2017

National Winter Canola Variety Trial

Report of Progress 1141

K-STATE Research and Extension

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

2017 National Winter Canola Variety Trial
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Contribution no. 18-343-S from the Kansas Agricultural Experiment Station

2017 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 34 locations in 15 states for the 2016–2017 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 36 entries 20 are commercial and 16 are experimental. These entries were provided by eight 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 36 entries were planted. Results for each trial were analyzed individually and are presented in separate tables. Differences between open-pollinated and hybrid yields can be compared to the common checks in each trial. Three open-pollinated cultivars were used as checks: Quartz, Riley, and Wichita.

Management guidelines were provided to cooperators, but previous growing experience influenced final management decisions. All trials were planted in small research plots (approximately 100 ft^2) with three or four replications. Cultural practices, site descriptions, growing conditions, and performance data are provided for each harvested location. Results are presented alphabetically by seed supplier. Yield results for some locations include 2-year summaries.

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

The NWCVT continues in the 2017–2018 growing season and includes 37 entries. Eight seed suppliers contributed to the trial, and it was distributed to 40 locations in 19 states.

2016–2017 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 “16-17” represents actual precipitation. If weather information was not provided, data were taken from a nearby town.

In general, the 2016–2017 growing season saw above-normal temperatures and normal to above-normal precipitation. Fall temperatures were extremely warm leading to excessive growth of canola in many trials. Some trials had gone through a brief winter acclimation period when temperatures dropped dramatically in mid-December. This resulted in winterkill and thinning of stands. The late winter was mild which caused the crop to break dormancy in early February. A cooler May provided ideal conditions for grain filling. Yields were excellent where stands were not thinned by winter temperatures.

Test Sites and Results

Sixteen harvested locations in 12 states are included in this report: Shorter, AL; Akron, CO; Athens, GA; Vincennes, IN; Garden City, Hutchinson, Manhattan, and Troy, KS; Scottsbluff, NE; Clovis, NM; Chickasha, OK; Nashville, TN; Springfield, TN; Bushland, TX; Orange, VA; and Alburgh, VT. Cape Girardeau, MO was harvested but the data was not published.

Seventeen locations were not harvested because of numerous causes including poor stand establishment, winterkill, inadequate vernalization, too much rainfall at harvest, 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, yield performance was average because of challenging weather conditions at some locations. Open pollinated trial averages ranged from 821 to 3,400 lb/acre. Hybrid trial averages ranged from 1,251 to 4,574 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. Seven 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 blackleg fungus. The 2016–2017 blackleg nursery was planted at Perkins, OK, by Oklahoma State University. Data is 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: 11/4/2016
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Dessicant: 1.5 pt/a Gramoxone on 5/29/2017
Harvested: 6/10/2017
Herbicides: 1.5 pt/a Treflan
Insecticides: 5 oz/a Tundra
Irrigation: 0.15 in. on 4/14/2017
Previous crop: NA
Soil test: P=67 lb/a, K=167 lb/a, pH=6.2
Fertilizer: 30-0-0-4.5 lb N-P-K-S fertilizer in fall
130-0-0-20 lb N-P-K-S fertilizer in spring
Soil type: Marvyn sandy loam
Elevation: 220 ft Latitude: 32° 24'N
Comments: Late planted then turned cold and wet. Some stands were thinned.

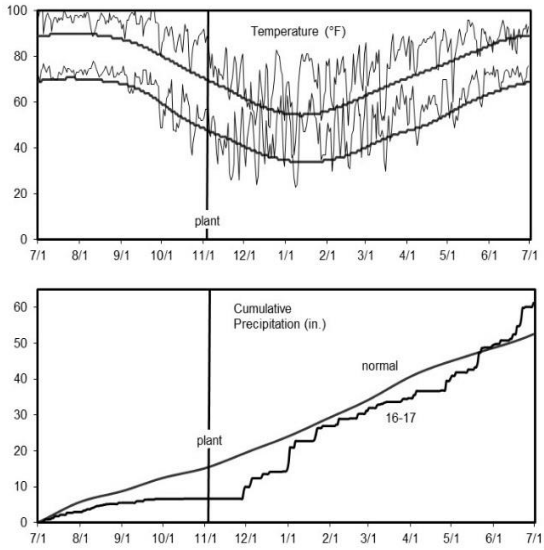

Table 1. Results for the 2017 National Winter Canola Variety Trial at Shorter, AL

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	**1667**	**1271**	1469	144	---	---	---	52	8.7	47.7	**41.2**	23.3
Kuga	H	**1737**	---	---	150	---	---	---	56	8.4	46.3	**42.0**	22.6
Plurax CL	H	**1854**	---	---	160	---	---	---	54	8.5	48.6	**42.0**	23.4
Popular	H	**2089**	**1478**	1783	180	---	---	---	52	8.0	48.4	**41.7**	23.8
Kansas State University													
Riley	OP	718	---	---	62	---	---	---	52	8.7	47.2	40.6	24.9
Wichita	OP	677	---	---	58	---	---	---	53	8.9	46.5	38.9	26.0
KWS MOMONT													
Hekip	H	**1804**	1095	1450	156	---	---	---	50	8.2	46.6	**41.2**	23.0
MH 12AY04	H	451	---	---	39	---	---	---	56	9.4	47.4	39.4	25.3
MH 12AY27	H	285	630	457	25	---	---	---	60	9.1	45.2	39.0	24.2
MH 12AY36	H	983	---	---	85	---	---	---	54	8.7	46.8	39.1	24.6
Quartz	OP	739	---	---	64	---	---	---	50	7.9	45.1	**41.6**	23.0
Monsanto / DEKALB													
DK Imiron CL	H	1073	1035	1054	93	---	---	---	59	8.5	47.3	40.0	25.6
DK Imistar CL	H	1615	**1266**	1441	140	---	---	---	59	8.4	48.3	**41.3**	24.4
DK Sensei	H	1587	---	---	137	---	---	---	58	8.4	48.2	40.6	25.1
DK Severnyi	H	1502	---	---	130	---	---	---	54	8.5	47.0	39.5	24.2
Rubisco Seeds LLC													
Edimax CL	H	1020	1072	1046	88	---	---	---	60	8.6	47.4	39.3	24.6
Inspiration	H	1366	**1230**	1298	118	---	---	---	58	8.6	47.7	39.4	24.2
Mercedes	H	1162	1044	1103	100	---	---	---	54	8.5	43.5	**41.7**	23.2
University of Idaho													
15.WC.05633	OP	203	---	---	18	---	---	---	51	---	---	38.6	25.3
15.WC.1	OP	409	---	---	35	---	---	---	52	9.2	44.6	39.6	23.8
Mean		1158	1029	---	---	---	---	---	55	8.5	46.9	40.3	24.2
CV		23	16	---	---	---	---	---	6	6.2	1.1	1.5	2.9
LSD (0.05)		452	266	---	---	---	---	---	5	NS	1.0	1.3	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.

[1]Type: H=hybrid, OP=open pollinated

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

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Athens, Georgia

Daniel Mailhot
University of Georgia

Planted: 10/11/2016 in 7-in. rows
Seeding Rate: 5 lbs/a
Harvested: 6/14/2017
Herbicides: Poast
Insecticides: 1 oz/a Karate
Irrigation: None
Previous crop: Sorghum
Soil test: P=Med, K=Low, pH=6.1
Fertilizer: 50-165-330 lb N-P-K fertilizer in fall
123-0-0-20 lb N-P-K-S fertilizer in spring
Elevation: 500 ft Latitude: 33° 43'N
Comments: Consistent high yields at this location.

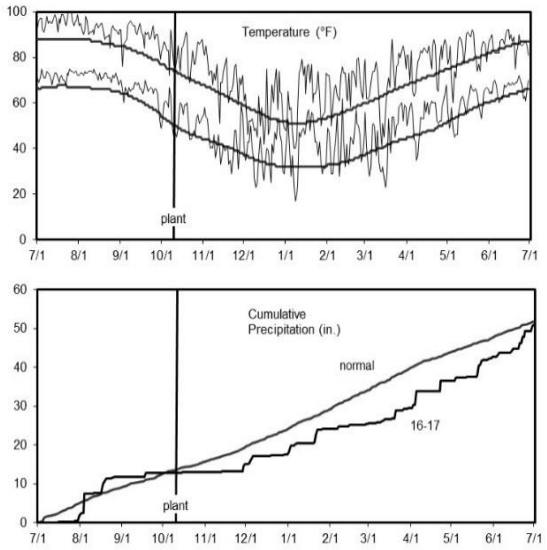

Table 2. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Athens, GA

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	2942	---	---	96	---	---	---	64	84	44.9	39.2	27.0
HyCLASS225W	OP	**3671**	---	---	120	---	---	---	63	85	44.9	40.0	26.3
HyCLASS320W	OP	**3351**	---	---	110	---	---	---	58	85	41.2	38.2	27.1
Kansas State University													
KS4675	OP	2738	---	---	90	---	---	---	62	87	40.8	39.4	26.9
KSR4653S	OP	**3499**	---	---	115	---	---	---	63	84	46.5	38.6	27.0
Riley	OP	**3496**	---	---	115	---	---	---	62	88	41.8	**40.9**	27.3
Sumner	OP	**3482**	---	---	114	---	---	---	62	86	42.9	39.6	27.3
Surefire	OP	3084	---	---	101	---	---	---	64	93	45.0	38.4	27.6
Torrington	OP	**3279**	---	---	107	---	---	---	66	86	44.4	38.5	27.1
Wichita	OP	**3369**	---	---	110	---	---	---	61	89	45.0	38.2	27.7
KWS MOMONT													
MH 09DJ058	OP	**3685**	---	---	121	---	---	---	61	87	38.8	**41.8**	24.5
Quartz	OP	**3360**	---	---	110	---	---	---	63	89	43.1	**41.9**	24.7
Monsanto / DEKALB													
DKW44-10	OP	3090	---	---	101	---	---	---	56	83	44.0	38.5	27.1
DKW45-25	OP	3038	---	---	100	---	---	---	59	86	44.0	38.3	26.9
DKW46-15	OP	3058	---	---	100	---	---	---	62	85	40.3	**41.3**	26.5
Star Specialty Seed, Inc.													
Star 915W	OP	3142	---	---	103	---	---	---	64	86	41.8	39.7	27.5
Star 930W	OP	2863	---	---	94	---	---	---	61	86	45.8	39.4	26.8
University of Idaho													
15.WC.05633	OP	2207	---	---	72	---	---	---	60	92	41.8	36.8	28.0
15.WC.1	OP	2677	---	---	88	---	---	---	63	89	43.7	37.6	27.2
WC.15.7.5	OP	2105	---	---	69	---	---	---	67	96	38.0	36.7	28.3
WC.9.7.5.7	OP	1940	---	---	64	---	---	---	63	93	39.7	37.7	28.0
Grand Mean		3051	---	---	---	---	---	---	62	88	42.8	39.1	27.0
Common Check OP Mean		3408	---	---	---	---	---	---	62	89	43.3	40.3	26.6
Common Check Hybrid Mean		3555	---	---	---	---	---	---	62	89	43.6	39.0	26.6
CV		10	---	---	---	---	---	---	4	2	5.7	2.0	2.4
LSD (0.05)		520	---	---	---	---	---	---	4	2	4.0	1.6	1.3

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.

[1]Type: OP=open pollinated

Table 3. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Athens, GA

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	3601	---	---	94	---	---	---	63	86	42.2	39.2	25.2
Kuga	H	3888	---	---	101	---	---	---	62	86	42.5	39.9	25.6
Plurax CL	H	3302	---	---	86	---	---	---	61	84	44.0	39.0	26.0
Popular	H	3920	---	---	102	---	---	---	60	88	45.6	40.0	26.4
Kansas State University													
Riley	OP	3139	---	---	82	---	---	---	64	89	45.1	38.4	27.3
Wichita	OP	3403	---	---	89	---	---	---	64	88	42.4	37.9	28.0
KWS MOMONT													
Hekip	H	4054	---	---	106	---	---	---	59	85	40.2	40.1	25.1
MH 12AY04	H	3682	---	---	96	---	---	---	64	91	43.6	40.3	27.2
MH 12AY27	H	3851	---	---	100	---	---	---	65	92	43.1	37.3	26.4
MH 12AY36	H	3711	---	---	97	---	---	---	67	90	41.6	39.6	25.3
Quartz	OP	4124	---	---	108	---	---	---	59	89	43.4	40.6	24.5
Monsanto / DEKALB													
DK Imiron CL	H	3772	---	---	98	---	---	---	64	90	41.8	38.8	27.6
DK Imistar CL	H	4190	---	---	109	---	---	---	65	90	44.8	39.4	27.4
DK Sensei	H	4214	---	---	110	---	---	---	65	90	46.1	39.1	26.7
DK Severnyi	H	4153	---	---	108	---	---	---	63	89	44.6	41.3	24.2
Rubisco Seeds LLC													
Edimax CL	H	3967	---	---	103	---	---	---	60	87	45.4	38.8	25.1
Inspiration	H	4167	---	---	109	---	---	---	62	87	44.8	39.5	25.4
Mercedes	H	3871	---	---	101	---	---	---	64	87	38.7	41.2	24.9
Grand Mean		3834	---	---	---	---	---	---	63	88	43.3	39.5	26.0
Common Check Hybrid Mean		3555	---	---	---	---	---	---	62	89	43.6	39.0	26.6
Common Check OP Mean		3408	---	---	---	---	---	---	62	89	43.3	40.3	26.6
CV		12	---	---	---	---	---	---	5	1	5.1	3.0	2.0
LSD (0.05)		NS	---	---	---	---	---	---	NS	1	3.7	NS	1.1

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.

[1]Type: H=hybrid, OP=open pollinated

Orange, Virginia

Brad Lael and Wade Thomason
Virginia Tech University

Planted: 9/23/2016
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Harvested: 6/12/2017
Herbicides: 0.5 pt/a Treflan
Irrigation: None
Fertilizer: 30-80-60 lb N-P-K fertilizer in fall
60-0-0 lb N-P-K fertilizer in spring
Soil type: Davidson silty clay
Elevation: 510 ft Latitude: 38° 13'N
Comments: Dry conditions resulted in lower than normal yields. Oil contents were excellent at this location.

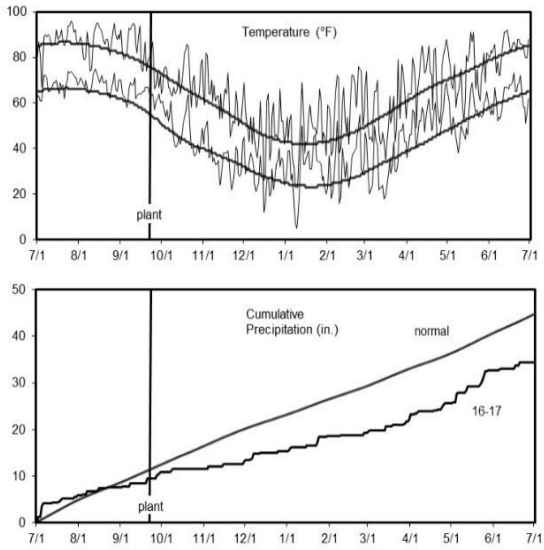

Table 4. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Orange, VA

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	1837	2234	2036	97	---	---	---	46	92	47.2	**43.4**	21.9
HyCLASS225W	OP	**2071**	2131	2101	110	---	---	---	44	94	47.3	**43.1**	21.7
HyCLASS320W	OP	2004	---	---	106	---	---	---	40	94	46.5	40.8	22.3
Kansas State University													
KS4675	OP	1792	---	---	95	---	---	---	41	94	45.7	42.2	22.6
KSR4653S	OP	1797	---	---	95	---	---	---	39	93	46.5	**43.2**	21.8
Riley	OP	1678	2167	1923	89	---	---	---	38	94	47.2	**43.4**	21.4
Sumner	OP	**2055**	2298	2177	109	---	---	---	40	94	48.5	42.2	23.6
Surefire	OP	1961	2218	2089	104	---	---	---	47	92	48.1	41.8	23.4
Torrington	OP	**2048**	**2519**	2284	108	---	---	---	48	92	48.0	**42.9**	21.9
Wichita	OP	**2138**	2420	2279	113	---	---	---	41	95	48.0	**43.9**	21.8
KWS MOMONT													
MH 09DJ058	OP	**2400**	---	---	127	---	---	---	39	93	49.1	42.1	20.3
Quartz	OP	**2278**	**3142**	2710	120	---	---	---	39	94	47.4	**43.7**	20.4
Monsanto / DEKALB													
DKW44-10	OP	**2245**	1857	2051	119	---	---	---	40	93	48.2	**42.4**	21.2
DKW45-25	OP	1804	**2567**	2186	95	---	---	---	41	94	47.9	42.2	21.7
DKW46-15	OP	1610	1958	1784	85	---	---	---	43	92	45.7	**43.0**	22.2
Star Specialty Seed, Inc.													
Star 915W	OP	1900	1773	1836	100	---	---	---	43	93	46.5	41.3	23.2
Star 930W	OP	1847	2072	1960	98	---	---	---	46	94	47.9	41.9	22.3
University of Idaho													
15.WC.05633	OP	1653	2376	2014	87	---	---	---	42	93	46.1	40.0	24.1
15.WC.1	OP	1940	**2606**	2273	103	---	---	---	40	94	47.2	41.6	22.2
WC.15.7.5	OP	1758	---	---	93	---	---	---	47	93	48.2	38.0	22.6
WC.9.7.5.7	OP	1410	---	---	75	---	---	---	40	94	43.8	39.9	23.5
Grand Mean		1918	2271	---	---	---	---	---	42	93	47.2	42.0	22.2
Common Check OP Mean		2031	---	---	---	---	---	---	39	94	47.5	43.6	21.2
Common Check Hybrid Mean		2115	---	---	---	---	---	---	44	93	47.3	44.3	20.8
CV		11	19	---	---	---	---	---	10	2	2.2	1.7	2.5
LSD (0.05)		364	709	---	---	---	---	---	NS	NS	1.7	1.5	1.2

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.

[1]Type: OP=open pollinated

Table 5. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Orange, VA

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	**2622**	**3529**	3076	107	---	---	---	42	90	43.2	**45.9**	18.3
Kuga	H	2434	---	---	100	---	---	---	44	90	45.3	45.2	19.2
Plurax CL	H	2382	---	---	98	---	---	---	42	90	46.5	44.5	20.2
Popular	H	2277	3133	2705	93	---	---	---	43	90	47.2	45.6	19.6
Kansas State University													
Riley	OP	2003	2167	2085	82	---	---	---	42	92	46.5	44.2	21.8
Wichita	OP	2070	2420	2245	85	---	---	---	49	94	48.1	43.7	21.4
KWS MOMONT													
Hekip	H	**2816**	3255	3036	115	---	---	---	45	90	46.4	43.7	20.2
MH 12AY04	H	2371	---	---	97	---	---	---	47	92	48.5	45.2	19.5
MH 12AY27	H	**2598**	**3554**	3076	106	---	---	---	48	94	46.5	**46.9**	18.6
MH 12AY36	H	**2466**	---	---	101	---	---	---	55	92	48.6	43.9	19.4
Quartz	OP	2272	3142	2707	93	---	---	---	40	92	47.2	45.2	19.2
Monsanto / DEKALB													
DK Imiron CL	H	2280	**3654**	2967	93	---	---	---	46	94	47.0	43.6	20.6
DK Imistar CL	H	2401	**3416**	2909	98	---	---	---	49	93	46.0	44.3	20.8
DK Sensei	H	**2633**	**3920**	3277	108	---	---	---	50	91	47.4	43.7	21.1
DK Severnyi	H	**2702**	**3762**	3232	111	---	---	---	41	93	47.1	44.0	19.9
Rubisco Seeds LLC													
Edimax CL	H	2423	**3711**	3067	99	---	---	---	48	92	47.1	42.7	19.3
Inspiration	H	**2511**	**3855**	3183	103	---	---	---	50	92	47.5	45.2	19.3
Mercedes	H	**2676**	3189	2932	110	---	---	---	45	92	45.7	45.6	19.4
Grand Mean		2441	3149	---	---	---	---	---	46	92	46.8	44.6	19.9
Common Check Hybrid Mean		2115	---	---	---	---	---	---	44	93	47.3	44.3	20.8
Common Check OP Mean		2031	---	---	---	---	---	---	39	94	47.5	43.6	21.2
CV		9	10	---	---	---	---	---	5	2	2.4	1.2	2.7
LSD (0.05)		371	508	---	---	---	---	---	4	3	1.8	1.2	1.1

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.

[1]Type: H=hybrid, OP=open pollinated

Vincennes, Indiana

Chuck Mansfield
Vincennes University

Planted:	9/19/2016 in 6-in. rows
Seeding Rate OP:	500,000 seeds/a
Seeding Rate Hybrid:	300,000 seeds/a
Dessicant:	2 pt/a Reglone on 6/2/2017
Harvested:	6/8 - 6/9/2017
Herbicides:	12 oz/a Dual, 4 oz/a Command
Insecticides:	2.75 oz/a Mavrik
Fungicides:	5 oz/a Proline, 8 oz/a Quadris
Irrigation:	None
Previous crop:	Tomatoes and peppers
Soil test:	P=59 lb/a, K=165 lb/a, pH=6.1
Fertilizer:	156-0-61-24-1 lb N-P-K-S-B fertilizer in spring
Soil type:	Lomax loam
Elevation:	430 ft Latitude: 38° 44'N
Comments:	Winterkill was observed. A relatively mild winter except for some single digit lows. Damage from cabbage seedpod weevil may have hurt yields.

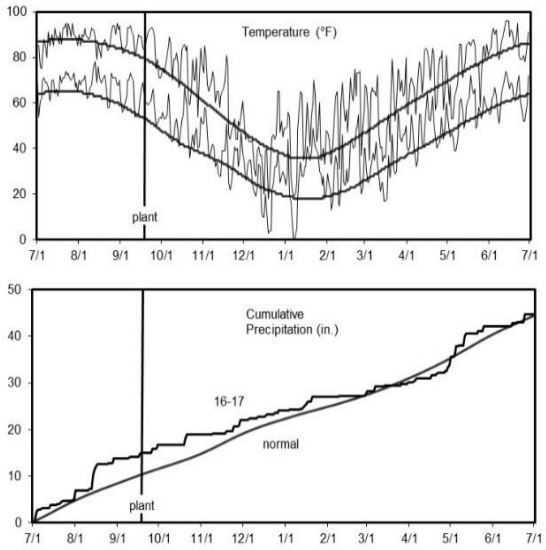

Table 6. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Vincennes, IN

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	Lodging	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	2722	2404	2563	102	90	100	95	51	35	48.0	**41.3**	25.0
HyCLASS225W	OP	2772	2835	2804	104	83	100	92	55	0	48.2	39.1	25.8
HyCLASS320W	OP	2829	---	---	106	90	---	---	52	55	48.6	40.3	25.0
Kansas State University													
KS4675	OP	2929	---	---	109	83	---	---	56	12	47.1	40.8	26.5
KSR4653S	OP	2599	---	---	97	78	---	---	52	18	48.2	40.2	25.7
Riley	OP	2706	2779	2742	101	78	100	89	57	13	47.7	39.3	26.8
Sumner	OP	2293	2698	2495	86	65	100	83	53	12	48.8	39.5	26.6
Surefire	OP	2343	2609	2476	88	70	100	85	58	12	47.2	37.7	27.2
Torrington	OP	**3066**	2703	2884	115	83	100	92	59	3	47.1	38.7	25.6
Wichita	OP	2928	2897	2913	109	87	100	93	57	8	48.2	39.4	27.0
KWS MOMONT													
MH 09DJ058	OP	2605	---	---	97	57	---	---	50	0	46.4	**42.7**	23.2
Quartz	OP	**3143**	**3516**	3329	117	83	100	92	52	13	49.2	**41.4**	23.6
Monsanto / DEKALB													
DKW44-10	OP	2884	2201	2543	108	87	100	93	50	35	48.1	39.6	25.6
DKW45-25	OP	2450	2452	2451	92	82	100	91	51	48	48.2	39.7	25.2
DKW46-15	OP	2509	2200	2355	94	82	100	91	55	7	47.2	**42.7**	24.8
Star Specialty Seed, Inc.													
Star 915W	OP	**3407**	2741	3074	127	88	100	94	58	0	48.5	40.1	26.4
Star 930W	OP	2632	2344	2488	98	88	100	94	54	22	48.7	39.6	25.7
University of Idaho													
15.WC.05633	OP	2189	2111	2150	82	68	100	84	57	3	47.0	38.3	26.8
15.WC.1	OP	2579	2746	2663	96	77	100	88	56	5	47.0	38.3	25.9
WC.15.7.5	OP	2562	---	---	96	88	---	---	62	3	47.5	37.1	27.1
WC.9.7.5.7	OP	2031	---	---	76	80	---	---	58	3	46.7	35.8	27.8
Grand Mean		2675	2572	---	---	80	100	---	55	15	47.8	39.6	25.9
Common Check OP Mean		2925	---	---	---	83	---	---	55	12	48.4	40.0	25.8
Common Check Hybrid Mean		2792	---	---	---	82	---	---	55	11	48.7	40.6	25.5
CV		9	10	---	---	7	---	---	2	70	---	2.1	1.3
LSD (0.05)		403	402	---	---	10	---	---	2	17	NS	1.8	0.7

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.

[1]Type: OP=open pollinated

Table 7. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Vincennes, IN

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	Lodging	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	2956	**3651**	3303	99	62	100	81	52	0	49.2	**42.3**	22.6
Kuga	H	3031	---	---	102	77	---	---	53	3	48.1	**41.4**	23.9
Plurax CL	H	**3068**	---	---	103	80	---	---	53	0	49.3	**42.3**	22.8
Popular	H	2980	3182	3081	100	80	100	90	52	0	49.4	**43.3**	23.4
Kansas State University													
Riley	OP	2679	2779	2729	90	80	100	90	56	10	48.3	40.2	26.4
Wichita	OP	2701	2897	2799	90	80	100	90	56	10	48.7	40.0	26.2
KWS MOMONT													
Hekip	H	**3171**	**3398**	3284	106	68	100	84	53	3	49.3	40.7	23.3
MH 12AY04	H	2826	---	---	95	67	---	---	56	0	48.7	41.1	25.0
MH 12AY27	H	2845	**3451**	3281	95	68	100	88	57	0	47.8	38.8	24.3
MH 12AY36	H	**3112**	---	---	104	77	---	---	58	0	48.5	41.0	23.8
Quartz	OP	2997	**3516**	3257	100	87	100	93	53	13	49.0	**41.7**	23.9
Monsanto / DEKALB													
DK Imiron CL	H	**3356**	3293	3325	112	87	100	93	57	0	49.3	38.8	26.5
DK Imistar CL	H	**3140**	3262	3201	105	83	100	92	57	0	49.8	39.8	25.7
DK Sensei	H	3017	3158	3087	101	83	100	92	55	0	49.1	39.9	25.6
DK Severnyi	H	**3216**	3064	3140	108	77	100	88	50	5	49.1	**41.4**	23.8
Rubisco Seeds LLC													
Edimax CL	H	2629	**3582**	3105	88	75	100	88	52	17	48.9	40.0	24.0
Inspiration	H	2811	**3544**	3178	94	55	100	78	56	7	48.2	39.3	24.5
Mercedes	H	**3192**	**3543**	3367	107	72	100	86	53	5	49.1	**43.3**	23.0
Grand Mean		2985	3237	---	---	75	100	---	54	4	48.9	40.9	24.4
Common Check Hybrid Mean		2792	---	---	---	82	---	---	55	11	48.7	40.6	25.5
Common Check OP Mean		2925	---	---	---	83	---	---	55	12	48.4	40.0	25.8
CV		6	6	---	---	11	---	---	2	---	1.3	2.5	2.0
LSD (0.05)		310	308	---	---	13	---	---	2	NS	1.0	2.2	1.1

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.

[1]Type: H=hybrid, OP=open pollinated

Nashville, Tennessee

Matthew W. Blair
Tennessee State University

Planted: 11/1/2016 in 12-in. rows
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Herbicides: None
Insecticides: None
Previous crop: Common bean
Soil test: NA
Fertilizer: None
Soil type: Byler silt loam
Elevation: 400 ft Latitude: 36° 9'N

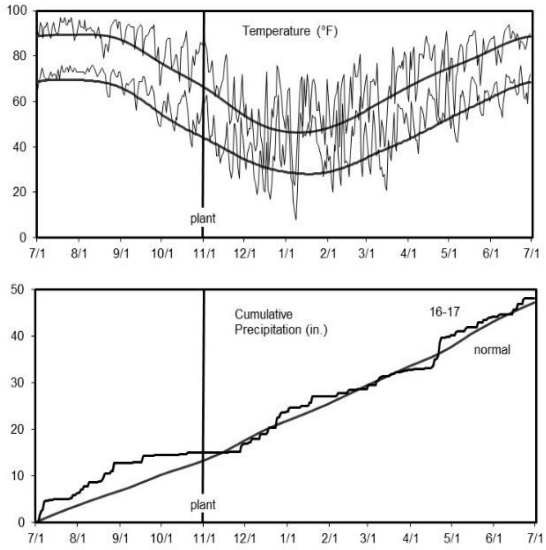

Table 8. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Nashville, TN

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	859	---	---	105	---	---	---	---	---	---	**41.8**	23.1
HyCLASS225W	OP	560	---	---	68	---	---	---	---	---	---	**40.0**	23.0
HyCLASS320W	OP	1059	---	---	129	---	---	---	---	---	---	**40.1**	22.6
Kansas State University													
KS4675	OP	802	---	---	98	---	---	---	---	---	---	**40.7**	23.1
KSR4653S	OP	844	---	---	103	---	---	---	---	---	---	**39.7**	24.1
Riley	OP	860	---	---	105	---	---	---	---	---	---	**40.2**	22.9
Sumner	OP	682	---	---	83	---	---	---	---	---	---	**41.7**	22.7
Surefire	OP	806	---	---	98	---	---	---	---	---	---	38.2	24.2
Torrington	OP	1021	---	---	124	---	---	---	---	---	---	**41.3**	22.1
Wichita	OP	629	---	---	77	---	---	---	---	---	---	37.3	24.8
KWS MOMONT													
MH 09DJ058	OP	**1542**	---	---	188	---	---	---	---	---	---	**43.0**	20.4
Quartz	OP	565	---	---	69	---	---	---	---	---	---	**42.8**	20.1
Monsanto / DEKALB													
DKW44-10	OP	**1201**	---	---	146	---	---	---	---	---	---	**40.4**	22.1
DKW45-25	OP	532	---	---	65	---	---	---	---	---	---	39.1	23.3
DKW46-15	OP	805	---	---	98	---	---	---	---	---	---	**42.1**	21.5
Star Specialty Seed, Inc.													
Star 915W	OP	660	---	---	80	---	---	---	---	---	---	**41.9**	24.0
Star 930W	OP	1105	---	---	135	---	---	---	---	---	---	**40.2**	23.2
University of Idaho													
15.WC.05633	OP	696	---	---	85	---	---	---	---	---	---	36.2	25.2
15.WC.1	OP	549	---	---	67	---	---	---	---	---	---	**42.8**	23.4
WC.15.7.5	OP	589	---	---	72	---	---	---	---	---	---	36.1	24.5
WC.9.7.5.7	OP	867	---	---	106	---	---	---	---	---	---	**39.8**	23.2
Grand Mean		821	---	---	---	---	---	---	---	---	---	40.3	23.0
Common Check OP Mean		685	---	---	---	---	---	---	---	---	---	40.1	22.6
Common Check Hybrid Mean		1246	---	---	---	---	---	---	---	---	---	40.4	22.8
CV		27	---	---	---	---	---	---	---	---	---	4.2	4.1
LSD (0.05)		367	---	---	---	---	---	---	---	---	---	3.5	2.0

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.

[1]Type: H=hybrid, OP=open pollinated

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

Table 9. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Nashville, TN

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	**2160**	---	---	138	---	---	---	---	---	---	**43.0**	19.9
Kuga	H	1237	---	---	79	---	---	---	---	---	---	**41.5**	22.1
Plurax CL	H	**2449**	---	---	157	---	---	---	---	---	---	**40.7**	21.7
Popular	H	**2084**	---	---	133	---	---	---	---	---	---	**41.1**	21.5
Kansas State University													
Riley	OP	1221	---	---	78	---	---	---	---	---	---	**42.0**	21.6
Wichita	OP	885	---	---	57	---	---	---	---	---	---	38.4	24.7
KWS MOMONT													
Hekip	H	**1630**	---	---	104	---	---	---	---	---	---	**41.2**	21.4
MH 12AY04	H	**1773**	---	---	113	---	---	---	---	---	---	38.7	23.5
MH 12AY27	H	980	---	---	63	---	---	---	---	---	---	32.5	24.6
MH 12AY36	H	1340	---	---	86	---	---	---	---	---	---	38.4	22.1
Quartz	OP	**1632**	---	---	104	---	---	---	---	---	---	**40.9**	22.2
Monsanto / DEKALB													
DK Imiron CL	H	847	---	---	54	---	---	---	---	---	---	**39.7**	23.4
DK Imistar CL	H	**2023**	---	---	129	---	---	---	---	---	---	**42.0**	22.7
DK Sensei	H	1300	---	---	83	---	---	---	---	---	---	**40.3**	23.4
DK Severnyi	H	**2216**	---	---	142	---	---	---	---	---	---	**42.7**	21.0
Rubisco Seeds LLC													
Edimax CL	H	1471	---	---	94	---	---	---	---	---	---	38.7	22.8
Inspiration	H	**1719**	---	---	110	---	---	---	---	---	---	**40.7**	21.6
Mercedes	H	1182	---	---	76	---	---	---	---	---	---	**43.5**	20.9
Grand Mean		1564	---	---	---	---	---	---	---	---	---	40.3	22.3
Common Check Hybrid Mean		1246	---	---	---	---	---	---	---	---	---	40.4	22.8
Common Check OP Mean		685	---	---	---	---	---	---	---	---	---	40.1	22.6
CV		27	---	---	---	---	---	---	---	---	---	5.3	5.2
LSD (0.05)		885	---	---	---	---	---	---	---	---	---	4.6	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.

[1]Type: H=hybrid, OP=open pollinated

[2]Use yield data with caution. A CV greater than 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: 9/23/2016 in 7.5-in. rows
Seeding Rate: 6 lbs/a
Harvested: 6/13/2017
Herbicides: None
Insecticides: 4.3 oz/a Proline
Irrigation: None
Previous crop: Soybean
Soil test: P=High, K=Low, pH=6.6
Fertilizer: 30-0-0 lb N-P-K fertilizer in fall
67-0-0-24 lb N-P-K-S fertilizer in spring
Soil type: Dickson silt loam
Elevation: 706 ft Latitude: 36° 32'N
Comments: Yields were consistent overall despite being lower than 2016.

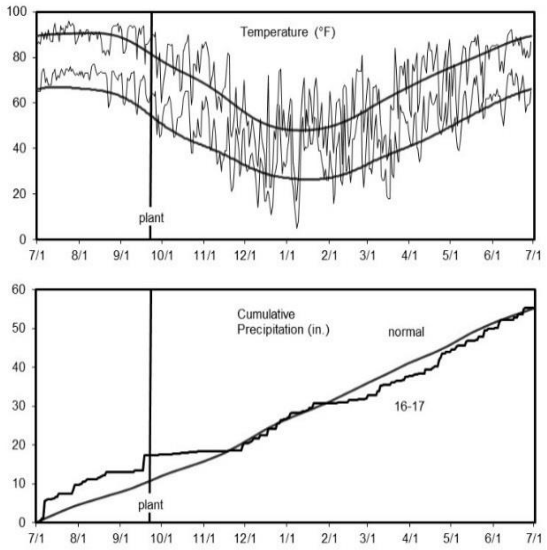

Table 10. Results for the 2017 National Winter Canola Variety Trial at Springfield, TN

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	3028	**5070**	4049	105	---	---	---	---	---	48.2	42.0	22.3
Kuga	H	**3224**	---	---	112	---	---	---	---	---	48.2	43.6	21.8
Plurax CL	H	2534	---	---	88	---	---	---	---	---	49.0	42.9	22.4
Popular	H	2497	**4974**	3735	87	---	---	---	---	---	48.7	42.7	24.1
Kansas State University													
KS4675	OP	2449	---	---	85	---	---	---	---	---	47.2	42.7	24.3
Riley	OP	2536	3974	3255	88	---	---	---	---	---	47.6	41.8	25.5
Sumner	OP	2508	3738	3123	87	---	---	---	---	---	47.5	41.7	25.1
Surefire	OP	2427	4812	3619	84	---	---	---	---	---	47.4	41.0	25.1
Torrington	OP	2440	4710	3575	85	---	---	---	---	---	48.0	40.6	25.2
Wichita	OP	2812	3517	3164	98	---	---	---	---	---	47.7	42.4	25.3
KWS MOMONT													
Hekip	H	**3367**	**5234**	4300	117	---	---	---	---	---	47.2	41.9	23.4
MH 09DJ058	OP	2819	---	---	98	---	---	---	---	---	48.7	43.6	23.0
MH 12AY04	H	2980	---	---	104	---	---	---	---	---	48.5	42.5	23.6
MH 12AY27	H	**3690**	**5709**	4700	128	---	---	---	---	---	48.3	41.9	22.9
MH 12AY36	H	2805	---	---	98	---	---	---	---	---	49.4	42.5	22.2
Quartz	OP	2781	**5401**	4091	97	---	---	---	---	---	47.9	43.3	21.9
Rubisco Seeds LLC													
Edimax CL	H	**3536**	**5048**	4292	123	---	---	---	---	---	48.8	41.3	22.9
Inspiration	H	**3275**	**5141**	4208	114	---	---	---	---	---	48.6	43.0	22.1
Mercedes	H	**3111**	**5571**	4341	108	---	---	---	---	---	47.8	44.7	21.6
Mean		2874	4737	---	---	---	---	---	---	---	48.2	42.4	23.4
CV		13	10	---	---	---	---	---	---	---	0.8	2.8	4.9
LSD (0.05)		603	799	---	---	---	---	---	---	---	0.7	NS	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.

[1]Type: H=hybrid, OP=open pollinated

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Akron, Colorado

Jerry Johnson and Edward Asfeld
Colorado State University

Planted: 9/1/2016
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Harvested: 7/7/2017
Herbicides: None
Insecticides: None
Irrigation: None
Previous crop: Wheat
Soil test: NA
Fertilizer: 35-0-0 lb N-P-K fertilizer in spring
Soil type: Ascalon fine sandy loam
Elevation: 4,144 ft Latitude: 40° 13'N
Comments: A dry winter resulted in lower yields. Canola did perform well despite the tough conditions.

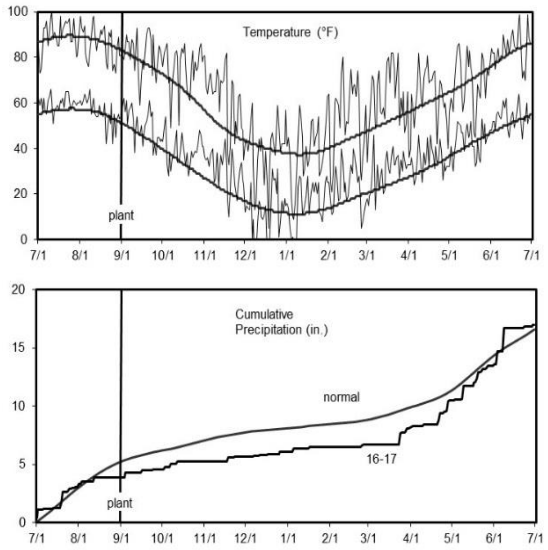

Table 11. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Akron, CO

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	**1567**	---	---	109	---	---	---	---	6.9	50.2	42.3	21.3
HyCLASS225W	OP	**1811**	---	---	126	---	---	---	---	8.7	49.1	40.5	21.3
HyCLASS320W	OP	**1659**	---	---	116	---	---	---	---	7.0	52.2	40.4	21.3
Kansas State University													
KS4675	OP	1175	---	---	82	---	---	---	---	7.9	49.8	38.6	23.2
KSR4653S	OP	**1573**	---	---	110	---	---	---	---	6.4	50.3	40.6	21.7
Riley	OP	1355	---	---	95	---	---	---	---	7.8	49.6	43.0	20.7
Sumner	OP	1302	---	---	91	---	---	---	---	7.2	49.4	40.0	22.7
Surefire	OP	**1726**	---	---	120	---	---	---	---	7.3	49.7	40.6	21.9
Torrington	OP	**1533**	---	---	107	---	---	---	---	7.0	51.2	40.0	21.8
Wichita	OP	1264	---	---	88	---	---	---	---	6.9	53.6	38.9	23.1
KWS MOMONT													
MH 09DJ058	OP	1197	---	---	84	---	---	---	---	12.8	47.5	38.5	22.0
Quartz	OP	989	---	---	69	---	---	---	---	10.1	49.5	40.2	20.7
Monsanto / DEKALB													
DKW44-10	OP	1381	---	---	96	---	---	---	---	7.4	50.1	37.6	22.0
DKW45-25	OP	**1689**	---	---	118	---	---	---	---	6.3	52.4	40.5	20.4
DKW46-15	OP	1303	---	---	91	---	---	---	---	6.3	49.5	40.1	22.1
Star Specialty Seed, Inc.													
Star 915W	OP	1237	---	---	86	---	---	---	---	9.5	49.8	41.7	21.2
Star 930W	OP	**1540**	---	---	107	---	---	---	---	6.6	49.6	40.1	21.4
University of Idaho													
15.WC.05633	OP	**1673**	---	---	117	---	---	---	---	7.6	52.6	40.6	22.1
15.WC.1	OP	**1503**	---	---	105	---	---	---	---	8.1	51.6	37.5	22.3
WC.15.7.5	OP	1031	---	---	72	---	---	---	---	12.8	48.5	37.0	23.4
WC.9.7.5.7	OP	**1429**	---	---	100	---	---	---	---	8.3	50.8	41.3	20.8
Grand Mean		1432	---	---	---	---	---	---	---	8.0	50.3	39.9	21.8
Common Check OP Mean		1203	---	---	---	---	---	---	---	8.3	50.9	40.7	21.5
Common Check Hybrid Mean		1272	---	---	---	---	---	---	---	7.0	49.9	40.5	21.8
CV		19	---	---	---	---	---	---	---	18.4	3.7	4.1	4.4
LSD (0.05)		406	---	---	---	---	---	---	---	2.2	NS	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.

[1]Type: OP=open pollinated

[2]Yields adjusted to 9% moisture.

Table 12. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Akron, CO

Name	Type[1]	Yield (lb/a)[2,3]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	1913	---	---	129	---	---	---	---	9.1	50.1	40.6	20.6
Kuga	H	1618	---	---	109	---	---	---	---	7.8	50.5	42.2	19.8
Plurax CL	H	1126	---	---	76	---	---	---	---	7.1	50.4	41.3	20.1
Popular	H	1442	---	---	97	---	---	---	---	7.8	50.0	43.5	19.6
Kansas State University													
Riley	OP	1275	---	---	86	---	---	---	---	7.0	50.3	41.5	21.5
Wichita	OP	1455	---	---	98	---	---	---	---	6.7	49.2	40.1	22.1
KWS MOMONT													
Hekip	H	1575	---	---	106	---	---	---	---	6.7	49.9	39.6	21.0
MH 12AY04	H	1320	---	---	89	---	---	---	---	6.8	50.7	40.0	21.6
MH 12AY27	H	1846	---	---	125	---	---	---	---	7.3	50.5	38.7	21.0
MH 12AY36	H	937	---	---	63	---	---	---	---	9.7	48.6	35.1	23.3
Quartz	OP	1087	---	---	73	---	---	---	---	7.3	50.3	39.8	21.7
Monsanto / DEKALB													
DK Imiron CL	H	1705	---	---	115	---	---	---	---	6.4	51.0	40.9	21.1
DK Imistar CL	H	1635	---	---	110	---	---	---	---	6.9	50.8	40.0	21.8
DK Sensei	H	1756	---	---	118	---	---	---	---	7.6	49.9	39.0	21.7
DK Severnyi	H	1204	---	---	81	---	---	---	---	8.7	48.8	40.2	20.9
Rubisco Seeds LLC													
Edimax CL	H	1102	---	---	74	---	---	---	---	9.1	49.5	40.0	22.1
Inspiration	H	1795	---	---	121	---	---	---	---	7.4	49.2	40.3	20.8
Mercedes	H	1612	---	---	109	---	---	---	---	7.0	49.5	41.8	20.3
Grand Mean		1482	---	---	---	---	---	---	---	7.6	50.0	40.4	21.2
Common Check Hybrid Mean		1272	---	---	---	---	---	---	---	7.0	49.9	40.5	21.8
Common Check OP Mean		1203	---	---	---	---	---	---	---	8.3	50.9	40.7	21.5
CV		27	---	---	---	---	---	---	---	18.8	2.8	3.7	3.8
LSD (0.05)		NS	---	---	---	---	---	---	---	NS	NS	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.

[1]Type: H=hybrid, OP=open pollinated

[2]Yields adjusted to 9% moisture.

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

Garden City, Kansas

Johnathon Holman
Kansas State University

Planted: 9/6/2016 in 8-in. rows
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Swathed: None
Harvested: 7/5 - 7/17/2017
Herbicides: 3 pt/a Prowl
Insecticides: None
Irrigation: 10.7 in.
Previous crop: Fallow
Soil test: NA
Fertilizer: 6-26-0-9 lb N-P-K-S fertilizer in fall
100-0-0 lb N-P-K fertilizer in spring
Soil type: Ulysses Richfield silt loam
Elevation: 2860 ft Latitude: 37° 58'N
Comments: A major blizzard on May 1 caused low yields and oil contents. Post blizzard rating takes into account lodging, stem damage, and regrowth potential.

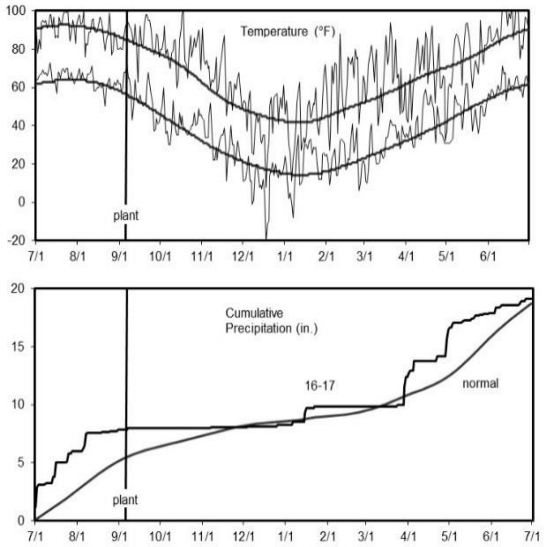

Table 13. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Garden City, KS

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Spring vigor	Post blizzard[3]	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(0-5)	(1-5)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	1146	---	---	91	93	---	---	3.0	2.8	43.3	33.9	29.2
HyCLASS225W	OP	1221	---	---	97	83	---	---	2.7	2.8	45.5	**35.1**	27.6
HyCLASS320W	OP	1168	---	---	92	90	---	---	3.7	2.7	42.7	33.5	28.3
Kansas State University													
KS4675	OP	**1691**	---	---	134	92	---	---	3.7	3.3	46.0	**36.6**	28.3
KSR4653S	OP	1011	---	---	80	88	---	---	3.3	2.2	41.6	31.3	27.4
Riley	OP	**1700**	---	---	134	90	---	---	2.7	3.3	45.9	**36.1**	28.6
Sumner	OP	830	---	---	66	68	---	---	3.0	1.8	40.8	32.8	29.4
Surefire	OP	**1742**	---	---	138	82	---	---	3.0	3.3	45.8	**34.5**	30.0
Torrington	OP	1266	---	---	100	75	---	---	3.0	2.0	41.6	**35.0**	27.7
Wichita	OP	**1509**	---	---	119	90	---	---	3.3	3.2	43.3	33.3	29.0
KWS MOMONT													
MH 09DJ058	OP	990	---	---	78	63	---	---	2.3	2.2	43.5	**34.7**	28.7
Quartz	OP	**1756**	---	---	139	95	---	---	3.0	3.0	40.7	32.3	27.0
Monsanto / DEKALB													
DKW44-10	OP	**1334**	---	---	105	82	---	---	2.7	2.2	43.2	34.0	27.5
DKW45-25	OP	1235	---	---	98	88	---	---	3.0	2.2	46.3	33.1	28.4
DKW46-15	OP	937	---	---	74	92	---	---	2.7	2.5	43.1	**34.8**	27.6
Star Specialty Seed, Inc.													
Star 915W	OP	**1433**	---	---	113	92	---	---	3.3	1.8	41.9	**35.2**	28.8
Star 930W	OP	1206	---	---	95	90	---	---	3.0	2.3	41.9	33.4	27.4
University of Idaho													
15.WC.05633	OP	1192	---	---	94	80	---	---	2.3	2.8	44.8	**34.9**	28.5
15.WC.1	OP	1193	---	---	94	75	---	---	3.3	2.3	46.0	**34.2**	28.8
WC.15.7.5	OP	1041	---	---	82	60	---	---	2.3	2.2	44.2	33.4	29.2
WC.9.7.5.7	OP	967	---	---	76	73	---	---	2.3	2.2	45.6	32.6	29.3
Grand Mean		1265	---	---	---	83	---	---	2.9	2.5	43.7	34.0	28.4
Common Check OP Mean		1655	---	---	---	92	---	---	3.0	3.2	43.3	33.9	28.2
Common Check Hybrid Mean		1817	---	---	---	90	---	---	2.9	2.9	47.5	35.3	27.7
CV		22	---	---	---	14	---	---	18.6	32.2	9.5	3.4	3.1
LSD (0.05)		459	---	---	---	19	---	---	NS	NS	NS	2.4	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.

[1]Type: OP=open pollinated

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

[3]Post blizzard rating taken on a scale of 0=total devastation to 5=no effect.

Table 14. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Garden City, KS

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Spring vigor	Post blizzard[3]	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(0-5)	(1-5)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	1060	---	---	85	38	---	---	1.7	1.2	48.7	33.4	29.3
Kuga	H	**1263**	---	---	101	43	---	---	3.0	1.2	48.0	34.1	28.7
Plurax CL	H	**1683**	---	---	135	93	---	---	3.7	3.3	48.8	**35.9**	28.7
Popular	H	**1648**	---	---	132	83	---	---	3.0	2.3	49.2	**35.3**	27.8
Kansas State University													
Riley	OP	**1593**	---	---	127	95	---	---	3.0	3.0	45.4	**35.1**	28.7
Wichita	OP	**1737**	---	---	139	85	---	---	2.7	2.8	49.0	33.7	30.1
KWS MOMONT													
Hekip	H	**1887**	---	---	151	34	---	---	1.7	1.5	47.6	34.1	29.2
MH 12AY04	H	256	---	---	20	20	---	---	1.3	0.7	40.4	34.3	30.4
MH 12AY27	H	611	---	---	49	20	---	---	1.7	0.8	49.1	34.2	29.8
MH 12AY36	H	381	---	---	30	18	---	---	1.3	1.0	48.5	32.9	31.3
Quartz	OP	**2122**	---	---	170	90	---	---	3.0	2.8	48.0	**35.5**	26.6
Monsanto / DEKALB													
DK Imiron CL	H	**1963**	---	---	157	77	---	---	3.0	2.8	49.8	**34.7**	29.5
DK Imistar CL	H	1173	---	---	94	53	---	---	2.7	1.7	48.7	**35.2**	28.7
DK Sensei	H	**1880**	---	---	150	50	---	---	1.7	2.2	49.7	33.8	29.2
DK Severnyi	H	996	---	---	80	25	---	---	1.3	0.8	49.2	**35.1**	29.7
Rubisco Seeds LLC													
Edimax CL	H	1093	---	---	87	30	---	---	1.3	1.5	49.1	**34.8**	28.8
Inspiration	H	394	---	---	32	10	---	---	1.0	0.8	47.9	**35.2**	30.2
Mercedes	H	**1359**	---	---	109	50	---	---	2.7	1.8	48.0	**36.3**	28.4
Grand Mean		1251	---	---	---	51	---	---	2.2	1.8	48.0	34.6	29.2
Common Check Hybrid Mean		1817	---	---	---	90	---	---	2.9	2.9	47.5	35.3	27.7
Common Check OP Mean		1655	---	---	---	92	---	---	3.0	3.2	43.3	33.9	28.2
CV		39	---	---	---	53	---	---	47.7	60.0	4.6	2.2	3.2
LSD (0.05)		869	---	---	---	44	---	---	NS	1.8	4.0	1.6	2.0

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.

[1]Type: H=hybrid, OP=open pollinated

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

[3]Post blizzard rating taken on a scale of 0=total devastation to 5=no effect.

Hutchinson, Kansas

Gary Cramer
Kansas State University

Planted: 9/21/2016 in 9-in. rows
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Swathed: 6/10/2017
Harvested: 6/24/2017
Herbicides: 10 oz/a Assure II
Insecticides: Sprayed for diamondback moth larvae
Irrigation: None
Previous crop: Wheat
Soil test: NA
Fertilizer: 75-0-0-0 lb N-P-K-S fertilizer in the fall
75-0-0-0 lb N-P-K-S fertilizer in the spring
Soil type: Funmar-Taver loam
Elevation: 1630 ft Latitude: 37° 56'N
Comments: Plants attained the optimum amount of fall growth going into the winter. Winterkill was minimal as a result. Yields were above average.

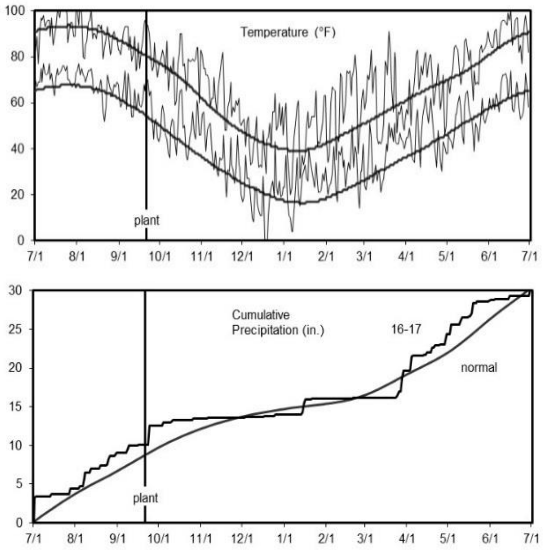

Table 15. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Hutchinson, KS

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Fall stand	50% bloom	Plant height	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(1-10)	(DOY)	(in.)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	2474	1996	2235	99	97	---	---	8.0	89	42	40.2	24.4
HyCLASS225W	OP	2241	2497	2369	90	96	---	---	8.7	93	42	39.2	23.1
HyCLASS320W	OP	2647	---	---	106	99	---	---	8.7	89	41	37.9	23.9
Kansas State University													
KS4675	OP	2817	---	---	113	99	---	---	8.0	91	46	39.9	23.6
KSR4653S	OP	2437	---	---	97	96	---	---	9.0	90	42	39.3	24.0
Riley	OP	2723	2578	2650	109	98	---	---	9.0	90	45	39.0	24.2
Sumner	OP	2538	1928	2233	102	99	---	---	8.0	87	43	39.1	24.7
Surefire	OP	2743	2724	2733	110	100	---	---	7.7	95	46	38.9	23.9
Torrington	OP	2935	2600	2768	117	100	---	---	7.3	89	47	39.5	23.0
Wichita	OP	2374	1802	2088	95	99	---	---	8.3	94	46	39.8	23.7
KWS MOMONT													
MH 09DJ058	OP	2756	---	---	110	87	---	---	9.0	92	37	**41.5**	21.4
Quartz	OP	**3423**	2334	2879	137	99	---	---	8.7	93	41	**40.7**	21.2
Monsanto / DEKALB													
DKW44-10	OP	2778	2501	2639	111	99	---	---	9.0	92	40	37.6	24.1
DKW45-25	OP	2451	2774	2612	98	93	---	---	9.7	91	43	38.3	24.2
DKW46-15	OP	2487	1823	2155	99	97	---	---	8.3	91	41	**41.8**	22.6
Star Specialty Seed, Inc.													
Star 915W	OP	2421	2000	2210	97	99	---	---	7.7	92	44	39.9	23.4
Star 930W	OP	2316	2193	2255	93	99	---	---	9.0	92	41	39.6	23.4
University of Idaho													
15.WC.05633	OP	1846	2034	1940	74	88	---	---	8.7	97	41	39.0	23.3
15.WC.1	OP	2143	2317	2230	86	95	---	---	8.7	95	45	37.8	24.2
WC.15.7.5	OP	2147	---	---	86	99	---	---	9.0	100	50	38.0	24.2
WC.9.7.5.7	OP	1933	---	---	77	96	---	---	9.3	95	44	38.8	23.9
Grand Mean		2500	2235	---	---	97	---	---	8.6	92	43	39.3	23.5
Common Check OP Mean		2840	---	---	---	98	---	---	8.7	92	44	39.8	23.0
Common Check Hybrid Mean		3033	---	---	---	98	---	---	8.4	92	46	39.8	23.4
CV		10	20	---	---	3	---	---	5.2	1	3	1.8	2.9
LSD (0.05)		421	NS	---	---	4	---	---	0.7	2	3	1.5	1.4

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.

[1]Type: OP=open pollinated

Table 16. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Hutchinson, KS

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Fall stand	50% bloom	Plant height	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(1-10)	(DOY)	(in.)	(%)	(%)
DL Seeds Inc													
Einstein	H	3143	3045	3094	101	90	---	---	8.0	92	43	39.0	22.1
Kuga	H	3167	---	---	102	98	---	---	8.7	89	43	41.3	21.5
Plurax CL	H	2996	---	---	97	99	---	---	8.0	89	46	39.6	22.5
Popular	H	**3204**	2173	2688	103	98	---	---	9.0	91	43	39.2	23.2
Kansas State University													
Riley	OP	2875	---	---	93	98	---	---	8.3	89	46	39.4	24.4
Wichita	OP	2715	---	---	88	99	---	---	8.7	94	46	40.0	23.8
KWS MOMONT													
Hekip	H	3121	2630	2876	101	92	---	---	8.7	90	41	41.1	20.8
MH 12AY04	H	2703	---	---	87	88	---	---	8.7	96	49	38.4	23.8
MH 12AY27	H	2943	2380	2662	95	88	---	---	8.3	97	48	39.7	22.0
MH 12AY36	H	2906	---	---	94	89	---	---	7.7	96	48	39.1	22.7
Quartz	OP	**3509**	---	---	113	99	---	---	8.3	93	46	40.1	22.1
Monsanto / DEKALB													
DK Imiron CL	H	**3502**	2424	2963	113	99	---	---	8.0	94	49	39.2	23.7
DK Imistar CL	H	**3261**	2424	2842	105	100	---	---	7.0	94	48	38.9	24.1
DK Sensei	H	**3464**	2272	2868	112	99	---	---	8.0	94	45	40.0	22.7
DK Severnyi	H	3119	2449	2784	101	92	---	---	8.3	94	40	40.2	22.0
Rubisco Seeds LLC													
Edimax CL	H	3185	2552	2869	103	94	---	---	8.3	94	49	39.6	21.7
Inspiration	H	2871	2499	2685	93	91	---	---	7.7	91	48	40.4	22.6
Mercedes	H	3148	3024	3086	101	95	---	---	8.3	94	45	40.0	22.0
Grand Mean		3102	2449	---	---	95	---	---	8.2	93	46	39.7	22.6
Common Check Hybrid Mean		3033	---	---	---	98	---	---	8.4	92	46	39.8	23.4
Common Check OP Mean		2840	---	---	---	98	---	---	8.7	92	44	39.8	23.0
CV		6	18	---	---	0	---	---	7.2	1	4	1.9	2.9
LSD (0.05)		319	NS	---	---	6	---	---	NS	2	3	NS	1.4

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.

[1]Type: H=hybrid, OP=open pollinated

Manhattan, Kansas

Michael Stamm
Kansas State University

Planted: 9/30/2016 in 9-in. rows
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Swathed: 6/5/2017
Harvested: 6/9/2017
Herbicides: 1 qt/a Treflan, 10 oz/a Assure II
Insecticides: None
Irrigation: None
Previous crop: Wheat
Soil test: NA
Fertilizer: 35-0-0-30 lb N-P-K-S fertilizer in fall
100-0-0 lb N-P-K fertilizer in spring
Soil type: Smolan silt loam
Elevation: 1064 ft Latitude: 39° 12'N
Comments: Planting was delayed because of wet soils. Despite warm autumn temperatures, the plots did not have excessive growth.

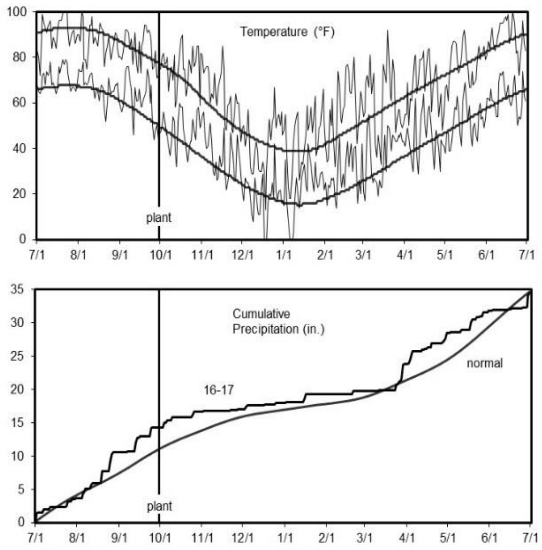

Table 17. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Manhattan, KS

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Fall stand	50% bloom	Plant height	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(1-10)	(DOY)	(in.)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	**1997**	---	---	110	99	---	---	8.7	94	49	40.6	22.9
HyCLASS225W	OP	**2006**	---	---	110	98	---	---	9.3	96	51	39.8	23.1
HyCLASS320W	OP	**1929**	---	---	106	100	---	---	9.0	94	47	39.4	22.5
Kansas State University													
KS4675	OP	**1926**	---	---	106	99	---	---	8.7	95	53	41.5	21.6
KSR4653S	OP	**1881**	---	---	104	95	---	---	8.7	96	53	37.4	24.2
Riley	OP	**2036**	---	---	112	99	---	---	9.0	96	52	39.8	23.1
Sumner	OP	1602	---	---	88	100	---	---	9.3	94	47	40.1	22.9
Surefire	OP	**2093**	---	---	115	99	---	---	9.3	98	54	39.6	23.2
Torrington	OP	**2007**	---	---	111	100	---	---	7.7	95	59	41.1	21.7
Wichita	OP	1756	---	---	97	97	---	---	8.7	97	54	41.1	22.7
KWS MOMONT													
MH 09DJ058	OP	1663	---	---	92	92	---	---	8.7	97	47	40.4	22.0
Quartz	OP	**1886**	---	---	104	99	---	---	8.3	97	49	40.9	21.3
Monsanto / DEKALB													
DKW44-10	OP	**2012**	---	---	111	99	---	---	9.3	95	45	38.4	22.9
DKW45-25	OP	**1842**	---	---	101	97	---	---	9.0	97	53	37.6	23.6
DKW46-15	OP	**1816**	---	---	100	99	---	---	8.7	96	51	39.0	23.0
Star Specialty Seed, Inc.													
Star 915W	OP	1705	---	---	94	98	---	---	8.0	96	50	40.2	23.1
Star 930W	OP	**1796**	---	---	99	99	---	---	9.0	96	52	39.6	23.2
University of Idaho													
15.WC.05633	OP	1409	---	---	78	92	---	---	9.0	99	48	40.8	22.1
15.WC.1	OP	1574	---	---	87	88	---	---	9.7	99	50	39.0	22.6
WC.15.7.5	OP	1685	---	---	93	97	---	---	9.7	99	58	38.8	22.3
WC.9.7.5.7	OP	1514	---	---	83	94	---	---	9.0	99	51	39.2	23.2
Grand Mean		1816	---	---	---	97	---	---	8.9	96	51	39.7	22.7
Common Check OP Mean		1893	---	---	---	98	---	---	8.7	97	52	40.6	22.4
Common Check Hybrid Mean		1818	---	---	---	98	---	---	8.8	97	52	40.1	22.4
CV		10	---	---	---	3	---	---	9.1	1	6	3.2	3.8
LSD (0.05)		305	---	---	---	6	---	---	NS	2	5	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.

[1]Type: OP=open pollinated

Table 18. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Manhattan, KS

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Fall stand	50% bloom	Plant height	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(1-10)	(DOY)	(in.)	(%)	(%)
DL Seeds Inc.													
Einstein	H	1842	---	---	90	94	---	---	8.7	96	52	**41.3**	20.3
Kuga	H	**2335**	---	---	114	99	---	---	9.0	94	51	**41.3**	20.5
Plurax CL	H	1938	---	---	94	98	---	---	7.7	94	51	**40.2**	21.0
Popular	H	2010	---	---	98	97	---	---	8.7	96	53	**40.9**	21.9
Kansas State University													
Riley	OP	1842	---	---	90	100	---	---	9.0	96	53	**40.1**	23.0
Wichita	OP	1747	---	---	85	99	---	---	8.3	97	55	38.8	23.8
KWS MOMONT													
Hekip	H	**2326**	---	---	113	96	---	---	9.0	94	53	**41.1**	20.3
MH 12AY04	H	1824			89	94	---	---	9.0	99	56	**40.1**	21.6
MH 12AY27	OP	**2137**	---	---	104	94	---	---	9.3	100	55	**40.8**	20.6
MH 12AY36	H	**2315**	---	---	113	94	---	---	9.0	99	58	39.3	22.1
Quartz	H	1867	---	---	91	96	---	---	9.0	97	47	**41.4**	20.5
Monsanto / DEKALB													
DK Imiron CL	H	**2148**	---	---	105	100	---	---	8.3	97	53	38.6	23.4
DK Imistar CL	H	2044	---	---	99	100	---	---	9.0	97	51	38.3	22.7
DK Sensei	H	2013	---	---	98	99	---	---	9.0	98	53	38.9	22.5
DK Severnyi	H	1982	---	---	96	99	---	---	9.0	96	45	37.1	22.8
Rubisco Seeds LLC			---	---									
Edimax CL	H	2014	---	---	98	94	---	---	8.3	96	55	**40.4**	20.6
Inspiration	H	**2118**	---	---	103	90	---	---	9.0	96	55	**39.9**	21.7
Mercedes	H	**2351**	---	---	114	99	---	---	9.0	96	53	**41.8**	21.4
Grand Mean		2055	---	---	---	97	---	---	8.8	97	53	40.0	21.7
Common Check Hybrid Mean		1818	---	---	---	98	---	---	8.8	97	52	40.1	22.4
Common Check OP Mean		1893	---	---	---	98	---	---	8.7	97	52	40.6	22.4
CV		8	---	---	---	4	---	---	8.5	1	5	2.7	3.1
LSD (0.05)		269	---	---	---	NS	---	---	NS	1	4	2.3	1.4

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.

[1]Type: H=hybrid, OP=open pollinated

Troy, Kansas

Tyler Thomas
Fly Over States Ag Research

Planted:	9/21/2016
Seeding Rate OP:	500,000 seeds/a
Seeding Rate Hybrid:	300,000 seeds/a
Harvested:	7/2/2017
Herbicides:	Select Max
Insecticides:	None
Irrigation:	None
Previous crop:	Corn
Soil test:	P=34 lb/a, K=212 lb/a, pH=6.8
Fertilizer:	100-0-0 lb N-P-K fertilizer
Soil type:	Silt loam
Elevation:	900 ft
Comments:	A new trial site in Kansas.

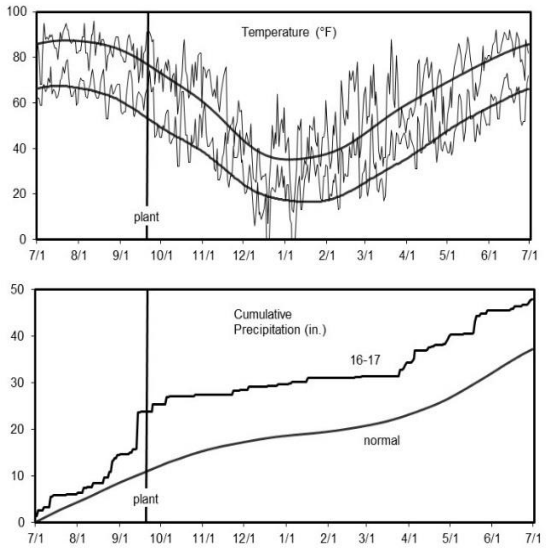

Table 19. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Troy, KS

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	2081	---	---	99	---	---	---	---	---	---	---	---
HyCLASS225W	OP	2075	---	---	99	---	---	---	---	---	---	---	---
HyCLASS320W	OP	2300	---	---	110	---	---	---	---	---	---	---	---
Kansas State University													
KS4675	OP	1795	---	---	86	---	---	---	---	---	---	---	---
KSR4653S	OP	2108	---	---	101	---	---	---	---	---	---	---	---
Riley	OP	2672	---	---	128	---	---	---	---	---	---	---	---
Sumner	OP	2472	---	---	118	---	---	---	---	---	---	---	---
Surefire	OP	2563	---	---	122	---	---	---	---	---	---	---	---
Torrington	OP	2588	---	---	124	---	---	---	---	---	---	---	---
Wichita	OP	1899	---	---	91	---	---	---	---	---	---	---	---
KWS MOMONT													
MH 09DJ058	OP	2054	---	---	98	---	---	---	---	---	---	---	---
Quartz	OP	2124	---	---	101	---	---	---	---	---	---	---	---
Monsanto / DEKALB													
DKW44-10	OP	1934	---	---	92	---	---	---	---	---	---	---	---
DKW45-25	OP	2101	---	---	100	---	---	---	---	---	---	---	---
DKW46-15	OP	1919	---	---	92	---	---	---	---	---	---	---	---
Star Specialty Seed, Inc.													
Star 915W	OP	1857	---	---	89	---	---	---	---	---	---	---	---
Star 930W	OP	1541	---	---	74	---	---	---	---	---	---	---	---
University of Idaho													
15.WC.05633	OP	2399	---	---	115	---	---	---	---	---	---	---	---
15.WC.1	OP	1409	---	---	67	---	---	---	---	---	---	---	---
WC.15.7.5	OP	2230	---	---	106	---	---	---	---	---	---	---	---
WC.9.7.5.7	OP	1857	---	---	89	---	---	---	---	---	---	---	---
Grand Mean		2094	---	---	---	---	---	---	---	---	---	---	---
Common Check OP Mean		2232	---	---	---	---	---	---	---	---	---	---	---
Common Check Hybrid Mean		2058	---	---	---	---	---	---	---	---	---	---	---
CV		25	---	---	---	---	---	---	---	---	---	---	---
LSD (0.05)		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.

[1]Type: OP=open pollinated

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

Table 20. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Troy, KS

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	1959	---	---	99	---	---	---	---	---	---	---	---
Kuga	H	**2395**	---	---	120	---	---	---	---	---	---	---	---
Plurax CL	H	1469	---	---	74	---	---	---	---	---	---	---	---
Popular	H	**2099**	---	---	106	---	---	---	---	---	---	---	---
Kansas State University													
Riley	OP	1921	---	---	97	---	---	---	---	---	---	---	---
Wichita	OP	2089	---	---	105	---	---	---	---	---	---	---	---
KWS MOMONT													
Hekip	H	**2451**	---	---	123	---	---	---	---	---	---	---	---
MH 12AY04	H	1787	---	---	90	---	---	---	---	---	---	---	---
MH 12AY27	H	1905	---	---	96	---	---	---	---	---	---	---	---
MH 12AY36	H	**2224**	---	---	112	---	---	---	---	---	---	---	---
Quartz	OP	**2164**	---	---	109	---	---	---	---	---	---	---	---
Monsanto / DEKALB													
DK Imiron CL	H	1924	---	---	97	---	---	---	---	---	---	---	---
DK Imistar CL	H	**2236**	---	---	112	---	---	---	---	---	---	---	---
DK Sensei	H	1990	---	---	100	---	---	---	---	---	---	---	---
DK Severnyi	H	1100	---	---	55	---	---	---	---	---	---	---	---
Rubisco Seeds LLC													
Edimax CL	H	1742	---	---	88	---	---	---	---	---	---	---	---
Inspiration	H	1560	---	---	78	---	---	---	---	---	---	---	---
Mercedes	H	**2780**	---	---	140	---	---	---	---	---	---	---	---
Grand Mean		1989	---	---	---	---	---	---	---	---	---	---	---
Common Check Hybrid Mean		2058	---	---	---	---	---	---	---	---	---	---	---
Common Check OP Mean		2232	---	---	---	---	---	---	---	---	---	---	---
CV		25	---	---	---	---	---	---	---	---	---	---	---
LSD (0.05)		686	---	---	---	---	---	---	---	---	---	---	---

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.

[1]Type: H=hybrid, OP=open pollinated

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

Scottsbluff, Nebraska

Dipak Santra
University of Nebraska-Lincoln

Planted:	9/2/2016
Seeding Rate OP:	500,000 seeds/a
Seeding Rate Hybrid:	300,000 seeds/a
Harvested:	7/14/2017
Herbicides:	None
Insecticides:	None
Irrigation:	2.85 in. total applied in June
Previous crop:	Fallow
Soil test:	NA
Fertilizer:	None
Soil type:	Tripp fine sandy loam
Elevation:	3694 ft Latitude: 41° 51'N
Comments:	Despite some significant stand thinning, most cultivars recovered favorably. Winter survival rating was taken on 5/3/2017. In general, the OPs had better survival than the hybrids.

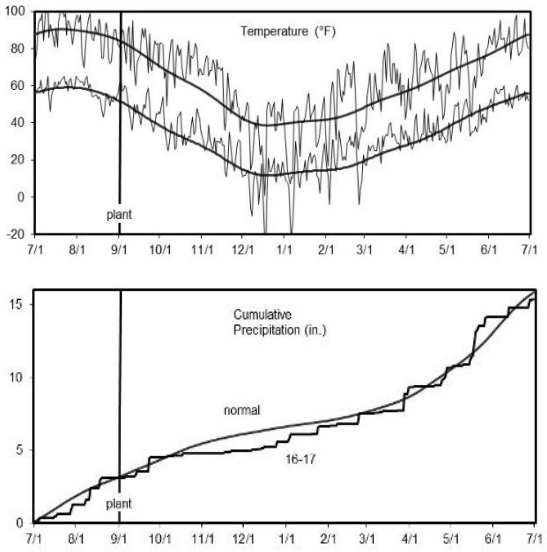

Table 21. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Scottsbluff, NE

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	**3447**	1736	2592	118	67	---	---	46	116	47.2	40.8	25.8
HyCLASS225W	OP	2672	1613	2142	91	43	---	---	48	117	46.9	40.6	25.7
HyCLASS320W	OP	**3025**	---	---	103	67	---	---	48	116	48.2	40.7	24.9
Kansas State University													
KS4675	OP	**3389**	---	---	116	73	---	---	51	117	47.7	41.4	25.6
KSR4653S	OP	2430	---	---	83	33	---	---	46	116	46.4	41.0	25.6
Riley	OP	**3506**	**1997**	2751	120	53	---	---	49	113	48.2	40.8	25.4
Sumner	OP	2603	1456	2030	89	33	---	---	49	117	47.7	39.9	26.7
Surefire	OP	**3339**	1934	2637	114	50	---	---	52	116	47.4	40.4	26.1
Torrington	OP	**3089**	1926	2508	106	60	---	---	55	115	48.1	41.3	24.5
Wichita	OP	**2989**	1687	2338	102	27	---	---	50	113	48.3	39.5	27.0
KWS MOMONT													
MH 09DJ058	OP	1304	---	---	45	8	---	---	45	121	42.8	41.0	25.1
Quartz	OP	**3563**	**2450**	3007	122	57	---	---	48	126	47.1	41.6	23.9
Monsanto / DEKALB													
DKW44-10	OP	**3786**	1742	2764	129	70	---	---	46	122	47.7	39.2	25.3
DKW45-25	OP	**2915**	1759	2337	100	50	---	---	49	123	47.8	40.6	24.6
DKW46-15	OP	2502	1480	1991	86	80	---	---	52	123	48.8	**42.8**	24.5
Star Specialty Seed, Inc.													
Star 915W	OP	2313	**2097**	2205	79	12	---	---	46	125	44.2	40.1	27.6
Star 930W	OP	**3470**	1657	2564	119	70	---	---	50	116	48.7	41.4	25.4
University of Idaho													
15.WC.05633	OP	2097	**2240**	2168	72	12	---	---	49	124	45.5	40.6	24.9
15.WC.1	OP	2886	**2253**	2570	99	33	---	---	51	116	47.1	40.3	25.0
WC.15.7.5	OP	**3441**	---	---	118	45	---	---	54	114	46.6	40.8	25.2
WC.9.7.5.7	OP	2655	---	---	91	22	---	---	53	114	47.4	39.7	26.3
Grand Mean		2925	1910	---	---	46	---	---	49	118	47.1	40.7	25.5
Common Check OP Mean		3353	---	---	---	46	---	---	49	118	47.9	40.6	25.5
Common Check Hybrid Mean		3368	---	---	---	46	---	---	50	114	48.0	41.4	25.1
CV		18	16	---	---	30	---	---	7	3	2.4	1.3	2.6
LSD (0.05)		892	506	---	---	23	---	---	6	6	1.9	1.1	1.4

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.

[1]Type: OP=open pollinated

Table 22. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Scottsbluff, NE

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	2574	2302	2438	100	12	---	---	44	113	47.6	41.4	24.7
Kuga	H	2405	---	---	93	12	---	---	49	114	46.0	41.9	23.9
Plurax CL	H	**2945**	---	---	114	33	---	---	51	120	47.6	**43.1**	23.6
Popular	H	2503	2110	2307	97	4	---	---	42	118	48.0	42.0	24.9
Kansas State University													
Riley	OP	**3660**	1997	2829	142	57	---	---	52	116	47.9	41.9	24.8
Wichita	OP	**2839**	1687	2263	110	47	---	---	48	121	48.1	40.4	26.1
KWS MOMONT													
Hekip	H	256	**2663**	1460	10	0	---	---	44	120	42.5	38.1	26.7
MH 12AY04	H	834	---	---	32	2	---	---	46	122	44.3	38.9	27.0
MH 12AY27	H	**2956**	2340	2648	115	5	---	---	52	115	47.2	40.8	25.1
MH 12AY36	H	1914	---	---	74	7	---	---	53	125	44.4	41.7	24.5
Quartz	OP	**3604**	2450	3027	140	33	---	---	50	114	48.0	41.8	24.3
Monsanto / DEKALB													
DK Imiron CL	H	**3383**	**2641**	3012	131	57	---	---	53	127	48.3	40.7	24.8
DK Imistar CL	H	**3248**	**3022**	3135	126	50	---	---	52	126	48.7	41.4	24.7
DK Sensei	H	**3489**	**2783**	3136	135	40	---	---	50	124	48.5	41.1	24.9
DK Severnyi	H	2729	2353	2541	106	20	---	---	46	119	46.8	41.6	24.6
Rubisco Seeds LLC													
Edimax CL	H	2464	2375	2420	95	10	---	---	47	116	46.3	40.9	24.4
Inspiration	H	2433	**2631**	2532	94	13	---	---	50	122	46.8	41.9	24.5
Mercedes	H	**2856**	2275	2566	111	30	---	---	47	123	48.1	**43.7**	23.2
Grand Mean		2581	2311	---	---	24	---	---	49	120	47.1	41.4	24.8
Common Check Hybrid Mean		3368	---	---	---	46	---	---	50	114	48.0	41.4	25.1
Common Check OP Mean		3353	---	---	---	46	---	---	49	118	47.9	40.6	25.5
CV		18	11	---	---	40	---	---	8	3	3.0	1.6	3.0
LSD (0.05)		837	410	---	---	16	---	---	6	5	2.6	1.5	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.

[1]Type: H=hybrid, OP=open pollinated

Clovis, New Mexico

Sangu Angadi and Sultan Begna
New Mexico State University

Planted:	9/13/2016 in 6-in. rows
Seeding Rate:	3-6 lbs/a
Dessicant:	2 pt/a Diquat on 6/14/2017
Harvested:	6/20/2017
Herbicides:	1.5 pt/a Treflan, 3 pt/a Prowl
Insecticides:	March, 2 oz/a BeLeaf in April, 1 pt/a Dimethoate in May
Irrigation:	11.7 in.
Previous crop:	Wheat
Soil test:	10-24-634 ppm N-P-K, pH=7.6
Fertilizer:	135-25-0-23 lb N-P-K-S fertilizer in fall
Soil type:	Olton clay loam
Elevation:	4437 ft Latitude: 34° 36'N
Comments:	Warm temperatures resulted in excessive fall growth. Annual rainfall was lower than normal. Temperatures were high during flowering and a hail storm reduced yields during pod formation.

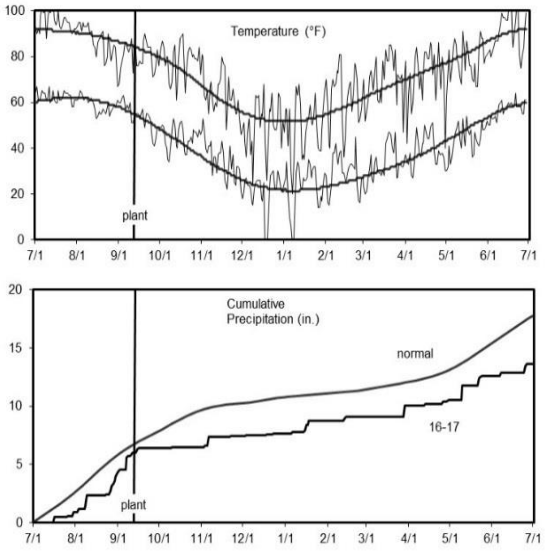

Table 23. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Clovis, NM

Name	Type[1]	Yield (lb/a)[2]			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	975	3119	2047	87	70	98	84	30	90	43.1	34.4	27.7
HyCLASS225W	OP	1014	3254	2134	90	73	98	86	32	90	43.5	35.5	25.7
HyCLASS320W	OP	**1397**	---	---	125	87	---	---	28	91	43.0	33.7	26.8
Kansas State University													
KS4675	OP	955	---	---	85	87	---	---	30	90	43.2	38.4	25.7
KSR4653S	OP	967	---	---	86	73	---	---	30	90	42.7	35.1	26.5
Riley	OP	869	**3352**	2110	77	80	98	89	30	89	44.0	35.4	26.1
Sumner	OP	671	2877	1774	60	80	98	89	26	91	40.6	37.0	26.9
Surefire	OP	**1489**	**3383**	2436	133	83	98	91	33	92	45.6	38.6	26.0
Torrington	OP	1093	**3377**	2235	97	87	98	92	30	89	42.4	37.1	26.1
Wichita	OP	**1463**	3167	2315	130	77	98	87	30	89	45.7	36.0	28.0
KWS MOMONT													
MH 09DJ058	OP	989	---	---	88	57	---	---	30	90	42.8	35.6	25.3
Quartz	OP	**1819**	**3528**	2674	162	80	98	89	29	92	46.1	35.1	25.3
Monsanto / DEKALB													
DKW44-10	OP	890	**3504**	2197	79	73	98	86	30	89	41.1	33.2	26.5
DKW45-25	OP	1122	3186	2154	100	70	98	84	30	89	42.0	34.7	27.4
DKW46-15	OP	906	3014	1960	81	73	98	86	28	89	42.9	37.2	26.2
Star Specialty Seed, Inc.													
Star 915W	OP	984	3183	2084	88	73	98	86	31	89	41.9	36.1	27.3
Star 930W	OP	1269	3204	2237	113	87	98	92	30	89	45.3	37.9	26.5
University of Idaho													
15.WC.05633	OP	848	2738	1793	76	67	96	81	30	90	40.6	35.4	27.7
15.WC.1	OP	1224	3140	2182	109	60	98	79	28	90	45.1	36.6	25.8
WC.15.7.5	OP	**1451**	---	---	129	70	---	---	32	90	45.8	37.7	25.1
WC.9.7.5.7	OP	1166	---	---	104	67	---	---	35	90	46.9	36.0	26.5
Grand Mean		1122	3148	---	---	75	98	---	30	90	43.5	36.0	26.4
Common Check OP Mean		1384	---	---	---	79	---	---	30	90	45.3	35.5	26.5
Common Check Hybrid Mean		1705	---	---	---	79	---	---	30	89	47.0	36.9	27.1
CV		27	8	---	---	9	---	---	7	1	4.5	4.6	2.8
LSD (0.05)		501	405	---	---	11	---	---	3	1	3.2	NS	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.

[1]Type: OP=open pollinated

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

Table 24. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Clovis, NM

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	50% bloom	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(DOY)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	1121	**4026**	2574	80	70	98	84	30	92	46.6	37.6	25.2
Kuga	H	1295	---	---	92	77	---	---	32	89	44.5	37.5	25.9
Plurax CL	H	**1887**	---	---	135	83	---	---	30	89	45.6	39.1	25.7
Popular	H	**1641**	**4295**	2968	117	80	98	89	29	89	47.1	39.7	25.1
Kansas State University													
Riley	OP	1498	3352	2425	107	77	98	87	30	89	46.2	37.7	27.6
Wichita	OP	**1744**	3167	2455	124	83	98	91	32	90	48.2	36.6	28.4
KWS MOMONT													
Hekip	H	1153	**4477**	2815	82	60	98	79	30	90	45.9	36.9	26.8
MH 12AY04	H	827	---	---	59	60	---	---	30	91	45.7	35.8	27.5
MH 12AY27	H	830	3762	2296	59	47	98	72	31	90	41.8	35.1	26.6
MH 12AY36	H	**1543**	---	---	110	63	---	---	32	89	48.8	36.3	26.4
Quartz	OP	**1872**	3528	2700	134	77	98	87	28	89	46.6	36.5	25.4
Monsanto / DEKALB													
DK Imiron CL	H	**1803**	3957	2880	129	87	98	92	32	90	46.5	38.0	27.6
DK Imistar CL	H	**1729**	3778	2754	123	80	98	89	33	90	47.3	40.0	26.6
DK Sensei	H	1271	3924	2598	91	67	98	82	30	90	47.6	37.9	26.9
DK Severnyi	H	1227	**4028**	2628	88	63	98	81	32	90	43.8	38.8	25.7
Rubisco Seeds LLC													
Edimax CL	H	1061	3774	2417	76	57	98	77	31	90	44.5	37.6	25.9
Inspiration	H	1089	**4272**	2681	78	63	98	81	33	90	44.6	37.6	25.6
Mercedes	H	**1632**	3944	2788	116	70	98	84	30	90	45.7	37.2	26.5
Grand Mean		1401	3948	---	---	70	98	---	31	90	45.9	37.5	26.4
Common Check Hybrid Mean		1705	---	---	---	79	---	---	30	89	47.0	36.9	27.1
Common Check OP Mean		1384	---	---	---	79	---	---	30	90	45.3	35.5	26.5
CV		16	8	---	---	12	---	---	4	1	4.3	4.8	4.8
LSD (0.05)		367	502	---	---	14	---	---	2	2	3.3	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.

[1]Type: H=hybrid, OP=open pollinated

Chickasha, Oklahoma

Josh Lofton
Oklahoma State University

Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Soil type: McClain silty clay loam
Elevation: 1085 ft Latitude: 35° 02'N
Comments: A very favorable growing season resulted in excellent yields at this location.

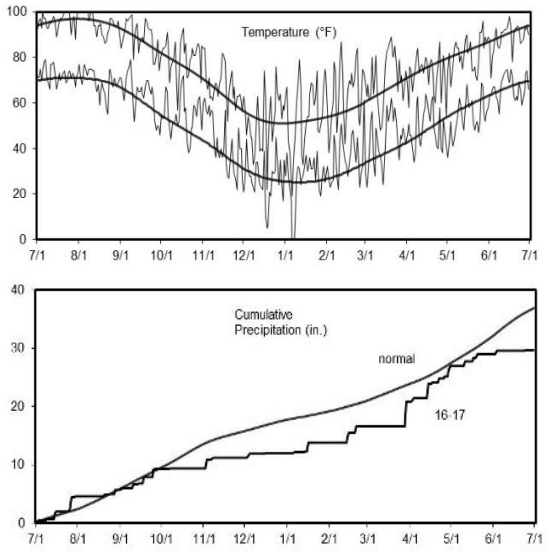

Table 25. Results for the 2017 National Winter Canola Variety Trial, open-pollinated cultivars, at Chickasha, OK

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	3747	**1996**	2872	110	---	---	---	---	4.5	49.0	---	---
HyCLASS225W	OP	3381	**1745**	2563	99	---	---	---	---	4.5	49.8	---	---
HyCLASS320W	OP	3659	---	---	108	---	---	---	---	4.6	49.5	---	---
Kansas State University													
KS4675	OP	3528	---	---	104	---	---	---	---	4.6	48.3	---	---
KSR4653S	OP	3131	---	---	92	---	---	---	---	4.6	50.3	---	---
Riley	OP	3106	**1787**	2447	91	---	---	---	---	4.5	49.7	---	---
Sumner	OP	3247	**1900**	2574	96	---	---	---	---	4.5	48.3	---	---
Surefire	OP	3717	**1848**	2783	109	---	---	---	---	4.5	48.5	---	---
Torrington	OP	4167	**1937**	3052	123	---	---	---	---	4.6	50.4	---	---
Wichita	OP	3182	1515	2348	94	---	---	---	---	4.4	49.7	---	---
KWS MOMONT													
MH 09DJ058	OP	3470	---	---	102	---	---	---	---	4.7	48.8	---	---
Quartz	OP	3947	**2116**	3031	116	---	---	---	---	4.8	49.9	---	---
Monsanto / DEKALB													
DKW44-10	OP	3096	1624	2360	91	---	---	---	---	4.7	50.4	---	---
DKW45-25	OP	3692	**1771**	2731	109	---	---	---	---	4.6	51.6	---	---
DKW46-15	OP	3109	**1756**	2432	91	---	---	---	---	4.4	48.2	---	---
Star Specialty Seed, Inc.													
Star 915W	OP	3664	**1966**	2815	108	---	---	---	---	4.5	49.7	---	---
Star 930W	OP	3598	**2084**	2841	106	---	---	---	---	4.6	48.7	---	---
University of Idaho													
15.WC.05633	OP	3096	1424	2260	91	---	---	---	---	4.5	50.6	---	---
15.WC.1	OP	3217	1675	2446	95	---	---	---	---	4.7	49.1	---	---
WC.15.7.5	OP	2833	---	---	83	---	---	---	---	4.3	47.1	---	---
WC.9.7.5.7	OP	2803	---	---	82	---	---	---	---	4.5	49.1	---	---
Grand Mean		3400	1764	---	---	---	---	---	---	4.6	49.4	---	---
Common Check OP Mean		3412	---	---	---	---	---	---	---	4.6	49.8	---	---
Common Check Hybrid Mean		4041	---	---	---	---	---	---	---	4.7	50.6	---	---
CV		17	14	---	---	---	---	---	---	3.6	2.9	---	---
LSD (0.05)		NS	398	---	---	---	---	---	---	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.

[1]Type: OP=open pollinated

Table 26. Results for the 2017 National Winter Canola Variety Trial, hybrid cultivars, at Chickasha, OK

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	**4851**	1938	3394	106	---	---	---	---	4.8	50.4	---	---
Kuga	H	**5023**	---	---	110	---	---	---	---	4.8	50.9	---	---
Plurax CL	H	4571	---	---	100	---	---	---	---	4.8	50.6	---	---
Popular	H	4343	**2453**	3398	95	---	---	---	---	4.9	50.4	---	---
Kansas State University													
Riley	OP	4335	1787	3061	95	---	---	---	---	4.6	50.4	---	---
Wichita	OP	3712	1515	2614	81	---	---	---	---	4.6	50.2	---	---
KWS MOMONT													
Hekip	H	4066	**2262**	3164	89	---	---	---	---	4.7	49.4	---	---
MH 12AY04	H	3646	---	---	80	---	---	---	---	4.5	49.0	---	---
MH 12AY27	H	4088	1833	2961	89	---	---	---	---	4.4	48.7	---	---
MH 12AY36	H	4530	---	---	99	---	---	---	---	4.7	49.5	---	---
Quartz	OP	4076	2116	3096	89	---	---	---	---	4.8	51.2	---	---
Monsanto / DEKALB													
DK Imiron CL	H	**5836**	**2258**	4047	128	---	---	---	---	4.9	50.6	---	---
DK Imistar CL	H	**4909**	**2251**	3580	107	---	---	---	---	4.8	50.3	---	---
DK Sensei	H	**5419**	**2203**	3811	118	---	---	---	---	4.9	50.0	---	---
DK Severnyi	H	**4901**	**2123**	3512	107	---	---	---	---	4.6	50.7	---	---
Rubisco Seeds LLC													
Edimax CL	H	**4947**	**2338**	3642	108	---	---	---	---	4.8	50.5	---	---
Inspiration	H	4598	**2219**	3409	101	---	---	---	---	4.8	50.4	---	---
Mercedes	H	4442	**2245**	3343	97	---	---	---	---	4.7	49.7	---	---
Grand Mean		4574	2018	---	---	---	---	---	---	4.7	50.2	---	---
Common Check Hybrid Mean		4041	---	---	---	---	---	---	---	4.7	50.6	---	---
Common Check OP Mean		3412	---	---	---	---	---	---	---	4.6	49.8	---	---
CV		13	11	---	---	---	---	---	---	3.1	2.5	---	---
LSD (0.05)		1004	361	---	---	---	---	---	---	0.2	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.

[1]Type: H=hybrid, OP=open pollinated

Bushland, Texas

Jourdan Bell
Texas A&M University

Planted: 9/21/2016 in 30-in. rows
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Harvested: 6/12/2017
Herbicides: None
Insecticides: None
Irrigation: 6 in. via drip irrigation
Previous crop: Wheat
Soil test: 27-29-685 ppm N-P-K, pH=7.8
Fertilizer: None
Soil type: Pantex silty clay loam
Elevation: 3825 ft Latitude: 35° 11'N
Comments: Stand establishment was below average and plots were negatively affected by the May 1 blizzard. Oil contents were excellent.

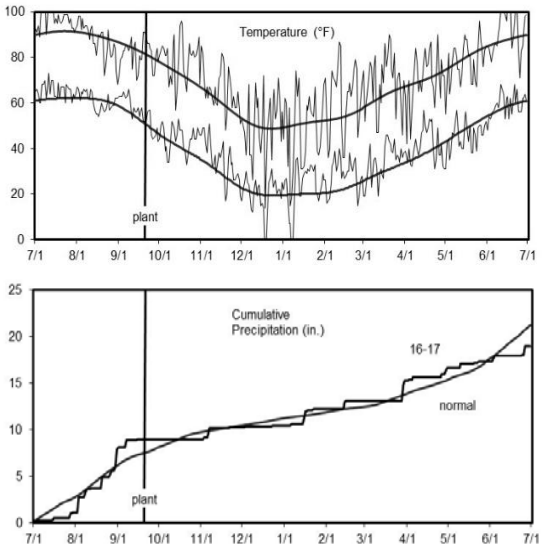

Table 27. Results for the 2017 National Winter Canola Variety Trial at Bushland, TX

Name	Type[1]	Yield (lb/a)			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
CROPLAN by WinField													
HyCLASS115W	OP	463	1242	853	90	---	---	---	---	---	51.0	38.9	26.4
HyCLASS225W	OP	103	---	---	20	---	---	---	---	---	---	**41.1**	24.3
DL Seeds Inc.													
Einstein	H	**747**	1817	1282	144	---	---	---	---	---	52.0	**40.8**	22.8
Popular	H	**876**	1693	1284	169	---	---	---	---	---	50.0	**42.8**	23.0
Kansas State University													
Riley	OP	550	---	---	106	---	---	---	---	---	27.0	37.5	25.9
Wichita	OP	---	1506	---	---	---	---	---	---	---	---	**39.6**	26.0
KWS MOMONT													
Hekip	H	**814**	---	---	157	---	---	---	---	---	40.0	**40.7**	23.3
Quartz	OP	422	2265	1344	82	---	---	---	---	---	32.0	**42.4**	22.2
Monsanto / DEKALB													
DKW44-10	OP	245	---	---	47	---	---	---	---	---	---	**39.3**	24.7
DKW45-25	OP	323	1540	931	62	---	---	---	---	---	---	**41.8**	23.8
DKW46-15	OP	576	510	543	111	---	---	---	---	---	57.0	**42.1**	23.2
Rubisco Seeds LLC													
Edimax CL	H	**762**	2039	1401	147	---	---	---	---	---	51.0	38.4	24.2
Inspiration	H	**843**	1708	1275	163	---	---	---	---	---	48.0	**42.5**	23.1
Mercedes	H	133	2011	1072	26	---	---	---	---	---	---	**41.0**	23.2
Star Specialty Seed, Inc.													
Star 915W	OP	384	1163	774	74	---	---	---	---	---	49.0	**40.3**	25.8
Mean		517	1519	---	---	---	---	---	---	---	46.9	40.6	24.1
CV		18	---	---	---	---	---	---	---	---	5.1	4.1	4.8
LSD (0.05)		202	271	---	---	---	---	---	---	---	9.5	3.5	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.

[1]Type: H=hybrid, OP=open pollinated

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Alburgh, Vermont

Heather Darby and Sara Ziegler
University of Vermont

Planted: 9/6/2016
Seeding Rate OP: 500,000 seeds/a
Seeding Rate Hybrid: 300,000 seeds/a
Harvested: 8/1/2017
Herbicides: None
Insecticides: None
Irrigation: None
Previous crop: Potatoes
Soil test: P=19 lb/a, K=76 lb/a, pH=7.5
Fertilizer: None
Soil type: Benson rocky silt loam
Elevation: 130 ft Latitude: 45° 0'N
Comments: Yields were lower than normal. Mild weather conditions were observed during the winter.

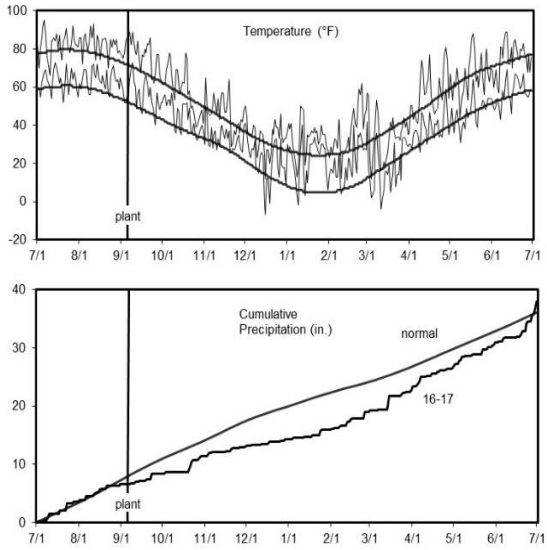

Table 28. Results for the 2017 National Winter Canola Variety Trial at Alburgh, VT

Name	Type[1]	Yield (lb/a)[2,3]			Yield (% of test avg.)	Winter survival (%)			Plant height	Moisture	Test weight	Oil	Protein
		2017	2016	2-yr.	2017	2017	2016	2-yr.	(in.)	(%)	(lb/bu)	(%)	(%)
DL Seeds Inc.													
Einstein	H	1025	1993	1509	83	---	---	---	---	23.7	45.5	**40.3**	23.4
Kuga	H	1289	---	---	104	---	---	---	---	14.2	45.2	**41.7**	22.5
Plurax CL	H	1151	---	---	93	---	---	---	---	17.1	47.1	**41.0**	24.0
Popular	H	1278	---	---	103	---	---	---	---	19.7	43.8	**41.9**	23.7
Kansas State University													
Riley	OP	1519	1878	1698	123	---	---	---	---	13.5	47.5	38.9	25.6
Torrington	OP	1391	**2287**	1839	112	---	---	---	---	12.8	48.0	38.8	25.4
KWS MOMONT													
Hekip	H	1072	**2046**	1559	87	---	---	---	---	24.8	46.6	39.4	24.0
Quartz	OP	1356	**2416**	1886	110	---	---	---	---	16.2	45.5	**40.1**	22.9
Rubisco Seeds LLC													
Edimax CL	H	1278	**2086**	1682	103	---	---	---	---	15.8	46.4	37.4	24.7
Inspiration	H	1332	**2020**	1676	108	---	---	---	---	16.3	45.4	39.0	24.7
Mercedes	H	1323	**2298**	1811	107	---	---	---	---	15.9	45.7	**42.0**	22.5
University of Idaho													
15.WC.05633	OP	1107	**2026**	1566	89	---	---	---	---	18.0	41.6	38.8	26.4
15.WC.1	OP	1261	1966	1614	102	---	---	---	---	15.4	44.4	37.4	25.8
WC.15.7.5	OP	1197	---	---	97	---	---	---	---	14.9	47.6	38.1	23.9
WC.9.7.5.7	OP	1022	---	---	83	---	---	---	---	17.2	46.9	37.8	26.9
Mean		1239	1979	---	---	---	---	---	---	16.8	45.8	39.5	24.4
CV		28	12	---	---	---	---	---	---	31.5	5.4	3.0	4.7
LSD (0.05)		NS	413	---	---	---	---	---	---	NS	2.9	2.5	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.

[1]Type: H=hybrid, OP=open pollinated

[2]Yields were adjusted to 8% moisture.

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

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Table 29. Results for the 2017 Blackleg (*Leptosphaeria maculans*) Trial at Perkins, OK.
National Winter Canola Variety Trial

J.P. Damicone, T.J. Pierson, J.J. Lofton, and C. Harris, Oklahoma State University
M.J. Stamm, Kansas State University

Entry	Yield[1] (lb/a)	Winterkill[2] (%)	Winter decline syndrome[3] (%)	Aster yellows[4] (%)	Blackleg incidence[5] (%)	Blackleg incidence[6] (≥3)	Blackleg severity[7] (0-5)
Checks							
Bristol	260 m	73 a	23 bc	7 bc	63 a	23 a	1.9 a-d
Eurol	738 lm	45 b	20 bcd	27 a	53 a-d	23 a	1.9 a-e
CROPLAN by WinField							
HyCLASS115W	1710 d-k	25 b-f	7 cde	1 c	60 ab	37 a	2.3 a
HyCLASS225W	1961 c-i	15 c-f	10 b-e	3 c	37 b-h	13 a	1.5 d-g
HyCLASS320W	1540 g-k	33 bc	7 cde	1 c	41 a-g	14 a	1.7 c-g
DL Seeds Inc.							
Einstein	2541 abc	7 f	10 b-e	2 c	37 b-h	20 a	1.7 b-g
Kuga	2198 b-g	23 c-f	7 cde	4 c	40 a-g	23 a	1.8 b-f
Plurax CL	2043 b-h	28 b-e	13 b-e	5 bc	20 fgh	3 a	1.3 fg
Popular	1961 c-i	8 ef	10 b-e	3 c	43 a-f	20 a	1.8 a-f
Kansas State University							
KS4675	1939 c-i	20 c-f	11 b-e	6 bc	37 b-g	14 a	1.5 d-g
KSR4653S	1585 f-k	23 c-f	20 bcd	4 c	57 abc	30 a	2.1 abc
Riley	2142 b-h	8 ef	10 b-e	1 c	43 a-f	17 a	1.7 b-g
Sumner	1646 e-k	13 c-f	10 b-e	4 c	37 b-h	13 a	1.5 d-g
Surefire	1567 f-k	15 c-f	3 de	3 c	37 b-h	13 a	1.7 c-g
Torrington	1822 c-j	27 b-f	27 ab	5 bc	40 a-g	10 a	1.6 c-g
Wichita	1782 d-k	22 c-f	10 b-e	7 bc	43 a-f	23 a	1.7 c-g
KWS MOMONT							
Hekip	2258 a-g	32 bcd	7 cde	4 c	24 e-h	14 a	1.5 d-g
MH 09DJ058	2248 b-g	12 def	7 cde	2 c	57 abc	17 a	1.9 a-e
MH 12AY04	1427 h-l	8 ef	7 cde	2 c	27 e-h	7 a	1.4 efg
MH 12AY27	2330 a-e	18 c-f	10 b-e	1 c	23 e-h	13 a	1.4 d-g
MH 12AY36	1866 c-i	13 c-f	17 b-e	3 c	34 c-h	24 a	1.7 c-g
Quartz	2517 abc	22 c-f	3 de	1 c	13 h	7 a	1.2 g
Monsanto / DEKALB							
DK Imiron CL	2422 a-d	13 c-f	10 b-e	4 c	30 d-h	7 a	1.4 d-g
DK Imistar CL	1621 e-k	22 c-f	17 b-e	6 bc	40 a-g	23 a	1.7 b-g
DK Sensei	1948 c-i	7 f	3 de	2 c	20 fgh	10 a	1.4 efg
DK Severnyi	2979 a	27 b-f	7 cde	1 c	21 fgh	0 a	1.2 g
DKW44-10	1900 c-i	8 ef	3 de	1 c	40 a-g	23 a	1.8 a-f
DKW45-25	1140 jkl	18 c-f	28 ab	12 b	24 e-h	17 a	1.5 d-g
DKW46-15	1887 c-i	17 c-f	3 de	3 c	43 a-f	13 a	1.6 c-g
Rubisco Seeds LLC							
Edimax CL	2171 b-g	22 c-f	3 de	3 c	27 e-h	3 a	1.3 fg
Inspiration	2728 ab	10 ef	7 cde	3 c	37 b-h	10 a	1.6 c-g
Mercedes	2272 a-f	10 ef	13 b-e	2 c	40 a-g	23 a	1.8 a-f

Table 29, continued. Results for the 2017 Blackleg (*Leptosphaeria maculans*) Trial at Perkins, OK. National Winter Canola Variety Trial

Entry	Yield[1] (lb/a)	Winterkill[2] (%)	Winter decline syndrome[3] (%)	Aster yellows[4] (%)	Blackleg incidence[5] (%)	Blackleg incidence[6] (≥3)	Blackleg severity[7] (0-5)
Star Specialty Seed, Inc.							
Star 915W	1076 kl	15 c-f	3 de	4 c	57 abc	33 a	2.2 ab
Star 930W	2117 b-h	15 c-f	0 e	2 c	34 c-h	10 a	1.5 d-g
University of Idaho							
15.WC.05633	1243 i-l	28 b-e	14 b-e	4 bc	51 a-d	27 a	1.9 a-e
15.WC.1	1087 kl	20 c-f	20 bcd	3 c	47 a-e	13 a	1.6 c-g
WC.15.7.5	1127 jkl	7 f	14 b-e	1 c	18 gh	7 a	1.3 fg
WC.9.7.5.7	1101 jkl	15 c-f	43 a	4 bc	47 a-e	23 a	1.8 a-f
P>F[8]	<0.01	<0.01	0.02	<0.01	<0.01	0.18	0.01
CV	25	119	96	66	38	80	20

[1]Values 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.

[2]Percentage of plants that were lost to winterkill.

[3]Percentage of plants with symptoms of winter decline syndrome.

[4]Percentage of plants with Aster yellows.

[5]Percentage of plants with blackleg cankers.

[6]Percentage of plants with severe blackleg cankers (severity rating of ≥3).

[7]Internal 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.

[8]Probability of a significant entry effect in SAS Proc GLIMMIX.

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Table 30 . Seed sources for entries in the 2016-2017 National Winter Canola Variety Trial

Source	Type[1]	Trait[2]	Release date	Maturity[3]
CROPLAN by WinField				
Paul Gregor (psgregor@landolakes.com)				
HyCLASS115W	OP	RR/SURT	2008	E
HyCLASS225W	OP	RR/SURT	2014	M
HyCLASS320W	OP	RR	2017	E
DL Seeds Inc.				
Kevin McCallum (kevin.mccallum@dlseeds.ca)				
Einstein	H	---	---	M
Kuga	H	---	---	E
Plurax CL	H	CL	---	E
Popular	H	---	2016	M
University of Idaho				
Jack Brown (jbrown@uidaho.edu)				
15.WC.1	OP	---	---	M
15.WC.05633	OP	SU	---	MF
WC.9.7.5.7	OP	---	---	M
WC.15.7.5	OP	---	---	F
Kansas State University Canola Breeding Program				
Michael J. Stamm (mjstamm@ksu.edu)				
KS4675	OP	---	---	M
KSR4653S	OP	RR/SURT	---	M
Riley	OP	---	2010	M
Sumner	OP	SU	2003	ME
Surefire	OP	SU	2017	MF
Torrington	OP	---	2016	M
Wichita	OP	---	1999	M

Source	Type[1]	Trait[2]	Release date	Maturity[3]
KWS MOMONT				
Thierry Momont (tmomont@momont.com)				
Photosyntech				
Bob Amstrup (bob.amstrup@photosyntech.com)				
Hekip	H	---	2014	ME
MH 09DJ058	OP	---	---	M
MH 12AY04	H	---	---	F
MH 12AY27	H	---	---	F
MH 12AY36	H	---	---	F
Quartz	OP	---	2015	M
Monsanto / DEKALB				
Chris Anderson (christopher.i.anderson@monsanto.com)				
DK Imiron CL	H	SD/CL	---	M
DK Imistar CL	H	CL	---	M
DK Sensei	H	SD	---	M
DK Severnyi	H	SD	---	M
DKW44-10	OP	RR	2009	ME
DKW45-25	OP	RR/SURT	2013	M
DKW46-15	OP	RR/SURT	2008	M
Rubisco Seeds LLC				
Claire Caldbeck (info@rubiscoseeds.com)				
Edimax CL	H	CL	2012	M
Inspiration	H	---	2014	M
Mercedes	H	---	2014	M
Star Specialty Seed, Inc.				
Jim Johnson (jimj_star@hotmail.com)				
Star 915W	OP	RR/SURT	2014	M
Star 930W	OP	RR	2013	ME

[1] OP = open pollinated, H = hybrid

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

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

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