

# North Dakota Canola Variety Trial Results for 2014 and Selection Guide

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## Introduction

Canola is a major oil crop in the northern Great Plains, particularly in North Dakota. In 2014, North Dakota accounted for approximately 76 percent of the canola acreage planted in the U.S. This publication summarizes canola variety performance at the various North Dakota State University Research Extension Centers. The relative performance of the varieties and hybrids is presented in table form.

Give special attention to yield results of those trials nearest to your production area when evaluating varieties or hybrids in these trials. Also, attempt to view yield averages of several years rather than using only one year's data as a determining factor. In addition, consider other agronomic characteristics, such as maturity, lodging score and oil percentages, if available.

Research specialists and technicians helped with the field work and data compilation. The assistance given by many secretaries in typing respective portions of the document is very much appreciated. A special thank you goes to Lisa Johnson, Extension Plant Sciences secretary, for assisting in the compilation of this publication.

## 2014 Growing Season Update

Canola fieldwork began by mid-May. Planting was later than normal, and by May 11, only 2 percent of the acres had been planted, compared with the average (2009-2013) of 23 percent on the same date. On May 11, the topsoil moisture was rated at 66 percent adequate and 33 percent surplus. Early canola stands varied across the region, depending on soil moisture availability and rainfall after planting. Some acres intended for canola production did not get seeded due to excess soil moisture. By July 6, 63 percent of the canola crop was flowering, which compared with the 2009-2013 average of 48 percent. By the last week in July, the North Dakota Agricultural Statistics Service reported the canola crop condition as 64 percent "good" and 20 percent "excellent." Only 8 percent of the canola acres were harvested on Aug. 24, and 40 percent of the crop was harvested by Sept. 8. By Sept. 29, 93 percent of the canola was harvested, which was near average. In general, the 2014 season started late and average yield is expected to be similar to yields obtained in 2013.

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**Table 1. Canola Production, North Dakota 2008-2014.**

Year	Acres Planted	Acres Harvested	Yield Per Acre	Production
	------(1,000 Acres)-----		(lb)	(1,000 lb)
2008	910	895	1,460	1,306,700
2009	730	725	1,840	1,334,000
2010	1,280	1,270	1,720	2,184,400
2011	890	850	1,500	1,275,000
2012	1,460	1,455	1,400	2,037,000
2013	920	915	1,820	1,665,300
2014	1,190	1,180	1,800	2,124,000
Average	1,054	1,041	1,649	1,703,771

Source: North Dakota Agricultural Statistics Service – USDA.

**Table 2. April-September 2014 Average Temperature and Precipitation and Rankings for Select North Dakota Locations.**

City	Temperature Ranking	Precipitation Ranking
Bowman	57.1 F (15th Coolest Period Since 1915)	17.6 inches (6th Wettest Period Since 1915)
Bismarck	59.7 F (63rd Coolest Period Since 1875)	11.7 inches (63rd Driest Period Since 1875)
Cavalier	56.7 F (20th Coolest Period Since 1934)	16.2 inches (30st Wettest Period Since 1927)
Fargo	60.8 F (46th Warmest Period Since 1881)	17.3 inches (51st Wettest Period Since 1881)
Minot Exp. Station	57.4 F (41st Coolest Period Since 1905)	18.2 inches (10th Wettest Period Since 1905)
Williston Exp. Station	58.9 F (50th Coolest Period Since 1894)	9.0 inches (34th Driest Period Since 1894)
North Dakota Average	<b>57.6 F (41st Coolest Period Since 1895)</b>	<b>16.4 inches (19th Wettest Period Since 1895)</b>

Source: Adnan Akyüz, NDSU, North Dakota state climatologist.

## About This Publication

Variety trial data from all NDSU Research Extension Centers for all crops can be found at [www.ag.ndsu.edu/varietytrials](http://www.ag.ndsu.edu/varietytrials). The agronomic data presented in this publication are from replicated research plots using experimental designs that enable the use of statistical analysis.

The LSD (least significant difference) numbers beneath the columns in tables are derived from the statistical analyses and only apply to the numbers in the column in which they appear. If the difference between two varieties exceeds the LSD value, it means that with 90 percent probability (0.10 level), the higher-yielding variety has a significant yield advantage. If the difference between two varieties is less than the LSD value, then the variety yields are considered similar.

The abbreviation NS is used to indicate “no significant difference” for that trait among any of the varieties. The CV is a measure of variability in the trial. The CV stands for coefficient of variation and is expressed as a percentage. Large CVs mean a large amount of variation that could not be attributed to differences in the varieties. In the tables, the mean indicates the average of the observations in the column.

Only compare values within the table and look for trends for the desired trait among different experimental sites and years. Oil and harvest yield were adjusted to 8.5 percent moisture. Tables 4 and 5 are summary tables, with yields expressed as a percentage of the trial mean (indicated on the bottom) of the various trials reported in subsequent tables.

Presentation of data for the varieties tested does not imply approval or endorsement by the authors or agencies conducting the tests. NDSU approves the reproduction of any table in this publication only if no portion is deleted, appropriate footnotes are given, the order of the data is not rearranged and NDSU is credited for the data.

**Table 3. Company Name, Short Name Used in the Tables and URL With Company Information.**

Company/Brand	Short	URL
Bayer CropScience	Bayer	<a href="http://www.bayercropscience.us/products/seeds/invigor-canola/">www.bayercropscience.us/products/seeds/invigor-canola/</a>
BrettYoung	BrettYoung	<a href="http://www.brettyoung.ca/index.cfm">www.brettyoung.ca/index.cfm</a>
Cargill	Cargill	<a href="http://www.victorycanola.com/">www.victorycanola.com/</a>
Dekalb	Dekalb	<a href="http://agseedselect.com/product-view/springcanola">agseedselect.com/product-view/springcanola</a>
DL Seeds	DL Seeds	<a href="http://www.dlseeds.ca">www.dlseeds.ca</a>
Integra Fortified Seed	Integra	<a href="http://www.integraseed.com/products/canola.aspx">www.integraseed.com/products/canola.aspx</a>
Mycogen Seeds	Mycogen	<a href="http://www.mycogen.com/Canola/SitePages/Variety%20List.aspx">www.mycogen.com/Canola/SitePages/Variety%20List.aspx</a>
Proseed Inc.	Proseed	<a href="http://www.proseed.net/canola.php">www.proseed.net/canola.php</a>
Star Specialty	Star	<a href="http://www.northstaragri.com/ag-center/agronomy">www.northstaragri.com/ag-center/agronomy</a>
WinField Croplan	Croplan	<a href="http://www.winfield.com/Farmer/Croplan/FindSeed/Canola/default.aspx">www.winfield.com/Farmer/Croplan/FindSeed/Canola/default.aspx</a>

**Table 4. 2014 Summary of Roundup Ready Canola Varieties in North Dakota.**

Company/ Brand	Variety	Type <sup>1</sup>	Blackleg Rating <sup>2</sup>	Clubroot Resistance <sup>3</sup>	REC Carrington	REC Hettinger	REC Langdon	REC Minot	REC Williston	Main Station
---(Yields Expressed as a Percentage of the Trial Mean)---										
BrettYoung	6044 RR	H,TR	R	No	--	100	99	117	105	--
BrettYoung	6056 CR	H,TR	R	Yes	--	--	103	106	--	--
BrettYoung	6070 RR	H,TR	R	No	--	103	100	94	120	--
Cargill <sup>4</sup>	08H0004	H,HO	R	No	89	120	106	103	92	--
Cargill <sup>4</sup>	09H7763	H,HO	R	No	116	106	100	104	--	--
Cargill	09H7757	H,HO	R	No	109	117	105	95	99	--
Cargill	V12-1	H,HO	R	No	102	112	109	95	89	--
Croplan	HyCLASS 930	H,TR	R	No	99	92	108	101	95	--
Croplan	HyCLASS 955	H,TR	R	Yes	109	100	105	112	99	--
Croplan	HyCLASS 969	H,TR	R	No	109	99	97	106	89	--
Dekalb	DKL30-03	H,TR	R	No	91	--	74	94	--	--
Dekalb	DKL30-42	H,TR	R	No	99	--	88	92	--	95
Dekalb	DKL38-48	H,TR	MR	No	93	--	105	103	--	--
Dekalb	DKL52-41	H,TR	R	No						92
Dekalb	DKL55-55	H,TR	R	No	97	--	100	78	--	104
Dekalb	DKL70-07	H,TR	R	No	110	--	104	101	--	107
Dekalb	DKL72-40	H,TR	R	No						109
Dekalb	DKL72-55	H,TR	R	No	--	--	--	--	--	98
Dekalb <sup>4</sup>	74-54RR	H,TR	R	Yes	113	--	112	108	--	--
DL Seeds	13DL30507	H,TR	R	No	70	--	89	113	--	--
Integra	7150R	H,TR	R	No	105	91	99	90	105	--
Mycogen	Nexera 1012 RR	H,HO	R	No	93	98	102	97	--	--
Mycogen	Nexera 1016 RR	H,HO	R	No	93	75	93	79	--	--
Mycogen <sup>4</sup>	G2537367H	H,HO	R	Yes	95	94	95	103	--	--
Pioneer	45H26	H,TR	NA	No	--	--	--	--	--	94
Pioneer	45H28	H,TR	NA	No	--	--	--	--	--	102
Proseed	44 Mag	H,TR	R	No	96	95	90	101	--	--
Proseed	300 Mag	H,TR	R	No	107	93	105	112	--	--
Star	Star 402	H,TR	R	No	106	105	113	93	109	--
Trial mean in lb/a					3,154	1,791	3,173	2,581	1,359	2,741

<sup>1</sup>H = Hybrid, TR = Traditional Oil Type, HO = High Oleic Oil Type.

<sup>2</sup>Blackleg: R = Resistant, MR = Moderately Resistant, NA = Not Available. Blackleg rating provided by company.

<sup>3</sup>Hybrid has Clubroot resistance. Rating provided by company.

<sup>4</sup>Experimental.

**Table 5. 2014 Summary of Liberty Link and Clearfield Canola Varieties in North Dakota.**

Company/ Brand	Variety	Type <sup>1</sup>	Blackleg Rating <sup>2</sup>	Clubroot Resistance <sup>3</sup>	REC Carrington	REC Minot	REC Langdon	REC Hettinger
(Yields Expressed as a Percentage of the Trial Mean)								
Bayer	InVigor 5440	H,LL,TR	R	No	--	108	99	--
Bayer	InVigor L120	H,LL,TR	R	No	--	100	--	--
Bayer	InVigor L130	H,LL,TR	R	No	--	98	98	--
Bayer	InVigor L135C	H,LL,TR	R	Yes	--	104	104	--
Bayer	InVigor L140P	H,LL,TR	R	No	--	116	104	--
Bayer	InVigor L156H	H,LL,TR	R	No	--	93	102	--
Bayer	InVigor L160s	H,LL,TR	R	No	--	--	101	--
Bayer	InVigor L252	H,LL,TR	R	No	--	99	115	--
Croplan <sup>4</sup>	HyCLASS 955	H,RR,TR	R	Yes	--	--	108	--
Dekalb <sup>4</sup>	DKL30-42	H,RR,TR	R	Yes	--	--	96	--
Dekalb <sup>4</sup>	DKL38-48	H,RR,TR	R	No	--	113	--	--
Mycogen	Nexera 2012 CL	H,CL,HO	MR	No	107	94	89	92
Mycogen	Nexera 2020 CL	H,CL,HO	R	Yes	98	84	96	98
Mycogen <sup>5</sup>	CL2537382H	H,CL,HO	R	No	81	96	95	107
Mycogen <sup>5</sup>	CL2537385H	H,CL,HO	R	No	114	95	92	104
Trial mean in lb/a					2,891	2,380	3,578	1,539

<sup>1</sup>H = Hybrid, LL = Liberty Link, CL = Clearfield System, RR = Roundup Ready.

TR = Traditional Oil Type, HO = High Oleic Oil Type, NA = Not Available.

<sup>2</sup>Blackleg: R = Resistant, MR = Moderately Resistant. Blackleg rating provided by company.

<sup>3</sup>Hybrid has Clubroot resistance. Rating provided by company.

<sup>4</sup>Roundup Ready checks in the trial.

<sup>5</sup>Experimental.

**Table 6. 2014 Canola - Roundup Ready - Carrington - Authors, M. Ostlie, B. Schatz, K. Bjerke and L. Berg.**

Company/		Type <sup>1</sup>	First	Flower	1000 Seed	Test	Oil	Seed Yield		
Brand	Variety		Flower	Duration				Maturity	Weight	Weight
			(DAP) <sup>2</sup>	(days)	(DAP) <sup>2</sup>	(gram)	(lb/bu)	(%)	------(lb/a)-----	
Cargill	08H0004	HO	48	17	91	2.90	50.8	42.3	2,818	--
Cargill	09H7757	HO	44	17	90	2.80	51.2	42.5	3,433	--
Cargill	09H7763	TR	42	16	87	2.99	50.8	43.5	3,673	--
Cargill	V12-1	HO	45	16	89	2.85	50.5	43.2	3,226	1,996
Croplan	HyCLASS 930	TR	39	17	88	3.48	50.6	45.1	3,133	2,045
Croplan	HyCLASS 955	TR	40	17	88	3.40	50.8	45.4	3,437	2,304
Croplan	HyCLASS 969	TR	41	17	88	3.10	51.4	45.4	3,439	--
Dekalb	74-54RR	TR	40	18	88	3.75	51.4	45.1	3,570	--
Dekalb	DKL30-03	TR	35	18	86	3.65	50.5	44.2	2,855	--
Dekalb	DKL30-42	TR	38	17	86	3.51	50.8	44.4	3,133	2,140
Dekalb	DKL38-48	TR	40	17	88	3.18	51.4	44.5	2,937	--
Dekalb	DKL55-55	TR	39	18	88	3.56	50.5	44.9	3,052	2,121
Dekalb	DKL70-07	TR	40	18	89	3.20	51.1	44.9	3,457	2,310
DL Seeds	13DL30507	TR	43	19	90	3.06	50.4	40.9	2,197	--
Integra	7150	TR	38	17	88	3.38	50.7	44.0	3,302	--
Mycogen	G2537367H	HO	45	16	89	2.73	49.4	41.9	3,004	--
Mycogen	Nexera 1012 RR	HO	44	18	90	2.89	50.4	41.0	2,936	--
Mycogen	Nexera 1016 RR	HO	43	17	89	2.91	50.2	42.3	2,920	--
Proseed	44 Mag	TR	40	18	89	3.26	50.3	45.3	3,020	--
Proseed	300 Mag	TR	39	18	88	3.24	51.0	44.5	3,363	2,074
Star Spec.	Star 402	TR	38	17	89	3.28	50.5	46.8	3,337	2,116
Mean			41	17	88	3.20	50.7	43.9	3,154	2,138
CV %			1.6	5.7	1.0	4.2	0.5	2.1	8.1	8
LSD 0.10			0.8	1.2	1.0	0.16	0.3	1.1	301	252

Trial was planted on May 25 and harvested on Aug. 29. Previous crop was spring wheat.

<sup>1</sup>TR = Traditional Oil Type, HO = High Oleic Oil Type.

<sup>2</sup>DAP = Days after planting.

**Table 7. 2014 Canola - Clearfield - Carrington - Authors, M. Ostlie, B. Schatz, K. Bjerke and L. Berg.**

Brand	Variety	Type <sup>1</sup>	Days to	Flower	Days to	Plant	Lodging <sup>2</sup>	Test	Oil	Seed Yield
			Flower	Duration	Mature	Height		Weight	Content	2014
			(DAP) <sup>3</sup>	(days)	(DAP) <sup>3</sup>	(inch)	(0-9)	(lbs/bu)	(%)	----(lbs/a)----
Mycogen	Nexera 2012 CL	HO	44	15	97	45.5	4	50.6	41.3	3,091
Mycogen	Nexera 2020 CL	HO	46	17	100	48.6	3	53.8	42.9	2,829
Mycogen	CL2537382H	HO	43	16	99	49.7	3	54.0	42.2	2,347
Mycogen	CL2537385H	HO	46	17	100	47.6	3	52.1	41.8	3,297
Mean			45	16	99	47.9	3	52.6	42.1	2,891
CV %			1.2	8.5	0.5	4.0	33.2	0.4	1.3	10.4
LSD 0.10			0.5	1.4	0.5	2.0	NS	0.2	0.6	304

Trial was planted on May 21 and harvested on Sept. 15. Previous crop was lentils.

<sup>1</sup>HO = High Oleic Oil Type.

<sup>2</sup>Lodging: 0 = none, 9 = lying flat on the ground.

<sup>3</sup>DAP = Days after planting.

**Table 8. 2014 Canola - Roundup Ready - Hettinger - Authors, J. Rickertsen and R. Olson.**

Company/ Brand	Variety	Type <sup>1</sup>	Days to	Flower	Days to	Plant	Lodging <sup>2</sup>	Test	Oil	Seed Yield	
			Flower (DAP) <sup>3</sup>	Duration (days)	Mature (DAP) <sup>3</sup>	Height (inch)		Weight (lb/bu)	Content (%)	2014	2-Yr. Avg.
Brett Young	6044 RR	TR	48	22	88	39	1	52.0	42.5	1,787	1,742
Brett Young	6070 RR	TR	46	23	87	39	2	50.5	42.2	1,851	1,695
Cargill	08H0004	HO	54	20	92	45	2	48.8	41.5	2,148	--
Cargill	09H7757	TR	51	22	90	44	1	50.2	41.6	2,103	--
Cargill	09H7763	TR	49	21	87	37	2	51.0	42.5	1,893	--
Cargill	V12-1	HO	49	21	89	39	1	50.1	42.3	1,997	1,858
Croplan	HyCLASS 930	TR	46	19	83	35	2	51.2	46.3	1,641	1,644
Croplan	HyCLASS 955	TR	47	20	85	39	2	51.4	44.6	1,793	1,924
Croplan	HyCLASS 969	TR	48	21	87	38	2	51.2	43.5	1,775	1,892
Integra	7150	TR	46	20	84	34	2	50.9	45.3	1,637	--
Mycogen	G2537736H	HO	49	22	88	40	2	50.2	39.4	1,684	--
Mycogen	Nexera 1012 RR	HO	50	25	93	46	1	50.3	40.2	1,748	1,671
Mycogen	Nexera 1016 RR	HO	49	21	88	42	2	49.9	42.1	1,347	1,324
Proseed	44 Mag	TR	49	22	89	37	2	49.9	42.8	1,705	1,657
Proseed	300 Mag	TR	47	22	87	39	1	50.8	44.2	1,664	1,638
Star Spec.	Star 402	TR	45	22	85	39	2	51.1	45.9	1,886	1,793
Mean			48	21	88	40	2	50.6	42.9	1,791	1,710
CV %			2.8	4.8	0.8	5.2	34	0.9	2.7	12.5	7.6
LSD 0.10			1	1	1	3	1.0	0.5	1.4	265	236

Trial was planted on May 6 and harvested on Aug. 20. Previous crop was durum.

<sup>1</sup>TR = Traditional Oil Type, HO = High Oleic Oil Type.

<sup>2</sup>Lodging: 0 = none, 9 = lying flat on the ground.

<sup>3</sup>DAP = Days after planting.

**Table 9. 2014 Canola - Clearfield - Hettinger - Authors, J. Rickertsen and R. Olson.**

Brand	Variety	Type <sup>1</sup>	Days to	Flower	Days to	Plant	Lodging <sup>2</sup>	Test	Oil	Seed Yield	
			Flower (DAP) <sup>3</sup>	Duration (days)	Mature (DAP) <sup>3</sup>	Height (inch)		Weight (lbs/bu)	Content (%)	2014	2-Yr. Avg.
Mycogen	Nexera 2012 CL	HO	49	21	88	43	2	50.3	40.3	1,412	950
Mycogen	Nexera 2020 CL	HO	51	21	90	44	2	50.8	41.0	1,507	--
Mycogen	CL2537382H	HO	51	20	89	45	1	50.8	41.9	1,642	--
Mycogen	CL2537385H	HO	49	23	90	45	2	49.3	39.6	1,596	--
Mean			50	21	89	44	2	50.3	40.7	1,539	950
CV %			0.5	2.0	0.5	3.7	31.4	1.1	3.8	11.3	--
LSD 0.10			1	1	1.0	2.0	1.0	0.7	2.0	225	--

Trial was planted on May 6 and harvested on Aug. 20. Previous crop was durum.

<sup>1</sup>HO = High Oleic Oil Type.

<sup>2</sup>Lodging: 0 = none, 9 = lying flat on the ground.

<sup>3</sup>DAP = Days after planting.

**Table 10. 2014 Canola - Roundup Ready - Langdon - Authors, B. Hanson, T. Hakanson, and L. Henry.**

Company/ Brand		Variety	Type <sup>1</sup>	Flower			Plant		Oil	Seed Yield	
	Flower (DAP) <sup>3</sup>			Duration (days)	Maturity (DAP) <sup>3</sup>	Height (inch)	Cover <sup>2</sup> (%)	Content (%)	2014	3-yr. Avg.	
Brett Young	6044 RR	TR	46	18	90	44	80	42.1	3,140	--	
Brett Young	6056 CR	TR	44	19	89	46	82	42.9	3,256	--	
Brett Young	6070 RR	TR	41	21	88	46	82	42.9	3,158	2,928	
Cargill	08H0004	HO	48	18	94	48	79	41.3	3,354	--	
Cargill	09H7757	TR	46	18	90	46	83	42.2	3,339	--	
Cargill	09H7763	TR	44	17	88	45	81	43.8	3,185	--	
Cargill	V12-1	HO	46	18	89	45	86	41.7	3,463	3,212	
Croplan	HyCLASS 930	TR	40	20	85	40	80	46.1	3,424	3,162	
Croplan	HyCLASS 955	TR	42	19	85	41	84	45.0	3,337	3,035	
Croplan	HyCLASS 969	TR	44	18	86	42	79	45.1	3,067	--	
Dekalb	74-54RR	TR	42	20	85	44	83	44.0	3,555	--	
Dekalb	DKL30-03	TR	39	21	83	39	82	44.6	2,360	--	
Dekalb	DKL30-42	TR	40	21	84	37	83	43.9	2,783	2,844	
Dekalb	DKL38-48	TR	43	18	85	42	82	43.4	3,334	--	
Dekalb	DKL55-55	TR	41	20	84	42	82	44.4	3,173	2,897	
Dekalb	DKL70-07	TR	42	19	85	44	83	44.4	3,291	3,013	
DL Seeds	13DL30507	TR	46	18	88	45	74	43.9	2,828	--	
Integra	7150R	TR	40	20	85	40	79	45.4	3,138	2,875	
Mycogen	G2537367H	HO	46	19	89	48	79	40.4	3,018	--	
Mycogen	Nexera 1012 RR	HO	47	19	89	52	83	40.8	3,237	3,009	
Mycogen	Nexera 1016 RR	HO	45	18	88	47	79	41.0	2,937	2,747	
Proseed	44 Mag	TR	43	19	87	40	73	43.5	2,857	--	
Proseed	300 Mag	TR	42	19	87	43	82	44.3	3,330	2,964	
Star Spec.	Star 402	TR	41	19	85	43	81	46.7	3,600	3,104	
Mean			43	19	87	44	81	43.5	3,173	2,982	
CV %			1.7	5.7	1.2	5.6	3.6	2.2	7.2	5	
LSD 0.10			0.8	1.2	1.2	2.9	3.4	1.2	269	228	

Trial was planted on May 22 and harvested on Sept. 3.

<sup>1</sup>TR = Tradional Oil Type, HO = High Oleic Oil Type.

<sup>2</sup>Cover - visual rating of percent area of plot covered by plant growth. This is a measure of stand and vigor. Plants were at 5- to 6-leaf stage.

<sup>3</sup>DAP = Days after planting.

**Table 11. 2014 Canola - Roundup Ready - Carrington, Williston, Hettinger, Langdon and Prosper - Author, M. Rahman.**

Company/ Brand		Hybrid	Type <sup>1</sup>	2014 Seed Yield					Seed Yield		
	Carrington			Williston	Hettinger	Langdon	Prosper	2012	2013	2014 Avg. <sup>2</sup>	
Dekalb	DKL30-42	TR	2,661	840	1,555	2,703	2,448	2,163	1,691	2,604	
Dekalb	DKL52-41	TR	2,449	--	--	2,649	2,454	2,012	1,990	2,517	
Dekalb	DKL55-55	TR	2,896	--	--	3,039	2,580	2,180	1,842	2,838	
Dekalb	DKL70-07	TR	3,039	794	1,907	3,042	2,683	2,347	2,263	2,921	
Dekalb	DKL72-40	TR	3,268	787	1,622	3,050	2,666	2,237	1,629	2,995	
Dekalb	DKL72-55	TR	2,834	--	--	2,993	2,260	2,133	1,533	2,696	
Pioneer	45H26	TR	2,676	--	--	2,793	2,247	2,039	1,768	2,572	
Pioneer	45H28	TR	2,977	852	1,970	2,916	2,460	--	--	2,784	
Mean			2,850	818	1,764	2,898	2,475	2,159	1,798	2,741	
CV %			--	--	--	--	--	11.4	15.5	4.4	
LSD 0.10			--	--	--	--	--	211	NS	175	

<sup>1</sup>TR = Tradional Oil Type.

<sup>2</sup>Averaged across Carrington, Langdon and Prosper, 2014.



**Table 12. 2014 Canola - Liberty Link and Clearfield - Langdon - Authors, B. Hanson, T. Hakanson and L. Henry.**

Company/ Brand	Variety	Type <sup>1</sup>	First Flower (DAP) <sup>3</sup>	Flower Duration (days)	Plant Maturity (DAP) <sup>3</sup>	Plant Height (inch)	Oil Cover <sup>2</sup> (%)	Oil Content (%)	Seed Yield 2014 2-yr. Avg. -----(lb/a)----	
Bayer	InVigor 5440	LL, TR	46	19	91	51	79	42.6	3,545	3,820
Bayer	InVigor L130	LL, TR	45	19	89	46	80	43.0	3,522	3,618
Bayer	InVigor L135c	LL, TR	44	19	90	48	81	43.3	3,714	--
Bayer	InVigor L140p	LL, TR	45	17	87	48	80	43.6	3,721	--
Bayer	InVigor L156h	LL, TR	45	20	91	49	84	44.1	3,651	3,695
Bayer	InVigor L160s	LL, TR	48	18	93	48	80	42.9	3,616	--
Bayer	InVigor L252	LL, TR	46	18	91	49	80	45.4	4,121	4,045
Mycogen	CL2537382H	CL, HO	46	19	92	48	79	46.2	3,385	--
Mycogen	CL2537385H	CL, HO	44	20	91	45	79	45.0	3,296	--
Mycogen	Nexera 2012 CL	CL, HO	45	18	88	47	74	45.7	3,185	3,310
Mycogen	Nexera 2020 CL	CL, HO	45	20	92	48	75	46.3	3,445	--
Croplan <sup>4</sup>	HyCLASS 955	RR,TR	41	20	86	42	84	49.3	3,873	3,712
Dekalb <sup>4</sup>	DKL 30-42	RR,TR	40	20	84	42	81	47.4	3,439	3,435
Mean			44	19	89	47	80	44.9	3,578	3,662
CV %			1	5	2	5	3	2.4	8	5.5
LSD 0.10			1	1	3	3	3	1.3	351	391

Trial was planted on May 22 and harvested on Sept. 3.

<sup>1</sup>LL = Liberty Link, CL = Clearfield System, RR = Roundup Ready, TR = Traditional Oil Type, HO = High Oleic Oil Type.

<sup>2</sup>Cover - visual rating of percent area of plot covered by plant growth. This is a measure of stand and vigor. Plants were at 5- to 6-leaf stage.

<sup>3</sup>DAP = Days after planting.

<sup>4</sup>Roundup Ready check in the trial.

**Table 13. 2014 Canola - Roundup Ready - Williston - Authors, J. Bergman, G. Pradhan and D. Amiot.**

Company/ Brand	Variety	Type <sup>1</sup>	First Flower (DAP) <sup>2</sup>	Flower Duration (days)	Plant Height (inch)	Oil Content (%)	Seed Yield 2014 2-yr. Avg. -----(lb/a)----	
BrettYoung	6044 RR	TR	34	16	31	43.8	1,425	1,597
BrettYoung	6070 RR	TR	33	16	32	44.7	1,636	1,691
Cargill	08H0004	HO	39	12	33	43.5	1,245	--
Cargill	09H7757	HO	36	15	33	44.4	1,340	--
Cargill	V12-1	HO	35	14	32	43.4	1,212	--
Croplan	HyCLASS 930	TR	32	14	30	43.3	1,287	1,472
Croplan	HyCLASS 955	TR	32	15	31	43.9	1,346	1,594
Croplan	HyCLASS 969	TR	34	15	31	43.6	1,216	1,501
Integra	7150	TR	32	14	32	45.1	1,410	1,566
Star Spec.	Star 402	TR	33	15	31	44.6	1,475	1,589
Mean			34	14	32	44.0	1,359	1,573
CV %			2.0	6.7	4.8	3	16.9	7
LSD 0.10			0.8	1.2	1.8	1.6	275	NS

Trial was planted on May 6 and harvested on Aug. 13. Previous crop was durum.

<sup>1</sup>TR = Traditional Oil Type, HO = High Oleic Oil Type.

<sup>2</sup>DAP = Days after planting.

**Table 14. 2014 Canola - Roundup Ready - Minot - Authors, E. Eriksmoen, J. Tarasenko and J. Effertz.**

Company/ Brand	Variety	Days to	Flower	Days to	Plant	Lod-	Oil	Seed Yield	
		Flower	Duration	Maturity	Height	ging	Content	2014	2-yr. Avg.
		(DAP) <sup>1</sup>	(days)	(DAP) <sup>1</sup>	(inch)	(0-9) <sup>2</sup>	(%)	(lb/a)	
BrettYoung	6044 RR	49	21	97	48	0	44.7	3,019	2,858
BrettYoung	6056 RR	49	21	100	49	1	43.5	2,744	--
BrettYoung	6070 RR	45	24	97	49	2	45.4	2,435	2,591
Cargill	08H0004	54	17	107	54	0	43.0	2,667	--
Cargill	09H7757	51	20	99	50	0	43.5	2,458	--
Cargill	09H7763	49	23	98	47	1	44.8	2,685	--
Cargill	V12-1	50	19	97	51	0	44.6	2,461	2,713
Croplan	HyCLASS 930	43	26	95	41	4	46.2	2,606	2,529
Croplan	HyCLASS 955	47	22	95	45	4	46.1	2,886	2,612
Croplan	HyCLASS 969	47	22	97	44	2	46.2	2,733	2,633
Dekalb	74-54RR	48	22	99	45	1	44.1	2,793	--
Dekalb	DKL30-03	41	29	95	42	5	45.5	2,429	--
Dekalb	DKL30-42	47	22	96	47	4	44.4	2,379	2,224
Dekalb	DKL38-48	48	22	96	45	1	44.7	2,671	2,727
Dekalb	DKL55-55	44	26	96	43	5	43.4	2,021	2,021
Dekalb	DKL70-07	46	23	96	44	2	44.9	2,610	2,549
DL Seeds	13DL30507	52	23	107	48	0	43.8	2,911	--
Integra	7150	46	23	96	40	5	44.6	2,329	2,287
Mycogen	G2537367H	51	19	101	48	1	42.1	2,658	--
Mycogen	Nexera 1012 RR	52	22	107	45	1	41.5	2,503	2,461
Mycogen	Nexera 1016 RR	50	20	100	44	1	43.4	2,046	2,267
Proseed	44 Mag	48	21	97	44	1	45.3	2,602	2,795
Proseed	300 Mag	47	23	97	46	1	44.9	2,885	2,737
Star Spec.	Star 402	46	23	96	41	2	47.2	2,411	2,491
Mean		48	22	98	46	2	44.5	2,581	2,531
CV %		1.9	6.4	1.4	8.2	57	2.1	10.7	8.6
LSD 0.10		1	2	2	4	1	1.1	322	380

Trial was planted on May 15 with a seeding rate of 8 lbs/A and harvested on Sept. 6. Previous crop was spring wheat.

<sup>1</sup>DAP = Days after planting.

<sup>2</sup>Lodging: 0 = none, 9 = lying flat on the ground.

**Table 15. 2014 Canola - Liberty Link - Minot - Authors, E. Eriksmoen, J. Tarasenko and J. Effertz.**

Company/ Brand	Variety	Type <sup>1</sup>	Days to Flower (DAP) <sup>2</sup>	Flower Duration (days)	Days to Maturity (DAP) <sup>2</sup>	Plant Height (inch)	Oil Content (%)	Seed Yield (lb/a)
Bayer	InVigor 5440	LL	48	21	96	60	43.0	2,570
Bayer	InVigor L120	LL	44	21	92	53	43.5	2,384
Bayer	InVigor L130	LL	45	21	93	54	43.4	2,344
Bayer	InVigor L135c	LL	46	21	93	56	41.6	2,475
Bayer	InVigor L140p	LL	45	20	93	55	44.0	2,770
Bayer	InVigor L156h	LL	47	21	100	52	43.5	2,222
Bayer	InVigor L252	LL	49	20	100	53	45.6	2,345
Mycogen	CL2537382H	CL	49	19	99	53	44.8	2,284
Mycogen	CL2537385H	CL	44	22	100	52	44.1	2,258
Mycogen	Nexera 2012 CL	CL	48	18	100	53	43.2	2,238
Mycogen	Nexera 2020 CL	CL	48	19	100	48	45.6	1,994
Dekalb <sup>3</sup>	DKL38-48	RR	42	26	92	50	44.8	2,679
Mean			46	21	96	53	43.8	2,380
CV %			2.2	4.8	1.1	7	1.2	7.7
LSD 0.10			1	1	1	4	0.6	222

Trial was planted on May 21 with a seeding rate of 8 lbs/A and harvested on Sept. 6. Previous crop was spring wheat.

<sup>1</sup>H = Hybrid, LL = Liberty Link, CL = Clearfield System, RR = Roundup Ready.

<sup>2</sup>DAP = Days after planting.

<sup>3</sup>Roundup Ready check in the trial.

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