

# 2011

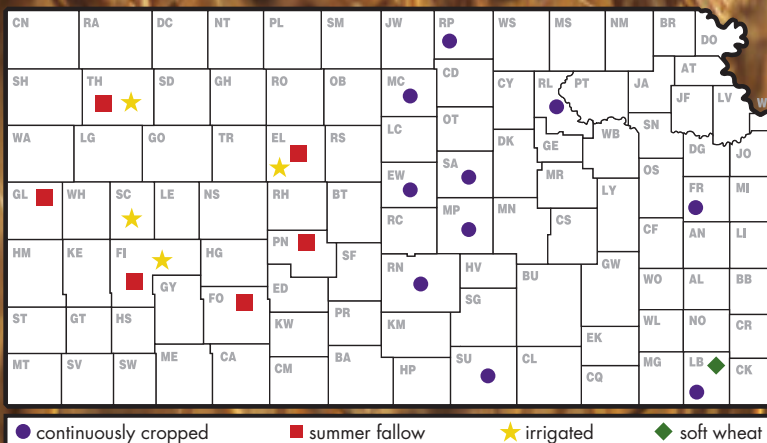
## Kansas Performance Tests with Winter Wheat Varieties

*Report of Progress 1054*



**K-STATE**  
Research and Extension

**Kansas State University  
Agricultural Experiment Station  
and Cooperative Extension Service**



# CONTENTS

<b>2011 WHEAT CROP REVIEW</b> .....	1
Weather and Crop Development, Diseases, Insects, Harvest Statistics, Acreage Distribution	
<b>2011 PERFORMANCE TESTS</b> .....	2
Varieties, Environmental Factors, Results and Variety Characterization, Electronic Access, Research and Duplication Policy, Contributors, Entrants Table	
Comparisons of Leading Winter Wheat Varieties Table 2.....	4
Site Descriptions and Management Table 3.....	5
Northeast Dryland Test Table 4.....	6
Southeast Dryland Tests Table 5.....	7
Southeast Soft Test Table 6.....	8
North Central Dryland Tests Table 7.....	9
Central Dryland Tests Table 8.....	10
South Central Dryland Tests Table 9.....	11
Northwest Dryland Tests Table 10.....	12
Southwest Dryland Tests Table 11.....	13
West Irrigated Tests Table 12.....	14
Planted Seed Characteristics and Hessian Fly Ratings Table 13.....	16
<b>National Winter Canola Variety Trial*</b> .....	17
Objectives, Procedures, Growing Conditions	
Seed Sources for Entries Table 1.....	18
Weather Data and Summaries	
Garden City, Kansas Table 2.....	19
Manhattan, Kansas Table 3.....	21
Marquette, Kansas Table 4.....	23

\*Excerpts from the National Winter Canola Variety Trial, Report of Progress 1062, Kansas State University Agricultural Experiment Station and Cooperative Extension Service (to be published in winter 2011-2012).

# 2011 WHEAT CROP REVIEW

## Weather and Crop Development

The 2010-2011 wheat growing season began with above-average topsoil moisture levels for most of the state that quickly tapered off into an extremely dry winter. The lack of precipitation and snow cover during the winter months, combined with cold temperatures and frequently strong winds, contributed to widespread emergence and wind and freeze damage issues. The dry weather persisted into the spring and summer months for the south central and western regions of the state, and many acres of wheat were consequently abandoned. Scattered showers during May improved conditions but were not enough to overcome the moisture deficit in the southwest, west central, and south central areas of Kansas.

The development of the 2010-2011 wheat crop progressed at a normal pace for most of the state with the exception of those areas affected by the lack of moisture. The northwest region of Kansas lagged the farthest behind in development because many acres did not emerge until late March.

The quality of the 2010-2011 wheat crop reflected the challenging conditions of the growing season; only 20% of the crop was rated as good or excellent, and 50% was rated as poor to very poor. (*Crop Progress and Conditions* report, Kansas Agricultural Statistics)

## Diseases

Barley yellow dwarf (BYD) was very common in Kansas and was probably the most important disease in 2011. BYD was most severe in the southeast and south central regions of the state where the disease likely caused moderate yield losses in many fields.

Wheat streak mosaic was also a problem in many parts of state this year, causing severe yield losses in the affected fields. Historically, wheat streak mosaic is most common in western Kansas, but in 2011 the disease was abnormally common in the central and north central regions. Wheat streak was reported in northeast Kansas, but appeared to be less frequent in this area of the state.

Many of the other historically important diseases were held in check by the dry weather that dominated the early spring growing conditions in central and western Kansas. Leaf rust and stripe rust were late to arrive in Kansas and generally did not cause serious yield losses. The rust diseases did increase in some areas of north central Kansas during the late stages of grain development and likely caused some moderate losses in isolated areas. (Erick De Wolf and Bill Bockus, Kansas State University Plant Pathologists)

## Insects

No major insect pest problems occurred for the 2011 crop. Winter grain mites caused some concerns in late fall and early spring, but infestations abated with the first spring rains and had no lasting effect.

A few army cutworm infestations were significant enough to require treatment in north central and northwest Kansas. Hessian fly infestations seem to be a consistent 1-6% across the western two-thirds of the state, but no major lodging was reported.

No major infestations of bird cherry oat aphids or greenbugs were encountered even though the barley yellow dwarf virus was common. A few reports of army worms feeding on plants were received, but infestations were not significant enough to cause reduced yields. (Jeff Whitworth, Kansas State University Extension Entomologist)

## Harvest Statistics

The Kansas Agricultural Statistics June 9 estimate of the 2011 crop was 261.8 million bushels from 7.7 million acres. If realized, this will be the lowest production since 1996. Yield per harvested acre is expected to average 34 bushels, down 11 bushels from last year's final yield. This will be the lowest yielding year since 2007 if realized. (June 9, 2011, *Crops* report, Kansas Agricultural Statistics)

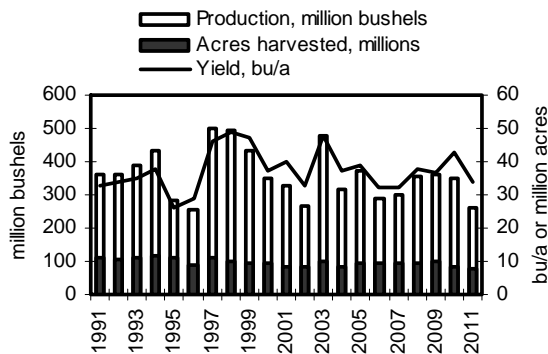


Figure 1. Historical Kansas wheat production

TAM 111 became the leading variety of wheat seeded in Kansas. It accounted for 11.6% of the state's wheat and was the most popular variety in the western third of the state. Fuller dropped to second place, accounting for 10% of wheat acres, but continues to be the leading variety in the south central and southeast regions.

Art jumped up to the third most popular variety and is the leading variety in central Kansas. Postrock and Santa Fe occupied the fourth and fifth positions, respectively. (February 1, 2011, *Wheat Variety*, Kansas Agricultural Statistics)

## Acreage Distribution

TAM 111 20 (18) Postrock 12 (11) Fuller 10 (10) TAM 112 6 Hatcher 4	Postrock 12 (16) Art 12 (6) Fuller 11 (11) Santa Fe 7 (8) Armour 3	Santa Fe 15 (38) Fuller 7 (11) Karl/Karl 92 6 (8) Art 6 (11) 2137 5
TAM 111 32 (25) TAM 112 10 (11) Hatcher 7 (6) T81 7 (8) Fuller 5	Art 13 (11) Fuller 11 (17) Postrock 10 (12) Armour 8 TAM 111 7	Santa Fe 14 (18) Fuller 12 (12) Art 10 2137 7 (13) Armour 4
TAM 111 24 (23) Jaglene 10 (14) TAM 112 10 (9) Postrock 5 Danby 5 (8)	Fuller 15 (15) Art 12 (7) Overley 7 (17) Postrock 6 (6) Santa Fe 6 (11)	Fuller 24 (17) Santa Fe 8 (16) Hitch 7 Endurance 6 Armour 6

Figure 2. Leading wheat varieties in Kansas  
Percentage of seeded acreage for 2011 and (2010) crops

## 2011 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, freeze, and heat damage were determining factors in many of the tests in the 2010-2011 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 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. The 2011 private entrants are listed in Table 1. Eleven entrants provided a total of 36 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 highest-yielding entries. Multiyear 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://www.agronomy.ksu.edu/kscpt>

### 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; 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 1054 "2011 Kansas Performance Tests with Winter Wheat Varieties," or the Kansas Crop Performance Test website, <http://www.agronomy.ksu.edu/kscpt> for details. Endorsement or recommendation by Kansas State University is not implied."

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 Jim Shroyer, Agronomy

**Table 1. Private entrants in the 2011 Kansas wheat performance tests**

<b>AgriPro-Syngenta</b> AgriPro Wheat, Inc. 11783 Ascher Rd. Junction City, KS 66441 785-210-0218	<b>Kansas Wheat Alliance</b> 2005 Research Park Circle, Manhattan, KS 66502 785-477-3400	<b>Scott Seed Company</b> Box 1732 Hereford, TX 79045 806-364-3484	<b>Watley</b> Watley Seed PO Box 51 Spearman, TX 79081 806-659-3838
<b>Drussel</b> Drussel Seed and Supply 2197 W. Parallel Road Garden City, KS 67846 620-275-2359	<b>MFA</b> MFA Incorporated 201 Ray Young Dr. Columbia, MO 65201 573-876-5363	<b>Syngenta</b> 778 CR 680 Bay, AR 72411 870-483-7691	<b>WestBred</b> WestBred LLC 14604 S. Haven Rd. Haven, KS 67543 620-465-2675
<b>Ehmke Seed</b> 74 W. Road 130 Healy, KS 67850 620-397-2766	<b>Pioneer Brand</b> Pioneer Hi-Bred Intl., Inc. 8100 South 15th Lincoln, NE 68512 800-258-5604	<b>Trio Research, Inc.</b> 6414 N. Sheridan Wichita, KS 67204 316-775-1685	

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

Variety <sup>1</sup>	% of Kansas seeded acreage 2011 <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	Acid tolerance	Sprout tolerance	Protein content <sup>3</sup>		Soil-borne mosaic	Spindle streak mosaic	Wheat streak mosaic	Barley yellow dwarf	Leaf rust	Stem rust	Stripe rust	Speckled leaf blotch			Tan spot	Powdery mildew	Head scab	Hessian fly	Russ. wheat aphid
					Height <sup>3</sup>	length	Shattering													leaf blotch	Glume blotch						
TAM 111	11.6	3	2	4	6	2	2	7	MS	2	7	AC	8	8	7	7	8	3	3	5	--	6	6	7	5	9	
Fuller	10.3	5	4	2	5	5	2	3	I	3	3	AC	1	1	5	7	5	7	6	6	6	6	7	9	9		
Art	8.0	3	3	3	6	5	5	5	T	3	5	AC	1	1	7	8	3	2	6	5	7	6	3	6	9		
PostRock	7.4	2	2	3	5	5	3	3	T	3	6	AC	2	5	6	7	6	6	7	8	7	5	8	7	4	9	
Santa Fe	4.0	3	3	2	6	2	3	3	MT	--	5	AC	1	--	7	6	3	4	7	3	6	5	6	7	7	9	
TAM 112	3.8	2	4	2	5	2	2	5	T	--	3	AC	8	8	5	6	7	2	8	5	--	6	1	8	9	9	
Jagger	3.7	4	4	1	5	6	5	6	T	3	3	EX	2	4	5	7	9	5	7	3	6	4	7	7	9	9	
Armour	3.6	3	3	1	2	7	1	5	T	--	5	AC	1	1	7	6	5	3	4	6	7	5	2	7	7	9	
Overley	3.1	3	5	1	7	7	9	9	T	1	3	EX	1	4	5	5	8	2	5	5	9	5	7	9	9	9	
Jagalene	2.8	3	3	2	4	6	4	5	MT	2	4	EX	2	3	5	7	9	2	9	4	--	7	9	8	5	9	
Endurance	2.3	5	5	5	7	5	5	5	T	3	7	AC	2	8	7	5	5	5	5	5	--	7	5	6	5	9	
Hatcher	2.1	5	6	3	5	2	3	2	I	--	4	AC	7	8	8	8	7	3	4	5	--	5	5	6	7	9	
Duster	1.7	3	9	5	5	7	1	7	T	7	5	AC	1	1	7	4	3	6	4	7	--	7	3	9	1	9	
T81	1.4	4	5	2	4	7	3	3	I	2	7	AC	8	4	8	6	8	3	3	7	7	6	3	5	--	9	
2137	1.2	4	3	3	5	7	5	3	T	2	7	AC	1	5	6	5	7	6	8	5	7	5	4	8	--	9	
Everest	1.1	2	5	1	6	5	3	3	T	--	5	LD	1	1	7	4	3	6	4	4	5	7	5	4	4	9	
Danby+	1.0	3	4	3	6	5	2	2	MS	4	5	AC	7	--	5	8	8	2	8	6	--	8	7	7	9	9	
Winter Hawk	0.8	3	5	5	8	5	5	3	I	--	5	AC	1	1	7	5	7	8	2	7	--	6	6	7	5	9	
Shocker	0.7	3	2	1	5	5	5	6	MT	--	4	AC	1	2	8	7	4	1	7	4	--	6	5	8	--	9	
TAM 401	0.7	--	--	1	--	--	--	--	T	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hitch	0.6	5	2	5	3	5	5	3	S	--	5	LD	1	1	7	7	2	2	9	6	--	4	6	5	9	9	
Jackpot	0.6	2	5	1	6	--	1	5	T	--	5	AC	1	1		7	6	4	5	6	--	4	6	7	4	9	
TAM 110	0.5	--	--	1	5	--	--	--	--	--	1	LD	9	9	5	8	9	4	8	6	6	7	1	8	--	9	
Karl/Karl 92	0.4	3	8	1	3	7	3	3	I	5	3	EX	1	3	9	8	8	6	5	5	3	3	4	6	--	9	
T136	0.3	4	3	1	3	7	2	6	I	3	--	AC	1	--	--	--	8	3	3	--	--	--	7	--	--	--	
T158	0.3	2	3	3	3	--	1	3	S	--	--	--	2	--	5	7	6	2	7	--	--	--	--	--	2	9	
Larned	0.3	4	5	4	9	3	3	3	S	3	4	AC	9	8	9	9	8	2	2	8	8	9	5	5	3	9	
Ike	0.3	3	4	4	6	7	2	3	S	2	3	AC	1	5	9	6	9	3	6	7	6	8	6	6	2	9	
OK Bullet	0.3	2	2	3	7	5	3	9	MT	5	3	AC	4	4	6	6	8	7	6	6	--	5	8	7	7	9	
Centerfield	0.2	3	2	5	3	7	1	7	I	1	5	AC	2	--	--	5	7	--	4	7	--	7	--	8	1	9	
Protection	0.2	7	3	2	7	5	7	9	I	--	5	AC	4	3	7	8	9	4	7	6	--	7	7	8	9	9	
Thunderbolt	0.2	2	--	3	7	6	6	--	MS	2	3	AC	8	8	6	7	7	8	5	6	--	7	7	7	9	9	
Blends	11.1																										
Other White	1.1																										
Other Red	12.2																										
Other Soft	0.1																										

<sup>†</sup>Hard white variety Scale: 1=Best 9=Poor 1=Best 9=Poor 1=Early 9=Late 1=Short 9=Tail 1=Long 9=Short 1=Best 9=Poor 1=Best 9=Poor T=Toler S=Susc 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. 13, 2009, 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 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, 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, 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 2011," Publication MF991 from Kansas State University.

<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 2011**

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	--	--	Fall	10/19/2010-6/24/2011 75 lb/a	Timely rains and cooler temperatures contributed to good yields.
<b><u>Southeast Dryland</u></b>							
East Central KS Experiment Field Ottawa (OT)	Woodson silt loam Grain sorghum	90	--	--	Fall	10/7/2010-6/27/2011 60 lb/a	Good emergence and stands. Short on moisture but not as dry as other parts of the state.
Southeast Agricultural Research Center Parsons (PA)	Parsons silt loam Corn	80	30	20	Fall	10/7/2010-6/15/2011 75 lb/a	Excellent planting conditions. Leaf, stripe, and stem rust present late in the season.
<b><u>Soft Wheat</u></b>							
Southeast Agricultural Research Center Parsons (PA)	Parsons silt loam Corn	80	30	20	Fall	10/7/2010-6/15/2011 75 lb/a	Excellent planting conditions. Leaf, stripe, and stem rust present late in the season.
<b><u>North Central Dryland</u></b>							
North Central KS Experiment Field Belleville (BE)	Crete silt loam Fallow	80	--	--	Fall	9/30/2010-6/30/2011 80 lb/a	Dry throughout most of growing season. Possible heat and freeze damage.
North Central KS Farmer's Field Beloit (BL)	Harney silt loam	--	--	--	Fall	-- 80 lb/a	Abandoned.
<b><u>Central Dryland</u></b>							
Central KS Farmer's Field Gypsum (GY)	Detroit silty clay loam Fallow	28	0	0	Fall	10/20/2010-6/23/2011 90 lb/a	Dry throughout most of growing season. No disease or insect pressures.
Central KS Farmer's Field Lorraine (LR)	McCook silt loam Fallow	28	0	0	Fall	10/6/2010-6/23/2011 60 lb/a	Dry throughout growing season. Uneven snow cover increased variability among varieties.
<b><u>South Central Dryland</u></b>							
South Central KS Farmer's Field McPherson (MC)	Crete silt loam Fallow	28	0	0	Fall	10/5/2010-6/22/2011 60 lb/a	Decent growing conditions turned hot and dry during the spring months.
South Central KS Experiment Field Hutchinson (HU)	Ost silt loam Fallow	125	40	0	Fall	10/22/2010-6/11/2011 60 lb/a	Extremely dry throughout most of the growing season.
South Central KS Farmer's Field Conway Springs (CW)	Sandy loam Fallow	28	0	0	Fall	10/5/2010-6/14/2011 60 lb/a	Dry throughout most of growing season. No disease or insect pressures.
<b><u>Northwest Dryland</u></b>							
Agricultural Research Center Hays (HA)	Harney silt loam Fallow	60	0	0	Fall	10/1/2010-6/23/2011 50 lb/a	Very dry winter and spring months.
Northwest Research-Extension Center Colby (CO)	Keith silt loam Fallow	70	0	0	Fall	9/20/2010-7/6/2011 60 lb/a	Very dry conditions at planting with some rows not emerging until March.
Northwest Research-Extension Center Tribune (TR)	Richfield silt loam Fallow	60	0	0	Fall	10/13/2010-6/30/2011 55 lb/a	Dry throughout most of growing season. No disease or insect pressures.
<b><u>Southwest Dryland</u></b>							
Southwest KS Farmer's Field Larned (LA)	Harney clay loam Fallow	--	--	--	Fall	-- 50 lb/a	Abandoned.
Southwest KS Farmer's Field Dodge City (DC)	Harney clay loam Fallow	60	0	0	Fall	10/17/2010-6/15/2011 45 lb/a	Very dry winter and spring months.
Southwest Research-Extension Center Garden City (GC)	Keith silt loam Fallow	--	--	--	Fall	-- 65 lb/a	Abandoned.
<b><u>Western Irrigated</u></b>							
Northwest Research-Extension Center Colby (CO)	Keith silt loam Fallow	150	0	0	Fall	9/20/2010-7/5/2011 90 lb/a	Winter was mild and dry with little snow fall. Dry conditions remained until harvest.
Agricultural Research Center Hays (HA)	Harney silt loam Fallow	60	0	0	Fall	10/8/2010-7/1/2011 80 lb/a	Very dry winter and spring months.
Southwest Research-Extension Center Garden City (GC)	Keith silt loam Wheat	90	0	0	Fall	10/24/2010-6/28/2011 75 lb/a	Extremely dry growing season.
Western KS Farmer's Field Scott City (SC)	Scott silt loam Fallow	90	0	0	Fall	9/29/2010-6/30/2011 80 lb/a	Extremely dry growing season.

**Table 4. 2011 NORTHEAST Kansas dryland winter wheat performance tests**

Brand / name	MA <sup>1</sup>	MA	MA		MA	MA	MA
	yield (bu/a)		% of test average	2yr			
<b>AgriPro</b>							
Art	63	99	62	--	57	--	--
CJ	64	101	--	--	60	--	--
Postrock	59	93	55	--	59	--	--
<b>Kansas</b>							
2137	65	102	65	--	59	--	--
Everest	64	101	66	--	60	--	--
Fuller	62	97	57	--	58	--	--
Jagger	51	80	51	--	53	--	--
<b>Nebraska</b>							
McGill	63	99	--	--	56	--	--
<b>Oklahoma</b>							
Billings	68	107	--	--	58	--	--
Duster	68	108	--	--	60	--	--
Endurance	65	103	--	--	58	--	--
<b>Trio-Research</b>							
T154	67	105	--	--	58	--	--
<b>WestBred</b>							
Armour	63	99	61	--	56	--	--
Hitch	64	101	64	--	55	--	--
Santa Fe	62	98	66	--	57	--	--
WB-Cedar	66	103	66	--	58	--	--
WB-Stout	62	98	59	--	54	--	--
Averages	63	63	--	--	57	--	--
CV (%)	5	5	--	--	2	--	--
LSD (0.05)*	4	6	--	--	2	--	--

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

(W) = Hard white wheat.

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



**Table 5. 2011 SOUTHEAST Kansas dryland winter wheat performance tests**

Brand / name	<sup>1</sup> OT			<sup>2</sup> PA			-OT-		-PA-		OT			PA			Av.			
	OT	PA	Av.	OT	PA	Av.	2yr	3yr	2yr	3yr	OT	PA	Av.	OT	PA	Av.	OT	PA	Av.	
	yield (bu/a)			% of test average			multiyear av. (bu/a)				tw (lb/bu)			head (+/- Jagger)			height (in.)			
<b>AgriPro</b>																				
CJ	58	35	46	95	82	88	--	--	44	--	58	60	59	--	3	3	--	39	39	
JackPot	63	45	54	104	105	104	70	66	50	51	58	60	59	--	4	4	--	38	38	
Postrock	57	33	45	94	78	86	--	--	35	--	58	60	59	--	4	4	--	35	35	
<b>Kansas</b>																				
2137	62	27	44	101	62	82	67	64	33	39	58	60	59	--	9	9	--	35	35	
Everest	66	50	58	108	117	113	72	69	54	56	60	60	60	--	2	2	--	37	37	
Fuller	61	45	53	101	104	102	66	64	42	45	58	60	59	--	1	1	--	37	37	
Jagger	52	39	45	85	91	88	67	59	39	40	56	60	58	--	0	0	--	35	35	
Overley	53	43	48	86	101	94	59	56	39	42	58	60	59	--	1	1	--	37	37	
<b>Oklahoma</b>																				
Billings	62	50	56	101	117	109	--	--	50	--	59	60	60	--	2	2	--	37	37	
Centerfield	55	22	38	90	52	71	--	--	--	--	55	61	58	--	6	6	--	36	36	
Duster	71	53	62	117	123	120	68	70	--	--	58	60	59	--	7	7	--	37	37	
Endurance	65	44	54	106	103	105	70	68	46	46	57	60	59	--	6	6	--	39	39	
<b>Trio-Research</b>																				
T154	66	28	47	109	66	87	--	--	--	--	58	60	59	--	1	1	--	34	34	
<b>WestBred</b>																				
Armour	63	49	56	103	115	109	69	66	51	50	57	60	59	--	5	5	--	34	34	
Hitch	61	39	50	101	91	96	70	66	42	46	57	60	58	--	7	7	--	33	33	
Santa Fe	61	44	53	101	103	102	70	66	43	43	58	60	59	--	1	1	--	36	36	
Shocker	54	46	50	89	106	98	60	57	44	45	58	60	59	--	0	0	--	37	37	
WB-Cedar	65	44	54	106	103	104	76	70	52	51	59	60	59	--	0	0	--	34	34	
WB-Stout	62	42	52	102	97	100	67	65	44	46	56	60	58	--	7	7	--	36	36	
Averages	61	43	52	61	43	52	--	--	--	--	58	60	59	--	3	3	--	36	36	
CV (%)	6	11	8	6	11	8	--	--	--	--	1	0	1	--	1	1	--	4	4	
LSD (0.05)*	5	7	6	8	16	12	--	--	--	--	1	0	0	--	1	1	--	2	2	

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

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

(W) = Hard white wheat.

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

**Table 6. 2011 SOUTHEAST Kansas SOFT winter wheat performance tests**

Brand / name	<sup>1</sup> PA	PA	-PA-		PA	PA	PA
	yield (bu/a)	% of test average	2yr multiyear av. (bu/a)	3yr	tw (lb/bu)	head (+/- Jagger)	height (in.)
<b>Kansas</b>							
2137	45	75	39	--	60	9	37
Jagger	50	83	43	--	60	0	37
<b>MFA</b>							
(S) 2525	56	94	52	--	60	10	41
(S) 2631	48	80	48	--	60	1	39
<b>Pioneer</b>							
(S) 25R30	83	138	--	--	60	5	40
(S) 25R40	66	110	--	--	60	8	37
(S) 25R62	63	105	58	--	61	3	37
<b>Syngenta</b>							
(S) Coker 9553	68	114	55	--	61	2	39
(S) OAKES	60	100	57	--	60	4	38
Averages	60	60	--	--	60	5	38
CV (%)	9	9	--	--	0	1	4
LSD (0.05)*	8	13	--	--	0	1	2

<sup>1</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. 2011 NORTH CENTRAL Kansas dryland winter wheat performance tests**

Brand / name	<sup>1</sup> BE <sup>2</sup> BL		Av.	BE	BL	Av.	-BE-		-BL-		BE	BL	Av.	BE	BL	BE	BL	Av.	
	yield (bu/a)						% of test average			multiyear av. (bu/a)									tw (lb/bu)
<b>AgriPro</b>																			
Art	89	--	89	100	--	100	79	91	84	--	58	--	58	--	--	36	--	36	
CJ	92	--	92	104	--	104	81	--	--	--	58	--	58	--	--	35	--	35	
Postrock	95	--	95	108	--	108	84	92	79	--	59	--	59	--	--	37	--	37	
SY Wolf	92	--	92	104	--	104	--	--	--	--	58	--	58	--	--	35	--	35	
<b>Kansas</b>																			
2137	93	--	93	105	--	105	79	88	82	--	57	--	57	--	--	37	--	37	
Everest	104	--	104	118	--	118	92	99	86	--	60	--	60	--	--	33	--	33	
Fuller	86	--	86	97	--	97	80	90	76	--	56	--	56	--	--	36	--	36	
Jagger	81	--	81	92	--	92	74	81	71	--	55	--	55	--	--	34	--	34	
<b>Nebraska</b>																			
Camelot	73	--	73	83	--	83	--	--	--	--	57	--	57	--	--	37	--	37	
McGill	69	--	69	78	--	78	--	--	--	--	56	--	56	--	--	40	--	40	
Settler CL	85	--	85	97	--	97	--	--	--	--	59	--	59	--	--	35	--	35	
<b>Oklahoma</b>																			
Duster	82	--	82	93	--	93	--	--	--	--	59	--	59	--	--	35	--	35	
Endurance	77	--	77	87	--	87	--	--	--	--	57	--	57	--	--	37	--	37	
<b>Trio-Research</b>																			
T154	86	--	86	97	--	97	--	--	--	--	59	--	59	--	--	32	--	32	
<b>WestBred</b>																			
Armour	110	--	110	125	--	125	98	101	81	--	59	--	59	--	--	33	--	33	
Hitch	90	--	90	101	--	101	74	86	70	--	57	--	57	--	--	35	--	35	
Santa Fe	77	--	77	88	--	88	73	85	69	--	58	--	58	--	--	32	--	32	
WB-Cedar	106	--	106	120	--	120	95	99	93	--	60	--	60	--	--	33	--	33	
WB-Stout	91	--	91	103	--	103	76	85	72	--	56	--	56	--	--	35	--	35	
Averages	88	--	88	88	--	88	--	--	--	--	58	--	58	--	--	35	--	35	
CV (%)	9	--	9	9	--	9	--	--	--	--	2	--	2	--	--	4	--	4	
LSD (0.05)*	13	--	13	15	--	15	--	--	--	--	2	--	2	--	--	2	--	2	

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

<sup>2</sup> BL = Beloit, KS, Mitchell County. Abandoned; uneven emergence caused by dry conditions.

(W) = Hard white wheat.

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

**Table 8. 2011 CENTRAL Kansas dryland winter wheat performance tests**

Brand / name	GY <sup>1</sup> LR <sup>2</sup> Av.			GY LR Av.			-GY-		-LR-		GY LR Av.			GY LR Av.					
	yield (bu/a)			% of average			multiyear av. (bu/a)		tw (lb/bu)			head (+/- Jagger)			height (in.)				
<b>AgriPro</b>																			
Art	48	41	44	93	110	102	49	--	--	--	55	50	52	--	--	--	--	--	--
CJ	54	39	46	105	105	105	52	--	--	--	55	59	57	--	--	--	--	--	--
Postrock	50	24	37	97	64	80	50	--	--	--	54	57	56	--	--	--	--	--	--
SY Wolf	48	30	39	94	82	88	--	--	--	--	53	60	56	--	--	--	--	--	--
<b>Kansas</b>																			
2137	46	33	40	90	89	90	48	--	--	--	52	58	55	--	--	--	--	--	--
Everest	52	44	48	101	119	110	52	--	--	--	56	61	59	--	--	--	--	--	--
Fuller	50	29	39	97	79	88	50	--	--	--	55	56	55	--	--	--	--	--	--
Jagger	49	43	46	96	115	105	47	--	--	--	53	58	56	--	--	--	--	--	--
Overley	50	35	42	96	93	95	47	--	--	--	54	53	53	--	--	--	--	--	--
<b>Oklahoma</b>																			
Billings	50	40	45	97	107	102	52	--	--	--	54	60	57	--	--	--	--	--	--
Centerfield	50	35	43	98	95	96	--	--	--	--	52	58	55	--	--	--	--	--	--
Duster	58	54	56	112	145	129	--	--	--	--	55	58	57	--	--	--	--	--	--
Endurance	51	41	46	98	110	104	51	--	--	--	53	52	53	--	--	--	--	--	--
<b>Trio-Research</b>																			
T154	56	38	47	110	103	106	--	--	--	--	55	57	56	--	--	--	--	--	--
<b>WestBred</b>																			
Armour	50	39	45	97	106	102	51	--	--	--	55	54	55	--	--	--	--	--	--
Hitch	51	26	38	100	69	84	53	--	--	--	52	53	52	--	--	--	--	--	--
Santa Fe	50	31	40	97	83	90	48	--	--	--	53	57	55	--	--	--	--	--	--
Shocker	49	44	46	95	118	107	49	--	--	--	54	55	54	--	--	--	--	--	--
WB-Cedar	59	40	49	114	107	110	56	--	--	--	54	57	55	--	--	--	--	--	--
WB-Stout	54	37	45	104	99	102	54	--	--	--	52	58	55	--	--	--	--	--	--
<b>Averages</b>																			
Averages	51	37	44	51	37	44	--	--	--	--	54	56	55	--	--	--	--	--	--
CV (%)	9	8	9	9	8	9	--	--	--	--	2	2	2	--	--	--	--	--	--
LSD (0.05)*	7	4	6	13	12	12	--	--	--	--	2	1	2	--	--	--	--	--	--

<sup>1</sup> GY = Gypsum, KS, Saline County.

<sup>2</sup> LR = Lorraine, KS, Ellsworth County.

(W) = Hard white wheat.

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

**Table 9. 2011 SOUTH CENTRAL Kansas dryland winter wheat performance tests**

Brand / name	<sup>1</sup> MC <sup>2</sup> HU <sup>3</sup> CW Av.				MC HU CW Av.				-MC- -HU- -CW- 2yr 3yr 2yr 3yr 2yr 3yr				MC HU CW Av.				MC HU CW Av.									
	yield (bu/a)				% of average				multiyear av. (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in.)					
<b>AgriPro</b>																										
Art	36	40	37	38	79	101	111	97	--	--	43	46	43	50	57	61	55	58	--	2	--	2	--	26	--	26
CJ	40	36	27	34	88	91	80	86	--	--	40	--	39	--	59	61	54	58	--	-1	--	-1	--	27	--	27
Postrock	52	40	32	41	114	100	95	103	--	--	40	40	42	48	53	61	55	57	--	2	--	2	--	27	--	27
<b>Kansas</b>																										
2137	43	37	28	36	96	94	85	92	--	--	41	44	40	47	58	60	47	55	--	3	--	3	--	26	--	26
Everest	48	46	35	43	107	116	106	110	--	--	49	55	49	52	58	62	56	59	--	-1	--	-1	--	28	--	28
Fuller	47	39	31	39	103	97	95	98	--	--	38	42	40	45	61	61	48	57	--	0	--	0	--	27	--	27
Jagger	45	36	33	38	100	91	99	96	--	--	38	38	42	47	63	60	51	58	--	0	--	0	--	27	--	27
Overley	40	43	30	38	89	107	91	96	--	--	42	42	39	45	60	62	54	59	--	0	--	0	--	28	--	28
<b>Oklahoma</b>																										
Billings	46	40	34	40	102	100	103	102	--	--	45	--	45	--	57	61	56	58	--	1	--	1	--	27	--	27
Centerfield	44	42	31	39	98	106	93	99	--	--	--	--	--	--	56	61	53	57	--	1	--	1	--	28	--	28
Duster	50	43	41	44	110	107	124	113	--	--	--	--	--	--	48	63	57	56	--	2	--	2	--	27	--	27
Endurance	48	48	35	43	106	119	105	110	--	--	49	53	43	50	58	62	54	58	--	1	--	1	--	28	--	28
OK Bullet	45	38	35	39	100	95	107	100	--	--	--	--	--	--	60	62	57	59	--	2	--	2	--	28	--	28
<b>Trio-Research</b>																										
T154	44	40	33	39	98	99	98	98	--	--	--	--	--	--	56	61	56	58	--	-2	--	-2	--	26	--	26
<b>WestBred</b>																										
Armour	42	36	37	38	92	90	113	98	--	--	44	47	47	50	56	60	47	54	--	2	--	2	--	24	--	24
Hitch	46	36	28	37	102	90	85	92	--	--	40	44	39	47	60	61	48	56	--	3	--	3	--	25	--	25
Santa Fe	45	37	29	37	99	94	87	93	--	--	39	44	39	48	57	61	48	55	--	2	--	2	--	26	--	26
Shocker	44	39	34	39	97	97	101	98	--	--	42	45	41	47	59	60	56	58	--	1	--	1	--	28	--	28
WB-Cedar	48	46	29	41	106	116	88	103	--	--	48	55	43	47	61	60	54	58	--	-4	--	-4	--	26	--	26
WB-Stout	46	35	32	38	101	88	97	95	--	--	41	44	40	45	59	60	55	58	--	2	--	2	--	27	--	27
Averages	45	40	33	39	45	40	33	39	--	--	--	--	--	--	57	61	54	57	--	1	--	1	--	27	--	27
CV (%)	8	10	11	10	8	10	11	10	--	--	--	--	--	--	1	1	2	1	--	1	--	1	--	5	--	5
LSD (0.05)*	6	6	5	6	14	14	15	14	--	--	--	--	--	--	1	1	1	1	--	2	--	2	--	2	--	2

<sup>1</sup> MC = McPherson, KS, McPherson County.

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

<sup>3</sup> CW = Conway Springs, KS, Sumner County.

(W) = Hard white wheat.

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

**Table 10. 2011 NORTHWEST Kansas dryland winter wheat performance tests**

Brand / name	<sup>1</sup> HA <sup>2</sup> CO <sup>3</sup> TR Av.				-HA- -CO- -TR-				HA CO TR Av.				HA CO TR Av.											
	yield (bu/a)				multiyear av. (bu/a)				tw (lb/bu)				head (+/- Jagger)				height (in.)							
<b>AgriPro</b>																								
Art	59	41	44	48	98	104	104	102	--	--	--	--	59	53	56	56	4	3	4	3	27	25	--	26
Greer	64	40	47	50	106	101	109	106	--	--	--	--	59	50	57	55	5	3	3	3	27	24	--	25
Jagalene	63	44	51	53	105	112	119	112	56	58	51	59	62	55	58	58	5	5	4	5	27	27	--	27
Postrock	61	39	41	47	101	98	97	98	56	58	54	63	60	53	56	56	3	2	1	2	28	26	--	27
SY Wolf	60	48	38	49	99	121	88	103	--	--	--	--	62	52	54	56	5	5	4	5	27	26	--	26
TAM 111	64	45	46	52	105	115	107	109	57	62	65	72	61	53	53	56	3	4	5	4	29	29	--	29
<b>Colorado</b>																								
(W) Snowmass	59	37	37	45	98	93	88	93	54	--	59	--	61	52	56	56	7	7	6	6	30	28	--	29
(W) Thunder CL	60	37	51	49	99	94	118	104	57	--	53	--	60	50	58	56	5	4	2	4	26	25	--	26
Bill Brown	64	45	49	53	106	112	115	111	60	60	60	63	62	54	57	58	3	2	1	2	27	27	--	27
CO050303-2	58	41	43	47	96	102	100	100	--	--	--	--	62	52	54	56	6	8	5	6	29	29	--	29
CO06052	62	39	40	47	103	98	93	98	--	--	--	--	62	52	55	56	2	2	-1	1	29	26	--	27
CO06424	67	41	35	47	110	103	81	98	--	--	--	--	60	52	54	55	1	1	1	1	26	27	--	26
Hatcher	65	44	47	52	108	110	110	109	59	60	63	66	61	53	57	57	3	5	0	3	26	27	--	26
Ripper	66	47	51	55	110	118	119	116	57	61	55	63	59	52	54	55	4	3	2	3	27	25	--	26
<b>Drussel</b>																								
T158	66	43	49	53	110	108	115	111	59	--	66	--	62	54	55	57	2	0	-1	0	26	25	--	25
T81	61	41	31	44	101	104	72	92	55	57	60	67	61	53	54	56	3	3	0	2	27	25	--	26
<b>Ehmke Seed</b>																								
Ike	56	38	46	47	93	95	107	98	53	55	55	63	60	54	57	57	4	1	-1	1	27	28	--	27
<b>Kansas</b>																								
(W) Danby	62	41	46	50	103	104	109	105	56	59	57	67	63	55	56	58	6	4	6	5	26	27	--	26
(W) RonL	55	31	39	42	91	79	91	87	--	--	--	--	63	53	56	57	4	5	3	4	23	23	--	23
(W) Tiger	53	36	31	40	88	91	72	84	52	57	58	68	61	52	52	55	5	5	8	6	22	23	--	22
2137	56	38	37	43	92	95	86	91	51	54	53	61	60	52	55	56	4	4	1	3	26	27	--	27
Everest	54	34	36	41	89	86	84	86	50	--	57	--	61	55	56	57	1	1	-1	0	24	25	--	24
Fuller	55	35	48	46	91	88	111	97	51	55	51	61	61	51	58	57	2	2	0	1	28	28	--	28
Jagger	58	40	41	46	96	101	96	98	52	54	57	64	59	53	57	56	0	0	0	0	28	27	--	27
<b>Nebraska</b>																								
Camelot	53	38	46	46	88	97	107	97	--	--	--	--	61	49	51	54	4	4	6	5	30	27	--	28
McGill	63	38	40	47	105	96	94	98	--	--	--	--	59	50	57	55	5	6	0	3	32	28	--	30
Robidoux	65	41	56	54	107	104	131	114	--	--	--	--	61	51	57	56	5	5	3	4	28	26	--	27
Settler CL	65	35	27	42	108	88	64	86	--	--	--	--	61	53	53	56	4	5	1	3	25	25	--	25
<b>Scott Seed</b>																								
TAM 304	64	45	46	51	106	112	107	108	59	--	64	--	61	50	59	56	2	1	1	1	27	26	--	26
<b>Trio-Research</b>																								
T163	54	42	44	47	89	107	103	99	--	--	--	--	60	54	57	57	4	3	2	3	25	26	--	25
<b>Watley</b>																								
TAM 112	68	42	48	53	112	105	113	110	59	61	59	68	62	56	58	59	1	0	2	1	28	27	--	28
<b>WestBred</b>																								
Armour	60	43	44	49	99	109	103	103	58	60	65	72	60	51	57	56	2	1	0	1	23	24	--	24
Hitch	55	47	50	51	92	118	116	108	52	55	51	62	60	52	57	56	5	4	5	4	26	23	--	24
WB-Cedar	58	33	36	42	95	83	85	87	52	54	57	68	60	50	51	54	0	1	-2	0	24	22	--	23
WB-Stout	61	41	42	48	101	104	98	101	55	59	52	61	59	49	59	56	2	0	1	1	27	26	--	27
Winterhawk	62	45	46	51	102	113	108	108	56	60	64	71	61	51	57	57	3	3	1	2	27	27	--	27
Averages	61	40	43	48	61	40	43	48	--	--	--	--	61	52	56	56	3	3	2	3	27	25	--	26
CV (%)	8	9	9	9	8	9	9	9	--	--	--	--	1	2	2	2	0	1	1	1	5	7	--	6
LSD (0.05)*	7	5	6	6	11	13	15	13	--	--	--	--	1	2	1	1	1	2	3	2	2	2	--	2

<sup>1</sup> HA = Hays, KS, K-State Agricultural Research Center, 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, difference needed to overcome test error.

**Table 11. 2011 SOUTHWEST Kansas dryland winter wheat performance tests**

Brand / name	<sup>1</sup> LA <sup>2</sup> DC <sup>3</sup> GC Av.				-LA- -DC- -GC-				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 (+/- Jagger)				height (in.)							
<b>AgriPro</b>																												
Greer	--	58	--	58	--	106	--	106	--	--	--	--	--	59	--	59	--	--	--	--	--	--	--	--	--	28	--	28
Jagalene	--	56	--	56	--	101	--	101	58	--	44	--	59	--	62	--	62	--	62	--	--	--	--	--	--	27	--	27
Postrock	--	55	--	55	--	99	--	99	55	--	46	--	64	--	61	--	61	--	61	--	--	--	--	--	--	28	--	28
TAM 111	--	53	--	53	--	97	--	97	61	--	49	--	66	--	62	--	62	--	62	--	--	--	--	--	--	30	--	30
<b>Colorado</b>																												
(W) Snowmass	--	51	--	51	--	93	--	93	60	--	45	--	--	60	--	60	--	--	--	--	--	--	--	--	--	29	--	29
(W) Thunder CL	--	53	--	53	--	97	--	97	62	--	48	--	--	61	--	61	--	--	--	--	--	--	--	--	--	27	--	27
Bill Brown	--	65	--	65	--	118	--	118	69	--	56	--	65	--	62	--	62	--	62	--	--	--	--	--	--	28	--	28
CO050303-2	--	59	--	59	--	106	--	106	--	--	--	--	--	62	--	62	--	--	--	--	--	--	--	--	--	29	--	29
CO06052	--	54	--	54	--	98	--	98	--	--	--	--	--	62	--	62	--	--	--	--	--	--	--	--	--	30	--	30
CO06424	--	57	--	57	--	104	--	104	--	--	--	--	--	61	--	61	--	--	--	--	--	--	--	--	--	28	--	28
Hatcher	--	55	--	55	--	100	--	100	64	--	52	--	66	--	61	--	61	--	61	--	--	--	--	--	--	28	--	28
Ripper	--	60	--	60	--	109	--	109	64	--	46	--	58	--	59	--	59	--	59	--	--	--	--	--	--	28	--	28
<b>Drussel</b>																												
T158	--	58	--	58	--	105	--	105	65	--	52	--	--	61	--	61	--	--	--	--	--	--	--	--	--	27	--	27
T81	--	54	--	54	--	97	--	97	63	--	46	--	63	--	62	--	62	--	62	--	--	--	--	--	--	29	--	29
<b>Ehmke Seed</b>																												
Ike	--	53	--	53	--	96	--	96	59	--	48	--	62	--	60	--	60	--	60	--	--	--	--	--	--	29	--	29
<b>Kansas</b>																												
(W) Danby	--	58	--	58	--	105	--	105	62	--	47	--	58	--	63	--	63	--	63	--	--	--	--	--	--	27	--	27
(W) RonL	--	56	--	56	--	102	--	102	68	--	48	--	--	63	--	63	--	--	--	--	--	--	--	--	--	24	--	24
(W) Tiger	--	49	--	49	--	89	--	89	59	--	44	--	61	--	61	--	61	--	61	--	--	--	--	--	--	25	--	25
2137	--	53	--	53	--	96	--	96	56	--	44	--	61	--	60	--	60	--	60	--	--	--	--	--	--	28	--	28
Everest	--	48	--	48	--	88	--	88	60	--	47	--	--	61	--	61	--	--	--	--	--	--	--	--	--	26	--	26
Jagger	--	53	--	53	--	96	--	96	57	--	44	--	60	--	61	--	61	--	61	--	--	--	--	--	--	30	--	30
<b>Oklahoma</b>																												
Billings	--	57	--	57	--	103	--	103	68	--	51	--	--	61	--	61	--	--	--	--	--	--	--	--	--	29	--	29
Duster	--	63	--	63	--	114	--	114	--	--	--	--	--	62	--	62	--	--	--	--	--	--	--	--	--	29	--	29
Endurance	--	55	--	55	--	100	--	100	58	--	48	--	63	--	62	--	62	--	62	--	--	--	--	--	--	28	--	28
OK Bullet	--	50	--	50	--	90	--	90	--	--	--	--	--	62	--	62	--	--	--	--	--	--	--	--	--	30	--	30
<b>Scott Seed</b>																												
TAM 304	--	57	--	57	--	103	--	103	--	--	--	--	--	61	--	61	--	--	--	--	--	--	--	--	--	27	--	27
<b>Trio-Research</b>																												
T163	--	49	--	49	--	90	--	90	--	--	--	--	--	61	--	61	--	--	--	--	--	--	--	--	--	30	--	30
<b>Watley</b>																												
TAM 112	--	62	--	62	--	112	--	112	66	--	51	--	62	--	61	--	61	--	61	--	--	--	--	--	--	30	--	30
<b>WestBred</b>																												
WB-Cedar	--	51	--	51	--	93	--	93	58	--	45	--	66	--	60	--	60	--	60	--	--	--	--	--	--	27	--	27
WB-Stout	--	54	--	54	--	99	--	99	66	--	44	--	59	--	60	--	60	--	60	--	--	--	--	--	--	30	--	30
Winterhawk	--	62	--	62	--	112	--	112	69	--	54	--	65	--	62	--	62	--	62	--	--	--	--	--	--	30	--	30
Averages	--	55	--	55	--	55	--	55	--	--	--	--	--	61	--	61	--	--	--	--	--	--	--	--	--	28	--	28
CV (%)	--	7	--	7	--	7	--	7	--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	4	--	4
LSD (0.05)*	--	5	--	5	--	9	--	9	--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	2	--	2

<sup>1</sup> LA = Larned, KS, Pawnee County. Abandoned; uneven emergence caused by dry conditions.

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

<sup>3</sup> GC = Garden City, KS, Finney County. Abandoned; uneven emergence caused by dry conditions.

(W) = Hard white wheat.

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

**Table 12. 2011 IRRIGATED Kansas winter wheat performance tests**

Brand / name	CO <sup>1</sup> HA <sup>2</sup> GC <sup>3</sup> SC <sup>4</sup> Av.					CO HA GC SC Av.					-CO- 2yr 3yr		-HA- 2yr 3yr		-GC- 2yr 3yr		CO HA GC SC Av.					Av.
	yield (bu/a)					% of test average					multiyear av. (bu/a)						tw (lb/bu)					
<b>AgriPro</b>																						
Art	95	--	--	--	95	106	--	--	--	106	--	--	--	--	--	--	58	--	--	--	58	
Jagalene	105	--	--	--	105	118	--	--	--	118	93	86	--	--	--	--	58	--	--	--	58	40
Postrock	89	--	--	--	89	101	--	--	--	101	85	--	--	--	--	--	58	--	--	--	58	40
SY Gold	100	--	--	--	100	112	--	--	--	112	--	--	--	--	--	--	57	--	--	--	57	40
TAM 111	85	--	--	--	85	96	--	--	--	96	93	89	--	--	--	--	58	--	--	--	58	41
<b>Colorado</b>																						
(W) Thunder CL	82	79	58	64	71	92	91	92	94	92	86	--	68	--	65	--	52	61	55	60	57	
Bill Brown	87	80	69	69	76	98	92	109	102	100	83	76	74	--	70	--	53	62	59	62	59	35
CO050303-2	90	87	60	72	77	101	100	96	106	101	--	--	--	--	--	--	58	63	58	63	60	37
CO06052	90	85	60	75	77	101	98	96	110	101	--	--	--	--	--	--	55	63	57	62	59	36
CO06424	77	80	58	65	70	86	92	92	95	91	--	--	--	--	--	--	54	62	57	60	58	35
Hatcher	82	80	62	59	71	92	92	99	87	93	81	74	70	--	65	--	56	62	59	62	59	35
Ripper	85	76	71	66	75	96	87	114	96	98	82	--	66	--	65	--	55	59	56	60	57	36
<b>Drussel</b>																						
T158	94	99	62	79	83	105	114	99	116	108	97	--	79	--	70	--	53	64	59	62	59	
T81	85	101	64	69	80	95	116	102	101	103	89	86	80	--	64	--	54	63	58	61	59	37
<b>Kansas</b>																						
(W) Danby	92	87	66	69	78	104	99	105	101	102	87	82	75	--	64	--	56	63	61	61	60	
2137	87	80	65	54	72	98	91	104	80	93	89	82	70	--	63	--	55	61	57	57	58	36
Everest	86	89	58	69	75	97	102	92	101	98	95	--	73	--	68	--	55	64	58	60	59	33
Fuller	83	75	72	63	73	94	86	115	93	97	79	77	66	--	69	--	53	62	58	60	58	35
Jagger	89	69	68	72	74	100	80	108	106	98	86	78	62	--	62	--	54	60	57	60	58	36
<b>Nebraska</b>																						
Robidoux	92	90	52	79	78	103	103	83	117	101	--	--	--	--	--	--	51	62	56	61	58	
Settler CL	88	92	66	74	80	99	106	106	109	105	--	--	--	--	--	--	54	62	57	61	58	35
<b>Oklahoma</b>																						
Billings	90	105	54	66	79	101	121	86	97	101	--	--	--	--	--	--	55	64	56	61	59	
Duster	88	106	68	64	81	99	122	109	94	106	--	--	--	--	--	--	55	64	57	60	59	36
Endurance	91	82	53	67	73	102	94	84	99	95	--	--	--	--	--	--	53	62	57	61	58	37
<b>Scott Seed</b>																						
TAM 304	99	101	68	79	87	111	116	109	116	113	98	96	82	--	71	--	51	63	57	60	58	
<b>Watley</b>																						
TAM 112	86	80	69	60	74	97	92	111	88	97	86	80	71	--	67	--	59	63	57	60	60	



**Table 12 continued. 2011 IRRIGATED Kansas winter wheat performance tests**

Brand / name	<sup>1</sup> <sup>2</sup> <sup>3</sup> <sup>4</sup>				Av.	CO	HA	GC	SC	Av.	-CO-		-HA-		-GC-		CO	HA	GC	SC	Av.	Av.
	CO	HA	GC	SC							2yr	3yr	2yr	3yr	2yr	3yr						
<b>WestBred</b>	yield (bu/a)				% of test average					multiyear av. (bu/a)				tw (lb/bu)					height (in.)			
(W) Aspen	95	95	70	70	83	107	110	112	103	108	108	05	80	--	70	--	49	63	58	59	57	33
Armour	87	89	64	60	75	98	102	102	88	98	89	89	80	--	68	--	55	61	55	60	58	32
Hitch	90	78	66	75	77	101	90	104	110	101	91	92	69	--	63	--	54	61	57	61	58	34
Santa Fe	85	76	66	58	71	96	87	105	85	93	--	--	--	--	--	--	55	62	57	58	58	34
WB-Cedar	96	88	52	67	76	108	101	83	99	98	106	02	77	--	65	--	56	62	57	60	59	33
Winterhawk	89	97	68	70	81	100	112	108	103	106	93	87	80	--	68	--	56	63	59	62	60	36
Averages	89	87	63	68	77	89	87	63	68	77	--	--	--	--	--	--	55	62	57	61	59	35
CV (%)	6	7	8	9	7	6	7	8	9	7	--	--	--	--	--	--	2	1	2	1	1	5
LSD (0.05)*	7	8	8	10	8	8	9	13	15	11	--	--	--	--	--	--	2	1	1	1	1	3

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

<sup>2</sup> HA = Hays, KS, K-State Agricultural Center, Ellis County.

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

<sup>4</sup> SC = Scott City, KS, Farmer's Field, Scott County.

(W) = Hard white wheat.

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

**Table 13. 2011 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) 25R30	40.5	48.7	11.2	1
Art	31.0	45.8	14.6	3	(S) 25R40	40.5	48.7	11.2	1
CJ	31.0	47.7	14.6	1	(S) 25R62	38.3	48.1	11.9	2
Greer	31.5	46.0	14.4	3	<b>Scott Seed</b>				
JackPot	34.5	47.1	13.2	1	TAM 304	32.0	46.8	14.2	1
Jagalene	29.5	51.3	15.4	2	<b>Syngenta</b>				
Postrock	29.0	56.7	15.6	1	(S) Coker 9553	38.5	52.8	11.8	1
SY Gold	29.3	53.3	15.5	1	(S) OAKES	35.0	44.8	13.0	4
SY Wolf	26.5	55.5	17.1	3	<b>Trio-Research</b>				
TAM 111	27.3	45.2	16.7	3	T154	33.0	56.8	13.8	3
<b>Colorado</b>					T163	30.5	53.1	14.9	8
(W) Snowmass	--	--	--	9	<b>Watley</b>				
(W) Thunder CL	--	--	--	--	TAM 112	30.3	61.9	15.0	8
Bill Brown	39.3	59.6	11.6	8	<b>WestBred</b>				
CO050303-2	38.5	57.8	11.8	1	(W) Aspen	35.3	54.4	12.9	6
CO06052	34.0	63.7	13.3	9	Armour	27.3	47.9	16.7	9
CO06424	44.0	49.0	10.3	--	Hitch	28.8	58.0	15.8	9
Hatcher	37.0	58.3	12.3	7	Santa Fe	35.0	53.1	13.0	5
Ripper	42.5	55.0	10.7	9	Shocker	32.5	48.7	14.0	5
<b>Drussel</b>					WB-Cedar	33.0	59.7	13.8	9
T158	37.5	43.7	12.1	2	WB-Stout	28.0	49.5	16.2	2
T81	--	--	--	8	Winterhawk	30.8	49.6	14.8	2
<b>Ehmke Seed</b>					Maximum	44.0	64.0	19.9	
Ike	34.5	64.0	13.2	2	Minimum	22.8	43.7	10.3	
<b>Kansas</b>					Average	33.6	53.6	13.7	
(W) Danby	30.5	52.5	14.9	9					
(W) RonL	34.3	61.8	13.2	9					
(W) Tiger	--	--	--	2					
2137	36.3	44.6	12.5	2					
Everest	33.3	54.6	13.6	4					
Fuller	33.5	58.7	13.5	9					
Jagger	33.3	48.0	13.6	9					
Overley	35.3	58.7	12.9	9					
<b>MFA</b>									
(S) 2525	32.3	58.1	14.1	1					
(S) 2631	35.8	62.7	12.7	1					
<b>Nebraska</b>									
Camelot	34.5	46.6	13.2	1					
McGill	29.3	62.0	15.5	5					
Robidoux	33.3	59.1	13.6	7					
Settler CL	35.3	62.9	12.9	1					
<b>Oklahoma</b>									
Billings	31.0	52.5	14.6	1					
Centerfield	39.8	56.0	11.4	1					
Duster	22.8	50.3	19.9	1					
Endurance	35.5	59.9	12.8	5					
OK Bullet	37.0	58.1	12.3	2					
<b>Pioneer</b>									

<sup>1</sup> Hessian fly ratings by Ming Chen, USDA, with inputs 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

# 2011 National Winter Canola Variety Trials

## Senior Authors

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## Other Contributors

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Dale Ladd, Kansas State University, McPherson

## Cooperating Producer

Dean Elvin, Marquette

The objectives of the National Winter Canola Variety Trial (NWCVT) are to evaluate germplasm over a wide range of environments, determine where released and experimental varieties are best adapted, increase the visibility of winter canola, and aid producers with variety selection decisions. The trials are planted in the Great Plains, Midwest, Northern Plains, and Southeast. The wide diversity of environments has improved our knowledge and understanding of winter canola variety performance.

### Procedures

The 2010-2011 NWCVT was distributed to 59 locations in 26 states. The trial included 27 commercial and 19 experimental cultivars from 10 participating seed suppliers (Table 1). All entries were treated with either Helix XTra or Prosper FX seed treatment to control insects and diseases during winter months.

Management guidelines were supplied to cooperators, but previous experience at the location influenced final management decisions. Agronomic information, site descriptions, and growing conditions are described for each location. All trials were planted in small research plots (approximately 100 ft<sup>2</sup>) and replicated three times. Yield results are grouped by brand.

Of the six NWCVT sites planted in Kansas, five were harvested. Three trials are

included in this report: Garden City, Marquette, and Manhattan. Clearwater and Kiowa produced unreliable yield data. Hutchinson, KS was lost to sprayer tank herbicide contamination. Some locations include high erucic acid rapeseed (HEAR) entries. By definition, HEAR is not canola-quality because it produces greater than 2% erucic acid in the processed oil.

### 2010-2011 Growing Conditions

Temperature and precipitation data are plotted at the top of the page for each location. Smooth black lines on the temperature graphs represent long-term average high and low temperatures (°F) for the location. The upper thin line represents actual daily high temperatures, and the lower thin line represents actual daily low temperatures. On the precipitation graph, the line labeled “normal” represents long-term average precipitation, and the line labeled “10-11” represents actual precipitation.

Overall, the 2010-2011 growing season produced respectable yields. Because of the prolonged drought in southern Kansas, canola yields increased from south to north. Fall stands were excellent where soil moisture was not limiting. Winter canola showed a tremendous capacity to survive harsh winter temperatures, especially where snow cover was limited.

**Table 1. Seed sources for entries in the 2010-2011 National Winter Canola Variety Trial**

Brand/name	Type <sup>1</sup>	Trait <sup>2</sup>	Release date	Seed treatment <sup>3</sup>	Brand/name	Type <sup>1</sup>	Trait <sup>2</sup>	Release date	Seed treatments
<b>Kansas State University Canola Breeding Program</b>					<b>University of Idaho (Developer)</b>				
Michael Stamm (mjstamm@ksu.edu)					Dr. Jack Brown (jbrown@uidaho.edu)				
KS4083	OP	---	---	H	<b>AAP USA (Marketer)</b>				
KS4426	OP	---	---	H	Alena Paier (alena.paier@aapltd.ie)				
KS4428	OP	---	---	H	Amanda	OP	---	---	H
Kiowa	OP	---	2008	H	Athena	OP	---	2000	H
Sumner	OP	SU	2003	H	Durola	OP	HEAR <sup>4</sup>	---	H
Riley	OP	---	2010	H					
Wichita	OP	---	1999	H					
<b>DL Seeds Inc. (Developer)</b>					<b>Croplan Genetics</b>				
Kevin McCallum (kevin.mccallum@dlseeds.ca)					Jay Bjerke (jmbjerke@landolakes.com)				
<b>Rubisco Seeds LLC (Marketer)</b>					HyClass 110W				
Claire Caldbeck (info@rubiscoseeds.com)					HyClass 115W				
Baldur	Hyb	---	2004	H	HyClass 125W				
Dimension	Hyb	---	2008	H	HyClass 154W				
Dynastie	Hyb	---	2007	H	OP	RR	2008		P
Flash	Hyb	---	2007	H	OP	RR/SURT	2008		H
Hornet	Hyb	---	2008	H	OP	RR/SURT	2010		H
Safran	Hyb	---	2008	H	Hyb	RR	2008		P
Sitro	Hyb	---	2007	H					
Visby	Hyb	---	2008	H					
<b>High Plains Crop Development</b>					<b>Monsanto / DEKALB</b>				
Dr. Charlie Rife (charlie@highplainscd.com)					John Fenderson (john.m.fenderson@monsanto.com)				
Claremore CL	OP	IMI	2010	H	DKW41-10				
HPX-7228	OP	---	---	H	DKW44-10				
HPX-7341	OP	---	---	H	DKW46-15				
					DKW47-15				
<b>MOMONT, France</b>					<b>Virginia State University Agricultural Experiment Station</b>				
Dr. Thierry Momont (tmomont@momont.com)					Dr. Harbans Bhardwaj (hbhardwj@vsu.edu)				
Chrome	Hyb	---	2010	H	Virginia				
Hybristar	Hyb	---	2006	H	VSX-3				
Hybrisurf	Hyb	---	2008	H	OP	---	2003		H
Hybrilux	Hyb	---	2009	H	OP	---	---		H
Kadore	OP	---	2007	H					
MH06E4	Hyb	---	---	H					
MH06E10	Hyb	---	---	H					
MH06E11	Hyb	---	---	H					
<b>Alabama A&amp;M University</b>					<b>Technology Crops International</b>				
Dr. Ernst Cebert (ernst.cebert@aamu.edu)					Blaise Boyle (Bboyle@techcrops.com)				
AAMU-6-07	OP	---	---	H	Rossini				
AAMU-33-07	OP	---	---	H	TCI805				
AAMU-62-07	OP	---	---	H	TCI806				
AAMU-64-07	OP	---	---	H	H	HEAR	2009		H
					H	HEAR	---		H
					H	HEAR	---		H

<sup>1</sup>OP = open pollinated, Hyb = hybrid

<sup>2</sup>RR = Roundup Ready, IMI = imidazolinone resistant, SU = sulfonylurea carryover tolerant, SURT = sulfonylurea carryover tolerant

<sup>3</sup>Seed treatment (H = Helix Xtra, P = Prosper FX)

<sup>4</sup>HEAR = High Erucic Acid Rapeseed. Contains greater than 2% erucic acid in the processed oil. Can be used only for industrial purposes. HEAR is not canola.

Garden City, KS

Cooperator: Johnathon Holman  
 Kansas State University

Planted: 8/31/2010  
 Harvested: 7/7/2011  
 Herbicides: 2 pt/a Roundup, 3 pt/a Prowl  
 Insecticides: 3.8 oz/a Warrior  
 Irrigation: 8 in.  
 Previous Crop: Wheat  
 Soil Test: N=12 ppm, P=57ppm  
 Fertilizer: 126-26-0-10 lb N-P-K-S fertilizer in fall  
 70-0-0 lb N-P-K fertilizer in spring

Soil Type: Ulysess-Richfield silt loam  
 Elevation: 2835 ft Latitude: 37° 99'N  
 Comments: Plants were shorter in stature this year because of high temperatures in the spring.

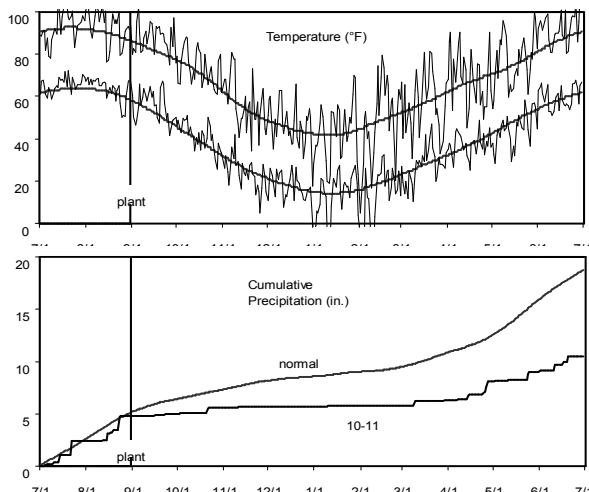


Table 2. Results for the 2011 National Winter Canola Variety Trial at Garden City, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Plant height (in.)		Test			
	2011	2010	Avg.	2011	2011	2010	Avg.	Moisture (%)	weight (lb/bu)	Protein (%)	Oil (%)	
<b>Alabama A&amp;M University</b>												
AAMU-33-07	1543	2392	1968	67	100	67	83	42	6.7	---	---	---
AAMU-6-07	1727	---	---	75	100	---	---	44	7.1	36.5	---	---
AAMU-62-07	1354	---	---	59	88	---	---	40	6.9	---	---	---
AAMU-64-07	1125	---	---	49	96	---	---	41	6.8	---	---	---
<b>Croplan Genetics</b>												
HyClass110W	1759	1651	1705	76	92	37	64	40	7.3	40.1	---	---
HyClass115W	2045	2591	2318	89	100	83	92	41	7.0	38.8	---	---
HyClass125W	2269	---	---	99	96	---	---	43	7.2	42.4	---	---
HyClass154W	1853	2354	2104	81	100	60	80	44	6.9	39.8	---	---
<b>DL Seeds Inc. (Developer) / Rubisco Seeds LLC (Marketer)</b>												
Baldur	2702	2755	2729	117	100	73	87	44	7.0	45.0	---	---
Dimension	2442	1861	2151	106	96	40	68	43	7.2	43.8	---	---
Dynastie	2606	2620	2613	113	100	60	80	44	8.1	43.1	---	---
Flash	2198	2082	2140	96	100	47	73	46	8.7	42.8	---	---
Hornet	2411	---	---	105	100	---	---	43	7.5	43.2	---	---
Safran	2978	2739	2859	129	100	67	83	42	7.6	47.8	---	---
Sitro	2737	2203	2470	119	100	53	77	43	7.7	44.3	---	---
Visby	2680	2888	2784	117	100	73	87	42	6.9	41.2	---	---
<b>High Plains Crop Development</b>												
HPX-501	1973	2409	2191	86	89	73	81	47	7.0	40.6	---	---
HPX-7228	2812	2783	2798	122	100	90	95	42	7.2	43.2	---	---
HPX-7341	2853	2627	2740	124	100	90	95	44	7.3	44.8	---	---
<b>Kansas State University</b>												
Kiowa	2128	2531	2330	93	96	87	91	46	7.3	37.3	---	---
KS4083	2546	---	---	111	100	---	---	45	7.2	40.5	---	---
KS4426	2337	2704	2520	102	100	87	93	44	7.1	43.7	---	---
KS4428	2919	---	---	127	97	---	---	44	7.5	44.6	---	---
Riley	2661	2981	2821	116	100	83	92	42	6.8	43.9	---	---
Sumner	2361	2897	2629	103	96	87	91	42	7.0	42.6	---	---
Wichita	2797	2805	2801	122	100	90	95	43	6.8	44.0	---	---
<b>MOMONT</b>												
Chrome	3016	2858	2937	131	100	70	85	45	7.2	45.4	---	---
Hybrilux	2022	---	---	88	89	---	---	44	7.3	36.0	---	---
Hybristar	2144	1389	1766	93	96	27	61	43	7.6	38.9	---	---
Hybrisurf	2864	1668	2266	125	96	27	61	41	6.3	47.5	---	---
Kadore	3301	3035	3168	144	100	87	93	39	7.5	47.2	---	---
MH06E10	2252	1362	1807	98	78	27	53	45	7.5	41.7	---	---
MH06E11	2172	1740	1956	94	88	43	66	44	7.3	37.1	---	---
MH06E4	2351	2368	2359	102	96	30	63	42	6.9	42.7	---	---

Table 2 continued. Results for the 2011 National Winter Canola Variety Trial at Garden City, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)		Plant height	Moisture	Test	
	2011	2010	Avg.	2011	2011	2010	Avg.	(in.)	(%)	weight (lb/bu)	Protein (%)	Oil (%)
<b>Monsanto / DEKALB</b>												
DKW41-10	1861	2192	2026	81	<b>100</b>	73	87	35	7.4	41.8	---	---
DKW44-10	2191	---	---	95	<b>100</b>	---	---	37	7.4	40.8	---	---
DKW46-15	2386	2431	2408	104	<b>96</b>	<b>80</b>	88	41	6.3	44.8	---	---
DKW47-15	1696	2246	1971	74	<b>100</b>	70	85	43	7.0	40.5	---	---
<b>Technology Crops International</b>												
Rossini	1693	---	---	74	<b>100</b>	---	---	42	7.0	38.9	---	---
<b>University of Idaho (Developer) / AAP USA (Marketer)</b>												
Amanda	2571	---	---	112	<b>96</b>	---	---	45	7.2	47.2	---	---
Athena	2320	---	---	101	<b>96</b>	---	---	44	7.8	41.6	---	---
Durola	2276	---	---	99	<b>96</b>	---	---	44	7.2	43.6	---	---
<b>Virginia State University</b>												
Virginia	2236	<b>2616</b>	2426	97	<b>100</b>	70	85	42	7.2	40.3	---	---
VSX-3	2365	---	---	103	<b>100</b>	---	---	42	7.2	40.2	---	---
<b>Mean</b>	2300	2348	2324	---	97	65	---	43	7.2	42.4	---	---
<b>CV</b>	15	12	13	---	5	15	---	3	7.4	6.9	---	---
<b>LSD (0.05)</b>	557	445	223	---	8	16	---	2	0.9	4.8	---	---

**Bold** - Superior LSD Group. Unless two entries differ by more than the LSD, little confidence can be placed in one being superior to the other.

Manhattan, KS

Cooperator: Michael Stamm  
 Kansas State University

Planted: 9/13/2010 at 5 lb/a in 9-in. rows  
 Swathed: 6/14/2011  
 Harvested: 6/22/2011  
 Herbicides: Assure II  
 Insecticides: Warrior  
 Irrigation: None  
 Previous Crop: Soybean  
 Soil Test: P=57 ppm, K=168 ppm  
 Fertilizer: 75-0-0-20 lb N-P-K-S fertilizer in fall  
 50-0-0 lb N-P-K fertilizer in spring  
 Soil Type: Smolan silt loam  
 Elevation: 1064 ft Latitude: 39° 12'N  
 Comments: Excellent yields. Good weather conditions throughout the entire growing season.

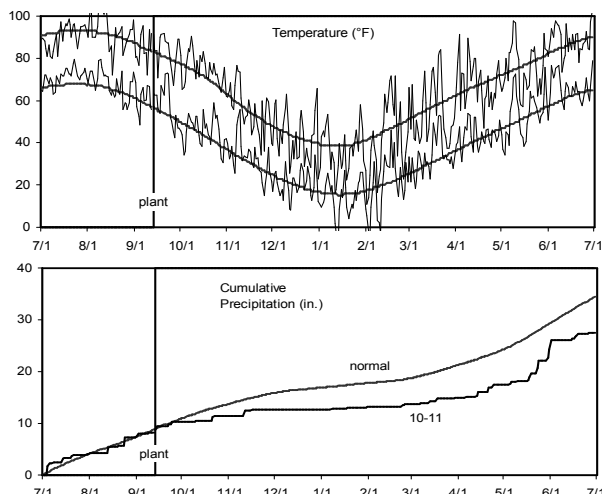


Table 3. Results for the 2011 National Winter Canola Variety Trial at Manhattan, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)			Plant height (in.)	Moisture (%)	Test weight (lb/bu)	Protein (%)	Oil (%)
	2011	2010	Avg.	2011	2011	2010	Avg.	2011	2010	Avg.	(in.)	(%)	(lb/bu)	(%)
<b>Alabama A&amp;M University</b>														
AAMU-33-07	2172	2385	2278	94	97	100	98	---	---	---	6.9	45.5	---	---
AAMU-6-07	2079	---	---	90	98	---	---	---	---	---	7.4	47.3	---	---
AAMU-62-07	1498	---	---	65	99	---	---	---	---	---	6.7	42.4	---	---
<b>Croplan Genetics</b>														
HyClass110W	1603	2210	1906	69	99	85	92	---	---	---	7.7	46.8	---	---
HyClass115W	1951	1231	1591	84	100	100	100	---	---	---	7.5	47.1	---	---
HyClass125W	2277	---	---	98	100	---	---	---	---	---	6.7	48.0	---	---
HyClass154W	2590	1584	2087	112	98	100	99	---	---	---	7.3	49.1	---	---
<b>DL Seeds Inc. (Developer) / Rubisco Seeds (Marketer)</b>														
Baldur	2590	1874	2232	112	99	98	98	---	---	---	8.1	49.1	---	---
Dimension	2149	2444	2297	93	99	90	94	---	---	---	7.3	49.1	---	---
Dynastie	2672	2717	2695	115	100	98	99	---	---	---	7.6	50.8	---	---
Flash	2602	1981	2292	112	100	90	95	---	---	---	7.4	49.1	---	---
Hornet	2439	---	---	105	100	---	---	---	---	---	8.0	49.5	---	---
Safran	2544	1823	2183	110	100	100	100	---	---	---	7.0	49.1	---	---
Sitro	2474	2671	2572	107	99	100	100	---	---	---	7.3	50.4	---	---
Visby	2858	2176	2517	123	99	100	100	---	---	---	7.0	48.9	---	---
<b>High Plains Crop Development</b>														
CLAREMORE CL	2312	2271	2292	100	99	100	100	---	---	---	7.1	49.6	---	---
HPX-7228	2463	2342	2402	106	100	100	100	---	---	---	7.3	50.4	---	---
HPX-7341	2405	2492	2448	104	99	100	100	---	---	---	7.1	49.6	---	---
<b>Kansas State University</b>														
Kiowa	2219	1407	1813	96	100	100	100	---	---	---	7.8	48.0	---	---
KS4083	2625	---	---	113	100	---	---	---	---	---	7.3	49.2	---	---
KS4426	2614	2175	2394	113	100	100	100	---	---	---	7.4	49.6	---	---
KS4428	2730	---	---	118	100	---	---	---	---	---	7.0	49.7	---	---
Riley	2602	1985	2294	112	100	98	99	---	---	---	7.9	49.1	---	---
Sumner	2207	2385	2296	95	100	100	100	---	---	---	7.3	49.5	---	---
Wichita	2927	2102	2515	126	100	100	100	---	---	---	7.3	48.9	---	---
<b>MOMONT</b>														
CHROME	2300	2289	2294	99	99	100	99	---	---	---	7.0	50.7	---	---
HYBRILUX	2811	---	---	121	96	---	---	---	---	---	7.7	48.5	---	---
HYBRISTAR	2416	2246	2331	104	97	90	93	---	---	---	7.0	50.0	---	---
HYBRISURF	2428	2377	2403	105	99	100	99	---	---	---	7.4	50.3	---	---
KADORE	2869	2040	2455	124	100	100	100	---	---	---	7.4	50.5	---	---
MH06E10	2416	2365	2390	104	90	83	86	---	---	---	7.2	50.8	---	---
MH06E11	2590	2230	2410	112	98	100	99	---	---	---	7.1	50.1	---	---
MH06E4	2323	2154	2239	100	99	95	97	---	---	---	8.2	49.4	---	---

Table 3 continued. Results for the 2011 National Winter Canola Variety Trial at Manhattan, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)			Plant height (in.)	Moisture (%)	Test weight (lb/bu)	Protein (%)	Oil (%)
	2011	2010	Avg.	2011	2011	2010	Avg.	2011	2010					
<b>Monsanto / DEKALB</b>														
DKW41-10	1777	1553	1665	77	<b>100</b>	100	100	---	---	---	8.3	49.3	---	---
DKW44-10	2021	---	---	87	<b>100</b>	---	---	---	---	---	7.5	48.8	---	---
DKW46-15	1905	1590	1747	82	<b>100</b>	100	100	---	---	---	6.8	47.1	---	---
DKW47-15	2126	1870	1998	92	<b>100</b>	100	100	---	---	---	6.6	48.0	---	---
<b>Technology Crops International</b>														
Rossini	2219	---	---	96	<b>100</b>	---	---	---	---	---	6.7	49.2	---	---
TCI805	1975	---	---	85	<b>98</b>	---	---	---	---	---	7.2	48.5	---	---
TCI806	<b>2614</b>	---	---	113	<b>98</b>	---	---	---	---	---	7.4	50.1	---	---
<b>University of Idaho (Developer) / AAP USA (Marketer)</b>														
Amanda	2149	---	---	93	<b>100</b>	---	---	---	---	---	7.3	51.1	---	---
Athena	1835	---	---	79	<b>100</b>	---	---	---	---	---	7.6	48.6	---	---
Durola	1557	---	---	67	<b>98</b>	---	---	---	---	---	7.2	49.7	---	---
<b>Virginia State University</b>														
Virginia	1905	2421	2163	82	<b>99</b>	98	98	---	---	---	7.7	48.1	---	---
V SX-3	<b>2381</b>	---	---	103	<b>99</b>	---	---	---	---	---	7.6	49.2	---	---
<b>MEAN</b>	2316	2063	---	---	99	97	98	---	---	---	7.3	49.0	---	---
<b>CV</b>	15	21	---	---	2	5	4	---	---	---	8.8	2.3	---	---
<b>LSD (0.05)</b>	576	NS	---	---	3	11	7	---	---	---	NS	1.9	---	---

**Bold** - Superior LSD Group. Unless two entries differ by more than the LSD, little confidence can be placed in one being superior to the other.



Marquette, KS

Cooperators: Dean Elvin  
Dale Ladd, Kansas State University

Planted: 9/20/2010 at 5 lb/a in 9-in. rows  
Swathed: 6/10/2011  
Harvested: 6/17/2011  
Herbicides: 9 oz/a Assure II  
Insecticides: None  
Irrigation: None  
Previous Crop: Wheat  
Soil Test: NA  
Fertilizer: 30-20-10-10 lb N-P-K-S fertilizer in fall  
60-0-0 lb N-P-K fertilizer in spring  
Soil Type: Roxbury silty clay loam  
Elevation: 1414 ft Latitude: 38° 34'N  
Comments: Canola yielded extremely well in a dry year. Some false chinch bug damage was observed.

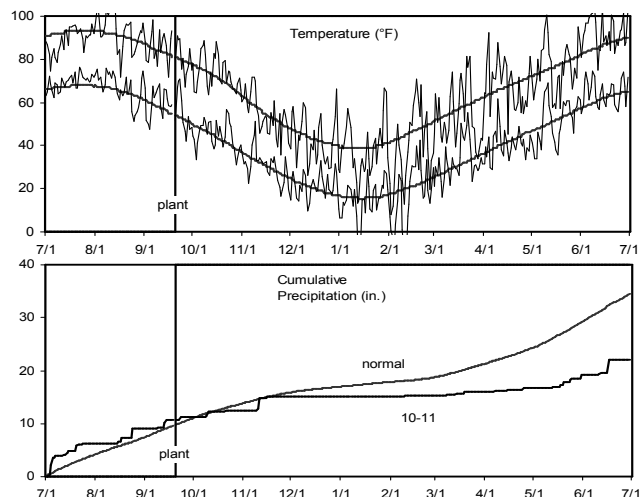


Table 4. Results for the 2011 National Winter Canola Variety Trial at Marquette, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Plant			Test		
	2011	2010	Avg.	2011	2010	Avg.	height (in.)	Moisture (%)	weight (lb/bu)	Protein (%)	Oil (%)	
<b>Croplan Genetics</b>												
HyClass115W	1928	1812	1870	92	100	99	---	7.4	47.4	---	---	
HyClass125W	1661	---	---	79	100	---	---	6.2	48.8	---	---	
HyClass154W	1522	1975	1749	73	100	99	---	7.7	48.9	---	---	
<b>DL Seeds Inc. (Developer) / Rubisco Seeds (Marketer)</b>												
Flash	1905	<b>2557</b>	2231	91	100	97	---	7.3	49.6	---	---	
Hornet	<b>2416</b>	---	---	115	100	---	---	7.5	50.3	---	---	
Safran	<b>2579</b>	2285	2432	123	100	98	---	6.9	49.7	---	---	
Sitro	<b>2207</b>	<b>2858</b>	2532	105	100	97	---	7.9	47.8	---	---	
Visby	<b>2428</b>	---	---	116	100	---	---	5.5	50.1	---	---	
<b>Kansas State University</b>												
Kiowa	<b>2149</b>	1733	1941	102	100	100	---	7.0	50.3	---	---	
KS4083	<b>2207</b>	---	---	105	100	---	---	6.5	50.8	---	---	
Riley	<b>2288</b>	1938	2113	109	100	100	---	6.1	50.0	---	---	
Sumner	<b>2300</b>	2006	2153	110	100	99	---	6.2	50.5	---	---	
Wichita	<b>2277</b>	1879	2078	109	100	99	---	6.3	49.9	---	---	
<b>MOMONT</b>												
CHROME	<b>2242</b>	---	---	107	97	---	---	5.1	50.4	---	---	
HYBRISTAR	1928	2054	1991	92	100	93	---	6.3	49.7	---	---	
HYBRISURF	2033	2334	2183	97	97	91	---	7.8	50.7	---	---	
<b>Monsanto / DEKALB</b>												
DKW41-10	1580	1570	1575	75	100	98	---	6.1	48.0	---	---	
DKW44-10	<b>2625</b>	---	---	125	100	---	---	7.7	49.1	---	---	
DKW46-15	1859	1895	1877	89	100	97	---	5.6	47.9	---	---	
DKW47-15	1812	1831	1822	86	100	99	---	6.0	48.4	---	---	
<b>MEAN</b>	2097	2063	---	---	100	98	---	6.7	49.4	---	---	
<b>CV</b>	17	14	---	---	2	3	---	19.7	2.3	---	---	
<b>LSD (0.05)</b>	587	411	---	---	NS	5	---	NS	1.9	---	---	

**Bold** - Superior LSD Group. Unless two entries differ by more than the LSD, little confidence can be placed in one being superior to the other.

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