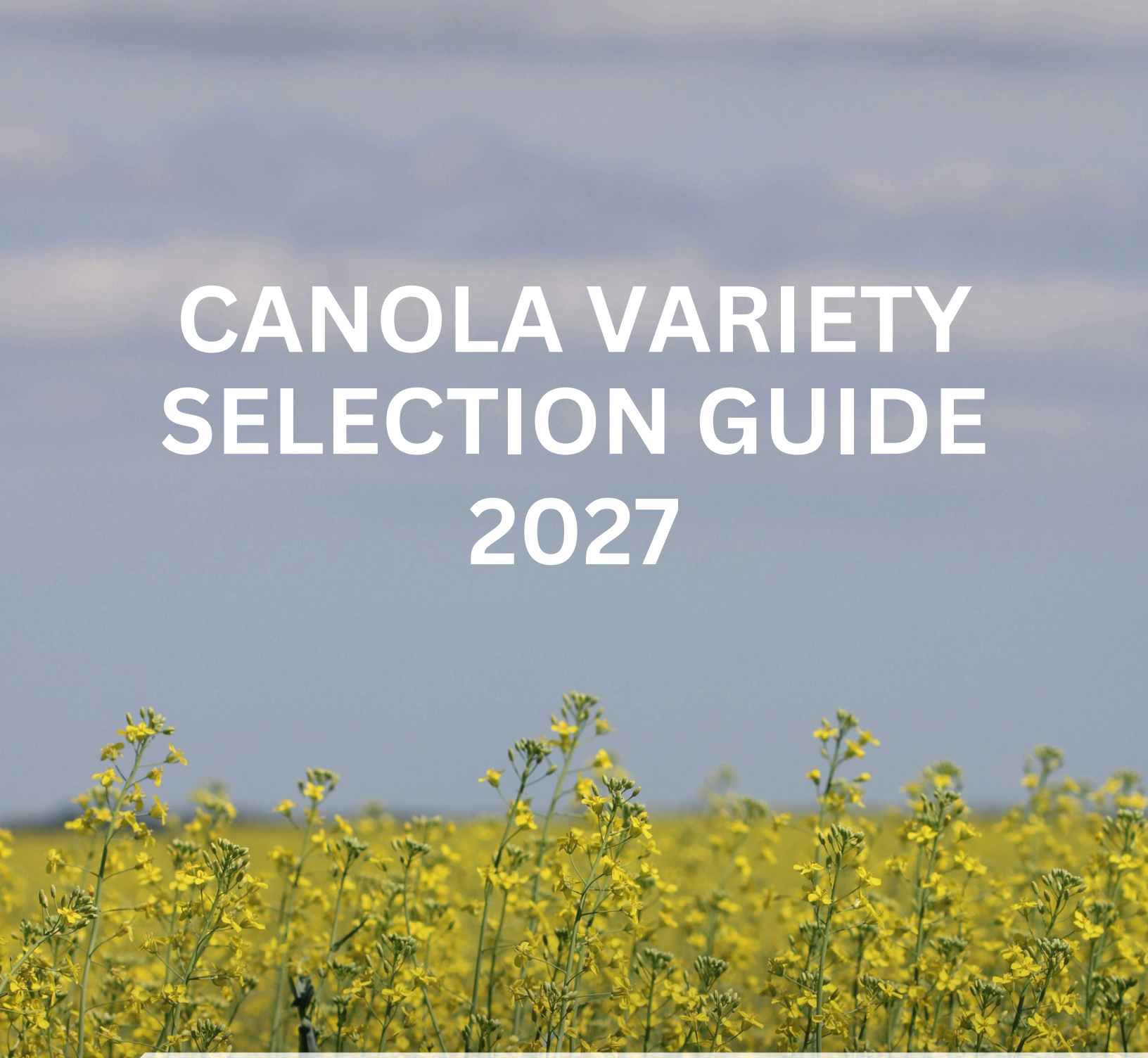
CANOLA VARIETY SELECTION GUIDE 2027



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OVERVIEW

About this Publication

This guide was developed by Manitoba Canola Growers (MCG) to support canola growers across the province in making informed variety decisions. It combines five years of acreage data from Yield Manitoba, which is published by Manitoba Agricultural Services Corporation (MASC) to report variety performance and acreage information across Manitoba. Agronomic trait information is summarized from seed companies, and educational resources are summarized from MCG and the Canola Council of Canada (CCC). Key variety characteristics, including disease tolerance, herbicide systems, pod shatter and other important agronomic traits have been summarized and explained to help growers evaluate varieties and select those best suited to their farm operations and management goals.

MANITOBA CANOLA GROWERS

Manitoba Canola Growers is the farmer-funded organization representing approximately 7,500 Manitoba canola farmers. Our priority is helping Manitoba farmers grow stronger crops, stronger markets, and a stronger future for canola.

THINGS TO CONSIDER WHEN CHOOSING A VARIETY

Choosing the right variety for your farm can be overwhelming. While there are no one-size-fits-all solutions, the following steps can help guide your decision making process.

STEP 1 List your "must have" traits

What traits are essential to your farm and management practices? This could be a herbicide system, pod shatter, maturity or disease resistance.

STEP 2 Which varieties were most profitable in 2026?

Hybrid choice can be a key part of field profitability, but there are many other factors that also influence overall yield. Can you pin higher profitability on any specific features related to variety?

STEP 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 neighbours and seed retailers to examine year-over-year performance in your area.

STEP 4 Note the top yield robbers in your fields

Are certain pests consistently reducing canola yields in your field? You may need to look at varieties with new sources of resistance or different seed treatment options.

STEP 5 Develop a shortlist

Create a shortlist of varieties that meet your must-have traits and have shown consistent performance in your region. Match variety to fields with specific concerns, such ongoing pest issues. Consider testing a new variety in a few fields.

Growing at least two varieties across the farm helps manage risk and maximize yield potential, stability, and profitability

Adapted from Canola Watch article, Choosing the right cultivar for each field.

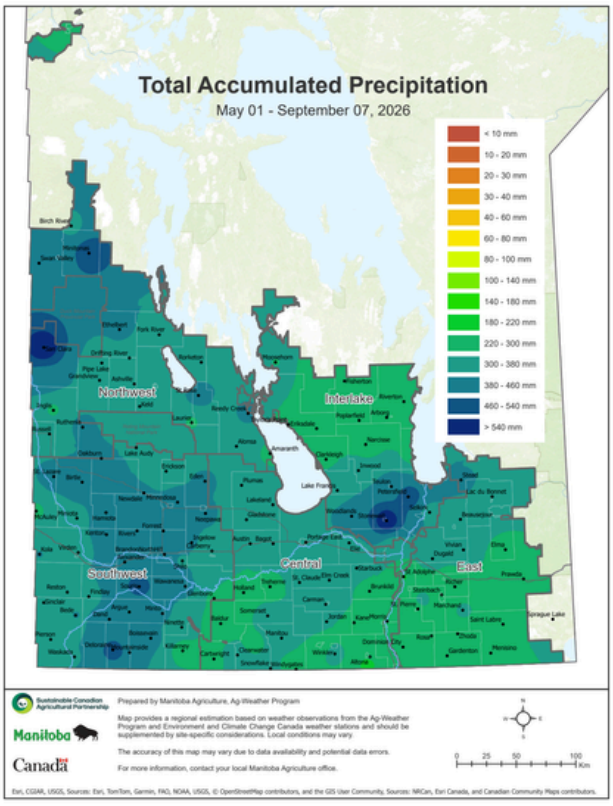
CANOLA VARIETY TRAITS OVERVIEW

Trait	Explanation
Pod Integrity	A variety's ability to keep pods intact before harvest, reducing seed loss from weather or handling. Pod shatter occurs when the seed pod breaks open and seeds fall to the ground. Pod drop refers to entire pods falling to the ground (but the pod does not open).
Maturity	How long a variety takes to reach harvest readiness, from emergence to maturity.
Herbicide Tolerance	Identifies which herbicides can be applied for in-crop weed control.
Specialty Markets	A variety that has been developed for specific end-use traits or market opportunities, such as specialty oil profiles or premium contracts.
Lodging	A variety's ability to remain standing throughout the growing season, reducing loss and improving harvestability.
Clubroot Resistance	Refers to a variety's genetic ability to resist clubroot infection.
Blackleg Resistance	Includes both a field rating, which reflects a variety's performance under blackleg pressure, and major gene resistance, which indicates its specific genetic ability to resist blackleg.
Verticillium Tolerance	Refers to observed tolerance to verticillium stripe based on field evaluations.
Sclerotinia Tolerance	Refers to observed tolerance to sclerotinia stem rot based on field evaluations.

2026 GROWING SEASON RECAP

Seeding and Plant Establishment
The 2026 growing season began with a cold, wet spring that delayed seeding across much of Manitoba. As planting was pushed later, some producers opted for shorter-season hybrids better suited to the reduced growing season. Seedling disease was noted in fields that were seeded early into cool, wet soils due to slow emergence. In contrast, canola seeded into warmer soils in June generally emerged more uniformly and established quickly.

Insect Pressure
Flea beetle pressure was generally lower than in recent years, possibly due to later seeding. Insecticide seed treatments provided strong early season protection in most fields, although some situations still required foliar insecticide applications to prevent yield loss. Cabbage seedpod weevil was observed at levels that warranted insecticide applications in many areas of the province.



Disease Pressure
Above average moisture created favourable conditions for several important canola diseases in 2026. Sclerotinia stem rot pressure was high across many regions, with prolonged moisture before and during flowering.Verticillium stripe was widespread, with both incidence and severity increased compared to other years. Blackleg continues to be present but was generally well managed through variety selection.

Harvest
Lodging, disease pressure, and uneven maturity led to a significant amount of swathing in 2026. Favourable growing conditions produced tall, dense canola stands that were more prone to lodging, particularly in fields affected by disease. Excess moisture and localized flooding also contributed to uneven crop maturity.

CANOLA PRODUCTION IN MANITOBA

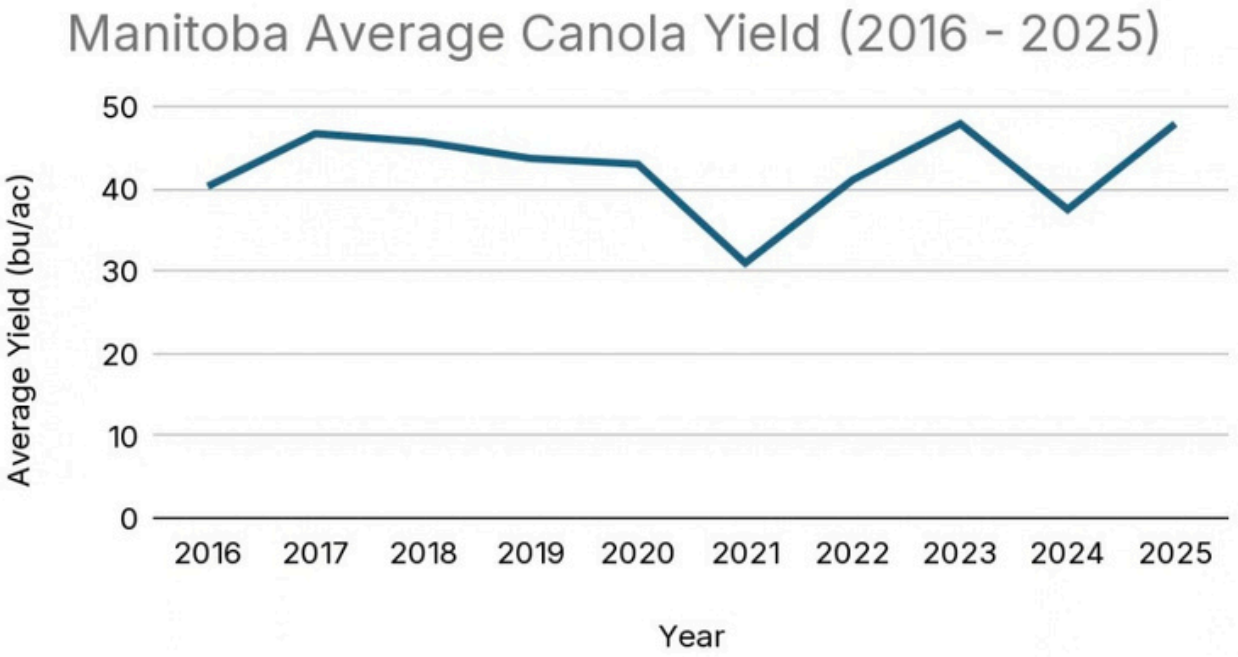


Figure 1: Manitoba Average Canola YIeld (bu/ac) 2016 - 2025.
Source: Manitoba Agricultural Services Corporation

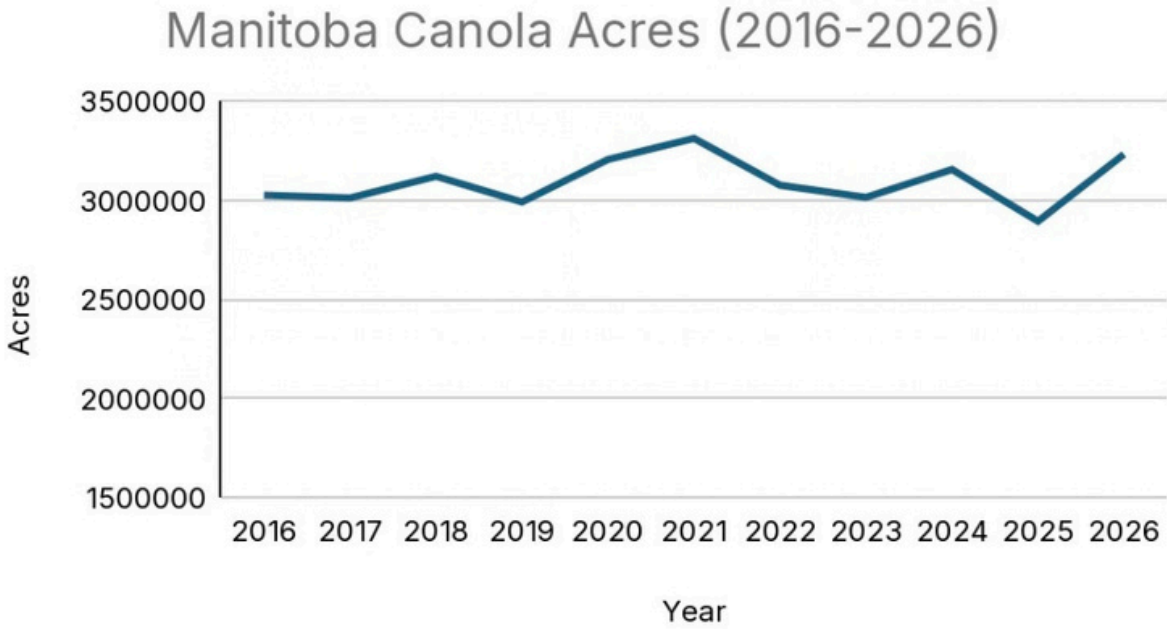


Figure 2: Manitoba Canola Seeded Acres 2016 - 2026.
Source: Manitoba Agricultural Services Corporation

MANITOBA TOP VARIETIES BY SEEDED ACREAGE (2021-2026)

Table 1: Varieties ranked by seeded acreage in Manitoba (2021-2026)

	Variety	Company	Seeded Acreage (2021 - 2026)	Weighted Average Yield (bu/ac)*†	Years Active
1	L340PC	BASF (Invigor)	4,774,327	44	2020 - Current
2	L233P	BASF (Invigor)	2,540,140	38.5	2016 - 2025
3	L356PC	BASF (Invigor)	2,418,199	46.2	2022 - Current
4	L358HPC	BASF (Invigor)	1,002,345	45.6	2024 - Current
5	L330 PC	BASF (Invigor)	817,713	47	2025 - Current
6	L345PC	BASF (Invigor)	719,874	38.6	2020 - Current
7	L255PC	BASF (Invigor)	479,322	38.3	2018 - 2023
8	L357P	BASF (Invigor)	416,452	39.5	2021 - 2026
9	L333P	BASF (Invigor)	391,492	49	2025 - Current
10	DKLL 82 SC	Bayer (Dekalb)	347,520	33.7	2020 - 2023
11	DKLL 83 SC	Bayer (Dekalb)	297,605	40.3	2022 - 2024
12	DK801LL	Bayer (Dekalb)	289,819	47.8	2024 - Current
13	P505MSL	Pioneer	276,826	37.9	2021 - 2025
14	L350PC	BASF (Invigor)	261,970	46	2022 - 2026
15	1028 RR	Nexera	237,138	34.6	2020 - 2023
16	DK900TF	Bayer (Dekalb)	228,096	38.9	2023 - Current
17	L258HPC	BASF (Invigor)	223,072	41.6	2019 - 2023
18	L343PC	BASF (Invigor)	182,645	44.2	2023 - Current
19	P508MCL	Pioneer	178,941	37.3	2021 - 2025
20	DKTF 96 SC	Bayer (Dekalb)	148,895	31.3	2020 - 2023

Source: Manitoba Agricultural Services Corporation (MASC)
*2026 average yield is not included in "Weighted Average Yields"
† Weighted Average is average yield adjusted based on the proportion of acres grown of each variety. ***Note:*** Only top 20 varieties by seeded acreage included in this table

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2026 MANITOBA CANOLA VARIETY MARKET SHARE

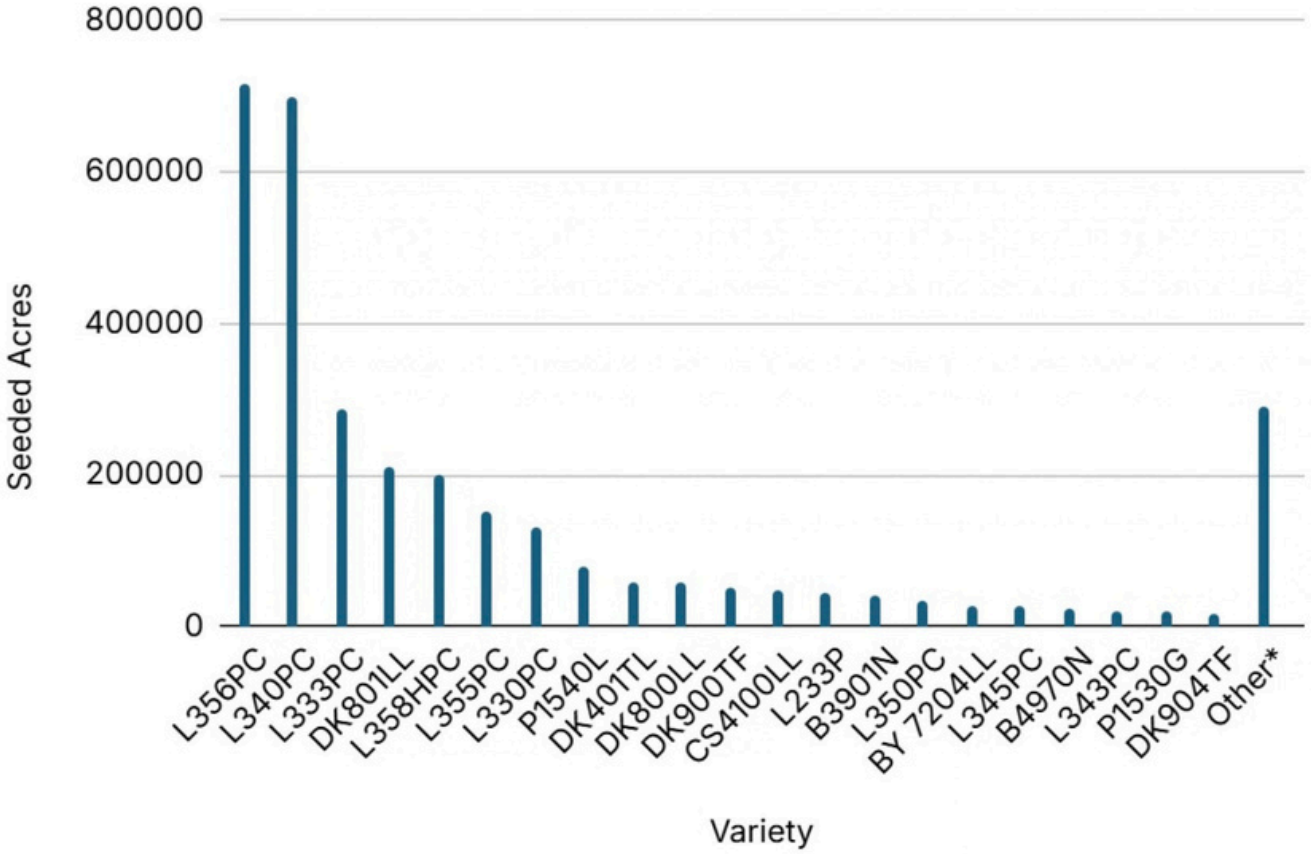
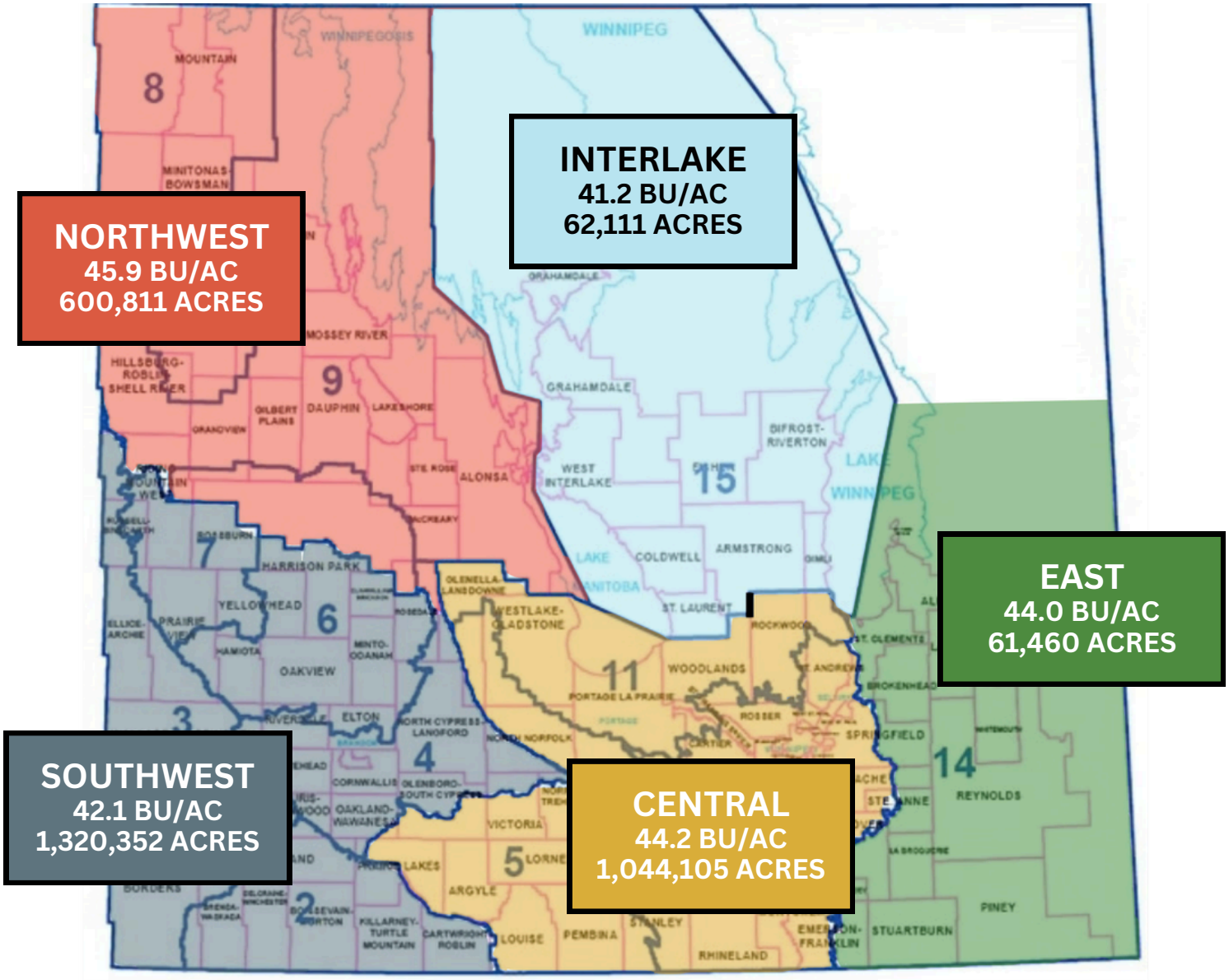


Figure 3: 2026 Manitoba Canola Variety Market Share Percentage is based off of 3,230,666 seeded acres reported (MASC data).

*Other indicates a sum of other varieties reported with less than 500 seeded acres.

CANOLA GROWING REGIONS OF MANITOBA



Regional average yields and average canola acres represent five-year averages from 2021-2025. Data is from Yield Manitoba (MASC). Risk area refers to MASC risk area.

EASTERN

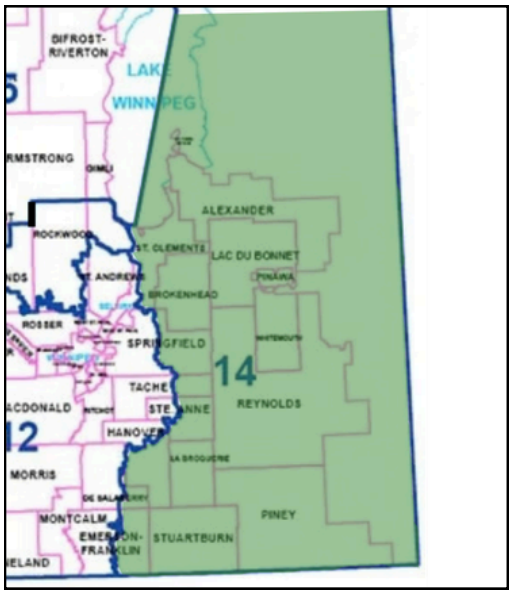


Table 2: Eastern Growing Region, Varieties Ranked by Acreage (2021-2025)

	Variety	Company	Total Acres	Percent of Acreage	Weighted Average Yield*† (bu/ac)	Years Active
1	**L340PC**	BASF (Invigor)	93,886	33.44%	43	2020 - Current
2	**L233P**	BASF (Invigor)	46,462	16.55%	38	2016 - 2025
3	**L345PC**	BASF (Invigor)	38,499	13.71%	40	2020 - Current
4	**L356PC**	BASF (Invigor)	33,095	11.79%	46	2022 - Current
5	**DKLL 82 SC**	Bayer (Dekalb)	14,054	5.01%	32	2020 - 2023
6	**DKLL 83 SC**	Bayer (Dekalb)	13,863	4.94%	42	2022 - 2024
7	**L255PC**	BASF (Invigor)	6,774	2.41%	35	2018 - 2023
8	**L357P**	BASF (Invigor)	5,929	2.11%	38	2021 - 2026
9	**L350PC**	BASF (Invigor)	5,669	2.02%	50	2022 - 2026
10	**L343PC**	BASF (Invigor)	5,156	1.84%	41	2023 - Current
11	**DK800LL**	Bayer (Dekalb)	2,549	0.91%	49	2025 - Current
12	**PV 660 LCM**	Nutrien (Proven)	2,548	0.91%	33	2021 - 2023
13	**DK801LL**	Bayer (Dekalb)	2,287	0.81%	47	2024 - Current
14	**L358HPC**	BASF (Invigor)	2,120	0.76%	34	2024 - Current
15	**BY 7204LL**	Brett Young	1,816	0.65%	42	2024 - Current

Source: Manitoba Agricultural Services Corporation (MASC)
*2026 average yield is not included in "Weighted Average Yields"
† Weighted Average is average yield adjusted based on the proportion of acres grown of each variety.
Note: Only the top 15 varieties by acreage are included in this table

INTERLAKE

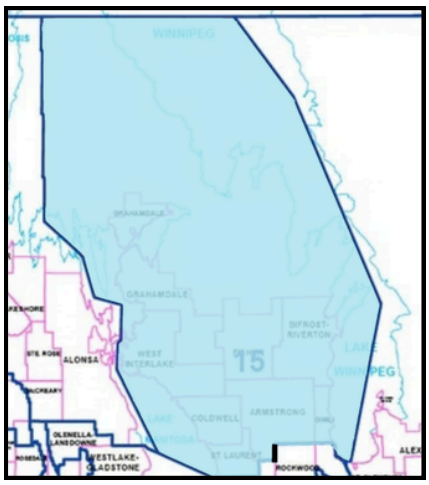


Table 3: Interlake Growing Region, Varieties Ranked by Acreage (2021-2025)

	Variety	Company	Total Acres	Percent of Acreage	Weighted Average Yield*† (bu/ac)	Years Active
1	**L340PC**	BASF (Invigor)	93,886	33.44%	43.4	2020 - Current
2	**L233P**	BASF (Invigor)	46,462	16.55%	38.4	2016 - 2025
3	**L345PC**	BASF (Invigor)	38,499	13.71%	39.6	2020 - Current
4	**L356PC**	BASF (Invigor)	33,095	11.79%	46.3	2022 - Current
5	**DKLL 82 SC**	Bayer (Dekalb)	14,054	5.01%	32	2020 - 2023
6	**DKLL 83 SC**	Bayer (Dekalb)	13,863	4.94%	42.5	2022 - 2024
7	**L255PC**	BASF (Invigor)	6,774	2.41%	34.7	2018 - 2023
8	**L357P**	BASF (Invigor)	5,929	2.11%	37.6	2021 - 2026
9	**L350PC**	BASF (Invigor)	5,669	2.02%	50.1	2022 - 2026
10	**L343PC**	BASF (Invigor)	5,156	1.84%	40.8	2023 - Current
11	**DK800LL**	Bayer (Dekalb)	2,549	0.91%	49	2025 - Current
12	**PV 660 LCM**	Nutrien (Proven)	2,548	0.91%	32.8	2021 - 2023
13	**DK801LL**	Bayer (Dekalb)	2,287	0.81%	47	2024 - Current
14	**L358HPC**	BASF (Invigor)	2,120	0.76%	34.4	2024 - Current
15	**BY 7204LL**	Brett Young	1,816	0.65%	42.4	2024 - Current

Source: Manitoba Agricultural Services Corporation (MASC)
*2026 average yield is not included in "Weighted Average Yields"
† Weighted Average is average yield adjusted based on the proportion of acres grown of each variety.
Note: Only the top 15 varieties by acreage are included in this table

CENTRAL

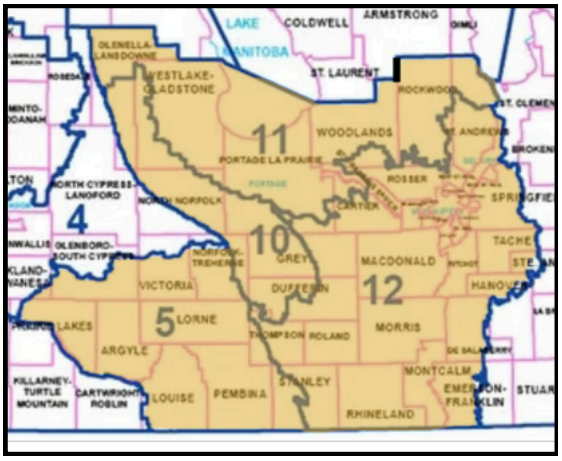


Table 4: Central Growing Region, Varieties Ranked by Acreage (2021-2025)

	Variety	Company	Total Acres	Percent of Acreage	Weighted Average Yield*† (bu/ac)	Years Active
1	**L340PC**	BASF (Invigor)	919,634	25.44%	44	2020 - Current
2	**L233P**	BASF (Invigor)	885,593	24.49%	38.7	2016 - 2025
3	**L356PC**	BASF (Invigor)	355,451	9.83%	47.8	2022 - Current
4	**L345PC**	BASF (Invigor)	255,300	7.06%	37.9	2020 - Current
5	**DKLL 83 SC**	Bayer (Dekalb)	136,105	3.76%	43.5	2022 - 2024
6	**DKLL 82 SC**	Bayer (Dekalb)	130,264	3.60%	35.9	2020 - 2023
7	**L357P**	BASF (Invigor)	103,777	2.87%	33.5	2021 - 2026
8	**L255PC**	BASF (Invigor)	93,439	2.58%	31.7	2018 - 2024
9	**P508MCL**	(Pioneer)	78,606	2.17%	37.3	2021 - 2025
10	**L258HPC**	BASF (Invigor)	66,144	1.83%	42.5	2019 - 2023
11	**L350PC**	BASF (Invigor)	65,719	1.82%	48.4	2022 - 2026
12	**L358HPC**	BASF (Invigor)	58,501	1.62%	48.8	2024 - Current
13	**P505MSL**	(Pioneer)	45,652	1.26%	39	2021 - 2025
14	**L343PC**	BASF (Invigor)	37,693	1.04%	45.7	2023 - Current
15	**DK801LL**	Bayer (Dekalb)	27,006	0.75%	52.2	2024 - Current

Source: Manitoba Agricultural Services Corporation (MASC)
*2026 average yield is not included in "Weighted Average Yields"
† Weighted Average is average yield adjusted based on the proportion of acres grown of each variety.
Note: Only the top 15 varieties by acreage are included in this table

SOUTHWEST

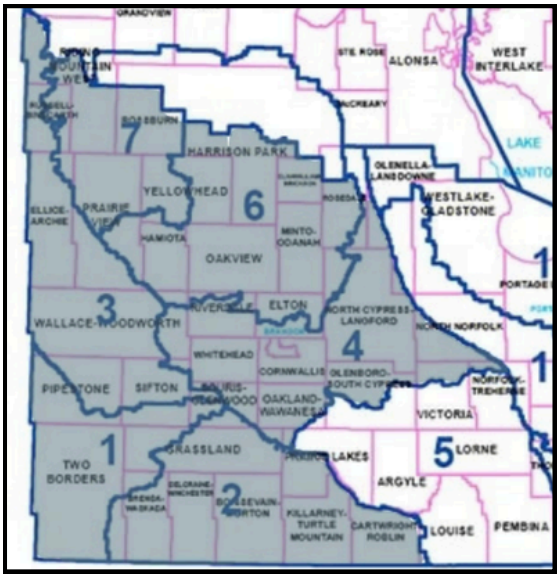


Table 5: Southwest Growing Region, Varieties Ranked by Acreage (2021-2025)

	Variety	Company	Total Acres	Percent of Acreage	Weighted Average Yield*† (bu/ac)	Years Active
1	**L340PC**	BASF (Invigor)	1,995,477	32.95%	44.3	2020 - Current
2	**L233P**	BASF (Invigor)	1,055,458	17.43%	39.4	2016 - 2025
3	**L356PC**	BASF (Invigor)	693,271	11.45%	46.3	2022 - Current
4	**L345PC**	BASF (Invigor)	232,595	3.84%	39.6	2020 - Current
5	**L357P**	BASF (Invigor)	155,421	2.57%	39.8	2021 - 2026
6	**1028 RR**	Nexera	124,360	2.05%	36.8	2020 - 2026
7	**L350PC**	BASF (Invigor)	120,770	1.99%	45.4	2022 - 2026
8	**P505MSL**	(Pioneer)	103,222	1.70%	38.8	2021 - 2025
9	**L255PC**	BASF (Invigor)	101,397	1.67%	37.2	2014 - 2018
10	**L358HPC**	BASF (Invigor)	100,989	1.67%	47.2	2024 - Current
11	**DK900TF**	Bayer (Dekalb)	81,082	1.34%	40	2023 - Current
12	**DKLL 83 SC**	Bayer (Dekalb)	80,957	1.34%	40.1	2022 - 2024
13	**DKLL 82 SC**	Bayer (Dekalb)	78,911	1.30%	35.4	2020 - 2023
14	**DKTF 96 SC**	Bayer (Dekalb)	64,463	1.06%	34.3	2020 -2024
15	**45CM39**	(Pioneer)	61,885	1.02%	34.7	2019 - 2022

Source: Manitoba Agricultural Services Corporation (MASC)
*2026 average yield is not included in "Weighted Average Yields"
† Weighted Average is average yield adjusted based on the proportion of acres grown of each variety.
Note: Only the top 15 varieties by acreage are included in this table

NORTHWEST

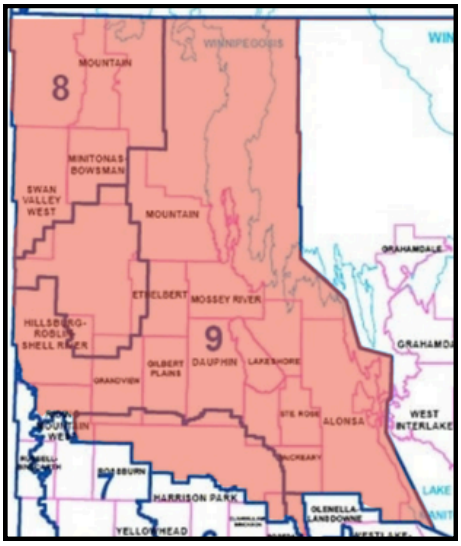


Table 6: Northwest Growing Region, Varieties Ranked by Acreage (2021-2025)

	Variety	Company	Total Acres	Percent of Acreage	Weighted Average Yield*† (bu/ac)	Years Active
1	**L340PC**	BASF (Invigor)	560,386	20.66%	43.3	2020 - Current
2	**L356PC**	BASF (Invigor)	378,117	13.94%	43.8	2022 - Current
3	**L233P**	BASF (Invigor)	339,469	12.51%	37	2015 - 2026
4	**L255PC**	BASF (Invigor)	166,822	6.15%	41.8	2014 - 2018
5	**L358HPC**	BASF (Invigor)	117,329	4.33%	42.8	2024 - Current
6	**L345PC**	BASF (Invigor)	84,945	3.13%	39.4	2020 - Current
7	**L258HPC**	BASF (Invigor)	83,776	3.09%	41.8	2020 - 2024
8	**P505MSL**	Pioneer	79,191	2.92%	37.6	2021 - 2025
9	**DK900TF**	Bayer (Dekalb)	71,554	2.64%	38.1	2023 - Current
10	**DKLL 82 CRSC**	Bayer (Dekalb)	69,825	2.57%	32.2	2020 - 2023
11	**L234PC**	BASF (Invigor)	62,636	2.31%	41.7	2019 - 2021
12	**L350PC**	BASF (Invigor)	54,450	2.01%	44.9	2022 - 2026
13	**1028 RR**	Nexera	48,269	1.78%	35.1	2020 - 2026
14	**P508MCL**	Pioneer	36,790	1.36%	38.1	2021 - 2026
15	**DKLL 83 SC**	Bayer (Dekalb)	36,102	1.33%	36.5	2022 - 2024

Source: Manitoba Agricultural Services Corporation (MASC)
*2026 average yield is not included in "Weighted Average Yields"
† Weighted Average is average yield adjusted based on the proportion of acres grown of each variety.
Note: Only the top 15 varieties by acreage are included in this table

UNDERSTANDING VARIETY TRAITS

The following section provides an overview of key canola traits and disease resistance/tolerance for canola varieties, as well as a summary of how individual seed companies communicate trait information.

Not all traits have industry-wide labelling and rating methods, and when available, not all companies choose to use them. Due to different naming systems, scales and marketing terminology across companies direct comparisons are not always possible.This information will provide a base understanding of each trait, use together with your knowledge of local disease pressure, field history and agronomic goals to select varieties.

HERBICIDE TOLERANCE

Choose a herbicide system that fits your weed challenges and crop rotation to improve control and prevent herbicide resistance.

Glufosinate Tolerance (Group 10)

Glufosinate tolerant varieties are labelled Liberty Link (LL). There are currently very few weeds that have developed resistance to glufosinate. Glufosinate-tolerant canola is a good fit in rotations with glyphosate-tolerant crops (soybeans and corn), or where glyphosate-resistant weeds (kochia) are present.

Glyphosate Tolerance (Group 9)

The two current glyphosate tolerant traits in canola are:

- **TruFlex:** maximum of 1.3 L/ac of glyphosate per season applied up to the first flower
- **OptimumGly:** maximum of 2.0 L/ac of glyphosate per season applied up to the first flower

Glyphosate-tolerant canola fits best in rotations with limited use of other glyphosate-tolerant crops (soybeans and corn), or in areas without glyphosate-resistant weeds (kochia, Canada fleabane). It can be a valuable option where Group 1-resistant wild oats are a concern.

Stacked Glufosinate + Glyphosate Tolerance

Tolerant to both glufosinate and glyphosate, offering flexibility to manage different weed challenges. Crop rotations need to be considered as varieties that contain stacked traits can be difficult to control as volunteers, especially in glyphosate-tolerant soybean fields.

Clearfield Tolerance (Group 2)

Clearfield provides an alternative to glyphosate and glufosinate systems and is best suited to farms without Group-2 resistant weeds (wild oats, kochia). Most Clearfield varieties are non-GMO and may quality for specialty markets.

HERBICIDE TOLERANCE - INTERPRETING THE MARKETPLACE

Table 7: Herbicide tolerance labelling by company

Seed Company	Herbicide Systems & Labelling
BASF (InVigor)	Liberty Link (L) Liberty Link + TruFlex (LR)
Bayer (Dekalb)	Liberty Link (LL) Liberty Link + TruFlex (TL) TruFlex (TF)
Brett Young	Liberty Link (LL) TruFlex (TF) Clearfield (CL)
CANTERRA SEEDS	Liberty Link (LL) TruFlex (TF) Clearfield (CL)
Cargill (Victory)	TruFlex (T) OptimumGly (G)
Maizex	Liberty Link (LL) TruFlex (TF)
Nutrien (Proven)	Liberty Link (L) TruFlex (T) OptimumGly (O) Clearfield (CL)
Pioneer	Liberty Link (L) OptimumGly (G) Clearfield (CL)
Winfield United (Croplan)	Liberty Link (L) TruFlex (T) OptimumGly (O)

POD INTEGRITY

Pod integrity is an important trait when selecting a canola variety. It can include both pod shatter tolerance and pod drop tolerance. **Both can cause significant yield loss, but the processes are different and controlled by different genes.**

Varieties with increased pod shatter tolerance are particularly beneficial when swathing is delayed or when straight-cut combining, improving flexibility in harvest timing.

A standardized pod shatter rating scale was developed collaboratively by the canola industry in 2021-2022. Seed companies voluntarily use this scale to help farmers understand what to expect for shatter compared to check varieties (45H33 and L255P). These values do not depict a specific percentage of shatter, as shatter is significantly impacted by environmental conditions.

POD SHATTER
Mature pods split open before harvest

POD DROP
Entire pods detach from the plant.

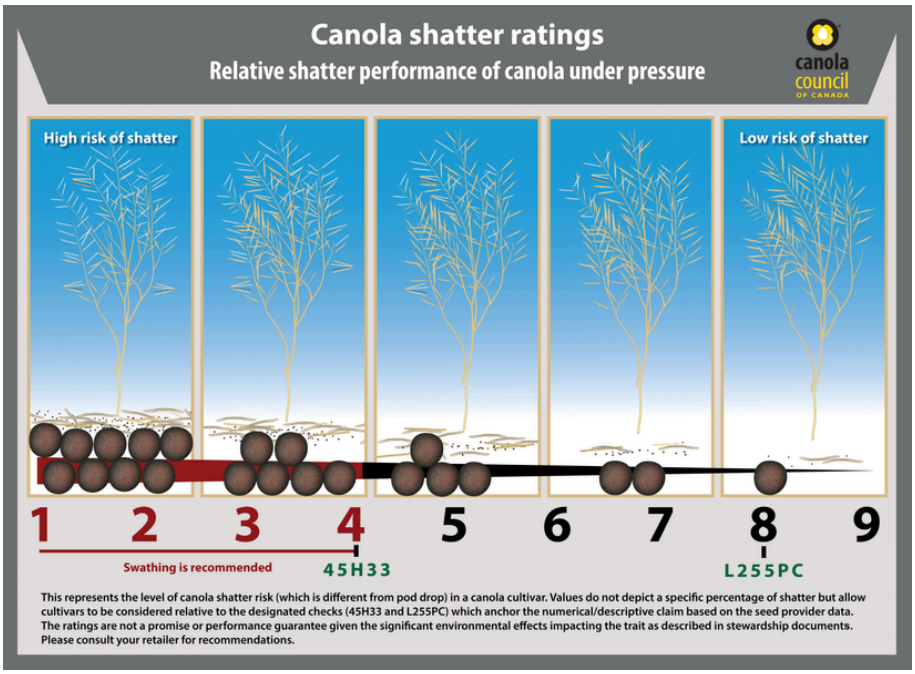


Figure 4: Standardized canola shatter rating scale
Source: Canola Council of Canada

For more information on canola shatter ratings and pod drop, visit: **www.CanolaHarvestManagement.ca**

POD INTEGRITY - INTERPRETING THE MARKETPLACE

Table 8: Pod integrity labelling by company

Seed Company	Pod Integrity Labelling
BASF (InVigor)	Labelled with **Pod Shatter Reduction (PSR)** traits and **Pod Drop Reduction (PDR)** traits. Variety names include a "**P**" to highlight these traits.
Bayer (Dekalb)	**Straight Cut (SC)** is used for varieties that are rated 7 or less on the CCC scale and swathing is recommended. **Straight Cut Plus (SC+)** is used for varieties with superior pod integrity and are rated 7 or higher on the CCC scale.
Brett Young	**Pod DefenderR** is used for varieties which have a pod shatter resistance trait and rated 7 or higher on CCC scale.
CANTERRA SEEDS	**PodProtect** is used for varieties that are rated 7 or higher on the CCC scale.
Cargill (Victory)	Varieties are rated on an internal Victory Harvest Scale and labeled **Traditional Harvest**, **Flexible Harvest** or **Advanced Shatter.**
Maizex	All varieties are ranked on the Canola Council scale.
Nutrien (Proven)	**NTact** is used for varieties that are rated 7 or higher on the CCC scale.
Pioneer	**Pod Shatter Premium (PSP)** is used for varieties that carry increased pod integrity using an internal pod shatter tolerance spectrum.
Winfield United (Croplan)	All varieties are ranked on the Canola Council scale.

CLUBROOT

Clubroot is a soil-borne disease and the recommended best management practice 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.

Manitoba is unique to the other prairie provinces as it has an increasingly diverse pathogen population (Figure 5). There is no guarantee that every cultivar will work in every field. 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 for farmers to determine pathotypes of clubroot present in a field.

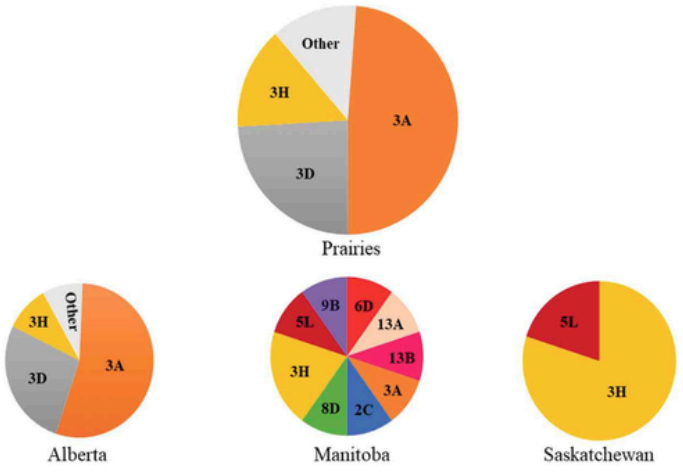
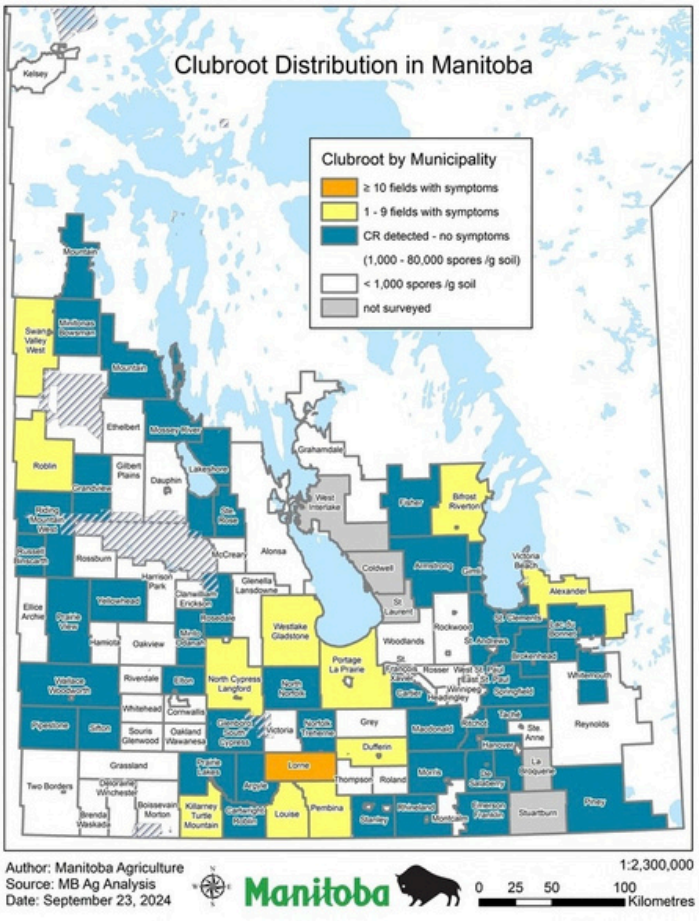


Figure 5: Prevalence of Clubroot pathotypes across the Canadian Prairies. Hollman et al 2020. Pathotypes of Plasmodiophora brassicae collected from clubroot resistant canola (Brassica napus L.) cultivars in western Canada in 2017-2018.

Resistant varieties are categorized as one of the following:

FIRST GENERATION:
Should work well for most fields and resistance to the most common clubroot pathotypes: 2F, 3H, 5I, 6M and 8N.

SECOND GENERATION:
Contains resistance to a varying set of pathotypes in addition to the five first-generation pathotypes.



For more information on managing clubroot, visit **www.clubroot.ca**.

CLUBROOT LABELLING - INTERPRETING THE MARKETPLACE

Table 9: Clubroot resistance labelling by company

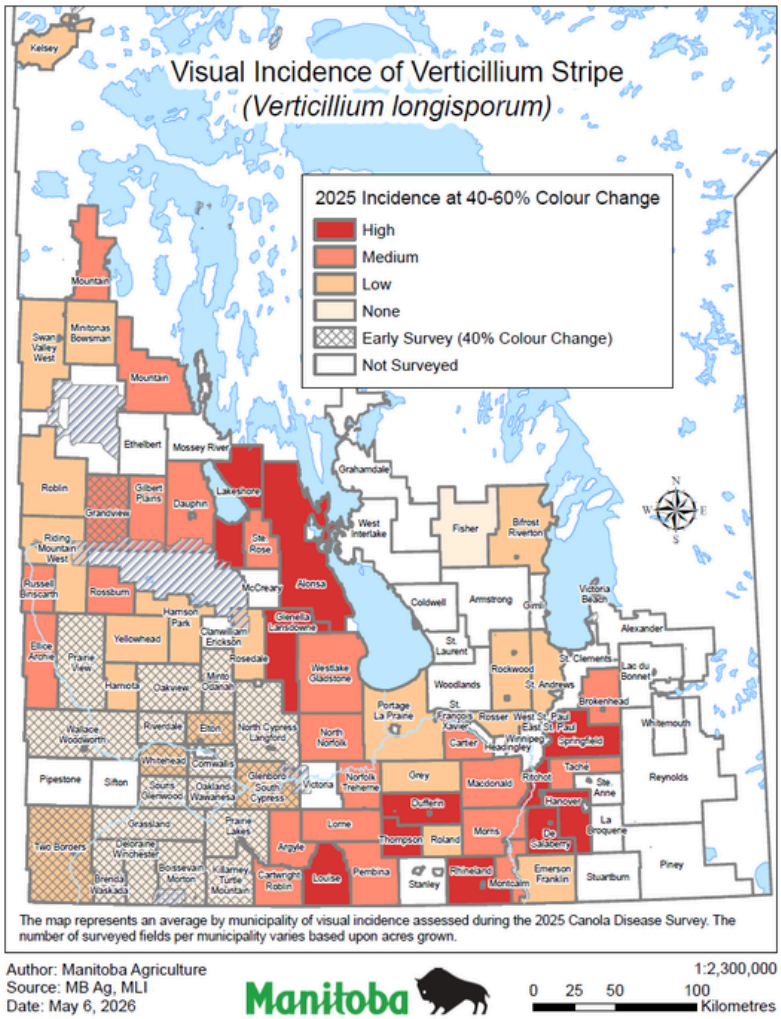
Seed Company	Clubroot Labelling
BASF (InVigor)	**First Generation Resistance** is used for varieties that are resistant to 2F, 5I, 6M, 2C, 8A and 3H. **Second Generation Resistance** includes all pathotypes listed in First Generation plus 3A, 3D, 5X, 5L, 2B, 9E, 11A, 8E, 8P and 5G. **Next-Generation Second-Generation** is a new source of clubroot resistance, but currently resistant to the same pathotypes as Second Generation
Bayer (Dekalb)	**Clubroot Resistant (CR)** trait is used for varieties with resistance to 3H, 8N, 8A, 5L, 5G and 5C pathotypes **Clubroot Resistant Plus (CR+)** includes all pathotypes listed in CR plus 3A, 3D, 8E, 9E, 8P, and 8J.
Brett Young	**Clubroot DefendR** trait is used for varieties with resistance to 3A, 3D, 3H, 8E, 8N, 8P, 9E, 8A, 5L, 5G, 8D and 5C.
CANTERRA SEEDS	**First-Generation Resistance** includes resistance to pathotypes 3H, 8N, 8A, 5L, 5G, 8D, 5C and 5I. **Second-Generation Resistance** includes all pathotypes listed in First-Gen plus 3A, 3D, 8E, 8P and 9E. **First- and Second-Generation Resistance** includes all pathotypes in First- and Second-Gen plus some varieties contain resistance to 5X.
Cargill (Victory)	**Clubroot Resistant** is used for varieties that are resistant to pathotypes 2F, 3H, 5I, 6M and 8N. **Next Generation Clubroot Resistant** includes all pathotypes listed in Clubroot Resistant plus 3A, 3D, 2B and 8E.
Maizex	**First-Generation Resistance** is used for varieties with resistance to 2F, 3H, 5I, 6M and 8N **Second-Generation Resistance** includes all pathotypes listed in First-Generation plus 3A, 3D, 2B, 5X, 11A, 8E, 9C, 9E
Nutrien (Proven)	**Clubroot Resistant (CR)** **Multigenic Clubroot Resistant** indicates that resistance is derived from multiple genes, providing broader protection. Pathotypes are not listed.
Pioneer	**Clubroot Resistant** hybrids have clubroot genes deployed in various combinations, gene combinations and pathotypes are listed.
Winfield United (Croplan)	Varieties are labelled as **Resistant** and each variety lists the specific pathotypes.

VERTICILLIUM STRIPE

Verticillium stripe is a soil-borne disease that has become a major concern to canola growers. Verticillium reduces yield potential and also can increase yield loss due to harvestability issues such as lodging and reduced pod integrity. .

There are currently no registered canola varieties that provide genetic resistance to verticillium. However, varieties do have different levels of tolerance to verticillium in field conditions. Some companies will provide an internal ranking or ratings across their varieties for field performance for verticillium. It is important to note that there is no industry-wide rating system for verticillium and ratings given by individual companies are not comparable.

There are currently no effective control options for verticillium stripe, making accurate identification essential. Symptoms can resemble blackleg or sclerotinia. Farmers are encouraged to confirm suspected cases through Manitoba Canola Growers' free Canola Diagnostics program.



VERTICILLIUM STRIPE LABELLING - INTERPRETING THE MARKETPLACE

Table 10: Verticillium stripe tolerance labelling by company

Seed Company	Verticillium Stripe Tollerance Labelling
BASF (InVigor)	Varieties are ranked through internal field performance ratings
Bayer (Dekalb)	Varieties are ranked through internal field performance ratings
Brett Young	No published verticillium rating available
CANTERRA SEEDS	Varieties are ranked through internal field performance ratings
Cargill (Victory)	No published verticillium rating available
Maizex	No published verticillium rating available
Nutrien (Proven)	No published verticillium rating available
Pioneer	Varieties are ranked through internal field performance ratings
Winfield United	No published verticillium rating available

BLACKLEG

Blackleg is a stubble-borne disease that can be classified into different Races based on the distinct stains of the fungus due to various avirulence (Avr) genes they carry. Growers can get infected stubble tested to identify blackleg race to help make future variety decisions.

Each variety is given a Field Rating label for blackleg resistance when it is registered that is determined by field testing of a varieties performance by the Western Canada Canola/Rapeseed Recommending Committee (WCC/RRC). Varieties are compared to the susceptible check for infection and assigned a Field Resistance Rating. The Field Rating label represents performance that is a result of both major and minor gene resistance.

FIELD RESISTANCE LABEL

The R/MR/MS/S label on cultivars is based on the disease severity compared to the susceptible check cultivar, Westar.

Field resistance rating	% Disease severity of Westar
R (Resistant)	0-29.9
MR (Moderately Resistant)	30-49.9
MS (Moderately Susceptible)	50-69.9
S (Susceptible)	70-100

CANOLA VARIETIES ON THE MARKET INCLUDE A COMBINATION OF MINOR AND MAJOR GENE RESISTANCE

Major gene resistance (qualitative) is effective against blackleg using pathogen race-specific resistance (R) genes. A R gene is matched against the corresponding blackleg Avr gene present in a field. R genes are readily identified within a variety. Seed companies label their R genes voluntarily through blackleg resistance group labels. Major gene labeling allows farmers to better manage this disease through informed variety choices and R gene rotation.

Minor gene resistance (quantitative) is effective across multiple blackleg races and helps protect longevity of major gene resistance. Due to the complexity of minor gene resistance, there is no simple way to measure and label it at this time, but its performance is captured within the field resistance rating.

BLACKLEG

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	E1	E2	F	G	X
Major Gene	Rlm 1 or LepR3	Rlm2	Rlm3	LepR1	Rlm4	Rlm7	Rlm9	RlmS or LepR2	unknown

Example of a Blackleg Resistance Two-Part Label

Image from CCC's Blackleg management guide

For more information on managing blackleg, visit **www.blackleg.ca.**

BLACKLEG LABELLING - INTERPRETING THE MARKETPLACE

Table 11: Blackleg resistance labelling by company

Seed Company	Blackleg Resistance Labelling
BASF (InVigor)	**Field Resistance** label of Resistant (R) **Major gene resistance** groups are not disclosed
Bayer (Dekalb)	**Field Resistance** label of Resistant (R) **Major gene resistance** groups are listed
Brett Young	**Blackleg DefendR** trait is used for varieties that contain one or more major blackleg resistance genes and carry a **Field Resistance** label of Resistant (R) **Major gene resistance** groups are listed
CANTERRA SEEDS	**Field Resistant** label of resistant (R) **Major gene resistance** groups are listed
Cargill (Victory)	**Field Resistance** label of Resistant (R) **Major gene resistance** groups are listed.
Maizex	**Field Resistance** label of Resistant (R) **Major gene resistance** groups are not disclosed
Nutrien (Proven)	Internal scale of 1-9, 1 = poor, 9 = excellent **Major gene resistance** groups are not disclosed
Pioneer	**Field Resistance** labels of Moderately Resistant (MR) or Resistant (R) Internal scale of 1-9, 1 = poor, 9 = excellent **Major gene resistance** groups are not disclosed
Winfield United (Croplan)	Internal scale of fair to excellent **Major gene resistance** groups are listed

HOW TO USE DIAGNOSTIC BLACKLEG RACE ID

STEP 1 Collect stem/stubble samples to send for analysis

Follow submitting instructions for Manitoba Canola Growers Canola Diagnostics at h**ttps://manitobacanola.com/research/canola-diagnostic-services/**

From 60% seed colour change to shortly after harvest, collect a representative stem or stubble sample from an infected field. Clip the stems just below the crown, into the root tissue and look for black discolouration. Select 8-10 symptomatic stems to send for diagnostic confirmation and Race ID.

STEP 2 Interpreting the results

Example:

Lab Results, Inferred Race Profile:

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

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

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

The results report will give a list of the inferred race profile detected in each stem.

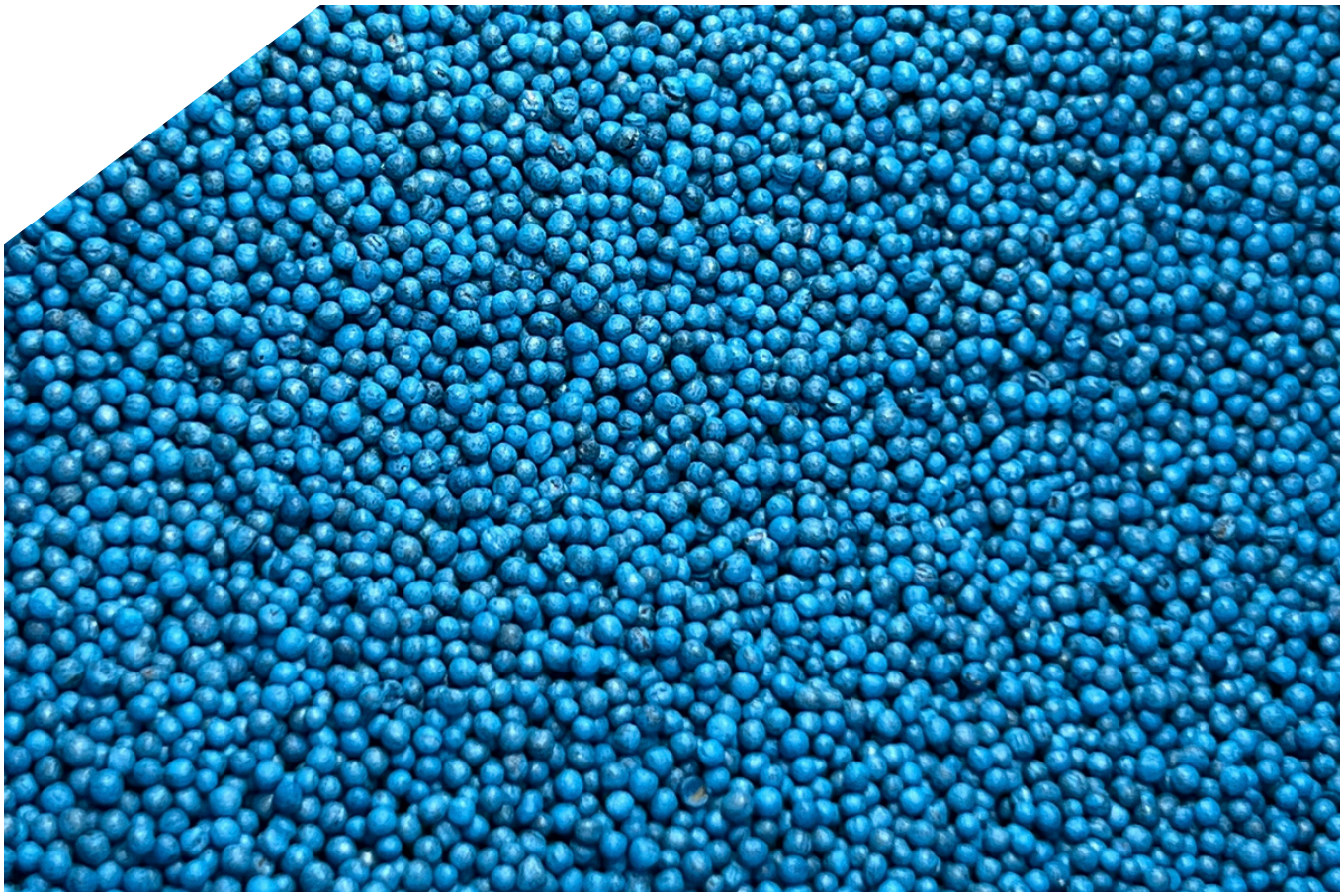
Identify an Avr gene that is present in the majority of the sample. In the example (left), AvrLm4 was detected most frequently in the sample.

STEP 3 Application of the results

Choose a canola variety with a major resistance gene that corresponds to that Avr gene. In the example, a variety containing Rlm4 would be the best choice. Resistance group E1 contains the Rlm4 resistance gene (see page 26). The resistance gene must match the Avr genes detected to be effective.

MCG MEMBERS RECEIVE ONE FREE BLACKLEG RACE ID TESTING PER FIELD

Manitoba Canola Growers Canola Diagnostics at: **https://manitobacanola.com/research/canola-diagnostic-services/**



SEED TREATMENTS

All canola seed comes treated with a base treatment that includes a combination of active ingredients to protect canola seed and seedlings from disease and insect pests. In addition to the base treatment many companies offer additional protection options that can be added to their varieties.

The efficacy and duration of protection from a seed treatment is impacted by environmental conditions, as protection will decline over time as active ingredients break down after seeding. To maximize efficacy of seed treatments target rapid emergence, through seeding canola 0.5 - 1 inch deep into warm, moist soils. This allows the crop to grow quickly through the early growth stages when it is most susceptible to seedling diseases and flea beetle damage.

SEED TREATMENTS - INTERPRETING THE MARKETPLACE

Table 12: Available seed treatments by company

Seed Company	Base Seed Treatment	Additional Protection Options
BASF (InVigor)	**Modalex** (flea beetle, blackleg, fusarium, pythium and rhizoctonia)	**Buteo Start** (enhanced flea beetle protection) **Lumiderm** (enhanced cutworm + flea beetle protection) **Buteo Start + Lumiposa** (enhanced cutworm + flea beetle protection)
Bayer (Dekalb)	**Prosper EverGol + Buteo Start** (flea beetle, blackleg, fusarium, and pythium)	**Fortenza** (enhanced flea beetle and cutworm protection)
Brett Young	**Helix Saltro** (flea beetle, blackleg, fusarium, pythium and rhizoctonia)	**Curanza** (enhanced flea beetle and cutworm protection) **Buteo Start** (enhanced flea beetle protection)
CANTERRA SEEDS	**Helix Saltro** (flea beetle, blackleg, fusarium and pythium)	**Fortenza Advanced** (enhanced flea beetle and cutworm protection) **Buteo Start** (enhanced flea beetle protection) **Curanza** (enhanced flea beetle and cutworm protection)
Cargill (Victory)	**Prosper EverGol + Buteo Start** (flea beetle, blackleg, fusarium and pythium) **Prosper EverGol + Lumiderm** (flea beetle, cutworm, blackleg, fusarium, and pythium)	**Lumiderm ONIQ** (enhanced flea beetle and cutworm protection)
Pioneer	**LumiGen + Lumiscend + Lumiderm ONIQ** (flea beetle, cutworm, blackleg, fusarium, pythium and rhizoctonia)	
Maizex	**Helix Saltro + Buteo Start** (flea beetle, blackleg, fusarium and pythium)	**Fortenza Advanced** (enhanced flea beetle and cutworm protection)
Nutrien (Proven)	**Helix Saltro** (flea beetle, blackleg, fusarium, and pythium)	**Lumiderm** (enhanced cutworm protection) **Buteo Start** (enhanced flea beetle protection)
Winfield United (Croplan)	**Helix Saltro + Fortenza Advanced** (flea beetle, cutworm, blackleg, fusarium and pythium)	**Prosper EverGol + Buteo Start** (blackleg, fusarium, pythium, rhizoctonia and enhanced flea beetle protection)

*See Appendix Table 2 for a more detailed list of seed treatments including active ingredients and groups.

NEW TO MARKET FOR 2027

Seed Company	Variety
BASF (InVigor)	• **L342PC** - a mid-maturing variety with next-gen second-generation clubroot resistance • **L346PC** - similar to L345PC with improvements in disease resistance and standability • **LR347PC** - a mid-maturing variety with dual tolerance to glufosinate and glyphosate
Bayer (Dekalb)	• **DK905TF -** a specialty-oil variety with Straight Cut Plus traits and clubroot resistance
Brett Young	• **BY 7203LL -** a Pod DefendR variety with clubroot and blackleg DefendR resistance • **BY 6222TF -** a Pod DefendR variety with clubroot and blackleg DefendR resistance
CANTERRA SEEDS	• **CS4200 LL -** a PodProtect LibertyLink variety with second-generation clubroot resistance • **CS3400 TF -** a PodProtect TruFlex variety with first and second-generation clubroot resistance
Cargill (Victory)	• **V27-1G -** an OptimumGly variety with enhanced pod integrity and clubroot resistance
Maizex	• **MC 5172LL -** a LibertyLink variety with increased pod shatter and standability • **MC 4227TF -** a TruFlex variety with increased clubroot resistance
Nutrien (Proven)	• **PV 281 CLCM -** a Clearfield variety with clubroot resistance • **PV 785 TCN -** a TruFlex variety with clubroot resistance and increased pod integrity
Pioneer	• **P1444L** - the earliest LibertyLink Pioneer brand canola • **P1541L** - a sclerotinia tolerant LibertyLink hybrid with PSP technology • **P691L & P1590L** - LibertyLink Pioneer IP (identity preserved, specialty oil) varieties • **P526G** - OptimumGly variety with PSP technology • **P592G** - OptimumGly IP (specialty oil) variety • **P525CL** - a Clearfield variety with clubroot tolerance
Winfield United (Croplan)	• **CP26T3C** - a TruFlex variety with clubroot resistance • **CP26L2P** - an early maturing LibertyLink hybrid • **CP26O3C** - an OptimumGly variety with clubroot resistance

New Seed Treatments
• **Curanza (Syngenta) -** an insecticide seed treatment (active ingredient - cyantraniliprole) providing protection from flea beetles and cutworms, available through Brett Young and Canterra Seeds

APPENDIX

Appendix Table 1: Commercially Available Canola Varieties in Manitoba for 2027

Distributor (Brand)	Name	Herbicide tolerance	Blackleg resistance (field label)	Blackleg resistance (group)	Clubroot resistance	Shatter rating
BASF (InVigor)	L333PC	LL	R		R	
BASF (InVigor)	L340PC	LL	R		R	
BASF (InVigor)	L341PC	LL	R		R*	
BASF (InVigor)	L342PC *New*	LL	R		R*	
BASF (InVigor)	L343PC	LL	R		R*	
BASF (InVigor)	L345PC	LL	R		R	
BASF (InVigor)	L346PC *New*	LL	R		R	
BASF (InVigor)	LR347PC *New*	TF + LL	R		R	
BASF (InVigor)	L355PC	LL	R		R	
BASF (InVigor)	L356PC	LL	R		R	
BASF (InVigor)	L358HPC	LL	R		R	
BASF (InVigor)	LR354PC	TF + LL	R		R	
BASF (InVigor)	L330PC	LL	R		R	
Bayer (DEKALB)	DK800LL	LL	R	A, E2	R	7.3
Bayer (DEKALB)	DK801LL	LL	R	A, G	R	7.3
Bayer (DEKALB)	DK904TF	TF	R	E2, G	R*	7.2
Bayer (DEKALB)	DK902 TF	TF	R	A	R*	5.6
Bayer (DEKALB)	DK901TF	TF	R	A, G	R*	5.4
Bayer (DEKALB)	DK900TF	TF	R	A, E2	R	7
Bayer (DEKALB)	DK905TF *New*	TF	R	E2	R	

APPENDIX

Appendix Table 1: Commercially Available Canola Varieties in Manitoba for 2027 continued.

Distributor (Brand)	Name	Herbicide tolerance	Blackleg resistance (field label)	Blackleg resistance (group)	Clubroot resistance	Shatter rating
Bayer (DEKALB)	DK401TL	TF + LL	R	A, E2	R	7.1
Bayer (DEKALB)	DK400TL	TF + LL	R	E2	R*	7.2
BrettYoung	BY 6211TF	TF	R	C, G	S	7.2
BrettYoung	BY 7206LL	LL	R	A, E2, G	R*	7.3
BrettYoung	BY 7204LL	LL	R	E2	R*	7.5
BrettYoung	BY 7203LL *New*	LL	R	E2	R*	7.4
BrettYoung	BY 7202LL	LL	R	C	R*	7
BrettYoung	BY 6222TF *New*	TF	R	C, G	R*	7
BrettYoung	BY 6223TF	TF	R	E2, G	R*	7.1
BrettYoung	BY 6217TF	TF	R	C, E2	R*	8
BrettYoung	BY 6216TF	TF	R	E2	R*	5.1
BrettYoung	BY 6214TF	TF	R	A, G	R*	5
BrettYoung	BY 5125CL	CL	R	C	R	4.2
Canterra Seeds	CS4200 LL *New*	LL	R	F	R*	8
Canterra Seeds	CS4100 LL	LL	R	E2, G	R*	7
Canterra Seeds	CS4000 LL	LL	R		R	6
Canterra Seeds	CS3400 TF *New*	TF	R	A, E2	R*	7
Canterra Seeds	CS3300 TF	TF	R	A, E2	R	7
Canterra Seeds	CS3200 TF	TF	R	C	R*	7
Canterra Seeds	CS3000 TF	TF	R	A, G	R*	5

APPENDIX

Appendix Table 1: Commercially Available Canola Varieties in Manitoba for 2027 continued.

Distributor (Brand)	Name	Herbicide tolerance	Blackleg resistance (field label)	Blackleg resistance (group)	Clubroot resistance	Shatter rating
Canterra Seeds	CS2800 CL	CL	R	A, F, G	R*	4
Canterra Seeds	CS2600 CR-T	TF	R	C	R*	5
Cargill (VICTORY)	V27-1G	GLY	R	D	R*	
Cargill (VICTORY)	V25-6T	TF	R	E1	R	
Cargill (VICTORY)	V25-3T	TF	R	BCE1	R	
Maizex	MC 5230TF	TF	R		R	7.6
Maizex	MC 5126LL	LL	R		R*	6
Nutrien (Proven)	PV 280 CLC	CL	R		R*	
Nutrien (Proven)	PV 881 OCM	GLY	R		R*	
Nutrien (Proven)	PV 784 TCN					
Nutrien (Proven)	PV 783TCN	TF	R		R	
Nutrien (Proven)	PV 781 TCM	TF	R		R*	
Nutrien (Proven)	PV 761 TM	TF	R			
Nutrien (Proven)	PV 664 LCN					
Nutrien (Proven)	PV 663 LCN					
Nutrien (Proven)	PV 661 LCM	LL	R		R*	
Nutrien (Proven)	PV 681 LC	LL	R		R	
Nutrien (Proven)	PV 780 TC	TF	R		R	
Nutrien (Proven)	PV 760 TM	TF	R			
Pioneer	P516L	LL	R		R*	

APPENDIX

Appendix Table 1: Commercially Available Canola Varieties in Manitoba for 2027 continued.

Distributor (Brand)	Name	Herbicide tolerance	Blackleg resistance (field label)	Blackleg resistance (group)	Clubroot resistance	Shatter rating
Pioneer	P524G	GLY	R		R*	
Pioneer	P520L	LL	R		R*	†
Pioneer	P519L	LL	R		R*	
Pioneer	P617SL	LL	R		R*	
Pioneer	P525CL	CL	R		R*	
Pioneer	P515G	GLY	R		R	
Pioneer	P1541SL *New*	LL	MR		R*	
Pioneer	P1530G	GLY	MR		R*	
Pioneer	P1590L *New*	LL	R		R*	
Pioneer	P592G *New*	GLY	R		R*	
Pioneer	P1444L *New*	LL	R		R*	
Pioneer	P691L *New*	LL	R		R*	
Pioneer	P526G *New*	GLY	R		R*	
Winfield United (CROPLAN)	CP22T1C	TF	R		R*	7.4
Winfield United (CROPLAN)	CP23L3C	LL				
Winfield United (CROPLAN)	CP24L3C	LL	R		R*	7
Winfield United (CROPLAN)	CP25L3C	LL	R		R	7.2
Winfield United (CROPLAN)	CP25T2C	TF	R	E1, G	R	7.3

APPENDIX

Appendix Table 2: Seed treatment and active ingredients and pesticide groupings

Trade Name	Fungicide Active Ingredients	Fungicide Group	Insecticide Active Ingredients	Insecticide Group
Buteo Start			Flupyradifurone	4D
Curanza			Cyantraniliprole	28
Fortenza			Cyantraniliprole	28
Fortenza Advanced			Cyantraniliprole Sulfoxaflor	28, 4C
Helix Saltro	Difenoconazole Metalaxyl-M Fludioxonil Sedaxane Adepidyn	3, 4, 7, 12	Thiamethoxam	4
Lumiderm			Cyantraniliprole	28
Lumiderm ONIQ*			Cyantraniliprole	28
Lumiposa			Cyantraniliprole	28
Modalex	Difenoconazole Metalaxyl-M Fludioxonil Sedaxane	3, 7, 11	Clothianidin	4A
Prosper EverGol	Penflufen Metalaxyl Trifloxystrobin	7, 4, 11	Clothianidin	4A