

# CANOLA VARIETY SELECTION GUIDE



Manitoba  
Canola  
Growers

## 2024

[www.canolagrowers.com](http://www.canolagrowers.com)



# Program Overview

## About this Publication

This publication was developed to aid Manitoba Canola Farmers in their canola variety purchasing decisions. Led by Manitoba Canola Growers Association (MCGA) this booklet incorporates messaging from various industry partners, notably the Canola Council of Canada's Crop Production & Innovation Team and Manitoba Agriculture Oilseeds Specialist. Variety evaluation data is included from the Manitoba Canola Variety Evaluation Trials (CVET) that launched in the 2024 season. The goal of MCGA's CVET program is to provide farmers with independent third-party testing data for commercial canola hybrids. Additional supporting data provided in this guide includes select North Dakota State University Canola Variety Trials, disease and pod shatter information, as well as links to resources from participating seed companies.

## MCGA Research Priorities

1. Increase canola yield potential and stability in Manitoba conditions through genetic and agronomic solutions.
2. Protect canola yields from current and emerging pests.
3. Improve canola nutrient use efficiency through 4R management practices.
4. Reduce or improve the environmental impact of canola production
5. Reduce harvest and storage loss through genetics, management, and equipment optimization.
6. Ensure supply of high-quality canola to meet current and future end-use demands.

# Things to Consider When Choosing a Canola Variety



The massive amount of canola varieties being marketed to farmers each season, paired with a number of traits, some with industry standards and some without, makes choosing the right canola variety for your fields harder than ever. Take the following steps to help you think through the decisions process:

**1**

## List your “must have” traits

Think about what traits are essential for your farm and management practices. This could be anything from herbicide tolerance system, pod shatter, days to maturity or disease resistance.

**2**

## Which cultivars produced your most profitable canola fields in 2024?

Examine the varieties you grew. Can you account for higher profitability, considering yield, quality, seed prices and in-season inputs, to any specific features of the seed or seed treatment?

**3**

## Look beyond the current year and farm gate.

Use resources such as Yield Manitoba, independent variety trials, seed company field scale data and conversations with neighbors and local seed retails to examine year over year performance in your area.

**4**

## Critically examine your “must have” list.

Try to envision a better way to grow canola. Honestly evaluate your system considering all of the options available to farmers. If you are curious about or might like to explore a new approach try changing your “must have” list for a few fields.

**5**

## Note the top yield robbers in your fields.

If certain pests are consistently reducing canola yields in your fields such as blackleg, clubroot or flea beetles you may need to look at varieties with new sources of resistance or different seed treatment options.

**6**

## Develop a shortlist

Create a list of varieties that include your “must haves” and choose at least two to grow next year based on yield potential, stability and profitability potential for your farm.

Adapted from Canola Watch Article, Choosing the right cultivar for each field:  
<https://www.canolacouncil.org/canola-watch/fundamentals/choose-the-right-cultivar-for-each-field/>



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# 2024 Growing Season Recap

## Seeding and Plant Establishment

Seeding of canola began the week of May 16th and continued until the second week in June. A few fields did have canola broadcasted on due to high moisture. Heavy early season rainfall and colder temperatures caused seeding, weed control and stand establishment challenges. The majority of regions received >150% percent of normal precipitation between May 1st and June 16th and lower than normal Growing Degree Day accumulation in the same period.

## Insect Pressure

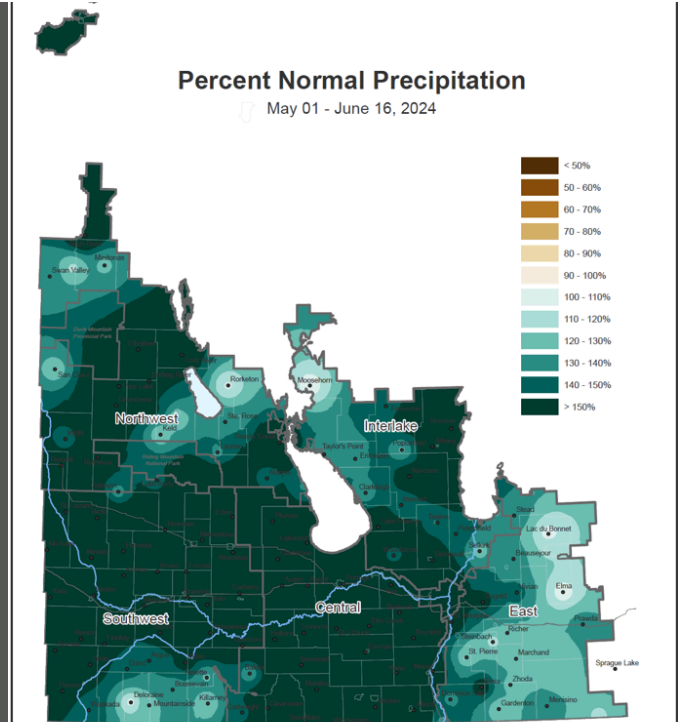
Flea beetles were once again a pest of concern with foliar insecticide applications reported across all regions. Cool temperatures kept canola in susceptible stages longer than normal leading to insecticide applications occurring into early July. Cutworm control measures took place in the northwest, southwest, central and eastern regions. Spraying for Lygus was reported in the Eastern and Interlake regions in August.

## Disease Pressure

Early blackleg infections were reported across the province. High soil moisture levels favoured sclerotinia infection and fungicide applications occurred across all canola growing regions. High verticillium stripe was noted across all MB growing regions in late August and September.

## Flowering and Harvest Conditions

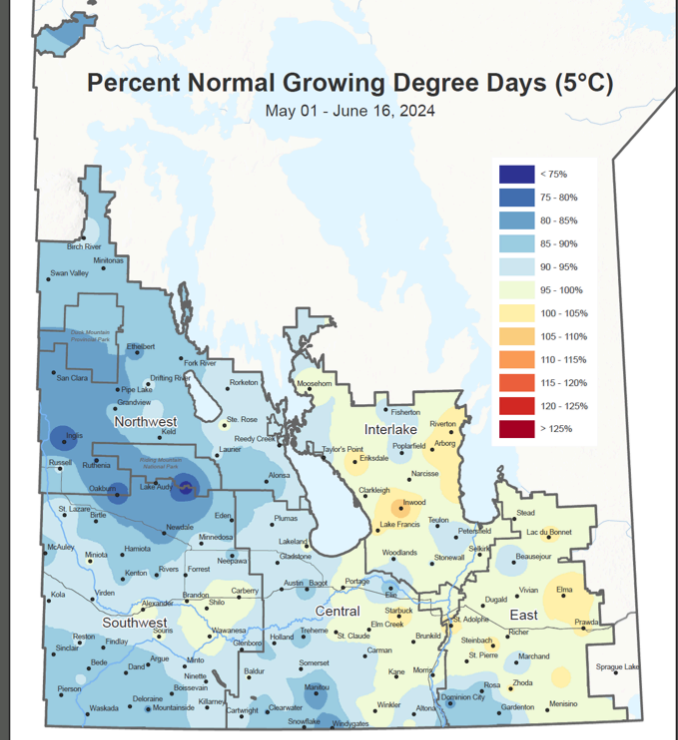
Flowering began the last week in June and continued until early August. Swathing started in the province the 3rd week in August with harvest generally starting the first week in September. Isolated heavy rainfall events in September delayed harvest progress but a warm, dry end of September and early October provided time for harvest completion and fall fieldwork.



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Canada  
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Prepared by Manitoba Agriculture, Ag-Weather Program  
Map provides a regional estimation based on weather observations from the Ag-Weather Program and Environment and Climate Change Canada weather stations and should be supplemented by site-specific considerations. Local conditions may vary.  
The accuracy of this map may vary due to data availability and potential data errors.  
For more information, contact your local Manitoba Agriculture office.

0 25 50 100 Km



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Canada  
CANADIAN AGRICULTURAL PARTNERSHIP

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# Canola Production in Manitoba (2014-2024)

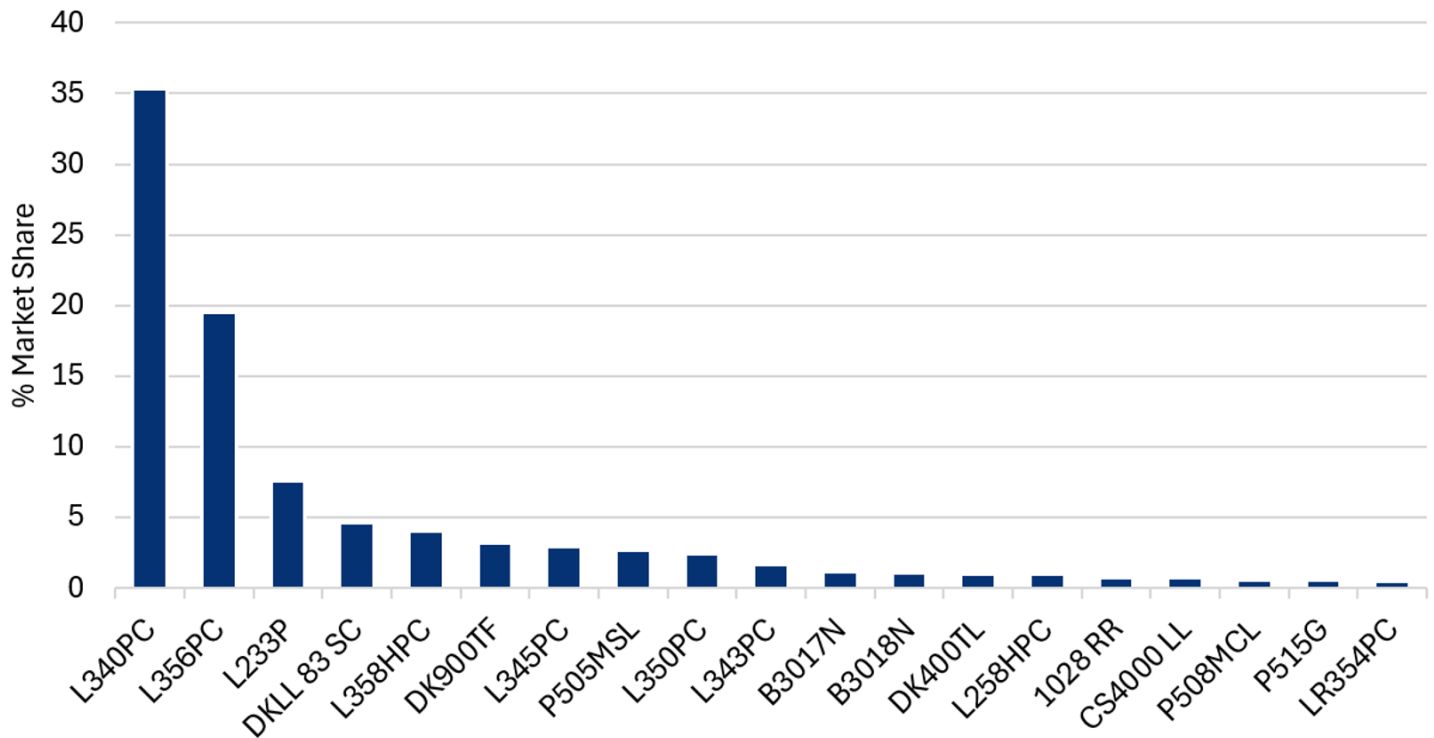
Year	Acres Seeded (acres)	Acres Seeded ('000 acres)	Acres Harvested (acres)	Acres Harvested ('000 acres)	Average Yield (bu/ac)	MB Production (metric tonnes)
2014	3,175,000	3,175	3,150,000	3,150	35.1	2,510,600
2015	3,215,000	3,215	3,190,000	3,190	39.5	2,857,600
2016	3,199,644	3,200	3,100,000	3,100	37.1	2,608,200
2017	3,160,000	3,160	3,155,000	3,155	44.0	3,147,900
2018	3,416,000	3,416	3,379,100	3,379	43.3	3,318,400
2019	3,307,800	3,308	3,208,600	3,209	42.0	3,056,300
2020	3,414,100	3,414	3,396,700	3,397	41.4	3,190,700
2021	3,424,226	3,424	3,389,984	3,390	36.4	2,800,089
2022	3,280,800	3,281	3,219,500	3,220	43.3	3,162,428
2023	3,128,200	3,128	3,116,200	3,116	44.3	3,130,200
2024	3,336,200	3,336	3,293,800	3,294	41.0	3,062,665

**Source:** Statistics Canada. Table 32-10-0359-01 Estimated areas, yield, production, average farm price and total farm value of principal field crops, in metric and imperial units

<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210035901>

## 2024 Manitoba Variety Market Share (MASC)

BASED ON 3,262,519 ACRES REPORTED







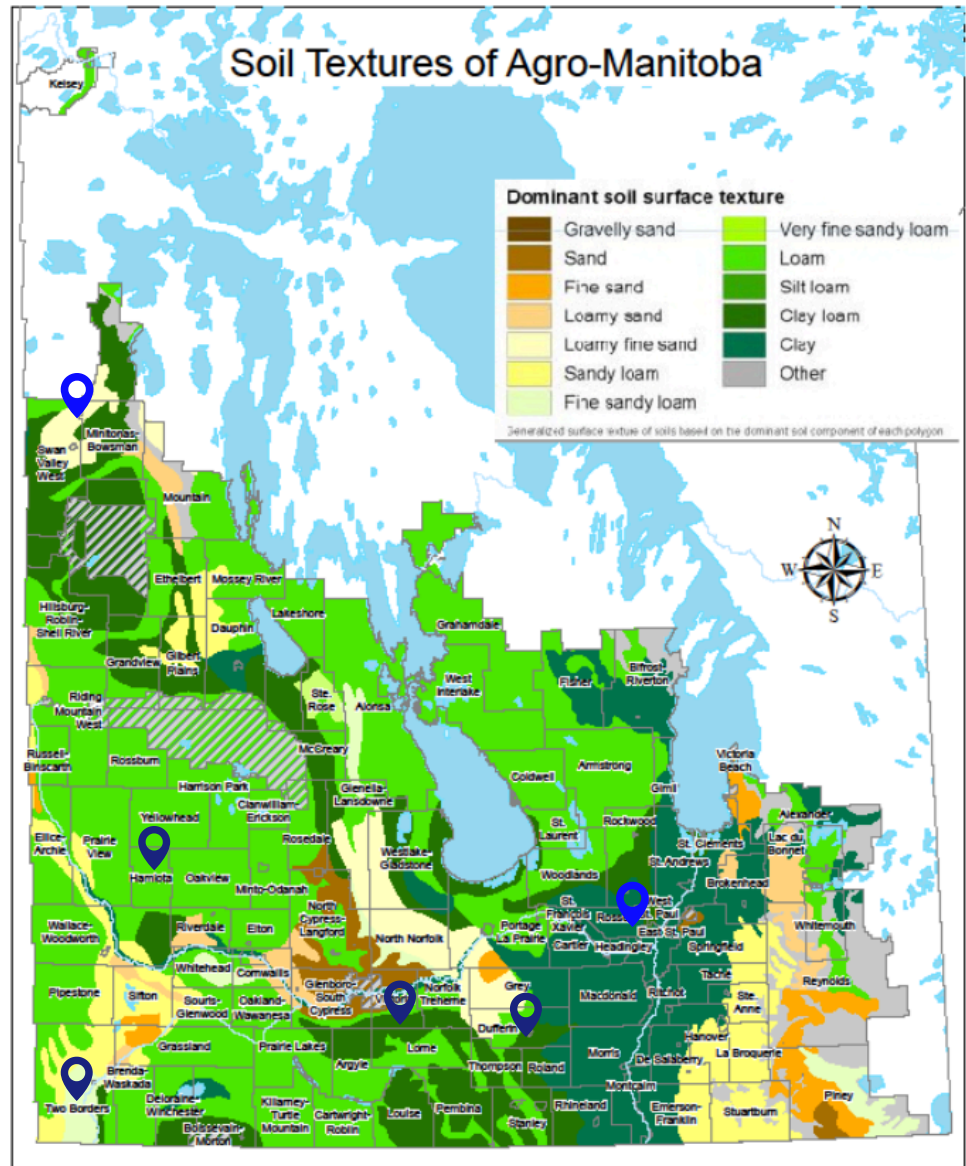
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# 2024 Manitoba Canola Variety Evaluation Trials (CVET)

Manitoba CVET launched in the 2024 season led by the Manitoba Canola Growers Association. All seed companies were approached to enter varieties in the 6 testing locations across Manitoba. Separate trials were conducted for each herbicide tolerant systems (Liberty Link and Roundup Ready/TruFlex) and all varieties were desiccated and straight cut. Unfortunately, two locations did have to be cancelled during the season. Swan River had early season wind and flea beetle damage and the Rosser location had very high data variability due to inconsistent stressors across the site. Therefore, data is presented from locations in Carman, Holland, Hamiota and Melita for the 2024 season.

## 2024 CVET Trial Locations

-  2024 Canola Variety Trial Sites
-  2024 Cancelled Sites



Manitoba Agriculture  
Source: MLI  
Date: November 6, 2024



1:2,300,000  
Kilometres  
0 20 40 80



# Understanding the Results

The check variety for each respective trial was chosen based on the highest market share of entered varieties based on the 2023 MASC Variety Market Share Report.

**Least Significant Difference (LSD):** The quantity by which varieties must differ to conclude with 95% confidence that differences in data exist. If the difference between the yields of two varieties exceeds the LSD value, it means that with 95% probability, the higher-yielding variety has a significant yield advantage. If the yield differences are smaller than the LSD value variety yields are considered similar.

**Coefficient of Variation (CV):** A measure of random variability in the trial. A CV of less than 15% generally indicates an acceptable, uniform trial and conclusive data.

**Lodging:** Rated on a 1 to 5 scale, where 5 is a completely lodged plant at harvest.

**Blackleg Group:** Varieties in the tables have a resistant (R) rating for blackleg (<30% infection of Westar check) based on WCC/RRC rating. Some seed distributors have chosen to provide a blackleg resistance grouping based on major-gene (qualitative) resistance within a variety in addition to the traditional rating. Labels identifying major resistance genes present will use the letters: A, B, C, D, E1, E2, F, G, H, and X. (See page 19 for more detail)

**Clubroot Resistance:** Clubroot resistance is generally termed 1st or 2nd Generation based on genetic source. First-generation clubroot resistance confers resistance to clubroot pathotypes 2F, 3H, 5I, 6M, and 8N, on the Canadian Clubroot Differential Set (Strelkov et al., 2018). Second-generation sources contain resistance to a varying set of pathotypes outside the original five first-generation pathotypes but may also have resistance to the original five. (See page 16 for more detail)

**Pod-Shatter Rating Scale:** The pod shatter rating scale was developed by a sub-committee of the WCC/RRC in 2021. Numeric pod shatter ratings are provided by their respective companies or may not yet be identified on the new rating system.

1 = poor, 9 = excellent pod shatter resistance. (See page 21 for more details)



# CVET Variety Descriptions

Note: Separate trials were conducted for each herbicide system (Liberty Link and Roundup/TruFlex)

## Liberty Link

Company	Variety	Manitoba CVET Data <sup>1</sup>			WCC/RRC Data <sup>2</sup>		Pod Shatter Rating <sup>5</sup>
		Yield	Maturity	Lodging	Blackleg Resistance <sup>4</sup>	Clubroot Resistance <sup>4</sup>	
		<i>bu/ac</i>	<i>(Days)</i>	<i>(1-5)</i>	<i>(Group)<sup>4a</sup></i>	<i>(Generation)<sup>4b</sup></i>	<i>(1-9)</i>
Brevant® seeds	B3012	50	95.1	1.3	R	R (1)	Y (7.0)
BrettYoung	BY 7204LL	52	92.9	1.3	R (E2)	R (1+2)	Y (7.5)
WinField United   CropPlan	CP21L3C	48	92.9	1.5	R	R (1)	N (5.4)
WinField United   CropPlan	CP24L3C	51	93.4	1.3	R	R (1+2)	Y (7.0)
CANTERRA SEEDS	CS4000 LL	48	91.9	2.3	R	R (1)	Y (6.0)
BASF   InVigor	L340PC	57	90.6	1.7	R	R (1)	Y
BASF   InVigor	L343PC	54	90.7	1.9	R	R (1+2)	Y
BASF   InVigor	L350PC	53	95.1	1.3	R	R (1)	Y
BASF   InVigor	L356PC	55	91.9	1.5	R	R (1)	Y
<b>LSD</b>		3.6	0.55	0.33			

## Roundup / TruFlex

Company	Variety	Manitoba CVET Data <sup>1</sup>			WCC/RRC Data <sup>2</sup>		Pod Shatter Rating <sup>5</sup>
		Yield	Maturity	Lodging	Blackleg Resistance <sup>4</sup>	Clubroot Resistance <sup>4</sup>	
		<i>bu/ac</i>	<i>(Days)</i>	<i>(1-5)</i>	<i>(Group)<sup>4a</sup></i>	<i>(Generation)<sup>4b</sup></i>	<i>(1-9)</i>
WinField United   CropPlan	CP21T3P	51	93.0	1.7	R (A,G)		Y (7.8)
WinField United   CropPlan	CP22T1C	50	90.8	2.3	R	R (1 +2)	Y (7.4)
CANTERRA SEEDS	CS3200 TF	55	95.3	1.3	R (C)	R (1 + 2)	Y (7.0)
CANTERRA SEEDS	CS3300 TF	57	89.7	1.9	R (A, G)	R (1)	Y (7.0)
<b>Experimental lines that are being tested / proposed for registration in Canada</b>							
Maizex Seeds	C8M24520 RR	56	91.9	1.3	NT	NT	Y (7.5)
Maizex Seeds	C8M24523 RR	50	95.1	1.0	NT	NT	Y (7.0)
Maizex Seeds	C8M24524 RR	51	90.3	1.5	NT	NT	Y (7.0)
<b>LSD</b>		4.8					

<sup>1</sup> Data from independent canola hybrid testing in the Manitoba Canola Variety Evaluation Trials.

<sup>2</sup> Data from canola hybrid registration testing at Western Canadian Canola/Rapeseed Recommending Committee Trials.

<sup>4</sup> Genetic disease resistance is indicated with an "R" resistant rating to Blackleg, Clubroot, based on variety descriptions submitted to CFIA. NT - not tested through WCC/RRC to date.

<sup>4a,b</sup> Additional details of blackleg group and clubroot generation labels provided by respective companies.

<sup>5</sup> The Canola Council of Canada rating system indicates that 1 = poor, 9 = excellent pod shatter resistance.





# CVET Individual Site Data

## Melita, MB

**Research Contractor:** Westman Agricultural  
Diversification Organization

**Seeding Date:** May 15, 2024

**Plot Size:** 60 m<sup>2</sup>

**Previous Crop:** Wheat

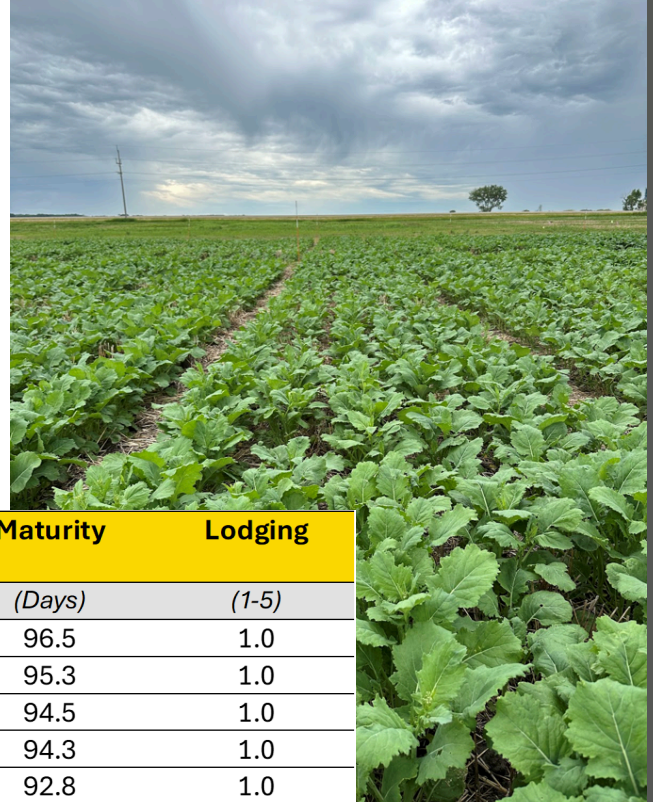
**Desiccation Date:** Aug 26, 2024

**Harvest Management:** Straight cut

**Harvest Date:** Sept 3, 2024

**Season Precipitation:** 251 mm

**Disease Pressure:** Med-High (Sclerotinia,  
Blackleg, Verticillium)



### Liberty Link

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
B3012	55	90%	96.5	1.0
BY 7204LL	59	97%	95.3	1.0
CP21L3C	55	91%	94.5	1.0
CP24L3C	54	89%	94.3	1.0
CS4000 LL	57	93%	92.8	1.0
<b>L340PC (check)</b>	<b>61</b>	<b>100%</b>	<b>90.0</b>	<b>1.0</b>
L343PC	58	95%	89.0	1.0
L350PC	59	97%	96.5	1.0
L356PC	62	101%	92.3	1.0
<b>Site Average</b>	<b>58</b>		<b>93.3</b>	<b>1</b>
<b>LSD</b>	<b>1.95</b>	<b>3%</b>	<b>0.78</b>	<b>0</b>
<b>CV (%)</b>	<b>7.5</b>		<b>3.2</b>	<b>0</b>

### Roundup / TruFlex

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
<b>CP21T3P (check)</b>	<b>57</b>	<b>100%</b>	<b>94.5</b>	<b>1</b>
CP22T1C	46	81%	92.0	1
CS3200 TF	59	103%	95.5	1
CS3300 TF	63	110%	90.2	1
C8M24520 RR	59	104%	92.5	1
C8M24523 RR	56	99%	95.2	1
C8M24524 RR	51	90%	88.5	1
<b>Site Average</b>	<b>56</b>		<b>92.6</b>	<b>1</b>
<b>LSD</b>	<b>2.3</b>	<b>4%</b>	<b>0.90</b>	<b>0</b>
<b>CV (%)</b>	<b>11.2</b>		<b>3.1</b>	<b>0</b>



# CVET Individual Site Data

## Hamiota, MB

Research Contractor: AgQuest

Seeding Date: May 21, 2024

Plot Size: 42 m<sup>2</sup>

Previous Crop: Wheat

Harvest Management: Straight cut

Harvest Date: Sept 3, 2024

Season Precipitation: 411 mm

Disease Pressure: Low



### Liberty Link

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
B3012	60	93%	96.3	1.3
BY 7204LL	61	94%	91.8	1.8
CP21L3C	54	84%	93.3	1.8
CP24L3C	58	89%	93.8	1.5
CS4000 LL	53	82%	92.8	2.5
<b>L340PC</b> ( <i>check</i> )	65	100%	88.8	1.5
L343PC	61	95%	89.3	1.5
L350PC	64	99%	97.5	1.0
L356PC	63	97%	91.3	1.0
<b>Site Average</b>	60		92.3	1.5
<b>LSD</b>	1.6	2%	0.22	0.20
<b>CV (%)</b>	7.8		3.0	41

### Roundup / TruFlex

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
<b>CP21T3P</b> ( <i>check</i> )	63	100%	91.8	2.0
CP22T1C	59	93%	88.5	2.5
CS3200 TF	66	105%	86.8	2.5
CS3300 TF	66	104%	96.5	2.0
C8M24520 RR	67	107%	89.0	2.5
C8M24523 RR	64	101%	95.5	1.0
C8M24524 RR	61	96%	90.0	1.0
<b>Site Average</b>	63		91.1	1.8
<b>LSD</b>	1.6	3%	0.26	0.55
<b>CV (%)</b>	5.8		3.8	58



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# CVET Individual Site Data

## Carman, MB

**Research Contractor:** University of Manitoba

**Seeding Date:** June 21, 2024  
**Plot Size:** 40 m<sup>2</sup>  
**Previous Crop:** Soybean  
**Desiccation Date:** Sept 15, 2024  
**Harvest Management:** Straight cut  
**Harvest Date:** Sept 26, 2024  
**Season Precipitation:** 441 mm  
**Disease Pressure:** Low



### Liberty Link

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
B3012	46	98%	92.5	1.0
BY 7204LL	43	93%	90.3	1.5
CP21L3C	41	88%	91.0	2.3
CP24L3C	45	96%	91.8	1.8
CS4000 LL	42	91%	90.5	3.5
<b>L340PC (check)</b>	47	100%	90.0	3.4
L343PC	46	99%	91.3	4.0
L350PC	41	89%	92.5	2.0
L356PC	47	100%	90.5	3.0
<b>Site Average</b>	44		91.2	2.3
<b>LSD</b>	1.3	3%	0.79	0.34
<b>CV (%)</b>	7.3		2.3	52

### Roundup / TruFlex

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
<b>CP21T3P (check)</b>	42.2	100%	92.3	2.0
CP22T1C	40.5	96%	90.3	3.3
CS3200 TF	44.5	105%	92.3	1.0
CS3300 TF	46.4	110%	90.3	2.5
C8M24520 RR	47.4	112%	92.0	1.5
C8M24523 RR	43.5	103%	94.0	1.0
C8M24524 RR	44.6	106%	90.0	2.3
<b>Site Average</b>	44		91.6	1.9
<b>LSD</b>	2	6%	0.72	0.23
<b>CV (%)</b>	9.7		1.7	45



# CVET Individual Site Data

## Holland, MB

**Research Contractor:** AgQuest

**Seeding Date:** June 6, 2024

**Plot Size:** 42 m<sup>2</sup>

**Previous Crop:** Wheat

**Desiccation Date:** Sept 11, 2024

**Harvest Management:** Straight cut

**Harvest Date:** Sept 24, 2024

**Season Precipitation:** 251 mm

**Disease Pressure:** Med (Blackleg, Verticillium)



### Liberty Link

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
B3012	41	71%	95.0	2.0
BY 7204LL	44	78%	94.3	1.0
CP21L3C	43	76%	92.8	1.0
CP24L3C	46	81%	94.0	1.0
CS4000 LL	40	70%	91.8	2.0
<b>L340PC (check)</b>	57	100%	93.5	1.0
L343PC	49	87%	93.3	1.0
L350PC	48	84%	94.0	1.0
L356PC	49	86%	93.5	1.0
<b>Site Average</b>	46		93.5	1.2
<b>LSD</b>	1.7	4%	0.38	0.09
<b>CV (%)</b>	12.3		1.3	38

### Roundup / TruFlex

Variety	Yield	Yield	Maturity	Lodging
	<i>bu/ac</i>	<i>% of Check</i>	<i>(Days)</i>	<i>(1-5)</i>
<b>CP21T3P (check)</b>	44.3	100%	93.5	1.75
CP22T1C	40.1	91%	92.3	2.5
CS3200 TF	51.0	115%	96.8	1
CS3300 TF	51.8	117%	91.5	1.75
C8M24520 RR	52.7	119%	94.3	1
C8M24523 RR	47.5	107%	95.5	1
C8M24524 RR	47.0	106%	92.5	1.75
<b>Site Average</b>	48		93.8	1.5
<b>LSD</b>	3.6	8%	0.71	0.28
<b>CV (%)</b>	13.7		2.2	45

## CANOLA VARIETY TRIALS

### Important Notes:

The following varieties are sold under different commercial names in Canada:

- CropPlan CP9978TF is CP21T3P in Canada
- CropPlan CP9221TF is CP22T1C in Canada
- CropPlan CP7130LL is CP21L3C in Canada

These trials were conducted in the United States and as a result not all varieties listed are registered or available in Canada.

### Canola - Liberty Link

Langdon

Company	Variety	Plant Height (inch)	Cover <sup>1</sup> (%)	Oil <sup>2</sup> (%)	Yield <sup>2</sup>				
					2022	2023	2024	2yr Avg.	3yr Avg.
BASF InVigor	L333PC	52	78	43.7	--	--	3110	--	--
BASF InVigor	L340PC	50	76	43.0	3573	2644	3406	3025	3208
BASF InVigor	L343PC	50	73	43.4	3627	2541	3304	2922	3157
BASF InVigor	L345PC	51	86	43.6	3734	2454	3391	2922	3193
BASF InVigor	L350PC	55	81	46.1	3615	2668	3140	2904	3141
BASF InVigor	LR344PC	55	76	44.1	--	--	3258	--	--
BASF InVigor	LR354PC	58	71	44.8	3351	2429	3186	2807	2989
BrettYoung	BY7204LL	55	64	46.9	--	--	2805	--	--
Canterra Seeds	CS4000 LL	54	79	45.3	3237	2907	2529	2718	2891
Canterra Seeds	CS4100 LL	53	68	46.6	--	--	2822	--	--
Croplan	CP7130LL	56	71	45.0	--	--	3149	--	--
Croplan	CP7250LL	52	75	44.7	--	2554	2432	2493	--
Dekalb	DK400TL	50	84	46.2	--	--	3048	--	--
Dyna-Gro	DG 661 LCM	55	83	44.4	--	2243	2738	2491	--
Pioneer	P516L	53	73	44.2	--	--	2733	--	--
Pioneer	P612L	55	46	45.0	--	2584	2607	2595	--
Trial Mean		53.7	72.6	44.7	3261	2530	2912	--	--
C.V. %		3.6	10.4	1.2	3.9	9.9	9.5	--	--
LSD 10%		2.3	8.9	0.6	102	299	326	--	--

<sup>1</sup> % Cover- Visual rating of percent area of plot covered by plant growth. This is a measure of stand and vigor.

Plants were at 5-6 leaf stage.

<sup>2</sup> 8.5% moisture

Data includes only released varieties. Experimental lines are not included. Statistics reflect the entire trial.

## CANOLA VARIETY TRIALS

Canola - Roundup Ready					Langdon				
Company	Variety	Plant Height (inch)	Cover <sup>1</sup> (%)	Club root Oil <sup>2</sup> (%)	Yield			2-yr Avg.	3-yr Avg.
					2022	2023	2024		
BASF InVigor	LR354PC	52	82	45.4	--	2344	3076	2710	--
BASF InVigor	LR344PC	52	76	44.4	--	--	2919	--	--
BrettYoung	BY 6219TF	53	73	44.4	--	2709	2819	2764	--
Canterra Seeds	CS3100 TF	52	66	44.3	3382	2609	2457	2533	2816
Canterra Seeds	CS3200 TF	52	100	45.4	--	--	3051	--	--
Canterra Seeds	CS3300 TF	51	63	45.1	--	--	2669	--	--
Croplan	CP9978TF	50	83	44.9	2710	2932	2933	2932	2858
Croplan	CP9221TF	49	78	43.2	--	2412	2446	2429	--
Dyna-Gro	DG 781TCM	50	80	45.0	--	2526	2753	2639	--
Dyna-Gro	DG 760TM	51	77	44.5	--	2818	2603	2710	--
Nuseed	NC527CRTF	50	75	45.0	2797	2471	2534	2503	2601
Pioneer	P515G	48	78	46.0	--	2551	2819	2685	--
Proseed	TR23127	50	68	44.9	--	2709	2566	2637	--
Star Specialty Seed	StarFlex	49	81	45.9	3149	2676	2871	2774	2899
Trial Mean		51.3	74.7	44.9	3036	2516	2727	--	--
C.V. %		2.8	11.2	1.4	7.0	5.1	11.3	--	--
LSD 10%		1.7	10.0	0.8	320	297	366	--	--

<sup>1</sup> 8.5% Moisture.

<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 5-6 leaf stage.

No lodging in trial.

Canola Liberty Link					Minot	
Variety	Days to Flower (days)	Days to Mature (days)	Plant Height (inch)	Oil (%)	Yield (lb/a)	
BY7204LL	47	98	47	42	3048	
CP7130LL	47	97	45	42.3	3083	
CP7250LL	49	98	44	41.2	2643	
CS4000 LL	47	98	41	42.4	2615	
DG 661 LCM	44	100	43	41.7	3027	
DK400TL	47	98	41	40.8	2970	
DK401TL	47	98	41	41.2	2691	
L333PC	48	99	48	40.9	3349	
L340PC	47	96	43	41.9	3021	
L343PC	47	96	43	42.0	2848	
L345PC	48	95	43	41.5	2957	
L350PC	48	96	46	42.4	3170	
LR344PC	49	95	47	43.3	2515	
LR354PC	48	97	44	42.1	2934	
P516L	47	95	48	42.0	3220	
P612L	48	96	45	41.9	3362	
Trial mean	47	97	44	41.8	2966	
C.V. %	2.1	3.3	7.4	2.3	6.7	
LSD 10%	1	4	4	1.3	275	

\*DAP = Days after planting.

Planting date: May 12, 2024

Harvest date: August 28, 2024

Seeding rate: 450,000 live seeds/acre

## CANOLA VARIETY TRIALS

### Canola Roundup Ready

Minot

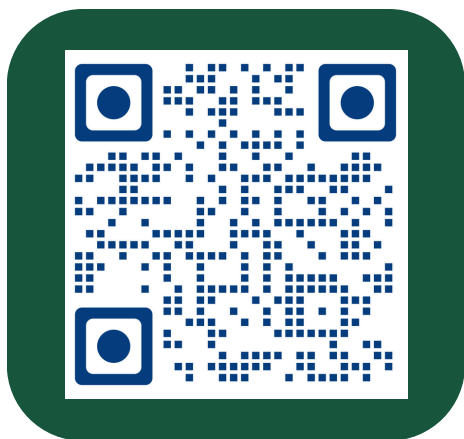
Variety	Days to Flower (days)	Days to Mature (days)	Plant Height (inch)	Oil (%)	Yield (lb/a)
BY6219TF	46	102	44	40.9	2655
CP9221TF	47	97	37	41.4	2819
CP9978TF	48	100	41	41.8	2553
CS3100 TF	47	103	42	42.7	2664
CS3200 TF	44	100	45	41.7	2816
CS3300 TF	46	99	42	41.4	2661
DG 760 TM	46	99	43	41.6	2618
DG 781 TCM	48	100	41	40.7	3151
DK900TF	48	98	41	41.4	2981
DK902TF	48	98	43	41.9	2881
P515G	48	99	41	41.4	2517
StarFlex	48	98	43	41.7	2490
TR23127	47	99	42	41.6	2442
Trial mean	47	99	42	41.4	2711
C.V. %	1.9	2.4	8.4	1.9	6.8
LSD 10%	1	3	5	1.1	260

Planting date: May 12, 2024

Harvest date: August 28, 2024

Seeding rate: 450,000 live seeds/acre

**For all NDSU Canola Variety  
Trial locations Scan Here:**



**We would like to thank  
NDSU Extension  
(Carrington REC, Dickinson  
REC, Hettinger REC,  
Langdon REC, North  
Central REC) for providing  
the above data.**

# Clubroot

Clubroot is a serious soil-borne disease that causes swellings, or galls to form on the roots, which can cause premature death of the plant. Clubroot is spread by the movement of soil containing soil-borne resting spores mainly on farm equipment and with wind and water movement.

The recommended best management practices for clubroot is an integrated approach to keep spore levels low and local in fields, which includes growing clubroot resistant varieties. Varieties available on the market have various sources of resistance and with clubroot populations becoming more diverse within Manitoba fields there is no guarantee that every cultivar will work in every field. Resistant varieties are categorized as one of the following:

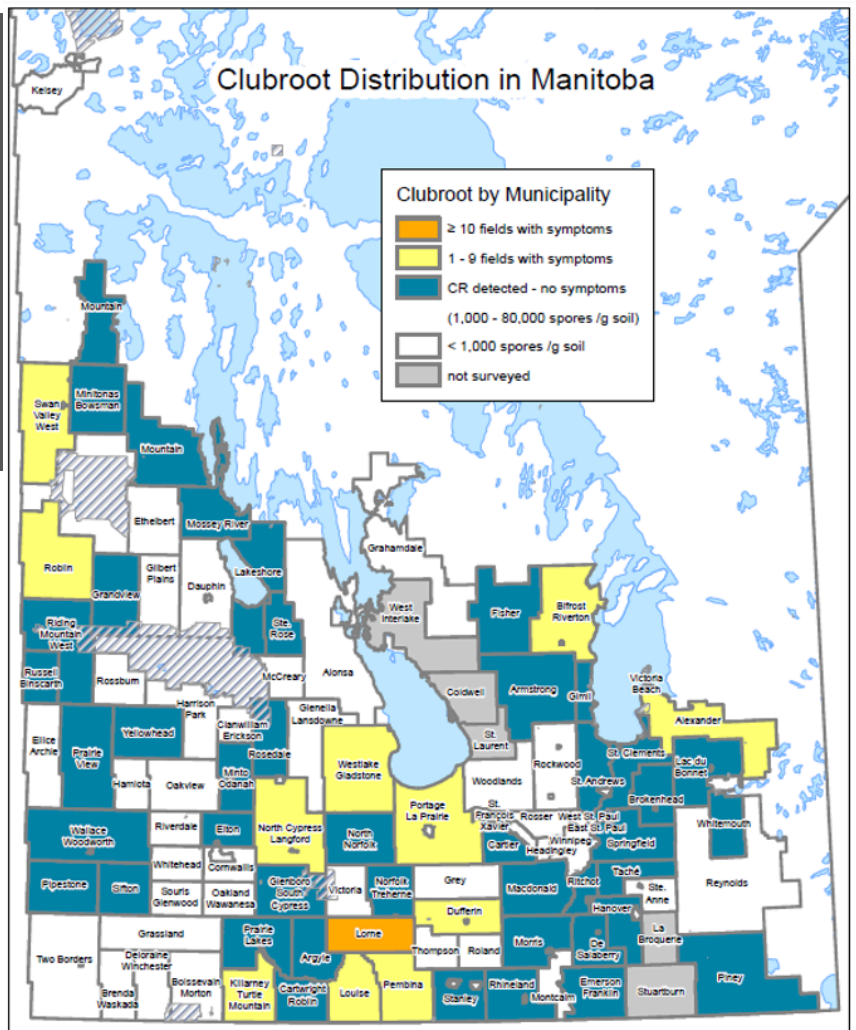
**First-generation:** should work well for most fields and includes clubroot resistance to the most common pathotypes 2F 3H, 5I, 6M, and 8N.

**Second-generation:** contains resistance to a varying set of pathotypes in addition to the original five first-generation pathotypes.

If symptoms are observed while using a clubroot resistant variety seek out a different source of resistance. Some companies choose to label their resistance sources while some do not.

There is currently no commercial testing available to determine pathotypes of clubroot present in a field.

**For more information on managing clubroot visit: [www.clubroot.ca](http://www.clubroot.ca)**



Author: Manitoba Agriculture  
Source: MB Ag Analysis  
Date: September 23, 2024

1:2,300,000  
0 25 50 100 Kilometres  
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# Sclerotinia Stem Rot

Sclerotinia stem rot will commonly cause yield loss in canola across Manitoba. Infection levels are heavily influenced by environmental conditions leading up to, and during the flowering period of canola, which can make predicting outbreaks difficult.

There are currently no standard rating scale in place for genetic resistance to sclerotinia, however, some varieties may have higher levels of tolerance than others.

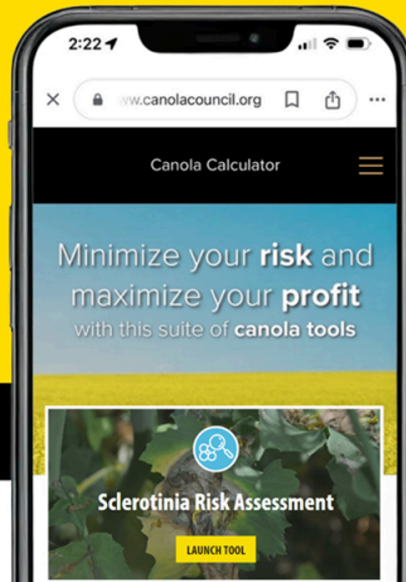
Even though there isn't sufficient variety resistance for sclerotinia, this disease is controlled well with a proper fungicide application, with many fungicide options available to farmers. The Canola Council of Canada has recently developed a Sclerotinia Risk Assessment Tool to help guide spray decisions.



## Use the sclerotinia risk assessment tool to:

- ✓ Help you make the spray decision at flowering
- ✓ Estimate disease severity at maturity to evaluate your spray decision

**CanolaCalculator.ca**



For more information on managing sclerotinia visit:



# Verticillium Stripe

Verticillium stripe was first identified in Manitoba in 2014 and has since grown in prevalence becoming a major concern to canola growers. It is a soil-borne disease that is known to cause yield loss in canola, however the level of yield loss resulting from verticillium stripe on a field-scale is still being researched.

**There is currently no standard rating scale in place for genetic resistance to verticillium stripe, however some varieties may have higher levels of tolerance than others.**



Picture credit: Manitoba Agriculture

There is currently no fungicide registered to control verticillium in canola. Research is currently underway to provide farmers with management solutions, at this point, management recommendations focus on proper identification of infected fields and lengthening crop rotations.

Symptoms of verticillium stripe and blackleg are similar, both causing stunting, leaf chlorosis, lodging, and premature ripening symptoms making it difficult to differentiate them in the field. Identification is best done post harvest and includes examination of both the external and cross-section symptoms. Canola Council of Canada has published a field scouting guide to help farmers and agronomists with field diagnostics. If after visual inspection there is still questions around if verticillium is present farmers are encouraged to submit samples to MCGA free member disease testing program.

A field scouting guide for canola producers

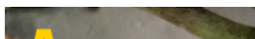
## Is it verticillium stripe or blackleg?

**Blackleg** and **verticillium stripe** can both cause stunting, leaf chlorosis, lodging, dieback and premature ripening symptoms. Use this guide to differentiate between these two diseases when scouting your canola crops.

### STEP 1: Check external symptoms

**Blackleg** is a stubble-borne disease caused by a fungus that favours wet/warm conditions. Though infection happens in spring, these symptoms are easier to identify later in the growing season:

- Cankering at the base of the stem where it



[https://www.canolacouncil.org/download/130/agronomy\\_guides/28744/verticillium-stripe-blackleg-resource-v5](https://www.canolacouncil.org/download/130/agronomy_guides/28744/verticillium-stripe-blackleg-resource-v5)



# Blackleg

Blackleg is a stubble-borne disease that commonly results in yield loss across Manitoba. There are standardized industry procedures for testing a varieties performance under blackleg stress through the Western Canada Canola/Rapeseed Recommending Committee (WCC/RRC).

Varieties are compared to the susceptible check for infection and assigned a Field Resistance Rating. Canola varieties on the market can include a combination of minor and major gene resistance.

FIELD RESISTANCE RATING	% DISEASE SEVERITY OF WESTAR
<b>R</b> (Resistant)	0-29.9
<b>MR</b> (Moderately Resistant)	30-49.9
<b>MS</b> (Moderately Susceptible)	50-69.9
<b>S</b> (Susceptible)	70-100

- **Minor gene resistance (quantitative)** is effective across multiple races and helps protect longevity of major gene resistance. Expressed at the adult plant stage as reduced development of necrotic tissue at the stem base. Due to the complexity of minor gene resistance there is no simple way to measure it (at this time), but its performance is captured within the field resistance rating.
- **Major gene resistance (qualitative)** is effective against blackleg using pathogen race-specific resistance genes when matched against the corresponding blackleg pathogen present in a field. This resistance is effective at the site of initial infection on the cotyledons and leaves. Major genes are readily identified within a variety and seed companies can choose to provide voluntary blackleg resistance group labels on their varieties to help farmers manage this disease through R gene rotation.

## A major gene resistance group label

The resistance group labels identify the resistance group (RG) based on the major genes in a canola cultivar. It appears after the field resistance label in the two-part label. While 15 major gene resistance groups have been identified, currently only 10 are relevant to Canadian canola producers (see table below).

Resistance Groups	A	B	C	D	E <sub>1</sub>	E <sub>2</sub>	F	G	X
Major Gene	Rlm1 or LepR3	Rlm2	Rlm3	LepR1	Rlm4	Rlm7	Rlm9	RlmS or LepR2	unknown

### Example of a blackleg resistance two-part label



Use MCGA’s free member disease testing program to determine what blackleg race’s are present in your field to help guide your varietal decisions for major gene resistance.

For more information on managing blackleg visit: [www.blackleg.ca](http://www.blackleg.ca)



# How to Use Blackleg Race ID Testing to Help Guide Variety Choices - An Example

## Step 1



Collect stubble samples to send for analysis

The ideal time to pull and assess plants for blackleg infection is at 60 per cent seed colour change, which is around swath timing. Cut just below the crown of the plant into the root material to assess. Complete submission for analysis to the lab of your choice following shipping and packaging instructions.

## Step 2



Interpreting the Results

Lab reports typically report both the genotype and phenotype of the blackleg races identified from the samples collected. Producers need to look at the estimated phenotype when making cultivar selections. Lab reports will identify the predominant race of blackleg or give a frequency breakdown of blackleg races found within the samples collected.

**Examples of results:**

**Test 1:**

**Phenotype:**

AvrLm4-5-6-7-11

**Test 2:**

**Phenotype:**

AvrLm2-4-5-6-7-11 (25%)

AvrLm4-5-6-7-11 (50%)

AvrLm1-4-5-6-7(25%)

## Step 3



Application of the Results.

Major genes within canola varieties need to match up to avirulence genes (Avr) within the pathogen to be effective.

The Avr genes in Example Test 1 are 4, 5, 6, 7 and 11, which means a producer can choose canola cultivars with one of the major genes Rlm4, Rlm5, Rlm6, Rlm7, and Rlm11 (resistance groups E1 or E2)

In Example Test 2 the farmer would want to find a major gene that corresponds with an avirulence gene found in all races listed or if too diverse find a major gene that matches the most frequent avirulence gene. In this example AvrLm4 is found in all blackleg races identified. Therefore a recommendation would be made to use a variety with the major gene Rlm4 (resistance group E1).

**MCGA members can receive free Blackleg Race ID Testing**

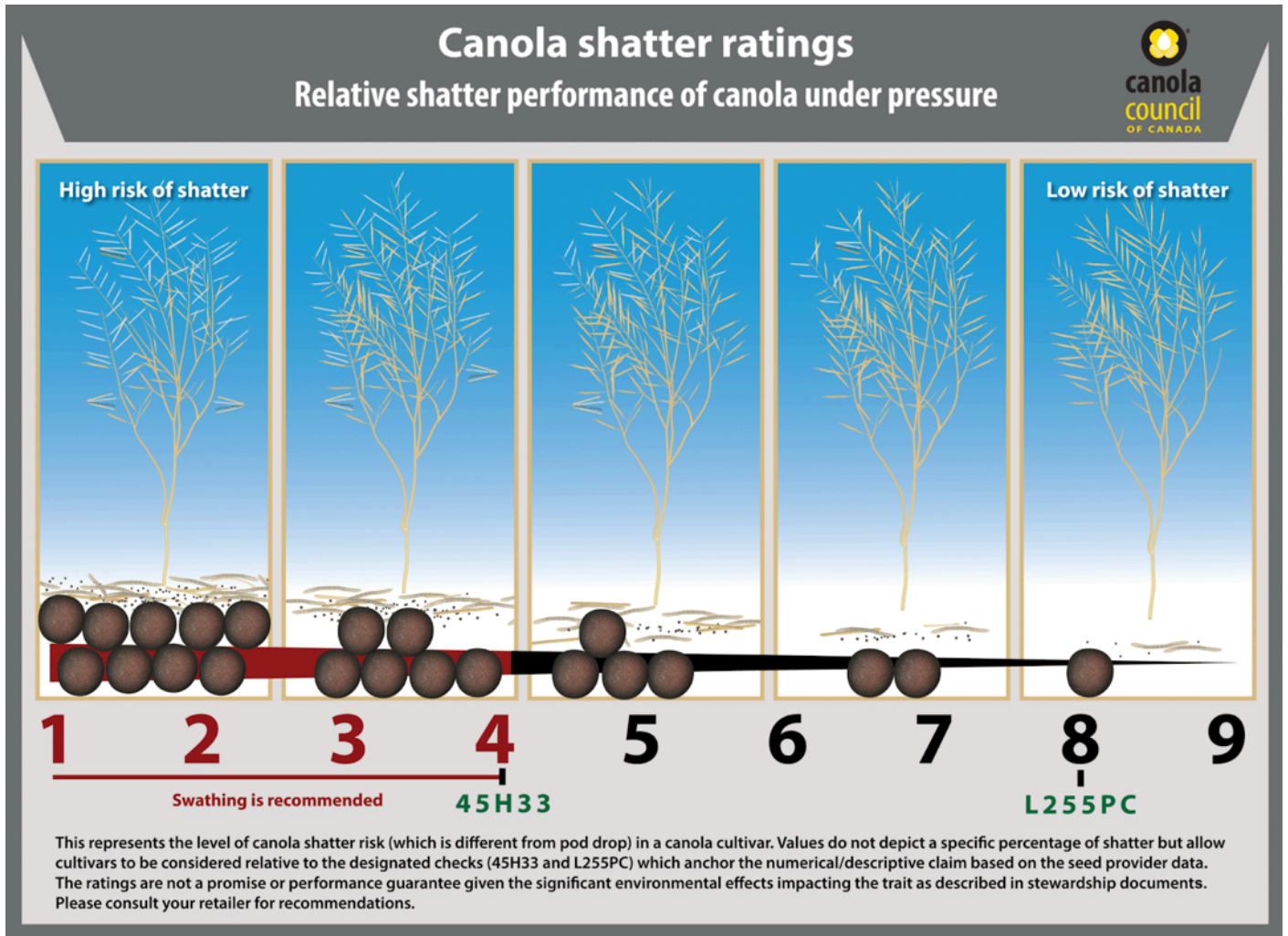


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# Pod Shatter Ratings

Pod integrity has become a major consideration for farmers when making variety of decisions on their farms. Varieties with increased pod shatter tolerance are better suited to late swathing and straight-cut combining which can improve yield and flexibility in harvest timing.

The canola industry worked together from 2021-2022 to develop a standardized rating scale to evaluate shatter ratings. Seed companies voluntarily use this scale to help farmers understand what to expect for shatter compared to anchor varieties (45H33 and L255P). The values do not depict a specific percentage of shatter as shatter is significantly impacted by environmental conditions.



For more information on canola shatter ratings and pod drop visit:  
[www.CanolaHarvestManagement.ca](http://www.CanolaHarvestManagement.ca)



# Additional Resources to Support Varietal Decisions

## Canola Field-Scale Data and Seed Guides



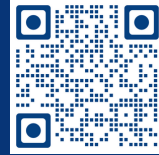
Brett Young



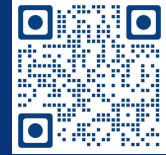
CROPLAN by  
WinField United



Canterra  
Seeds



Brevant by  
Corteva



InVigor by  
BASF

## Resources:

**Canola Council of Canada - Canola Cultivar Traits List:** <https://www.canolacouncil.org/canola-encyclopedia/history-of-canola-seed-development/canola-seed-traits/>

### **MASC Yield Manitoba:**

<https://www.manitobacooperator.ca/pub/yield-manitoba/>

### **Seed Manitoba:**

<https://www.seedmb.ca/>

## Manitoba Canola Agronomic Support

### **Canola Council of Canada - Crop Production & Innovation Team**

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### **Manitoba Agriculture**

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### **Manitoba Canola Growers Association**

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- Kendall Baker, Research & Extension Coordinator ([Kendall@CanolaGrowers.com](mailto:Kendall@CanolaGrowers.com))

# Canola Variety Guide 2024



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Canola  
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