



2024

Product Guide

CANOLA | SOYBEANS | FORAGES & CORN | BIOLOGICALS | SEED PRODUCTION





From Your Friend In The Field

This is a real field. You're a real farmer.
So that's where we keep our focus.

At BrettYoung, we focus on what's real, like good products, good information, and good local choice. It's how we've become Canada's Largest Independent Seed Company. Read on to see how we can help your farm.



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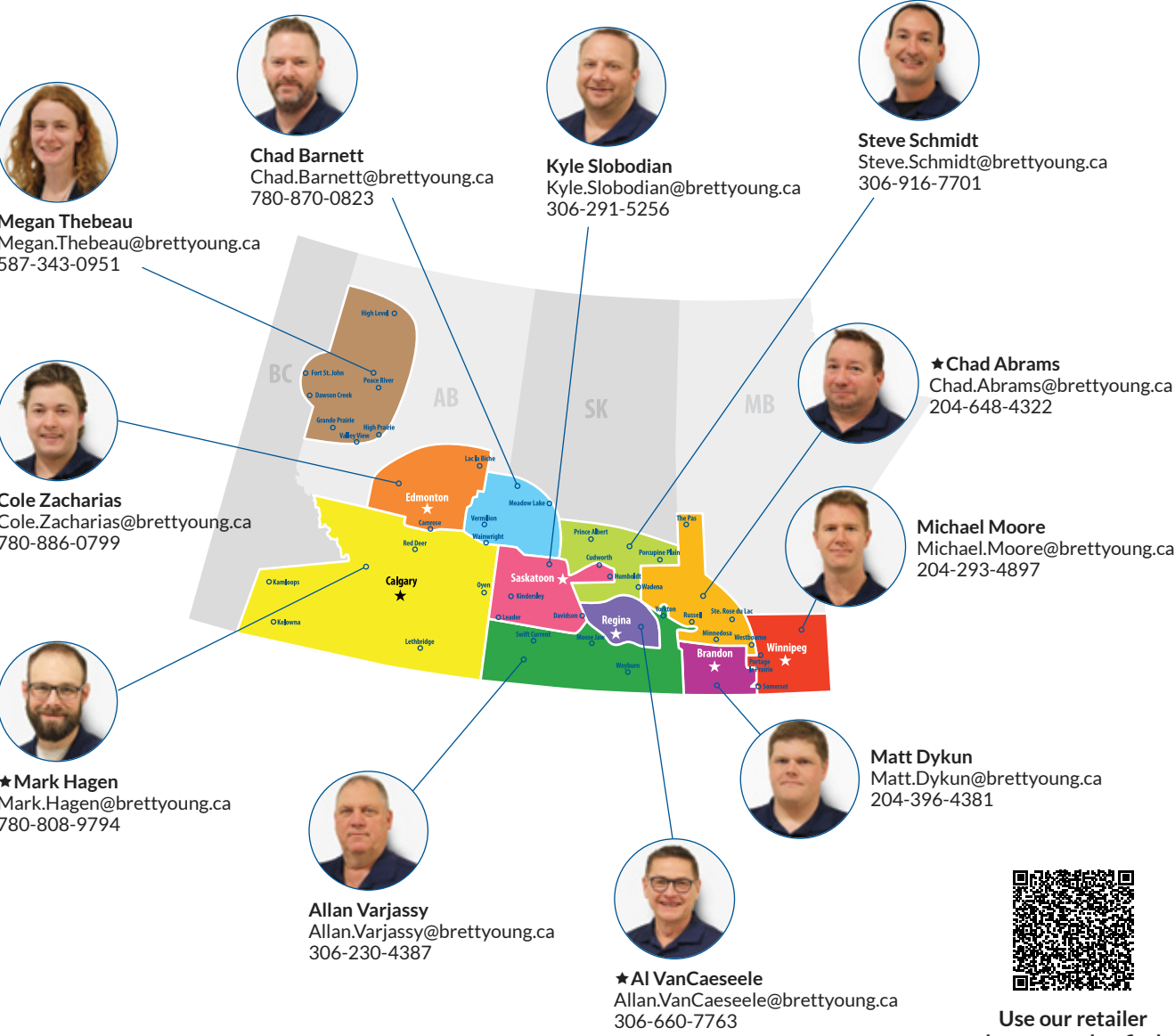
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Regional Account Manager (RAM) Territory Map

BrettYoung RAMs are spread out across the Prairies to work directly with you in your community and offer product and agronomic support. Reach out to yours with any questions.



★ Provincial Sales Manager



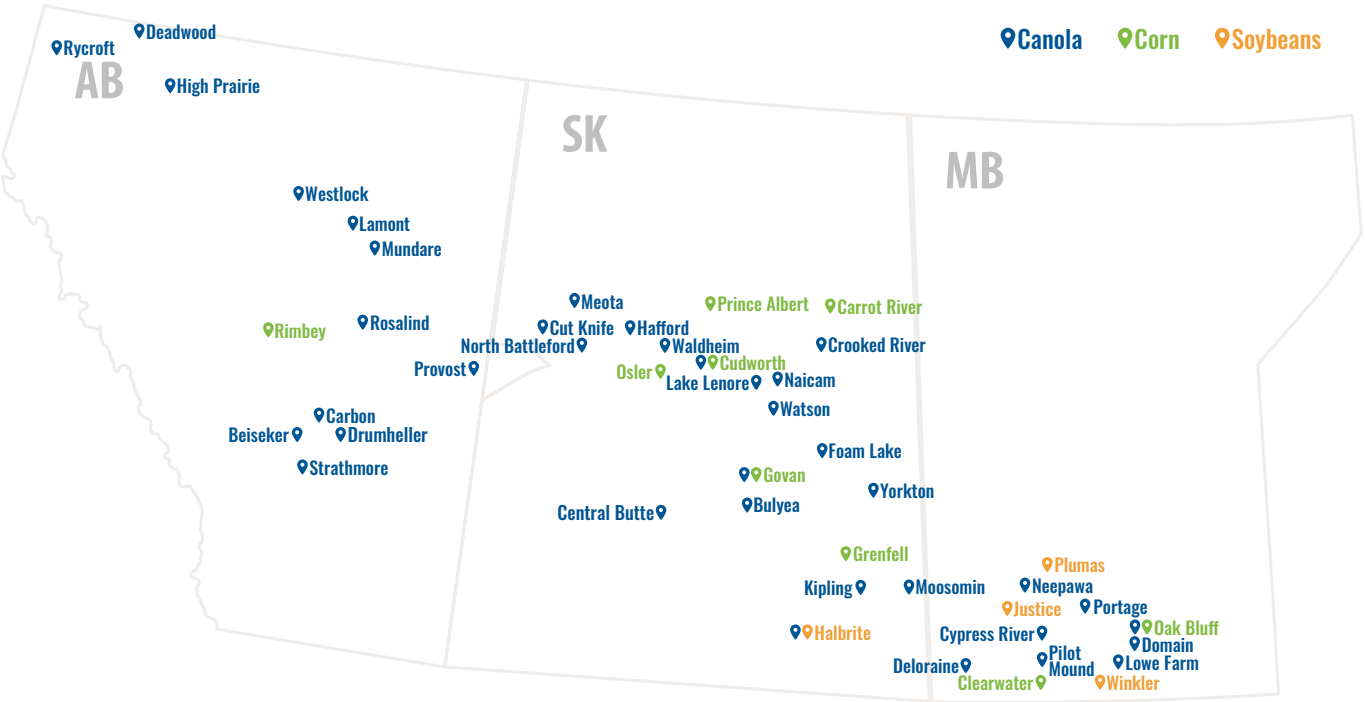
Use our retailer
locator tool to find
a BrettYoung
dealer near you.

Performance Trials

BrettYoung Comparison Trials (BCTs)

The BrettYoung Comparison Trials compare BrettYoung commercial and pre-commercial canola, soybean, and corn varieties against other industry leading products. The BCT sites are replicated field-scale strip trials managed by growers and an independent agronomy consultant or a BrettYoung RAM. BCTs allow you to see each product's agronomic characteristics while generating local yield data to assess product performance across different geographies. The latest product insights and trial results will be published in the fall of 2023 — you can view them at brettyoung.ca/product-performance.

2023 BCT and MaxPlot Locations



Canola MaxPlots

In partnership with DL Seeds, MaxPlots were established to showcase new hybrids from the DL Seeds' breeding program along with BrettYoung commercial products. The MaxPlots consist of 20 entries with hybrids from LibertyLink®, TruFlex®, and Clearfield® herbicide systems compared together at nearly 20 sites across Western Canada. These sites allow BrettYoung, DL Seeds, and you to assess new advancements in canola genetics and how they compare to familiar commercial products. This is a great opportunity to have a glance, in a small-plot format, at what's to come.

Canola

In 2024, we're launching BY 6216TF — a TruFlex canola hybrid with maturity suited to mid- and long-season maturity zones and with great yield for maturity performance at 102% of WCC/RRC checks. It also carries our industry-leading double-layered DefendR protection traits against clubroot and blackleg.

Stay tuned for further information being released this fall on new high-performance LibertyLink hybrids being added to our canola portfolio for 2024. With Pod DefendR shatter tolerance and DefendR-rated disease protection, they will be a fit on any farm looking to take advantage of the newest hybrids with the LibertyLink trait.



DL Seeds Making Moves in Pod Shatter Research

It's something every canola grower worries about: pod shatter. Whether from the weather or the swather, your canola pods are doomed to shatter at some point — or are they?

DL Seeds, our canola breeding partner, has been researching pod shatter for years now, with huge developments in creating hybrids with resistance to this phenomenon. Jesse Mutcheson, Pre-Breeder Seed and QAS Manager at DL Seeds, has been working on his Master's degree while researching pod shatter. He said their biggest leap so far has been getting their first commercial pod shatter tolerant hybrid into the market — BY 6217TF. Brett Young has branded this trait as Pod DefendR, which you can expect high performance and a dependable level of pod shatter tolerance from.

But how did we get here?

Once DL Seeds finds unique traits or genes of interest, it takes years to implement them into a parent. First, there are multiple cycles of backcrossing to get the trait as stable as possible within each parent. After that, the first cross between two parents can be made to create an F1 hybrid.

"It's not blindly picking two parents," said Mutcheson. "You look at their trait packages on each side and make combinations with what you think would develop an industry-leading hybrid."

For the first year of testing, most crosses go down to Chile where DL Seeds produces in contra-season.

Once they come back, DL Seeds starts growing them in their trials and that's where evaluation starts.

DL Seeds has two main tests for evaluating pod shatter resistance:

- **Wind mimicking** — DL Seeds researchers use high-speed leaf blowers to mimic high wind on plots for an extended amount of time. From there, they give the hybrid a rating from one to nine, one meaning low shatter tolerance and nine being the highest. Those numbers coincide with a scale created by the Canola Council of Canada, where a hybrid pod shatter rating of eight is the gold standard for shatter tolerance.
- **Random impact test** — during this test, DL Seeds collects pods off mature canola plants and uses an indoor random impact test machine with an oscillating shaker and ball bearings to see how much impact it takes to shatter the pods. From there, a pod shatter reduction index is given to each hybrid for analysis.

Mutcheson prefers to use the wind test as it gives real data on the spot.

"Once we get the ratings in-house, we start comparing them to the other hybrids in that trial," he said. "You can see where it lines up against the industry-leading hybrids and start looking at other critical traits like yield performance, disease resistance, and quality."




In their most recent evaluations, DL Seeds had several hybrids scoring neck and neck with industry-leading shatter-tolerant products.

"We know our pipeline is looking very strong for shatter tolerance," said Mutcheson. "It wasn't just a 'one and done' that we found something good. Our pipeline is full of quality hybrids that are going to be in demand when released."

DEFENDR Genetic Traits

DefendR is an easy-to-understand approach that highlights the superior harvest management and disease resistance genetics developed by our primary canola breeding partner, DL Seeds. The DefendR trait platform is gene-driven and can be an important piece of your overall canola management and production strategy. BrettYoung uses the DefendR designation to signal genetic tolerance to pod shatter and durable resistance to two prominent disease complexes affecting canola: clubroot and blackleg.

DefendR Traits

Trait	Minimum Resistance Level	Hybrids	
	A dependable level of shatter tolerance, well suited to straight-cut or delayed swathing harvest systems. Pod DefendR-rated hybrids score a minimum of 7.0 on the Canola Council of Canada's canola shatter rating scale.	BY 7204LL BY 6217TF BY 6211TF	
	Multi-genic (multiple major gene) resistance to blackleg, and a strong R rating for adult plant blackleg resistance.	BY 7102LL BY 6217TF BY 6216TF	BY 6214TF BY 6211TF BY 6204TF
	Stacked 1st and next-generation clubroot resistance genes that provide protection against a broad array of established pathotypes like 3H and newer pathotypes such as 2B, 3A, and 3D.	BY 7204LL BY 7102LL BY 6217TF	BY 6216TF BY 6214TF BY 6207TF



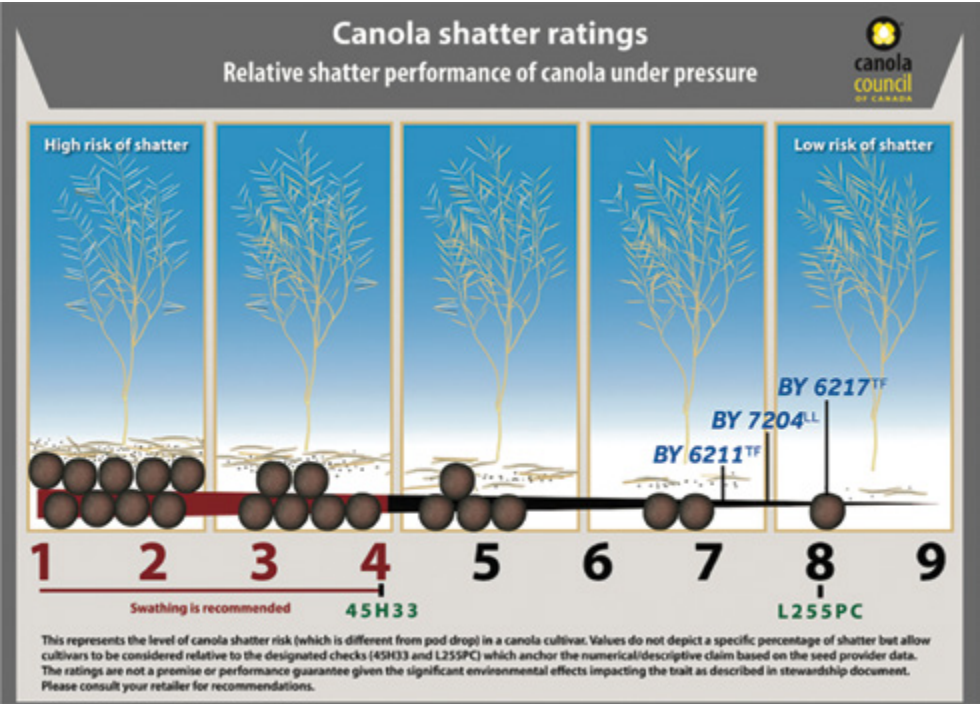
The introduction of pod shatter-resistant hybrids to canola growers several years ago led to a significant increase in adoption of both direct harvesting and delayed swathing of canola crops. BrettYoung canola growers can now enjoy this same flexibility because of our new pod shatter resistance trait, which delivers a dependable level of shatter tolerance.

Pod shattering, and the seed dispersion associated with it, is a survival mechanism found in nature and, despite decades of breeding and domestication, canola pods still have a natural tendency to split and open at maturity, with the goal of scattering seeds. Plant breeders and trait developers have been working to understand the physiology of canola pod ripening and pod shatter mechanisms.

DL Seeds, and its parent companies, have researched their own solutions, and what has emerged is an understanding of a complex pathway of gene interaction that controls pod valve function.

Much of this work has meant isolating specific genes from other brassica species and breeding them into canola to interrupt these shatter-inducing pathways. If you've ever grown mustard, you're aware of the substantial pod shatter resistance in that crop.

The result is Pod DefendR, a specific genetic trait that reduces pod tension built up at maturity and ultimately, the tendency for canola pods to split at the pod dehiscence zone (pod seam) that holds both sides of the pod (valves) together.



BrettYoung canola hybrid pod shatter resistance scores are developed through internal and breeder trial data.



Blackleg is a disease that has made a resurgence in intensive canola production areas. Most agree that a combination of crop rotation, crop management (including regular field scouting), and proper hybrid selection are important factors to reducing the impact of this disease.

The Blackleg DefendR trait means the BrettYoung canola hybrid is rated as a strong R for blackleg resistance. It also means the hybrid incorporates multiple major genes to be completely resistant against specific races of the pathogen. Blackleg DefendR hybrids achieve an enhanced level of resistance compared to competitor's R-rated hybrids that have either zero or only one major gene for blackleg resistance.



Clubroot is now established in all three Prairie provinces. Since 2013, when the first resistance-breaking pathotype was identified in Alberta, several new and more virulent pathotypes have evolved that can evade what is known as 1st generation (Mendel-type) resistance. The Clubroot DefendR trait indicates the canola hybrid has 1st generation resistance stacked with newer, next-generation clubroot resistance gene(s). This approach means resistance to the older, first-identified pathotypes, but also resistance to recently identified ones like 3A, 3D, 3H, and 5X, and others. DL Seeds has a robust pipeline coupled to high-performance hybrids that BrettYoung will continue to commercialize to support you in keeping one step ahead of this impactful disease. For the latest around the conversation on clubroot see the article on page 8 of this guide.

Keeping Clubroot Under Control

Clubroot has been ravaging fields in Western Canada for almost two decades now. The soil-borne disease causes galls to form on the roots of canola plants, eventually killing them prematurely. It's well documented that short canola rotations in intensive clubroot zones are a serious factor in aggravating the disease and creating conditions for it to thrive, allowing new pathotypes to emerge.

The University of Alberta has identified over 43 clubroot pathotypes in Western Canada. Pathotype 3A is the most common in the region, followed closely by 3H and 3D. Clubroot is spread easily through soil movement. Root galls release spores back into the soil where they remain dormant until susceptible plants are grown again. So, if you can't prevent it, what can you do?

Clubroot-resistant hybrids

One of the best ways you can manage clubroot is by growing a clubroot-resistant canola hybrid. The canola industry is moving forward on standardized testing and labelling protocol for hybrids with resistance to clubroot pathotypes. This will provide growers with better information when making hybrid selections. Newer pathotypes such as 3A, 3D, and 8E are

overcoming the first-generation resistance genes, which is why next-generation clubroot resistant hybrids may provide you with a better defence.

BrettYoung's Clubroot DefendR: Broad Resistance with a Multi-Genic Approach

Along with the identification of new pathotypes, plant breeders have been identifying and incorporating new sources of resistance into their latest canola hybrids. This includes the stacking of multiple sources of clubroot resistance in hybrids like BY 7102LL, BY 6216TF, and BY 6217TF. These hybrids have resistance to the older pathotypes that were first identified on the Prairies (2F, 3H, 5L, 6M, and 8N), plus several recently discovered pathotypes.

BrettYoung, through our primary canola genetics supplier, DL Seeds, continues to screen clubroot-resistant hybrids against the most common and newly emerging clubroot pathotypes. DL Seeds' research on clubroot genes is never-ending, and they're constantly working to create hybrids with resistance to the newest clubroot pathotypes.

Glen Hawkins, Senior Agronomist and Pulse Research Manager for DL Seeds, said together, we have a "solid next-generation resistance package" in most of our hybrids.

"At the end of the day, we're not stopping there," he said. "We're always developing new genetics and new potential forms of resistance to bolster what we already have."

Hawkins described the clubroot situation as status quo right now, with Alberta continuing to be a hotspot for the disease but noting that Manitoba is beginning to catch up. He said our first generation and next-generation clubroot-resistant products are doing what they're supposed to, with both having multi-pathotype specificity.

"The gene we insert," he stated, "will have full or partial resistance to a number of different pathotypes."

Clubroot Management Practices

The Canola Council of Canada (CCC) has a list of recommendations to manage the spread of clubroot spores by focusing on keeping them low and local.

Growers in Manitoba, Saskatchewan, and other areas not impacted by clubroot pathotype 3A can prevent the accumulation of spores for as long as possible by using resistant hybrids. Choose BrettYoung's Clubroot DefendR hybrids for areas where incidence of resistance breakdown is suspected.

1 Strelkov, S.E., Hwang, S.F., Manolii, V.P., Cao, T., Fredua-Agyeman, R., Harding, M.W., Peng, G., Gossen, B.D., McDonald, M.R., and Feindel, D. 2018. Virulence and pathotype classification of *Plasmodiophora brassicae* populations collected from clubroot resistant canola (*Brassica napus*) in Canada. Canadian Journal of Plant Pathology. 40:284–298, DOI: 10.1080/07060661.2018.1459851
2 Askarian, H., Akhavan, A., Manolii, V.P., Cao, T., Hwang, S.F., Strelkov, S.E. 2020. Virulence spectrum of single-spore and field isolates of *Plasmodiophora brassicae* able to overcome resistance in Canola (*Brassica napus*). Plant Disease, 105:43–52, DOI: 10.1094/PDIS-03-20-0471-RE
3 Hollman, K.B., Hwang, S.F., Manolii, V.P., Strelkov S.E. 2021. Pathotypes of *Plasmodiophora brassicae* collected from clubroot resistant canola (*Brassica napus* L.) cultivars in western Canada in 2017–2018. Canadian Journal of Plant Pathology. DOI: 10.1080/07060661.2020.1851893

Keep spores **low**


- Crop rotation:** Maintain a minimum 2-year break between canola (1-in-3 rotation).
- Scout:** Examine roots in every canola field during late summer/fall. Pay special attention to high-traffic and high-moisture areas. Soil testing may help identify spores before physical symptoms appear.
- Grow CR:** Early infestations can be missed for years while susceptible hosts multiply spores to catastrophic levels. Clubroot resistance (CR) should be grown on all canola acres as part of an integrated management strategy.
- Control brassica weeds in all crops:** Host weeds (like volunteer canola, stinkweed, flaxweed, shepherd's purse and mustards) should be controlled early to minimize gall formation and resting spore release.

Keep spores **local**

- Biosecurity:** Commit to a biosecurity plan to prevent the introduction and spread of spores on contaminated inputs and equipment. Communicate sanitation expectations with all relevant parties before field entry.
- Reduce tillage:** Minimize soil (and spore) movement within and between fields.

Patch management to keep spores low and local:

If you find clubroot, manage the patches separately from the rest of the field to reduce spore concentration and prevent spores from spreading.



Visit **clubroot.ca** to learn more.

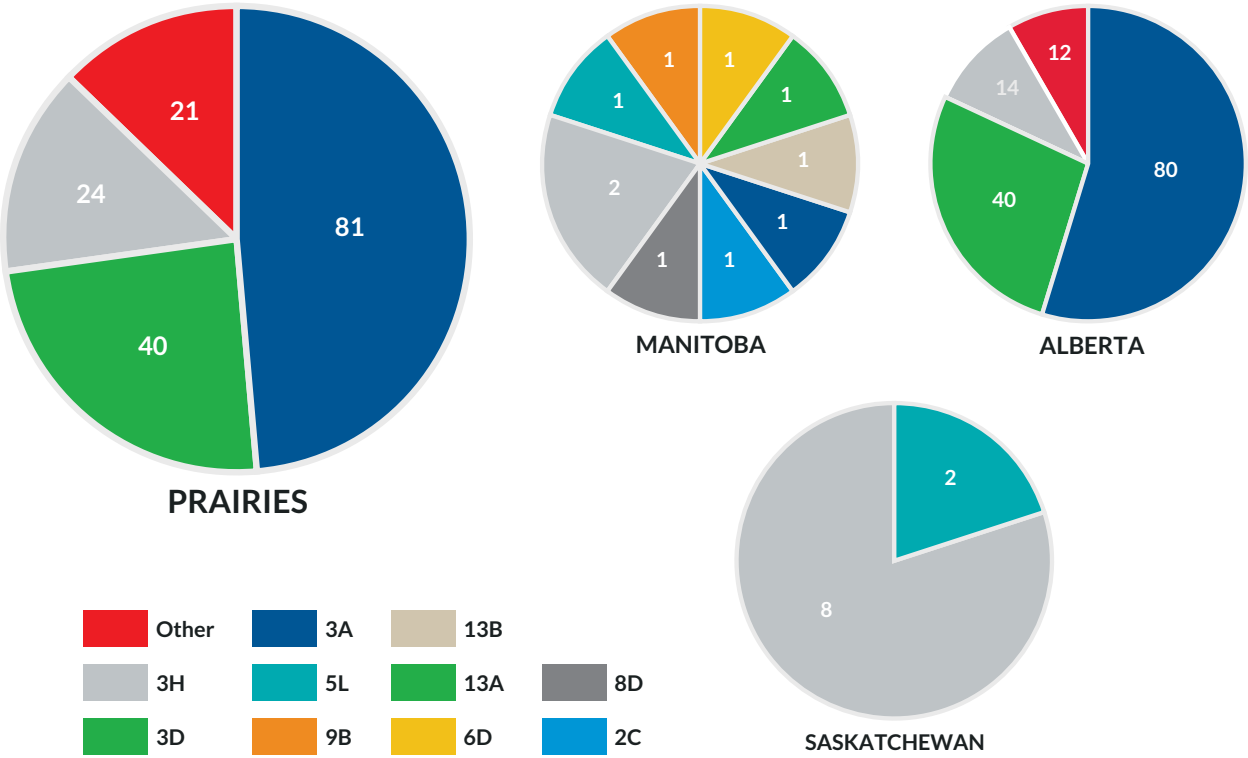


Fig. 1 Prevalence of *Plasmodiophora brassicae* pathotypes across the Canadian Prairies and in the provinces of Alberta, Manitoba, and Saskatchewan. Based on collections made from canola crops in 2017 and 2018. One hundred and sixty-six *P. brassicae* field isolates were tested, including 146 from Alberta, and 10 from each of Manitoba and Saskatchewan. Pathotype classifications are according to the Canadian Clubroot Differential set.

Source: Canola Council of Canada, 2021

Managing Your Blackleg

Blackleg has been around for what seems like forever. The stubble-borne canola disease is most prevalent in Western Canada, its severity dependent on the environment and your management practices.

“The key to managing blackleg on your farm is through scouting fields prior to harvest,” said BrettYoung Agronomic & Regulatory Services Manager, Justine Cornelsen. “Assess the level of incidence and severity and develop an estimate of blackleg risk for future crops.”

A minimum two-year break between canola crops allows for the crop residue housing the blackleg-causing pathogen (*Leptosphaeria maculans*) to break down. Another way to manage blackleg is through the use of genetic-resistance. Canola hybrids use two sources of resistance and it’s best to have a combination of major genes (qualitative resistance) and quantitative resistance within a hybrid.

Major gene resistance are single genes that are race-specific and highly effective at blocking infection of specific blackleg pathogen races at all growth stages. Major genes are identified and classified by resistance gene groups to help you select genes that are relevant to the pathogen causing blackleg damage.

Quantitative resistance involves many genes working together to slow the progression of the pathogen within the plant. This form of resistance is non-race-specific, providing protection against pathogen races.

Stewardship of Genetic Resistance

If your field is at high risk of blackleg infection due to intense canola rotations, or has had known blackleg infections, you should consider rotating blackleg-resistant hybrids. That means selecting a canola hybrid with a different major gene group(s) than the previously grown hybrid. The blackleg race identification test is a great tool to use to determine what the predominant blackleg races are in your field and which major gene groups will be the most effective.



Blackleg stubble tests determine the *L. maculans* genotype and phenotype expressed in the field. The phenotype determines which resistance gene groups will provide protection towards the *L. maculans* races identified.

Blackleg Resistance

<i>L. maculans</i> phenotype	Major Resistance Genes	Resistance Gene Groups*	BrettYoung Hybrids to Utilize
AvrLm4-5-6-7-11	Rlm4, Rlm5, Rlm6, Rlm7, Rlm11	E ₁ , E ₂	BY 7204LL BY 6217TF BY 6216TF BY 6204TF
AvrLm2-3-5-9-S	Rlm2, Rlm3, Rlm5, Rlm9, RlmS	C, F, G	BY 6214TF BY 6211TF BY 7102LL BY 5125CL

*Not all resistance genes are classified into resistance groups, as they are not currently in Canadian canola germplasm

BrettYoung Blackleg DefendR Hybrids

Growing a blackleg-resistant hybrid is your number one line of defence when it comes to managing this common disease. Our Blackleg DefendR trait means the canola hybrid is rated as a strong R for blackleg resistance. It also means the hybrid incorporates multiple major genes to be completely resistant against specific races of the pathogen. Blackleg DefendR hybrids achieve an enhanced level of resistance compared to competitors’ R-rated hybrids.

If you’re looking to grow a blackleg-resistant canola hybrid, BrettYoung has lots of options. BY 6217TF, BY 6216TF, BY 6214TF, BY 6211TF, BY 6204TF, and BY 7102LL all come equipped with Blackleg DefendR, ensuring your crop reaches its full potential, regardless of the disease.



Canola root cross-section cuts to assess blackleg infection on a 0 (healthy) to 5 (severely infected) disease severity scale.

Canola Portfolio

Realize your yield potential with BrettYoung canola. BrettYoung has industry-leading hybrids in the TruFlex, LibertyLink, and Clearfield systems, sourcing the best technology and genetics to keep your operation profitable.

BrettYoung’s premium canola genetics also carry the DefendR trait platform as part of an active disease and harvest management strategy. A variety of maturity and DefendR trait combinations will help you find the best canola hybrid fit for your farm.



For product performance information scan this QR code or visit brettyoung.ca/product-performance.

Variety	System	Yield Rating ¹	Blackleg Rating	Major Gene ID	Clubroot Rating	DefendR Disease Resistance	Standability	Pod DefendR Rating	Maturity ¹
NEW BY 7204 ^{LL***}		105%	R – E ₂	Rlm7	R (Next-generation* resistance)		Excellent	7.5 ²	- 0.5 days
BY 7102 ^{LL}		101%	R – CF	Rlm3, Rlm7	R (Next generation** resistance)		Excellent	—	+1.9 days
BY 6217 ^{TF}		106%	R – CE ₂	Rlm3, Rlm7	R (Next generation* resistance)		Excellent	8.0 ²	+1.5 days
NEW BY 6216 ^{TF}		102%	R – E ₂	Rlm7	R (Next generation* resistance)		Very Good	—	+0.9 days
BY 6214 ^{TF}		103%	R - AG	RlmS, LepR3	R (Next generation* resistance)		Very Good	—	+0.3 days
BY 6211 ^{TF}		101%	R – AG (9% of Westar)	Rlm3, RlmS	—		Very Good	7.2 ²	+0.9 days
BY 6207 ^{TF}		100%	R – C	Rlm3	R (Next generation** resistance)		Excellent	—	+1.7 days
BY 6204 ^{TF}		102%	R – CE ₁	Rlm3, Rlm4	R (1st generation* resistance)		Excellent	—	+0.1 days
BY5125 ^{CL}		106%	R – C	Rlm3	R (1st generation* resistance)	—	Excellent	—	+0.4 days

Disease Management Rating: R = Resistant, IT = Improved Tolerance
¹Yield and maturity ratings based on relative to check performance in co-op registration trials.
²Pod shatter tolerance rating. This is based on the Canola Council of Canada’s shatter tolerance scale of 1 – 9. 1 = poor, 9 = excellent. Results may vary slightly on your farm due to environmental factors and management practices.
* Next-generation resistance includes pathotypes covered by 1st generation resistance plus resistance to newer pathotypes such as 3A, 3D, 3H, and other prevalent pathotypes.
** 1st generation resistance means resistant to pathotypes 2F, 3H, 5I, 6M, and 8N (these are equivalent to pathotypes 2, 3, 5, 6, 8 on the Williams’ Differential set).
*** Pending registration.

Canola Seed Treatments

All BrettYoung canola hybrids are treated with Helix® Saltro® with the option of adding Fortenza® Advanced, or Prosper® EverGol® and BUTEO™ start.

Pests Controlled by Seed Treatments	Base Treatment	With Optional Add-on Treatment	Base Treatment
	Helix Saltro	Helix Saltro + Fortenza Advanced	Prosper Evergol + BUTEO start
Pythium spp.	✓	✓	✓
Fusarium spp.	✓	✓	✓
Rhizoctonia spp.	✓	✓	✓
Seed-Borne Blackleg	✓	✓	OR ✓
Airborne Blackleg	✓	✓	
Flea Beetles	✓	✓	✓
Leaf Hoppers	✓	✓	
Enhanced Flea Beetle control		✓	✓
Cutworms		✓	

Canola Hybrids



The First in our New Generation Of Libertylink® Hybrids: A High Yield Potential, Mid-Maturity Hybrid with Pod DefendR® Technology and Next-generation Clubroot Protection

- Pod DefendR — durable shatter resistance technology
- DefendR-rated next-generation clubroot protection
- Strong early season vigour and excellent standability

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity	Pod Shatter Tolerance Rating
105%	R – E ₂	Rlm7	R (Next-generation* resistance)	Excellent	- 0.5 days	7.5



Our Premier LibertyLink Hybrid with Blackleg and Clubroot DefendR Protection, and Full-Season Yield Potential

- Next-generation clubroot resistance, including resistance to newer pathotypes such as 3A, 3D, 3H, and others
- DefendR-rated clubroot resistance
- DefendR-rated blackleg protection

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity
101% ¹	R – CF	Rlm3, Rlm9	R (Next-generation* resistance)	Excellent	+1.9 days



Pod, Clubroot, and Blackleg DefendR Protection and Flexibility of the TruFlex Canola System

- Another BrettYoung canola hybrid with Pod DefendR — a shatter reduction trait
- DefendR-rated clubroot and blackleg resistance
- Medium-long maturity suitable for mid- and long-season zones
- TruFlex canola hybrid equipped with the latest in herbicide trait technology

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity	Pod Shatter Tolerance Rating
106% ¹	R – CE ₂	Rlm3, Rlm7	R (Next-generation* resistance)	Excellent	+1.5 days ¹	8.0



A Mid-Maturity Hybrid with Full Season Yield Performance and DefendR-Rated Clubroot and Blackleg Protection

- DefendR-rated next-generation clubroot protection
- A unique blackleg major resistance gene effective against predominant blackleg races
- Mid-maturity suitable for mid- and long-season zones
- TruFlex canola hybrid equipped with the latest in herbicide trait technology

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity
102% ¹	R – E ₂	Rlm7	R (Next-generation* resistance)	Very Good	+0.9 days ¹



High-Performing, Mid-Maturity Hybrid with Advanced Disease Resistance Traits

- Pod integrity that is suitable for delayed swathing
- Next-generation clubroot resistance, including resistance to newer pathotypes such as 3A, 3D, 3H, and others
- DefendR-rated blackleg protection

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity
103% ¹	R – AG	RlmS, LepR3	R (Next-generation* resistance)	Very Good	+0.3 days ¹



New Level of Pod Shatter Resistance with Blackleg DefendR Protection

- Contains a new genetic source of pod shatter resistance well suited to direct harvest and delayed swathing systems
- DefendR-rated multi-genic blackleg resistance
- Excellent yield potential with mid-season maturity

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity	Pod Shatter Tolerance Rating
101% ¹	R – AG	Rlm3, RlmS	S	Very Good	+0.9 days ¹	7.2

Disease Management Rating: R = Resistant, IT = Improved Tolerance
¹ Yield and maturity ratings based on relative to check performance in co-op registration trials.
* Next-generation resistance includes pathotypes covered by 1st generation resistance plus resistance to newer pathotypes such as 3A, 3D, 3H, and other prevalent pathotypes.
** 1st generation resistance means resistant to pathotypes 2F, 3H, 5I, 6M, and 8N (these are equivalent to pathotypes 2, 3, 5, 6, 8 on the Williams’ Differential set).
*** Pending registration.



BrettYoung’s Premier TruFlex Canola Hybrid with Clubroot DefendR Protection

- TruFlex canola hybrid equipped with the latest in herbicide trait technology
- Clubroot resistance (next-generation* resistance), including resistance to newer pathotypes such as 3A, 3D, 3H, and others
- Medium-long maturity suitable for mid- and long-season zones

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity
104% ¹	R – C	Rlm3	R (Next-generation* resistance)	Excellent	+1.7 days ¹



TruFlex Canola Hybrid with Blackleg DefendR Protection

- TruFlex canola hybrid equipped with the latest in herbicide trait technology
- DefendR-rated blackleg resistance plus clubroot protection
- A true mid-maturity product suitable for all production zones

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity
102% ¹	R – CE ₁	Rlm3, Rlm4	R (1st generation** resistance)	Excellent	+0.1 days ¹



An Outstanding Yield Performer in the Clearfield® Segment

- 1st generation** clubroot protection
- Blackleg-resistant
- Can be marketed under the Clearfield (non-GMO) canola premium programs

Yield	Blackleg	Major Gene ID	Clubroot	Standability	Maturity
106% ¹	R – C	Rlm3	R (1st generation** resistance)	Excellent	+0.4 days ¹

Disease Management Rating: R = Resistant, IT = Improved Tolerance
¹ Yield and maturity ratings based on relative to check performance in co-op registration trials.
* Next-generation resistance includes pathotypes covered by 1st generation resistance plus resistance to newer pathotypes such as 3A, 3D, 3H, and other prevalent pathotypes.
** 1st generation resistance means resistant to pathotypes 2F, 3H, 5I, 6M, and 8N (these are equivalent to pathotypes 2, 3, 5, 6, 8 on the Williams’ Differential set).

FLEA BEETLE
& CUTWORM
CONTROL
MADE
SIMPLE.



Always read and follow label directions. Fortenza® Advanced is an on-seed application of Fortenza Seed Treatment insecticide and Rascendo® Seed Treatment insecticide. Fortenza®, Rascendo® and the Syngenta logo are trademarks of a Syngenta Group Company. © 2019 Syngenta.

Soybeans

This year is a big one for soybeans at BrettYoung, as we're launching three exciting new varieties: BY Hector XT, BY Deno XT, and BY Robson XT.

BY Hector XT is the earliest with 00.1 relative maturity and offers excellent defenses against iron deficiency chlorosis (IDC) and phytophthora root rot (PRR). BY Deno XT features a 00.3 relative maturity and comes equipped with an outstanding combination of yield and disease resistance, along with a semi-tolerant rating to IDC. BY Robson XT is a compact plant with unmatched standability and disease resistance with a 00.6 relative maturity.

Phytophthora Root Rot

Phytophthora root rot (PRR) is a fungal disease that attacks the roots and stems of your soybean plants. It can happen at any stage in the plant's life, and while it may seem scary, it's completely manageable. So, let's talk about what you can do about it.

This disease is part of the "water moulds" group and is most common in warm soils. PRR forms brown lesions on the soybean plant stems, which restricts the flow of water and nutrients to the plant. This eventually causes your plants to wilt and die.

BrettYoung Regional Account Manager for Eastern Manitoba, Michael Moore, recommends scouting for PRR if:

- Your field, or neighbouring fields that drain into yours, have a history of PRR infection
- There are areas in your crop where beans haven't emerged uniformly
- Plants are showing visible symptoms (yellow to brown leaves, brown lesions on stem)
- Your field has poor drainage or low spots
- Your field has been receiving steady rainfall

Moore said you can start scouting for the disease as soon as your soybean seeds start to germinate.

"If there are areas within rows where no plants are emerging, you can gently dig down to investigate," he said.

It's important to remember PRR can affect your soybean plants any time after they start bringing in water, so some seeds may rot before they even have the chance to germinate. Other seeds may germinate but die off before emerging, with a noticeable pinch at the top of the stem. This, commonly referred to as damping off, can make it hard to distinguish between Pythium and PRR.

Stem rot is another symptom of PRR and is easier to identify. It will show a clear brown lesion vertically on the stem, moving from the ground up. The top of the plant will remain green at the beginning, but will eventually succumb to the PRR and wilt, turn yellow, and die.

PRR is most common in soils with high clay content and lots of moisture, but it can show up anywhere. It's common in Manitoba, but still present in Saskatchewan.

"Once you have PRR in a field, it's very tough to get rid of," said Moore. "PRR spores can stay dormant for years but will break dormancy and germinate in the right conditions."

So, what can you do? You can manage the infection with:

- Crop rotation, ideally planting soybeans no more than every fourth year
- Soil sampling to determine which strain of PRR is present in your field so you can plant a variety with adequate resistance
- Field drainage
- Fungicide on-seed treatments
- Cleaning field equipment and vehicles before changing fields

Moore said preventing PRR is like managing it. Grow PRR-resistant soybean varieties, put your crops on rotation, drain your high moisture fields, use fungicide seed treatments, and clean equipment going in and out of different fields.

"PRR can be minor or catastrophic to your yield," said Moore. "It really depends on the level of infection present in the field, the variety seeded, and the environmental conditions."

Soybean Portfolio

BrettYoung brings premium soybean products specifically suited to growing conditions in Western Canada. Our soybeans are high-yielding with a range of characteristics to meet the distinct challenges of your farm.



For product performance information scan this QR code or visit brettyoung.ca/product-performance.

Variety	Brand	Trait	Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Plant/Canopy Type	Plant Height	Row Spacing	Standability	Seedling Vigour	Hilum	Pubescence	Flower
BY RUNDLE XT	BrettYoung	ROUNDUP READY 2 XTEND SOYBEANS	000.5 RM 2150 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps 1c/3a genes)	Very Good	Yes	Semi-bushy	Medium	7 to 22 inch	Excellent	Very Good	Grey to Black	Tawny	Purple
AMIRANI R2	ELITE	Roundup Ready 2 YIELD SOYBEANS	000.5 RM 2150 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps 1k gene)	Very Good	—	Semi-bushy	Tall	7 to 22 inch	Very Good	Excellent	Yellow	Brown	Purple
NEW BY HECTOR XT	BrettYoung	ROUNDUP READY 2 XTEND SOYBEANS	00.1 RM 2300 CHU	Very Good	Tolerant	VG Field Resistance (Rps 1c gene)	Very Good	—	Bushy	Tall	7 to 22 inch	Very Good	Excellent	Black	Tawny	Purple
SUNNA R2X	ELITE	ROUNDUP READY 2 XTEND SOYBEANS	00.3 RM 2375 CHU	Very Good	Tolerant	VG Field Resistance (Rps 1c gene)	Very Good	Yes	Bushy	Tall	7 to 30 inch	Very Good	Excellent	Grey	Tawny	Purple
AKRAS R2	ELITE	Roundup Ready 2 YIELD SOYBEANS	00.3 RM 2375 CHU	Excellent	Tolerant	VG Field Resistance (Rps 1c gene)	Very Good	—	Semi-bushy	Medium	7 to 22 inch	Excellent	Very Good	Imperfect Black	Grey	Purple
NEW BY DENO XT	BrettYoung	ROUNDUP READY 2 XTEND SOYBEANS	00.3 RM 2375 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps 1c gene)	Very Good	Yes	Semi-bushy	Medium	7 to 22 inch	Very Good	Good	Black	Light Tawny	Purple
BY RAINIER XT	BrettYoung	ROUNDUP READY 2 XTEND SOYBEANS	00.5 RM 2425 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps 1c gene)	Very Good	—	Semi-bushy	Tall	7 to 22 inch	Very Good	Excellent	Black	Tawny	Purple
NEW BY ROBSON XT	BrettYoung	ROUNDUP READY 2 XTEND SOYBEANS	00.6 RM 2450 CHU	Very Good	Semi-tolerant	Good Field Resistance (Rps 1c gene)	Good	—	Semi-bushy	Medium	7 to 22 inch	Excellent	Good	Black	Light Tawny	Purple

RM: Relative maturity; CHU: Corn heat units; IDC: Iron Deficiency Chlorosis; PRR: Phytophthora root rot; SCN: Soybean cyst nematode
Excellent (E) > Very Good (VG) > Good (G) > Poor (P)



Roundup Ready 2 Xtend® System — Minimize Weeds, Maximize Yields

Built on the high-yielding Roundup Ready 2 Yield® soybean technology, Roundup Ready 2 Xtend soybeans are the industry’s first biotech-stacked soybean trait with both dicamba and glyphosate herbicide tolerance.

With tolerance to glyphosate and dicamba, farmers will have access to additional tools to help control tough-to-manage broadleaf weeds.

The technology offers the yield and quality potential that farmers already know and trust from their Roundup Ready 2 Yield soybeans.

Benefits

- Employing multiple modes of action to control the same weed spectrum is part of a good weed resistance management strategy.
- Roundup Ready 2 Xtend soybeans are tolerant to both dicamba (Group 4) and glyphosate (Group 9), and are intended to provide soybean growers with the option of applying Roundup

WeatherMAX® herbicide (glyphosate) and dicamba for maximum weed control.

- The residual activity of dicamba may reduce early weed competition and improve late-season control, supporting higher yields, and cleaner fields at harvest.

To learn more, visit Traits.Bayer.ca

Soybean Varieties



Leading Ultra-Early Performance

- Excellent yield potential with ultra-early maturity
- Very good PRR resistance with stacked Rps1c/3a resistance genes
- Xtend herbicide system to help control tough-to-manage broadleaf weeds

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
000.5 RM 2150 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps1c/3a genes)	Very Good	Yes	Semi-bushy	Medium	Excellent	Very Good	7 to 22 inches	Grey to Black



Performance Way Beyond Its Class

- Excellent yield potential
- Excellent spring vigour
- Excellent standability
- Extreme early maturity

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
000.5 RM 2150 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps1k gene)	Very Good	No	Semi-bushy	Tall	Very Good	Excellent	7 to 22 inches	Yellow



Strong Yields and Excellent Defensive Characteristics

- Strong yield potential and early maturity
- Excellent IDC and PRR tolerance and very good white mould
- Tall, bushy plant

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
00.1 RM 2300 CHU	Very Good	Tolerant	VG Field Resistance (Rps1c gene)	Very Good	No	Bushy	Tall	Very Good	Excellent	7 to 22 inches	Black



Impressive Size, Shape, and Yield

- Tall, bushy variety
- Good choice for heavier soils and wider rows
- Very good PRR field tolerance and SCN resistance
- Excellent early season vigour

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
00.3 RM 2375 CHU	Very Good	Tolerant	VG Field Resistance (Rps1c gene)	Very Good	Yes	Bushy	Tall	Very Good	Excellent	7 to 30 inches	Grey



The Standard in Pod Height

- Exceptional combination of yield, maturity, and dependable performance
- Widely adapted to provide high yield potential throughout early- and mid-season maturity zones
- Very high first pod

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
00.3 RM 2375 CHU	Excellent	Tolerant	VG Field Resistance (Rps1c gene)	Very Good	No	Semi-bushy	Medium	Excellent	Very Good	7 to 22 inches	Imperfect Black



Outstanding Combination of Yield and Diseases Resistance

- High yield potential
- Excellent defensive package with very good PRR and white mould

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
00.3 RM 2375 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps1c gene)	Very Good	Yes	Semi-bushy	Medium	Very Good	Good	7 to 22 inches	Black

RM: Relative maturity; CHU: Corn heat units; IDC: Iron Deficiency Chlorosis; PRR: Phytophthora root rot; SCN: Soybean cyst nematode
Excellent (E) > Very Good (VG) > Good (G) > Poor (P)



Great Performance for the Red River Valley

- Very good yield potential
- Tall plant height
- Good IDC and PRR tolerance

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standabil-ity	Seedling Vigour	Row Spacing	Hilum
00.5 RM 2425 CHU	Very Good	Semi-tolerant	VG Field Resistance (Rps1c gene)	Very Good	No	Semi-bushy	Tall	Very Good	Excellent	7 to 22 inches	Black



Big Yields and Great Standability

- Great yield potential
- Compact plant with excellent standability
- Excellent fit in the Red River Valley

Maturity	Pod Height	IDC	PRR	White Mould	SCN Resistant	Canopy Type	Plant Height	Standability	Seedling Vigour	Row Spacing	Hilum
00.6 RM 2450 CHU	Very Good	Semi-tolerant	Good Field Resistance (Rps1c gene)	Good	No	Semi-bushy	Medium	Excellent	Good	7 to 22 inches	Black

RM: Relative maturity; CHU: Corn heat units; IDC: Iron Deficiency Chlorosis; PRR: Phytophthora root rot; SCN: Soybean cyst nematode
Excellent (E) > Very Good (VG) > Good (G) > Poor (P)



BY PLUS is BrettYoung’s digital communications program that ensures that you receive timely information and have opportunities to connect with BrettYoung product support and your local BrettYoung representative.

Signing up for BY PLUS gives you:

- The latest news on BrettYoung, useful production information, and agronomic support and advice
- Access to the best offers through BrettYoung Retailers, including product discounts and re-seed benefits

- First look and preferred access to new BrettYoung products
- Opportunities to tell us how BrettYoung products performed on your farm



Sign up by visiting brettyoung.ca/BYPLUS

Forages & Corn

BrettYoung forages are designed to meet the distinct needs of your farm. They feature industry-leading genetics and the highest seed quality available.

Our silage and grazing corn hybrids are specifically selected for Western Canadian conditions to deliver high yields and consistent performance you can count on.

In 2024, BrettYoung is launching BY Guernsey VT2P RIB, a leading silage and grazing hybrid with broad adaptability and reliable performance that gives you a broad spectrum of protection against above-ground pests. It comes equipped with VT Double PRO® RIB Complete® tech, the first double-stacked corn trait with two modes of action to help control ear-feeding insects.

On the forage side, we're launching , Torsion, a new meadow brome selected for its high yield and rapid regrowth. It offers you an improved forage yield with a similar maturity to Fleet Meadow Brome.

Forages are at the core of what we have been doing for decades, and now they come with a broadened offer: silage and grazing corn.

"We're looking at feed rations for your herd as an entirety," said Mark Hagen, BrettYoung Sales Manager for Alberta. "We're selecting corn hybrids based on the traits that are desired when it comes to making a feed rather than grain."

That means we're looking at how long the plant stays green, making sure it has a slower drydown time for silage, if it's suitable for grazing, the overall plant structure, and more.

"We also have a phenomenal alfalfa lineup that covers everything a grower may want," said Hagen. "And we're constantly re-evaluating our stock blends to make sure those offerings are being utilized and are properly tailored to where they're at. If they need to be adjusted, we're making those adjustments."

BrettYoung has 17 stock blends, seven of which we call SUPER blends. SUPER Blends are our proven performers with outstanding quality and persistence. Our stock blends have been carefully crafted so there's one to suit the needs of almost every situation. We have hay blends, pasture blends, and dual-purpose blends for you to choose from — but if you don't find one that suits your fancy, our Regional Account Managers (RAMs) will work with you to create your perfect custom blend.

"One product that sets us apart is Blend 4440," said Hagen. "It's a blend using our top certified alfalfa varieties."

Blend 4440 is always improving. As new alfalfa varieties are developed, we add them to Blend 4440 to ensure it offers growers the best genetics on the market, with a range of characteristics, making it widely adapted to the many growing conditions in Western Canada.

Blend 4440 has high yield potential, excellent winter hardiness, and disease resistance like no other.

For 2024, it's comprised of:

- **Ace:** exceptional yield and quality
- **Barricade II:** salt-tolerant with an outstanding disease package and high yields
- **Dynamo:** high multifoliate expression
- **Foothold:** spreading root type with exceptional winter hardiness, improved disease resistance
- **Reload:** branch root for optimum performance in poorly drained soils
- **Stronghold:** delivers excellent winter survival, good quality, persistence

When planting a new forage stand, establishment can sometimes be out of your hands. Luckily, we've got an answer for you there, too.

When you grow an eligible BrettYoung forage, you can enroll in our Forage Establishment Guarantee. In the event of an establishment failure, you don't have to panic. If you sign up before April 1 and follow our seeding guidelines, we'll cover up to 100% of your replacement seed cost. If you sign up before April 30, we'll cover up to 50% of it.

"The Establishment Guarantee rewards you for ordering earlier, and at that time of year there's good availability of the products you want," said Hagen.

At BrettYoung, we don't sit back when it comes to forages — we're constantly adapting to you and your needs. To learn more, download our Forage Product Guide.

Corn Hybrids



High Performance with Broad Adaptation

- High-yielding flint/dent ideal for silage and grazing
- Widely adapted for use across Western Canada
- White cob hybrid with excellent grain quality and slow drydown for a wider harvest window

Genetic Trait:	Roundup Ready® Corn 2
Relative Maturity:	78
Grain CHU:	2250
Silage CHU:	2150
Spring Vigour:	Good
Plant Height:	Medium-tall
Stalk Strength:	Very Good
Root Strength:	Very Good
Drought Tolerance:	Very Good
Silage Potential:	Excellent
Ear Type:	Semi-flex
Husk Cover:	Good
Test Weight:	Excellent
Drydown:	Slow
Target Population:	30–34 K
Northern Corn Leaf Blight:	Good
Goss's Wilt:	Good



Great Performance with Insect Resistance

- High yielding flint/dent ideal for silage and grazing
- Excellent late season stay-green and eye appeal with good stalks and roots
- Early flowering white cob hybrid with high grain quality and slow drydown
- Consistent ear development down the row

Genetic Trait:	VT Double PRO® Corn
Relative Maturity:	78
Grain CHU:	2250
Silage CHU:	2150
Spring Vigour:	Good
Plant Height:	Medium-tall
Stalk Strength:	Very Good
Root Strength:	Very Good
Drought Tolerance:	Very Good
Silage Potential:	Excellent
Ear Type:	Semi-flex
Husk Cover:	Good
Test Weight:	Very Good
Drydown:	Slow
Target Population:	30–34 K
Northern Corn Leaf Blight:	Good
Goss's Wilt:	Good



Consistent High Performance

- High-yielding hybrid well suited for silage and grazing in longer season areas
- Excellent root and stalk strength
- Broadly adapted to various soil types
- Impressive disease tolerance, including very good resistance to Goss's Wilt

Genetic Trait:	Roundup Ready® Corn 2
Relative Maturity:	83
Grain CHU:	2450
Silage CHU:	2350
Spring Vigour:	Very Good
Plant Height:	Medium
Stalk Strength:	Excellent
Root Strength:	Very Good
Drought Tolerance:	Very Good
Silage Potential:	Very Good
Ear Type:	Semi-flex
Husk Cover:	Good
Test Weight:	Good
Drydown:	Average
Target Population:	30–34 K
Northern Corn Leaf Blight:	Very Good
Goss's Wilt:	Very Good



Excellent (E) > Very Good (VG) > Good (G) > Poor (P)

Forages

BrettYoung is your full-service forage seed supplier. With over 80 years serving Western Canadian growers, we have the products, service, and knowledge to deliver you a productive forage stand.

Download our Forage Guide

BrettYoung’s Forage Guide includes information on each of our industry-leading varieties, each of our stock blends, and forage-specific agronomic tips.

For more information, go to brettyoung.ca/forages or scan the QR code



Try our Stock Blend Selector

BrettYoung’s online tool helps you narrow down your stock blend options based on your use and soil type.

For more information, go to brettyoung.ca/stock-blend-selector or scan the QR code



Enroll in our Forage Establishment Guarantee

BrettYoung’s Establishment Guarantee ensures your forage seed investment doesn’t go to waste.

For more information, go to brettyoung.ca/establishment-guarantee or scan the QR code



BUTEO[®] start

PROTECT THAT START OF THE SEASON FEELIN’ FROM FLEA BEETLES

BUTEO[®] start is the powerful seed treatment that protects your canola and your start of the season spirit. BUTEO start is specifically engineered to defend your canola against early flea beetle pressure, delivering unparalleled protection right through the three-leaf stage putting you on the path to strong plants and even stronger yields. So make this year one for the record books and start strong with BUTEO start.



BUTEOstart.ca | 1 888-283-6847 | [@Bayer4CropsCA](https://www.instagram.com/Bayer4CropsCA) | [#AskBayerCrop](https://www.facebook.com/AskBayerCrop)

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Biologicals

Our biological lineup is industry-leading, featuring distinct inoculant technologies to provide you improved performance in tough conditions.

Ensuring Your Inoculants Work in Every Condition

Choosing the right inoculant isn’t about what you want — it’s about what you need. It means balancing performance, ease of use, and cost factors.

Our inoculant lineup features a range of products including both granular and liquid inoculants.

Granular Inoculants

Granular inoculants are widely used in Western Canada for their ability to protect rhizobia and ensure inoculant survival. They allow for maximum flexibility with seed treatments and fertilizers as they’re applied to the soil separately from the seed.

The challenge with granular inoculants is they’re bulky. And though their separate application can be a benefit in some ways, it means they must be handled separately during seeding, which requires you to have suitable equipment.

Liquid Inoculants

Liquid inoculants are applied directly onto your seed, eliminating the extra handling. They’re less expensive per acre than granular inoculants, too.

Liquid inoculants can be applied with a chemical seed treatment application. Advances in liquid inoculant manufacturing technology have significantly improved the on-seed life of some liquid inoculants, but growers using one should be aware of its on-seed life and compatibility with chemical seed treatments.

There are a few key items to think about when it comes to choosing your inoculant. You need to know if it will work in conjunction with your seed-applied products. You need to choose between a granular or liquid inoculant. The most significant factor to consider, however, is the risk of nodulation failure in a particular crop.

In fields with little or no history of soybeans or pulse crops, or those that have experienced flooding or significant drought, double inoculation (using both a granular in-furrow and liquid on-seed inoculant) is the best strategy.

Double inoculating increases the number of rhizobia in the soil and distributes them more broadly in the seed row, which maximizes your crop’s opportunity to fix nitrogen when background rhizobia populations in the soil are low.

Compatibility Testing

BrettYoung inoculants work in every condition. Our partner, Rizobacter, uses a robust compatibility testing process, which ensures their products perform in the field with seed-applied products. The process includes on-seed rhizobia counts and grow-outs of treated seeds to ensure those rhizobia not only survive but form sufficient nodules to support your crop.

In Rizobacter’s compatibility testing process, seeds are treated and inoculated, then held at temperatures that represent real world conditions, measuring the on-seed life of the inoculant with seed-applied products.

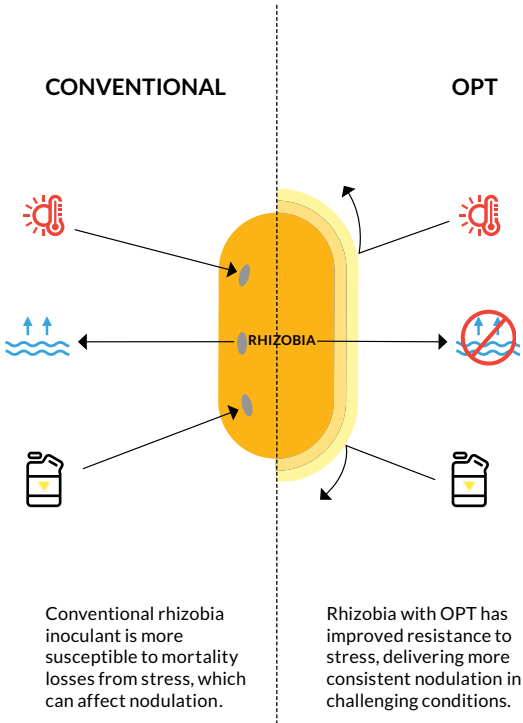
These seeds are then planted in sterile soil media to ensure only the rhizobia on the seed are present for the test. The plants then grow and form nodules before being removed from the soil to measure the number, size, and position of the nodules on each plant.

“This robust testing process allows us to support some of the longest on-seed life ratings on the market,” said BrettYoung Corn, Soybeans, and Biologicals Product Manager Vikas Chand. “And to stand behind our products with confidence.”

Osmo Protector Technology (OPT)

Osmo Protector Technology strengthens the cell walls of rhizobial bacteria through a longer, stress-inducing manufacturing process. This enhances on-seed survival and performance in challenging environments including high temperature, low moisture availability, and chemical (seed treatment) stresses.

Many of BrettYoung’s inoculants come equipped with Osmo Protector Technology, which features high-performance bacteria with longer on-seed survival. Rhizobia with Osmo Protector Technology are also better equipped to withstand the tough Prairie conditions like hot, dry soils and to survive exposure to seed treatments.



Bio-Inducer Technology

To accomplish nodulation, plant roots and rhizobia bacteria communicate using chemical signals. In turn, rhizobia respond with additional chemical signals (called nodulation determinants) initiating the nodulation process.

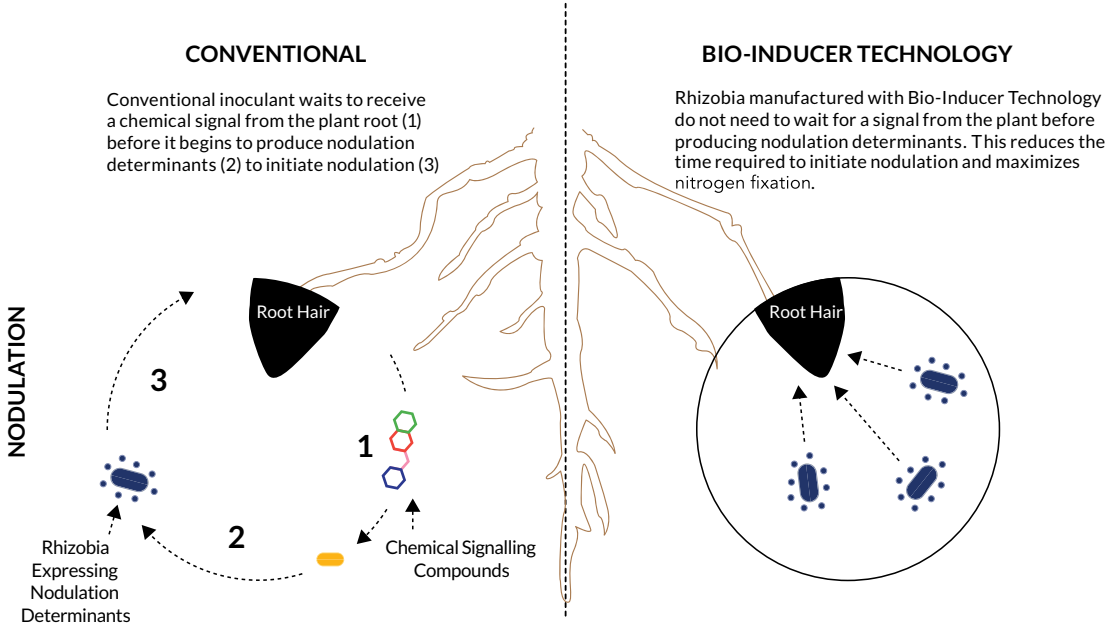
These nodulation determinants include:

- **Nod Factors** — Chemical compounds released by the rhizobia bacteria signaling the plant to initiate nodulation
- **Lipopolysaccharides (LPS)** — Long chain fatty acid molecules responsible for the development of the infection tube
- **Type Three Secretion System (T3SS)** — A protein structure used to transport substances between the cells of the rhizobia and the plant

Bio-Inducer Technology assists in the process by stimulating earlier production of specific nodulation determinants through introducing rhizobia to plant-based signaling compounds, called Bio-Inducer components, during the manufacturing process. These compounds mimic what plant roots release naturally in the soil, inducing the rhizobia to respond by releasing nodulation determinants, as if they were already in the presence of a receptive host.

The early presence of these nodulation determinants accelerates the nodulation process in the soil and improves nodulation on a plant’s crown and primary roots, where nodules are most effective. This maximizes nitrogen fixation and yield potential, delivering more consistent performance under all conditions.

Signum® Soybean inoculants come equipped with Bio-Inducer Technology, which accelerates and improves nodulation. This not only maximizes nitrogen fixation but improves yield potential for your crop.





Signum Soybean is an effective and convenient inoculant equipped with both Osmo Protector and Bio-Inducer Technology to promote quicker biological fixation of nitrogen, allowing soybean growers to maximize yields even in stressful growing conditions.

- High concentration
- Bio-inducers
- Enhanced performance in challenging environments
- Longer survival on-seed
- Convenient all-in-one liquid formulation



Osmium Pea/Lentil is a convenient liquid inoculant featuring Osmo Protector Technology to provide pea and lentil growers with longer on-seed survival and enhances performance in challenging environments.

- Enhanced performance in challenging environments
- Longer survival on-seed
- Convenient all-in-one liquid formulation



Osmium Chickpea is an inoculant featuring Osmo Protector Technology that provides chickpea growers with a liquid formulation that has on-seed survival that outperforms all other peat and liquid inoculants and enhance performance in challenging environments.

- Enhanced performance in challenging environments
- Longer survival on-seed
- Convenient all-in-one liquid formulation

Formulation:	Liquid Suspension
Guaranteed Analysis:	Bradyrhizobium japonicum 1 x 10 ¹⁰ CFU/ml
Technology:	Bio-Inducer Technology, Osmo Protector Technology
Crops:	Soybean
Application:	On-seed
Application Rate:	130 ml/100 kg, 2 fl. oz./100 lbs
On-Seed Life:	Up to 120 days ¹
Package Size:	11.84 L (400 fl.oz.) – treats 400 units (20,000 lbs); 1.18 L (40 fl. oz.) – treats 40 units (2,000 lbs)

Formulation:	Liquid Suspension
Guaranteed Analysis:	Rhizobium leguminosarum bv. Viciae 1 x 10 ⁹ CFU/ml
Technology:	Osmo Protector Technology
Crops:	Pea, Lentil and Faba Bean
Application:	On-seed
Application Rate:	200 ml/100 kg, 3 fl. oz./100 lbs
On-Seed Life:	Up to 15 days ¹
Package Size:	2 x 5.45 L (2 x 184 fl. oz.) – treats 200 bu (12,000 lbs)

Formulation:	Liquid Suspension
Guaranteed Analysis:	Mesorhizobium Ciceri 1 x 10 ⁹ CFU/ml
Technology:	Osmo Protector Technology
Crops:	Chickpea
Application:	On-seed
Application Rate:	200 ml/100 kg, 3 fl. oz./100 lbs
On-Seed Life:	Up to 15 days ¹
Package Size:	2 x 5.45 L (2 x 184 fl. oz.) – treats 200 bu (12,000 lbs)



Formulation:	Liquid Suspension
Guaranteed Analysis:	Bradyrhizobium japonicum 4 x 10 ⁹
Crop:	Soybean
Application:	On-seed or In-furrow
On-Seed Application Rate:	130ml/100kg, 2 fl. oz/100 lbs
In-Furrow Application Rate:	5ml/100m, 0.5 fl. oz/1,000 ft
On-Seed Life:	Up to 4 days ¹
Package Size:	11.84 L (400 fl. oz.) – treats 400 units (20,000 lbs); 1.18 L (40 fl. oz.) – treats 40 units (2,000 lbs)



Formulation:	Peat Granular
Guaranteed Analysis:	Bradyrhizobium japonicum 1 x 10 ⁸
Crop:	Soybean
Application:	In-furrow
In-Furrow Application Rate:	3.8 lbs/ac (4.4 kg/ha) 12-inch row
Package Size:	18.14 kg (40 lbs) or 235.87 kg (520 lbs)



Formulation:	Peat Granular
Guaranteed Analysis:	Rhizobium leguminosarum biovar viciae 1 x 10 ⁸
Crop:	Pea, Lentil
Application:	In-furrow
In-Furrow Application Rate:	3.8 lbs/ac (4.4 kg/ha) 12-inch row
Package Size:	18.14 kg (40 lbs) or 235.87 kg (520 lbs)



¹ Visit brettyoung.ca/compatibility for seed treatment compatibility information

Bio-Inducer Technology	<div>*Included In </div>	Bio-Inducers Accelerates initial, early communication between rhizobia and plant roots and triggers earlier nodulation for maximum nitrogen fixation.
Osmo Protector Technology	<div>*Included In </div>	Enhanced Performance in Challenging Environments Osmo Protector Technology results in tougher bacteria that enhances performance in the field under adverse conditions. This includes high temperatures, low water availability, and chemical (seed treatment) stresses.
Longer Survival On-Seed Osmo Protector Technology provides added protection for longer on-seed survival without requiring an extender. This allows growers much greater planting window flexibility compared to other seed-applied liquid and peat inoculants.		

Producing Seed for BrettYoung

Forage and turf seed production is an excellent way to diversify your risk and add profitable cropping options to your rotation. When you partner with BrettYoung, we help you with every step, from planning and production to harvest and delivery.

Agronomic and Management Benefits of Forage Seed Production

Forage and turf seed production offers many advantages to your farm. BrettYoung works with a wide range of species and can provide unique seed production opportunities to fit your farm’s needs.

Grass Seed Production

Available species are Perennial Ryegrass, Tall Fescue, Annual Ryegrass, Fine Fescue, Meadow Fescue, Timothy, and Bromegrass.

Benefits include:

- Early harvest splits up the fall workload
- Increases organic matter to improve soils
- Some species have tolerance to salinity, alkalinity, and acidity
- Perennial options with multiple crop years, reducing the planting season workload

Legume Seed Production

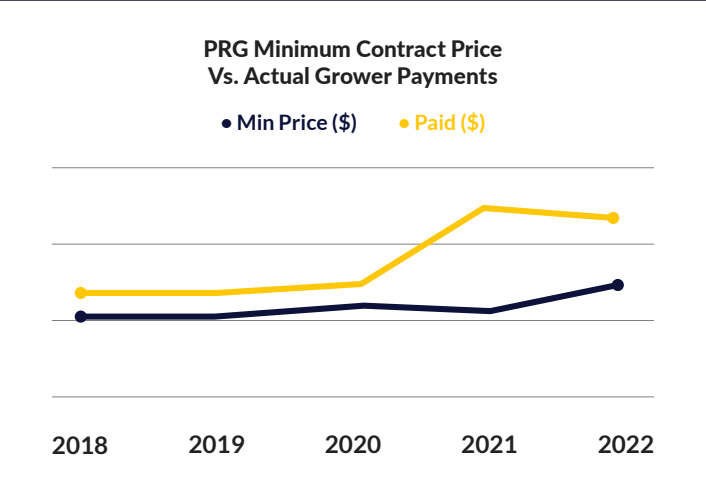
Available species are Alfalfa, Clover, and Trefoil.

Benefits include:

- Improves soil health
- Low input
- Nitrogen fixation
- Rotational benefits for following annual crops
- Multiple crop years reduce the planting season workload

Economic Benefits

Forage and turf seed production has an excellent profitability track record. BrettYoung’s seed production contracts allow growers to lock in a minimum price without limiting upside, helping add to your bottom line.



Seed Grower Partnership Program

The Seed Grower Partnership Program (SGPP) provides BrettYoung seed growers with tools to help manage risk and maximize the profitability of forage and turf seed production.

Ask a Seed Production Specialist about SGPP and how you can qualify.

Seed Production Specialist Territory Map



BrettYoung’s dedicated team of Seed Production Specialists are here to guide you with every aspect of forage and turf seed production to help you maximize your field’s potential.

Planning

- Scouting and field selection
- Species selection
- Cover crop recommendations
- Production planning
- Contract terms

Harvest

- Harvest timing recommendations
- Equipment setting recommendations
- Crop sample collection
- Post-harvest recommendations

Production

- Delivery of stock seed
- Multiple field scouting visits
- Fertility recommendations
- Herbicide, fungicide, and growth regulator recommendations

Delivery

- Communication of delivery schedule
- Communication of quality analysis
- Communication of grower payments



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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with products with Roundup Ready 2 Xtend® soybeans. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED AND APPROVED FOR SUCH USES. Contact the Pest Management Regulatory Agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® soybeans or products with XtendFlex® Technology.

Roundup Ready® 2 Technology contains genes that confer tolerance to glyphosate. Roundup Ready 2 Xtend® soybeans contains genes that confer tolerance to glyphosate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Contact your Bayer retailer, refer to the Bayer Technology Use Guide, or call the technical support line at 1-888-283-6847 for recommended Roundup Ready® Xtend Crop System weed control programs.

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Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, **including applicable refuge requirements for insect resistance management**, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology/Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.

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