



Current Report

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2010-2011 Winter Canola Performance Trials

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Production season

The 2010-2011 canola production season in Oklahoma was challenging due to wide-spread below normal precipitation. The southwestern part of the state dealt with extreme drought conditions, while the northwest part of the state dealt with less severe drought conditions. However, precipitation was still below normal in most places.

The 2010-2011 winter we experienced was one of our coldest winter in recent times and very little winter kill was observed as long as the planting date was within the recommended time frame. As long as the planting date recommendations are followed winter kill appears to not be a problem for most areas in Oklahoma when using recommended varieties/hybrids for Oklahoma.

Pest problems

Overall, pest problems were average in 2010-2011. Aphid pressure varied from region to region as usual. In the drier areas pest pressure tended to be greater. False chinch bugs were present in a few locations and had to be controlled.

Interpreting Data

Details of establishment and management of each test are listed in footnotes below the tables. Least significant differences (LSD) are listed at the bottom of all but the Performance Summary tables. Differences between varieties are significant only if they are equal to or greater than the LSD value. If a given variety out yields another variety by as much or more than the LSD value, then we are 95% sure that the yield difference is real, with only a 5% probability that the difference is due to chance alone. For example, if variety X is 500 lb/acre higher in yield than variety Y, then this difference is statistically significant if the LSD is 500 or less. If the LSD is 501 or greater, then we are less confident that variety X

really is higher yielding than variety Y under the conditions of the test.

The CV value or coefficient of variation, listed at the bottom of each table is used as a measure of the precision of the experiment. Lower CV values will generally relate to lower experimental error in the trial. Uncontrollable or immeasurable variations in soil fertility, soil drainage, and other environmental factors contribute to greater experimental error and higher CV values. Generally, a CV less than 15 for canola trials is considered good. This is an indication that less error was observed in the plots.

Results reported here should be representative of what might occur throughout the state but would be most applicable under environmental and management conditions similar to those of the tests. The relative yields of all forage legume varieties are affected by crop management and by environmental factors including soil type, winter conditions, soil moisture conditions, diseases, and insects.

Methods

Test locations were near Burlingotn, El Reno, Frederick, Fort Cobb, Lahoma, Hunter, Kingfisher, and Stillwater. The location at Frederick, Fort Cobb, and Hunter, OK was lost due to environmental conditions.

Plots were 4 feet wide by 30 feet long and seeded at a rate of 5 lb/ac. Soil characteristics and fertilizer applied is indicated for each location on later pages. Plots were kept pest free for the duration of the growing season. Entire plots were dessicated and harvested with a small plot combine.

Additional information on the Web

A copy of this publication as well as additional variety information and more information on canola management can be found at: www.canola.okstate.edu/

Table 1. Sources of seed for the 2010-2011 Winter Canola Performance Tests.

<i>Name/Address</i>	<i>Contact</i>	<i>Entries</i>
Dekalb/Monsanto 540 Dickinson St P.O.Box 47 Kiowa,KS 67070	620-825-4315	DKW 46-15 DKW 41-10 DKW 47-15 DKW 44-10
DL Seeds Box 2499 Mordien, MB Canada	204-331-2360	BALDUR VISBY
Kansas State Univ. 2004 Throckmorton Plant Sciences Center Manhattan, KS 66506	785-532-3871	KIOWA RILEY SUMNER WICHITA KS4083 KS4423 KS4426 KS4428
Croplan Genetics 525 55th St. SE Minot, ND 58701	701-852-3556	Hyclass 110W Hyclass 115W Hyclass 125W Hyclass 154W
Technology Crops Int. 7996 North Point Blvd Suite 100 Winston-Salem, NC 27106	336-354-1144	ROSSINI (High Erucic Acid) LSCE 805 (High Erucic Acid) LSCE 806 (High Erucic Acid)

The authors would like to thank the following individuals for their cooperation in gathering information for this current report:

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Jeff Scott-Lamont, OK

Cooperating County Educators

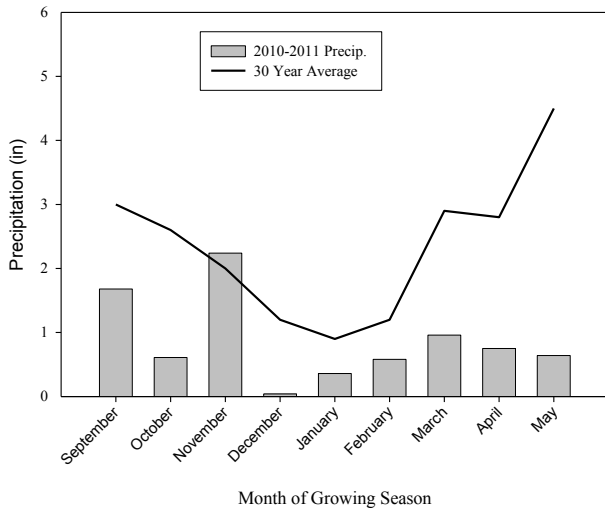
Jeff Bedwell, Garfield County
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Aaron Henson, Tillman County
Tommy Puffinbarger, Alfalfa County
Brad Tipton, Canadian County

Cooperating Station Superintendents

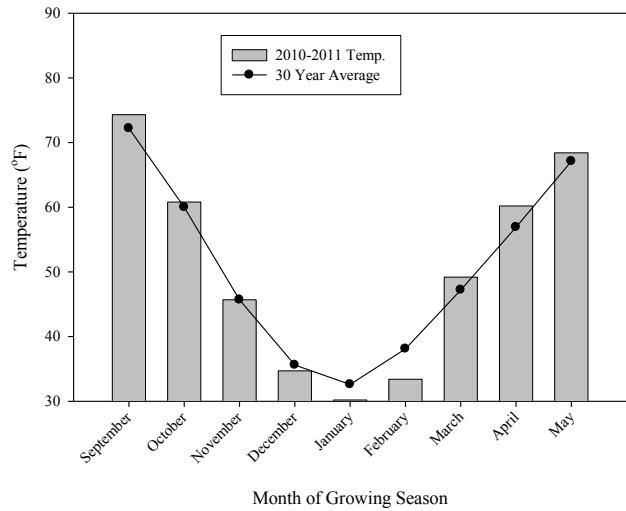
Erich Wehrenberg, Agronomy Research Station, Stillwater
Bobby Weidenmaier, Caddo Research Station, Fort Cobb
Ray Sidwell, North Central Research Station, Lahoma

Burlington, Okla.

Burlington Precipitation



Burlington Temperature



Observations:

An excellent stand was achieved in the fall. Plants were four to five leaves going into winter dormancy. Winter survival was excellent. Yields were good given the lack of precipitation since December. Seed yields at Burlington averaged 2,391 lb/ac in the Glyphosate resistant trial and 2,685 lb/ac in the conventional test. Plots were desiccated on May 31 and direct harvested on June 6.

Table 2. Information on soil properties and management practices for Burlington, OK in 2010-2011.

Date Planted	27-Sep	
Soil Moisture at Planting	Good	
Soil Characteristics		Fertilizer Applied (lbs/ac)
Dale Silt Loam		Fall Nitrogen 30
		Spring Nitrogen 100
		Total Nitrogen 130
		P ₂ O ₅ 0
		K ₂ O 0
		Sulfur 10
Desiccated	31-May	
Harvested	6-Jun	

Table 3. Selected cultivar characteristics and seed yields for the glyphosate tolerant winter canola performance trial at Burlington, OK in 2010-2011.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	--- lb/ac ---
DWK 44-10	100	100	38	0	3,055
HYCLASS 110W	100	100	38	0	2,567
DKW 41-10	100	100	34	0	2,483
HYCLASS 115W	100	100	38	0	2,258
HYCLASS 154W	100	100	41	0	2,250
DKW 46-15	100	100	39	0	2,235
DKW 47-15	100	100	41	0	2,170
HYCLASS 125W	100	100	39	0	2,106
Mean					2,391
LSD (P=0.05)					387
CV					10

† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

Table 4. Selected cultivar characteristics and seed yields for the conventional winter canola performance trial at Burlington, OK in 2010-2011.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	--- lb/ac ---
WICHITA	100	100	40	0	3,080
KS4423	100	100	37	0	2,907
SUMNER	100	100	37	0	2,848
KS4426	100	100	36	0	2,831
RILEY	100	100	34	0	2,824
KS4428	100	100	41	0	2,819
KIOWA	100	100	41	0	2,704
KS4083	100	100	41	0	2,679
BALDUR	100	100	41	0	2,642
ROSSINI§	100	100	41	0	2,573
LSCE805§	100	100	44	0	2,384
VISBY	100	100	36	0	2,349
LSCE806§	100	100	42	0	2,261
Mean					2,685
LSD (P=0.05)					358
CV					10

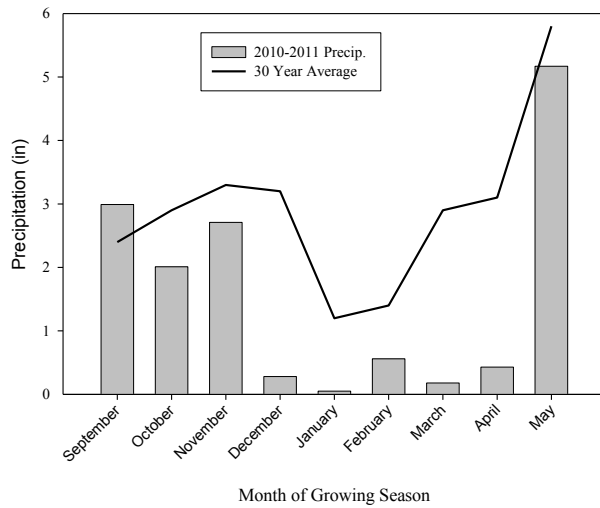
† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

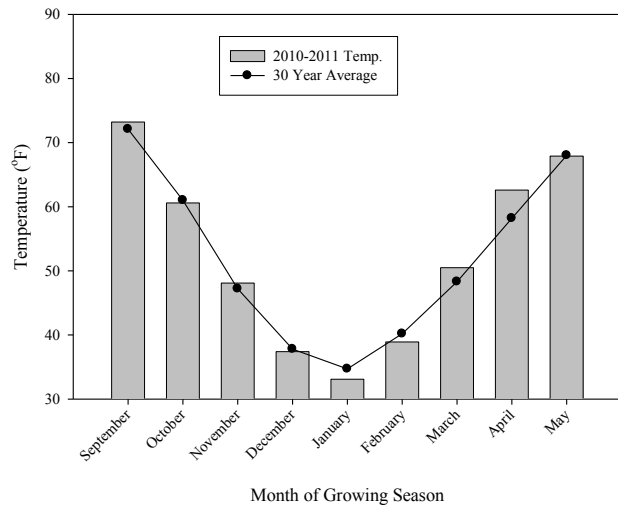
§ High erucic acid rapeseed, can only be used for industrial purposes.

El Reno, Okla.

El Reno Precipitation



El Reno Temperature



Observations:

An excellent stand was achieved in the fall. Plants were six to seven leaves going into winter dormancy. Winter survival was excellent. Yields were good given the lack of precipitation from Dec. through April. Seed yields at El Reno averaged 1,841 lb/ac in the Glyphosate resistant trial and 2,155 lb/ac in the conventional trial when averaged across all varieties/hybrids. Plots withstood some severe wind during the last week of May but shatter loss was minimal with the exception of DKW41-10. This is a result of the relatively short maturity of this variety compared to the other varieties. Please take this into consideration when viewing results. Plots were desiccated on May 25 and direct harvested on May 31.

Table 5. Information on soil properties and management practices for El Reno, OK in 2010-2011.

Date Planted	29-Sep	
Soil Moisture at Planting	Good	
Soil Chemical Characteristics		Fertilizer Applied (lbs/ac)
Norge Silt Loam		Fall Nitrogen 30
Soil pH	5.8	Spring Nitrogen 100
Soil Test P Index	43	Total Nitrogen 130
Soil Test K Index	402	P ₂ O ₅ 0
Nitrate-N (lbs N/ac)	33	K ₂ O 0
Sulfur (lbs/ac)	22	Sulfur 10
Desiccated	25-May	
Harvested	31-May	

Table 6. Selected cultivar characteristics and seed yields for the glyphosate tolerant winter canola performance trial at El Reno, OK in 2010-2011.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	----- lb/ac -----
HYCLASS 154W	100	100	43	2	2,365
HYCLASS 115W	100	100	44	4	1,959
DKW 47-15	100	100	44	2	1,914
HYCLASS 110W	100	100	44	4	1,841
HYCLASS 125W	100	100	43	3	1,756
DWK 44-10	100	100	43	7	1,752
DKW 46-15	100	100	43	2	1,683
DKW 41-10	100	100	37	13	1,455
Mean					1,841
LSD (P=0.05)					523
CV					19

† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

Table 7. Selected cultivar characteristics and seed yields for the conventional winter canola performance trial at El Reno, OK in 2010-2011.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	----- lb/ac -----
ROSSINI§	100	100	47	1	2,575
KIOWA	100	100	47	3	2,369
KS4083	100	100	49	2	2,232
KS4426	100	100	46	2	2,186
BALDUR	100	100	46	3	2,167
KS4428	100	100	45	2	2,130
LSCE805§	100	100	474	2	2,100
WICHITA	100	100	43	2	2,095
SUMNER	100	100	45	4	2,094
VISBY	100	100	45	3	2,065
RILEY	100	100	42	2	2,046
KS4423	100	100	43	4	1,984
LSCE806§	100	100	48	1	1,972
Mean					2,155
LSD (P=0.05)					510
CV					17

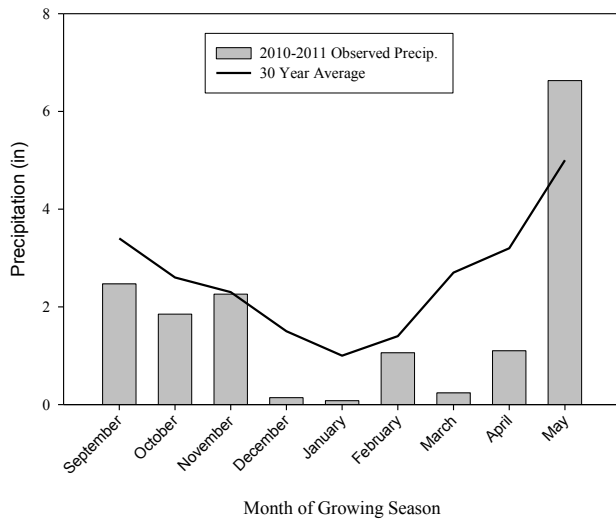
† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

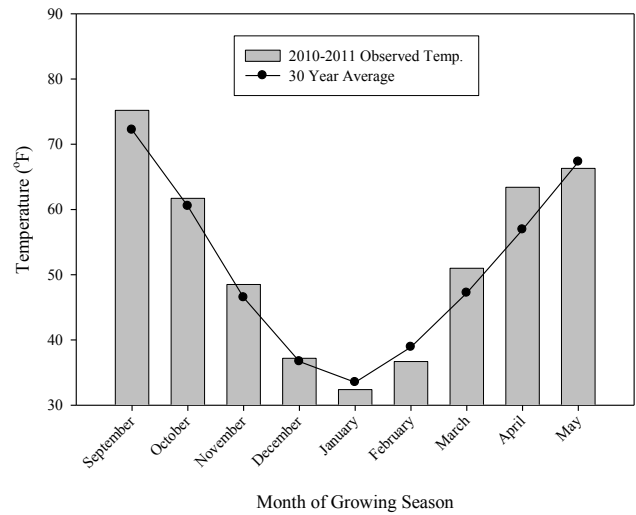
§ High erucic acid rapeseed, can only be used for industrial purposes.

Kingfisher, Okla.

Kingfisher Precipitation



Kingfisher Temperature



Observations:

An excellent stand was achieved in the fall. Plants were six to seven leaves going into winter dormancy. Winter survival was excellent. Yields were good given the lack of precipitation from Dec. through April. Seed yields at Kingfisher averaged 1,481 lb/ ac in the Glyphosate resistant trial. Plots withstood some severe wind during the last week of May and a hail event that resulted in shatter loss. The earlier maturing varieties had more shatter since they were more mature. Please take this into consideration when viewing results. Plots were desiccated on May 23 and direct harvested on May 31. No conventional test was harvested at Kingfisher due to herbicide damage.

Table 8. Information on soil properties and management practices for Kingfisher, OK in 2010-2011.

Date Planted	20-Sep	
Soil Moisture at Planting	Good	
Soil Chemical Characteristics		Fertilizer Applied (lbs/ac)
Kingfisher Silt Loam		Fall Nitrogen 30
		Spring Nitrogen 100
		Total Nitrogen 130
		P ₂ O ₅ 0
		K ₂ O 0
		Sulfur 10
Desiccated	25-May	
Harvested	31-May	

Table 9. Selected cultivar characteristics and seed yields for the glyphosate tolerant winter canola performance trial at Kingfisher, OK in 2010-2011.

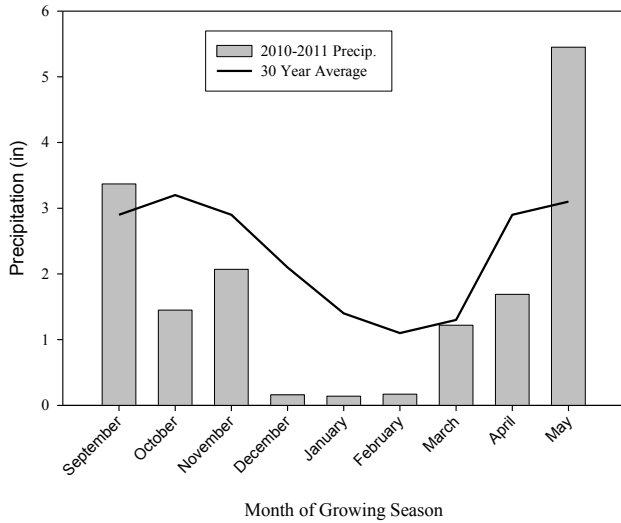
<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	----- lb/ac -----
HYCLASS 125W	100	100	37	10	1,886
DKW 47-15	100	100	41	8	1,801
HYCLASS 154W	100	100	43	5	1,798
DKW 46-15	100	100	35	10	1,757
HYCLASS 115W	100	100	39	20	1,335
HYCLASS 110W	100	100	37	23	1,311
DWK 44-10	100	100	34	20	1,194
DKW 41-10	100	100	31	50	769
Mean					1,481
LSD (P=0.05)					269
CV					14

† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

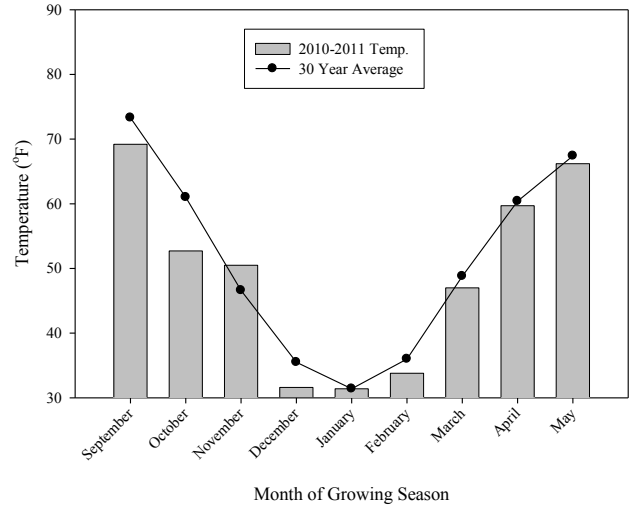
‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

Lahoma, OK

Lahoma Precipitation



Lahoma Temperature



Observations:

An excellent stand was achieved in the fall. Plants were four to five leaves going into winter dormancy. Winter survival was excellent at Lahoma. Timely rains in the spring increased yield potential even though the winter months were extremely dry. Seed yields at Lahoma averaged 3,529 lb/ac in the Glyphosate resistant trial and 2,918 lb/ac in the conventional trial when averaged across all varieties/hybrids. Insecticide was applied once in the spring. Plots were desiccated on May 31 and direct harvested on June 3.

Table 10. Information on soil properties and management practices for Lahoma, OK in 2010-2011.

Date Planted	27-Sep	
Soil Moisture at Planting	Good	
Soil Chemical Characteristics		Fertilizer Applied (lbs/ac)
Norge Silt Loam		Fall Nitrogen 30
Soil pH	7.8	Spring Nitrogen 100
Soil Test P Index	22	Total Nitrogen 130
Soil Test K Index	408	P ₂ O ₅ 0
Nitrate-N (lbs N/ac)	38	K ₂ O 0
Sulfur (lbs/ac)		Sulfur 10
Desiccated	31-May	
Harvested	3-Jun	

Table 11. Selected cultivar characteristics and seed yields for the glyphosate tolerant winter canola performance trial at Lahoma, OK in 2010-2011, 2 -year, and 3-year average.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>	<i>2-yr Average Seed Yield</i>	<i>3-yr Average Seed Yield</i>
	----- % -----		- in -	--- % ---	----- lb/ac -----		
DWK 44-10	100	100	45	1	3,916	3,260	3,300
HYCLASS 110W	100	100	45	1	3,666	2,703	-
HYCLASS 125W	100	100	46	1	3,661	2,949	3,041
HYCLASS 115W	100	100	46	1	3,638	2,855	-
DKW 47-15	100	100	49	0	3,576	2,833	2,955
HYCLASS 154W	100	100	48	1	3,570	2,846	3,144
DKW 46-15	100	100	48	1	3,521	2,840	2,911
DKW 41-10	100	100	39	5	2,681	2,136	2,276
Mean					3,529	2,803	2,865
LSD (P=0.05)					298	540	542
CV					6.5		

† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

Table 12. Selected cultivar characteristics and seed yields for the conventional winter canola performance trial at Lahoma, OK in 2010-2011, 2-year, and 3-year average.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>	<i>2-yr Average Seed Yield</i>	<i>3-yr Average Seed Yield</i>
	----- % -----		- in -	--- % ---	----- lb/ac -----		
KS4426	100	100	46	0	3,645	-	-
SUMNER	100	100	47	1	3,397	2,776	2,715
BALDUR	100	100	46	1	3,219	2,854	-
WICHITA	100	100	47	0	3,004	2,904	2,764
KIOWA	100	100	47	1	2,949	-	-
RILEY	100	100	37	1	2,919	2,557	-
KS4428	100	100	41	1	2,900	-	-
ROSSINI§	100	100	44	1	2,899	2,575	-
KS4083	100	100	50	1	2,885	-	-
KS4423	100	100	43	1	2,871	-	-
VISBY	100	100	38	1	2,821	2,755	2,818
LSCE806§	100	100	43	0	2,262	-	-
LSCE805§	100	100	43	0	2,165	-	-
Mean					2,918	2,737	2,766
LSD (P=0.05)					846	ns	ns
CV					20		

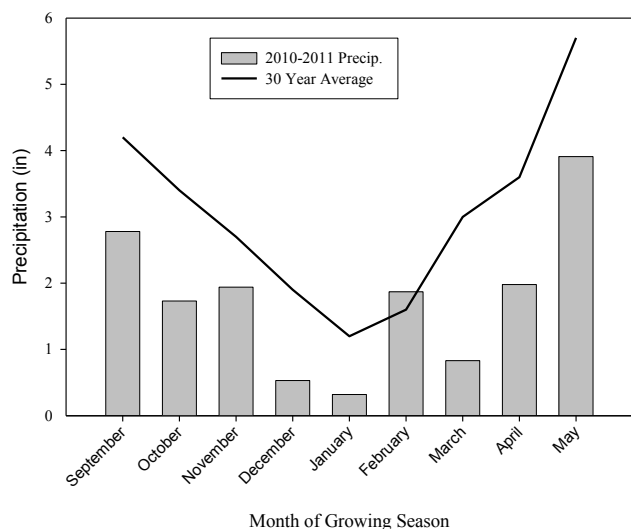
† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

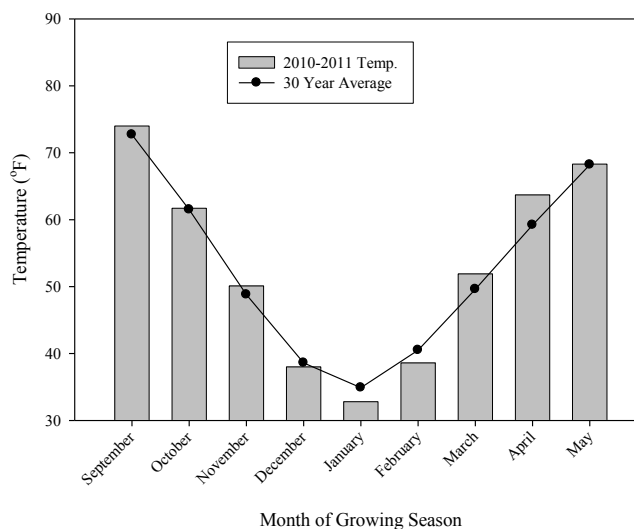
§ High erucic acid rapeseed, can only be used for industrial purposes.

Stillwater, Okla.

Stillwater Precipitation



Stillwater Temperature



Observations:

An excellent stand was achieved in the fall. Plants were four to five leaves going into winter dormancy. Winter survival was excellent. Yields were good given the lack of precipitation from Dec. through April. Seed yields at Stillwater averaged 2,610 lb/ac in the Glyphosate resistant trial and 2,950 lb/ac in the conventional test. Plots were desiccated on May 25 and direct harvested on June 1.

Table 13. Information on soil properties and management practices for Stillwater, OK in 2010-2011.

Date Planted	1-Oct	
Soil Moisture at Planting	Good	
Soil Chemical Characteristics		Fertilizer Applied (lbs/ac)
Easpur Loam		Fall Nitrogen 30
Soil pH	6.1	Spring Nitrogen 100
Soil Test P Index	115	Total Nitrogen 130
Soil Test K Index	197	P ₂ O ₅ 0
Nitrate-N (lbs N/ac)	10	K ₂ O 0
Sulfur (lbs/ac)	-	Sulfur 10
Desiccated	25-May	
Harvested	1-Jun	

Table 14. Selected cultivar characteristics and seed yields for the glyphosate tolerant winter canola performance trial at Stillwater, OK in 2010-2011.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	--- lb/ac ---
HYCLASS 115W	100	100	41	0	2,906
DWK 44-10	100	100	40	0	2,832
DKW 47-15	100	100	39	0	2,770
HYCLASS 125W	100	100	40	0	2,732
HYCLASS 110W	100	100	38	0	2,668
DKW 46-15	100	100	39	0	2,494
HYCLASS 154W	100	100	42	0	2,451
DKW 41-10	100	100	31	5	2,028
Mean					2,610
LSD (P=0.05)					547
CV					16

† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

Table 15. Selected cultivar characteristics and seed yields for the conventional winter canola performance trial at Stillwater, OK in 2010-2011.

<i>Cultivar</i>	<i>Fall Stand Rating†</i>	<i>Winter Survival‡</i>	<i>Height</i>	<i>Estimated Shatter Loss</i>	<i>Seed Yield 2010-2011</i>
	----- % -----		- in -	--- % ---	--- lb/ac ---
ROSSINI§	100	100	48	0	3727
KS4428	100	100	41	0	3126
KS4083	100	100	49	0	3083
VISBY	100	100	44	0	2988
SUMNER	100	100	46	0	2961
BALDUR	100	100	42	0	2931
WICHITA	100	100	45	0	2925
KS4423	100	100	46	0	2914
KS4426	100	100	42	0	2882
RILEY	100	100	44	0	2852
KIOWA	100	100	47	0	2774
LSCE805§	100	100	53	0	2657
LSCE806§	100	100	52	0	2530
Mean					2950
LSD (P=0.05)					476
CV					12

† Fall stand rating was based on a 0 to 100% scale with 100% being a full stand.

‡ Winter survival ratings were taken in the spring after winter dormancy was broken (rated as percent of the plot that survived).

§ High erucic acid rapeseed, can only be used for industrial purposes.

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