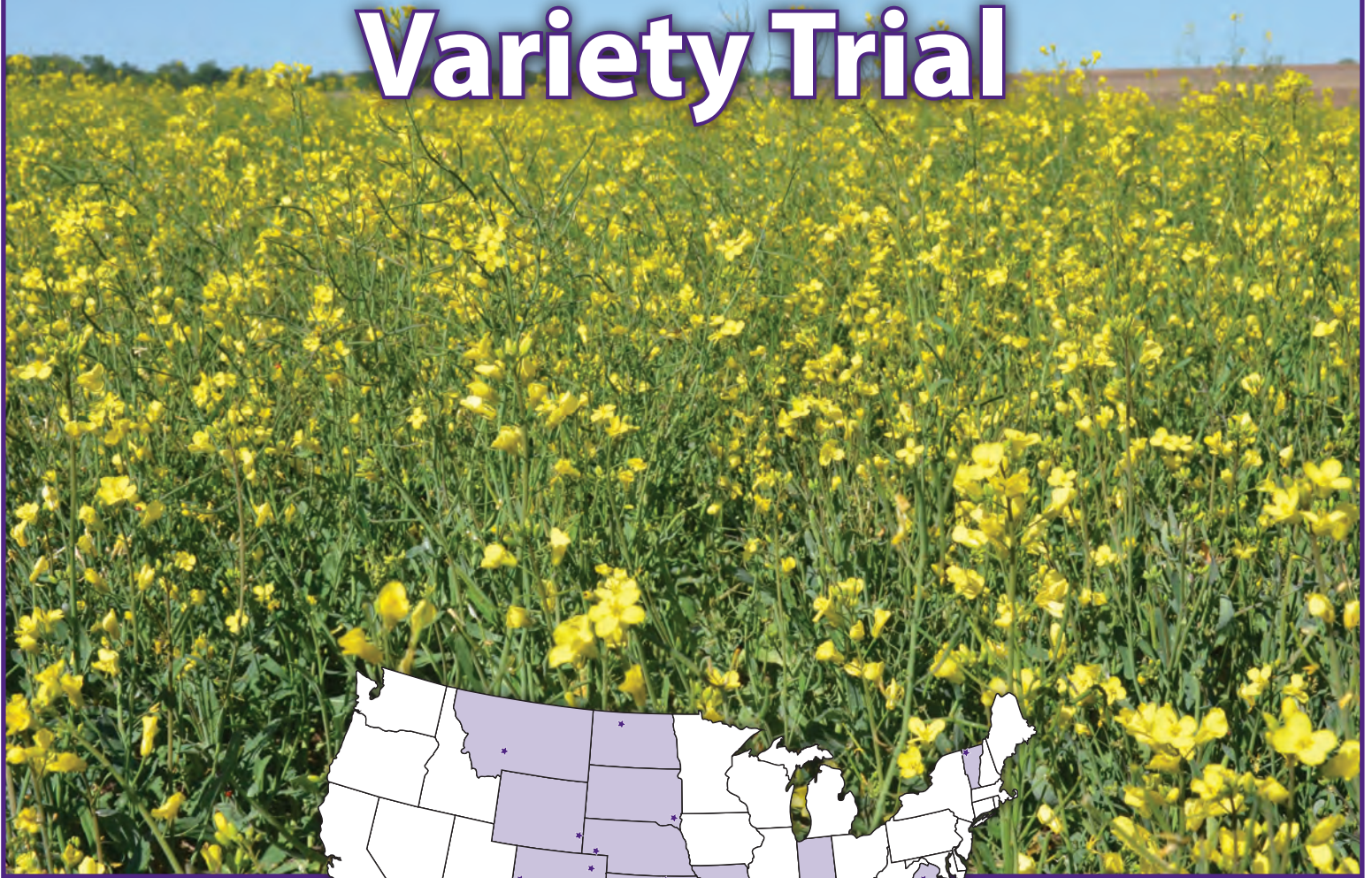


2016

National Winter Canola Variety Trial



Report of Progress 1134

K-STATE
Research and Extension

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

2016 National Winter Canola Variety Trial

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Contribution no. 18-144-S from the Kansas Agricultural Experiment Station

2016 National Winter Canola Variety Trial

Objectives

The objectives of the National Winter Canola Variety Trial (NWCVT) are to evaluate the performance of released and experimental varieties, determine where these varieties are best adapted, and increase the visibility of winter canola across the United States. Breeders, marketers, and producers use data collected from the trials to make informed variety selections. The NWCVT is planted at locations in the Great Plains, Midwest, northern U.S., and Southeast.

Procedures

Seed for the NWCVT was distributed to 43 cooperators in 18 states for the 2015–2016 growing season. The locations receiving seed are illustrated on the map on the front cover. See the back cover for a listing of participating cooperators. Of the 48 entries tested, 30 are commercially available and 18 are experimental. These entries were provided by 11 global seed suppliers. All entries in the trial were treated with insecticide and fungicide seed treatments to control insects and seedling diseases through the late fall and early winter months.

Open-pollinated and hybrid cultivars were planted in separate, side-by-side trials at sites where all 48 entries were planted. Results for each trial were analyzed separately and are presented in different tables. Differences between open-pollinated and hybrid yields can be observed, but direct comparisons between the two cultivar types cannot be made with the statistics provided.

Management guidelines were provided to cooperators, but previous growing experience influenced final management decisions. All trials were planted in small research plots (approximately 100 ft²) with three or four replications. Cultural practices, site descriptions, growing conditions, and

performance data are provided for each harvested location. Yield results for some locations include 2-year summaries. Results are presented alphabetically by seed supplier.

The Brassica Breeding and Research Program at the University of Idaho performed total oil analysis for all sites using NIR spectroscopy.

The NWCVT continues in the 2016–2017 growing season and includes 36 entries. Eight seed suppliers contributed to the trial, and it was distributed to 34 locations in 16 states.

2015–2016 Growing Conditions

Temperature and precipitation data are shown at the top of the page for each location. Thick 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 “15-16” represents actual precipitation. If weather information was not provided, data were taken from a nearby town.

In general, temperatures during the 2015–2016 growing season were mild and moisture was above normal. Saturated soils were common in December and January in Kansas. A dry spring and late freezes at flowering reduced plant height and limited pod set at some locations. A cooler May provided ideal conditions for grain filling and resulted in high yields.

Test Sites and Results

Seventeen harvested locations in 14 states are included in this report: Shorter, AL; Fruita, CO; Vincennes, IN; Conway Springs, Hutchinson, and Kiowa, KS; Bozeman, MT; Scottsbluff, NE;

Clovis, NM; Chickasha and Goodwell, OK; Beresford, SD; Ashland City and Springfield, TN; Bushland, TX; Orange, VA, and Alburgh, VT. Walsh, CO, and Manhattan, KS, were harvested but the data was not published because of poor quality.

Twenty-four locations were not harvested because of numerous causes including inadequate stand establishment, poor vernalization, winterkill, too much rainfall at harvest, rabbit feeding, or hail damage.

The “percentage of test average” yield calculation is included in the results. This relative yield calculation allows for some comparison of performance across environments. Entries yielding more than 100% of the test average across multiple locations merit some consideration.

Overall, yields were outstanding because of the mild winter temperatures and adequate rainfall. Open pollinated trial averages ranged from 1,518 to 2,839 lb/acre. Hybrid trial averages ranged from 2,017 to 3,948 lb/acre. One trial site in Tennessee averaged 4,737 lb/acre. Caution should be used when evaluating data from locations with coefficient of variation (CV) values greater than 20. Lower values suggest less error was observed at the location. Inestimable differences in soil type, weather, and environmental conditions play a part in increasing experimental error and CV values. Four trials have CV values of greater than 20.

Variety Selection

Winter hardiness is an important trait to consider when selecting a winter canola variety. This trait has been improved, but variability still exists where differential winterkill occurs. Winter canola varieties should show consistent survival across multiple years and locations. Other traits to consider include herbicide resistance, tolerance to carryover from sulfonylurea herbicides, maturity, disease tolerance, yield potential, and oil content. More than one year of data should be used to make an informed variety

selection decision. Canola weighs 50 lb/bushel, so a 2,000 lb/acre yield is 40 bushels/acre.

Table 29 provides information on the tolerance of varieties to the blackleg fungus. The 2015–2016 blackleg nursery was planted at Perkins, OK, by Oklahoma State University. Data are provided with permission. View Table 30 for seed sources, contact information, brand names, and traits of the winter canola varieties and hybrids grown in the NWCVT.

Acknowledgments

This work was funded in part by the Supplemental and Alternative Crops Competitive Grants Program, which is administered by the U.S. Department of Agriculture-National Institute of Food and Agriculture, and the Kansas Agricultural Experiment Station. Assistant scientist Scott Dooley assisted with organizing, packaging, planting, harvesting, and data collection. Sincere appreciation is expressed to all participating researchers and seed suppliers who have a vested interest in expanding winter canola acres and increasing production in the U.S.

Shorter, Alabama

Dennis Delaney
Auburn University

Planted: 11/17/2015 in 7-in. rows
 Seeding Rate OP: 500,000 seeds/acre
 Seeding Rate Hybrid: 300,000 seeds/acre
 Harvested: 7/13/2016 and 7/17/2016
 Herbicides: 1.5 pt/a Treflan
 Insecticides: 7 oz/a Admire Pro and 5 oz/a Tundra
 Irrigation: 1.3 inches in June 2016
 Previous crop: N/A
 Soil test: 40 lb/a P, 138 lb/a K, pH=6.5
 Fertilizer: 30-30-30 lb N-P-K fertilizer in fall
 120-0-0-18-1 lb N-P-K-S-B fertilizer in spring
 Soil type: Marvyn sandy loam
 Elevation: 220 ft Latitude: 32° 24'N
 Comments: Late planted with very heavy rainfall during the winter months. Disease pressure was significant.

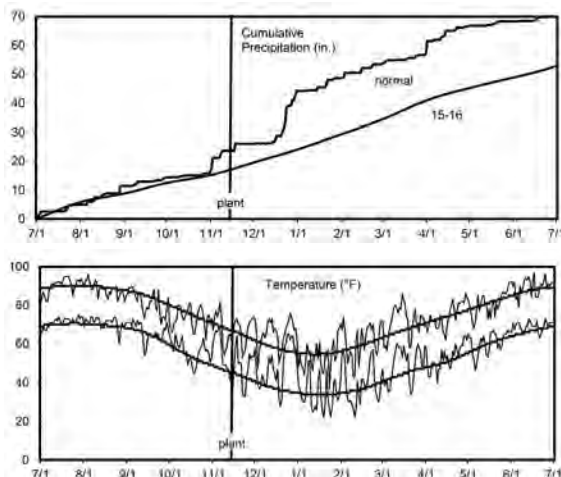


Table 1. Results for the 2016 National Winter Canola Variety Trial at Shorter, AL

Name	Type ¹	Yield (lb/a)			Yield (% of test avg.)			Plant			Cercospora		
		2016	2015	2-yr.	2016	2016	2015	2-yr.	height (in.)	50% bloom (DOY)	Maturity (DOY)	Leaf Spot (1-10)	Blackrot (1-10)
DL Seeds Inc.													
Einstein	H	1271	---	---	123	---	---	---	51	90	153	1	2
Popular	H	1478	---	---	144	---	---	---	54	92	151	2	1
DuPont Pioneer													
Exp1302	H	454	---	---	44	---	---	---	59	109	158	1	3
PX112	H	437	---	---	42	---	---	---	56	117	164	1	1
KWS MOMONT													
Hekip	H	1095	1945	1520	106	---	---	---	54	87	153	1	3
Helix	H	579	---	---	56	---	---	---	60	104	159	2	2
MH11J41	H	790	1679	1234	77	---	---	---	59	96	158	2	1
MH12AC17	H	1446	---	---	140	---	---	---	49	87	150	1	3
MH12AQ37	H	1285	---	---	125	---	---	---	58	90	151	3	2
MH12AX37	H	1159	1783	1471	113	---	---	---	59	90	154	1	2
MH12AY27	H	630	---	---	61	---	---	---	60	107	159	1	2
Monsanto / DEKALB													
DK Imiron CL	H	1035	2002	1519	101	---	---	---	60	101	157	1	2
DK Imistar CL	H	1266	2052	1659	123	---	---	---	63	98	156	2	3
Rubisco Seeds LLC													
Edimax CL	H	1072	2009	1540	104	---	---	---	63	102	159	1	4
Hornet	H	1108	2289	1698	108	---	---	---	61	99	156	1	3
Inspiration	H	1230	---	---	119	---	---	---	60	94	154	1	4
Mercedes	H	1044	---	---	101	---	---	---	59	98	154	1	4
Virginia State University													
Virginia	OP	1035	---	---	101	---	---	---	50	91	151	1	3
V SX-3	OP	1086	---	---	106	---	---	---	50	90	151	2	4
V SX-4	OP	1088	---	---	106	---	---	---	51	89	151	1	4
Mean		1029	1952	---	---	---	---	---	57	97	155	1	3
CV		16	14	---	---	---	---	---	3	2	1	---	41
LSD (0.05)		266	443	---	---	---	---	---	3	3	3	---	2

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.

¹Type: H=hybrid, OP=open-pollinated

Orange, Virginia

Wade Thomason and Steve Gulick
Virginia Tech University

Planted: 9/18/2015
Seeding Rate OP: 500,000 seeds/acre
Seeding Rate Hybrid: 300,000 seeds/acre
Harvested: 6/20/2016
Herbicides: 1 pt/a Treflan
Insecticides: None
Irrigation: None
Previous crop: N/A
Soil test: N/A
Fertilizer: 30-80-80-0 lb N-P-K-S fertilizer in fall
60-0-0-0 lb N-P-K-S fertilizer in spring
Soil type: Davidson silty clay
Elevation: 510 ft Latitude: 38° 13'N
Comments: A late spring freeze reduced yields.

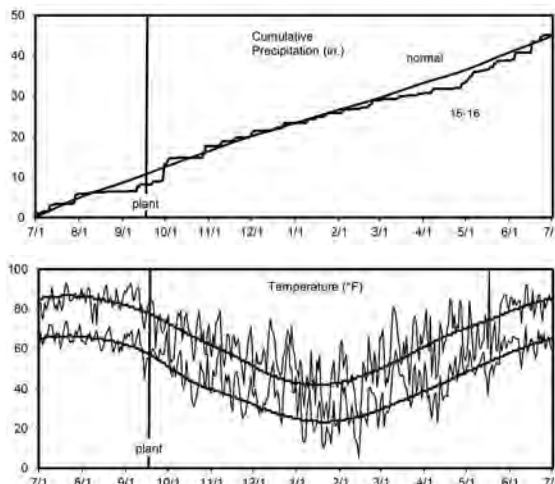


Table 2. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Orange, VA

Name	Yield (lb/a) ¹			Yield (% of test avg.)			Plant		Test			
	2016	2015	2-yr.	2016	2016	2015	2-yr.	height (in.)	Moisture (%)	weight (lb/bu)	Protein (%)	Oil (%)
CROPLAN by WinField												
HyCLASS115W	2234	2425	2329	98	---	---	---	53	8.9	46.4	27.9	38.6
HyCLASS125W	2055	2322	2189	91	---	---	---	52	8.9	46.7	28.2	37.7
HyCLASS220W	2390	2208	2299	105	---	---	---	52	8.6	46.6	27.5	38.6
HyCLASS225W	2131	1949	2040	94	---	---	---	53	8.9	47.0	27.3	39.3
High Plains Crop Development												
Claremore	2746	2277	2511	121	---	---	---	52	8.6	48.1	27.5	38.6
Kansas State University												
KS4506	2519	---	---	111	---	---	---	53	9.1	47.5	27.2	38.7
KSR07363	2072	---	---	91	---	---	---	53	8.5	46.7	27.7	38.3
KSUR1211	2218	---	---	98	---	---	---	53	8.7	48.3	27.5	38.7
Riley	2167	2561	2364	95	---	---	---	53	8.5	47.7	27.2	38.9
Sumner	2298	2361	2330	101	---	---	---	54	8.3	48.8	28.4	39.1
Wichita	2420	2460	2440	107	---	---	---	53	8.4	48.2	27.9	38.2
KWS MOMONT												
Kadore	2209	---	---	97	---	---	---	53	9.1	48.4	27.3	35.9
Quartz	3142	---	---	138	---	---	---	53	9.2	47.1	26.2	39.5
Monsanto / DEKALB												
DKW45-25	2567	2216	2392	113	---	---	---	53	9.2	47.2	26.9	38.0
DKW41-10	1248	2195	1721	55	---	---	---	45	8.7	44.2	30.0	35.7
DKW44-10	1857	2141	1999	82	---	---	---	45	8.9	46.9	27.3	37.8
DKW46-15	1958	2295	2127	86	---	---	---	53	8.5	45.9	26.0	40.7
DKW47-15	2349	1968	2159	103	---	---	---	53	9.2	46.1	27.6	38.5
Star Specialty Seed												
Star 915W	1773	2563	2168	78	---	---	---	53	8.4	45.8	28.2	38.4
University of Idaho												
15.Ul.WC.05633	2376	---	---	105	---	---	---	53	9.6	45.1	27.6	37.9
15.Ul.WC.1	2606	---	---	115	---	---	---	53	10.9	47.5	27.6	38.3
Virginia State University												
Virginia	2384	2165	2275	105	---	---	---	53	8.6	47.3	27.6	37.9
V SX-3	2487	2086	2287	110	---	---	---	53	8.9	46.5	27.1	38.4
V SX-4	2292	2576	2434	101	---	---	---	54	9.0	47.5	27.7	37.3
Mean	2271	---	---	---	---	---	---	52	8.9	47.0	27.6	38.3
CV	19	---	---	---	---	---	---	2	3.9	2.3	2.5	1.9
LSD (0.05)	709	---	---	---	---	---	---	1	0.6	1.8	1.4	1.5

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.

¹Yields adjusted to 9% moisture.

Table 3. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Orange, VA

Name	Yield (lb/a) ¹			Yield (% of test avg.)			Winter survival (%)		Plant height (in.)	Moisture (%)	Test weight (lb/bu)	Protein (%)	Oil (%)
	2016	2015	2-yr.	2016	2016	2015	2-yr.						
DL Seeds Inc.													
DL14001RR	2272	2542	2407	72	---	---	---	53	9.7	46.8	26.3	38.2	
Einstein	3529	3073	3301	112	---	---	---	50	11.2	46.3	23.9	41.6	
Popular	3133	2888	3010	99	---	---	---	53	9.3	47.0	24.1	43.2	
Reflex CL	2912	---	---	92	---	---	---	53	10.7	42.2	24.4	40.4	
Thure	2975	---	---	94	---	---	---	53	10.0	45.7	24.5	38.9	
WRH458	2696	---	---	86	---	---	---	53	9.1	44.5	25.3	41.3	
DuPont Pioneer													
46W94	2223	2208	2216	71	---	---	---	53	10.0	44.3	25.0	39.5	
Exp1302	3017	2603	2810	96	---	---	---	54	10.5	44.8	25.2	42.6	
PX112	3112	2466	2789	99	---	---	---	50	10.9	46.3	25.4	39.8	
KWS MOMONT													
Hekip	3255	2563	2909	103	---	---	---	53	8.9	45.8	24.9	39.7	
Helix	2902	---	---	92	---	---	---	52	10.8	44.4	24.8	40.3	
MH11J41	2527	2391	2459	80	---	---	---	53	8.9	44.8	24.0	41.6	
MH12AC17	3107	---	---	99	---	---	---	54	10.7	41.4	24.8	42.7	
MH12AQ37	2929	---	---	93	---	---	---	53	10.0	45.3	24.7	41.0	
MH12AX37	2969	2114	2541	94	---	---	---	52	10.9	44.4	25.4	39.7	
MH12AY27	3554	---	---	113	---	---	---	53	9.9	46.3	24.4	40.2	
Monsanto / DEKALB													
DK Imiron CL	3654	2623	3139	116	---	---	---	54	8.4	46.7	26.0	39.6	
DK Imistar CL	3416	2831	3124	108	---	---	---	52	8.6	48.5	26.7	39.2	
DK Sensei	3920	2576	3248	124	---	---	---	52	8.7	46.7	26.3	39.1	
DK Severnyi	3762	2635	3198	119	---	---	---	53	8.7	47.9	24.8	39.7	
Rubisco Seeds LLC													
Edimax CL	3711	2734	3223	118	---	---	---	53	9.4	45.8	24.8	39.2	
Hornet	2954	2223	2588	94	---	---	---	54	8.9	46.6	24.6	41.0	
Inspiration	3855	2699	3277	122	---	---	---	53	8.6	47.3	24.6	41.1	
Mercedes	3189	2817	3003	101	---	---	---	54	9.8	45.5	23.9	42.2	
Mean	3149	2494	---	---	---	---	---	53	9.7	45.6	25.0	40.5	
CV	10	12	---	---	---	---	---	2	7.5	3.1	2.0	1.9	
LSD (0.05)	508	496	---	---	---	---	---	1	1.2	2.4	1.1	1.6	

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.

¹Yields adjusted to 9% moisture.

Vincennes, Indiana

Chuck Mansfield
Vincennes University

Planted: 9/15/2015
Seeding Rate OP: 500,000 seeds/acre
Seeding Rate Hybrid: 300,000 seeds/acre
Desiccant: 2 pt/acre Reglone on 6/10/2016
Harvested: 6/20/2016
Herbicides: Dual 12 oz/a, Command 4 oz/a
Insecticides: Mavrik 2.75 oz/a
Fungicides: Proline 5 oz/a, Quadris 8 oz/a
Irrigation: 1 inch in fall
Previous crop: Soybean
Soil test: 73-252 lb/a P-K, pH=6.1
Fertilizer: 76-0-0-24-1 lb N-P-K-S-B in early March
80-0-61-0-0 lb N-P-K-S-B in late March
Soil type: Lomax loam
Elevation: 430 ft Latitude: 38° 44'N
Comments: Very high and consistent yields

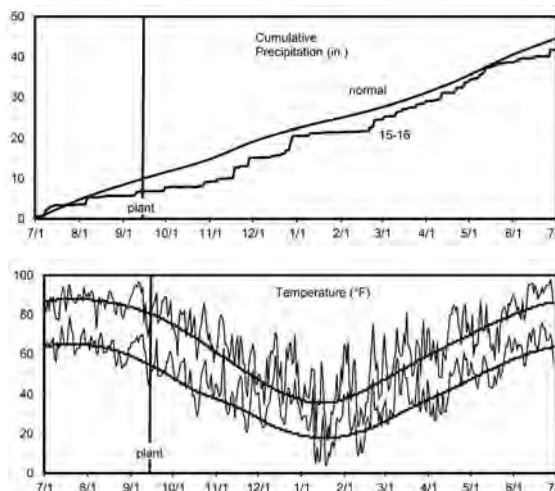


Table 4. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Vincennes, IN

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)		Plant height	50% Bloom	Test weight	Protein	Oil
	2016	2015	2-yr.	2016	2016	2015	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)	
CROPLAN by WinField													
HyCLASS 115W	2404	2884	2644	93	100	100	100	50	94	51	23.7	42.0	
HyCLASS 125W	2241	2835	2538	87	100	100	100	51	94	51	26.1	39.4	
HyCLASS 220W	2749	2790	2769	107	100	100	100	51	96	51	29.2	40.7	
HyCLASS 225W	2835	2865	2850	110	100	100	100	52	95	51	28.3	41.2	
High Plains Crop Development													
Claremore	2906	3299	3103	113	100	100	100	54	104	51	29.4	39.4	
Kansas State University													
KS4506	2703	3150	2927	105	100	99	100	54	96	51	28.8	39.1	
KSR07363	2344	3073	2709	91	100	100	100	51	94	51	26.9	39.3	
KSUR1211	2609	---	---	101	100	---	---	54	99	51	24.7	39.0	
Riley	2779	3248	3014	108	100	99	100	54	96	51	30.8	39.8	
Sumner	2698	2839	2768	105	100	98	99	51	94	51	27.1	39.2	
Wichita	2897	3245	3071	113	100	100	100	52	96	51	30.0	39.1	
KWS MOMONT													
Kadore	2985	---	---	116	100	---	---	49	102	51	24.2	38.8	
Quartz	3516	---	---	137	100	---	---	50	96	50	29.7	41.5	
Monsanto / DEKALB													
DKW41-10	2141	2548	2344	83	100	100	100	43	90	53	29.6	37.7	
DKW44-10	2201	2407	2304	86	100	100	100	49	96	51	27.0	38.6	
DKW45-25	2452	2720	2586	95	100	100	100	50	95	51	26.9	38.7	
DKW46-15	2200	2835	2518	86	100	100	100	52	95	50	27.3	39.4	
DKW47-15	2342	3031	2687	91	100	100	100	53	96	51	29.0	38.3	
Star Specialty Seed													
Star 915W	2741	3153	2947	107	100	99	100	53	94	51	25.9	40.0	
University of Idaho													
15.UI.WC.05633	2111	---	---	82	100	---	---	52	100	51	24.1	37.2	
15.UI.WC.1	2746	---	---	107	100	---	---	53	98	51	25.9	38.5	
Virginia State University													
Virginia	2369	2993	2681	92	100	100	100	52	95	51	31.1	37.3	
VSX-3	2407	3086	2747	94	97	99	98	52	94	51	29.0	40.6	
VSX-4	2353	3203	2778	91	100	100	100	50	94	51	33.3	39.5	
Mean	2572	3283	---	---	100	---	---	51	96	51	27.8	39.4	
CV	10	6	---	---	---	---	---	4	1	1	7.9	2.6	
LSD (0.05)	402	307	---	---	---	---	---	3	2	1	4.6	2.1	

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.

Table 5. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Vincennes, IN

Name	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Protein	Oil
	2016	2015	2-yr.	2016	2016	2015	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
DL Seeds Inc.												
DL14001RR	2151	2913	2532	66	100	100	100	57	97	51.3	28.4	37.4
Einstein	3651	3603	3627	113	100	100	100	54	93	50.9	22.8	42.2
Popular	3182	3709	3446	98	100	100	100	52	92	51.3	24.8	41.8
Reflex CL	3418	---	---	106	100	---	---	54	94	50.6	23.5	42.5
Thure	3403	---	---	105	100	---	---	54	96	52.0	27.9	37.6
WRH458	3165	---	---	98	100	---	---	55	93	51.3	27.6	42.3
DuPont Pioneer												
46W94	2905	3396	3150	90	100	100	100	56	92	51.0	21.9	41.2
Exp 1302	3158	3585	3372	98	100	100	100	55	97	50.5	24.2	42.7
PX112	3013	3271	3142	93	100	100	100	52	101	51.2	26.4	40.4
KWS MOMONT												
Hekip	3398	3573	3485	105	100	99	100	53	93	50.9	25.8	39.9
Helix	3154	---	---	97	100	---	---	56	99	51.4	25.8	41.2
MH11J41	3412	3579	3496	105	100	100	100	53	95	49.5	21.8	40.8
MH12AC17	3364	---	---	104	100	---	---	54	93	49.9	19.7	43.9
MH12AQ37	3051	---	---	94	100	---	---	53	93	50.8	28.3	41.2
MH12AX37	2892	3227	3060	89	100	98	99	55	96	50.4	25.0	39.1
MH12AY27	3451	---	---	107	100	---	---	58	102	51.4	23.7	39.7
Monsanto / DeKalb												
DK Imiron CL	3293	3460	3377	102	100	100	100	50	97	51.0	31.6	38.8
DK Imistar CL	3262	3454	3358	101	100	100	100	55	97	51.4	28.8	40.1
DK Sensei	3158	3519	3339	98	100	100	100	53	96	51.0	28.1	39.2
DK Severnyi	3064	3620	3342	95	100	100	100	48	97	50.7	26.2	39.6
Rubisco Seeds LLC												
Edimax CL	3582	3392	3487	111	100	100	100	55	96	51.2	27.2	40.5
Hornet	3484	3613	3549	108	100	100	100	54	95	50.9	26.6	39.8
Inspiration	3544	3586	3565	109	100	100	100	57	94	50.6	25.3	39.8
Mercedes	3543	3696	3619	109	100	100	100	54	95	51.1	21.2	42.6
Mean	3237	3283	---	---	---	---	---	54	96	50.9	25.5	40.6
CV	6	6	---	---	---	---	---	2	1	0.8	14.1	2.0
LSD (0.05)	308	307	---	---	---	---	---	2	1	0.6	---	1.7

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.

Ashland City, Tennessee

Jason de Koff
Tennessee State University

Planted: 9/28/2015
 Seeding Rate: 2.8 lb/acre
 Harvested: 6/7/2016
 Herbicides: Trifluralin
 Insecticides: None
 Irrigation: None
 Previous crop: Fallow
 Soil test: 221-77 lb P-K, pH=5.6
 Fertilizer: 54-0-33-22 lb N-P-K-S fertilizer in fall
 54-0-0-0 lb N-P-K-S fertilizer in spring
 Soil type: Lindell silt loam
 Elevation: 399 ft
 Comments: Some high yields observed but there was variability in the trial.

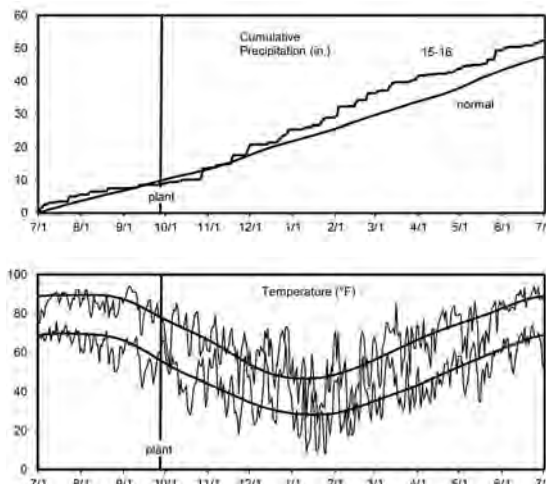


Table 6. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Nashville, TN

Name	Yield (lb/a) ¹			Yield (% of test avg.)		Winter survival (%)		Protein (%)	Oil (%)
	2016	2015	2-yr.	2016	2015	2016	2015		
High Plains Crop Development									
Claremore	3666	---	---	140	---	---	---	25.0	39.4
Kansas State University									
KS4506	2695	---	---	103	---	---	---	24.4	38.8
KSUR1211	3096	---	---	119	---	---	---	25.1	37.7
Riley	2057	---	---	79	---	---	---	24.9	39.9
Sumner	2693	---	---	103	---	---	---	25.5	39.0
Wichita	2292	---	---	88	---	---	---	25.3	38.6
KWS MOMONT									
Kadore	3719	---	---	142	---	---	---	23.7	37.0
Quartz	4128	---	---	158	---	---	---	22.5	41.0
University of Idaho									
15.UI.WC.1	2100	---	---	80	---	---	---	24.7	36.6
15.UI.WC.05633	1450	---	---	56	---	---	---	25.8	35.9
Virginia State University									
Virginia	1677	---	---	64	---	---	---	25.2	37.5
VSX-3	2818	---	---	108	---	---	---	24.9	37.4
VSX-4	1549	---	---	59	---	---	---	24.5	39.1
Mean	2611	---	---	---	---	---	---	24.7	38.3
CV	30	---	---	---	---	---	---	1.9	2.2
LSD (0.05)	1317	---	---	---	---	---	---	1.0	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.

¹Use yield data with caution. A CV above 20 indicates higher experimental error. Make variety selection decisions based on more than one year's data.

Table 7. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Nashville, TN

Name	Yield (lb/a) ¹			Yield (% of test avg.)			Winter survival (%)			Protein (%)	Oil (%)
	2016	2015	2-yr.	2016	2016	2015	2-yr.				
DL Seeds Inc.											
Einstein	3060	---	---	119	---	---	---	21.9	40.4		
Popular	2428	---	---	95	---	---	---	22.8	40.7		
Reflex CL	1667	---	---	65	---	---	---	22.3	40.5		
Thure	2576	---	---	100	---	---	---	22.0	40.4		
WRH458	2469	---	---	96	---	---	---	23.8	38.6		
DuPont Pioneer											
Exp1302	3751	---	---	146	---	---	---	23.4	39.8		
PX112	1505	---	---	59	---	---	---	23.3	39.0		
KWS MOMONT											
Hekip	3496	---	---	136	---	---	---	22.4	38.9		
Helix	881	---	---	34	---	---	---	23.1	39.6		
MH11J41	2403	---	---	94	---	---	---	22.3	40.7		
MH12AC17	2459	---	---	96	---	---	---	21.0	43.4		
MH12AQ37	2384	---	---	93	---	---	---	22.6	40.4		
MH12AX37	2737	---	---	107	---	---	---	23.4	39.2		
MH12AY27	1495	---	---	58	---	---	---	22.9	39.8		
Monsanto / DEKALB											
DK Imiron CL	1915	---	---	75	---	---	---	23.4	38.2		
DK Imistar CL	3135	---	---	122	---	---	---	24.5	38.0		
DK Sensei	3452	---	---	135	---	---	---	22.7	40.6		
DK Severnyi	2948	---	---	115	---	---	---	22.8	38.9		
Rubisco Seeds LLC											
Edimax CL	2960	---	---	115	---	---	---	22.1	40.9		
Hornet	3408	---	---	133	---	---	---	22.6	40.5		
Inspiration	2788	---	---	109	---	---	---	22.0	40.2		
Mercedes	1937	---	---	76	---	---	---	22.5	39.8		
Mean	2566	---	---	---	---	---	---	22.7	39.9		
CV	34	---	---	---	---	---	---	2.9	2.8		
LSD (0.05)	NS	---	---	---	---	---	---	1.4	NS		

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.

¹Use yield data with caution. A CV above 20 indicates higher experimental error. Make variety selection decisions based on more than one year's data.

Springfield, Tennessee

Dennis West
University of Tennessee

Planted: 9/16/2015
Seeding Rate: 6 lb/acre
Harvested: 6/13/2016
Herbicides: N/A
Insecticides: N/A
Previous crop: Soybean
Soil test: P=high, K=medium, pH=6.1
Fertilizer: 30-0-0-0 lb N-P-K-S fertilizer in fall
120-0-0-0 lb N-P-K-S fertilizer in spring
Soil type: Dickson silt loam
Elevation: 706 ft Latitude: 36° 32'N
Comments: Outstanding yields and high oil contents.

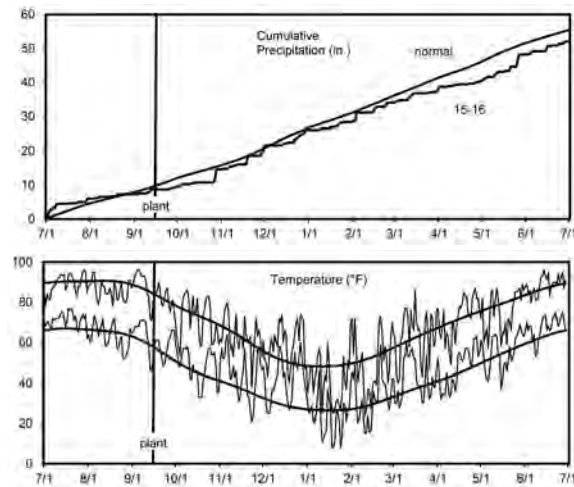


Table 8. Results for the 2016 National Winter Canola Variety Trial at Springfield, TN

Name	Type ¹	Yield (lb/a)			Yield (% of test avg.)			Test weight			Oil (%)
		2016	2015	2-yr.	2016	2015	2-yr.	(lb/bu)	(%)		
DL Seeds Inc											
DL14001RR	H	3791	---	---	80	---	---	49.5	23.9	42.4	
Einstein	H	5070	---	---	107	---	---	48.9	20.8	44.6	
Popular	H	4974	---	---	105	---	---	49.8	22.1	45.2	
Reflex CL	H	4860	---	---	103	---	---	49.2	21.8	43.6	
Thure	H	4748	---	---	100	---	---	49.9	21.4	43.6	
WRH458	H	4525	---	---	96	---	---	49.7	21.9	44.9	
Kansas State University											
KS4506	OP	4710	---	---	99	---	---	49.5	23.6	43.4	
KSR07363	OP	4538	---	---	96	---	---	50.3	23.6	42.7	
KSUR1211	OP	4812	---	---	102	---	---	49.8	24.2	42.2	
Riley	OP	3974	---	---	84	---	---	49.7	23.7	43.6	
Sumner	OP	3738	---	---	79	---	---	49.9	23.4	43.9	
Wichita	OP	3517	---	---	74	---	---	49.5	23.2	44.3	
KWS MOMONT											
Hekip	H	5234	---	---	110	---	---	48.9	20.7	45.3	
Helix	H	4463	---	---	94	---	---	52.0	22.9	44.1	
Kadore	H	5232	---	---	110	---	---	50.1	22.4	42.1	
MH11J41	H	4825	---	---	102	---	---	47.6	21.3	45.1	
MH12AC17	H	4783	---	---	101	---	---	48.4	21.8	46.3	
MH12AQ37	H	5347	---	---	113	---	---	49.7	21.2	45.1	
MH12AX37	H	4056	---	---	86	---	---	48.5	22.1	44.6	
MH12AY27	H	5709	---	---	121	---	---	49.2	21.5	44.9	
Quartz	OP	5401	---	---	114	---	---	49.3	20.5	45.8	
Rubisco Seeds LLC											
Edimax CL	H	5048	---	---	107	---	---	49.8	21.7	43.6	
Hornet	H	5303	---	---	112	---	---	49.9	21.3	44.7	
Inspiration	H	5141	---	---	109	---	---	49.9	21.0	45.7	
Mercedes	OP	5571	---	---	118	---	---	49.3	21.1	44.8	
Virginia State University											
Virginia	OP	4145	---	---	88	---	---	49.8	23.2	43.4	
VSX-3	OP	4240	---	---	90	---	---	49.7	23.7	42.3	
VSX-4	OP	4869	---	---	103	---	---	50.2	24.8	41.7	
Mean		4737	---	---	---	---	---	49.5	22.3	44.1	
CV		10	---	---	---	---	---	0.7	3.2	1.9	
LSD (0.05)		799	---	---	---	---	---	0.7	1.4	1.8	

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.

¹Type: H=hybrid, OP=open-pollinated

Fruita, Colorado

Calvin Pearson
Colorado State University

Soil type: Youngston clay loam
Elevation: 4604 ft Latitude: 39° 11'N
Comments: Yields were better than the previous year.

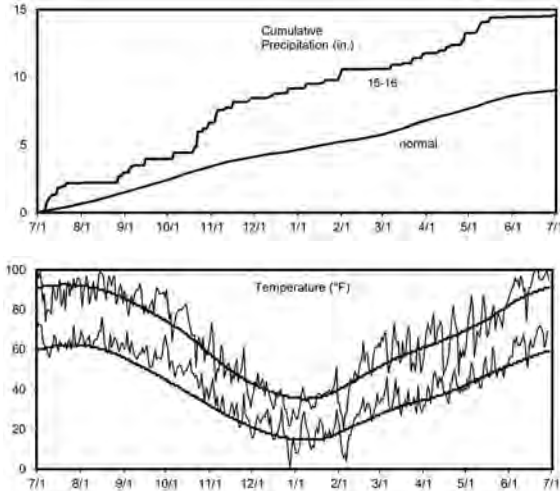


Table 9. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Fruita, CO

Name	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Fall		Test		
	2016	2015	2-yr.		2016	2015	2-yr.	vigor ¹ (1-5)	50% bloom (DOY)	weight (lb/bu)	Protein (%)	Oil (%)
CROPLAN by WinField												
HyCLASS115W	2323	1441	1882	103	---	---	---	4.7	109	49.7	21.1	42.3
HyCLASS125W	2273	1380	1826	100	---	---	---	5.0	109	50.8	21.3	40.9
HyCLASS220W	2273	992	1632	100	---	---	---	4.3	108	49.4	20.4	42.1
HyCLASS225W	2563	1768	2166	113	---	---	---	5.0	109	49.4	20.9	40.2
High Plains Crop Development												
Claremore	2109	1337	1723	93	---	---	---	5.0	111	50.7	23.6	39.7
Kansas State University												
KS4506	2298	1518	1908	102	---	---	---	5.0	109	49.7	20.2	42.0
KSR07363	2437	992	1714	108	---	---	---	5.0	106	51.0	21.4	41.0
KSUR1211	2412	---	---	107	---	---	---	5.0	108	51.2	21.3	41.0
Riley	2273	2348	2310	100	---	---	---	4.3	105	50.2	21.1	41.8
Sumner	2071	1490	1780	91	---	---	---	4.7	105	50.6	22.2	39.9
Wichita	2159	1462	1810	95	---	---	---	4.7	106	50.8	21.3	41.0
KWS MOMONT												
Kadore	2424	---	---	107	---	---	---	4.7	111	49.8	21.1	39.7
Quartz	2740	---	---	121	---	---	---	4.7	110	49.2	20.2	41.5
Monsanto/DEKALB												
DKW41-10	2008	1330	1669	89	---	---	---	5.0	104	51.9	22.4	37.7
DKW44-10	2197	1379	1788	97	---	---	---	5.0	109	50.9	21.7	39.1
DKW45-25	2538	1302	1920	112	---	---	---	4.7	108	51.3	21.7	38.6
DKW46-15	2210	1598	1904	98	---	---	---	4.3	109	49.8	22.1	39.7
DKW47-15	2348	1084	1716	104	---	---	---	5.0	109	50.3	21.6	40.4
Star Speciality Seeds												
Star 915W	2374	1698	2036	105	---	---	---	4.7	109	48.8	21.5	41.2
University of Idaho												
15.UI.WC.05633	1793	---	---	79	---	---	---	5.0	109	49.5	21.8	40.1
15.UI.WC.1	2197	---	---	97	---	---	---	4.7	110	46.4	20.4	40.3
Virginia State University												
Virginia	2033	1323	1678	90	---	---	---	5.0	109	49.4	21.1	41.4
VSX-3	2146	1239	1693	95	---	---	---	5.0	108	49.1	21.4	40.5
VSX-4	2121	1510	1815	94	---	---	---	5.0	108	50.5	20.5	41.9
Mean	2263	1683	---	---	---	---	---	4.8	108	50.0	21.4	40.6
CV	7	25	---	---	---	---	---	8.1	1	2.9	3.5	3.5
LSD (0.05)	254	694	---	---	---	---	---	NS	1	2.3	1.6	NS

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.

¹Fall vigor rated on a scale of 1=poor to 5=excellent.

Table 10. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Fruita, CO

Name	Yield (lb/a)			Yield (% of	Winter survival (%)			Fall	50% bloom	Test	Protein	Oil
	2016	2015	2-yr.	test avg.)	2016	2015	2-yr.	vigor ¹	(DOY)	weight		
	2016	2015	2-yr.	2016	2016	2015	2-yr.	(1-5)	(DOY)	(lb/bu)	(%)	(%)
DL Seeds Inc.												
Einstein	2891	1929	2410	107	---	---	---	4.7	108	50.7	19.2	42.6
DL14001RR	2374	2054	2214	88	---	---	---	5.0	109	50.7	20.8	41.2
Popular	2752	2182	2467	102	---	---	---	4.7	105	51.2	19.9	43.0
Reflex CL	2538	---	---	94	---	---	---	5.0	108	50.3	18.6	44.6
Thure	2639	---	---	98	---	---	---	4.7	110	50.6	19.7	40.8
WRH458	2816	---	---	104	---	---	---	4.3	104	51.0	19.3	43.7
DuPont Pioneer												
46W94	2550	2018	2284	95	---	---	---	5.0	107	49.8	18.8	43.4
PX112	2563	602	1583	95	---	---	---	4.7	111	50.7	20.9	42.5
Exp1302	2386	616	1501	89	---	---	---	5.0	110	50.8	19.4	44.5
KWS MOMONT												
Hekip	2853	2675	2764	106	---	---	---	5.0	106	51.1	19.8	41.6
Helix	2563	---	---	95	---	---	---	4.7	110	50.2	19.5	44.4
MH11J41	2664	1808	2236	99	---	---	---	5.0	105	49.4	18.5	45.3
MH12AC17	2563	---	---	95	---	---	---	5.0	108	49.2	18.9	44.7
MH12AQ37	2614	---	---	97	---	---	---	4.7	108	50.5	19.1	43.6
MH12AX37	2361	1889	215	88	---	---	---	5.0	111	49.0	19.3	44.4
MH12AY27	2740	---	---	102	---	---	---	5.0	111	49.8	19.0	45.0
Monsanto / DEKALB												
DK Imiron CL	2740	2147	2443	102	---	---	---	4.7	111	49.9	21.1	39.7
DK Imistar CL	2816	1958	2387	104	---	---	---	5.0	110	50.7	20.1	42.1
DK Sensei	2904	1785	2345	108	---	---	---	5.0	111	48.9	20.5	41.7
DK Severnyi	2803	1735	2269	104	---	---	---	4.7	110	50.4	19.6	41.8
Rubisco Seeds LLC												
Edimax CL	2992	2295	2644	111	---	---	---	4.7	110	50.8	19.2	42.1
Hornet	2866	1441	2154	106	---	---	---	4.3	109	50.7	20.2	41.7
Inspiration	2992	1717	2355	111	---	---	---	5.0	106	49.7	18.6	44.1
Mercedes	2715	1997	2356	101	---	---	---	4.7	108	50.0	18.9	44.5
Mean	2696	1683	---	---	---	---	---	4.8	109	50.2	19.5	43.0
CV	9	25	---	---	---	---	---	7.9	1	2.0	4.1	3.0
LSD (0.05)	NS	694	---	---	---	---	---	NS	1	NS	NS	2.7

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.

¹Fall vigor rated on a scale of 1=poor to 5=excellent.

Conway Springs, Kansas

Paul Lange

Planted: 9/25/2015
 Seeding rate: 4 lb/acre
 Swathed: 5/30/2016
 Harvested: 6/8/2016
 Herbicides: Gramoxone SL 2.0, Paraquat
 Insecticides: 6 fl oz/a Sniper on 9/30/2015
 Fertilizer: 72-0-0-8 lb N-P-K-S fertilizer in spring
 Soil type: Kirkland silt loam
 Elevation: 1371 ft Latitude: 37° 23'N
 Comments: A late spring freeze reduced yields.

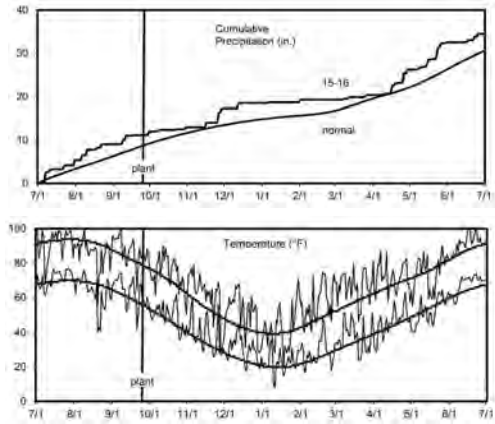


Table 11. Results for the 2016 National Winter Canola Variety Trial at Conway Springs, KS

Name	Type ¹	Yield (lb/a)			Yield (% of test avg.)			Fall stand			Protein (%)	Oil (%)
		2016	2015	2-yr.	2016	2016	2015	2-yr.	(0-10)	(lb/bu)		
CROPLAN by WinField												
HyCLASS115W	OP	1894	---	---	100	---	---	9.0	48.8	22.0	41.3	
HyCLASS125W	OP	1896	---	---	100	---	---	9.5	50.3	22.8	40.8	
HyCLASS220W	OP	1816	---	---	96	---	---	9.0	50.0	22.5	41.5	
HyCLASS225W	OP	2164	---	---	114	---	---	8.5	50.5	22.9	41.2	
DL Seeds Inc.												
Einstein	H	1924	---	---	101	---	---	9.0	48.8	24.2	40.1	
Popular	H	2185	---	---	115	---	---	9.5	48.6	23.0	41.4	
Reflex CL	H	2384	---	---	126	---	---	9.0	47.8	21.0	43.1	
Thure	H	2119	---	---	112	---	---	9.0	50.5	24.5	39.1	
DuPont Pioneer												
46W94	H	2162	---	---	114	---	---	9.0	49.6	23.1	39.2	
High Plains Crop Development												
Claremore	OP	1863	---	---	98	---	---	8.5	50.2	23.0	39.5	
Kansas State University												
KS4506	OP	2117	---	---	112	---	---	8.5	49.4	22.8	41.2	
KSR07363	OP	1810	---	---	95	---	---	9.0	49.3	22.5	41.9	
KSUR1211	OP	1770	---	---	93	---	---	9.0	50.2	23.4	41.8	
Riley	OP	1838	---	---	97	---	---	8.0	50.2	23.1	40.5	
Sumner	OP	2012	---	---	106	---	---	9.0	51.2	22.5	41.3	
Wichita	OP	1809	---	---	95	---	---	7.5	49.8	23.4	39.0	
KWS MOMONT												
Hekip	H	2108	---	---	111	---	---	9.5	46.6	23.4	41.2	
Helix	H	1495	---	---	79	---	---	8.5	45.8	21.0	41.3	
Kadore	OP	1878	---	---	99	---	---	9.0	48.2	22.2	41.1	
Quartz	OP	2197	---	---	116	---	---	8.5	49.3	20.6	42.6	
Monsanto / DEKALB												
DKW41-10	OP	1309	---	---	69	---	---	9.5	51.4	21.3	42.2	
DKW44-10	OP	1986	---	---	105	---	---	9.0	47.9	20.0	42.8	
DKW45-25	OP	1939	---	---	102	---	---	9.0	50.5	22.4	40.7	
DKW46-15	OP	2016	---	---	106	---	---	9.0	50.5	21.3	41.9	
DKW47-15	OP	1446	---	---	76	---	---	8.5	50.2	22.1	40.3	
Rubisco Seeds LLC												
Edimax CL	H	1922	---	---	101	---	---	8.5	47.6	23.8	41.0	
Hornet	H	1655	---	---	87	---	---	9.0	46.4	21.4	41.6	
Inspiration	H	1502	---	---	79	---	---	9.0	46.0	23.1	40.7	
Mercedes	H	2330	---	---	123	---	---	8.5	49.8	22.9	36.5	
Star Specialty Seed												
Star 915W	OP	1389	---	---	73	---	---	8.5	46.7	21.7	40.2	
Mean		1898	---	---	---	---	---	8.8	49.0	22.5	40.9	
CV		11	---	---	---	---	---	4.5	2.5	4.1	3.6	
LSD (0.05)		425	---	---	---	---	---	0.8	2.5	1.9	NS	

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.

¹Type: OP=open-pollinated, H=hybrid

Hutchinson, Kansas

Gary Cramer
Kansas State University

Planted: 9/23/2015
Seeding Rate OP: 500,000 seeds/acre
Seeding Rate Hybrid: 300,000 seeds/acre
Swathed: 6/3/2016
Harvested: 6/10/2016
Herbicides: 1.5 pt/a Treflan, 10 oz/a Assure II
Insecticides: None
Previous crop: Wheat
Soil test: 8-57-330 ppm N-P-K, pH=5.7
Fertilizer: 75-0-0-0 lb N-P-K-S fertilizer in fall
75-0-0-0 lb N-P-K-S fertilizer in spring
Soil type: Funmar-Taver loam
Elevation: 1630 ft Latitude: 37° 56'N
Comments: Excellent yields following a mild winter and favorable spring.

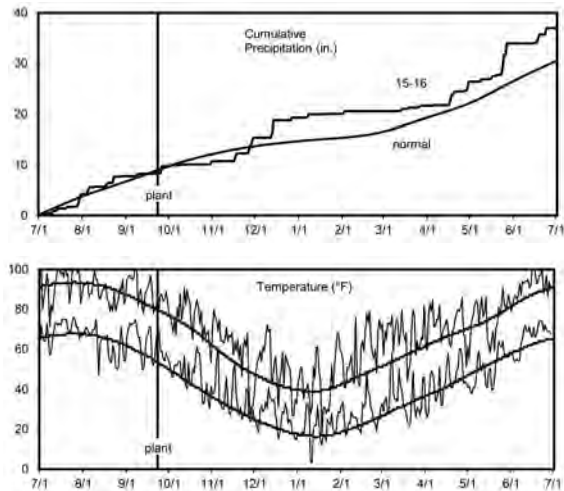


Table 12. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Hutchinson, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)		Plant height (in.)	50% bloom (DOY)	Test weight (lb/bu)	Protein (%)	Oil (%)
	2016	2013	2-yr.	2016	2016	2014	2-yr.						
CROPLAN by WinField													
HyCLASS115W	1996	1889	1942	89	---	26	---	40.0	90.3	48.6	26.7	34.2	
HyCLASS125W	2564	1723	2143	115	---	26	---	42.0	91.3	48.5	26.7	36.4	
HyCLASS220W	2438	---	---	109	---	---	---	44.0	91.3	48.3	27.4	36.7	
HyCLASS225W	2497	---	---	112	---	46	---	42.0	92.0	47.8	25.9	36.9	
High Plains Crop Development													
Claremore	1538	1850	1694	69	---	50	---	40.7	94.3	49.3	27.6	35.3	
University of Idaho													
15.UI.WC.05633	2034	---	---	91	---	---	---	43.3	93.0	46.2	26.8	37.1	
15.UI.WC.1	2317	---	---	104	---	---	---	38.7	92.3	47.0	25.7	36.4	
Kansas State University													
KS4506	2600	---	---	116	---	60	---	42.7	93.3	47.8	27.4	36.8	
KSR07363	2193	1885	2039	98	---	50	---	38.7	92.0	49.8	29.1	34.6	
KSUR1211	2724	---	---	122	---	---	---	42.0	92.3	49.3	26.9	34.8	
Riley	2578	2035	2306	115	---	64	---	46.0	92.3	48.7	25.1	35.8	
Sumner	1928	1677	1803	86	---	34	---	37.3	90.3	46.5	26.0	37.9	
Wichita	1802	1784	1793	81	---	30	---	38.0	93.3	50.2	26.7	37.1	
KWS MOMONT													
Kadore	2222	---	---	99	---	---	---	37.3	93.0	47.1	26.8	35.2	
Quartz	2334	---	---	104	---	---	---	40.0	93.0	46.8	26.0	37.2	
Monsanto / DEKALB													
DKW41-10	2256	1462	1859	101	---	34	---	35.3	89.7	50.8	25.2	36.8	
DKW44-10	2501	1877	2189	112	---	74	---	39.3	94.3	47.4	27.5	35.3	
DKW45-25	2774	---	---	124	---	66	---	42.0	91.3	49.3	26.2	37.1	
DKW46-15	1823	1653	1738	82	---	64	---	39.3	93.0	48.6	25.7	38.2	
DKW47-15	2171	1756	1964	97	---	34	---	42.0	93.0	49.6	26.7	32.8	
Star Specialty Seed													
Star 915W	2000	---	---	90	---	36	---	42.0	91.7	48.1	24.2	36.5	
Virginia State University													
Virginia	1905	2593	2249	85	---	36	---	40.7	92.0	48.0	26.8	35.1	
VSX-3	2314	2183	2248	104	---	54	---	40.0	91.0	43.4	26.5	35.9	
VSX-4	2127	---	---	95	---	26	---	39.3	91.3	47.6	25.5	35.9	
Mean	2235	2118	2176	---	---	36	---	40.5	92.2	48.1	26.5	36.1	
CV	20	14	---	---	---	14	---	7.1	0.9	3.9	2.8	3.5	
LSD (0.05)	NS	482	---	---	---	16	---	4.7	1.4	3.1	1.5	NS	

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.

Table 13. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Hutchinson, KS

Name	Yield (lb/a)			Yield (% of test avg.)				Winter survival (%)		Plant height	50% bloom	Test weight	Protein	Oil
	2016	2013	2-yr.	2016	2016	2014	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)	(%)	
DL Seeds Inc.														
DL14001RR	1936	---	---	79	---	---	---	43.3	92.3	46.8	25.3	36.4		
Einstein	3045	---	---	124	---	---	---	44.0	94.0	48.2	24.6	36.8		
Popular	2173	---	---	89	---	36	---	38.7	91.7	49.2	25.4	38.6		
Reflex CL	2437	---	---	100	---	---	---	42.7	91.3	48.4	26.3	37.1		
Thure	2306	---	---	94	---	---	---	42.0	92.7	48.8	25.8	35.5		
WRH458	2302	---	---	94	---	---	---	38.7	91.3	50.6	26.5	35.8		
DuPont Pioneer														
46W94	2763	2201	2482	113	---	0	---	44.7	91.3	49.0	25.7	35.8		
Exp1302	2538	---	---	104	---	0	---	41.3	93.7	49.4	24.6	38.5		
PX112	2540	3260	2900	104	---	66	---	44.0	93.7	47.6	25.3	34.9		
KWS MOMONT														
Hekip	2630	2653	2641	107	---	24	---	44.0	90.7	48.7	24.6	36.4		
Helix	2064	---	---	84	---	---	---	43.3	94.0	44.3	25.0	37.2		
MH11J41	1913	---	---	78	---	---	---	38.0	91.7	48.5	24.0	34.4		
MH12AC17	2581	---	---	105	---	---	---	43.3	92.3	46.4	27.0	34.3		
MH12AQ37	2957	---	---	121	---	---	---	45.3	91.7	49.5	24.7	37.3		
MH12AX37	2341	---	---	96	---	---	---	44.7	93.3	47.2	23.9	37.6		
MH12AY27	2380	---	---	97	---	---	---	42.7	93.7	47.0	24.8	35.0		
Monsanto / DEKALB														
DK Imiron CL	2424	---	---	99	---	66	---	40.0	93.7	47.7	25.0	38.0		
DK Imistar CL	2424	---	---	99	---	---	---	42.7	93.7	49.1	24.4	36.2		
DK Sensei	2272	---	---	93	---	46	---	42.0	93.3	47.9	26.0	35.3		
DK Severnyi	2450	---	---	100	---	---	---	38.7	94.3	47.1	24.2	36.8		
Rubisco Seeds LLC														
Edimax CL	2552	1882	2217	104	---	26	---	43.3	93.3	48.1	24.1	37.7		
Hornet	2229	2125	2177	91	---	24	---	43.3	91.3	47.2	25.0	36.4		
Inspiration	2499	2085	2292	102	---	0	---	45.3	91.0	47.5	26.1	34.9		
Mercedes	3024	2381	2702	123	---	30	---	43.3	92.7	48.8	24.9	35.9		
Mean	2449	2118	2284	---	---	36	---	42.5	92.6	48.0	25.1	36.4		
CV	18	14	---	---	---	14	---	5.6	1.0	3.0	3.1	3.5		
LSD (0.05)	NS	482	---	---	---	16	---	3.9	1.5	2.4	1.6	NS		

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.

Kiowa, Kansas

Bob Schrock

Planted: 9/25/2015
 Seeding Rate OP: 500,000 seeds/acre
 Seeding Rate Hybrid: 300,000 seeds/acre
 Swathed: 5/30/2016
 Harvested: 6/8/2016
 Herbicides: Assure II
 Insecticides: Pyrethroid in the fall
 Irrigation: None
 Previous crop: Wheat
 Soil test: N/A
 Fertilizer: N/A
 Soil type: Pond Creek silt loam
 Elevation: 1600 ft Latitude: 36° 58'N
 Comments: Very high yielding and consistently even location.

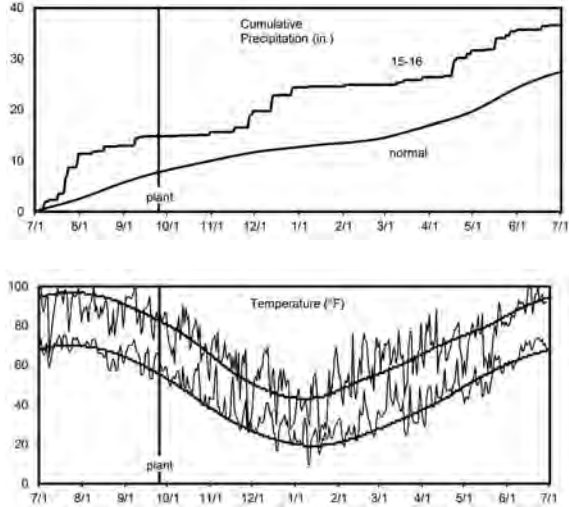


Table 14. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Kiowa, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)		Plant height	50% bloom	Test weight	Protein	Oil
	2016	2012	2-yr.	2016	2016	2015	2-yr.	(in)	(DOY)	(lb/bu)	(%)	(%)	
CROPLAN by WinField													
HyCLASS115W	2976	1728	2352	105	---	8.3	---	46.0	85	49.1	23.1	39.1	
HyCLASS125W	3036	1989	2513	107	---	5.3	---	46.0	85	49.3	24.1	39.3	
HyCLASS220W	2930	---	---	103	---	13.3	---	47.3	86	49.5	24.6	39.4	
HyCLASS225W	2940	---	---	104	---	21.7	---	48.7	86	48.5	24.7	38.3	
High Plains Crop Development													
Claremore	2925	1670	2297	103	---	16.7	---	50.0	88	50.7	23.8	39.5	
University of Idaho													
15.UI.WC.05633	2537	1728	2132	89	---	---	---	46.0	88	49.2	24.5	36.8	
15.UI.WC.1	2637	2105	2371	93	---	---	---	45.3	88	51.0	21.5	40.2	
Kansas State University													
KS4506	2963	---	---	104	---	20.0	---	50.7	86	49.4	23.5	39.9	
KSR07363	3012	---	---	106	---	16.7	---	46.7	86	49.7	25.6	37.4	
KSUR1211	3033	---	---	107	---	---	---	48.7	86	49.4	23.6	40.1	
Riley	3039	1946	2492	107	---	21.7	---	47.3	86	47.6	25.4	37.2	
Sumner	2367	2033	2200	83	---	30.0	---	42.7	82	49.6	23.5	39.4	
Wichita	2871	2018	2445	101	---	10.0	---	48.0	86	50.2	22.4	40.5	
KWS MOMONT													
Kadore	3026	---	---	107	---	---	---	40.7	87	51.0	24.3	38.8	
Quartz	3397	---	---	120	---	---	---	45.3	87	49.8	23.3	39.5	
Monsanto / DEKALB													
DKW41-10	2391	1859	2125	84	---	10.0	---	48.0	86	49.1	24.7	38.7	
DKW44-10	3010	1946	2478	106	---	10.0	---	42.7	83	49.2	23.3	39.7	
DKW45-25	2650	---	---	93	---	20.0	---	43.3	87	50.2	23.4	38.7	
DKW46-15	2681	1757	2219	94	---	20.0	---	43.3	85	50.3	25.1	38.1	
DKW47-15	2650	1975	2312	93	---	8.3	---	46.7	86	49.8	23.8	35.8	
Star Specialty Seed													
Star 915W	2502	---	---	88	---	11.7	---	48.7	86	48.2	25.9	37.1	
Virginia State University													
Virginia	2464	2120	2292	87	---	2.3	---	45.3	85	47.9	24.1	38.5	
V SX-3	3175	2163	2669	112	---	1.0	---	46.0	85	48.4	23.5	38.7	
V SX-4	2913	---	---	103	---	3.7	---	44.7	85	48.0	22.8	40.2	
Mean	2838	2117	2478	---	---	8.6	---	46.2	86	49.4	23.9	38.8	
CV	13	20	---	---	---	47.2	---	3.6	1	2.5	4.1	3.1	
LSD (0.05)	NS	677	---	---	---	6.6	---	2.7	1	NS	2.1	2.5	

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.

Table 15. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Kiowa, KS

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)		Plant height	50% bloom	Test weight	Protein	Oil
	2016	2012	2-yr.	2016	2016	2015	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)	
DL Seeds Inc.													
DL14001RR	2698	---	---	81	---	3.7	---	48.0	86	48.3	23.1	39.1	
Einstein	3818	---	---	114	---	5.0	---	48.7	86	49.2	23.8	38.2	
Popular	3291	---	---	99	---	6.7	---	46.7	85	50.0	22.1	38.8	
Reflex CL	3420	---	---	102	---	---	---	48.7	85	49.0	23.6	39.0	
Thure	3448	---	---	103	---	---	---	47.3	85	49.3	22.5	38.8	
WRH458	3426	---	---	103	---	---	---	48.7	85	50.8	22.2	39.8	
DuPont Pioneer													
46W94	3246	2367	2806	97	---	2.3	---	50.0	86	47.8	23.0	39.1	
Exp1302	3284	---	---	98	---	3.7	---	45.3	86	49.2	22.3	40.1	
PX112	3704	---	---	111	---	13.3	---	44.0	87	48.4	23.9	39.2	
KWS MOMONT													
Hekip	3328	---	---	100	---	2.3	---	50.0	84	49.4	22.3	39.4	
Helix	2646	---	---	79	---	---	---	51.3	86	45.8	22.8	38.2	
MH11J41	3299	---	---	99	---	2.3	---	44.7	86	49.0	22.9	40.8	
MH12AC17	3322	---	---	99	---	---	---	46.0	85	47.7	23.7	38.5	
MH12AQ37	3293	---	---	99	---	---	---	48.0	85	48.9	22.4	38.8	
MH12AX37	3383	---	---	101	---	1.0	---	50.7	87	47.6	22.6	39.9	
MH12AY27	3738	---	---	112	---	---	---	48.7	88	48.9	23.3	40.9	
Monsanto / DEKALB													
DK Imiron CL	2998	---	---	90	---	11.7	---	45.3	87	48.9	23.8	37.7	
DK Imistar CL	3473	---	---	104	---	3.7	---	48.7	87	49.8	23.3	40.0	
DK Sensei	3463	---	---	104	---	5.0	---	46.7	87	49.2	22.4	40.0	
DK Severnyi	3271	---	---	98	---	3.7	---	42.7	86	47.6	22.5	38.6	
Rubisco Seeds LLC													
Edimax CL	3127	2425	2776	94	---	2.3	---	48.7	86	47.6	24.0	38.8	
Hornet	3003	2120	2561	90	---	3.7	---	50.0	86	48.0	22.2	40.8	
Inspiration	3538	---	---	106	---	3.7	---	49.3	86	48.1	24.8	38.1	
Mercedes	3923	2701	3312	117	---	10.0	---	48.7	86	49.8	22.3	40.6	
Mean	3339	2117	2728	---	---	8.6	---	47.8	86	48.7	23.0	39.3	
CV	9	20	---	---	---	47.2	---	3.8	1	2.7	5.3	3.8	
LSD (0.05)	472	677	---	---	---	6.6	---	3.0	1	2.2	NS	NS	

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.

Scottsbluff, Nebraska

Dipak Santra
University of Nebraska-Lincoln

Planted: 8/28/2015
Seeding Rate OP: 500,000 seeds/acre
Seeding Rate Hybrid: 300,000 seeds/acre
Harvested: 7/15/2016
Herbicides: 1.5 pt/a Sonolan
Insecticides: None
Irrigation: 1 inch at planting
Previous crop: Fallow
Soil test: 17-586 ppm P-K, pH=8.1
Fertilizer: N/A
Soil type: Tripp fine sandy loam
Elevation: 3694 ft Latitude: 41° 51'N
Comments: Limited irrigation site. Only 1 inch applied at planting. Treated as dryland the rest of the season.

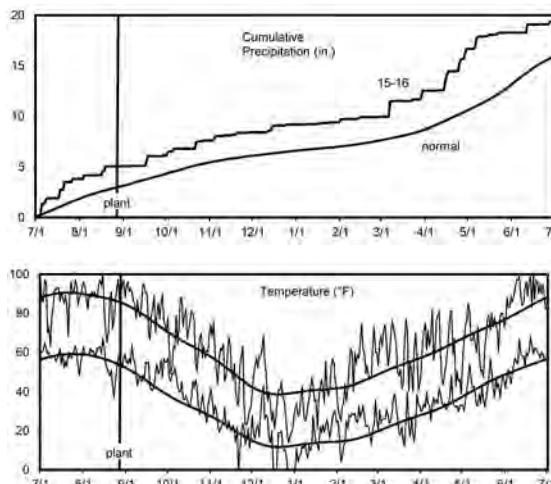


Table 16. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Scottsbluff, NE

Name	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			50% bloom (DOY)	Maturity (DOY)	Shatter (%)	Protein (%)	Oil (%)
	2016	2015	2-yr.		2016	2015	2-yr.					
CROPLAN by WinField												
HyCLASS115W	1736	---	---	91	---	---	---	116	177	70	24.5	40.4
HyCLASS125W	2015	---	---	106	---	---	---	117	178	70	26.6	38.4
HyCLASS220W	1864	---	---	98	---	---	---	118	178	63	25.1	38.8
HyCLASS225W	1613	---	---	84	---	---	---	119	176	70	24.0	39.4
High Plains Crop Development												
Claremore	2144	---	---	112	---	---	---	123	177	50	26.4	39.3
Kansas State University												
KS4506	1926	---	---	101	---	---	---	118	177	57	26.5	37.2
KSR07363	1657	---	---	87	---	---	---	117	175	60	25.3	38.1
KSUR1211	1934	---	---	101	---	---	---	120	177	60	26.8	37.8
Riley	1997	---	---	105	---	---	---	117	178	63	25.9	40.2
Sumner	1456	---	---	76	---	---	---	109	175	57	24.7	39.8
Wichita	1687	---	---	88	---	---	---	121	177	47	25.7	38.6
KWS MOMONT												
Kadore	2256	---	---	118	---	---	---	123	180	57	23.0	39.5
Quartz	2450	---	---	128	---	---	---	122	182	37	23.0	40.8
Monsanto/DEKALB												
DKW41-10	1531	---	---	80	---	---	---	109	178	57	27.6	35.4
DKW44-10	1742	---	---	91	---	---	---	120	177	57	25.7	37.2
DKW45-25	1759	---	---	92	---	---	---	116	175	57	25.9	37.1
DKW46-15	1480	---	---	77	---	---	---	119	175	70	23.8	40.6
DKW47-15	1757	---	---	92	---	---	---	121	178	53	25.7	39.2
Star Specialty Seeds												
Star 915W	2097	---	---	110	---	---	---	119	181	53	25.7	40.0
University of Idaho												
15.UI.WC.05633	2240	---	---	117	---	---	---	122	180	30	24.9	40.5
15.UI.WC.1	2253	---	---	118	---	---	---	123	180	60	24.0	38.6
Virginia State University												
Virginia	1953	---	---	102	---	---	---	115	179	43	23.7	39.8
VSX-3	2023	---	---	106	---	---	---	120	179	53	24.1	39.9
VSX-4	2268	---	---	119	---	---	---	118	181	53	27.2	37.3
Mean	1910	---	---	---	---	---	---	118	178	56	25.2	38.9
CV	16	---	---	---	---	---	---	2	1	21	5.2	3.4
LSD (0.05)	506	---	---	---	---	---	---	5	3	19	NS	2.7

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.

Table 17. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Scottsbluff, NE

Name	Yield (lb/a)			Yield (% of test avg.)			50% bloom			Shatter (%)	Protein (%)	Oil (%)
	2016	2015	2-yr.	2016	2015	2-yr.	(DOY)	Maturity (DOY)				
DL Seeds												
DL14001RR	2388	---	---	103	---	---	---	123	184	50	26.9	36.9
Einstein	2302	---	---	100	---	---	---	117	181	50	22.8	39.9
Popular	2110	---	---	91	---	---	---	117	180	60	25.5	39.1
Reflex CL	2342	---	---	101	---	---	---	116	181	47	25.5	38.9
Thure	2002	---	---	87	---	---	---	118	179	37	24.8	38.6
WRH458	1629	---	---	70	---	---	---	115	176	80	25.9	37.9
DuPont Pioneer												
46W94	2210	---	---	96	---	---	---	120	179	77	23.6	39.7
Exp1302	2248	---	---	97	---	---	---	119	180	43	25.0	41.0
PX112	2214	---	---	96	---	---	---	122	180	50	25.5	39.4
KWS MOMONT												
Hekip	2663	---	---	115	---	---	---	115	182	40	26.1	38.1
Helix	1502	---	---	65	---	---	---	123	185	37	25.4	40.2
MH11J41	2235	---	---	97	---	---	---	117	180	63	24.7	39.4
MH12AC17	2195	---	---	95	---	---	---	117	185	37	24.1	42.4
MH12AQ37	2506	---	---	108	---	---	---	118	182	30	25.3	38.3
MH12AX37	2340	---	---	101	---	---	---	122	185	30	26.3	38.7
MH12AY27	2686	---	---	116	---	---	---	123	185	30	24.0	39.5
Monsanto/DEKALB												
DK Imiron CL	2641	---	---	114	---	---	---	121	178	40	26.7	35.7
DK Imistar CL	3022	---	---	131	---	---	---	117	177	37	26.1	37.9
DK Sensei	2783	---	---	120	---	---	---	122	178	33	27.4	35.3
DK Severnyi	2353	---	---	102	---	---	---	121	184	27	24.5	39.3
Rubisco Seeds												
Edimax CL	2375	---	---	103	---	---	---	121	185	33	24.7	38.5
Hornet	1904	---	---	82	---	---	---	123	184	30	24.9	39.3
Inspiration	2631	---	---	114	---	---	---	119	180	30	25.0	39.2
Mercedes	2275	---	---	98	---	---	---	117	181	33	25.7	38.9
Mean	2311	---	---	---	---	---	---	119	181	43	25.3	38.8
CV	11	---	---	---	---	---	---	2	2	19	5.1	3.4
LSD (0.05)	410	---	---	---	---	---	---	4	4	13	NS	2.7

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.

Clovis, New Mexico

Sangu Angadi and Sultan Begna
New Mexico State University

Planted: 9/8/2015
Seeding Rates: 3-6 lb/acre
Desiccant: 2 pt/a Diquat
Harvested: 6/22/2016
Herbicides: Treflan HFP, Prowl H2O
Insecticides: Sivanto, BeLeaf, Mustang Maxx
Irrigation: 11 inches
Previous crop: Fallow
Soil test: 19-10-392 ppm N-P-K, pH=7.8
Fertilizer: 65-40-0-28 lb N-P-K-S fertilizer in fall
Soil type: Olton clay loam
Elevation: 4436 ft Latitude: 34° 36'N
Comments: Excellent yields under limited irrigation on the High Plains.

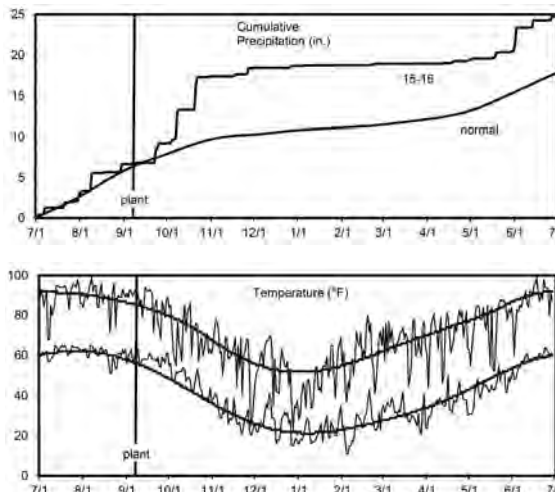


Table 18. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Clovis, NM

Name	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height (in.)	50% bloom (DOY)	Test weight (lb/bu)	Protein (%)	Oil (%)
	2016	2015	2-yr.		2016	2015	2-yr.					
CROPLAN by WinField												
HyCLASS115W	3119	3724	3422	99	98	98	98	46	86	---	28.8	35.7
HyCLASS125W	3000	3371	3186	95	98	98	98	47	86	---	26.8	37.2
HyCLASS220W	3716	3692	3704	118	98	97	98	50	88	---	27.2	36.4
HyCLASS225W	3254	3299	3277	103	98	97	98	48	88	---	27.1	35.2
High Plains Crop Development												
Claremore	2979	3657	3318	95	98	98	98	52	94	---	29.2	34.7
Kansas State University												
KS4506	3377	3834	3606	107	98	98	98	54	90	---	26.1	37.4
KSR07363	3204	3518	3361	102	98	98	98	49	86	---	27.6	36.0
KSUR1211	3383	---	---	107	98	---	---	51	91	---	27.6	35.6
Riley	3352	4105	3729	106	98	98	98	49	87	---	27.5	35.5
Sumner	2877	3269	3073	91	98	98	98	47	86	---	28.7	35.9
Wichita	3167	3663	3415	101	98	98	98	49	87	---	28.5	34.6
KWS MOMONT												
Kadore	3594	---	---	114	98	---	---	48	93	---	26.6	34.2
Quartz	3528	---	---	112	98	---	---	49	92	---	26.1	36.8
Monsanto / DEKALB												
DKW41-10	1777	2666	2222	56	98	98	98	38	82	---	29.3	35.2
DKW44-10	3504	3444	3474	111	98	98	98	44	87	---	27.4	33.8
DKW45-25	3186	3299	3243	101	98	98	98	51	87	---	26.5	35.6
DKW46-15	3014	3817	3416	96	98	98	98	47	89	---	26.8	36.7
DKW47-15	3118	3538	3328	99	98	98	98	50	90	---	28.0	35.3
Star Speciality Seed												
Star 915W	3183	4080	3632	101	98	97	98	47	87	---	28.3	35.8
University of Idaho												
15.UI.WC.05633	2738	---	---	87	96	---	---	52	94	---	27.7	34.2
15.UI.WC.1	3140	---	---	100	98	---	---	51	92	---	27.3	34.9
Virginia State University												
VIRGINIA	3015	3384	3200	96	98	95	97	47	87	---	28.7	34.6
VSX-3	2964	3184	3074	94	98	97	98	47	87	---	27.6	35.8
VSX-4	3359	3216	3288	107	98	95	97	48	88	---	27.6	35.7
Mean	3148	3811	---	---	98	98	98	48	88	---	27.6	35.5
CV	8	10	---	---	0	---	---	5	1	---	1.2	1.9
LSD (0.05)	405	607	---	---	0	---	---	4	2	---	2.1	2.6

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.

Table 19. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Clovis, NM

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)			Plant Height	50% bloom	Test weight	Protein	Oil
	2016	2015	2-yr.	2016	2016	2015	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)		
DL Seeds Inc.														
DL 14001RR	3672	3493	3583	93	98	96	97	47	90	---	27.6	35.0		
Einstein	4026	4013	4020	102	98	96	97	48	90	---	25.7	36.7		
Popular	4295	3489	3892	109	98	98	98	49	89	---	26.2	36.4		
Reflex	3881	---	---	98	98	---	---	51	89	---	25.9	35.4		
Thure	3756	---	---	95	98	---	---	45	88	---	28.0	33.6		
WRH458	3775	---	---	96	98	---	---	47	87	---	26.0	35.4		
DuPont Pioneer														
46W94	3626	4238	3932	92	98	97	98	47	86	---	26.1	36.7		
EXP1302	4197	4172	4185	106	98	97	98	51	90	---	26.7	37.8		
PX112	3732	4066	3899	95	98	98	98	46	91	---	27.9	33.4		
KWS MOMONT														
Hekip	4477	3933	4205	113	98	98	98	45	85	---	26.2	34.3		
Helix	3684	---	---	93	98	---	---	55	91	---	25.6	37.6		
MH11J41	4125	3498	3812	104	98	98	98	47	89	---	27.0	36.3		
MH12AC17	3812	---	---	97	98	---	---	46	87	---	28.6	35.2		
MH12AQ37	3934	---	---	100	98	---	---	47	86	---	28.4	35.7		
MH12AX37	4251	3219	3735	108	98	98	98	49	90	---	26.2	37.1		
MH12AY27	3762	---	---	95	98	---	---	55	91	---	26.3	35.4		
Monsanto / DEKALB														
DK Imiron CL	3957	4378	4168	100	98	98	98	46	90	---	27.7	34.6		
DK Imistar CL	3778	4124	3951	96	98	98	98	47	89	---	27.0	37.2		
DK Sensei	3924	4182	4053	99	98	98	98	50	91	---	27.2	35.4		
DK Severnyi	4028	3890	3959	102	98	98	98	45	89	---	26.9	36.1		
Rubisco Seeds LLC														
Edimax CL	3774	3884	3829	96	98	98	98	47	89	---	26.4	36.8		
Hornet	4063	3943	4003	103	98	98	98	50	89	---	26.9	35.2		
Inspiration	4272	3993	4133	108	98	97	98	53	87	---	26.1	36.8		
Mercedes	3944	3778	3861	100	98	98	98	49	91	---	26.8	36.3		
Mean	3948	3811	---	---	98	98	98	48	89	---	26.8	35.8		
CV	8	10	---	---	---	---	---	5	1	---	1.7	2.1		
LSD (0.05)	502	607	---	---	---	---	---	4	2	---	3.1	2.8		

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.

Chickasha, Oklahoma

Josh Lofton
Oklahoma State University

Soil type: McClain silty clay loam
Elevation: 1085 ft Latitude: 35° 02'N
Comments: Yields were average or better for two years in a row.

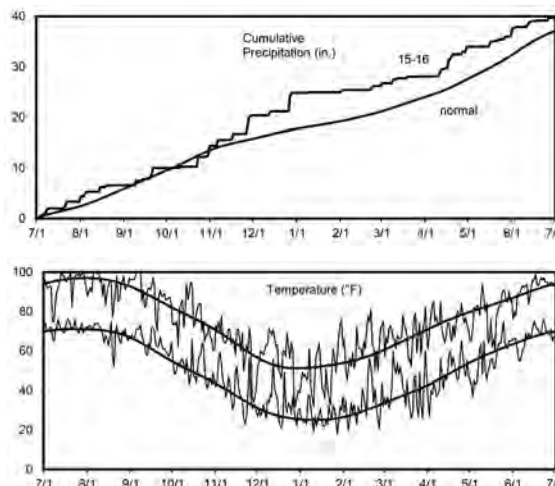


Table 20. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Chickasha, OK

Name	Yield (lb/a) ¹			Yield (% of test avg.)			Winter survival (%)			Test weight (lb/bu)	Moisture (%)
	2016	2015	2-yr.	2016	2015	2-yr.	2016	2015	2-yr.		
CROPLAN by WinField											
HyCLASS115W	1996	1610	1803	113	---	---	---	---	---	51.6	11.1
HyCLASS125W	1794	1765	1780	102	---	---	---	---	---	50.8	10.5
HyCLASS220W	1825	1650	1738	103	---	---	---	---	---	52.2	10.7
HyCLASS225W	1745	1420	1582	99	---	---	---	---	---	50.7	11.2
High Plains Crop Development											
Claremore	2036	2170	2103	115	---	---	---	---	---	51.4	11.1
Kansas State University											
KS4506	1937	1885	1911	110	---	---	---	---	---	50.1	11.2
KSR07363	2084	1615	1850	118	---	---	---	---	---	50.8	11.7
KSUR1211	1848	---	---	105	---	---	---	---	---	50.7	11.6
Riley	1787	1715	1751	101	---	---	---	---	---	51.2	11.3
Sumner	1900	1595	1747	108	---	---	---	---	---	51.5	10.7
Wichita	1515	1720	1617	86	---	---	---	---	---	50.5	11.2
KWS MOMONT											
Kadore	1409	---	---	80	---	---	---	---	---	50.7	10.8
Quartz	2116	---	---	120	---	---	---	---	---	51.1	11.1
Monsanto / DEKALB											
DKW41-10	893	1625	1259	51	---	---	---	---	---	50.2	11.1
DKW44-10	1624	1565	1595	92	---	---	---	---	---	49.9	10.9
DKW45-25	1771	1345	1558	100	---	---	---	---	---	51.6	10.9
DKW46-15	1756	1740	1748	100	---	---	---	---	---	51.8	10.1
DKW47-15	1575	1470	1522	89	---	---	---	---	---	49.9	11.1
Star Specialty Seeds											
Star 915W	1966	1365	1666	111	---	---	---	---	---	51.0	10.4
University of Idaho											
15.Ul.WC.05633	1424	---	---	81	---	---	---	---	---	49.2	11.4
15.Ul.WC.1	1675	---	---	95	---	---	---	---	---	51.2	11.7
Virginia State University											
Virginia	1952	1840	1896	111	---	---	---	---	---	50.9	11.3
VSX-3	1934	1705	1819	110	---	---	---	---	---	50.1	11.0
VSX-4	1778	1535	1656	101	---	---	---	---	---	49.4	11.2
Mean	1764	1962	---	---	---	---	---	---	---	50.8	11.0
CV	14	20	---	---	---	---	---	---	---	2.2	4.5
LSD (0.05)	398	624	---	---	---	---	---	---	---	NS	0.8

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.

¹Yields adjusted to 9% moisture.

Table 21. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Chickasha, OK

Name	Yield (lb/a) ¹			Yield (% of test avg.)			Winter survival (%)			Test weight (lb/bu)	Moisture (%)
	2016	2015	2-yr.	2016	2016	2015	2-yr.				
DL Seeds Inc.											
DL14001RR	1404	2230	1817	70	---	---	---	51.4	10.4		
Einstein	1938	2590	2264	96	---	---	---	50.8	11.0		
Popular	2453	2990	2722	122	---	---	---	50.9	11.1		
Reflex CL	2240	---	---	111	---	---	---	52.1	11.2		
Thure	1998	---	---	99	---	---	---	51.2	11.3		
WRH458	1938	---	---	96	---	---	---	51.3	11.2		
DuPont Pioneer											
46W94	1959	1765	1862	97	---	---	---	50.5	10.9		
Exp1302	1730	2855	2293	86	---	---	---	50.4	10.9		
PX112	1193	3060	2127	59	---	---	---	50.6	10.8		
KWS MOMONT											
Hekip	2262	2210	2236	112	---	---	---	51.4	10.9		
Helix	1937	---	---	96	---	---	---	50.1	11.3		
MH11J41	1941	1955	1948	96	---	---	---	50.8	10.8		
MH12AC17	1742	---	---	86	---	---	---	50.0	10.4		
MH12AQ37	2198	---	---	109	---	---	---	52.0	10.9		
MH12AX37	1859	1770	1815	92	---	---	---	49.6	11.9		
MH12AY27	1833	---	---	91	---	---	---	50.6	11.3		
Monsanto / DEKALB											
DK Imiron CL	2258	1965	2112	112	---	---	---	51.7	11.0		
DK Imistar CL	2251	2285	2268	112	---	---	---	51.7	11.1		
DK Sensei	2203	2190	2196	109	---	---	---	50.4	11.1		
DK Severnyi	2123	1840	1982	105	---	---	---	51.0	10.8		
Rubisco Seeds LLC											
Edimax CL	2338	2070	2204	116	---	---	---	51.1	11.0		
Hornet	2167	2160	2164	107	---	---	---	50.1	11.4		
Inspiration	2219	2300	2260	110	---	---	---	52.1	10.8		
Mercedes	2245	1870	2057	111	---	---	---	51.9	11.0		
Mean	2018	1962	---	---	---	---	---	51.0	11.0		
CV	11	20	---	---	---	---	---	2.0	5.2		
LSD (0.05)	361	624	---	---	---	---	---	NS	NS		

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.

¹Yields adjusted to 9% moisture.

Goodwell, Oklahoma

Tracy Beedy
Oklahoma State University

Soil Type: Richfield clay loam
Elevation: 3239 ft Latitude: 36° 36'N
Comments: Hybrid yields were considerably better than open-pollinated yields at this trial site.

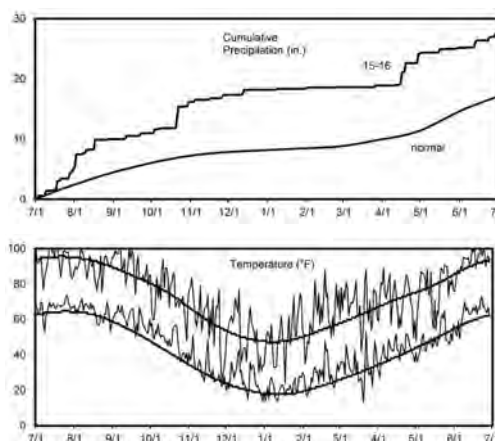


Table 22. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Goodwell, OK

Name	Yield (lb/a) ¹			Yield (% of test avg.)	Winter survival (%)			Fall stand (0-10)	Fall vigor ² (1-5)	Test weight (lb/bu)	Moisture (%)
	2016	2014	2-yr.		2016	2016	2014				
CROPLAN by WinField											
HyCLASS115W	1213	1221	1217	80	---	---	---	8.3	4.3	39.1	7.3
HyCLASS125W	1515	1516	1516	100	---	---	---	8.7	4.0	41.9	6.6
HyCLASS220W	1467	---	---	97	---	---	---	7.7	3.3	44.4	4.8
HyCLASS225W	1310	1687	1498	86	---	---	---	7.7	3.7	44.6	4.8
High Plains Crop Development											
Claremore	1720	1803	1761	113	---	---	---	8.0	3.7	45.3	4.6
Kansas State University											
KS4506	1748	1571	1660	115	---	---	---	7.3	3.3	45.9	5.9
KSR07363	1505	1541	1523	99	---	---	---	8.0	3.7	44.6	3.7
KSUR1211	1891	---	---	125	---	---	---	8.0	4.3	46.9	4.8
Riley	1765	1308	1536	116	---	---	---	5.7	1.7	47.9	4.1
Sumner	1290	1226	1258	85	---	---	---	9.0	5.0	44.7	5.6
Wichita	1226	1047	1136	81	---	---	---	5.7	2.0	44.4	4.4
KWS MOMONT											
Kadore	2080	---	---	137	---	---	---	8.0	3.3	46.5	5.3
Quartz	1568	---	---	103	---	---	---	8.0	4.0	43.7	6.5
Monsanto / DEKALB											
DKW41-10	996	1331	1163	66	---	---	---	7.3	3.3	36.8	9.1
DKW44-10	1457	986	1222	96	---	---	---	7.0	3.0	39.8	5.8
DKW45-25	1805	1355	1580	119	---	---	---	6.7	2.7	42.3	8.2
DKW46-15	1829	729	1279	121	---	---	---	7.0	2.7	46.8	2.7
DKW47-15	1252	1260	1256	82	---	---	---	8.0	3.7	38.5	7.5
Star Specialty Seeds											
Star 915W	855	1445	1150	56	---	---	---	7.7	2.3	42.5	7.0
University of Idaho											
15.UI.WC.05633	1557	---	---	103	---	---	---	6.3	4.3	40.9	6.4
15.UI.WC.1	1723	---	---	113	---	---	---	8.0	3.7	46.5	4.7
Virginia State University											
Virginia	1520	1921	1720	100	---	---	---	7.0	3.3	37.7	9.4
VSX-3	1340	1638	1489	88	---	---	---	7.0	3.3	37.2	10.1
VSX-4	1943	1417	1680	128	---	---	---	6.7	2.7	35.6	12.9
Mean	1518	1755	---	---	---	---	---	7.4	3.4	42.7	6.4
CV	34	24	---	---	---	---	---	12.3	19.5	7.5	23.2
LSD (0.05)	NS	704	---	---	---	---	---	1.5	1.1	5.3	2.4

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.

¹Use yield data with caution. A CV above 20 indicates higher experimental error. Make variety selection decisions based on more than one year's data.

²Fall vigor is rated on a scale of 1=poor to 5=excellent.

Table 23. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Goodwell, OK

Name	Yield (lb/a)			Yield (% of test avg.)			Winter survival (%)			Fall stand	Fall vigor ¹	Test weight	Moisture
	2016	2014	2-yr.	2016	2016	2014	2-yr.	(0-10)	(1-5)	(lb/bu)	(%)		
DL Seeds Inc.													
DL14001RR	1877	---	---	81	---	---	---	6.3	3.0	51.0	4.2		
Einstein	2524	---	---	109	---	---	---	7.8	4.0	43.9	3.7		
Popular	2593	1626	2110	112	---	---	---	6.7	4.0	51.0	3.9		
Reflex CL	1955	---	---	84	---	---	---	7.3	4.0	49.3	4.4		
Thure	3005	---	---	130	---	---	---	8.3	4.7	43.1	3.6		
WRH458	1851	---	---	80	---	---	---	6.7	4.0	42.7	6.2		
DuPont Pioneer													
46W94	---	1423	---	---	---	---	---	8.2	3.9	---	---		
Exp1302	2422	2142	2282	104	---	---	---	6.7	3.0	42.6	5.0		
PX112	3111	2182	2646	134	---	---	---	6.7	2.3	45.1	5.1		
KWS MOMONT													
Hekip	2265	1668	1966	98	---	---	---	8.3	4.0	47.3	3.9		
Helix	2437	---	---	105	---	---	---	7.7	4.3	42.4	6.7		
MH11J41	1674	---	---	72	---	---	---	6.7	3.3	47.2	3.8		
MH12AC17	1946	---	---	84	---	---	---	7.0	3.3	45.9	5.3		
MH12AQ37	1812	---	---	78	---	---	---	7.7	3.0	47.9	4.2		
MH12AX37	1988	---	---	86	---	---	---	6.7	3.0	44.7	6.2		
MH12AY27	2502	---	---	108	---	---	---	7.0	3.3	48.9	3.7		
Monsanto / DEKALB													
DK Imiron CL	---	2336	---	---	---	---	---	5.7	3.0	---	---		
DK Imistar CL	2121	---	---	91	---	---	---	6.3	3.3	51.9	---		
DK Sensei	2931	2338	2635	126	---	---	---	6.7	3.0	49.8	4.0		
DK Severnyi	2936	---	---	127	---	---	---	7.0	3.3	50.5	3.8		
Rubisco Seeds LLC													
Edimax CL	2027	1647	1837	87	---	---	---	6.7	3.3	48.0	4.3		
Hornet	2635	2017	2326	114	---	---	---	7.7	4.0	47.1	4.8		
Inspiration	2313	2263	2288	100	---	---	---	7.3	4.3	47.9	4.2		
Mercedes	2268	2252	2260	98	---	---	---	8.0	5.0	50.2	4.8		
Mean	2319	1755	---	---	---	---	---	7.1	3.6	47.1	4.5		
CV	20	24	---	---	---	---	---	12.9	15.6	8.0	24.6		
LSD (0.05)	756	704	---	---	---	---	---	NS	0.9	NS	1.8		

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.

¹Fall vigor rated on a scale of 1=poor to 5=excellent.

Bushland, Texas

Jourdan Bell
Texas A&M University

Planting Date 1: 8/17/2015
 Planting Date 2: 10/2/2015
 Harvested: 6/24/2016
 Herbicides: 32 oz/a Glyphosate
 Insecticides: None
 Irrigation: None
 Previous crop: N/A
 Soil test: N/A
 Fertilizer: No fertility required based on soil test.
 Soil type: N/A
 Elevation: N/A
 Comments: Two planting dates were used. Plots were grown in 30-in rows.

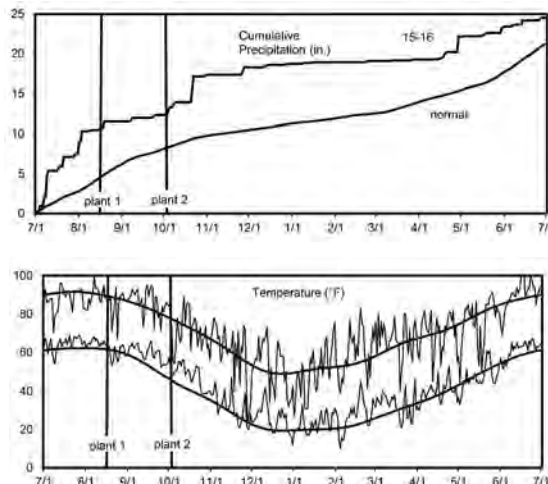


Table 24. Results for the 2016 National Winter Canola Variety Trial at Bushland, TX

Name	Type ¹	Yield (% of test avg.)				Yield (% of test avg.)				Avg. yield (lb/a)
		Yield (lb/a)	Protein (%)	Oil (%)	Yield (lb/a)	Protein (%)	Oil (%)			
		Planting Date 1				Planting Date 2				
CROPLAN by WinField		2016	2016		2016	2016				
HyCLASS115W	OP	1619	102	28.4	36.8	865	60	26.9	32.9	1242
HyCLASS125W	OP	995	62	26.9	34.6	1001	69	26.4	38.6	998
DuPont Pioneer										
46W94	H	1732	109	27.4	36.9	983	68	26.5	36.7	1358
DL Seeds Inc.										
Einstein	H	1578	99	27.4	36.9	2056	142	26.1	39.1	1817
Popular	H	1698	107	26.8	37.3	1687	117	25.5	37.5	1693
Kansas State University										
Wichita	OP	1890	119	27.5	36.6	1123	78	28.1	37.7	1506
KWS MOMONT										
Kadore	OP	1664	104	28.0	35.6	1362	94	27.0	34.1	1513
Quartz	OP	2615	164	27.1	37.7	1916	133	24.6	40.9	2265
Monsanto/DEKALB										
DKW45-25	OP	1652	104	26.7	37.3	1428	99	26.6	35.2	1540
DKW46-15	OP	344	22	26.5	35.0	676	47	25.7	36.7	510
Rubisco Seeds LLC										
Edimax CL	H	2288	143	27.6	37.4	1791	124	25.8	38.9	2039
Hornet	H	1216	76	26.2	35.3	1622	112	26.2	39.2	1419
Inspiration	H	1559	98	27.0	35.0	1857	129	27.4	35.8	1708
Mercedes	H	1706	107	26.0	34.9	2316	160	25.2	40.5	2011
Star Specialty Seed										
Star 915W	OP	1361	85	27.6	36.2	966	67	27.2	38.8	1163
Mean		1595	---	27.1	36.2	1443	---	26.4	37.5	1519
CV		---	---	3.1	4.4	---	---	4.2	6.3	---
LSD (0.05)		370	---	NS	NS	370	---	NS	NS	271

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.

¹Type: OP=open-pollinated, H=hybrid

Bozeman, Montana

Perry Miller and Jeff Holmes
Montana State University

Planted: 8/26/2015
Harvested: 8/11/2016
Herbicides: Glyphosate
Insecticides: 2 oz/a Warrior II
Irrigation: None
Previous crop: N/A
Soil test: N/A
Fertilizer: 23-0-0-0 lb N-P-K-S in fall
69-0-0-0 lb N-P-K-S in spring
Soil type: Amsterdam silt loam
Elevation: 4775 ft Latitude: 45° 40'N
Comments: Roundup Ready varieties only. A warm winter resulted in no winterkill. Harvest was delayed but yields were excellent.

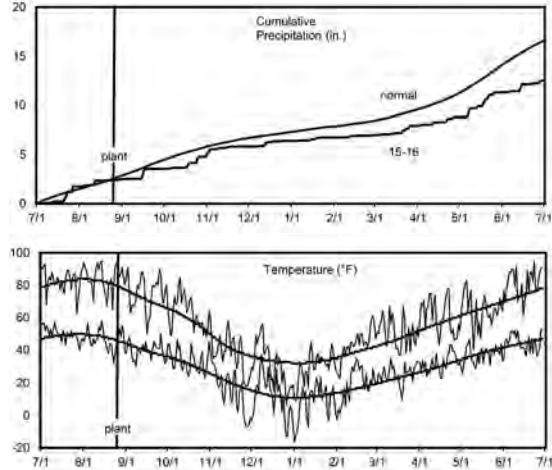


Table 25. Results for the 2016 National Winter Canola Variety Trial at Bozeman, MT

Name	Type ¹	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			50% bloom (DOY)	Maturity (DOY)	Fall stand (0-10)	Moisture (%)
		2016	2013	2-yr.		2016	2016	2013				
CROPLAN by WinField												
HyCLASS115W	OP	2757	2990	2873	113	---	---	---	146	169	9.2	6.8
HyCLASS125W	OP	2462	3080	2771	101	---	---	---	149	172	8.3	7.0
HyCLASS220W	OP	2846	---	---	117	---	---	---	147	171	7.3	5.8
HyCLASS225W	OP	2694	---	---	110	---	---	---	146	171	6.3	6.5
DL Seeds Inc.												
DL14001RR	H	1954	---	---	80	---	---	---	147	176	4.9	7.2
DuPont Pioneer												
46W94	H	2284	2770	2527	94	---	---	---	148	174	5.8	7.9
Kansas State University												
KSR07363	OP	2632	3265	2948	108	---	---	---	146	170	8.0	6.5
KSR4652	OP	2436	---	---	100	---	---	---	147	170	8.0	6.9
KSR4653S	OP	2552	---	---	105	---	---	---	147	170	8.8	6.9
KSR4704	OP	2677	---	---	110	---	---	---	146	171	7.5	6.8
Monsanto / DEKALB												
DKW41-10	OP	2587	2915	2751	106	---	---	---	146	168	4.8	6.4
DKW44-10	OP	2587	3135	2861	106	---	---	---	148	170	7.0	6.5
DKW45-25	OP	2346	---	---	96	---	---	---	147	169	5.5	6.3
DKW46-15	OP	2427	3365	2896	99	---	---	---	148	171	6.5	6.4
DKW47-15	OP	1454	3155	2305	60	---	---	---	150	173	7.8	6.9
Star Specialty Seed												
Star 915W	OP	2329	---	---	95	---	---	---	148	178	4.8	6.9
Mean		2439	3065	---	---	---	---	---	147	171	7.0	7.1
CV		---	7	---	---	---	---	---	---	---	---	---
LSD (0.05)		381	315	---	---	---	---	---	2	2	2.1	0.9

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.

¹Type: OP=open-pollinated, H=hybrid

Beresford, South Dakota

Peter Sexton
South Dakota State University

Planted: 9/4/2015
Seeding Rate OP: 500,000 seeds/acre
Seeding Rate Hybrid: 300,000 seeds/acre
Harvested: 7/1/2016
Soil type: Egan-Clarno-Trent silty complex
Elevation: 1499 ft Latitude: 43° 4'N
Comments: No winterkill observed. Fall stands were low but the plants compensated well.

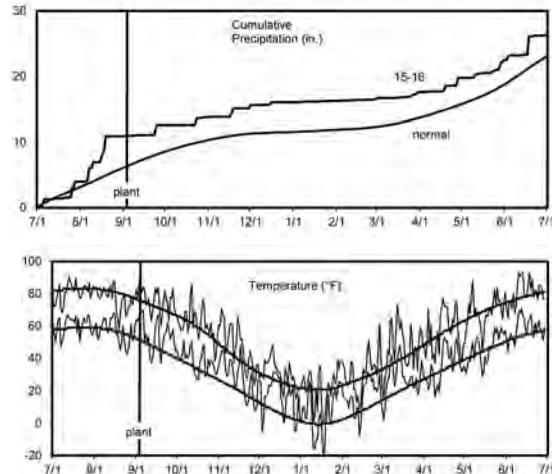


Table 26. Results for the 2016 National Winter Canola Variety Trial, open-pollinated cultivars, at Beresford, SD

Name	Yield (lb/a) ^{1,2}			Yield (% of test avg.)			Winter survival (%)	Fall stand (plts/ft ²)	Moisture (%)	Protein (%)	Oil (%)
	2016	2015	2-yr.	2016	2015	2-yr.					
CROPLAN by WinField											
HyCLASS115W	1748	---	---	87	---	---	---	6.1	11.6	24.3	35.7
HyCLASS125W	1949	---	---	97	---	---	---	2.9	13.0	24.5	36.4
HyCLASS220W	2031	---	---	101	---	---	---	1.8	11.8	23.8	36.9
HyCLASS225W	2067	---	---	103	---	---	---	1.8	9.2	23.4	37.6
High Plains Crop Development											
Claremore	2028	---	---	101	---	---	---	1.7	12.0	24.8	36.4
Kansas State University											
KS4506	1933	---	---	96	---	---	---	3.1	15.1	24.5	33.3
KSR07363	1979	---	---	99	---	---	---	2.2	11.1	24.8	35.7
KSUR1211	2216	---	---	111	---	---	---	2.6	9.6	23.9	38.7
Riley	2352	---	---	117	---	---	---	2.5	13.7	24.1	37.6
Sumner	1606	---	---	80	---	---	---	1.5	11.0	25.4	35.4
Wichita	1884	---	---	94	---	---	---	2.3	8.4	24.5	38.2
KWS MOMONT											
Kadore	2193	---	---	109	---	---	---	3.2	10.0	23.4	36.5
Quartz	2226	---	---	111	---	---	---	4.8	14.3	22.8	35.3
Monsanto / DEKALB											
DKW41-10	1908	---	---	95	---	---	---	1.4	15.5	26.3	33.2
DKW44-10	1989	---	---	99	---	---	---	2.7	16.1	24.8	34.9
DKW45-25	1503	---	---	75	---	---	---	2.0	12.4	25.1	35.5
DKW46-15	2339	---	---	117	---	---	---	2.9	9.9	24.0	37.3
DKW47-15	2211	---	---	110	---	---	---	3.7	11.4	24.9	35.3
Star Specialty Seeds											
Star 915W	2583	---	---	129	---	---	---	3.0	11.1	24.5	36.5
University of Idaho											
15.UI.WC.05633	1662	---	---	83	---	---	---	2.4	20.1	24.7	37.2
15.UI.WC.1	1708	---	---	85	---	---	---	1.8	16.4	24.5	35.1
Mean	2005	---	---	---	---	---	---	2.6	12.6	24.4	36.1
CV	26	---	---	---	---	---	---	44.5	20.6	3.1	6.2
LSD (0.05)	NS	---	---	---	---	---	---	2.0	2.0	1.6	NS

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.

¹Yields adjusted to 9% moisture.

²Use yield data with caution. A CV above 20 indicates higher experimental error. Make variety selection decisions based on more than one year's data.

Table 27. Results for the 2016 National Winter Canola Variety Trial, hybrid cultivars, at Beresford, SD

Name	Yield (lb/a) ¹			Yield (% of test avg.)			Winter survival (%)			Fall stand (plts/ft ²)	Moisture (%)	Protein (%)	Oil (%)
	2016	2015	2-yr.	2016	2016	2015	2-yr.						
DL Seeds Inc.													
DL14001RR	2150	---	---	96	---	---	---	2.2	13.6	24.2	35.2		
Einstein	2436	---	---	109	---	---	---	2.1	15.2	23.0	37.5		
Popular	2157	---	---	97	---	---	---	1.9	14.7	22.1	38.6		
Reflex CL	2134	---	---	96	---	---	---	1.6	13.0	22.1	38.2		
Thure	2425	---	---	109	---	---	---	1.3	12.7	22.2	38.7		
WRH458	1737	---	---	78	---	---	---	1.3	15.3	23.1	38.1		
DuPont Pioneer													
46W94	2458	---	---	110	---	---	---	3.1	13.4	22.2	39.6		
Exp1302	1536	---	---	69	---	---	---	1.3	13.5	23.2	38.9		
PX112	1641	---	---	74	---	---	---	1.3	16.8	23.6	37.9		
KWS MOMONT													
Hekip	2212	---	---	99	---	---	---	2.0	16.2	22.3	38.7		
Helix	2286	---	---	102	---	---	---	2.9	18.3	23.7	38.2		
Monsanto / DEKALB													
DK Imiron CL	2685	---	---	120	---	---	---	2.6	13.1	24.0	36.0		
DK Imistar CL	2586	---	---	116	---	---	---	3.5	14.5	24.1	37.0		
DK Sensei	2439	---	---	109	---	---	---	1.6	9.9	22.9	39.2		
DK Severnyi	2583	---	---	116	---	---	---	3.3	13.9	22.6	39.6		
Rubisco Seeds LLC													
Edimax CL	2329	---	---	104	---	---	---	3.0	14.4	22.3	38.9		
Hornet	2511	---	---	112	---	---	---	2.1	14.8	23.1	37.8		
Inspiration	1913	---	---	86	---	---	---	1.6	13.8	22.9	38.3		
Mercedes	2189	---	---	98	---	---	---	2.5	15.7	22.3	40.0		
Mean	2232	---	---	---	---	---	---	2.2	14.3	22.9	38.2		
CV	14	---	---	---	---	---	---	41.6	18.3	2.4	3.3		
LSD (0.05)	522	---	---	---	---	---	---	1.5	NS	1.1	NS		

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.

¹Yields adjusted to 9% moisture.

Alburgh, Vermont

Heather Darby and Sara Ziegler
University of Vermont

Planted: 8/23/2015
Seeding Rate: 6 lb/acre
Harvested: 7/18/2016
Herbicides: None
Insecticides: None
Irrigation: None
Previous crop: Spring wheat
Soil test: 19-46 ppm P-K, pH=7.5
Fertilizer: 50-100-100 lb N-P-K fertilizer
Soil type: Benson rocky silt loam
Elevation: 130 ft Latitude: 45° 0'N
Comments: No winterkill was observed as a result of a very mild winter.

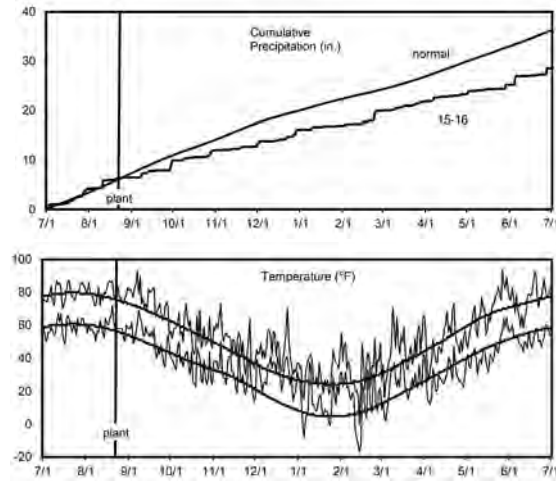


Table 28. Results for the 2016 National Winter Canola Variety Trial at Alburgh, VT

Name	Type ¹	Yield (lb/a)			Yield (% of test avg.)			Test				
		2016	2015	2-yr.	2016	2016	2015	2-yr.	weight (lb/bu)	Moisture (%)	Protein (%)	Oil (%)
DL Seeds Inc.												
Einstein	H	1993	---	---	108	---	---	---	49.8	10.0	20.2	46.6
Kansas State University												
KS4506	OP	2287	---	---	124	---	---	---	50.2	5.4	21.8	44.5
Riley	OP	1878	---	---	102	---	---	---	51.2	6.1	23.6	44.8
Wichita	OP	1407	---	---	76	---	---	---	50.8	5.9	24.0	43.2
KWS MOMONT												
Hekip	H	2046	---	---	111	---	---	---	45.8	12.8	21.7	45.0
Helix	H	1411	---	---	76	---	---	---	48.3	20.4	22.4	44.8
Kadore	OP	2228	---	---	121	---	---	---	51.7	6.0	21.4	44.0
Quartz	OP	2416	---	---	131	---	---	---	50.5	5.8	21.2	46.2
Rubisco Seeds LLC												
Edimax CL	H	2086	---	---	113	---	---	---	49.7	9.1	21.8	43.3
Hornet	H	2198	---	---	119	---	---	---	50.8	14.0	22.3	43.9
Inspiration	H	2020	---	---	109	---	---	---	49.2	8.5	21.5	45.1
Mercedes	H	2298	---	---	124	---	---	---	48.7	8.1	20.2	46.3
University of Idaho												
15.Ul.WC.05633	OP	2026	---	---	110	---	---	---	49.3	9.5	22.8	44.5
15.Ul.WC.1	OP	1966	---	---	106	---	---	---	49.3	9.6	22.6	42.9
Virginia State University												
Virginia	OP	1520	---	---	82	---	---	---	49.3	7.3	22.5	44.1
Mean		1979	---	---	---	---	---	---	49.6	9.3	22.0	44.6
CV		12	---	---	---	---	---	---	3.8	46.0	2.3	1.6
LSD (0.05)		413	---	---	---	---	---	---	NS	7.2	1.1	1.5

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.

¹Type: OP=open-pollinated, H=hybrid

Table 29. Results for the 2016 Blackleg (*Leptosphaeria maculans*) Trial at Perkins, OK.**National Winter Canola Variety Trial**

J.P. Damicone, T.J. Pierson, J.J. Lofton, and W.E. Vaughan, Oklahoma State University

M.J. Stamm, Kansas State University

Entry	Yield ¹ (lb/a)	Aster yellows ² (%)	Blackleg incidence ³ (%)	Blackleg incidence ⁴ (≥ 3%)	Blackleg severity ⁵ (0-5)
CROPLAN by WinField					
HyCLASS 115W	2513 f-m	13.3 d-i	80 a-d	40.0 c-g	2.1 c-g
HyCLASS 125W	2383 h-m	11.7 e-i	77 a-e	46.7 c-e	2.4 b-f
HyCLASS 220W	2405 g-m	6.7 hi	80 a-d	46.7 c-e	2.6 b-d
HyCLASS 225W	2551 f-m	13.3 d-i	90 ab	76.7 ab	3.1 a-c
DL Seeds Inc.					
DL14001RR	2289 i-n	13.3 d-i	83 a-c	26.7 d-k	1.7 d-k
Einstein	2860 b-j	18.3 c-g	80 a-d	53.3 bc	2.6 b-d
Popular	3280 b-e	16.7 d-h	63 b-i	23.3 e-k	1.4 f-l
Reflex CL	2735 d-l	21.7 b-e	47 f-l	16.7 g-k	1.0 h-m
Thure	3247 b-e	15.0 d-i	63 b-i	33.3 c-i	1.6 d-k
WRH458	2408 g-r	20.0 b-f	40 h-m	23.3 e-k	1.2 g-m
DuPont Pioneer					
46W94	3136 b-f	8.3 g-i	77 a-e	26.7 d-k	1.7 d-k
Exp 1302	2163 j-o	10.0 f-i	30 k-m	3.3 k	0.5 lm
PX112	2840 c-j	11.7 e-i	63 b-i	10.0 i-k	1.1 g-m
High Plains Crop Development					
Claremore	2042 k-o	10.0 f-i	70 a-g	30.0 c-j	1.8 d-j
University of Idaho					
15.UI.WC.05633	2016 l-o	8.3 g-i	67 a-h	23.3 e-k	1.6 d-k
15.UI.WC.1	2201 j-o	16.7 d-h	73 a-f	23.3 e-k	1.7 d-k
Kansas State University					
KS4506	1966 m-o	20.0 b-f	63 b-i	36.7 c-h	1.7 d-k
KSR07363	2519 f-m	13.3 d-i	77 a-e	36.7 c-h	2.3 b-f
KSUR1211	2519 f-m	10.0 f-i	50 e-l	23.3 e-k	1.5 e-l
Riley	1957 m-o	30.0 ab	57 c-k	18.3 f-k	1.2 g-m
Sumner	2467 f-m	15.0 d-i	60 c-j	36.7 c-h	1.9 d-i
Wichita	1624 o	33.0 a	65 b-h	20.3 f-k	1.2 g-m
KWS MOMONT					
Hekip	3507 ab	11.7 e-i	60 c-j	36.7 c-h	1.8 d-j
Helix	2662 e-l	23.3 a-d	47 f-l	13.3 h-k	1.0 h-m
Kadore	2085 k-o	23.3 a-d	33 j-m	13.3 h-k	0.7 k-m
MH11J41	3320 b-d	11.7 e-i	40 h-m	10.0 i-k	0.8 j-m
MH12AC17	2986 b-h	11.7 e-i	57 c-k	16.7 g-k	1.2 g-m
MH12AQ37	3017 b-h	16.7 d-h	37 i-m	16.7 g-k	0.9 j-m
MH12AX37	2776 d-j	15.0 d-i	17 m	6.7 jk	0.3 m
MH12AY27	2753 d-k	8.3 g-i	23 lm	6.7 jk	0.4 lm
Quartz	3156 b-f	20.0 b-f	47 f-l	20.0 f-k	1.1 g-m
Monsanto / DEKALB					
DK Imiron CL	3052 b-g	8.3 g-i	47 f-l	16.7 g-k	0.9 i-m
DK Imistar CL	3195 b-f	11.7 e-i	53 d-k	20.0 f-k	1.2 g-m
DK Sensei	3489 a-c	21.7 b-e	33 j-m	16.7 g-k	1.0 h-m
DK Severnyi	4114 a	8.3 g-i	30 k-m	20.0 f-k	0.9 i-m
DKW41-10	2379 h-r	6.7 hi	63 b-i	43.3 c-f	1.9 d-i
DKW44-10	2717 d-l	5.0 i	90 ab	80.0 a	3.3 ab
DKW45-25	2063 k-o	18.3 c-g	73 a-f	50.0 cd	2.5 b-e
DKW46-15	2482 f-m	11.7 e-iv	93 a	76.7 ab	3.6 a
DKW47-15	1722 no	18.3 c-g	53 d-k	26.7 d-k	1.3 f-m
Rubisco Seeds LLC					
Edimax CL	2898 b-i	28.3 a-c	33 j-m	10.0 i-k	0.7 k-m
Homet	2689 d-l	13.3 d-i	60 c-j	26.7 d-k	1.4 f-l
Inspiration	3161 b-f	18.3 c-g	40 h-m	6.7 jk	0.7 k-m
Mercedes	2720 d-l	18.3 c-g	53 d-k	13.3 h-k	1.0 h-m

Table 29. Results for the 2016 Blackleg (*Leptosphaeria maculans*) Trial at Perkins, OK.

National Winter Canola Variety Trial

J.P. Damicone, T.J. Pierson, J.J. Lofton, and W.E. Vaughan, Oklahoma State University

M.J. Stamm, Kansas State University

Entry	Yield¹ (lb/a)	Aster yellows² (%)	Blackleg incidence³ (%)	Blackleg incidence⁴ (≥ 3%)	Blackleg severity⁵ (0-5)
Star Specialty Seed, Inc.					
Star 915W	2175 j-o	21.7 b-e	77 a-e	40.0 c-g	2.0 d-h
Virginia State University					
Virginia	2040 k-o	20.0 b-f	40 h-m	13.3 h-k	0.9 h-m
VSX-3	2409 g-m	15.0 d-i	37 i-m	16.7 g-k	0.9 j-m
VSX-4	2519 f-m	13.3 d-i	43 g-m	10.0 i-k	0.9 h-m
⁶P>F	<0.01	<0.01	<0.01	<0.01	<0.01
CV	15.4	45.1	30.3	57.7	43.9

¹Values in a column followed by the same letter are not statistically different at P=0.05 according to t-tests produced by the Lines option of SAS Proc GLIMMIX.

²Percentage of plants with aster yellows.

³Percentage of plants with blackleg cankers.

⁴Percentage of plants with severe blackleg cankers (severity rating of ≥3).

⁵Internal stem decay from blackleg on a 0 to 5 scale where 0 = no disease, 1 = 25% of the stem with decay, 2 = 50% of the stem with decay, 3 = 75% of the stem with decay, 4 = 100% of the stem with decay, 5 = dead plant.

⁶Probability of a significant entry effect in SAS Proc GLIMMIX.

Used with permission. Plant Disease Management Reports 11:FC024

Table 30. Seed sources for entries in the 2015-2016 National Winter Canola Variety Trial

Source	Type ¹	Trait ²	Release date	Maturity ³	Source	Type ¹	Trait ²	Release date	Maturity ³
CROPLAN by WinField Paul Gregor (psgregor@landolakes.com)					KWS MOMONT Thierry Momont (tmomont@momont.com)				
HyCLASS 115W OP RR/SURT 2008 E					Photosyntech Bob Amstrup (bob.amstrup@photosyntech.com)				
HyCLASS 125W OP RR/SURT 2010 M					Hekip Hyb --- 2014 ME				
HyCLASS 220W OP RR 2014 ME					Helix Hyb --- 2015 F				
HyCLASS 225W OP RR/SURT 2014 M					Kadore OP --- 2006 F				
DL Seeds Inc. Kevin McCallum (kevin.mccallum@dlseeds.ca)					MH 11J41 Hyb --- --- E				
DL14001RR Hyb RR --- F					MH 12AC17 Hyb --- --- M				
Einstein Hyb --- --- M					MH 12AQ37 Hyb --- --- M				
Popular Hyb --- --- ME					MH 12AX37 Hyb --- --- F				
Reflex CL Hyb CL --- M					MH 12AY27 Hyb --- --- M				
Thure Hyb SD --- M					Quartz OP --- 2015 M				
WRH 458 Hyb CL --- ME					Monsanto / DEKALB Chris Anderson (christopher.i.anderson@monsanto.com)				
DuPont Pioneer Daniel Berning (dan.berning@pioneer.com)					DK Imiron CL Hyb SD/CL --- M				
46W94 Hyb RR 2011 M					DK Imistar CL Hyb CL --- M				
Exp 1302 Hyb --- --- M					DK Sensei Hyb SD --- M				
PX112 Hyb SD --- M					DK Severnyi Hyb SD --- M				
High Plains Crop Development Charlie Rife (charlie@highplainscd.com)					DKW41-10 OP RR 2008 E				
Claremore OP IMI 2011 F					DKW44-10 OP RR 2009 ME				
University of Idaho Jack Brown (jbrown@uidaho.edu)					DKW45-25 OP RR/SURT 2013 M				
15.UI.WC.1 OP --- --- MF					DKW46-15 OP RR/SURT 2008 M				
15.UI.WC.05633 OP SU --- F					DKW47-15 OP RR/SURT 2008 M				
Kansas State University Canola Breeding Program Michael J. Stamm (mjstamm@ksu.edu)					Rubisco Seeds LLC Claire Caldbeck (info@rubiscoseeds.com)				
KS4506 OP --- --- M					Edimax CL Hyb CL 2012 M				
KSR07363 OP RR 2013 ME					Hornet Hyb --- 2008 M				
KSUR1211 OP SU --- F					Inspiration Hyb --- 2014 M				
Riley OP --- 2010 M					Mercedes Hyb --- 2014 M				
Sumner OP SU 2003 ME					Star Specialty Seed, Inc. Jim Johnson (jimj_star@hotmail.com)				
Wichita OP --- 1999 M					Star 915W OP RR/SURT 2014 M				
Virginia State University Agricultural Experiment Station Harbans Bhardwaj (hbhardwj@vsu.edu)					Virginia OP --- 2003 M				
					VSX-3 OP --- --- M				
					VSX-4 OP --- --- M				

¹ OP = open-pollinated, Hyb = hybrid

² SU & SURT = sulfonylurea carryover tolerant; CL = Clearfield (imidazolinone resistant); IMI = imidazolinone carryover tolerant; RR = Roundup Ready; SD = semi dwarf

³ E = Early; ME = Medium/Early; M = Medium; MF = Medium/Full; F = Full

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