

# 2007

## Kansas Performance Tests with Winter Wheat Varieties

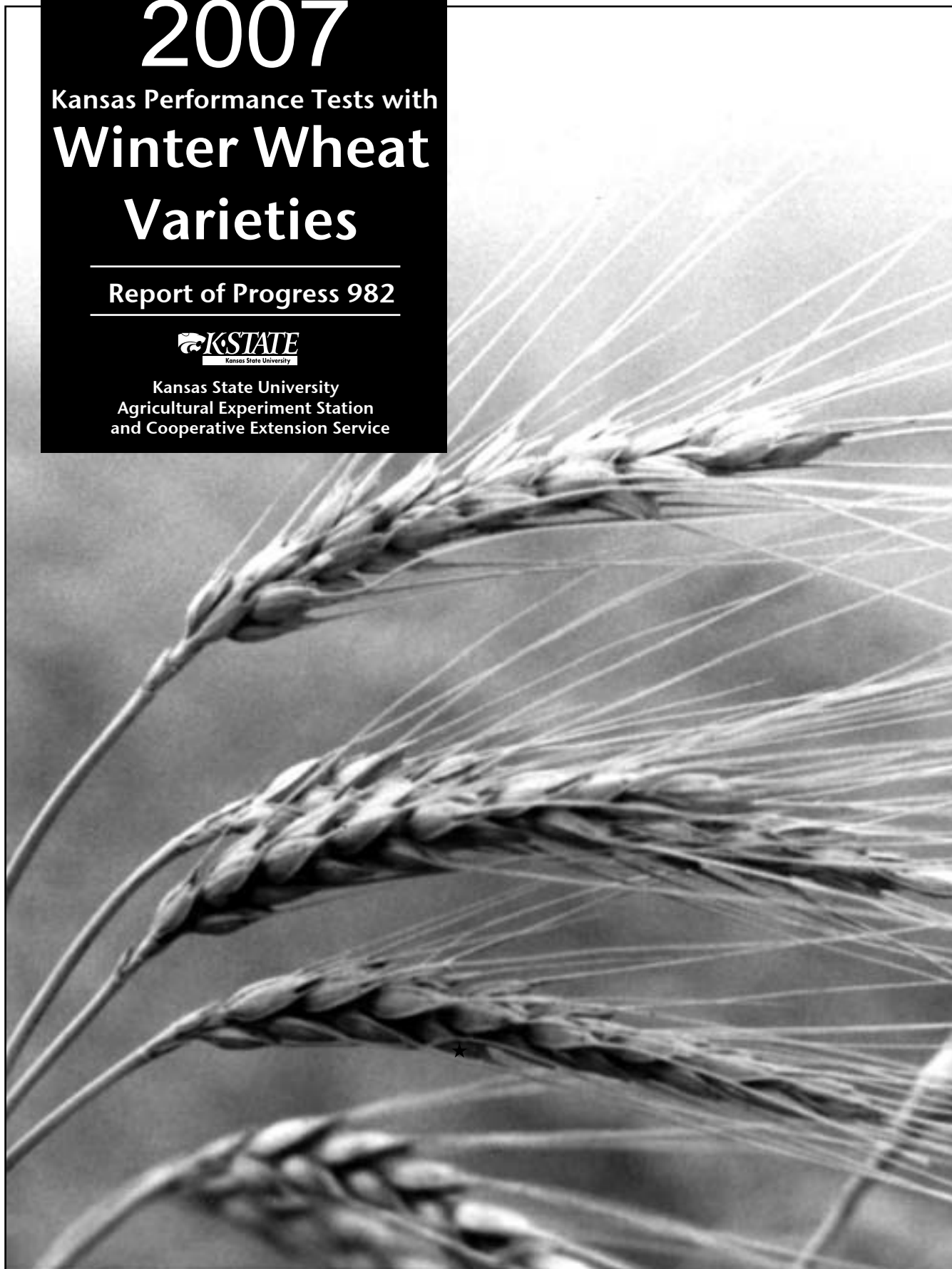
---

Report of Progress 982

---



Kansas State University  
Agricultural Experiment Station  
and Cooperative Extension Service



## CONTENTS

<b>2007 WHEAT CROP REVIEW</b> .....	1
Crop Development, Weather, Diseases, Insects, Harvest Statistics, Acreage Distribution	
<b>2007 PERFORMANCE TESTS</b> .....	2
Varieties, Environmental Factors, Results and Variety Characterization, Performance Summaries, Electronic Access, Research and Duplication Policy, Contributors	
Comparisons of Leading Winter Wheat Varieties Table 2.....	4
Site Descriptions and Management Table 3.....	5
Northeast Tests Table 4.....	6
Performance Summary Figure 3 .....	7
Southeast Tests Table 5.....	8
Performance Summary Figure 4 .....	9
Southeast Soft Tests Table 6.....	10
North Central Tests Table 7.....	12
Performance Summary Figure 5 .....	13
South Central Tests Table 8.....	14
Performance Summary Figure 6 .....	15
Northwest Dryland Tests Table 9.....	16
Performance Summary Figure 7 .....	17
Southwest Dryland Tests Table 10.....	18
Performance Summary Figure 8 .....	19
Irrigated Tests Table 11.....	20
Performance Summary Figure 9 .....	21
Planted Seed Characteristics, and Hessian Fly Ratings Table 12.....	22

**Table 1. Private entrants in the 2007 Kansas Wheat Performance Tests.**

<b>AgriPro/AgriPro COKER</b> AgriPro Wheat, Inc. 6515 Ascher Rd. Junction City, KS 66441 785-210-0218	<b>Drussel</b> Drussel Seed and Supply 2197 W. Parallel Road Garden City, KS 67846 620-275-2359	<b>Polansky</b> Polansky Seed PO Box 306, 2729 M St. Belleville, KS 66935 785-527-2271	<b>Watley</b> Watley Seed PO Box 51 Spearman, TX 79081 806-659-3838
<b>AGSECO</b> AGSECO, Inc. PO Box 7 Girard, KS 66743-0007 620-724-6223	<b>MFA</b> MFA Incorporated 201 Ray Young Dr. Columbia, MO 65201 573-876-5363	<b>Rinck</b> Rinck Seed Farm, Inc. PO Box 141, 720 Road 29 Niotaze, KS 67355 620-673-5343	<b>WestBred</b> WestBred LLC 14604 S. Haven Rd. Haven, KS 67543 877-921-0950
<b>AMIGO</b> Amigo Genetics PO Box 6 524 South Hwy 156 Justin, TX 76247 940-648-2751	<b>Pioneer Brand</b> Pioneer Hi-Bred Intl., Inc. 1616 S. Kentucky, Suite C350 Amarillo, TX 79102 800-258-5604	<b>Seed-link</b> Seed-link, Inc. PO Box 217, 208 St. David St. Lindsay, ON Canada K9V 5Z4 705-324-0544	

## 2007 WHEAT CROP REVIEW

### Crop Development

Progress of the 2007 wheat crop followed uneven patterns across the state. Planting and emergence followed close to the pace of recent years, except for southeastern areas that were delayed by rains and western parts of the state that were delayed by lack of moisture. Jointing began significantly earlier than the 5-year average with 46% of the crop jointed by April 2. After record-low temperatures in early April, the progress of the wheat that was still alive slowed to the point that heading was significantly behind last year and the 5-year average. Warmer temperatures in May and June helped hasten growth, but frequent rains delayed harvest in many parts of the state. As of July 9 only 81% of the wheat crop had been harvested.

The condition of the 2007 wheat prior to the April freeze rated 77% of the crop as either good or excellent. The quality of the crop sharply declined in the next few months as the full extent of damage caused by the freezing temperatures was reported. The wheat rebounded somewhat in late May and June but remained stressed by foliar diseases and late-season rains. In late June, 32% of the wheat acres were rated as good or excellent, 40% were rated as poor to very poor, leaving 28% in the fair category. (*Crop-Weather* reports, Kansas Ag Statistics)

### Weather

The 2007 wheat season was again characterized by uneven conditions, both in temperature and precipitation. The western parts of the state experienced mostly ideal wheat weather conditions, while the rest of the state faced various weather challenges.

The western third of the state was wetter than average in the fall, which allowed for good stand establishment. This was followed by the wettest winter conditions (Dec-Feb) on record. Much of this moisture came in the form of snow. Many locations saw continuous snow cover from mid-December through mid-March. The snow cover provided protection from temperature changes, and left much of the wheat in a less vulnerable state when the early April freeze hit. Drier, but still favorable, moisture conditions continued through the spring. A generally dry harvest period put the cap on a nearly ideal growing season. Some problems were seen in Northwest Kansas where cool, wet soils limited root development, which was then stressed by the drier spring conditions. Northwest Kansas did not escape hailstorms, but the most severe hail events were in north central Kansas.

For the rest of the state, generally favorable fall and winter growing conditions came to a screeching halt in April, when record cold temperatures- in the low teens- plunged into Oklahoma. Since March temperatures were warmer than normal, much of the wheat was actively growing and quite vulnerable to the extreme cold. This was followed by excessively wet and cool conditions in May and June.

Flooding was a widespread problem in central and south central Kansas in May. This moved to east central and southeast parts in June. While flooding wasn't as widespread in the north central and northeastern areas, continued wet weather contributed to harvest delays and aggravated disease and condition problems. (Mary Knapp, K-State Weather Data Library)

### Diseases

Frequent rainfall and extended periods of high relative humidity favored the development of fungal diseases. Leaf rust was severe in 2007 and was probably the most important disease in Kansas. Trace levels were reported as early as mid-March. In many locations, leaf rust had destroyed the leaves of susceptible varieties by the early stages of grain fill. Stripe rust was an important factor in western Kansas where the disease pressure was moderate to high on susceptible varieties. Stripe rust could be found at most locations in central Kansas, but the disease appeared to be held in check by the widespread use of resistant varieties.

Powdery mildew was severe in many fields in the eastern two-thirds of the state, and persisted well into the heading stages of growth. Speckled leaf blotch was also at elevated levels; it is spread by splashing rain and frequent showers. This year created an ideal environment for disease development. Tan spot was a problem during stem elongation in north central Kansas and was severe in continuous wheat fields. Low levels of head scab were reported in parts of eastern and central Kansas and likely played a role in the below average test weights experienced in many fields.

Barley yellow dwarf (BYD) was the most common viral disease in 2007 in central and eastern Kansas. Tillers damaged by freezing conditions in April appeared to provide an ideal environment for the aphid populations which spread BYD, possibly complicating the recovery from the freeze. Wheat streak mosaic was reported in some fields in western Kansas. Soilborne mosaic and spindle streak were also present, but it appears that the use of resistant varieties continues to provide good protection from the damaging effects of these diseases. (K-State Extension Plant Pathologist, Erick DeWolf)

### Insects

Winter grain mites generated considerable interest in the fall of 2006. These small pests became numerous and active from November until mid-January when cold temperatures stopped their activity. Winter grain mites annually cause grower concern but rarely cause economic losses.

Bird cherry oat aphids (BCOA) are efficient vectors of the virus that causes barley yellow dwarf, but are usually of little concern due to feeding damage only. However, BCOA populations exploded throughout the state after the unusually cold weather in April. This created considerable concern and resulted in many acres being treated. Insecticide treatment is seldom justified to control yield

losses due to aphid feeding, but we had not previously experienced populations of this magnitude.

As BCOA populations declined, armyworm populations rapidly increased. Much like the BCOA situation, armyworms were more numerous and widely distributed than in previous years. Again, this resulted in many acres treated to prevent yield reductions.

Hessian fly adults were active through November in south central Kansas, according to pheromone trapping data. Hessian fly infestations were difficult to determine however, due to the freeze-affected and extremely wet weather experienced in the spring of 2007. (K-State Extension Entomologist, Jeff Whitworth)

### Harvest Statistics

The Kansas Agricultural Statistics' July 12 estimate of the 2007 crop was 300.8 million bushels from 9.4 million acres, with a 32 bushels/acre yield average, identical to last year's yield. (July 12, 2007, *CROPS* report, Kansas Ag Statistics, Topeka)

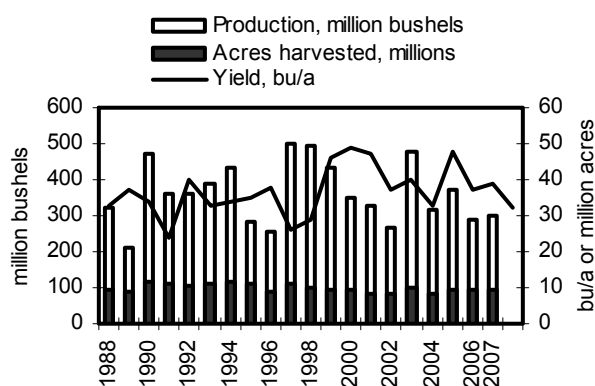


Figure 1. Historical Kansas wheat production

### Acreage Distribution

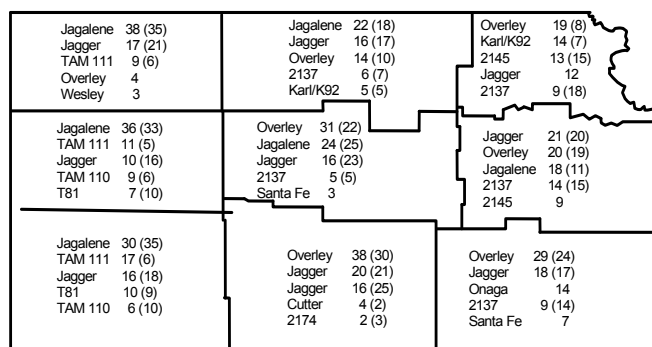


Figure 2. Leading wheat varieties in Kansas  
Percentage of seeded acreage for 2007 and (2006) crops

Overley replaced Jagalene by a very small margin as the variety planted on the most acres in Kansas in 2007. Jagger

fell to the third spot, with 17.1 of the statewide acreage, and TAM 111 moved into fourth place. Hard white varieties occupied 0.1% of the 2007 wheat acreage, following a downward trend from last year. The acreage of blends did not change from 2006 and remained at 10%. (February 5, 2007, *Wheat Variety*, Kansas Ag Statistics, Topeka)

### 2007 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.

### Varieties

Public varieties are selected for inclusion in the tests on the basis of several criteria. Most represent new or established varieties with potential for successful use in Kansas. Some are included as long-term checks. Others are entered at the request of the originating institution.

Originators or marketers enter privately developed varieties on a voluntary basis. Entrants choose both the entries and test sites and pay a fee to help defray test expenses. The 2007 private entrants are listed in Table 1. Eleven entrants provided a total of 37 varieties for testing.

Table 13 describes the characteristics of seed submitted for testing. Seed quality- including such factors 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 comparable 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.

### Environmental Factors

Many plants in these tests lost primary tillers during the freeze in April, stimulating late secondary and tertiary tillers that delayed harvest and introduced additional variability. All locations affected by the freeze had some degree of lodging. Many tests, especially those in SE Kansas, were completely lodged by harvest.

Leaf rust and stripe rusts were reported at all testing locations, however leaf rust developed later in the season in the southwest dryland, northwest dryland, and irrigated regions and had little effect on yields. Leaf rust caused near total defoliation in many varieties after heading at the Beloit test in the north central region. Tests in the southeast region were affected by powdery mildew, barley yellow dwarf virus, and head scab due to the frequent rains. The dryland test at Hesston in the South Central region reported incidence of soilborne mosaic virus and spindle streak mosaic virus.

Hessian flies caused some concern in the northwest dryland region. Wheat head army worms took most of the leaves after heading at the Southeast region tests.

Site descriptions and management practices for each site are summarized in Table 4. One-year or one-location results can be misleading because of the possibility of unusual weather or pest conditions. **Be sure to keep extenuating environmental conditions in mind when examining test results.**

### Results and Variety Characterization

Results from Kansas tests are presented in Tables 4 through 11. Yields are reported as bushels per acre (60 pounds per bushel) 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 highest yielding entries. Multi-year averages are presented for those varieties entered more than one year.

Additional information, such as test weight, heading date, and plant height, is helpful for fine-tuning variety comparisons. For example, a relatively tall variety may yield well in the tests, but may not be appropriate for some situations. Conversely, some producers may want a tall variety for straw production. 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.

### Performance Summaries

Figures 3 through 9 summarize the performance of each variety standardized to the average of two widely grown, check varieties: Jagger and 2137. The number at the base of each bar indicates the number of direct comparisons with the check varieties. Values that differ significantly from the average of the two check varieties are indicated by a + or – at the end of the bar.

### Electronic Access

To access crop performance testing information electronically, visit the World Wide Web site at <http://kscroptests.agron.ksu.edu>.

### 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 so as 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; 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 982 ‘2007 Kansas Performance Tests with Winter Wheat Varieties,’ or the Kansas Crop Performance Test website, <http://kscroptests.agron.ksu.edu>, for details. Endorsement or recommendation by Kansas State University is not implied.”

*These materials may be freely reproduced for educational purposes. All other rights reserved. In each case, give credit to the author(s), name of work, Kansas State University, and the date the work was published.*

NOTE: Trade names are used to identify products. No endorsement is intended, nor is any criticism implied of similar products not named.

## CONTRIBUTORS

### Main Station, Manhattan

Jane Lingenfelter, Assistant Agronomist (Senior Author)  
Kraig Roozeboom, Assistant Professor  
Allan Fritz, KSU Wheat Breeder  
Erick DeWolf, KSU Extension Plant Pathologist  
Mary Knapp, KSU Weather Data Librarian  
Jeff Whitworth, KSU Extension Entomologist

### Experiment Fields

Mark Claassen, Hesston  
W. Barney Gordon, Scandia  
William Heer, Hutchinson  
James Kimball, Ottawa  
Larry Maddux, Ottawa

### Research Centers

Patrick Evans, Colby  
James Long, Parsons  
T. Joe Martin, Hays  
Monty Spangler, Garden City  
Alan Schlegel, Tribune

### Others

Richard Chen, Laura McLaughlin, USDA  
Rebecca Miller, Grain Science and Industry  
Bill Bockus, Plant Pathology  
Jim Shroyer, Agronomy

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

Variety <sup>1</sup>	% of Kansas seeded acreage 2007 <sup>1</sup>	Relative <sup>2</sup>											Relative milling and baking quality <sup>4</sup>	Resistance or tolerance to: <sup>5</sup>												
		Test weight	Straw strength	Maturity	Coleoptile			Winter hardiness	AI Tolerance	Sprout Tolerance	Protein content <sup>3</sup>	Soil-borne mosaic		Spindle streak mosaic	Wheat streak mosaic	Barley yellow dwarf	Leaf rust	Stem rust	Speckled			Powdery mildew	Head scab	Hessian fly	Russ. wheat aphid <sup>6</sup>	
					Height <sup>3</sup>	length	Shattering												leaf blotch	Glume blotch	Tan spot					
Overley	23.3	3	3	1	6	5	7	6	5	2	3	EX	1	4	5	5	7	3	2	5	--	5	7	9	9	9
Jagalene	23.1	3	3	2	4	6	4	5	4	2	4	EX	2	3	5	7	9	2	4	4	--	8	9	7	9	9
Jagger	17.1	4	4	1	5	6	5	6	3	3	3	EX*	2	4	5	7	9	5	3	3	6	4	7	7	9	9
TAM 111	4.0	3	2	4	6	--	2	--	--	--	--	AC	8	8	7	7	9	1	4	5	--	5	6	--	7	9
2137	2.9	4	1	3	5	7	5	3	2	2	7	AC	1	5	6	5	7	7	8	5	7	5	4	8	8	9
Cutter	2.1	4	4	3	5	5	5	3	--	3	4	AC	3	4	6	7	8	2	3	5	--	6	7	8	9	9
T81	2.0	4	2	2	4	7	3	--	--	--	8	AC	8	4	8	6	8	3	3	7	7	6	3	--	8	9
TAM 110	1.5	3	2	1	5	5	2	--	8	3	7	AC	9	9	5	8	9	4	8	6	6	7	1	8	9	8
Santa Fe	1.3	3	3	2	6	--	--	--	--	--	5	AC	1	--	7	8	3	4	4	2	--	6	6	7	9	9
Ike	1.2	3	4	4	6	7	2	3	8	2	3	AC	1	5	9	6	9	3	6	8	6	8	6	6	3	9
2174	1.1	3	1	3	4	5	3	4	5	1	3	AC	1	5	8	5	7	8	7	4	7	5	2	6	9	9
Karl/Karl 92	1.0	3	4	1	3	7	3	3	9	3	3	EX*	1	3	9	8	9	6	5	5	3	3	4	6	9	9
Danby <sup>+</sup>	0.7	3	4	3	6	--	--	--	4	--	--	AC	7	--	5	--	8	2	2	6	--	8	7	--	--	9
2145	0.5	4	2	3	3	6	6	3	8	3	3	AC	1	--	9	6	8	3	5	4	--	8	8	8	5	9
Trego <sup>+</sup>	0.5	3	4	3	4	6	2	2	8	5	7	AC	2	4	7	7	8	3	8	7	5	8	8	9	8	9
TAM 112	0.4	--	4	2	5	--	--	--	--	--	--	AC	8	--	5	--	8	--	8	5	--	7	1	--	--	9
Dominator	0.4	4	3	4	2	8	7	3	8	5	3	AC	1	4	7	6	9	4	6	5	4	5	4	7	5	9
Wesley	0.4	4	--	5	4	--	2	--	--	--	4	AC	1	4	8	7	6	3	2	5	--	6	7	--	9	9
Thunderbolt	0.4	2	--	3	7	6	6	--	7	2	3	AC	8	8	6	7	7	8	5	6	--	7	7	7	9	9
Protection	0.3	4	3	2	7	--	--	--	--	--	--	--	4	--	7	--	9	4	2	6	--	7	--	9	9	
Larned	0.3	4	5	4	9	3	3	3	8	3	4	AC	9	8	9	9	8	2	2	8	8	9	5	5	3	9
Coronado	0.2	3	1	2	3	8	4	5	3	--	3	AC	1	4	6	6	7	5	6	6	6	6	5	9	5	9
2163	0.2	6	1	3	3	7	6	4	2	--	7	LD	1	4	4	5	7	4	7	5	8	4	2	8	3	9
NuHills <sup>+</sup>	0.2	3	3	2	4	7	3	--	--	--	3	AC	2	2	6	6	9	--	3	7	--	7	8	--	9	9
Onaga	0.2	3	3	3	2	6	--	--	--	--	3	--	1	5	5	6	5	8	6	5	--	8	4	5	4	8
T83	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9
NuFrontier <sup>+</sup>	0.2	4	3	5	6	5	3	--	--	7	5	AC	4	--	8	6	9	--	2	7	--	7	2	4	7	9
Stanton	0.2	4	3	3	5	6	2	2	--	2	4	AC	8	5	6	8	2	2	7	7	--	9	--	7	8	9
Blends	10.4																									
Other White	0.1																									
Other Red	3.5																									
Other Soft	0.1																									

<sup>1</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 1=Best 9=Poor 1=Best 9=Poor 1=Best 9=Poor 1=Best 9=Poor 1=Best 9=Poor 1=Best 9=Poor 1=Best 9=Poor  
Scale: 1=Most resistant/tolerant 9=Least resistant/tolerant

<sup>1</sup> Varieties and percentage seeded acreage from the Feb. 5, 2007, 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 Joe Martin - Hays, and Allan Fritz, Jim Shroyer, and Kraig Roozeboom - 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, using inputs from the U.S. Grain Marketing and Production Research Center, and industry.

EX = Exceptional; large kernels; high protein content; very good milling, mixing, and commercial bread-baking. LD = Less Desirable; one or more serious quality defects. -- = Inadequate information or conflicting data.  
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, Joe Martin - Hays; W.W. Bockus and Erick DeWolf - K-State Plant Pathology; Phil Sloderbeck - Entomology. Final ratings and descriptions of disease and insect pests are available in "Wheat Variety Disease and Insect Ratings 2007."

<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 2007.**

Region	Soil	N	P	O	K	Plant-harvest	Conditions
Location	crop		<sub>2</sub>	<sub>5</sub>	<sub>2</sub>	seed rate	
<b>North East</b>							
Bunck Seed Farms	Grundy silty clay loam	75	--	--	Fall	10/4/2006-7/4/2007	Freeze damage significantly reduced yields. Most primary tillers were killed by the freeze.
Everest (EV)	Corn, 2006	--	--	--	Spring	90 lb/a	
Ashland Agronomy Farm	Reading silt loam	60	--	--	Fall	Abandoned	Extensive freeze damage killed most primary tillers.
Manhattan (MA)	Corn, 2006	20	--	--	Spring	75 lb/a	
<b>South East</b>							
EC KS Experiment Field	Woodson silt loam	12	30	21	Fall	10/6/2006-7/9/2007	Wheat came back after severe freeze damage. Frequent rains in spring and summer delayed harvest.
Ottawa (OT)	Soybean, 2006	92	--	--	Spring	1200000 seeds/a	
SE Agric Res Ctr	Parsons silt loam	80	50	80	Fall	10/30/2006-6/22/2007	Later planting lessened the impact of the hard April freeze. Very wet in spring and summer.
Columbus (CL)	Soybean, 2006	--	--	--	Spring	75 lb/a	
SE Agric Res Ctr	Parsons silt loam	60	50	50	Fall	Abandoned	Freeze damage, extensive lodging, and frequent rains prevented harvest.
Parsons (PA)	Corn, 2006	30	--	--	Spring	75 lb/a	
<b>Soft Wheat</b>							
SE Agric Res Ctr	Parsons silt loam	80	50	80	Fall	10/30/2006-6/22/2007	Later planting lessened the impact of the hard April freeze. Very wet in spring and summer.
Columbus (CL)	Soybean, 2006	--	--	--	Spring	75 lb/a	
SE Agric Res Ctr	Parsons silt loam	60	50	50	Fall	Abandoned	Freeze damage, extensive lodging, and frequent rains prevented harvest.
Parsons (PA)	Corn, 2006	30	--	--	Spring	75 lb/a	
<b>North Central</b>							
NC KS Experiment Field	Crete silt loam	110	30	--	Fall	10/4/2006-7/3/2007	Good stands in the fall. Easter freeze reduced stand and yield. Leaf rust was heavy.
Belleville (BE)	Fallow, 2006	--	--	--	Spring	90 lb/a	
Farmer's Field	Silt loam	100	30	--	Fall	10/3/2006-6/26/2007	Good stands in the fall. Easter freeze and leaf rust did significant damage.
Beloit (BL)	Wheat, 2006	--	--	--	Spring	80 lb/a	
<b>South Central</b>							
Harvey Co Expt Field	Ladysmith silty clay loam	90	--	--	Fall	10/9/2006-6/25/2007	Severe freeze caused stand and yield reductions. Spindle streak and soilborne mosaic were present.
Hesston (HE)	Soybean, 2006	--	--	--	Spring	60 lb/a	
SC KS Experiment Field	Ost silt loam	75	--	--	Fall	Abandoned	Freeze damage, extensive lodging, and frequent rains prevented harvest.
Hutchinson (HU)	Soybean, 2006	50	--	--	Spring	60 lb/a	
Max Kolarik Farm	Sandy loam	50	--	--	Fall	10/18/2006-6/25/2007	Good stands with adequate moisture in the fall. April freeze significantly reduced yields.
Caldwell (CA)	Wheat, 2006	--	--	--	Spring	60 lb/a	
<b>North West Dryland</b>							
Agric Res Ctr - Hays	Harney clay loam	60	--	--	Fall	Abandoned	Secondary tillers that developed after the April freeze were badly damaged by 5/29 hailstorm.
Hays (HA)	Wheat, 2005	--	--	--	Spring	50 lb/a	
NW Res-Ext Ctr	Keith silt loam	70	--	--	Fall	9/19/2006-6/24/2007	Very good growing conditions. Stripe and leaf rust were present later, but had little effect on yield.
Colby (CO)	Fallow, 2006	--	--	--	Spring	60 lb/a	
SW Res-Ext Ctr	Richfield silt loam	5	25	--	Fall	10/23/2006-7/5/2007	Dry conditions for most of the season. Some leaf and stripe rust was reported.
Tribune (TR)	Wheat, 2005	80	--	--	Spring	55 lb/a	
<b>South West Dryland</b>							
Farmer's Field	Harney clay loam	--	--	--	Fall	10/2/2006-6/26/2007	Too much moisture in the spring affected growth; moderate freeze damage.
Larned (LA)	Sorghum, 2006	30	--	--	Spring	50 lb/a	
Farmer's Field	Harney clay loam	50	--	--	Fall	Abandoned	Freeze damage and lodging prevented harvest.
Dodge City (DC)	Sorghum, 2006	--	--	--	Spring	45 lb/a	
SW Res-Ext Ctr	Keith silt loam	50	--	--	Fall	10/3/2006-6/27/2007	Good moisture in fall and winter. Wet spring. Hard freeze in April did not cause much damage.
Garden City (GC)	Wheat, 2005	--	--	--	Spring	65 lb/a	
<b>Irrigated</b>							
NW Res-Ext Ctr	Keith silt loam	85	--	--	Fall	9/29/2006-6/28/2007	Very good growing conditions. Stripe and leaf rust were present later, had little effect on yield.
Colby (CO)	Fallow, 2006	--	--	--	Spring	90 lb/a	
Farmer's Field		60	--	--	Fall	10/4/2006-6/26/2007	Good fall conditions. April freeze had some effect on yields.
Dodge City (DC)	Wheat, 2005	120	--	--	Spring	80 lb/a	
SW Res-Ext Ctr	Keith silt loam	50	--	--	Fall	10/4/2006-6/27/2007	Good moisture in fall and winter. Wet spring. Hard freeze in April did moderate damage.
Garden City (GC)	Corn, 2006	--	--	--	Spring	75 lb/a	

**Table 4. 2007 NORTHEAST Kansas Winter Wheat Performance Tests.**

Brand / Name	EV <sup>1</sup> MA <sup>2</sup> Av.			EV MA Av.			-EV- 2yr 3yr		-MA- 2yr 3yr		EV MA Av.			EV MA Av.			EV CA Av.		
	yield (bu/a)			% of test average			multi-year avg (bu/a)				tw (lb/bu)			head (+/- Jagger)			height (in)		
<b>AgriPro</b>																			
AP Jagalene	24	--	--	71	--	--	51	53	--	--	--	--	--	--	--	--	--	--	--
Art	33	--	--	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hawken	33	--	--	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Neosho	17	--	--	49	--	--	46	49	--	--	--	--	--	--	--	--	--	--	--
Postrock	29	--	--	87	--	--	54	54	--	--	--	--	--	--	--	--	--	--	--
<b>AGSECO</b>																			
Onaga	40	--	--	118	--	--	57	54	--	--	--	--	--	--	--	--	--	--	--
<b>AMIGO</b>																			
Sturdy-2K	33	--	--	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Kansas</b>																			
(W) Danby	29	--	--	87	--	--	47	49	--	--	--	--	--	--	--	--	--	--	--
(W) RonL	33	--	--	99	--	--	58	--	--	--	--	--	--	--	--	--	--	--	--
2137	45	--	--	134	--	--	62	62	--	--	--	--	--	--	--	--	--	--	--
2145	27	--	--	80	--	--	47	50	--	--	--	--	--	--	--	--	--	--	--
Fuller	28	--	--	83	--	--	55	--	--	--	--	--	--	--	--	--	--	--	--
Jagger	28	--	--	84	--	--	52	54	--	--	--	--	--	--	--	--	--	--	--
Karl 92	36	--	--	106	--	--	56	54	--	--	--	--	--	--	--	--	--	--	--
Overley	28	--	--	83	--	--	49	51	--	--	--	--	--	--	--	--	--	--	--
<b>Nebraska</b>																			
Hallam	43	--	--	130	--	--	52	54	--	--	--	--	--	--	--	--	--	--	--
Overland	47	--	--	141	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wahoo	45	--	--	136	--	--	56	60	--	--	--	--	--	--	--	--	--	--	--
Wesley	38	--	--	114	--	--	59	62	--	--	--	--	--	--	--	--	--	--	--
<b>Oklahoma</b>																			
2174	36	--	--	106	--	--	51	53	--	--	--	--	--	--	--	--	--	--	--
Deliver	29	--	--	85	--	--	51	--	--	--	--	--	--	--	--	--	--	--	--
Duster	32	--	--	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endurance	44	--	--	132	--	--	62	--	--	--	--	--	--	--	--	--	--	--	--
OK Bullet	27	--	--	80	--	--	54	--	--	--	--	--	--	--	--	--	--	--	--
Okfield	33	--	--	98	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--
<b>Polansky</b>																			
Dominator	27	--	--	82	--	--	56	--	--	--	--	--	--	--	--	--	--	--	--
<b>WestBred</b>																			
Spartan	26	--	--	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tarkio	38	--	--	114	--	--	59	63	--	--	--	--	--	--	--	--	--	--	--
Winterhawk	35	--	--	104	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>WestBred/AGSE</b>																			
Santa Fe	43	--	--	130	--	--	61	60	--	--	--	--	--	--	--	--	--	--	--
Smoky Hill	32	--	--	96	--	--	58	--	--	--	--	--	--	--	--	--	--	--	--
Averages	34	--	--	34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CV (%)	10	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LSD (0.05)*	5	--	--	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

<sup>1</sup> EV = Everest, KS, Bunck Seed Farm, Brown County.

<sup>2</sup> MA = Manhattan, KS, Ashland Bottoms Research Farm, Riley County. Abandoned.

(W) = Hard white wheat

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.



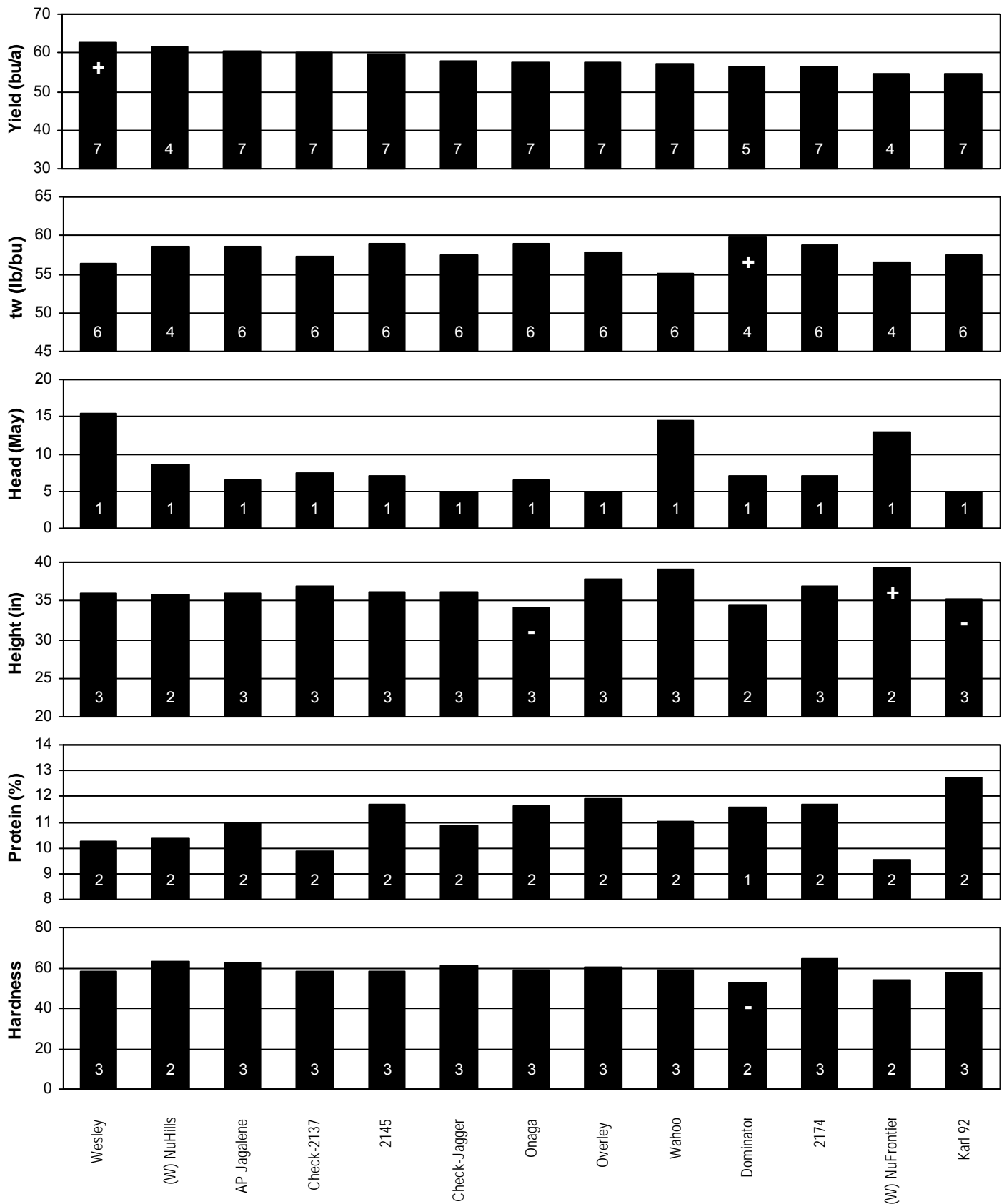


Figure 3. Performance summary of wheat varieties in NORTHEAST Kansas, 2003-2007.

Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically greater or less than mean of checks.

**Table 5. 2007 SOUTHEAST Kansas Winter Wheat Performance Tests.**

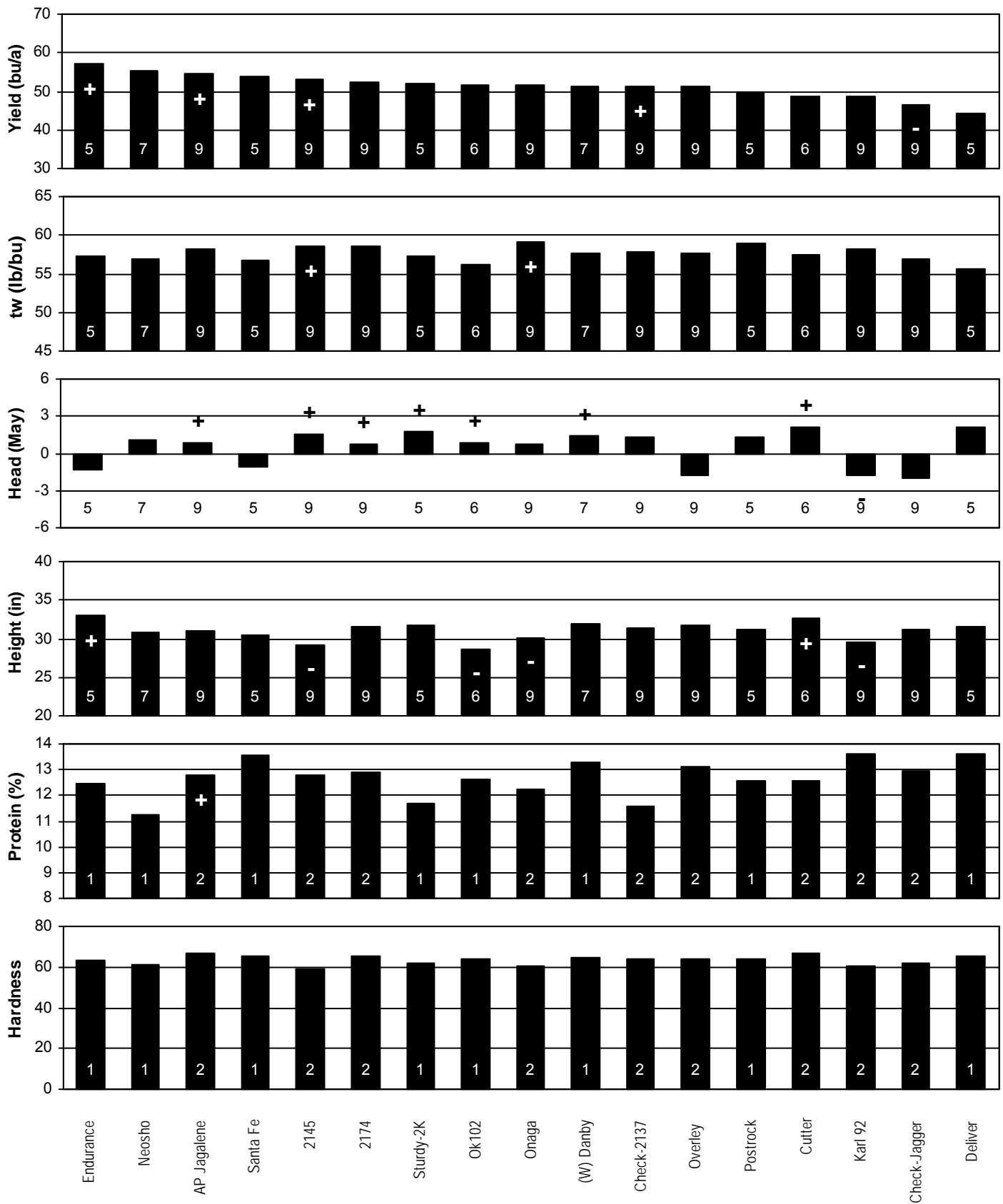
Brand / Name	<sup>1</sup> <sup>2</sup> <sup>3</sup>								-OT-		-CL-		-PA-													
	OT	CL	PA	Av.	OT	CL	PA	Av.	2yr	3yr	2yr	3yr	2yr	3yr	OT	CL	PA	Av.	OT	CL	PA	Av.	OT	CL	PA	Av.
<b>AgriPro</b>	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)					
AP Jagalene	22	11	--	16	94	79	--	87	42	46	21	30	--	--	52	51	--	51	-2	0	--	-1	23	--	--	--
Neosho	15	4	--	10	63	50	--	57	32	43	17	29	--	--	50	49	--	50	2	2	--	2	22	--	--	--
Postrock	23	13	--	18	100	87	--	94	40	42	22	27	--	--	57	51	--	54	-4	4	--	0	25	--	--	--
<b>AGSECO</b>																										
Onaga	23	14	--	18	98	92	--	95	40	43	23	30	--	--	58	52	--	55	0	1	--	1	22	--	--	--
<b>AMIGO</b>																										
Sturdy-2K	21	8	--	15	89	69	--	79	42	46	26	34	--	--	54	47	--	51	-3	4	--	1	22	--	--	--
<b>Kansas</b>																										
(W) Danby	27	18	--	22	114	109	--	112	38	44	27	32	--	--	51	53	--	52	-5	2	--	-2	24	--	--	--
(W) RonL	35	18	--	27	151	111	--	131	42	--	18	--	--	--	49	51	--	50	-4	1	--	-2	24	--	--	--
2137	29	25	--	27	125	144	--	135	47	48	32	35	--	--	55	52	--	54	-9	0	--	-5	25	--	--	--
2145	18	21	--	20	78	124	--	101	41	47	27	33	--	--	54	52	--	53	2	0	--	1	22	--	--	--
Fuller	17	16	--	16	74	100	--	87	37	--	24	--	--	--	53	50	--	52	2	1	--	2	22	--	--	--
Jagger	15	18	--	16	64	109	--	86	35	40	25	33	--	--	52	51	--	52	0	0	--	0	22	--	--	--
Karl 92	24	18	--	21	101	113	--	107	36	42	26	31	--	--	55	53	--	54	-4	0	--	-2	21	--	--	--
Overley	16	18	--	17	66	111	--	88	36	41	30	36	--	--	53	52	--	53	1	0	--	1	20	--	--	--
<b>Oklahoma</b>																										
2174	28	19	--	24	122	116	--	119	41	43	24	28	--	--	55	51	--	53	-5	1	--	-2	24	--	--	--
Deliver	27	14	--	20	115	91	--	103	38	39	25	28	--	--	54	51	--	53	-3	4	--	1	23	--	--	--
Duster	23	15	--	19	97	98	--	98	--	--	--	--	--	--	53	52	--	52	-1	2	--	1	21	--	--	--
Endurance	37	20	--	28	159	119	--	139	52	55	30	37	--	--	54	49	--	52	-14	1	--	-7	27	--	--	--
OK Bullet	22	12	--	17	92	86	--	89	41	--	22	--	--	--	55	51	--	53	-2	0	--	-1	25	--	--	--
Okfield	27	20	--	23	116	120	--	118	45	--	26	--	--	--	54	50	--	52	-10	1	--	-5	28	--	--	--
<b>Polansky</b>																										
Dominator	22	13	--	18	96	88	--	92	36	--	25	--	--	--	55	51	--	53	2	1	--	2	22	--	--	--
<b>WestBred</b>																										
Spartan	21	11	--	16	88	79	--	84	--	--	--	--	--	--	46	47	--	47	3	0	--	2	21	--	--	--
Winterhawk	27	12	--	20	117	85	--	101	--	--	--	--	--	--	56	49	--	53	-2	-1	--	-2	23	--	--	--
<b>WestBred/AGSE</b>																										
Santa Fe	30	20	--	25	126	118	--	122	44	50	29	36	--	--	54	53	--	53	-4	2	--	-1	23	--	--	--
Shocker	14	16	--	15	58	101	--	79	35	--	26	--	--	--	53	52	--	53	0	1	--	1	22	--	--	--
Averages	23	15	--	19	23	22	--	23	--	--	--	--	--	--	53	51	--	52	--	1	--	--	23	--	--	--
CV (%)	8	13	--	11	8	27	--	18	--	--	--	--	--	--	8	3	--	6	--	--	--	--	5	--	--	--
LSD (0.05)*	3	5	--	4	12	44	--	28	--	--	--	--	--	--	6	3	--	4	--	--	--	--	2	--	--	--

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

<sup>2</sup> CL = Columbus, KS, Cherokee County.

<sup>3</sup> PA = Parsons, KS, Southeast Agricultural Research Center, Labette County. Abandoned.

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.



**Figure 4. Performance summary of wheat varieties in SOUTHEAST Kansas, 2004-2007.**

Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically greater or less than mean of checks.

**Table 6. 2007 SOUTHEAST Kansas SOFT Winter Wheat Performance Tests.**

Brand / Name	<sup>1</sup> CL <sup>2</sup> PA Av.			CL PA Av.			-CL- 2yr 3yr		-PA- 2yr 3yr		CL PA Av.			CL PA Av.			CL PA Av.			
	yield (bu/a)	% of test average		multi-year avg (bu/a)			tw (lb/bu)			head (+/- Jagger)			height (in)							
<b>AgriPro</b>																				
AP Jagalene	8	--	--	37	--	--	--	--	--	--	--	50	--	--	1	--	--	--	--	--
<b>AgriPro COKER</b>																				
(S) Coker 9553	33	--	--	147	--	--	39	--	--	--	51	--	--	-1	--	--	--	--	--	
<b>Georgia</b>																				
(S)951231-4E26	14	--	--	65	--	--	--	--	--	--	51	--	--	0	--	--	--	--	--	
(S)961231-4E25	15	--	--	65	--	--	--	--	--	--	51	--	--	-2	--	--	--	--	--	
(S)96693-4E16	27	--	--	120	--	--	--	--	--	--	50	--	--	-2	--	--	--	--	--	
<b>Kansas</b>																				
2137	26	--	--	115	--	--	29	32	--	--	50	--	--	1	--	--	--	--	--	
Jagger	13	--	--	59	--	--	26	35	--	--	50	--	--	0	--	--	--	--	--	
<b>MFA</b>																				
(S) 2318	18	--	--	79	--	--	--	--	--	--	51	--	--	1	--	--	--	--	--	
(S) 2320	19	--	--	83	--	--	31	--	--	--	50	--	--	1	--	--	--	--	--	
<b>Pioneer</b>																				
(S) 25R56	35	--	--	157	--	--	--	--	--	--	50	--	--	2	--	--	--	--	--	
(S) 25R63	39	--	--	174	--	--	43	--	--	--	52	--	--	0	--	--	--	--	--	
Averages	22	--	--	22	--	--	--	--	--	--	51	--	--	0	--	--	--	--	--	
CV (%)	11	--	--	11	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	
LSD (0.05)*	4	--	--	19	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	

<sup>1</sup>CL = Columbus, KS, Cherokee County.

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

(S) = Soft red wheat

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.

**Table 7. 2007 NORTH CENTRAL Kansas Winter Wheat Performance Tests.**

Brand / Name	BE <sup>1</sup> CN <sup>2</sup> BL <sup>3</sup> Av.				BE CN BL Av.				-BE- -CN- -BL- 2yr 3yr 2yr 3yr 2yr 3yr				BE CN BL Av.				BE CN BL Av.							
	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)			
<b>AgriPro</b>																								
AP Jagalene	57	--	42	49	87	--	101	94	85	90	--	--	--	--	57	--	51	54	--	--	31	--	29	30
Art	78	--	46	62	120	--	110	115	--	--	--	--	--	--	51	--	54	52	--	--	31	--	27	29
Hawken	76	--	46	61	117	--	112	115	--	--	--	--	--	--	58	--	56	57	--	--	30	--	27	28
Neosho	50	--	27	38	77	--	65	71	76	75	--	--	--	--	57	--	53	55	--	--	31	--	28	30
Postrock	68	--	47	57	105	--	113	109	87	91	--	--	--	--	52	--	54	53	--	--	32	--	29	31
<b>AGSECO</b>																								
Infinity CL	67	--	40	54	104	--	98	101	82	87	--	--	--	--	58	--	50	54	--	--	33	--	31	32
Protection CL	61	--	42	52	94	--	102	98	80	80	--	--	--	--	55	--	51	53	--	--	31	--	30	31
<b>AMIGO</b>																								
Sturdy-2K	65	--	42	54	101	--	102	101	78	79	--	--	--	--	56	--	52	54	--	--	29	--	27	28
<b>Kansas</b>																								
(W) Danby	63	--	34	48	97	--	81	89	89	91	--	--	--	--	58	--	54	56	--	--	34	--	29	32
(W) RonL	65	--	40	52	99	--	96	98	75	--	--	--	--	--	57	--	53	55	--	--	31	--	24	27
(W) Trego	59	--	39	49	90	--	93	92	80	79	--	--	--	--	57	--	50	54	--	--	29	--	25	27
2137	80	--	51	66	123	--	124	123	96	87	--	--	--	--	58	--	53	56	--	--	29	--	27	28
2145	58	--	36	47	89	--	87	88	77	80	--	--	--	--	56	--	53	55	--	--	27	--	24	26
Fuller	69	--	44	56	107	--	105	106	92	--	--	--	--	--	56	--	51	53	--	--	30	--	28	29
Ike	62	--	44	53	96	--	107	102	76	74	--	--	--	--	57	--	53	55	--	--	33	--	31	32
Jagger	50	--	38	44	76	--	92	84	78	81	--	--	--	--	55	--	52	53	--	--	28	--	26	27
Karl 92	63	--	42	53	98	--	102	100	79	76	--	--	--	--	57	--	52	54	--	--	25	--	25	25
Overley	68	--	45	56	104	--	109	107	91	92	--	--	--	--	57	--	52	54	--	--	30	--	29	30
Stanton	--	--	36		--	--	88		--	--	--	--	--	--	--	--	56		--	--	--	--	32	
<b>Nebraska</b>																								
Hallam	68	--	46	57	105	--	110	108	84	83	--	--	--	--	56	--	54	55	--	--	31	--	30	31
Overland	76	--	41	59	117	--	100	108	--	--	--	--	--	--	58	--	50	54	--	--	35	--	30	33
Wahoo	65	--	35	50	100	--	85	93	80	82	--	--	--	--	50	--	52	51	--	--	35	--	31	33
Wesley	69	--	47	58	106	--	114	110	84	86	--	--	--	--	57	--	51	54	--	--	32	--	29	30
<b>Oklahoma</b>																								
(W) Guymon	58	--	34	46	90	--	81	86	78	--	--	--	--	--	58	--	55	56	--	--	31	--	27	29
2174	59	--	43	51	91	--	104	98	77	79	--	--	--	--	58	--	56	57	--	--	29	--	27	28
Deliver	65	--	40	53	100	--	97	99	89	--	--	--	--	--	58	--	51	54	--	--	31	--	28	30
Duster	60	--	37	49	93	--	89	91	--	--	--	--	--	--	57	--	50	54	--	--	29	--	25	27
Endurance	69	--	41	55	106	--	98	102	84	--	--	--	--	--	58	--	50	54	--	--	29	--	29	29
OK Bullet	64	--	42	53	98	--	102	100	82	--	--	--	--	--	58	--	50	54	--	--	33	--	30	31
Okfield	66	--	40	53	101	--	96	99	83	--	--	--	--	--	56	--	51	54	--	--	34	--	32	33
<b>Polansky</b>																								
Dominator	55	--	38	46	85	--	92	88	77	75	--	--	--	--	58	--	53	56	--	--	26	--	27	27
<b>Seed-link</b>																								
ACS 51017	71	--	46	58	110	--	110	110	--	--	--	--	--	--	57	--	55	56	--	--	32	--	29	30
ACS 52012	51	--	43	47	79	--	103	91	--	--	--	--	--	--	55	--	52	53	--	--	30	--	32	31
ACS 54048	44	--	42	43	68	--	102	85	--	--	--	--	--	--	54	--	51	52	--	--	27	--	27	27
ACS 55007	67	--	43	55	103	--	103	103	--	--	--	--	--	--	57	--	52	55	--	--	33	--	31	32
ACS52009	59	--	44	52	91	--	107	99	--	--	--	--	--	--	56	--	52	54	--	--	32	--	32	32
ACS97003	73	--	43	58	113	--	105	109	--	--	--	--	--	--	58	--	51	54	--	--	31	--	30	30
<b>Watley</b>																								
TAM 112	58	--	37	47	89	--	89	89	--	--	--	--	--	--	51	--	50	50	--	--	28	--	26	27
<b>WestBred</b>																								
Spartan	64	--	35	49	98	--	85	92	--	--	--	--	--	--	56	--	50	53	--	--	27	--	26	26
Tarkio	76	--	45	60	117	--	108	112	89	91	--	--	--	--	51	--	51	51	--	--	30	--	28	29
Winterhawk	65	--	44	54	100	--	106	103	--	--	--	--	--	--	58	--	52	55	--	--	30	--	26	28

**Table 7. 2007 NORTH CENTRAL Kansas Winter Wheat Performance Tests.**

Brand / Name	BE <sup>1</sup> CN <sup>2</sup> BL <sup>3</sup> Av.				BE CN BL Av.				-BE- -CN- -BL- 2yr 3yr 2yr 3yr 2yr 3yr				BE CN BL Av.				BE CN BL Av.											
	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)							
<b>WestBred/AGSE</b>																												
Santa Fe	91	--	48	69	140	--	115	127	96	94	--	--	--	--	56	--	55	55	--				29	--	27	28		
Smoky Hill	76	--	46	61	117	--	112	114	91	--	--	--	--	--	57	--	54	56	--				32	--	29	31		
Averages	65	--	41	53	65	--	41	53	--	--	--	--	--	--	56	--	52	54	--				30	--	28	29		
CV (%)	4	--	7	6	4	--	7	6	--	--	--	--	--	--	1	--	1	1	--				5	--	7	6		
LSD (0.05)*	4	--	5	5	7	--	11	9	--	--	--	--	--	--	1	--	1	1	--				2	--	3	3		

<sup>1</sup> BE = Belleville, KS, North Central Experiment Field, Republic County. (W) = Hard white wheat

<sup>2</sup> CN = Concordia, KS, Cloud County. Abandoned.

<sup>3</sup> BL = Beloit, KS, Mitchell County.

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.

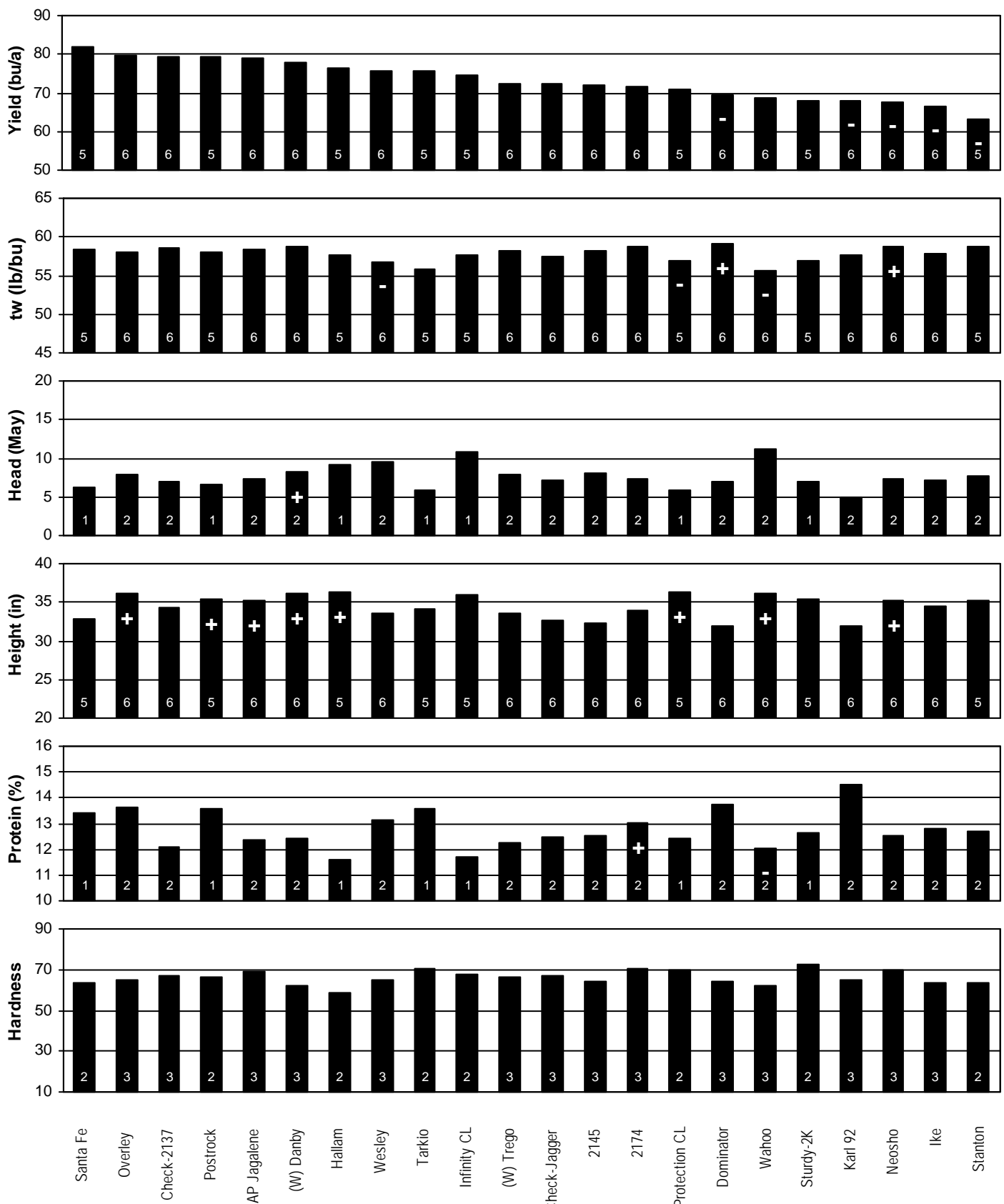


Figure 5. Performance summary of wheat varieties in NORTH CENTRAL Kansas, 2004-2007.

Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically greater or less than mean of checks.

**Table 8. 2007 SOUTH CENTRAL Kansas Winter Wheat Performance Tests.**

Brand / Name	<sup>1</sup> HE <sup>2</sup> CS <sup>3</sup> HU Av.				HE CS HU Av.				-HE- -CS- -HU- 2yr 3yr 2yr 3yr 2yr 3yr				HE CS HU Av.				HE CS HU Av.											
	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)							
<b>AgriPro</b>																												
AP Jagalene	11	10	--	11	53	48	--	50	31	35	--	--	--	--	42	--	--	--	-1	--	--	--	26	--	--	--		
Art	26	31	--	29	128	145	--	136	--	--	--	--	--	--	48	--	--	--	0	--	--	--	28	--	--	--		
Neosho	11	9	--	10	55	41	--	48	32	37	--	--	--	--	44	--	--	--	3	--	--	--	30	--	--	--		
Postrock	21	26	--	24	106	119	--	112	36	--	--	--	--	--	48	--	--	--	2	--	--	--	29	--	--	--		
<b>AGSECO</b>																												
Protection CL	14	13	--	14	71	60	--	65	35	37	--	--	--	--	43	--	--	--	1	--	--	--	31	--	--	--		
<b>AMIGO</b>																												
Sturdy-2K	24	23	--	24	119	106	--	113	38	44	--	--	--	--	46	--	--	--	1	--	--	--	30	--	--	--		
<b>Kansas</b>																												
(W) Danby	14	19	--	17	71	88	--	80	34	29	--	--	--	--	46	--	--	--	4	--	--	--	28	--	--	--		
(W) RonL	23	18	--	21	115	85	--	100	37	--	--	--	--	--	45	--	--	--	1	--	--	--	28	--	--	--		
2137	29	27	--	28	145	125	--	135	41	43	--	--	--	--	48	--	--	--	1	--	--	--	30	--	--	--		
2145	15	16	--	15	76	72	--	74	33	39	--	--	--	--	46	--	--	--	3	--	--	--	27	--	--	--		
Fuller	21	26	--	24	104	123	--	113	39	--	--	--	--	--	50	--	--	--	4	--	--	--	27	--	--	--		
Jagger	13	12	--	13	63	58	--	60	33	37	--	--	--	--	47	--	--	--	0	--	--	--	27	--	--	--		
Karl 92	22	28	--	25	107	132	--	119	32	38	--	--	--	--	53	--	--	--	3	--	--	--	26	--	--	--		
Overley	20	21	--	20	96	99	--	98	36	42	--	--	--	--	49	--	--	--	4	--	--	--	27	--	--	--		
<b>Oklahoma</b>																												
(W) Guymon	19	16	--	18	96	74	--	85	36	--	--	--	--	--	50	--	--	--	2	--	--	--	29	--	--	--		
2174	21	27	--	24	104	123	--	114	33	38	--	--	--	--	48	--	--	--	0	--	--	--	28	--	--	--		
Deliver	30	29	--	29	147	134	--	140	38	40	--	--	--	--	47	--	--	--	2	--	--	--	28	--	--	--		
Duster	16	22	--	19	77	102	--	89	--	--	--	--	--	--	45	--	--	--	4	--	--	--	26	--	--	--		
Endurance	25	31	--	28	125	146	--	135	41	42	--	--	--	--	49	--	--	--	-1	--	--	--	31	--	--	--		
OK Bullet	17	21	--	19	83	97	--	90	37	--	--	--	--	--	49	--	--	--	3	--	--	--	105	--	--	--		
Okfield	14	21	--	17	68	97	--	82	37	--	--	--	--	--	43	--	--	--	4	--	--	--	31	--	--	--		
<b>Polansky</b>																												
Dominator	18	16	--	17	88	74	--	81	33	40	--	--	--	--	50	--	--	--	3	--	--	--	26	--	--	--		
<b>WestBred</b>																												
Spartan	21	20	--	21	105	93	--	99	--	--	--	--	--	--	43	--	--	--	3	--	--	--	25	--	--	--		
Winterhawk	24	26	--	25	119	121	--	120	--	--	--	--	--	--	51	--	--	--	2	--	--	--	30	--	--	--		
<b>WestBred/AGSE</b>																												
Santa Fe	34	33	--	33	169	151	--	160	43	46	--	--	--	--	52	--	--	--	-2	--	--	--	30	--	--	--		
Shocker	23	19	--	21	111	88	--	100	38	--	--	--	--	--	48	--	--	--	2	--	--	--	29	--	--	--		
Averages	20	22	--	21	20	22	--	21	--	--	--	--	--	--	47	--	--	--	2	--	--	--	31	--	--	--		
CV (%)	8	11	--	10	8	11	--	10	--	--	--	--	--	--	3	--	--	--	--	--	--	--	94	--	--	--		
LSD (0.05)*	2	3	--	3	12	16	--	14	--	--	--	--	--	--	2	--	--	--	--	--	--	--	41	--	--	--		

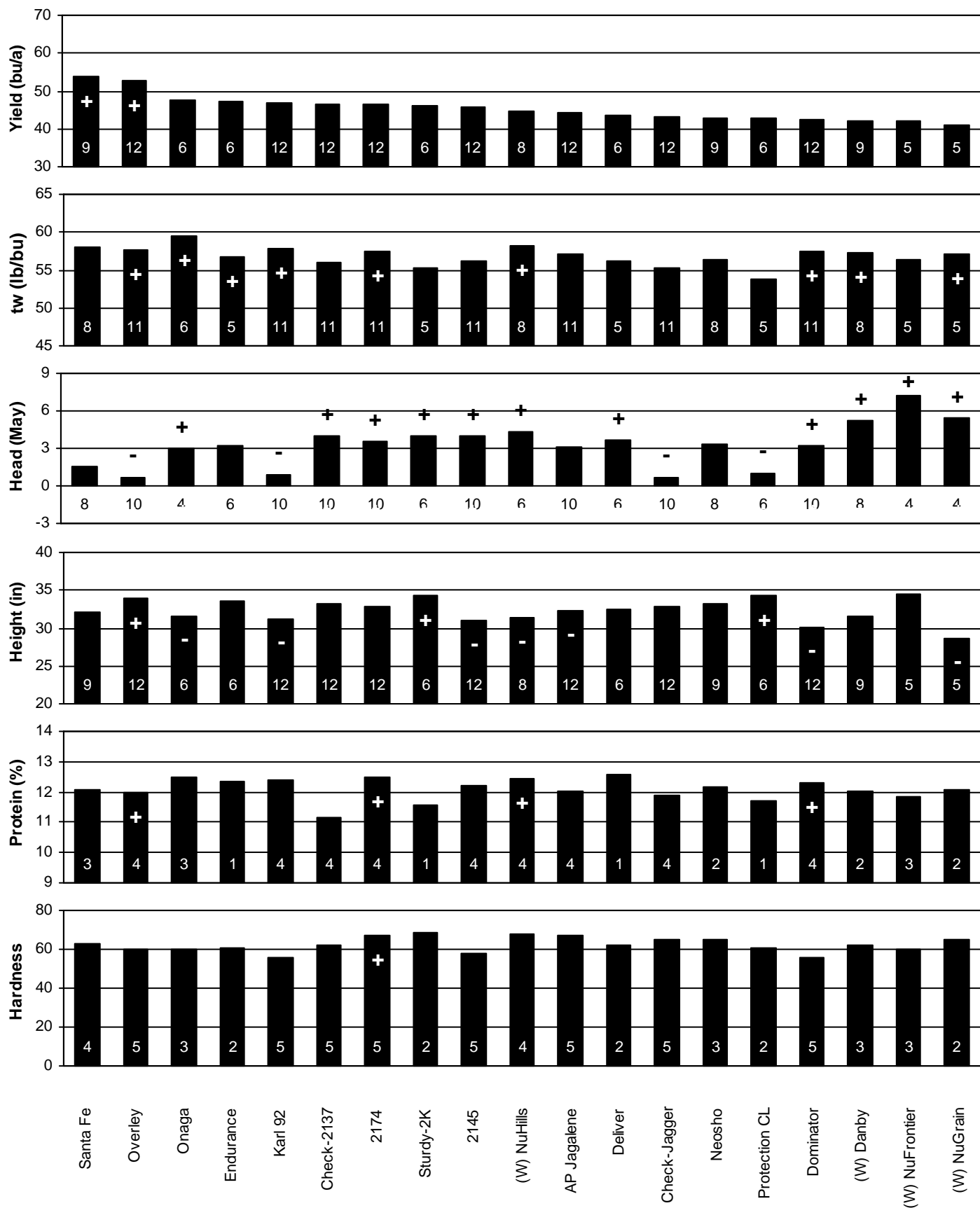
<sup>1</sup> HE = Hesston, KS, Harvey County Experiment Field, Harvey County. Freeze and disease had more impact than variety performance.

<sup>2</sup> CS = Conway Springs, KS, Sumner County.

<sup>3</sup> HU = Hutchinson, KS, South Central Experiment Field, Reno County. Abandoned.

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.





**Figure 6. Performance summary of wheat varieties in SOUTH CENTRAL Kansas, 2004-2007.**

Values inside bars indicate the number of comparisons with checks. Symbols (+, -) indicate if statistically greater or less than mean of checks.

**Table 9. 2007 NORTHWEST DRYLAND Kansas Winter Wheat Performance Tests.**

Brand / Name	1 2 3				-HA-				-CO-				-TR-													
	HA	CO	TR	Av.	HA	CO	TR	Av.	2yr	3yr	2yr	3yr	2yr	3yr	HA	CO	TR	Av.	HA	CO	TR	Av.				
	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)					
<b>AgriPro</b>																										
AP Jagalene	--	74	37	55	--	98	76	87	--	--	--	--	39	51	--	60	59	60	--	2	--	--	--	34	34	34
(W) NuDakota	--	80	46	63	--	110	95	100	--	--	--	--	44	--	--	57	57	57	--	4	--	--	--	32	31	32
(W) NuFrontier	--	73	38	56	--	96	78	87	--	--	--	--	34	45	--	59	59	59	--	4	--	--	--	36	37	37
(W) NuGrain	--	74	43	58	--	97	88	93	--	--	--	--	41	48	--	59	60	59	--	3	--	--	--	30	31	31
(W) NuHills	--	68	39	54	--	90	80	85	--	--	--	--	39	48	--	61	60	60	--	2	--	--	--	32	33	32
Art	--	83	56	70	--	110	116	113	--	--	--	--	--	--	--	60	61	61	--	1	--	--	--	32	33	33
Hawken	--	75	50	63	--	100	103	101	--	--	--	--	--	--	--	58	59	59	--	2	--	--	--	31	34	32
Postrock	--	81	55	68	--	110	112	110	--	--	--	--	47	--	--	60	62	61	--	2	--	--	--	32	34	33
TAM 111	--	80	59	70	--	110	122	114	--	--	--	--	49	58	--	59	60	60	--	2	--	--	--	34	37	36
Thunderbolt	--	76	54	65	--	100	111	106	--	--	--	--	47	54	--	62	62	62	--	3	--	--	--	35	38	36
<b>AGSECO</b>																										
Infinity CL	--	72	57	65	--	95	118	107	--	--	--	--	50	56	--	57	60	59	--	5	--	--	--	36	40	38
Protection CL	--	78	45	61	--	100	92	97	--	--	--	--	43	--	--	56	57	57	--	0	--	--	--	35	36	36
TAM 110	--	72	41	57	--	95	85	90	--	--	--	--	33	37	--	57	58	58	--	0	--	--	--	34	32	33
<b>Colorado</b>																										
(W) Avalanche	--	67	41	54	--	89	84	86	--	--	--	--	39	44	--	59	61	60	--	2	--	--	--	34	34	34
Above	--	76	45	60	--	100	93	97	--	--	--	--	38	44	--	57	58	58	--	0	--	--	--	33	33	33
Bond CL	--	76	43	60	--	100	89	95	--	--	--	--	44	54	--	56	59	57	--	1	--	--	--	36	38	37
Hatcher	--	85	58	71	--	110	118	115	--	--	--	--	49	55	--	58	60	59	--	1	--	--	--	33	34	33
Ripper	--	72	55	63	--	95	112	104	--	--	--	--	--	--	--	56	59	58	--	2	--	--	--	33	34	33
<b>Drussel</b>																										
T81	--	73	45	59	--	97	92	94	--	--	--	--	42	53	--	58	60	59	--	1	--	--	--	33	34	34
<b>Kansas</b>																										
(W) Danby	--	74	49	62	--	98	101	99	--	--	--	--	47	54	--	59	62	60	--	2	--	--	--	34	35	35
(W) RonL	--	65	55	60	--	86	113	99	--	--	--	--	48	--	--	58	61	60	--	2	--	--	--	31	32	31
(W) Trego	--	73	56	64	--	97	115	106	--	--	--	--	49	54	--	60	60	60	--	2	--	--	--	32	34	33
2137	--	74	56	65	--	98	115	107	--	--	--	--	49	50	--	58	61	60	--	2	--	--	--	33	34	34
2145	--	75	49	62	--	99	101	100	--	--	--	--	41	48	--	59	59	59	--	3	--	--	--	30	33	32
Fuller	--	78	48	63	--	100	100	101	--	--	--	--	45	--	--	59	60	59	--	1	--	--	--	32	34	33
Ike	--	76	50	63	--	100	104	102	--	--	--	--	48	52	--	59	60	59	--	2	--	--	--	35	38	37
Jagger	--	80	42	61	--	110	86	96	--	--	--	--	42	51	--	58	59	58	--	0	--	--	--	33	33	33
Karl 92	--	79	52	66	--	110	106	106	--	--	--	--	40	47	--	62	61	61	--	0	--	--	--	32	31	31
Overlay	--	81	56	69	--	110	116	112	--	--	--	--	46	54	--	61	62	61	--	0	--	--	--	35	35	35
Stanton	--	76	51	63	--	100	105	102	--	--	--	--	39	47	--	57	60	59	--	2	--	--	--	34	35	35
<b>Nebraska</b>																										
Hallam	--	72	58	65	--	96	120	108	--	--	--	--	49	52	--	57	59	58	--	2	--	--	--	35	41	38
Overland	--	83	59	71	--	110	121	115	--	--	--	--	--	--	--	59	61	60	--	6	--	--	--	35	41	38
Wahoo	--	72	51	62	--	95	106	101	--	--	--	--	45	52	--	55	59	57	--	3	--	--	--	36	42	39
Wesley	--	71	48	60	--	95	100	97	--	--	--	--	39	46	--	58	59	58	--	5	--	--	--	32	33	33
<b>Oklahoma</b>																										
(W) Guymon	--	72	48	60	--	95	99	97	--	--	--	--	40	--	--	60	62	61	--	3	--	--	--	33	33	33
2174	--	74	44	59	--	98	90	94	--	--	--	--	40	43	--	60	61	60	--	2	--	--	--	33	33	33
Deliver	--	81	49	65	--	110	101	104	--	--	--	--	39	--	--	60	61	60	--	2	--	--	--	33	33	33
Duster	--	74	55	64	--	98	112	105	--	--	--	--	--	--	--	58	60	59	--	2	--	--	--	32	35	34
Endurance	--	80	53	67	--	110	110	108	--	--	--	--	48	--	--	59	59	59	--	1	--	--	--	33	34	33
OK Bullet	--	74	53	64	--	99	108	103	--	--	--	--	46	--	--	61	62	61	--	1	--	--	--	36	37	36
Okfield	--	73	43	58	--	96	89	93	--	--	--	--	41	--	--	56	58	57	--	2	--	--	--	36	37	36
<b>Seed-link</b>																										
ACS 51017	--	81	41	61	--	110	84	96	--	--	--	--	--	--	--	58	58	58	--	1	--	--	--	33	30	31
ACS 52012	--	75	38	57	--	100	77	89	--	--	--	--	--	--	--	54	53	54	--	4	--	--	--	31	32	31
ACS 54048	--	76	40	58	--	100	83	92	--	--	--	--	--	--	--	58	58	58	--	1	--	--	--	31	30	30
ACS 55007	--	63	33	48	--	83	67	75	--	--	--	--	--	--	--	58	59	58	--	3	--	--	--	36	37	36
ACS52009	--	75	43	59	--	100	89	94	--	--	--	--	--	--	--	59	58	59	--	5	--	--	--	37	40	39
ACS97003	--	74	47	60	--	97	96	97	--	--	--	--	--	--	--	58	59	58	--	2	--	--	--	34	36	35
<b>Watley</b>																										
TAM 112	--	81	63	72	--	110	129	118	--	--	--	--	55	--	--	60	62	61	--	1	--	--	--	33	35	34
<b>WestBred</b>																										
Aspen	--	81	56	69	--	110	116	112	--	--	--	--	--	--	--	60	60	60	--	0	--	--	--	31	29	30

**Table 9. 2007 NORTHWEST DRYLAND Kansas Winter Wheat Performance Tests.**

Brand / Name	<sup>1</sup> <sup>2</sup> <sup>3</sup>				-HA-				-CO-				-TR-													
	HA	CO	TR	Av.	HA	CO	TR	Av.	2yr	3yr	2yr	3yr	2yr	3yr	HA	CO	TR	Av.	HA	CO	TR	Av.				
<b>WestBred/AGSE</b>	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)					
Keota	--	77	45	61	--	100	92	97	--	--	--	--	41	50	--	61	59	60	--	2	--	--	--	35	37	36
Smoky Hill	--	79	43	61	--	110	88	96	--	--	--	--	46	--	--	57	59	58	--	5	--	--	--	34	33	33
Averages	--	76	49	62	--	76	49	62	--	--	--	--	--	--	--	--	60	--	2	--	--	--	--	--	35	
CV (%)	--	3	7	5	--	3	7	5	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--	3	4	4
LSD (0.05)*	--	3	5	4	--	4	9	7	--	--	--	--	--	--	--	2	1	2	--	--	--	--	--	1	2	2

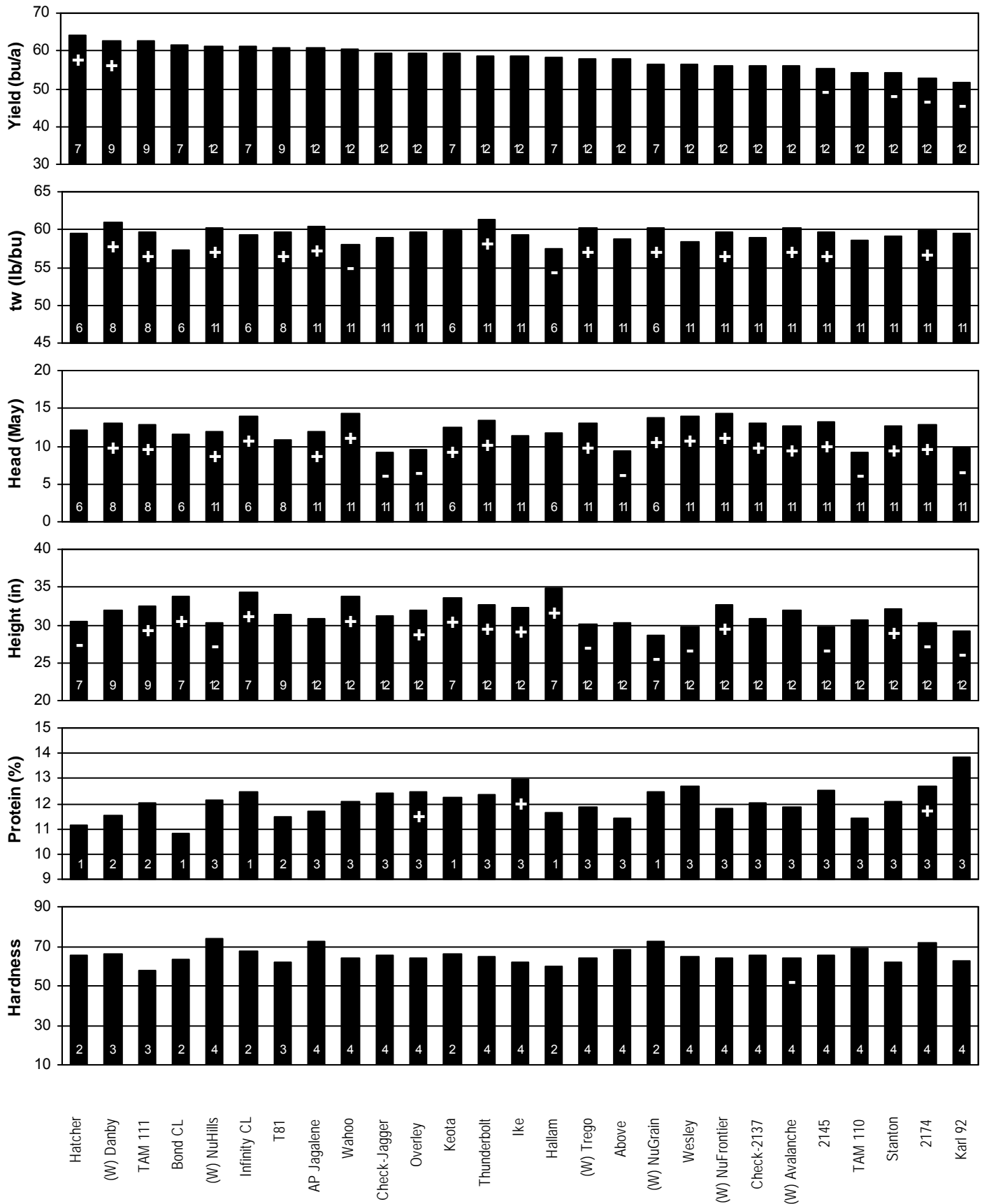
<sup>1</sup> HA = Hays, KS, K-State Research and Extension Center - Hays, Ellis County.

<sup>2</sup> CO = Colby, KS, Northwest Research-Extension Center, Thomas County.

<sup>3</sup> TR = Tribune, KS, Southwest Research-Extension Center, Greeley County.

(W) = Hard white wheat

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.



**Figure 7. Performance summary of wheat varieties in NORTHWEST Kansas, DRYLAND, 2004-2007.**

Values inside bars indicate the number of comparisons with checks. Symbols (+, -) indicate if statistically greater or less than mean of checks.

**Table 10. 2007 SOUTHWEST DRYLAND Kansas Winter Wheat Performance Tests.**

Brand / Name	<sup>1</sup> LA <sup>2</sup> DC <sup>3</sup> GC Av.				LA DC GC Av.				-LA- -DC- -GC- 2yr 3yr 2yr 3yr 2yr 3yr				LA DC GC Av.				LA DC GC Av.									
	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)					
<b>AgriPro</b>																										
(W) NuHills	42	--	42	42	85	--	96	90	--	--	--	--	31	31	58	--	56	57	--	--	--	--	31	--	36	34
Art	51	--	47	49	103	--	108	106	--	--	--	--	--	--	56	--	56	56	--	--	--	--	31	--	36	34
Jagalene	47	--	42	45	95	--	97	96	--	--	--	--	33	33	57	--	56	56	--	--	--	--	31	--	36	34
Postrock	47	--	48	48	95	--	111	103	--	--	--	--	--	--	58	--	57	57	--	--	--	--	33	--	35	34
TAM 111	42	--	48	45	85	--	110	98	--	--	--	--	42	39	56	--	54	55	--	--	--	--	31	--	36	33
<b>AGSECO</b>																										
Protection CL	46	--	41	43	92	--	94	93	--	--	--	--	34	--	53	--	52	52	--	--	--	--	34	--	39	36
TAM 110	44	--	40	42	89	--	93	91	--	--	--	--	29	31	55	--	52	54	--	--	--	--	32	--	37	35
<b>Colorado</b>																										
(W) Avalanche	47	--	37	42	94	--	85	90	--	--	--	--	27	30	57	--	55	56	--	--	--	--	32	--	37	35
Above	48	--	42	45	96	--	96	96	--	--	--	--	28	30	55	--	53	54	--	--	--	--	31	--	36	34
Bond CL	56	--	41	49	113	--	94	104	--	--	--	--	32	--	55	--	55	55	--	--	--	--	34	--	38	36
Hatcher	56	--	44	50	113	--	100	106	--	--	--	--	39	--	56	--	54	55	--	--	--	--	31	--	35	33
Ripper	47	--	34	41	94	--	79	87	--	--	--	--	--	--	55	--	52	54	--	--	--	--	31	--	36	34
<b>Drussel</b>																										
T81	51	--	37	44	103	--	85	94	--	--	--	--	36	36	57	--	56	56	--	--	--	--	31	--	36	34
<b>Kansas</b>																										
(W) Danby	56	--	46	51	112	--	105	108	--	--	--	--	35	35	60	--	58	59	--	--	--	--	33	--	37	35
(W) RonL	54	--	42	48	109	--	96	103	--	--	--	--	--	--	57	--	56	56	--	--	--	--	30	--	33	31
(W) Trego	50	--	45	48	101	--	103	102	--	--	--	--	29	31	55	--	57	56	--	--	--	--	30	--	35	32
2137	54	--	48	51	108	--	110	109	--	--	--	--	27	28	57	--	54	56	--	--	--	--	32	--	35	33
2145	43	--	44	44	87	--	102	94	--	--	--	--	32	31	57	--	53	55	--	--	--	--	29	--	34	31
Fuller	45	--	44	45	91	--	102	96	--	--	--	--	--	--	57	--	55	56	--	--	--	--	29	--	37	33
Ike	52	--	40	46	105	--	91	98	--	--	--	--	29	32	58	--	55	57	--	--	--	--	33	--	37	35
Jagger	38	--	39	38	76	--	89	82	--	--	--	--	33	31	55	--	53	54	--	--	--	--	29	--	37	33
Karl 92	51	--	51	51	102	--	116	109	--	--	--	--	24	22	58	--	58	58	--	--	--	--	30	--	36	33
Overlay	40	--	45	42	81	--	102	91	--	--	--	--	29	29	57	--	56	56	--	--	--	--	30	--	40	35
Stanton	51	--	48	49	103	--	109	106	--	--	--	--	30	31	58	--	60	59	--	--	--	--	33	--	39	36
<b>Nebraska</b>																										
Wesley	56	--	36	46	112	--	82	97	--	--	--	--	35	35	56	--	54	55	--	--	--	--	31	--	35	33
<b>Oklahoma</b>																										
(W) Guymon	47	--	38	42	94	--	86	90	--	--	--	--	--	--	58	--	56	57	--	--	--	--	30	--	35	32
2174	49	--	46	47	98	--	104	101	--	--	--	--	27	28	57	--	57	57	--	--	--	--	30	--	37	33
Deliver	53	--	49	51	107	--	113	110	--	--	--	--	33	--	57	--	57	57	--	--	--	--	31	--	35	33
Duster	52	--	41	47	105	--	94	100	--	--	--	--	--	--	56	--	56	56	--	--	--	--	30	--	114	72
Endurance	61	--	57	59	122	--	130	126	--	--	--	--	33	--	57	--	56	56	--	--	--	--	33	--	36	35
OK Bullet	51	--	38	44	102	--	87	95	--	--	--	--	--	--	58	--	57	58	--	--	--	--	32	--	38	35
Okfield	46	--	43	44	92	--	98	95	--	--	--	--	--	--	56	--	55	55	--	--	--	--	33	--	39	36
<b>Watley</b>																										
TAM 112	57	--	39	48	114	--	89	102	--	--	--	--	--	--	57	--	56	56	--	--	--	--	32	--	37	35
<b>WestBred</b>																										
Aspen	60	--	51	56	121	--	117	119	--	--	--	--	--	--	56	--	55	56	--	--	--	--	30	--	34	32
<b>WestBred/AGSE</b>																										
Keota	49	--	49	49	98	--	112	105	--	--	--	--	31	--	57	--	58	57	--	--	--	--	34	--	38	36
Shocker	51	--	50	51	103	--	115	109	--	--	--	--	--	--	56	--	55	56	--	--	--	--	31	--	35	33
Averages	50	--	44	47	50	--	44	47	--	--	--	--	--	--	57	--	55	56	--	--	--	--	31	--	36	34
CV (%)	10	--	10	10	10	--	10	10	--	--	--	--	--	--	2	--	3	3	--	--	--	--	4	--	3	3.5
LSD (0.05)*	7	--	6	7	14	--	14	14	--	--	--	--	--	--	1	--	2	2	--	--	--	--	2	--	1	1.5

<sup>1</sup> LA = Larned, KS, Pawnee County.

<sup>2</sup> DC = Dodge City, KS, Ford County.

<sup>3</sup> GC = Garden City, KS, Southwest Research-Extension Center, Finney County.

(W) = Hard white wheat

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.

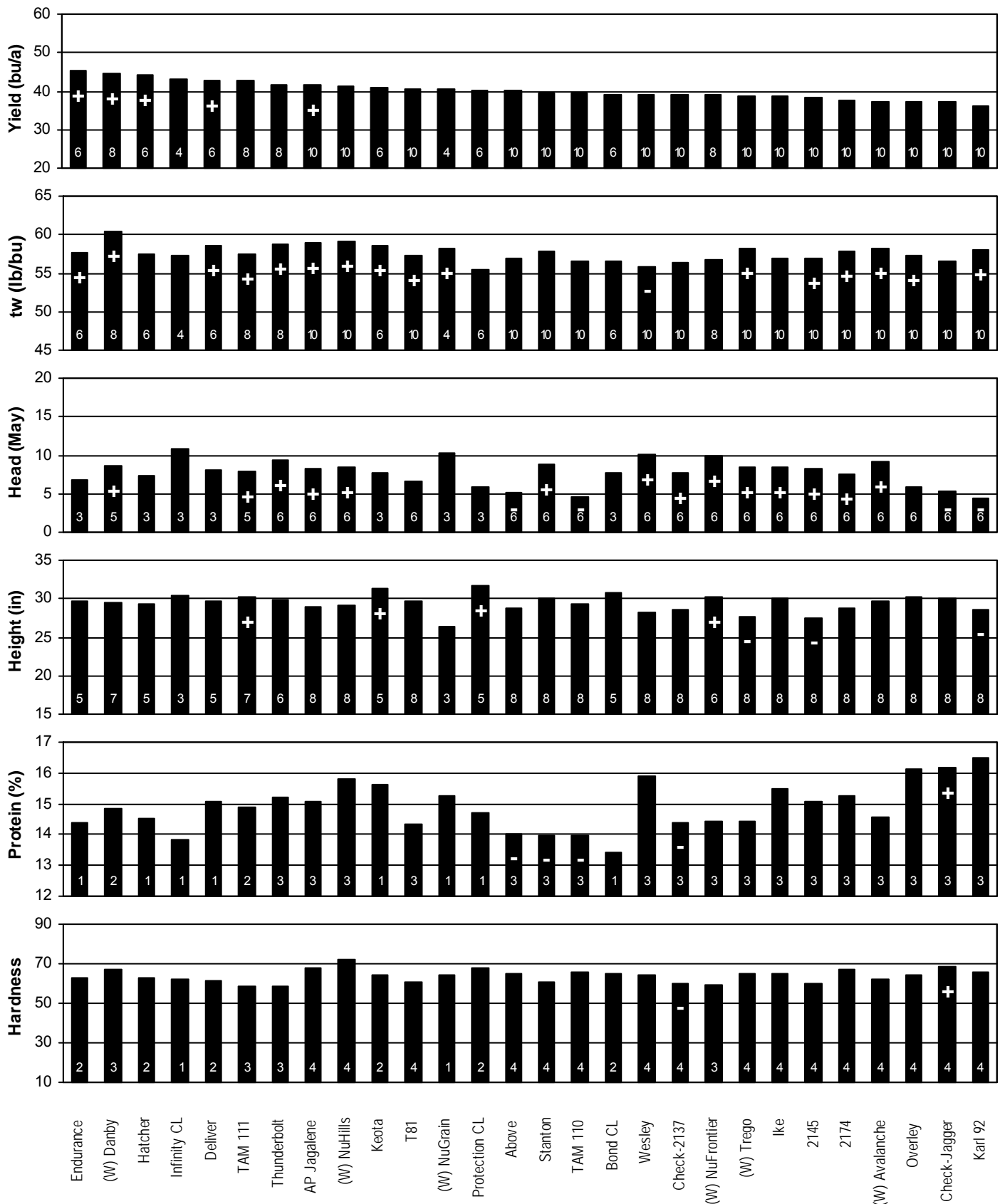


Figure 8. Performance summary of wheat varieties in SOUTHWEST Kansas, DRYLAND, 2004-2007.

Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically greater or less than mean of checks.

**Table 11. 2007 IRRIGATED Kansas Winter Wheat Performance Tests.**

Brand / Name	<sup>1</sup> CO <sup>2</sup> DC <sup>3</sup> GC Av.				CO DC GC Av.				-CO- 2yr 3yr		-DC- 2yr 3yr		-GC- 2yr 3yr		CO DC GC Av.				CO DC GC Av.				CO DC GC Av.			
	yield (bu/a)				% of test average				multi-year avg (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in)					
<b>AgriPro</b>																										
AP Jagalene	86	36	59	60	93	75	82	83	--	--	--	--	59	63	58	58	58	58	3	--	2	2.5	38	33	37	36
(W) NuHills	84	34	57	58	90	73	79	81	--	--	--	--	60	60	57	60	58	58	4	--	4	3.8	35	33	36	35
Art	99	51	87	79	110	110	121	110	--	--	--	--	--	--	60	59	60	60	1	--	3	1.9	36	34	36	35
Hawken	101	52	71	75	110	110	100	110	--	--	--	--	--	--	57	60	59	59	3	--	4	3.3	35	31	35	34
Postrock	98	52	78	76	110	110	109	110	--	--	--	--	66	--	61	60	61	61	3	--	4	3.4	37	33	35	35
TAM 111	101	51	79	77	110	110	110	110	--	--	--	--	72	72	59	59	61	60	3	--	1	2	39	33	36	36
Thunderbolt	90	54	77	74	97	110	108	110	--	--	--	--	58	--	61	61	62	62	4	--	3	3.4	39	34	39	37
<b>AGSECO</b>																										
TAM 110	80	35	58	58	87	75	81	81	--	--	--	--	62	64	56	56	56	56	1	--	-1	0	37	33	36	35
<b>Colorado</b>																										
(W) Avalanche	82	37	60	60	89	79	83	84	--	--	--	--	51	54	59	58	59	59	3	--	3	3	39	26	37	34
Above	85	40	64	63	92	84	90	88	--	--	--	--	68	--	56	56	57	56	0	--	1	0.5	37	33	36	36
Bond CL	92	44	61	66	100	94	85	93	--	--	--	--	63	64	54	56	59	56	2	--	2	2.1	41	35	38	38
Hatcher	98	60	78	79	110	130	110	110	--	--	--	--	68	66	58	60	60	59	2	--	2	1.8	36	34	35	35
Ripper	79	35	54	56	85	75	76	79	--	--	--	--	--	--	53	54	55	54	5	--	3	4	37	32	37	35
<b>Drussel</b>																										
T81	88	44	69	67	95	92	97	95	--	--	--	--	64	66	59	59	60	59	1	--	1	0.8	37	33	38	36
<b>Kansas</b>																										
(W) Danby	94	49	66	69	100	100	92	99	--	--	--	--	65	66	56	61	60	59	3	--	4	3.3	39	34	37	37
(W) RonL	95	52	76	74	100	110	107	110	--	--	--	--	73	--	54	61	60	58	3	--	3	3	34	31	34	33
(W) Trego	93	48	66	69	100	100	92	98	--	--	--	--	66	63	56	61	59	59	3	--	3	2.8	37	33	33	34
2137	87	42	72	67	95	89	101	95	--	--	--	--	63	61	59	57	58	58	2	--	1	1.5	37	33	36	35
2145	87	44	68	67	95	94	95	95	--	--	--	--	58	62	60	58	58	59	2	--	3	2.4	35	31	36	34
Fuller	100	52	78	77	110	110	109	110	--	--	--	--	65	--	60	60	60	60	1	--	1	1	37	33	36	35
Jagger	88	36	57	60	96	76	80	84	--	--	--	--	50	56	58	56	55	57	0	--	0	0	37	33	36	35
Karl 92	93	52	74	73	100	110	103	110	--	--	--	--	64	58	62	60	60	61	1	--	0	0.5	34	31	35	33
Overlay	98	44	75	72	110	93	105	100	--	--	--	--	58	61	61	60	60	61	0	--	-1	-0.5	37	33	40	37
Stanton	94	53	74	73	100	110	103	110	--	--	--	--	60	59	59	59	61	60	2	--	2	2.1	40	34	39	37
<b>Nebraska</b>																										
Wesley	91	53	69	71	99	110	97	100	--	--	--	--	64	65	58	58	58	58	5	--	4	4.6	36	33	36	35
<b>Oklahoma</b>																										
(W) Guymon	86	47	69	67	93	100	96	97	--	--	--	--	69	--	60	61	60	60	3	--	3	3	37	32	36	35
2174	89	47	72	69	96	100	100	99	--	--	--	--	59	58	60	59	61	60	3	--	2	2.5	37	34	37	36
Deliver	93	56	76	75	100	120	107	110	--	--	--	--	63	--	59	60	61	60	4	--	2	3	37	32	35	35
Duster	93	56	75	75	100	120	106	110	--	--	--	--	--	--	58	60	60	60	4	--	3	3.5	37	32	36	35
Endurance	97	53	83	77	100	110	116	110	--	--	--	--	67	--	59	58	59	59	1	--	0	0.5	37	33	36	35
OK Bullet	96	46	76	72	100	97	106	100	--	--	--	--	66	--	61	60	61	61	2	--	2	2	40	34	38	37
Okfield	87	48	69	68	94	100	97	97	--	--	--	--	61	--	55	58	59	57	2	--	3	2.5	41	34	39	38
<b>Watley</b>																										
TAM 112	97	45	68	70	110	96	95	99	--	--	--	--	68	--	60	58	59	59	1	--	-1	0	38	33	36	36
<b>WestBred</b>																										
Aspen	105	56	88	83	110	120	123	120	--	--	--	--	--	--	57	60	59	59	1	--	-1	0	33	31	34	33
Spartan	98	45	78	74	110	96	109	100	--	--	--	--	--	--	58	56	58	58	2	--	1	1.5	32	30	31	31
Winterhawk	101	53	83	79	110	110	116	110	--	--	--	--	--	--	60	60	62	61	2	--	2	1.8	37	33	36	35
<b>WestBred/AGSE</b>																										
Keota	90	41	68	66	98	87	96	93	--	--	--	--	64	63	59	59	60	60	3	--	2	2.5	38	34	38	37
Santa Fe	97	54	85	79	100	110	119	110	--	--	--	--	69	65	61	59	59	60	0	--	1	0.5	35	34	36	35
Averages	92	47	72	70	92	47	72	70	--	--	--	--	--	--	58	59	59	59	2.2	--	2	2.1	37	33	36	35
CV (%)	3	9	7	6.3	3	9	7	6.3	--	--	--	--	--	--	2	1	1	1.3	--	--	--	--	3	9	8	6.7
LSD (0.05)*	4	6	7	5.7	4	12	9	8.3	--	--	--	--	--	--	2	1	1	1.3	--	--	--	--	1	4	2	2.3

<sup>1</sup> CO = Colby, KS, Northwest Research-Extension Center, Thomas County.

<sup>2</sup> DC = Dodge City, KS, Ford County.

<sup>3</sup> GC = Garden City, KS, Southwest Research-Extension Center, Finney County.

(W) = Hard white wheat

\* Least Significant Difference, similar to 'Margin of Error,' indicates difference needed to overcome test error.

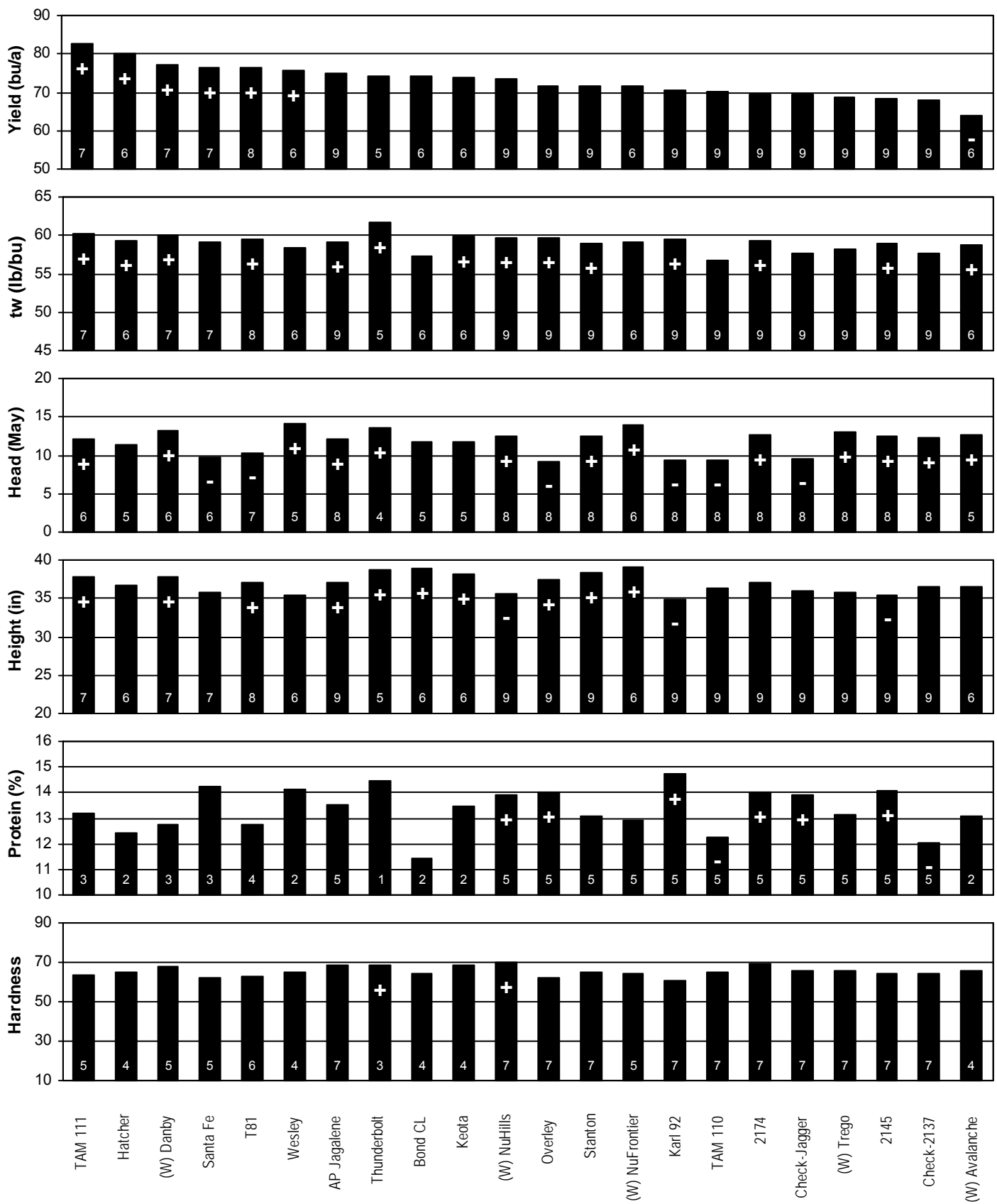


Figure 9. Performance summary of wheat varieties at IRRIGATED sites in Kansas, 2004-2007.

Values inside bars indicate the number of comparisons with checks. Symbols (+,-) indicate if statistically greater or less than mean of checks.



**Table 12. 2007 Planted seed characteristics and Hessian fly ratings.**

Brand / Name	1000	Test weight	Seeds per lb.	Hess. fly <sup>1</sup>	Brand / Name	1000	Test weight	Seeds per lb.	Hess. fly <sup>1</sup>
	Seed weight					Seed weight			
	(grams)	(lb/bu)	(1000)	(rating)		(grams)	(lb/bu)	(1000)	(rating)
<b>AgriPro</b>					(S) 2320	38.8	60.3	11.6	H-
AP Jagalene	40.4	61.0	11.1	S	<b>Nebraska</b>				
(W) NuDakota	40.2	63.3	11.2	S	Hallam	31.0	57.3	14.5	S
(W) NuFrontier	36.1	66.1	12.5	S	Overland	32.1	60.5	14.0	S
(W) NuGrain	28.7	63.6	15.7	S	Wahoo	27.9	59.8	16.1	S
(W) NuHills	27.7	60.7	16.3	S	Wesley	33.8	61.6	13.3	S
Art	26.8	--	16.8	S	<b>Oklahoma</b>				
Hawken	28.2	57.7	16.0	S	(W) Guymon	33.0	64.7	13.6	S
Neosho	30.2	59.2	14.9	S	2174	36.4	60.4	12.4	S
Postrock	31.1	56.6	14.5	S	Deliver	29.4	58.1	15.3	S
TAM 111	32.4	59.8	13.9	S	Duster	28.8	58.3	15.6	--
Thunderbolt	27.9	58.2	16.2	S	Endurance	34.7	57.7	13.0	S
<b>AgriPro COKER</b>					OK Bullet	34.4	61.9	13.1	S
(S) Coker 9553	41.9	62.4	10.7	S	Okfield	37.8	59.1	11.9	S
<b>AGSECO</b>					<b>Pioneer</b>				
Infinity CL	29.9	58.1	15.0	S	(S) 25R56	36.2	57.8	12.4	S
Onaga	24.4	59.4	18.4	S	(S) 25R63	42.6	59.4	10.6	S
Protection CL	41.5	60.7	10.8	S	<b>Polansky</b>				
TAM 110	37.6	62.8	12.0	S	Dominator	27.7	59.2	16.2	S
<b>AMIGO</b>					<b>Seed-link</b>				
Sturdy-2K	30.9	61.2	14.6	S	ACS 51017	53.9	63.1	8.3	S
<b>Colorado</b>					ACS 52012	62.4	63.2	7.2	S
(W) Avalanche	45.3	61.4	9.9	S	ACS 54048	53.9	62.5	8.4	S
Above	47.3	60.3	9.5	S	ACS 55007	53.1	63.8	8.5	S
Bond CL	35.4	60.2	12.7	S	ACS52009	54.2	64.3	8.3	S
Hatcher	39.0	57.6	11.5	S	ACS97003	45.4	64.0	9.9	S
Ripper	47.1	60.6	9.6	--	<b>Watley</b>				
<b>Drussel</b>					TAM 112	33.1	60.5	13.6	S
T81	38.8	65.1	11.6	S	<b>WestBred</b>				
<b>Georgia</b>					Aspen	40.8	58.4	11.0	S
(S)951231-4E26	41.4	57.6	10.9	S	Spartan	38.4	56.7	11.7	S
(S)961231-4E25	41.0	60.0	11.0	S	Tarkio	--	--	--	S
(S)96693-4E16	43.5	61.0	10.4	S	Winterhawk	41.1	61.4	11.0	S
<b>Kansas</b>					<b>WestBred/AGSE</b>				
(W) Danby	29.3	60.7	15.3	S	Keota	30.0	58.1	15.0	S
(W) RonL	33.1	60.9	13.6	S	Santa Fe	33.9	58.7	13.3	S
(W) Trego	29.2	57.5	15.4	S	Shocker	34.3	61.9	13.1	S
2137	31.6	61.2	14.2	H-	Smoky Hill	--	--	--	S
2145	37.6	64.1	12.0	S	Maximum	62.4	66.1	18.4	
Fuller	37.1	61.2	12.1	S	Minimum	24.4	56.6	7.2	
Ike	29.7	61.0	15.1	S	Average	36.7	60.6	12.7	
Jagger	37.0	59.0	12.2	S					
Karl 92	35.3	61.1	12.8	S					
Overley	40.2	63.4	11.2	S					
Stanton	31.5	59.0	14.3	S					
<b>MFA</b>									
(S) 2318	36.0	60.2	12.5	H					

<sup>1</sup> Hessian fly ratings by C.E. Parker, USDA; S = majority of plants susceptible, H = mixture of susceptible and resistant plants (heterogenous), R = majority of plants resistant. Tested with recent collection of Great Plains Hessian fly.

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

For those interested in accessing crop performance testing information electronically, visit our World Wide Web site. All of the information contained in this publication, plus more, is available for viewing or downloading.

The URL is <http://kscroptests.agron.ksu.edu>

Excerpts from the  
University Research Policy Agreement with Cooperating Seed Companies\*

Permission is hereby given to Kansas State University to test varieties and/or hybrids designated on the attached entry forms in the manner indicated in the test announcements. I certify that seed submitted for testing is a true sample of the seed being offered for sale.

I understand that all results from Kansas Crop Performance Tests belong to the University and the public and shall be controlled by the University so as 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; 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 982, '2007 Kansas Performance Tests with Winter Wheat Varieties,' or the Kansas Crop Performance Test Web site, [www.ksu.edu/kscpt](http://www.ksu.edu/kscpt), for details. Endorsement or recommendation by Kansas State University is not implied."

These materials may be freely reproduced for educational purposes. All other rights reserved. In each case, give credit to the author(s), name of work, Kansas State University, and the date the work was published.

### Contributors

Main Station, Manhattan

Jane Lingenfelter, Assistant Agronomist (Coordinating Author)

Allan Fritz, KSU Wheat Breeder

Erick DeWolf, KSU Extension Plant Pathologist

Jeff Whitworth, KSU Extension Specialist

### Experiment Fields

Mark Claassen, Hesston

W. Barney Gordon, Scandia

William Heer, Hutchinson

James Kimball, Ottawa

Larry Maddux, Topeka

### Research Centers

Patrick Evans, Colby

James Long, Parsons

T. Joe Martin, Hays

Alan Schlegel, Tribune

Monty Spangler, Garden City

### Others Providing information for this project:

Elburn Parker, USDA

Richard Chen, USDA

Mary Knapp, Weather Data Library

Jim Shroyer, Agronomy

Rebecca Miller, Grain Science & Industry

William W. Bockus, Plant Pathology

NOTE: Trade names are used to identify products.  
No endorsement is intended, nor is any criticism implied of similar products not named.

This Station Report of Progress was edited, designed, and printed  
by the Department of Communications at Kansas State University

Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan 66506

SRP 982

August 2007

Kansas State University Agricultural Experiment Station and Cooperative Extension Service is an equal opportunity provider and employer. These materials may be available in alternative formats. 5000