





# 2014 WHEAT CROP REVIEW

## Weather and Crop Development

The 2013-2014 wheat crop got off to a fairly productive start in the fall with adequate topsoil moisture in most parts of the state. Even areas that have been drought-stricken for the last few years saw good emergence and stand establishment.

This respite unfortunately did not last, however, and precipitation levels remained below normal from January through May. Many parts of the state experienced above-average snow cover during the winter months, but this was not enough to bring the soil moisture profile back to levels that could support the full yield potential of the wheat crop. Temperatures were also uncharacteristically cold during the winter months, leaving the wheat that was already stressed from the lack of moisture vulnerable to freeze damage.

Spring brought a reprieve of warmer temperatures and increased precipitation, but the effects of the challenging winter were evident in many acres. Wheat stands that had previously been good were thinned by the drought and cold damage, and growing weeds in thin-standing wheat became an issue in the state. Precipitation in late May and June did much to improve grain fill for later-maturing varieties, but those rains came too late for early-maturing varieties already damaged by the drought. At harvest, only 12% of the wheat crop was rated as good or excellent; the majority was rated as poor to very poor. (*Crop Progress and Conditions* report, Kansas Agricultural Statistics)

## Diseases

Yield losses to disease were low in 2014 relative to recent years. Leaf rust and stripe rust, two of the most important diseases in Kansas, were present only at trace levels this year. Tan spot was present in the North Central region this past year, but disease severity remained low in most production fields. Barley yellow dwarf (BYD) was present 2014, but the disease was not a significant production factor in most fields. This is second year that BYD incidence was low and was a welcome reprieve after severe yield losses to this disease 2011 and 2012.

Wheat streak mosaic caused severe damage in some areas of south Central KS. In most cases, fields with severe wheat streak mosaic were associated with poor control of volunteer wheat the previous summer. The incidence of wheat streak mosaic was below normal in western Kansas for the third year in a row. This low incidence of wheat streak mosaic is likely the result of persistent drought, which reduces the survival of the disease in volunteer wheat and other grassy weeds. (Erick De Wolf, Kansas State University Plant Pathologist)

## Insects

Fall armyworms were reported from various parts of south-central and north-central Kansas in October and early November. These worms are sometimes quite destructive to seedling wheat plants, and growers had to treat some fields to protect against these pests. There were also some reports of army cutworms in the fall, and even more so in the spring. Fall armyworms do not overwinter in Kansas, but army cutworms do. So, if the worms feeding on wheat in the fall are army cutworms, they will be there to feed in the spring, whereas fall armyworms will not. Wheat head armyworms were also relatively abundant in April and May across the state and did cause some concern because of their habit of feeding directly on the grain.

Hessian fly caused lodging in some north-central counties. There are no remedial management tactics for spring infested wheat. Ensure volunteer destruction at least two weeks prior to planting and plant as late as possible if you are concerned about Hessian fly. (Jeff Whitworth, Kansas State University Extension Entomologist)

## Harvest Statistics

The Kansas Agricultural Statistics July 11 estimate of the 2014 crop was 235 million bushels from 8.4 million acres, down 26% from last year's crop and the smallest since 1989. Yield per harvested acre is expected to average 28 bushels, down 10 bushels from last year's final yield and the lowest yield since 1995. (July 11, 2014, *Crops Report*, Kansas Agricultural Statistics)

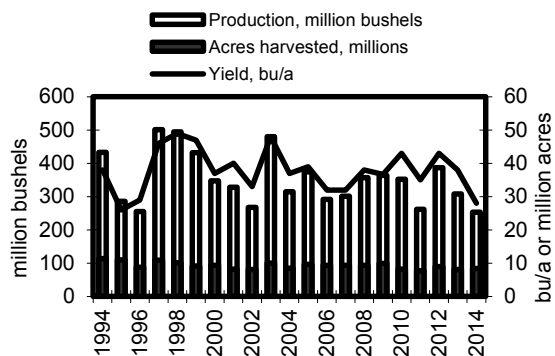


Figure 1. Historical Kansas wheat production

Everest remained the leading variety of wheat seeded in Kansas. It accounted for 14.3% of the state's wheat and was the most popular variety in the eastern two-thirds of the state. TAM 111 remained at second with 11.6% of acreage and is the leading variety in the western third of the state. T158 jumped to third place, accounting for 5.0% of wheat acres; TAM 112 stayed at fourth place with 4.6%;

and Armour dropped two places to fifth place with 4.2% of wheat acres. (February 20, 2014, *Wheat Variety*, Kansas Agricultural Statistics)

### Acreeage Distribution

TAM 111 22 (29) Winterhawk 9 (6) Fuller 6 (9) Postrock 5 (7) SY Wolf 4	Everest 17 (16) Armour 10 (11) WB Cedar 5 SY Wolf 4 Postrock 4 (4)	Everest 30 (23) Armour 11 (10) TAM 111 7 Santa Fe 5 (6) Fuller 4
TAM 111 21 (21) TAM 112 13 (15) T158 11 (9) Hatcher 6 (7) Postrock 3 (4)	Everest 26 (23) Armour 10 (14) TAM 111 6 (6) WB Cedar 3 Fuller 2	Everest 39 (36) Armour 4 (8) WB Cedar 4 Santa Fe 2 (3) Art 2 (4)
TAM 111 22 (22) TAM 112 11 (15) T158 11 (9) Danby 5 Winterhawk 4	Everest 24 (21) Duster 7 (9) Endurance 5 Armour 4 (8) TAM 111 4	Everest 60 (54) WB Cedar 3 Armour 3 (4) Pioneer 25R40 2 Pioneer 25R78 1

**Figure 2. Leading wheat varieties in Kansas; percentage of seeded acreage for 2014 and (2013) crops**

## 2014 PERFORMANCE TESTS

The Kansas Agricultural Experiment Station annually compares both new and currently grown varieties in the state’s major crop-producing areas. These performance tests generate unbiased performance information designed to help Kansas growers select wheat varieties suited for their area and conditions.

Site descriptions and management practices for each site are summarized in Table 3. One-year or one-location results can be misleading because of the possibility of unusual weather or pest conditions.

### Environmental Factors

Drought and freeze damage were determining factors in many of the tests in the 2013-2014 growing season. **Be sure to keep extenuating environmental conditions in mind when examining test results.**

### Varieties

Public varieties are selected for inclusion in the tests on the basis of several criteria. Most represent new or established varieties from Nebraska, Oklahoma, and Colorado with potential for successful use in Kansas. Some are included as long-term checks. Others are entered at the request of the originating institution. Twenty-six public wheat varieties were entered for testing.

Originators or marketers enter privately developed varieties voluntarily. Entrants choose both the entries and test sites. The 2014 private entrants are listed in Table 1. Eight private entrants provided a total of 38 varieties for testing.

Table 13 describes the characteristics of seed submitted for testing. Seed quality—including factors such as size, purity, and germination—can be important in determining the performance of a variety. Wheat seed used for entries in the Kansas Crop Performance Tests is prepared professionally and usually meets or exceeds Kansas Crop Improvement Certification standards. Performance of a given variety similar to that obtained in these tests is best assured under similar environmental and cultural conditions and with the use of certified or professionally prepared seed.

## Results and Variety Characterization

Results from Kansas tests are presented in Tables 4 through 12. Yields are reported as bushels per acre (60 lb/bu) and are adjusted to a moisture content of 13% where moistures were reported at harvest. Yields also are converted to percentages of the test average to speed recognition of the highest-yielding entries. Multi-year averages are presented for those varieties entered more than 1 year.

Additional information such as test weight, heading date, and plant height is helpful for fine-tuning variety comparisons. Planting varieties with a range of maturities helps minimize weather risks.

At the bottom of each table is the (0.05) LSD (least significant difference) for each column of replicated data. One can think of the LSD as a “margin of error” that shows how big the difference between two varieties must be for one to be 95% confident that the difference is real. The use of the LSD is intended to reduce the chance of overemphasizing small differences. Small variations in soil structure, fertility, water-holding characteristics, and other test-site characteristics can cause considerable yield variation among plots of one variety.

### Electronic Access

To access crop performance testing information electronically, visit the website at:

<http://agronomy.ksu.edu/services/crop-performance-tests/index.html>.

### Research and Duplication Policy

When companies submit entries, permission is given to Kansas State University to test varieties and/or hybrids designated on the entry forms in the manner indicated in the test announcements. Seed submitted for testing should be a true sample of the seed being offered for sale.

All results from Kansas Crop Performance Tests belong to the University and the public and shall be controlled by the University to produce the greatest benefit to the public. Performance data may be used in the following ways: 1) Tables may be reproduced in their entirety, provided the source is referenced and data are not manipulated or reinterpreted; and 2) advertising statements by an

individual company about the performance of its entries may be made as long as they are accurate statements about the data as published, with no reference to other companies' names or cultivars. In both cases, the following must be included with the reprint or ad citing the appropriate publication number and title: "See the official Kansas State University Agricultural Experiment Station and Cooperative Extension Service Report of Progress 1108 '2014 Kansas Performance Tests with Winter Wheat Varieties,' or the Kansas Crop Performance Test website, <http://www.agronomy.ksu.edu/services/crop-performance-tests> for details. Endorsement or recommendation by Kansas State University is not implied."

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Guorong Zhang, Hays

### Others

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Richard Chen, Laura McLaughlin, USDA  
Justin Knopf, Gypsum

**Table 1. Private entrants in the 2014 Kansas wheat performance tests**

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**AGSECO**

P.O. Box 7  
Girard, KS 66743  
620-724-6223

**Limagrain Cereal Seeds**

2040 SE Frontage Road  
Fort Collins, CO 80525  
970-498-2200

**Scott Seed Company**

Box 1732  
Hereford, TX 79045  
806-364-3484

**Watley Seed**

Box 51  
Spearman, TX 79081  
800-659-3838

**DuPont Pioneer**

Pioneer Hi-Bred Intl., Inc.  
8100 South 15th  
Lincoln, NE 68512  
800-228-4050

**MFA**

MFA Incorporated  
201 Ray Young Dr.  
Columbia, MO 65201  
573-876-5363

**Syngenta AgriPro**

AgriPro Wheat, Inc.  
11783 Ascher Rd.  
Junction City, KS 66441  
785-210-0218

**WestBred-Monsanto**

540 Dickinson St.  
Kiowa, KS 67543  
620-825-4315

**Kansas Wheat Alliance**

2005 Research Park Circle  
Manhattan, KS 66502  
785-477-3400

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**Table 2. Comparisons of leading winter wheat varieties - agronomy and quality**

Variety <sup>1</sup>	% of Kansas seeded acreage 2014	Relative <sup>2</sup>									Relative milling and baking quality <sup>4</sup>	Resistance or tolerance to: <sup>5</sup>													
		Test weight	Straw strength	Maturity	Height <sup>3</sup>	Coleoptile length	Shattering	Winter hardiness	Acid tolerance	Protein content <sup>3</sup>		Soil-borne mosaic	Spindle streak mosaic	Wheat streak mosaic	Barley yellow dwarf	Leaf rust	Stem rust	Stripe rust	Septoria tritici blotch	Glume blotch	Tan spot	Powdery mildew	Head scab	Hessian fly	Russ. wheat aphid
Everest	14.3	2	5	1	6	5	3	3	T	5	LD	1	1	7	4	3	3	8	4	5	7	3	4	3	9
TAM 111	11.6	3	2	4	6	2	2	7	MS	7	AC	8	8	7	7	8	3	8	6	--	6	6	7	5	9
T158	5.0	1	1	3	5	--	1	3	S	--	AC	2	2	5	6	7	8	2	7	--	5	3	5	6	9
TAM 112	4.6	2	4	2	5	2	2	5	T	3	AC	8	8	5	7	7	2	8	5	--	6	1	8	9	9
Armour	4.2	3	3	1	2	7	1	5	T	5	AC	1	1	7	6	5	3	7	6	7	5	2	7	1	9
Winterhawk	2.9	3	5	5	8	5	5	3	I	5	AC	1	1	7	5	7	8	6	7	6	6	6	7	2	9
Duster	2.7	3	9	5	5	7	1	7	T	5	AC	1	1	7	4	3	3	4	7	--	7	3	8	1	9
WB Cedar	2.2	2	1	1	1	5	2	1	MT	5	AC	1	1	7	6	5	3	3	4	6	5	2	6	5	9
PostRock	2.2	2	2	3	5	5	3	3	T	6	AC	2	5	6	7	7	4	8	8	7	5	8	7	3	9
Endurance	1.8	5	5	5	7	5	5	5	T	7	AC	2	8	7	5	5	5	5	5	--	7	5	6	9	9
Fuller	1.7	5	4	2	5	5	2	3	I	3	AC	1	1	5	7	6	2	7	6	6	6	6	6	9	9
Danby+	1.5	3	4	3	6	5	2	2	MS	5	AC	7	--	5	8	8	2	8	6	--	8	7	7	9	9
TAM 113	1.3	2	7	5	5	--	1	7	MT	5	AC	8	8	7	7	3	2	4	--	--	7	--	--	9	9
Hatcher	1.2	5	6	3	5	2	3	2	I	4	AC	7	8	8	8	7	3	4	5	--	5	3	6	5	9
Jagalene	1.1	3	3	2	4	6	4	5	MT	4	EX	2	3	6	7	9	2	9	4	--	7	9	8	6	9
Denali	1.0	1	2	7	7	7	1	5	MT	5	AC	8	8	6	7	7	3	8	--	--	8	--	7	9	9
Jagger	1.0	4	4	1	5	6	5	6	T	3	EX	2	4	5	7	9	4	7	3	6	4	7	7	8	9
Billings	1.0	2	5	3	5	7	1	8	T	2	EX	2	5	8	5	2	4	2	4	--	8	5	7	1	9
Art	0.9	3	3	3	6	5	5	5	T	5	AC	1	1	7	8	3	2	6	5	7	6	5	6	3	9
Overley	0.8	3	5	1	7	7	9	9	T	3	EX	1	4	5	5	8	2	4	5	8	5	7	9	8	9
Jackpot	0.8	2	5	1	6	--	1	5	T	5	AC	1	1	8	7	8	4	5	6	--	4	6	7	3	9
SY Wolf	0.7	2	1	5	5	5	1	1	I	5	AC	2	--	6	6	1	2	5	3	6	3	5	--	5	9
Santa Fe	0.6	3	3	2	6	2	3	3	MT	5	AC	1	--	7	6	3	4	7	3	6	5	6	7	9	9
Centerfield	0.6	3	2	5	3	7	1	7	I	5	AC	2	2	--	5	7	2	4	7	--	6	2	8	3	9
AP503 CL2	0.4	1	1	5	5	5	5	1	S	6	AC	2	5	6	7	8	2	9	4	--	7	7	7	6	9
Aspen+	0.4	2	1	1	1	5	1	2	MT	5	AC	1	1	7	6	6	4	3	4	--	5	2	6	5	9
Greer	0.3	8	1	5	5	9	1	5	T	6	AC	1	--	4	7	7	2	3	5	--	4	5	--	6	9
TAM 110	0.3	--	--	1	5	--	--	--	--	1	LD	9	9	5	8	9	4	8	6	6	7	1	8	--	9
1863	0.3	2	7	5	7	5	2	2	T	6	AC	2	1	5	6	7	1	3	6	--	5	6	6	7	9
T81	0.3	4	5	2	4	7	3	3	I	7	AC	8	4	8	6	8	3	3	7	7	6	3	5	--	9
CJ	0.3	2	5	1	7	5	9	1	MT	6	AC	5	6	4	7	6	2	7	4	--	5	5	7	1	9
SY Southwind	0.3	5	1	3	3	5	2	2	T	6	AC	2	--	7	6	2	2	2	4	--	6	5	7	1	9
Blends	10.4																								
Other White	0.9																								
Other Red	19.8																								
Other Soft	0.3																								

<sup>4</sup>Hard white variety Scale: 1=Best 9=Poor 1=Best 9=Poor 1=Early 9=Late 1=Short 9=Tall 1=Long 9=Short 1=Best 9=Poor 1=Best 9=Poor T=Toler S=Susc 1=Best 9=Poor Scale: 1=Most resistant/tolerant 9=Least resistant/tolerant -- = Inadequate information or conflicting data.

<sup>1</sup> Varieties and percentage seeded acreage from the Feb. 20, 2014, wheat variety survey, Kansas Agricultural Statistics, Topeka, KS.

<sup>2</sup> Most ratings are estimates based on information and observations from many sources over several years. Agronomic information by Jim Shroyer and Steve Watson - K-State Agronomy.

<sup>3</sup> Summary of crop performance test results from recent years.

<sup>4</sup> Ratings from Rebecca Miller - K-State Wheat Quality Laboratory.

EX = Exceptional; large kernels; high protein content; very good milling, mixing, and commercial bread-baking.

LD = Less Desirable; one or more serious quality defects.

AC = Acceptable; milling and baking attributes acceptable, but not outstanding, for all properties; may have minor defects.

\*Strong blending wheat; needed for blending with weaker wheats; may not be suitable alone for bread flour.

<sup>5</sup> Ratings by Allan Fritz - Manhattan, Guorong Zhang - Hays, Erick DeWolf and Bill Bockus - K-State Plant Pathology, Phil Sloderbeck - K-State Entomology.

Final ratings and descriptions of disease and insect pests are available in "Wheat Variety Disease and Insect Ratings 2014," Publication MF991 from K-State Research and Extension.

<sup>6</sup> New Russian wheat aphid biotype is thought to be virulent on all currently available commercial varieties.

**Table 3. Wheat performance test site descriptions and management in 2014**

Region and location	Soil type Previous crop	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O		Plant-harvest		
						Seed rate	Conditions	
<b><u>Northeast Dryland</u></b>								
Ashland Agronomy Farm Manhattan (MA)	Reading silt loam Soybean	70	0	0	Fall	10/24/2013-7/2/2014 75 lb/a	Above-average snow cover in the winter and rains in early summer boosted performance.	
<b><u>Southeast Dryland</u></b>								
East Central KS Experiment Field Ottawa (OT)	Woodson silt loam Grain sorghum	110	40	15	Fall	10/8/2013-6/27/2014 60 lb/a	Late-season rainfall bloom through grain fill period resulted in overall good yields for all varieties.	
Southeast Agricultural Research Center Parsons (PA)	Parsons silt loam Corn	110	15	15	Fall	10/25/2013-6/25/2014 90 lb/a	Cold weather immediately after planting affected emergence and stands. Very dry spring.	
<b><u>Soft Wheat</u></b>								
Southeast Agricultural Research Center Parsons (PA)	Parsons silt loam Corn	110	15	15	Fall	10/25/2013-6/25/2014 90 lb/a	Cold weather immediately after planting affected emergence and stands. Very dry spring.	
<b><u>North Central Dryland</u></b>								
North Central KS Experiment Field Belleville (BE)	Crete silt loam Fallow	90	0	0	Fall	10/1/2013-7/1/2014 90 lb/a	Snow cover and timely rains led to good growing conditions.	
North Central KS Farmer's Field Beloit (BL)	Harney silt loam Wheat	100	0	0	Fall	80 lb/a	Abandoned: uneven stands and high variability.	
<b><u>Central Dryland</u></b>								
Central KS Farmer's Field Gypsum (GY)	Silty clay loam Fallow	50	0	0	Fall	10/10/2013-7/3/2014 90 lb/a	Drought was an issue in the fall, but wheat recovered with timely rains in the summer.	
Central KS Farmer's Field Lorraine (LR)	McCook silt loam Fallow	60	0	0	Fall	10/9/2013-7/8/2014 60 lb/a	Drought was an issue in the fall, but wheat recovered with timely rains in the summer.	
<b><u>South Central Dryland</u></b>								
South Central KS Farmer's Field McPherson (MC)	Crete silt loam Fallow	60	0	0	Fall	10/17/2013-7/4/2014 60 lb/a	Stands were thinned by drought and wheat streak mosaic in susceptible varieties.	
South Central KS Experiment Field Hutchinson (HU)	Ost silt loam Fallow	80	40	0	Fall	10/23/2013-7/11/2014 60 lb/a	Crop enjoyed timely rains in early summer during grain fill.	
South Central KS Farmer's Field Conway Springs (CW)	Sandy loam Fallow	40	0	0	Fall	10/8/2013-6/18/2014 60 lb/a	Stands were thinned by drought and wheat streak mosaic in susceptible varieties.	
<b><u>Northwest Dryland</u></b>								
Agricultural Research Center Hays (HA)	Harney silt loam Fallow	80	0	0	Fall	10/1/2013-7/24/2014 50 lb/a	Herbicide damage to the plots. Dry in spring and summer.	
Northwest Research-Extension Center Colby (CO)	Keith silt loam Fallow	60	0	0	Fall	9/24/2013-7/4/2014 60 lb/a	Rain in early September helped provide good stands. May and June were fairly wet and cool.	
Northwest Research-Extension Center Tribune (TR)	Richfield silt loam Fallow	65	25	0	Fall	9/26/2013-6/27/2014 55 lb/a	Good rain in June.	
Northwest KS Farmer's Field Wakeeny (WA)	Harney clay loam Grain Sorghum	40	0	0	Fall	10/4/2013 50 lb/a	Good establishment in the fall but dry the rest of the growing season.	
<b><u>Southwest Dryland</u></b>								
Southwest KS Farmer's Field Larned (LA)	Harney clay loam Grain sorghum	75	0	0	Fall	10/7/2013-6/27/2014 50 lb/a	Good establishment in the fall but dry the rest of the growing season.	
Southwest KS Farmer's Field Dodge City (DC)	Harney clay loam Fallow	60	0	0	Fall	10/6/2013- 45 lb/a	Abandoned: poor stands from persistent drought conditions.	
Southwest Research-Extension Center Garden City (GC)	Keith silt loam Wheat	60	0	0	Fall	10/8/2013- 65 lb/a	Abandoned: poor stands from persistent drought conditions.	
<b><u>Western Irrigated</u></b>								
Northwest Research-Extension Center Colby (CO)	Keith silt loam Fallow	110	0	0	Fall	9/23/2013-7/10/2014 90 lb/a	Winter was dry and fairly mild with some snow cover on the coldest days. May and June were wet and cool.	
Southwest Research-Extension Center Garden City (GC)	Keith silt loam Corn	100	0	0	Fall	10/8/2013-7/8/2014 75 lb/a	Hailstorm on 6/24/2014 affected variability.	
Western KS Farmer's Field Healy, Lane County (LN)	Scott silt loam Fallow	90	0	0	Fall	10/3/2013-7/9/2014 80 lb/a	Good establishment in the fall and decent growing conditions throughout the season.	



**Table 4. 2014 NORTHEAST Kansas dryland winter wheat performance test**

Brand / Name	MA <sup>1</sup> yield (bu/a)	MA % of test average	MA multiyear av. (bu/a)		MA tw (lb/bu)	MA head (+/- Everest)	MA height (in.)
			2 yr	3 yr			
<b>Kansas</b>							
KS061406-LN-37	66	101	--	--	56	--	--
<b>Limagrain</b>							
LCS Mint	73	111	62	--	60	--	--
LCS Wizard	69	106	--	--	60	--	--
T153	65	100	60	53	58	--	--
T154	63	97	58	--	58	--	--
T158	62	96	54	50	58	--	--
<b>Oklahoma Genetics</b>							
Doublestop CL Plus	70	107	--	--	60	--	--
Duster	59	91	55	50	55	--	--
Gallagher	65	99	59	--	57	--	--
Garrison	60	92	--	51	58	--	--
Iba	63	97	56	--	60	--	--
Ruby Lee	68	105	60	56	59	--	--
<b>Syngenta AgriPro</b>							
SY Southwind	64	98	--	--	54	--	--
SY Wolf	70	107	--	--	59	--	--
<b>WestBred</b>							
WB-Cedar	63	97	56	53	57	--	--
Armour	68	104	59	50	57	--	--
WB-4458	65	100	58	--	59	--	--
WB-Redhawk	71	109	62	--	59	--	--
<b>Wildcat Genetics</b>							
1863	63	97	55	51	60	--	--
Everest	59	90	52	50	60	--	--
KanMark	64	98	--	--	59	--	--
Averages	65	65	--	--	58	--	--
CV (%)	6	6	--	--	2	--	--
LSD (0.05)*	6	9	--	--	1	--	--

<sup>1</sup> MA = Manhattan, KS, Ashland Bottoms Research Farm, Riley County.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.

**Table 5. 2014 SOUTHEAST Kansas dryland winter wheat performance test**

Brand / Name	-OT-			-PA-															
	OT <sup>1</sup>	PA <sup>2</sup>	Av.	OT	PA	Av.	2 yr	3 yr	2 yr	3 yr	OT	PA	Av.	OT	PA	Av.	OT	PA	Av.
	yield (bu/a)			% of test average			multiyear av. (bu/a)				tw (lb/bu)			head (+/- Everest)			height (in.)		
<b>Kansas</b>																			
KS061406-LN-37	88	37	63	99	89	94	--	--	--	--	55	60	58	2	4	3	--	18	18
<b>Limagrain</b>																			
LCS Wizard	91	49	70	102	117	110	--	--	--	--	58	61	59	3	6	5	--	19	19
T153	89	39	64	100	93	97	75	71	42	52	57	60	59	-1	-1	-1	--	19	19
T154	89	41	65	99	98	99	77	72	43	50	58	60	59	-1	0	-1	--	19	19
<b>Oklahoma Genetics</b>																			
Doublestop CL Plus	85	49	67	95	118	107	--	--	--	--	59	61	60	3	7	5	--	21	21
Gallagher	89	50	69	100	120	110	--	--	--	--	57	60	58	3	5	4	--	20	20
Garrison	85	36	61	96	86	91	76	70	42	51	56	60	58	3	7	5	--	19	19
Iba	93	50	71	104	119	112	--	--	--	--	57	61	59	3	5	4	--	20	20
Ruby Lee	98	46	72	110	110	110	85	76	49	53	57	60	59	1	4	3	--	21	21
<b>Syngenta AgriPro</b>																			
CJ	91	35	63	102	83	92	78	69	38	51	57	61	59	0	0	0	--	20	20
Jackpot	90	37	64	101	89	95	80	74	42	51	57	60	59	0	2	1	--	19	19
SY Southwind	84	41	62	94	97	96	69	68	39	48	55	60	58	2	3	3	--	20	20
<b>WestBred</b>																			
Armour	84	45	65	94	109	101	73	72	49	56	56	60	58	1	4	3	--	19	19
WB-4458	93	39	66	104	93	99	72	--	41	--	58	60	59	1	5	3	--	20	20
WB-Cedar	83	38	60	93	90	92	71	68	40	87	57	59	58	-1	1	0	--	19	19
WB-Redhawk	97	45	71	109	107	108	84	--	49	--	57	61	59	0	3	2	--	20	20
<b>Wildcat Genetics</b>																			
1863	92	43	67	103	102	103	79	71	48	54	57	61	59	2	6	4	--	21	21
Everest	87	38	62	97	92	94	75	71	43	54	58	61	59	0	0	0	--	18	18
KanMark	87	36	62	98	86	92	--	--	--	--	58	61	59	3	6	5	--	19	19
Averages	89	42	65	89	42	65	--	--	--	--	57	60	59	1	4	3	--	20	20
CV (%)	2	10	6	2	10	6	--	--	--	--	0	1	1	0	1	0	--	4	4
LSD (0.05)*	3	7	5	3	16	10	--	--	--	--	0	1	1	0	1	1	--	1	1

<sup>1</sup> OT = Ottawa, KS, East Central Experiment Field, Franklin County.

<sup>2</sup> PA = Parsons, KS, Southeast Agricultural Research Center, Labette County.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.

**Table 6. 2014 SOUTHEAST Kansas SOFT winter wheat performance test**

Brand / Name	PA <sup>1</sup>	PA	PA		PA	PA	PA
			2 yr	3 yr			
	yield (bu/a)	% of test average	multiyear av. (bu/a)		tw (lb/bu)	head (+/- Everest)	height (in.)
<b>Georgia</b>							
GA-041293-11E54	41	99	--	--	59	6	20
GA-041293-11LE37	43	102	--	--	59	6	20
GA-04434-11E44	35	85	--	--	58	8	19
<b>Kansas</b>							
KS061406-LN-37	35	83	--	--	57	5	19
<b>MFA</b>							
(S) 2166	45	109	48	--	58	4	20
(S) 2248	49	116	--	--	59	5	20
(S) 2250	44	104	--	--	58	3	19
(S) 2525	40	97	48	62	58	7	22
<b>Oklahoma Genetics</b>							
OK11754WF	38	92	--	--	58	6	19
<b>Pioneer</b>							
(S) 25R39	44	105	47	66	58	7	20
(S) 25R40	43	103	--	--	58	7	20
(S) 25R46	40	96	--	--	58	6	19
(S) 25R77	45	109	--	--	59	5	20
(S) XW12J	39	95	--	--	58	5	20
(S) XW12K	44	105	--	--	58	7	19
(S) XW12L	46	111	--	--	58	7	20
(S) XW12M	41	97	--	--	58	5	20
<b>Syngenta AgriPro</b>							
SY Harrison	42	100	48	--	58	5	20
<b>Wildcat Genetics</b>							
1863	43	102	--	--	58	5	21
Everest	37	89	44	56	59	0	19
KanMark	42	101	--	--	59	5	20
Averages	42	42	--	--	58	5	20
CV (%)	10	10	--	--	1	1	3
LSD (0.05)*	7	16	--	--	1	1	1

<sup>1</sup> PA = Parsons, KS, Southeast Agricultural Research Center, Labette County.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.

**Table 7. 2014 NORTH CENTRAL Kansas dryland winter wheat performance test**

Brand / Name	BE <sup>1</sup>	BL <sup>2</sup>	Av.	BE	BL	Av.	-BE-		-BL-		BE	BL	Av.	BE	BL	Av.	BE	BL	Av.	
	yield (bu/a)			% of test average			multiyear av. (bu/a)				tw (lb/bu)			head (+/- Everest)			height (in.)			
<b>Kansas</b>																				
KS061406-LN-37	65	--	65	88	--	88	--	--	--	--	57	--	57	--	--	--	25	--	25	
<b>Limagrain</b>																				
LCH11-1130	76	--	76	103	--	103	--	--	--	--	58	--	58	--	--	--	27	--	27	
LCS Mint	80	--	80	108	--	108	82	--	86	--	60	--	60	--	--	--	29	--	29	
LCS Wizard	71	--	71	95	--	95	--	--	--	--	59	--	59	--	--	--	26	--	26	
T153	69	--	69	92	--	92	73	77	83	75	59	--	59	--	--	--	27	--	27	
T154	79	--	79	106	--	106	81	83	82	75	59	--	59	--	--	--	28	--	28	
T158	78	--	78	105	--	105	82	85	84	78	59	--	59	--	--	--	28	--	28	
<b>Nebraska</b>																				
Freeman	78	--	78	105	--	105	--	--	--	--	57	--	57	--	--	--	27	--	27	
Robidoux	87	--	87	117	--	117	--	--	--	--	58	--	58	--	--	--	31	--	31	
<b>Oklahoma Genetics</b>																				
Doublestop CL Plus	78	--	78	104	--	104	--	--	--	--	62	--	62	--	--	--	32	--	32	
Iba	73	--	73	99	--	99	77	--	84	--	61	--	61	--	--	--	29	--	29	
<b>Syngenta AgriPro</b>																				
Postrock	73	--	73	98	--	98	81	80	80	74	59	--	59	--	--	--	28	--	28	
SY Gold	74	--	74	99	--	99	84	--	92	--	58	--	58	--	--	--	28	--	28	
SY Monument	77	--	77	104	--	104	--	--	--	--	58	--	58	--	--	--	29	--	29	
SY Southwind	67	--	67	89	--	89	76	85	72	80	57	--	57	--	--	--	26	--	26	
SY Wolf	77	--	77	103	--	103	81	86	78	74	62	--	62	--	--	--	28	--	28	
<b>WestBred</b>																				
WB-Cedar	63	--	63	85	--	85	75	85	89	82	58	--	58	--	--	--	26	--	26	
Armour	62	--	62	83	--	83	78	79	78	71	58	--	58	--	--	--	26	--	26	
WB-4458	76	--	76	103	--	103	78	--	88	--	60	--	60	--	--	--	30	--	30	
WB-Grainfield	73	--	73	99	--	99	80	--	76	--	58	--	58	--	--	--	30	--	30	
WB-Redhawk	85	--	85	115	--	115	91	--	76	--	58	--	58	--	--	--	30	--	30	
Winterhawk	78	--	78	105	--	105	83	87	84	83	61	--	61	--	--	--	29	--	29	
<b>Wildcat Genetics</b>																				
1863	77	--	77	103	--	103	81	85	67	74	63	--	63	--	--	--	31	--	31	
Everest	74	--	74	99	--	99	82	85	81	85	60	--	60	--	--	--	27	--	27	
Fuller	79	--	79	106	--	106	79	84	77	77	62	--	62	--	--	--	30	--	30	
KanMark	72	--	72	97	--	97	--	--	--	--	58	--	58	--	--	--	26	--	26	
<b>Averages</b>																				
Averages	74	--	74	74	--	74	--	--	--	--	59	--	59	--	--	--	28	--	28	
CV (%)	8	--	8	8	--	8	--	--	--	--	0	--	0	--	--	--	4	--	4	
LSD (0.05)*	10	--	10	14	--	14	--	--	--	--	0	--	0	--	--	--	2	--	2	

<sup>1</sup> BE = Belleville, KS, North Central Experiment Field, Republic County.

<sup>2</sup> BL = Beloit, KS. Farmer's Field, Mitchell County. Abandoned; uneven stands.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.

**Table 8. 2014 CENTRAL Kansas dryland winter wheat performance test**

Brand / Name	GY <sup>1</sup>			LR <sup>2</sup>			-GY-				-LR-				GY			LR			Av.		
	GY	LR	Av.	GY	LR	Av.	2 yr	3 yr	2 yr	3 yr	GY	LR	Av.	GY	LR	Av.	GY	LR	Av.	GY	LR	Av.	
<b>Kansas</b>	yield (bu/a)			% of test average			multiyear av. (bu/a)				tw (lb/bu)			head (+/- Everest)			height (in.)						
KS061406-LN-37	57	32	45	98	61	79	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--	--	
<b>Limagrain</b>																							
LCH11-1130	62	61	61	107	114	110	--	--	--	--	58	58	58	--	--	--	--	--	--	--	--	--	
LCS Mint	64	69	66	111	129	120	63	--	57	--	60	59	60	--	--	--	--	--	--	--	--	--	
LCS Wizard	59	55	57	102	104	103	--	--	--	--	60	59	59	--	--	--	--	--	--	--	--	--	
T153	51	44	47	88	82	85	64	58	43	42	58	57	57	--	--	--	--	--	--	--	--	--	
T154	46	46	46	80	86	83	52	51	44	48	58	58	58	--	--	--	--	--	--	--	--	--	
T158	58	60	59	101	112	106	60	55	51	49	59	57	58	--	--	--	--	--	--	--	--	--	
<b>Oklahoma Genetics</b>																							
Billings	52	49	51	90	92	91	53	53	43	45	59	60	60	--	--	--	--	--	--	--	--	--	
Doublestop CL Plus	65	50	58	113	94	104	--	--	--	--	60	60	60	--	--	--	--	--	--	--	--	--	
Duster	54	63	58	94	117	106	52	49	51	49	59	58	59	--	--	--	--	--	--	--	--	--	
Gallagher	61	61	61	105	115	110	60	--	52	--	59	59	59	--	--	--	--	--	--	--	--	--	
Garrison	57	47	52	99	88	93	61	50	45	45	58	57	58	--	--	--	--	--	--	--	--	--	
Iba	62	55	59	108	104	106	62	--	48	--	59	60	60	--	--	--	--	--	--	--	--	--	
Ruby Lee	56	51	53	96	95	96	58	55	47	49	59	57	58	--	--	--	--	--	--	--	--	--	
<b>Syngenta AgriPro</b>																							
Postrock	58	55	56	100	103	102	56	46	52	46	60	59	60	--	--	--	--	--	--	--	--	--	
SY Monument	69	63	66	120	118	119	--	--	--	--	58	57	58	--	--	--	--	--	--	--	--	--	
SY Southwind	53	46	50	92	86	89	55	51	44	44	58	55	56	--	--	--	--	--	--	--	--	--	
SY Wolf	66	62	64	114	117	116	62	55	52	49	59	58	59	--	--	--	--	--	--	--	--	--	
TAM 111	60	60	60	104	113	109	--	--	--	--	60	57	59	--	--	--	--	--	--	--	--	--	
<b>WestBred</b>																							
WB-Cedar	56	50	53	97	93	95	65	61	47	51	57	56	56	--	--	--	--	--	--	--	--	--	
Armour	57	48	53	99	90	95	57	50	42	41	55	58	56	--	--	--	--	--	--	--	--	--	
WB-4458	60	57	58	103	107	105	63	--	51	--	59	58	59	--	--	--	--	--	--	--	--	--	
WB-Grainfield	59	53	56	101	100	101	59	--	46	--	59	58	59	--	--	--	--	--	--	--	--	--	
WB-Redhawk	57	41	49	99	76	88	58	--	42	--	60	59	59	--	--	--	--	--	--	--	--	--	
Winterhawk	61	65	63	105	122	113	--	--	--	--	61	61	61	--	--	--	--	--	--	--	--	--	
<b>Wildcat Genetics</b>																							
1863	50	50	50	86	95	90	50	47	46	43	59	58	58	--	--	--	--	--	--	--	--	--	
Everest	54	50	52	94	93	94	57	52	45	44	59	59	59	--	--	--	--	--	--	--	--	--	
KanMark	61	56	59	106	106	106	--	--	--	--	60	61	60	--	--	--	--	--	--	--	--	--	
Averages	58	53	56	58	53	56	--	--	--	--	59	58	59	--	--	--	--	--	--	--	--	--	
CV (%)	11	9	10	11	9	10	--	--	--	--	2	2	2	--	--	--	--	--	--	--	--	--	
LSD (0.05)*	9	7	8	15	13	14	--	--	--	--	1	2	2	--	--	--	--	--	--	--	--	--	

<sup>1</sup> GY = Gypsum, KS, Farmer's Field, Saline County.

<sup>2</sup> LR = Lorraine, KS, Farmer's Field, Ellsworth County.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.

**Table 9. 2014 SOUTH CENTRAL Kansas dryland winter wheat performance test**

Brand / Name	MC <sup>1</sup>				HU <sup>2</sup>				CW <sup>3</sup>				-MC-				-HU-				-CW-											
	MC	HU	CW	Av.	MC	HU	CW	Av.	MC	HU	CW	Av.	2 yr	3 yr	2 yr	3 yr	2 yr	3 yr	2 yr	3 yr	MC	HU	CW	Av.	MC	HU	CW	Av.	MC	HU	CW	Av.
<b>Kansas</b>	yield (bu/a)				% of test average				multiyear av. (bu/a)				tw (lb/bu)				head (+/- Everest)				height (in.)											
KS061406-LN-37	23	49	32	35	80	103	91	91	--	--	--	--	--	--	--	--	--	--	--	--	--	56	54	55	--	--	--	--	--	--	--	--
<b>Limagrain</b>																																
LCH11-1130	34	50	36	40	117	104	103	108	--	--	--	--	--	--	--	--	--	--	--	--	--	56	54	55	--	--	--	--	--	--	--	--
LCS Mint	40	58	38	45	138	121	108	122	43	--	45	--	39	--	--	--	--	--	--	--	--	58	58	58	--	--	--	--	--	--	--	--
LCS Wizard	30	52	35	39	104	110	99	104	--	--	--	--	--	--	--	--	--	--	--	--	--	58	58	58	--	--	--	--	--	--	--	--
T153	26	41	35	34	89	85	98	91	41	47	42	43	35	42	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
T154	27	42	32	34	93	88	92	91	41	46	42	43	34	41	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
T158	28	51	33	37	97	106	92	99	37	44	42	39	36	42	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
<b>Oklahoma Genetics</b>																																
Billings	23	50	30	34	80	106	83	90	33	41	49	47	33	42	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
Doublestop CL Plus	32	47	41	40	112	99	116	109	42	--	45	--	40	--	--	--	--	--	--	--	--	57	60	58	--	--	--	--	--	--	--	--
Duster	27	53	43	41	94	111	120	109	35	39	45	43	37	41	--	--	--	--	--	--	--	58	58	58	--	--	--	--	--	--	--	--
Gallagher	30	44	33	36	102	93	94	96	38	--	44	--	43	--	--	--	--	--	--	--	--	55	56	56	--	--	--	--	--	--	--	--
Garrison	28	48	36	37	97	101	101	100	38	39	44	38	37	42	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
Iba	28	58	42	42	97	121	117	112	34	40	50	49	44	45	--	--	--	--	--	--	--	60	59	59	--	--	--	--	--	--	--	--
Ruby Lee	27	46	37	36	92	96	104	97	41	44	46	45	41	47	--	--	--	--	--	--	--	56	59	58	--	--	--	--	--	--	--	--
<b>Syngenta AgriPro</b>																																
CJ	22	41	24	29	76	85	67	76	--	30	--	37	--	37	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
Jackpot	28	41	34	34	96	86	97	93	34	--	39	--	36	--	--	--	--	--	--	--	--	56	56	56	--	--	--	--	--	--	--	--
SY Southwind	33	47	33	38	113	98	92	101	38	43	43	41	30	38	--	--	--	--	--	--	--	57	56	56	--	--	--	--	--	--	--	--
<b>WestBred</b>																																
WB-Cedar	28	38	38	35	96	80	106	94	39	47	39	47	42	50	--	--	--	--	--	--	--	55	56	55	--	--	--	--	--	--	--	--
Armour	30	43	37	37	103	91	104	99	39	41	43	35	44	48	--	--	--	--	--	--	--	56	55	56	--	--	--	--	--	--	--	--
WB-4458	34	56	41	43	116	117	115	116	48	--	52	--	44	--	--	--	--	--	--	--	--	57	58	57	--	--	--	--	--	--	--	--
WB-Grainfield	31	55	36	41	108	116	101	108	--	--	--	--	--	--	--	--	--	--	--	--	--	58	56	57	--	--	--	--	--	--	--	--
WB-Redhawk	30	51	34	38	103	106	95	102	41	--	51	--	42	--	--	--	--	--	--	--	--	58	57	57	--	--	--	--	--	--	--	--
<b>Wildcat Genetics</b>																																
1863	33	44	34	37	113	92	95	100	35	38	42	39	36	41	--	--	--	--	--	--	--	56	57	56	--	--	--	--	--	--	--	--
Everest	24	43	36	34	83	90	101	91	33	40	42	39	38	44	--	--	--	--	--	--	--	56	58	57	--	--	--	--	--	--	--	--
Fuller	29	51	37	39	101	107	103	104	35	37	43	40	36	41	--	--	--	--	--	--	--	57	57	57	--	--	--	--	--	--	--	--
KanMark	24	48	40	37	82	100	112	98	--	--	--	--	--	--	--	--	--	--	--	--	--	57	57	57	--	--	--	--	--	--	--	--
Averages	29	48	35	37	29	48	35	37	--	--	--	--	--	--	--	--	--	--	--	--	--	57	57	57	--	--	--	--	--	--	--	--
CV (%)	12	12	6	10	12	12	6	10	--	--	--	--	--	--	--	--	--	--	--	--	--	3	1	2	--	--	--	--	--	--	--	--
LSD (0.05)*	5	8	3	5	16	17	9	14	--	--	--	--	--	--	--	--	--	--	--	--	--	2	1	2	--	--	--	--	--	--	--	--

<sup>1</sup> MC = McPherson, KS, Farmer's Field, McPherson County.

<sup>2</sup> HU = Hutchinson, KS, South Central Experiment Field, Reno County.

<sup>3</sup> CW = Conway Springs, KS, Farmer's Field, Sumner County.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.



**Table 11. 2014 SOUTHWEST Kansas dryland winter wheat performance test**

Brand / Name	-LA-				-DC-				-GC-																	
	LA <sup>1</sup>	DC <sup>2</sup>	GC <sup>3</sup>	Av.	LA	DC	GC	Av.	2 yr	3 yr	2013	2 yr	2013	2 yr	LA	DC	GC	Av.	LA	DC	GC	Av.	LA	DC	GC	Av.
	yield (bu/a)				% of test average				multiyear av. (bu/a)				tw (lb/bu)				head (+/- Everest)				height (in.)					
<b>AGSECO</b>																										
TAM 113	43	--	--	43	109	--	--	109	41	35	--	--	15	--	60	--	--	60	--	--	--	--	--	--	--	--
<b>Kansas</b>																										
KS061406-LN-37	29	--	--	29	73	--	--	73	--	--	--	--	--	--	54	--	--	54	--	--	--	--	--	--	--	--
KS10HW78-1-1	37	--	--	37	95	--	--	95	--	--	--	--	--	--	59	--	--	59	--	--	--	--	--	--	--	--
<b>Limagrain</b>																										
LCH10-187	29	--	--	29	73	--	--	73	--	--	--	--	--	--	54	--	--	54	--	--	--	--	--	--	--	--
LCH11-1130	44	--	--	44	112	--	--	112	--	--	--	--	--	--	57	--	--	57	--	--	--	--	--	--	--	--
LCS Mint	48	--	--	48	121	--	--	121	45	--	--	--	21	--	58	--	--	58	--	--	--	--	--	--	--	--
LCS Wizard	34	--	--	34	86	--	--	86	--	--	--	--	--	--	56	--	--	56	--	--	--	--	--	--	--	--
T153	30	--	--	30	77	--	--	77	39	36	--	36	18	--	57	--	--	57	--	--	--	--	--	--	--	--
T154	31	--	--	31	78	--	--	78	35	31	--	37	19	--	53	--	--	53	--	--	--	--	--	--	--	--
T158	34	--	--	34	87	--	--	87	39	34	--	31	14	--	56	--	--	56	--	--	--	--	--	--	--	--
<b>Oklahoma Genetics</b>																										
Doublestop CL Plus	41	--	--	41	103	--	--	103	--	--	--	--	--	--	59	--	--	59	--	--	--	--	--	--	--	--
Gallagher	47	--	--	47	119	--	--	119	42	--	--	--	15	--	58	--	--	58	--	--	--	--	--	--	--	--
Iba	45	--	--	45	114	--	--	114	44	--	--	--	17	--	61	--	--	61	--	--	--	--	--	--	--	--
Ruby Lee	35	--	--	35	88	--	--	88	38	35	--	31	11	--	53	--	--	53	--	--	--	--	--	--	--	--
<b>PlainsGold</b>																										
(W) Antero	45	--	--	45	114	--	--	114	48	--	--	--	23	--	59	--	--	59	--	--	--	--	--	--	--	--
Brawl CL Plus	42	--	--	42	106	--	--	106	49	40	--	32	15	--	60	--	--	60	--	--	--	--	--	--	--	--
Byrd	47	--	--	47	119	--	--	119	46	38	--	36	19	--	60	--	--	60	--	--	--	--	--	--	--	--
Hatcher	38	--	--	38	97	--	--	97	42	34	--	30	22	--	56	--	--	56	--	--	--	--	--	--	--	--
<b>Scott Seed</b>																										
TAM 304	39	--	--	39	100	--	--	100	46	39	--	32	12	--	55	--	--	55	--	--	--	--	--	--	--	--
<b>Syngenta AgriPro</b>																										
SY Monument	39	--	--	39	99	--	--	99	--	--	--	--	--	--	60	--	--	60	--	--	--	--	--	--	--	--
TAM 111	42	--	--	42	107	--	--	107	47	38	--	28	15	--	58	--	--	58	--	--	--	--	--	--	--	--
<b>Watley Seed</b>																										
TAM 112	37	--	--	37	94	--	--	94	--	21	--	31	--	--	58	--	--	58	--	--	--	--	--	--	--	--
<b>WestBred</b>																										
WB-4458	40	--	--	40	101	--	--	101	46	--	--	--	15	--	56	--	--	56	--	--	--	--	--	--	--	--
WB-Grainfield	36	--	--	36	91	--	--	91	43	--	--	--	17	--	56	--	--	56	--	--	--	--	--	--	--	--
Winterhawk	48	--	--	48	121	--	--	121	50	42	--	33	20	--	60	--	--	60	--	--	--	--	--	--	--	--
<b>Wildcat Genetics</b>																										
1863	26	--	--	26	67	--	--	67	34	30	--	30	13	--	51	--	--	51	--	--	--	--	--	--	--	--
(W) Clara CL	34	--	--	34	87	--	--	87	41	35	--	28	21	--	57	--	--	57	--	--	--	--	--	--	--	--
(W) Danby	43	--	--	43	108	--	--	108	48	39	--	31	17	--	62	--	--	62	--	--	--	--	--	--	--	--
Denali	43	--	--	43	110	--	--	110	38	32	--	28	26	--	58	--	--	58	--	--	--	--	--	--	--	--
Everest	26	--	--	26	65	--	--	65	36	33	--	32	16	--	52	--	--	52	--	--	--	--	--	--	--	--
KanMark	42	--	--	42	105	--	--	105	--	--	--	--	--	--	59	--	--	59	--	--	--	--	--	--	--	--
Oakley CL	60	--	--	60	151	--	--	151	52	--	--	--	19	--	59	--	--	59	--	--	--	--	--	--	--	--
Averages	39	--	--	39	39	--	--	39	--	--	--	--	--	--	57	--	--	57	--	--	--	--	--	--	--	--
CV (%)	11	--	--	11	11	--	--	11	--	--	--	--	--	--	5	--	--	5	--	--	--	--	--	--	--	--
LSD (0.05)*	6	--	--	6	16	--	--	16	--	--	--	--	--	--	4	--	--	4	--	--	--	--	--	--	--	--

<sup>1</sup> LA = Larned, KS, Farmer's Field, Pawnee County.

<sup>2</sup> DC = Dodge City, KS, Farmer's Field, Ford County. Abandoned; dry conditions throughout growing season.

<sup>3</sup> GC = Garden City, KS, Southwest Agricultural Research Center, Finney County. Abandoned; dry conditions throughout growing season.

\* Least significant difference, similar to margin of error, indicates difference needed to overcome test error.





**Table 13. 2014 Planted seed characteristics and Hessian fly ratings**

Brand / Name	1000 seed weight (grams)	Test weight (lb/bu)	Seeds per lb (1000)	Hess. fly <sup>1</sup> (rating)	Brand / Name	1000 seed weight (grams)	Test weight (lb/bu)	Seeds per lb (1000)	Hess. fly <sup>1</sup> (rating)
<b>AGSECO</b>					<b>PlainsGold</b>				
TAM 113	26.0	54.8	17.5	9	(W) Antero	38.8	62.9	11.7	5
<b>Georgia</b>					Brawl CL Plus	37.8	52.6	12.0	9
GA-041293-11E54	44.0	58.5	10.3	--	Byrd	32.3	53.2	14.1	5
GA-041293-11LE37	38.8	58.5	11.7	--	Hatcher	34.5	58.4	13.2	3
GA-04434-11E44	36.3	53.0	12.5	--	<b>Scott Seed</b>				
<b>Kansas</b>					TAM 304	33.5	57.3	13.5	1
KS061406-LN-37	30.8	57.7	14.8	--	<b>Syngenta AgriPro</b>				
KS10HW78-1-1	38.3	55.8	11.9	--	CJ	33.5	53.9	13.5	1
<b>Limagrain</b>					Greer	35.8	59.7	12.7	6
LCH10-187	36.3	57.5	12.5	--	JackPot	33.5	59.0	13.5	3
LCH11-1064	35.5	53.2	12.8	--	Postrock	31.8	57.8	14.3	1
LCH11-1130	36.3	51.2	12.5	--	SY Gold	30.3	51.6	15.0	3
LCS Wizard	34.3	58.4	13.2	--	SY Harrison	37.3	55.1	12.2	9
LCSMint	36.8	59.4	12.3	9	SY Monument	44.0	53.6	10.3	--
T153	32.0	50.5	14.2	3	SY Southwind	27.5	60.7	16.5	1
T154	31.3	58.3	14.5	3	SY Wolf	31.8	57.8	14.3	5
T158	28.8	56.4	15.8	6	TAM 111	34.3	57.0	13.2	5
<b>MFA</b>					<b>Watley</b>				
(S) 2166	32.8	59.5	13.9	1	TAM 112	32.0	62.1	14.2	9
(S) 2248	37.5	59.4	12.1	1	<b>WestBred</b>				
(S) 2250	47.0	57.2	9.7	1	Armour	34.3	59.3	13.2	1
(S) 2525	42.5	59.9	10.7	1	WB-4458	43.0	62.7	10.6	9
<b>Nebraska</b>					WB-Cedar	46.3	60.6	9.8	5
Freeman	35.0	52.3	13.0	--	WB-Grainfield	36.8	60.7	12.3	9
Robidoux	32.5	52.6	14.0	9	WB-Redhawk	37.5	65.0	12.1	9
<b>OGI</b>					Winterhawk	38.3	59.9	11.9	2
Billings	38.8	51.4	11.7	1	<b>Wildcat Genetics</b>				
Doublestop CL Plus	26.0	56.9	17.5	5	(W) Clara CL	33.8	58.1	13.4	4
Duster	27.5	52.6	16.5	1	(W) Danby	26.0	63.3	17.5	9
Gallagher	31.5	61.3	14.4	1	1863	34.8	57.2	13.1	7
Garrison	30.0	56.6	15.1	9	Denali	31.3	54.7	14.5	9
Iba	27.5	57.4	16.5	9	Everest	35.3	54.7	12.9	3
Ruby Lee	35.5	58.7	12.8	1	Fuller	38.8	53.3	11.7	9
<b>Oklahoma</b>					KanMark	31.5	55.4	14.4	--
OK11754WF	48.3	59.1	9.4	--	Oakley CL	30.8	52.4	14.8	--
<b>Pioneer</b>					Maximum	48.3	65.0	17.5	
(S) 25R39	34.0	57.2	13.3	1	Minimum	26.0	50.5	9.4	
(S) 25R40	41.5	58.1	10.9	1	Average	35.3	56.9	13.1	
(S) 25R46	44.8	52.0	10.1	1					
(S) 25R77	37.3	61.1	12.2	1					
XW12J	37.5	56.9	12.1	1					
XW12K	34.0	53.1	13.3	1					
XW12L	39.5	53.1	11.5	1					
XW12M	37.0	53.1	12.3	1					

<sup>1</sup> Hessian fly ratings by Ming Chen, USDA, with input from Jeff Whitworth, K-State Entomology; 1-Highly resistant; 5-Intermediate; 7-Moderately susceptible; 9-Highly susceptible. Ratings are based on greenhouse results with Kansas (Great Plains) biotype of Hessian fly.

(W) = Hard white wheat                      (S) = Soft red wheat

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