann	53	23	50	88	87	56	32	94
OGI	Bentley	57	28	58	99	89	66	37	104
AgriPro	Bob Dole	69	34	56	82	80	68	36	105
PlainsGold	Canvas	-	68	58	95	87	-	58	109
CROPLAN	CP7010	-	66	-	-	-	-	44	-
CROPLAN	CP7869	33	68	-	-	-	-	46	-
CROPLAN	CP7909	-	54	-	-	-	-	47	-
PlainsGold	Crescent AX	-	22	59	79	92	-	44	94
OGI	Doublestop CL Plus	61	64	52	85	87	65	41	108
OGI	Duster	47	33	58	-	77	58	38	93
OGI	Gallagher	47	42	54	71	92	51	42	102
OGI	Green Hammer	57	29	-	81	85	57	-	104
PlainsGold	Guardian	-	63	-	-	-	-	58	102
OGI	Iba	-	39	58	85	86	-	51	105
KWA	KS Dallas	-	36	-	-	-	-	42	-
KWA	KS Silverado	-	42	-	-	-	-	27	-
KWA	KS Western Star	-	50	-	-	-	-	53	-
PlainsGold	Langin	-	23	58	90	97	-	31	104
LCS	LCS Chrome	47	59	55	85	76	68	34	109
LCS	LCS Photon AX	-	28	-	-	-	-	26	-
OGI	Lonerider	-	-	51	-	-	-	43	-
OGI	OK Corral	69	61	49	85	89	59	40	113
OGI	Ruby Lee	68	30	-	-	76	61	-	104
OGI	Showdown	53	63	54	88	100	71	48	118
OGI	Skydance	61	23	-	-	-	53	-	-
OGI	Smith's Gold	69	46	55	89	88	59	33	112
OGI	Spirit Rider	-	-	41	-	83	-	35	99
AgriPro	SY Achieve CL2	65	37	-	-	-	-	38	-
AgriPro	SY Benefit	59	30	-	-	-	-	38	-
AgriPro	SY Rugged	-	39	55	85	86	65	56	111
AGSECO	TAM 114	-	52	52	92	85	-	33	-
WestBred	WB4269	61	18	52	92	95	68	37	119
WestBred	WB4401	-	26	-	-	-	-	-	-
WestBred	WB4515	52	64	-	-	-	-	34	-
WestBred	WB4595	-	66	-	-	90	-	43	113
WestBred	WB4699	-	66	56	81	97	-	48	121
WestBred	WB4792	55	63	58	90	90	-	40	116
KWA	Zenda	43	45	-	90	84	48	34	106
Dyna-Gro	Long Branch	-	-	55	-	-	-	44	-
OGI	Lonerider	-	-	51	-	-	-	43	-
AgriPro	SY Wolverine	-	-	47	-	-	-	45	-
OSU Experimentals									
	OCW04S717T-6W	-	37	-	-	72	74	-	118
	OK12912C-138407-2	-	42	-	98	89	63	-	111
	OK15MASBx7 ARS 8-1	35	49	52	-	86	50	33	97
	OK16107117	-	-	55	-	84	-	31	-
	OK16729W	53	34	55	89	84	67	33	112
	OK168512	-	-	52	76	86	-	40	-
	OK16D101089	-	28	-	66	81	68	-	107
	OK188608	-	31	-	-	-	63	-	-
	Mean	54	43	54	86	86	62	41	107
	LSD (0.05)	9	6	5	10	7	6	9	10

2019-2020 Oklahoma wheat variety performance tests summary. (cont'd)

Licensee	Variety	Hooker	Keyes	Kildare	Kingfisher	Lahoma	Lahoma Fungicide	Lamont	Walters
-----grain yield (bu/ac)-----									
AGSECO	AG Icon	54	58	74	36	93	101	85	-
AgriMAXX	AM Cartwright	-	-	-	-	102	102	-	-
AgriMAXX	AM Eastwood	53	48	78	40	98	110	81	-
AgriPro	Ap EverRock	-	-	-	-	90	91	-	-
OGI	Baker's Ann	53	49	81	36	91	92	82	24
OGI	Bentley	55	41	92	36	88	98	79	37
AgriPro	Bob Dole	52	37	88	36	92	92	95	45
PlainsGold	Canvas	58	68	-	-	92	105	-	-
CROPLAN	CP7010	-	-	-	-	89	106	-	-
CROPLAN	CP7869	-	-	-	-	84	92	-	-
CROPLAN	CP7909	-	-	-	-	98	109	-	-
PlainsGold	Crescent AX	51	57	-	-	90	99	-	-
OGI	Doublestop CL Plus	55	44	80	34	95	98	91	42
OGI	Duster	55	46	-	28	72	84	80	40
OGI	Gallagher	58	46	75	32	87	98	91	35
OGI	Green Hammer	-	-	82	36	88	90	84	36
PlainsGold	Guardian	-	-	-	-	85	92	-	-
OGI	Iba	62	46	81	-	84	96	90	38
KWA	KS Dallas	-	-	-	-	86	96	-	-
KWA	KS Silverado	-	-	-	-	98	108	-	-
KWA	KS Western Star	-	-	-	-	78	95	-	-
PlainsGold	Langin	54	47	-	-	85	98	-	-
LCS	LCS Chrome	51	53	80	27	88	89	87	42
LCS	LCS Photon AX	-	-	-	-	92	95	-	-
OGI	Lonerider	51	56	-	-	-	-	-	-
OGI	OK Corral	53	54	74	34	91	94	93	34
OGI	Ruby Lee	-	-	-	37	85	84	81	33
OGI	Showdown	55	39	84	32	89	90	89	50
OGI	Skydance	-	-	-	39	-	-	-	34
OGI	Smith's Gold	50	42	76	37	85	87	87	37
OGI	Spirit Rider	51	51	71	-	80	90	73	-
AgriPro	SY Achieve CL2	-	-	86	33	89	89	82	-
AgriPro	SY Benefit	-	-	-	28	85	103	81	-
AgriPro	SY Rugged	52	61	82	36	92	95	87	42
AGSECO	TAM 114	50	42	-	-	88	100	-	-
WestBred	WB4269	53	49	83	36	111	113	93	42
WestBred	WB4401	-	-	-	-	98	98	-	-
WestBred	WB4515	-	-	-	-	91	98	-	-
WestBred	WB4595	-	-	-	39	98	116	94	-
WestBred	WB4699	57	54	82	-	97	106	90	-
WestBred	WB4792	59	68	78	35	98	113	86	45
KWA	Zenda	-	-	80	27	90	95	83	32
Dyna-Gro	Long Branch	54	60	-	-	-	-	-	-
OGI	Lonerider	51	56	-	-	-	-	-	-
AgriPro	SY Wolverine	55	56	-	-	-	-	-	-
OSU Experimentals									
	OCW04S717T-6W	-	-	84	35	73	74	96	37
	OK12912C-138407-2	-	-	77	34	102	111	95	36
	OK15MASBx7 ARS 8-1	55	47	72	35	92	104	86	30
	OK16107117	49	41	-	-	-	-	-	-
	OK16729W	55	34	87	44	92	97	85	43
	OK168512	53	56	-	-	-	-	-	-
	OK16D101089	-	-	80	41	83	81	82	40
	OK188608	-	-	-	43	-	-	-	34
	Mean	54	50	80	35	90	97	87	38
	LSD (0.05)	8	4	6	5	7	7	6	5

Summary of Regional Trial Locations

Locations: Altus, Goodwell and Lahoma

Licensee	Variety	Grain Yield 2019-20	Test Weight 2019-20	Protein 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
PlainsGold	Canvas	81	55.7	12.9
WestBred	WB4595	81	58.9	12.3
WestBred	WB4699	79	58.2	12.1
WestBred	WB4792	78	57.8	12.3
CROPLAN	CP7909	77	59.2	13.7
CROPLAN	CP7010	76	59.9	12.5
PlainsGold	Guardian	74	59.6	13.1
OGI	Doublestop CL Plus	74	60.5	13.8
CROPLAN	CP7869	73	57.3	13.1
OGI	Showdown	73	56.6	13.3
OGI	OK Corral	72	55.8	13.5
WestBred	WB4515	72	58.8	14.4
AgriPro	SY Rugged	70	58.3	13.3
WestBred	WB4269	70	60.3	13.5
AGSECO	AG Icon	69	58.6	14.2
KWA	KS Western Star	69	55.8	13.0
KWA	KS Silverado	68	60.5	13.7
AGSECO	TAM 114	68	59.7	13.7
OGI	Iba	68	60.1	12.7
LCS	LCS Chrome	67	54.7	14.5
OGI	Gallagher	67	58.7	13.8
KWA	Zenda	66	58.3	13.9
KWA	KS Dallas	65	58.2	13.8
PlainsGold	Crescent AX	64	59.8	13.6
AgriPro	SY Benefit	64	59.6	13.7
AgriPro	AP EverRock	63	58.1	14.3
AgriPro	SY Achieve CL2	63	59.4	14.9
AgriPro	Bob Dole	63	59.3	14.1
OGI	Bentley	63	57.5	13.7
OGI	Smith's Gold	63	58.1	13.8
LCS	LCS Photon AX	60	61.3	14.4
OGI	Baker's Ann	60	59.5	14.6
PlainsGold	Langin	59	59.4	13.6
OGI	Duster	57	57.1	13.8
OSU Experimentals				
	OK15MASBx7 ARS 8-1	70	57.8	13.3
	OK16729W	64	60.5	12.6
Mean		69	58.6	13.5
LSD (0.05)		7	1.2	0.7

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Data for varieties reported from the Altus, Goodwell Irrigated, Lahoma and Lahoma Fungicide trials are included in this analysis. Data from Chickasha was not included due to severe freeze damage during heading.

Afton Wheat Variety Trial

Cooperator: Greg Leonard

Planting & harvest dates: 10/4/19 & 6/16/20

Management: Grain-only

Tillage: conventional

Extension Educator: Kathy Enyart

Previous crop: Corn

Soil Type: Taloka silt loam

Soil test: pH= 7.4, N= 52, P= 139, K= 277

<i>Licensee</i>	<i>Variety</i>	<i>Grain Yield</i> 2019-20	<i>Test Weight</i> 2019-20	<i>Protein</i> 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
OGI	Smith's Gold	69	58.0	11.1
OGI	OK Corral	69	56.6	11.5
AgriPro	Bob Dole	69	58.5	11.4
OGI	Ruby Lee	68	59.0	11.3
AgriPro	SY Achieve CL2	65	58.3	11.2
OGI	Doublestop CL Plus	61	60.1	11.9
OGI	Skydance	61	59.7	12.5
WestBred	WB4269	61	57.7	11.7
AgriPro	SY Benefit	59	58.0	12.0
OGI	Bentley	57	56.0	11.4
OGI	Green Hammer	57	57.2	11.5
WestBred	WB4792	55	58.0	10.7
OGI	Baker's Ann	53	58.6	12.0
OGI	Showdown	53	57.4	10.9
WestBred	WB4515	52	57.4	12.0
OGI	Duster	47	56.1	11.2
LCS	LCS Chrome	47	55.7	11.6
OGI	Gallagher	47	55.3	11.1
AgriMAXX	AM Eastwood	45	53.1	11.3
KWA	Everest	43	58.9	13.0
KWA	Zenda	43	56.9	10.5
CROPLAN	CP7869	33	55.3	11.4
Experimentals				
	OK16729W	53	59.0	10.8
	OK15MASBx7 ARS 8-1	35	53.4	12.3
Mean		54	57.3	11.5
LSD (0.05)		9	1.4	0.9

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Severe pressure from Fusarium head blight (scab) disease.

Altus Wheat Variety Trial

Cooperator: OSU Southwest Res. & Ext. Center
 Planting & harvest dates: 9/30/19 & 6/1/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Gary Strickland
 Previous crop: Wheat
 Soil type: Hollister silt clay loam
 Soil test: pH=7.5, N= 64, P= 52, K= 913

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
CROPLAN	CP7869	68	68	-	57.1	11.6
PlainsGold	Canvas	68	69	-	51.5	11.5
WestBred	WB4595	66	63	-	60.4	10.7
CROPLAN	CP7010	66	-	-	60.5	11.4
WestBred	WB4699	66	62	-	57.3	10.5
WestBred	WB4515	64	57	46	57.7	11.9
OGI	Doublestop CL Plus	64	58	44	59.8	11.2
PlainsGold	Guardian	63	-	-	57.6	11.7
WestBred	WB4792	63	65	-	59.1	11.6
OGI	Showdown	63	68	52	56.6	12.2
OGI	OK Corral	61	-	-	58.1	11.2
LCS	LCS Chrome	59	56	44	51.6	13.3
CROPLAN	CP7909	54	55	-	58.4	12.9
AGSECO	TAM 114	52	59	41	58.6	12.8
KWA	KS Western Star	50	-	-	52.8	12.1
OGI	Smith's Gold	46	53	42	59.9	12.8
KWA	Zenda	45	51	37	58.7	14.3
AGSECO	AG Icon	44	55	44	60.1	14.3
KWA	KS Silverado	42	-	-	60.4	13.2
OGI	Gallagher	42	49	37	58.3	12.7
OGI	Iba	39	51	39	59.3	12.3
AgriPro	SY Rugged	39	47	36	58.9	13.6
AgriPro	SY Achieve CL2	37	41	30	60.1	14.3
KWA	KS Dallas	36	-	-	59.6	13.3
AgriPro	AP EverRock	35	-	-	58.2	13.5
AgriPro	Bob Dole	34	41	30	58.8	14.8
OGI	Duster	33	50	38	58.5	13.8
AgriPro	SY Benefit	30	32	23	60.9	14.4
OGI	Ruby Lee	30	40	32	61.4	14.7
OGI	Green Hammer	29	49	40	60.2	15.1
OGI	Bentley	28	43	36	58.8	13.7
LCS	LCS Photon AX	28	-	-	61.5	14.9
WestBred	WB4401	26	-	-	55.1	13.8
PlainsGold	Langin	23	38	29	59.8	14.1
OGI	Baker's Ann	23	41	31	60.8	14.9
OGI	Skydance	23	36	-	60.4	14.2
PlainsGold	Crescent AX	22	33	-	60.3	14.2
WestBred	WB4269	18	42	37	58.5	14.7
Experimentals						
	OK15MASBx7 ARS 8-1	49	-	-	57.9	12.4
	OK12912C-138407-2	42	-	-	59.9	13.4
	OCW04S717T-6W	37	-	-	57.4	14.0
	OK16729W	34	52	-	61.9	13.7
	OK188608	31	-	-	61.3	12.8
	OK16D101089	28	46	-	60.4	13.5
Mean		43	51	38	58.7	13.1
LSD (0.05)		6	10	7	1.1	1.4

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Moderate pressure of stripe rust and septoria diseases. There was no lodging across the trial. Average rating for freeze damage was 49% and late maturing varieties seemed to be less affected by the mid-April freeze event.

Balko Wheat Variety Trial

Cooperator: Teryl Rorabaugh
 Planting & harvest dates: 9/27/19 & 6/17/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Loren Sizelove
 Previous crop: Fallow
 Soil type: Ulysses silt loam
 Soil test: pH= 8.0, N= 41, P= 33, K= 724

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
PlainsGold	Crescent AX	59	-	-	60.8	9.9
PlainsGold	Canvas	58	-	-	60.0	10.3
OGI	Iba	58	75	58	61.6	10.2
OGI	Duster	58	74	60	61.7	10.0
PlainsGold	Langin	58	72	56	60.0	9.5
OGI	Bentley	58	72	61	59.6	9.7
WestBred	WB4792	58	-	-	60.3	8.8
AgriPro	Bob Dole	56	-	-	60.8	10.3
WestBred	WB4699	56	-	-	60.3	9.7
LCS	LCS Chrome	55	71	57	59.7	11.0
Dyna-Gro	Long Branch	55	73	64	59.4	10.1
OGI	Smith's Gold	55	73	59	61.1	9.8
AgriPro	SY Rugged	55	73	61	61.3	9.7
OGI	Showdown	54	75	65	60.1	9.8
OGI	Gallagher	54	74	62	60.0	9.7
AGSECO	AG Icon	53	70	-	59.9	11.2
AGSECO	TAM 114	52	74	61	61.1	11.0
OGI	Doublestop CL Plus	52	-	57	61.9	11.1
WestBred	WB4269	52	69	-	60.2	10.9
OGI	Baker's Ann	50	68	57	61.1	10.7
OGI	Lonerider	51	72	60	60.2	10.6
OGI	OK Corral	49	-	-	57.3	9.5
AgriMAXX	AM Eastwood	48	64	-	59.7	10.9
AgriPro	SY Wolverine	47	-	-	61.0	9.9
OGI	Spirit Rider	41	-	-	59.4	10.6
Experimentals						
	OK16729W	55	-	-	61.8	9.8
	OK16107117	55	-	-	59.4	9.0
	OK168512	52	71	-	60.6	10.0
	OK15MASBx7 ARS 8-1	52	-	-	60.1	9.7
	Mean	54	72	60	60.4	10.1
	LSD (0.05)	5	4	4	1.5	1.1

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

Buffalo Wheat Variety Trial

Cooperator: NRCS

Planting & harvest dates: 10/15/19 & 6/11/20

Management: Grain-only

Tillage: no-till

Extension Educator: Darrell McBee

Previous crop: Fallow

Soil Type: St. Paul silt loam

Soil test: pH= 7.4, N= 45, P= 50, K= 670

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
OGI	Bentley	99	91	73	59.5	11.2
PlainsGold	Canvas	95	-	-	56.9	12.1
WestBred	WB4269	92	85	-	61.5	11.1
AGSECO	TAM 114	92	86	66	60.2	12.5
WestBred	WB4792	90	-	-	56.1	11.2
KWA	Zenda	90	-	-	60.2	12.1
PlainsGold	Langin	90	85	68	59.7	11.7
OGI	Smith's Gold	89	85	66	57.0	12.5
OGI	Baker's Ann	88	-	-	59.9	12.7
OGI	Showdown	88	86	68	59.1	11.8
OGI	Doublestop CL Plus	85	79	62	61.3	13.3
OGI	Iba	85	80	64	59.9	11.3
LCS	LCS Chrome	85	79	65	58.1	13.0
OGI	OK Corral	85	-	-	57.1	11.9
AgriPro	SY Rugged	85	83	66	56.5	11.2
AgriPro	Bob Dole	82	84	-	60.9	11.9
OGI	Green Hammer	81	-	-	60.4	13.4
WestBred	WB4699	81	-	-	57.5	11.6
AGSECO	AG Icon	80	73	-	56.7	12.3
PlainsGold	Crescent AX	79	-	-	56.1	12.0
OGI	Gallagher	71	75	59	59.0	12.3
Experimentals						
	OK12912C-138407-2	98	-	-	61.2	12.9
	OK16729W	89	-	-	59.4	11.3
	OK168512	76	72	-	59.5	12.1
	OK16D101089	66	-	-	59.6	12.4
	Mean	86	82	66	58.9	12.1
	LSD (0.05)	10	7	5	1.3	0.5

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column

Cherokee Wheat Variety Trial

Cooperator: Kenneth Failes
 Planting & harvest dates: 11/01/19 & 6/11/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Tommy Puffinbarger
 Previous crop: Wheat
 Soil type: Dale silt loam
 Soil test: pH= 6.9, N= 43, P= 47, K= 616

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
OGI	Showdown	100	78	63	59.3	9.8
WestBred	WB4699	97	-	-	59.8	9.4
PlainsGold	Langin	97	74	61	61.0	9.6
WestBred	WB4269	95	73	-	62.7	9.9
PlainsGold	Crescent AX	92	-	-	62.0	10.1
OGI	Gallagher	92	75	57	62.0	9.9
WestBred	WB4595	90	-	-	61.7	9.6
WestBred	WB4792	90	-	-	59.1	10.3
OGI	OK Corral	89	-	-	59.3	10.0
OGI	Bentley	89	68	56	60.3	10.3
AgriMAXX	AM Eastwood	88	64	-	62.5	9.7
OGI	Smith's Gold	88	69	53	59.9	10.4
PlainsGold	Canvas	87	-	-	58.2	9.9
OGI	Baker's Ann	87	74	59	62.7	10.3
OGI	Doublestop CL Plus	87	75	61	63.4	11.1
AGSECO	AG Icon	86	73	-	60.9	10.2
AgriPro	SY Rugged	86	71	55	60.6	10.2
OGI	Iba	86	69	56	62.5	10.3
AGSECO	TAM 114	85	68	57	61.6	9.9
OGI	Green Hammer	85	73	-	62.5	11.2
KWA	Zenda	84	-	-	61.8	10.7
OGI	Spirit Rider	83	-	-	62.0	10.2
AgriPro	Bob Dole	80	74	59	61.1	10.4
OGI	Duster	77	56	46	59.1	10.2
OGI	Ruby Lee	76	65	52	62.6	10.4
LCS	LCS Chrome	76	66	55	56.7	11.5
Experimentals						
	OK12912C-138407-2	89	-	-	62.2	10.3
	OK168512	86	68	-	61.1	10.1
	OK15MASBx7 ARS 8-1	86	-	-	60.6	10.1
	OK16107117	84	-	-	60.2	10.0
	OK16729W	84	-	-	61.6	10.7
	OK16D101089	81	-	-	61.9	10.6
	OCW04S717T-6W	72	-	-	59.7	10.2
	Mean	86	70	56	61.0	10.2
	LSD (0.05)	7	7	6	1.1	1.2

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

EI Reno Wheat Variety Trial

Cooperator: Jerry Lingo

Planting & harvest dates: 10/02/19 & 6/8/20

Management: Dual-purpose

Tillage: Conventional

Extension Educator: Kyle Worthington

Previous crop: Wheat

Soil Type: Bethany silt loam

Soil test: pH=6.3, N= 85, P= 31, K= 391

Licensee	Variety	Grain Yield 2019-20	Test Weight 2019-20	Protein 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
OGI	Showdown	71	60.2	10.4
LCS	LCS Chrome	68	60.3	10.9
WestBred	WB4269	68	61.7	10.1
AgriPro	Bob Dole	68	62.1	10.3
OGI	Bentley	66	58.9	10.0
AgriPro	SY Rugged	65	59.8	10.7
OGI	Doublestop CL Plus	65	64.7	11.1
OGI	Ruby Lee	61	63.5	10.7
AGSECO	AG Icon	60	60.4	10.7
OGI	OK Corral	59	59.8	9.8
OGI	Smith's Gold	59	59.8	10.9
OGI	Duster	58	60.5	10.3
OGI	Green Hammer	57	62.7	12.0
OGI	Baker's Ann	56	62.8	10.9
OGI	Skydance	53	64.1	10.7
OGI	Gallagher	51	61.0	10.4
KWA	Zenda	48	62.3	9.9
OSU Experimentals				
	OCW04S717T-6W	74	60.3	11.1
	OK16D101089	68	62.2	10.1
	OK16729W	67	62.9	10.1
	OK188608	63	62.2	10.4
	OK12912C-138407-2	63	62.9	10.5
	OK15MASBx7 ARS 8-1	50	58.9	9.5
Mean		62	61.5	10.5
LSD (0.05)		6	0.9	0.5

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Plots were grazed from Jan. 16, 2020 to Feb. 1, 2020 at a stocking rate of 280 pounds per acre, and from Feb. 2, 2020 to Feb. 24, 2020 at a stocking rate of 396 pounds per acre.

Goodwell Irrigated Wheat Variety Trial

Cooperator: OK Panhandle Res. & Ext. Center
 Planting & harvest dates: 9/26/19 & 6/18/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Dr. Britt Hicks
 Previous crop: Fallow
 Soil Type: Gruver clay loam
 Soil test: pH= 7.6, N= 93, P= 21, K= 1164

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
PlainsGold	Canvas	58	77	-	54.8	14.6
PlainsGold	Guardian	58	-	-	58.7	14.9
AgriPro	SY Rugged	56	73	75	55.7	14.4
KWA	KS Western Star	53	-	-	55.1	14.2
OGI	Iba	51	72	75	57.6	14.1
AgriMAXX	AM Eastwood	49	71	72	54.2	15.8
WestBred	WB4699	48	74	-	53.3	14.2
OGI	Showdown	48	69	72	52.8	15.1
CROPLAN	CP7909	47	68	-	55.8	15.8
CROPLAN	CP7869	46	69	-	56.0	14.8
AgriPro	SY Wolverine	45	-	-	56.8	14.9
CROPLAN	CP7010	44	-	-	55.5	14.4
PlainsGold	Crescent AX	44	71	-	57.7	15.4
Dyna-Gro	Long Branch	44	60	72	53.3	15.0
WestBred	WB4595	43	67	-	53.7	14.8
OGI	Lonerider	43	68	75	53.9	16.3
AGSECO	AG Icon	42	66	73	53.9	15.8
OGI	Gallagher	42	64	72	53.8	16.4
KWA	KS Dallas	42	-	-	52.9	15.3
OGI	Doublestop CL Plus	41	60	65	54.4	16.3
WestBred	WB4792	40	68	-	54.2	14.1
OGI	OK Corral	40	-	-	46.6	16.1
AgriPro	SY Achieve CL2	38	58	62	55.7	17.4
AgriPro	SY Benefit	38	55	63	54.7	16.1
OGI	Duster	38	63	72	52.4	15.6
AgriPro	Ap Everock	38	-	-	55.2	16.2
OGI	Bentley	37	61	66	54.4	15.7
WestBred	WB4269	37	64	70	57.1	15.3
AgriMAXX	AM Cartwright	37	64	-	55.4	15.9
AgriPro	Bob Dole	36	60	66	53.3	15.8
OGI	Spirit Rider	35	64	69	52.5	16.6
WestBred	WB4515	34	58	61	53.3	17.2
LCS	LCS Chrome	34	64	69	51.9	15.7
KWA	Zenda	34	56	63	53.5	15.2
AGSECO	TAM 114	33	58	69	56.5	15.8
OGI	Smith's Gold	33	56	65	53.9	15.8
OGI	Baker's Ann	32	66	70	54.7	15.9
PlainsGold	Langin	31	60	67	56.5	15.0
KWA	KS Silverado	27	-	-	57.1	15.5
LCS	LCS Photon AX	26	-	-	56.5	15.9
Experimentals						
	OK168512	40	60	-	54.7	15.3
	OK15MASBx7 ARS 8-1	33	-	-	51.6	15.9
	OK16729W	33	65	-	54.4	14.7
	OK16107117	31	-	-	52.2	15.3
	Mean	41	64	69	54.5	15.5
	LSD (0.05)	9	8	7	2.0	0.6

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Moderate pressure of brown wheat mite.

Homestead Wheat Variety Trial

Cooperator: Brook Strader
 Planting & harvest dates: 10/7/19 & 6/8/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Troy Gosney
 Previous crop: Fallow
 Soil Type: Canadian fine sandy loam
 Soil test: pH= 6.1, N= 46, P= 40, K= 400

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
WestBred	WB4699	121	-	-	62.1	10.3
WestBred	WB4269	119	94	-	62.7	11.4
OGI	Showdown	118	89	64	61.7	10.4
WestBred	WB4792	116	-	-	62.1	10.5
OGI	OK Corral	113	-	-	61.9	10.5
AgriMAXX	AM Eastwood	113	80	-	62.6	10.8
WestBred	WB4595	113	-	-	62.2	10.0
OGI	Smith's Gold	112	88	64	62.1	11.8
AgriPro	SY Rugged	111	85	-	60.4	10.9
LCS	LCS Chrome	109	87	62	62.1	12.2
PlainsGold	Canvas	109	-	-	59.1	10.9
OGI	Doublestop CL Plus	108	88	63	64.8	12.2
KWA	Zenda	106	-	-	62.3	11.5
OGI	Iba	105	82	62	63.3	10.3
AGSECO	AG Icon	105	85	-	62.0	11.5
AgriPro	Bob Dole	105	91	65	62.8	11.0
PlainsGold	Langin	104	-	-	60.9	10.9
OGI	Green Hammer	104	86	61	62.9	13.0
OGI	Bentley	104	84	60	60.6	10.7
OGI	Ruby Lee	104	85	61	62.7	10.9
PlainsGold	Guardian	102	-	-	62.7	11.1
OGI	Gallagher	102	83	61	63.3	10.7
OGI	Spirit Rider	99	81	59	62.1	11.1
OGI	Baker's Ann	94	-	-	62.3	11.9
PlainsGold	Crescent AX	94	-	-	61.3	11.8
OGI	Duster	93	72	53	60.0	11.4
Experimentals						
	OCW04S717T-6W	118	92	64	62.0	12.3
	OK16729W	112	-	-	62.7	11.0
	OK12912C-138407-2	111	-	-	62.0	11.7
	OK16D101089	107	-	-	62.7	11.5
	OK15MASBx7 ARS 8-1	97	-	-	60.9	11.0
Mean		107	85	61	62.0	11.2
LSD (0.05)		10	8	6	0.8	1.3

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

Hooker Wheat Variety Trial

Cooperator: Dan Herald
 Planting & harvest dates: 9/26/19 & 6/17/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Dr. Britt Hicks
 Previous crop: Fallow
 Soil Type: Dalhart fine sandy loam
 Soil test: pH= 6.8, N= 106, P= 61, K= 738

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
OGI	Iba	62	57	49	60.3	13.4
WestBred	WB4792	59	-	-	59.9	13.5
OGI	Gallagher	58	46	42	59.8	13.9
PlainsGold	Canvas	58	-	-	59.0	14.3
WestBred	WB4699	57	-	-	60.0	13.8
OGI	Duster	55	51	46	58.8	14.5
OGI	Bentley	55	57	51	59.6	14.9
OGI	Doublestop CL Plus	55	52	46	59.9	15.4
OGI	Showdown	55	56	50	59.7	15.2
AgriPro	SY Wolverine	55	-	-	59.5	13.8
PlainsGold	Langin	54	60	55	60.3	13.9
Dyna-Gro	Long Branch	54	54	50	58.6	14.2
AGSECO	AG Icon	54	48	-	60.0	14.4
OGI	OK Corral	53	-	-	58.1	15.2
WestBred	WB4269	53	51	-	59.5	14.5
OGI	Baker's Ann	53	54	48	58.3	15.4
AgriMAXX	AM Eastwood	53	53	-	59.8	15.2
AgriPro	Bob Dole	52	-	-	60.1	14.7
AgriPro	SY Rugged	52	52	45	58.9	14.8
PlainsGold	Crescent AX	51	-	-	59.3	14.5
OGI	Lonerider	51	54	47	59.3	15.9
OGI	Spirit Rider	51	-	-	58.8	15.8
LCS	LCS Chrome	51	53	46	59.7	14.8
OGI	Smith's Gold	50	50	44	60.8	14.3
AGSECO	TAM 114	50	48	43	60.3	15.0
Experimentals						
	OK15MASBx7 ARS 8-1	55	-	-	59.8	14.5
	OK16729W	55	-	-	59.7	14.8
	OK168512	53	58	-	59.2	14.7
	OK16107117	49	-	-	59.5	15.1
Mean		54	53	47	59.5	14.6
LSD (0.05)		8	6	5	1.4	0.8

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

Keyes Wheat Variety Trial

Cooperator: J.B. Stewart
 Planting & harvest dates: 9/26/19 & 6/17/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Justin Wagner
 Previous crop: Fallow
 Soil Type: Sperm clay loam
 Soil test: pH= 6.3, N= 190, P= 40, K= 865

Licensee	Variety	SHAT	Grain Yield		Test Weight	Protein	
		2019-20	2019-20	2-Year	3-Year	2019-20	2019-20
		(1 to 10)	----- bu/ac -----		-- lb/bu --	-- % --	
WestBred	WB4792	1	68	-	-	60.9	11.0
PlainsGold	Canvas	4	68	-	-	61.2	11.4
AgriPro	SY Rugged	2	61	73	59	61.1	11.9
Dyna-Gro	Long Branch	4	60	71	59	59.3	11.2
AGSECO	AG Icon	4	58	73	-	59.9	12.2
PlainsGold	Crescent AX	4	57	-	-	61.7	12.1
AgriPro	SY Wolverine	3	56	-	-	61.1	11.9
OGI	Lonerider	2	56	70	56	60.5	13.0
OGI	OK Corral	1	54	-	-	53.7	12.4
WestBred	WB4699	3	54	-	-	57.9	11.9
LCS	LCS Chrome	6	53	69	54	59.1	12.7
OGI	Spirit Rider	4	51	-	-	60.4	13.1
OGI	Baker's Ann	5	49	-	-	61.0	13.4
WestBred	WB4269	1	49	64	-	60.3	13.1
AgriMAXX	AM Eastwood	3	48	65	-	59.2	13.5
PlainsGold	Langin	8	47	70	57	61.8	11.4
OGI	Gallagher	5	46	64	51	58.4	13.2
OGI	Iba	3	46	65	53	60.7	12.4
OGI	Duster	4	46	68	55	58.8	12.6
OGI	Doublestop CL Plus	4	44	60	50	59.7	13.9
OGI	Smith's Gold	6	42	60	49	59.9	12.8
AGSECO	TAM 114	6	42	56	47	60.4	13.1
OGI	Bentley	7	41	66	56	58.3	12.2
OGI	Showdown	7	39	62	51	58.9	11.8
AgriPro	Bob Dole	6	37	-	-	58.5	12.9
Experimentals							
	OK168512	3	56	73	-	61.3	12.5
	OK15MASBx7 ARS 8-1	2	47	-	-	58.0	13.0
	OK16107117	7	41	-	-	58.0	12.8
	OK16729W	8	34	-	-	60.4	11.9
Mean		4	50	66	62	59.7	12.5
LSD (0.05)		-	4	6	6	0.8	0.7

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Average shattering (SHAT) score was measured on a scale from 1 to 10 with 1 indicating no shattering.

Kildare Wheat Variety Trial

Cooperator: Don Schieber
 Planting & harvest dates: 10/16/19 & 6/9/20
 Management: Grain-only
 Tillage: No-till

Extension Educator: Shannon Mallory
 Previous crop: Wheat
 Soil Type: Tabler silt loam
 Soil test: pH= 6.7, N= 29, P= 102, K= 380

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
OGI	Bentley	92	84	70	60.7	9.4
AgriPro	Bob Dole	88	82	67	61.2	9.8
AgriPro	SY Achieve CL2	86	79	64	62.8	10.2
OGI	Showdown	84	77	64	59.9	9.6
WestBred	WB4269	83	73	62	62.6	10.0
WestBred	WB4699	82	-	-	60.7	9.0
AgriPro	SY Rugged	82	73	-	60.7	9.7
OGI	Green Hammer	82	73	-	62.7	11.5
OGI	Iba	81	70	58	62.8	9.2
OGI	Baker's Ann	81	73	-	61.8	10.1
OGI	Doublestop CL Plus	80	74	64	63.8	11.3
LCS	LCS Chrome	80	71	61	59.7	11.2
KWA	Zenda	80	77	61	62.5	10.3
WestBred	WB4792	78	-	-	60.4	9.4
AgriMAXX	AM Eastwood	78	76	-	61.6	9.9
OGI	Smith's Gold	76	65	54	59.3	10.2
OGI	Gallagher	75	68	54	61.4	9.6
OGI	OK Corral	74	-	-	59.4	10.0
AGSECO	AG Icon	74	68	-	59.3	10.6
OGI	Spirit Rider	71	64	54	61.9	10.0
Experimentals						
	OK16729W	87	-	-	62.0	9.7
	OCW04S717T-6W	84	-	-	59.8	10.8
	OK16D101089	80	76	-	62.2	10.9
	OK12912C-138407-2	77	-	-	61.8	10.5
	OK15MASBx7 ARS 8-1	72	-	-	59.1	9.6
Mean		80	73	61	61.2	10
LSD (0.05)		6	5	4	0.8	0.9

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

Kingfisher Wheat Variety Trial

Cooperator: Tary Helt
 Planting & harvest dates: 11/04/19 & 6/6/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Bryan Kennedy
 Previous crop: Wheat
 Soil Type: Tilman silt loam
 Soil test: pH=6.2, N= 46, P= 62, K= 613

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
AgriMAXX	AM Eastwood	40	56	-	58.2	16.7
WestBred	WB4595	39	-	-	58.8	16.3
OGI	Skydance	39	-	-	61.4	16.4
OGI	Ruby Lee	37	54	42	60.2	16.8
OGI	Smith's Gold	37	50	37	59.1	16.5
OGI	Green Hammer	36	52	38	59.8	17.3
OGI	Bentley	36	54	42	58.6	16.6
AGSECO	AG Icon	36	51	-	58.2	16.3
WestBred	WB4269	36	59	-	58.7	15.5
AgriPro	Bob Dole	36	52	-	58.0	16.4
OGI	Baker's Ann	36	-	-	59.3	17.0
AgriPro	SY Rugged	36	55	40	57.6	16.3
WestBred	WB4792	35	-	-	58.8	16.5
OGI	Doublestop CL Plus	34	47	34	60.9	16.9
OGI	OK Corral	34	-	-	57.8	17.2
AgriPro	SY Achieve CL2	33	55	40	58.5	17.2
OGI	Gallagher	32	49	37	60.1	16.4
OGI	Showdown	32	50	37	57.8	16.6
OGI	Duster	28	48	36	57.5	16.0
AgriPro	SY Benefit	28	46	34	58.3	16.3
KWA	Zenda	27	-	-	58.2	16.4
LCS	LCS Chrome	27	50	38	59.1	16.6
Experimentals		-	-	-	-	-
	OK16729W	44	-	-	60.8	15.6
	OK188608	43	-	-	58.5	16.5
	OK16D101089	41	53	-	59.7	15.9
	OK15MASBx7 ARS 8-1	35	-	-	59.5	16.3
	OK12912C-138407-2	34	-	-	59.0	16.6
	OCW04S717T-6W	35	50	35	57.8	16.9
Mean		35	52	38	58.9	16.5
LSD (0.05)		5	5	4	0.9	0.7

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

Lahoma Regional Wheat Variety Trial

Cooperator: OSU North Central Research Station
 Planting & harvest dates: 10/14/19 & 6/10/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Rick Nelson
 Previous crop: Wheat
 Soil Type: Pond Creek silt loam
 Soil test: pH= 5.6, N= 175, P= 79 , K= 424

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
WestBred	WB4269	111	75	66	62.6	12.1
AgriMAXX	AM Cartwright	102	73	-	61.0	12.4
WestBred	WB4595	98	69	-	58.8	11.9
WestBred	WB4792	98	75	-	57.7	11.7
AgriMAXX	AM Eastwood	98	55	45	60.3	12.8
WestBred	WB4401	98	-	-	60.9	12.0
CROPLAN	CP7909	98	68	-	60.5	12.9
KWA	KS Silverado	98	-	-	61.5	13.2
WestBred	WB4699	97	72	-	60.5	11.9
OGI	Doublestop CL Plus	95	69	58	63.8	13.7
AGSECO	AG Icon	93	68	57	59.5	13.5
AgriPro	SY Rugged	92	66	54	59.1	12.5
PlainsGold	Canvas	92	56	-	57.2	12.6
LCS	LCS Photon AX	92	-	-	63.4	13.4
AgriPro	Bob Dole	92	75	57	62.5	13.0
OGI	OK Corral	91	-	-	59.0	13.3
OGI	Baker's Ann	91	71	57	61.0	13.5
WestBred	WB4515	91	58	50	61.6	13.9
PlainsGold	Crescent AX	90	64	-	59.8	12.4
KWA	Zenda	90	69	55	60.1	13.1
AgriPro	AP EverRock	90	-	-	58.9	13.5
AgriPro	SY Achieve CL2	89	62	50	60.4	13.6
OGI	Showdown	89	60	50	58.2	12.6
CROPLAN	CP7010	89	-	-	60.4	12.2
LCS	LCS Chrome	88	65	55	57.4	15.1
OGI	Green Hammer	88	70	58	61.7	14.0
OGI	Bentley	88	62	57	57.5	12.7
AGSECO	TAM 114	88	63	52	60.4	13.0
OGI	Gallagher	87	66	55	60.7	12.8
KWA	KS Dallas	86	-	-	59.7	13.3
PlainsGold	Langin	85	60	53	59.6	12.6
OGI	Ruby Lee	85	64	58	61.6	13.8
AgriPro	SY Benefit	85	56	48	60.1	12.1
OGI	Smith's Gold	85	62	53	58.4	13.4
PlainsGold	Guardian	85	-	-	60.3	12.8
CROPLAN	CP7869	84	58	-	57.3	13.1
OGI	Iba	84	59	49	61.2	12.2
OGI	Spirit Rider	80	58	50	60.0	13.5
KWA	KS Western Star	78	-	-	56.6	12.8
OGI	Duster	72	53	44	57.8	12.9
Experimentals						
	OK12912C-138407-2	102	-	-	61.6	13.7
	OK15MASBx7 ARS 8-1	92	66	-	59.9	12.3
	OK16729W	92	71	-	62.7	12.2
	OK16D101089	83	70	-	61.7	13.4
	OCW04S717T-6W	73	62	49	58.3	13.9
	Mean	90	65	53	60.1	13.0
	LSD (0.05)	7	8	7	1.5	0.8

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Average lodging score at this location was 2 on a scale from 1 to 5 with 1 indicating no lodging.

Lahoma Regional Fungicide Wheat Variety Trial

Cooperator: OSU North Central Research Station
 Planting & harvest dates: 10/14/19 & 6/10/20
 Management: Grain-only, conventional tillage
 Fungicide: 13 fl oz/ac Nexicor at Feekes 9 4/14/20

Extension Educator: Rick Nelson
 Previous crop: Wheat
 Soil Type: Pond Creek silt loam
 Soil test: pH= 5.6, N= 175, P= 79 , K= 424

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
WestBred	WB4595	116	91	-	62.6	11.8
WestBred	WB4269	113	87	76	63.1	12.0
WestBred	WB4792	113	91	-	60.1	11.7
AgriMAXX	AM Eastwood	110	77	60	62.7	13.0
CROPLAN	CP7909	109	88	-	62.1	13.0
KWA	KS Silverado	108	-	-	63.2	12.9
WestBred	WB4699	106	88	-	61.6	11.9
CROPLAN	CP7010	106	-	-	63.1	11.9
PlainsGold	Canvas	105	77	-	59.4	12.7
AgriPro	SY Benefit	103	77	62	62.7	12.5
AgriMAXX	AM Cartwright	102	83	-	61.6	12.7
AGSECO	AG Icon	101	81	64	60.8	13.2
AGSECO	TAM 114	100	82	64	63.3	13.2
PlainsGold	Crescent AX	99	81	-	61.5	12.4
PlainsGold	Langin	98	81	68	61.8	12.7
WestBred	WB4401	98	-	-	60.8	12.4
OGI	Gallagher	98	82	67	62.2	13.3
OGI	Bentley	98	82	70	59.1	12.8
OGI	Doublestop CL Plus	98	80	64	64.1	14.1
WestBred	WB4515	98	76	61	62.5	14.5
OGI	Iba	96	80	62	62.2	12.4
KWA	KS Dallas	96	-	-	60.6	13.4
LCS	LCS Photon AX	95	-	-	64.0	13.6
KWA	Zenda	95	84	66	60.9	13.2
AgriPro	SY Rugged	95	76	59	59.5	12.5
KWA	KS Western Star	95	-	-	58.6	12.9
OGI	OK Corral	94	-	-	59.7	13.5
OGI	Baker's Ann	92	82	65	61.5	14.0
PlainsGold	Guardian	92	-	-	61.9	13.0
AgriPro	Bob Dole	92	82	61	62.7	12.8
CROPLAN	CP7869	92	76	-	58.6	13.1
AgriPro	AP EverRock	91	-	-	60.3	13.8
OGI	Showdown	90	74	59	59.0	13.3
OGI	Spirit Rider	90	77	63	61.4	13.7
OGI	Green Hammer	90	78	63	62.3	14.6
AgriPro	SY Achieve CL2	89	76	59	61.4	14.2
LCS	LCS Chrome	89	75	60	57.9	14.0
OGI	Smith's Gold	87	76	62	60.1	13.3
OGI	Ruby Lee	84	75	66	61.1	14.3
OGI	Duster	84	69	54	59.9	13.0
Experimentals						
	OK12912C-138407-2	111	-	-	62.0	13.9
	OK15MASBx7 ARS 8-1	104	85	-	61.9	12.6
	OK16729W	97	84	-	63.0	9.6
	OK16D101089	81	77	-	61.6	13.4
	OCW04S717T-6W	74	68	53	58.4	13.7
	Mean	97	80	63	61.3	13.0
	LSD (0.05)	7	7	6	1.1	1.3

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Average lodging score at this location was 2 on a scale from 1 to 5 with 1 indicating no lodging.

Lahoma Regional Wheat Variety Trial Fungicide vs. No Fungicide Comparison

Cooperator: OSU North Central Research Station
Planting & harvest dates: 10/14/19 & 6/10/20
Management: Grain-only, conventional tillage
Fungicide: 13 fl oz/ac Nexicor at Feekes 9 4/14/20

Extension Educator: Rick Nelson
Previous crop: Wheat
Soil Type: Pond Creek silt loam
Soil test: pH= 5.6, N= 175, P= 79 , K= 424

Licensee	Variety	2019-20 Grain Yield			2019-20 Test Weight		
		No Fungicide	Fungicide	Diff.	No Fungicide	Fungicide	Diff.
		-----bu/ac-----			-----lb/bu-----		
WestBred	WB4269	111	113	2	62.6	63.1	0.5
AgriMAXX	AM Cartwright	102	102	0	61.0	61.6	0.7
WestBred	WB4595	98	116	18	58.8	62.6	3.9
WestBred	WB4792	98	113	15	57.7	60.1	2.3
AgriMAXX	AM Eastwood	98	110	13	60.3	62.7	2.4
WestBred	WB4401	98	98	1	60.9	60.8	-0.1
CROPLAN	CP7909	98	109	12	60.5	62.1	1.6
KWA	KS Silverado	98	108	11	61.5	63.2	1.7
WestBred	WB4699	97	106	9	60.5	61.6	1.1
OGI	Doublestop CL Plus	95	98	3	63.8	64.1	0.3
AGSECO	AG Icon	93	101	8	59.5	60.8	1.2
AgriPro	SY Rugged	92	95	3	59.1	59.5	0.4
PlainsGold	Canvas	92	105	13	57.2	59.4	2.2
LCS	LCS Photon AX	92	95	3	63.4	64.0	0.6
AgriPro	Bob Dole	92	92	0	62.5	62.7	0.2
OGI	OK Corral	91	94	3	59.0	59.7	0.8
OGI	Baker's Ann	91	92	1	61.0	61.5	0.5
WestBred	WB4515	91	98	7	61.6	62.5	0.9
PlainsGold	Crescent AX	90	99	9	59.8	61.5	1.7
KWA	Zenda	90	95	5	60.1	60.9	0.8
AgriPro	AP EverRock	90	91	1	58.9	60.3	1.4
AgriPro	SY Achieve CL2	89	89	0	60.4	61.4	1.0
OGI	Showdown	89	90	2	58.2	59.0	0.7
CROPLAN	CP7010	89	106	17	60.4	63.1	2.6
LCS	LCS Chrome	88	89	1	57.4	57.9	0.5
OGI	Green Hammer	88	90	2	61.7	62.3	0.6
OGI	Bentley	88	98	10	57.5	59.1	1.6
AGSECO	TAM 114	88	100	12	60.4	63.3	2.9
OGI	Gallagher	87	98	11	60.7	62.2	1.5
KWA	KS Dallas	86	96	10	59.7	60.6	0.9
PlainsGold	Langin	85	98	13	59.6	61.8	2.2
OGI	Ruby Lee	85	84	-1	61.6	61.1	-0.5
AgriPro	SY Benefit	85	103	18	60.1	62.7	2.6
OGI	Smith's Gold	85	87	3	58.4	60.1	1.8
PlainsGold	Guardian	85	92	7	60.3	61.9	1.6
CROPLAN	CP7869	84	92	8	57.3	58.6	1.3
OGI	Iba	84	96	12	61.2	62.2	1.0
OGI	Spirit Rider	80	90	10	60.0	61.4	1.4
KWA	KS Western Star	78	95	16	56.6	58.6	2.0
OGI	Duster	72	84	12	57.8	59.9	2.1
Experimentals							
	OK12912C-138407-2	102	111	9	61.6	62.0	0.4
	OK15MASBx7 ARS 8-1	92	104	12	59.9	61.9	2.0
	OK16729W	92	97	5	62.7	63.0	0.3
	OK16D101089	83	81	-2	61.7	61.6	0.0
	OCW04S717T-6W	73	74	1	58.3	58.4	0.1
Mean		90	97	7	60.1	61.3	1.2
LSD (0.05)		7	7	7	1.5	1.1	1.0

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Average lodging score was 2 on a scale from 1 to 5 with 1 indicating no lodging. Moderate to severe pressure from Septoria and other leaf spotting conditions, including spring freeze damage of leaf tissue. Low pressure of leaf and stripe rust diseases during grain-fill. Possible shattering loss where lodging was not severe.

Lamont Wheat Variety Trial

Cooperator: Don and Roger Kirby
 Planting & harvest dates: 10/16/19 & 6/9/20
 Management: Grain-only
 Tillage: Conventional

Extension Educator: Sarah Donahue
 Previous crop: Wheat
 Soil Type: Pond Creek silt loam
 Soil test: pH= 6.4, N= 72, P= 40, K= 325

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
AgriPro	Bob Dole	95	75	61	60.5	12.4
WestBred	WB4595	94	-	-	60.8	11.4
WestBred	WB4269	93	63	54	61.2	11.6
OGI	OK Corral	93	-	-	58.8	12.5
OGI	Doublestop CL Plus	91	67	56	62.6	13.6
OGI	Gallagher	91	59	45	59.5	12.0
WestBred	WB4699	90	-	-	58.4	11.1
OGI	Iba	90	56	47	61.5	11.0
OGI	Showdown	89	58	47	59.0	11.4
OGI	Smith's Gold	87	60	48	58.8	12.4
LCS	LCS Chrome	87	59	50	58.1	12.7
AgriPro	SY Rugged	87	63	-	59.5	11.6
WestBred	WB4792	86	-	-	58.0	11.3
AGSECO	AG Icon	85	61	-	59.9	12.6
OGI	Green Hammer	84	61	52	61.3	13.9
KWA	Zenda	83	63	52	60.9	12.2
OGI	Baker's Ann	82	60	48	60.8	12.7
AgriPro	SY Achieve CL2	82	58	48	61.3	12.6
AgriMAXX	AM Eastwood	81	50	-	58.7	12.5
AgriPro	SY Benefit	81	55	45	58.9	11.5
OGI	Ruby Lee	81	59	49	60.4	12.9
OGI	Duster	80	46	38	58.2	12.3
OGI	Bentley	79	58	50	59.4	12.0
OGI	Spirit Rider	73	54	45	59.7	12.8
Experimentals						
	OCW04S717T-6W	96	-	-	58.9	13.1
	OK12912C-138407-2	95	-	-	60.8	13.1
	OK15MASBx7 ARS 8-1	86	-	-	58.6	12.0
	OK16729W	85	-	-	61.3	12.2
	OK16D101089	82	-	-	60.2	12.7
Mean		87	59	49	59.9	12.3
LSD (0.05)		6	6	5	1.4	0.6

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column.

Walters Wheat Variety Trial

Cooperator: Jimmy Kinder
 Planting & harvest dates: 10/2/19 & 5/30/20
 Management: Dual-purpose
 Tillage: No-till

Extension Educator: Kimbreley Davis
 Previous crop: Wheat
 Soil Type: Foard silt loam
 Soil test: pH=7.9 , N= 43, P= 24, K= 396

Licensee	Variety	Grain Yield			Test Weight	Protein
		2019-20	2-Year	3-Year	2019-20	2019-20
		----- bu/ac -----			-- lb/bu --	-- % --
OGI	Showdown	50	44	52	57.9	9.1
WestBred	WB4792	45	-	-	59.9	8.8
AgriPro	Bob Dole	45	-	-	58.0	9.5
OGI	Doublestop CL Plus	42	38	48	60.6	10.0
LCS	LCS Chrome	42	36	47	58.6	9.4
WestBred	WB4269	42	30	-	58.4	9.1
AgriPro	SY Rugged	42	28	40	59.4	9.7
OGI	Duster	40	33	43	58.5	9.3
OGI	Iba	38	29	42	59.3	9.5
OGI	Bentley	37	29	40	58.0	9.8
OGI	Smith's Gold	37	30	40	57.8	9.5
OGI	Green Hammer	36	30	40	58.9	10.3
OGI	Gallagher	35	27	37	57.8	9.8
OGI	OK Corral	34	-	-	57.2	10.3
OGI	Skydance	34	25	-	60.4	10.6
OGI	Ruby Lee	33	29	37	59.8	10.4
KWA	Zenda	32	-	-	58.9	10.2
OGI	Baker's Ann	24	-	-	59.5	11.4
Experimentals						
	OK16729W	43	-	-	58.0	9.3
	OK16D101089	40	28	-	59.0	9.8
	OCW04S717T-6W	37	-	-	55.7	10.1
	OK188608	34	-	-	59.0	10.3
	OK12912C-138407-2	36	-	-	58.4	9.6
	OK15MASBx7 ARS 8-1	30	-	-	56.5	10.2
Mean		38	31	42	58.6	9.8
LSD (0.05)		5	4	5	0.95	0.7

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Average visual rating for freeze damage was 38%. There was no lodging across the trial. Low disease pressure observed during grain-fill. Plots were grazed from 12/28/19 to 03/04/20 at a stocking rate of 145 pounds per acre.

Central Region Summary

Locations: Kingfisher and El Reno

<i>Licensee</i>	<i>Variety</i>	<i>Grain Yield</i> 2019-20	<i>Test Weight</i> 2019-20	<i>Protein</i> 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
WestBred	WB4269	52	60.2	12.8
AgriPro	Bob Dole	52	60.1	13.3
OGI	Showdown	52	59.0	13.5
OGI	Bentley	51	58.7	13.3
AgriPro	SY Rugged	51	58.7	13.5
OGI	Doublestop CL Plus	49	62.8	14.0
OGI	Ruby Lee	49	61.8	13.7
AGSECO	AG Icon	48	59.3	13.5
OGI	Smith's Gold	48	59.4	13.7
LCS	LCS Chrome	47	59.7	13.8
OGI	Green Hammer	47	61.2	14.7
OGI	OK Corral	46	58.8	13.5
OGI	Skydance	46	62.7	13.6
OGI	Baker's Ann	46	61.0	13.9
OGI	Duster	43	59.0	13.2
OGI	Gallagher	42	60.6	13.4
KWA	Zenda	38	60.3	13.2
Experimentals				
	OK16729W	56	61.8	12.8
	OK16D101089	55	60.9	13.0
	OCW04S717T-6W	55	59.1	14.0
	OK188608	53	60.4	13.4
	OK12912C-138407-2	48	61.0	13.6
	OK15MASBx7 ARS 8-1	43	59.2	12.9
	Mean	48	60.2	13.5
	LSD (0.05)	5	0.9	0.5

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Data for varieties reported from the El Reno and Kingfisher trials are included in this analysis.

North Central Region Summary

Locations: Homestead, Kildare, Lahoma and Lamont

<i>Licensee</i>	<i>Variety</i>	<i>Grain Yield 2019-20</i>	<i>Test Weight 2019-20</i>	<i>Protein 2019-20</i>
		-----bu/ac-----	-----lb/bu----	-----%-----
WestBred	WB4269	106	62.7	11.4
WestBred	WB4792	101	60.1	10.8
WestBred	WB4699	101	61.2	10.8
AgriMAXX	AM Eastwood	100	61.8	11.6
OGI	Showdown	96	59.7	11.5
OGI	Bentley	95	59.5	11.4
OGI	Doublestop CL Plus	95	64.1	12.8
AgriPro	SY Rugged	94	59.9	11.4
AgriPro	Bob Dole	94	62.3	11.7
OGI	OK Corral	93	60.0	11.8
AGSECO	AG Icon	93	60.4	12.2
KWA	Zenda	92	61.4	12.0
OGI	Iba	92	62.3	11.0
LCS	LCS Chrome	91	59.3	13.1
OGI	Green Hammer	91	62.4	13.3
OGI	Gallagher	90	61.9	11.6
OGI	Smith's Gold	90	60.0	12.2
OGI	Baker's Ann	90	61.6	12.4
OGI	Spirit Rider	85	61.3	12.1
Experimentals				
	OK12912C-138407-2	99	61.9	12.4
	OK16729W	96	62.6	10.6
	OK15MASBx7 ARS 8-1	92	60.4	11.4
	OK16D101089	89	62.1	12.3
	OCW04S717T-6W	86	59.6	12.7
Mean		94	61.2	11.8
LSD (0.05)		5	0.7	0.6

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Data for varieties reported from the Homestead, Kildare, Lahoma, Lahoma Fungicide and Lamont trials are included in this analysis.

Northwest Region Summary

Locations: Buffalo and Cherokee

<i>Licensee</i>	<i>Variety</i>	<i>Grain Yield</i> 2019-20	<i>Test Weight</i> 2019-20	<i>Protein</i> 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
WestBred	WB4269	94	62.1	10.5
PlainsGold	Langin	93	60.3	10.6
OGI	Showdown	93	59.2	10.8
OGI	Bentley	93	59.9	10.8
PlainsGold	Canvas	91	57.5	11.0
WestBred	WB4792	90	57.6	10.7
OGI	Smith's Gold	89	58.5	11.4
WestBred	WB4699	89	58.6	10.5
AGSECO	TAM 114	88	60.9	11.2
OGI	Baker's Ann	88	61.3	11.5
KWA	Zenda	87	61.0	11.4
OGI	OK Corral	87	58.2	10.9
PlainsGold	Crescent AX	86	59.1	11.0
OGI	Doublestop CL Plus	86	62.3	12.2
AgriPro	SY Rugged	86	58.5	10.7
OGI	Iba	85	61.2	10.8
AGSECO	AG Icon	83	58.8	11.3
OGI	Green Hammer	83	61.5	12.3
OGI	Gallagher	82	60.5	11.1
AgriPro	Bob Dole	81	61.0	11.1
LCS	LCS Chrome	80	57.4	12.2
Experimentals				
	OK12912C-138407-2	92	61.7	11.6
	OK16729W	87	60.5	11.0
	OK168512	81	60.3	11.1
	OK16D101089	74	60.7	11.5
	Mean	87	59.9	11.2
	LSD (0.05)	7	1.1	0.7

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Data for varieties reported from the Buffalo and Cherokee trials are included in this analysis.

Panhandle Region Summary

Locations: Balko, Goodwell, Hooker and Keyes

Licensee	Variety	Grain Yield 2019-20	Test Weight 2019-20	Protein 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
PlainsGold	Canvas	61	58.9	12.6
WestBred	WB4792	57	59.1	11.7
AgriPro	SY Rugged	56	59.4	12.6
OGI	Iba	55	60.2	12.4
WestBred	WB4699	54	58.1	12.3
Dyna-Gro	Long Branch	54	57.9	12.5
PlainsGold	Crescent AX	53	60.0	12.8
AGSECO	AG Icon	52	58.7	13.3
AgriPro	SY Wolverine	51	59.8	12.5
OGI	Lonerider	51	58.8	13.8
OGI	Gallagher	50	58.2	13.1
OGI	Duster	50	58.2	13.1
OGI	OK Corral	50	54.3	13.2
AgriMAXX	AM Eastwood	49	58.5	13.7
LCS	LCS Chrome	49	57.9	13.4
OGI	Showdown	49	58.1	12.9
OGI	Bentley	48	58.2	13.0
PlainsGold	Langin	48	59.8	12.3
OGI	Doublestop CL Plus	48	59.2	14.1
WestBred	WB4269	48	59.4	13.4
OGI	Baker's Ann	47	59.0	13.7
OGI	Smith's Gold	46	59.2	13.0
AgriPro	Bob Dole	46	58.4	13.3
OGI	Spirit Rider	45	58.0	13.9
AGSECO	TAM 114	45	59.7	13.6
Experimentals				
	OK168512	51	59.2	13.0
	OK15MASBx7 ARS 8-1	48	57.7	13.1
	OK16729W	45	59.3	12.7
	OK16107117	45	57.5	12.9
	Mean	50	58.6	13.0
	LSD (0.05)	4	0.9	0.5

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Data for varieties reported from the Balko, Goodwell, Hooker and Keyes trials are included in this analysis.

Southwest Region Summary

Locations: Altus and Walters

<i>Licensee</i>	<i>Variety</i>	<i>Grain Yield</i> 2019-20	<i>Test Weight</i> 2019-20	<i>Protein</i> 2019-20
		-----bu/ac-----	-----lb/bu-----	-----%-----
OGI	Showdown	56	57.2	10.6
WestBred	WB4792	54	59.5	10.2
OGI	Doublestop CL Plus	53	60.2	10.6
LCS	LCS Chrome	50	55.1	11.3
OGI	OK Corral	48	57.6	10.7
OGI	Smith's Gold	42	58.9	11.2
AgriPro	SY Rugged	41	59.2	11.7
AgriPro	Bob Dole	39	58.4	12.1
OGI	Iba	39	59.3	10.9
KWA	Zenda	39	58.8	12.3
OGI	Gallagher	38	58.1	11.2
OGI	Duster	37	58.5	11.5
OGI	Bentley	33	58.4	11.8
OGI	Green Hammer	32	59.5	12.7
OGI	Ruby Lee	32	60.6	12.5
WestBred	WB4269	30	58.4	11.9
OGI	Skydance	28	60.4	12.4
OGI	Baker's Ann	24	60.2	13.1
Experimentals				
	OK15MASBx7 ARS 8-1	40	57.2	11.3
	OK12912C-138407-2	39	59.1	11.5
	OK16729W	39	59.9	11.5
	OCW04S717T-6W	37	56.6	12.1
	OK16D101089	34	59.7	11.7
	OK188608	33	60.2	11.5
Mean		39	58.8	11.6
LSD (0.05)		8	1.3	0.9

Notes: Grain yield and protein concentration were adjusted to 12% moisture content. Shaded values are not statistically different from the highest value within a column. Data for varieties reported from the Altus and Walters trials are included in this analysis.

Heading Date and Plant Height

Licensee	Variety	Goodwell					Goodwell			
		Altus	Chickasha	Irrigated	Lahoma	Stillwater	Altus	Irrigated	Lahoma	Stillwater
		----- 50% heading -----					----- plant height at harvest (in) -----			
AGSECO	AG Icon	4/4	4/9	4/28	4/24	4/16	97	59	97	84
AgriMAXX	AM Cartwright	-	4/8	5/2	4/23	4/19	-	62	92	81
AgriMAXX	AM Eastwood	-	4/2	4/29	4/22	4/16	-	50	89	76
AgriPro	AP EverRock	4/3	4/2	5/3	4/21	4/11	99	55	91	81
OGI	Baker's Ann	4/1	4/2	5/2	4/20	4/10	100	55	106	82
OGI	Bentley	4/2	4/6	4/29	4/23	4/16	105	65	103	89
AgriPro	Bob Dole	4/2	4/8	5/1	4/23	4/16	111	67	107	98
PlainsGold	Canvas	4/8	4/10	4/29	4/26	4/22	99	60	90	78
CROPLAN	CP7010	4/8	4/10	5/2	4/25	4/18	97	65	92	79
CROPLAN	CP7869	4/14	4/23	4/30	4/30	4/26	96	60	86	79
CROPLAN	CP7909	4/4	4/8	5/2	4/22	4/14	108	65	92	83
PlainsGold	Crescent AX	4/1	4/2	5/2	4/19	4/11	100	66	91	87
OGI	Doublestop CL Plus	4/8	4/10	5/1	4/26	4/21	105	48	100	91
OGI	Duster	4/7	4/8	5/2	4/23	4/16	99	61	94	87
OGI	Gallagher	4/6	4/6	5/2	4/23	4/16	97	63	98	88
OGI	Green Hammer	4/2	4/6	-	4/23	4/16	105	-	105	90
PlainsGold	Guardian	4/7	4/13	5/2	4/28	4/21	99	54	90	88
OGI	Iba	4/6	-	4/30	4/23	4/16	100	68	93	82
KWA	KS Dallas	4/4	4/6	4/30	4/23	4/17	97	62	91	88
KWA	KS Silverado	4/2	4/10	5/2	4/21	4/14	86	51	91	82
KWA	KS Western Star	4/10	4/20	4/28	4/27	4/25	105	62	102	88
PlainsGold	Langin	3/29	4/2	5/2	4/19	4/11	89	60	88	77
LCS	LCS Chrome	4/11	4/20	5/1	4/29	4/27	98	52	99	85
LCS	LCS Photon AX	4/2	4/10	5/3	4/22	4/16	99	62	100	98
OGI	Lonerider	-	-	4/29	-	4/20	-	53	-	79
Dyna-Gro	Long Branch	-	-	4/29	-	4/25	-	60	-	86
OGI	OK Corral	4/7	4/10	5/2	4/26	4/18	94	55	91	82
OGI	Ruby Lee	4/4	4/3	-	4/21	4/13	98	-	100	90
OGI	Showdown	4/6	4/9	4/30	4/23	4/19	104	68	104	96
OGI	Skydance	4/2	4/2	-	-	4/12	98	-	-	91
OGI	Smith's Gold	4/6	4/10	5/2	4/23	4/19	97	50	82	84
OGI	Spirit Rider	-	-	5/2	4/27	4/22	-	48	90	76
AgriPro	SY Achieve CL2	3/30	4/2	4/28	4/20	4/11	99	60	108	83
AgriPro	SY Benefit	3/31	4/6	4/30	4/21	4/15	99	58	98	80
AgriPro	SY Rugged	3/31	4/3	4/28	4/22	4/16	91	63	89	78
AgriPro	SY Wolverine	-	-	4/30	-	4/13	-	58	-	81
AGSECO	TAM 114	4/6	4/10	4/30	4/23	4/20	99	63	102	91
WestBred	WB4269	3/30	4/6	4/28	4/21	4/13	90	60	89	73
WestBred	WB4401	3/29	4/1	-	4/21	4/10	92	-	100	79
WestBred	WB4515	4/7	4/14	5/3	4/25	4/21	94	58	96	79
WestBred	WB4595	4/7	4/11	4/27	4/25	4/17	100	60	92	84
WestBred	WB4699	4/7	4/10	5/2	4/25	4/20	85	40	85	79
WestBred	WB4792	4/7	4/11	5/3	4/25	4/19	103	52	92	88
KWA	Zenda	4/3	4/8	5/3	4/23	4/16	97	62	99	85
OSU Experimentals										
	OCW04S717T-6W	4/9	4/11	-	4/26	4/20	100	-	94	92
	OK12912C-138407-2	4/4	4/9	-	4/22	4/16	105	-	106	95
	OK15MASBx7 ARS 8-1	4/5	4/8	5/2	4/23	4/16	94	55	93	82
	OK16107117	-	-	5/3	-	-	-	60	-	-
	OK16729W	4/2	4/8	4/30	4/22	4/18	108	69	101	92
	OK168512	-	-	5/2	-	-	-	55	-	-
	OK16D101089	4/2	4/6	-	4/21	4/16	95	-	96	85
	OK188608	4/3	4/3	-	-	-	109	-	-	-
Mean		4/4	4/8	4/30	4/23	4/17	99	59	95	85

Freeze Damage

<i>Licensee</i>	<i>Variety</i>	<i>Altus^a</i>	<i>Apach^b</i>	<i>Chickasha^b</i>
----- % Freeze damage -----				
AGSECO	AG Icon	95	-	82
AgriMAXX	AM Cartwright	-	-	80
AgriMAXX	AM Eastwood	-	-	80
AgriPro	AP EverRock	55	-	93
OGI	Baker's Ann	85	90	92
OGI	Bentley	60	83	82
AgriPro	Bob Dole	80	85	87
PlainsGold	Canvas	10	-	77
CROPLAN	CP7010	20	-	80
CROPLAN	CP7869	5	-	20
CROPLAN	CP7909	60	-	80
PlainsGold	Crescent AX	100	-	95
OGI	Doublestop CL Plus	10	28	67
OGI	Duster	10	80	85
OGI	Gallagher	30	77	88
OGI	Green Hammer	55	87	88
PlainsGold	Guardian	20	-	80
OGI	Iba	25	77	-
KWA	KS Dallas	70	-	82
KWA	KS Silverado	65	-	85
KWA	KS Western Star	0	-	30
PlainsGold	Langin	95	-	95
LCS	LCS Chrome	0	43	25
LCS	LCS Photon AX	95	-	87
OGI	OK Corral	10	65	70
OGI	Ruby Lee	75	90	90
OGI	Showdown	10	83	87
OGI	Skydance	90	90	88
OGI	Smith's Gold	65	78	85
AgriPro	SY Achieve CL2	25	-	90
AgriPro	SY Benefit	80	90	83
AgriPro	SY Rugged	95	87	87
AGSECO	TAM 114	50	-	85
WestBred	WB4269	60	93	85
WestBred	WB4401	85	-	92
WestBred	WB4515	5	-	77
WestBred	WB4595	10	-	82
WestBred	WB4699	5	-	75
WestBred	WB4792	0	57	82
KWA	Zenda	75	85	87
OSU Experimentals				
	OCW04S717T-6W	40	70	85
	OK12912C-138407-2	30	82	78
	OK15MASBx7 ARS 8-1	55	88	90
	OK16729W	65	85	85
	OK16D101089	95	92	92
	OK188608	85	-	92
Mean		49	78	81

a Freeze damage ratings at Altus are based on percent of damaged heads from one replication within the trial.

b Freeze damage ratings at Apache and Chickasha are based on average percent of damaged heads of three replications for each trial.

Participating Seed Companies

AgriMAXX Wheat Company

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Varieties: AM Cartwright, AM Eastwood

AgriPro

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Varieties: CP7010, CP7869, CP7909

Dyna-Gro Seed

Shawn Carter
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Email: shawn.carter@nutrien.com
www.dynagroseed.com
Variety: Long Branch

Kansas Wheat Alliance (KWA)

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Varieties: KS Dallas, KS Silverado, KS Western Star, Zenda

Limagrain Cereal Seeds (LCS)

Nathan Miller
6414 N Sheridan street
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Varieties: LCS Chrome, LCS Photon AX, T173

Oklahoma Genetics, Inc. (OGI)

Mark Hodges
201 South Range Road
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www.okgenetics.com
Varieties: Baker's Ann, Bentley, Doublestop CL Plus, Duster, Gallagher, Green Hammer, Iba, Lonerider, OK Corral, Ruby Lee, Showdown, Skydance, Smith's Gold, Spirit Rider

PlainsGold

(Colorado Wheat Research Foundation)
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Varieties: Canvas, Crescent AX, Guardian, Langin

WestBred

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www.westbred.com
Varieties: WB4269, WB4401, WB4515, WB4595, WB4699, WB4792

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President for Agricultural Programs and has been prepared and distributed at a cost of \$1.20 per copy. Revised 08/2020 GH.