At BrettYoung, we strive to be a company like no other. We are proud of our strategic partnerships with world-class organizations through which we source leading technologies and genetics.

We are passionate about bringing choice through distinct and leading products which help keep your business profitable while backing them with knowledge and experience.

The ag industry has undergone significant change as consolidation continues and the number of choices declines.

Yet BrettYoung remains a family-owned company. We have strong connections to local markets where, along with investment in innovation and infrastructure, we continue to grow our presence.

We succeed in our markets by bringing distinct choices that deliver performance and value. By design, our success is deeply rooted within your success; the two are intertwined and grow together.

We are Distinct By Design and we wouldn’t have it any other way.
Realize your yield potential with BrettYoung canola. BrettYoung has industry-leading varieties in the Genuity® Roundup Ready® and Clearfield® systems, sourcing the best technology and genetics to keep your business profitable.

BrettYoung’s premium canola genetics also carry the DefendR™ trait platform as part of an active disease management strategy.
LEADING GENETICS IN CANOLA

Our Strategic Canola Breeding Partner

DL Seeds is our canola breeding partner and the source of our high-performance, industry-leading, 6070 RR and 6080 RR. DL Seeds’ focus on canola is second to none. It includes a large trial network across Western Canada and the Northern United States, with seven trial sites in North Dakota alone, all testing top-performing canola hybrids for the North American market. DL Seeds continues to increase its breeding capacity to deliver the bottom line impact that North American farmers are looking for in a profitable canola hybrid.

The DL Seeds head office is located in Morden, Manitoba, with greenhouses and a double-haploid and gene marker lab located at BrettYoung’s Winnipeg facility, plus satellite locations in Saskatoon and Edmonton. A closer look at DL Seeds reveals that there is much more than just the Canadian-based operations. DL Seeds’ two German-based parents — DSV and NPZ Lembke — currently with more than 600 staff, are long-standing canola and winter oilseed rape breeding companies in the highly competitive European marketplace.

Both DSV and NPZ Lembke were involved in these crops right from the start of their development in the mid-70s. Today, DSV and NPZ Lembke have the number one combined market share position in the 22-million-acre European Union and Commonwealth of Independent States’ spring canola and winter oilseed rape markets. At home in Germany, their combined market share is close to 50%.

DL Seeds — along with its parent companies — is truly a global oilseed breeding powerhouse, with more than 15 oilseed/canola breeders operating in North America, Europe and Australia. The breeding program has unrivalled access to diverse germplasm that year after year produces new high-yielding canola varieties with leading Blackleg resistance and excellent tolerance to other diseases like Clubroot (including 5x pathotype), and now Sclerotinia.

This continued investment in people and technology keeps DL Seeds in the forefront of canola breeding in North America.

Learn more about DL Seeds, DSV and NPZ Lembke at their respective websites: www.dlseeds.ca; www.dsv-seeds.com; www.npz.de.
BrettYoung is proud to introduce the DefendR trait platform as part of an active disease management strategy. The DefendR designation is used to signal exceptional genetic resistance or tolerance to the big three disease complexes affecting canola: Sclerotinia, Clubroot and Blackleg. DefendR is reserved for use only on BrettYoung varieties that deliver significantly above industry-average levels of genetic resistance or tolerance to one or more of the prominent canola diseases. It is our nod to the strength of the breeding program with our primary canola partner, DL Seeds, and a promise to canola growers that they are purchasing a variety that has leading genetics for disease management in a canola hybrid with exceptional yield potential.

### DefendR™ Genetic Traits

<table>
<thead>
<tr>
<th>Disease Resistance Trait</th>
<th>Minimum Resistance Level</th>
<th>Varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DefendR</strong> Sclerotinia</td>
<td>Improved Tolerance (IT) to Sclerotinia Stem Rot</td>
<td>6074 RR</td>
</tr>
<tr>
<td><strong>DefendR</strong> Blackleg</td>
<td>Multi-genic resistance to Blackleg, strong R rating</td>
<td>6090 RR, 4187 RR, 4157 RR, 5545 CL</td>
</tr>
<tr>
<td><strong>DefendR</strong> Clubroot</td>
<td>Resistant to Clubroot pathotypes (2, 3, 5, 6, and 8) and intermediate or greater resistance to pathotype 5x</td>
<td>–</td>
</tr>
</tbody>
</table>

For growers wanting to further reduce the impact of this disease, BrettYoung’s DefendR Sclerotinia tolerance trait is built into 6074 RR. Screening and testings results for 6074 demonstrate improved tolerance superior to susceptible checks using industry-approved testing protocol.

The DefendR trait in 6074 RR provides Sclerotinia tolerance at levels that will:

- Reduce the impacts of infection and reduce yield loss whenever disease pressure is present
- Allow for greater flexibility in fungicide application timing when flowering is uneven and staggered, which otherwise makes fungicide application timing difficult
- Reduce the impact of Sclerotinia in long-flowering crops where the window of fungicide protection has lapsed

DefendR Blackleg

Sclerotinia Tolerance – internal stem infection

Blackleg is back in the spotlight as a disease that is evolving and making a strong resurgence in intensive canola production areas. Most agree that managing this disease requires a combination of rotation, crop management (including regular field scouting) and proper variety selection as important factors to reducing the impact of this disease.

The DefendR Blackleg trait means the BrettYoung canola variety is rated as a strong R for Blackleg resistance. It also means that the variety incorporates multiple major genes to defend against multiple strains of Blackleg. DefendR Blackleg varieties achieve a broader level of resistance compared to competitive R-rated varieties that have either no or only one major gene for Blackleg resistance.

DefendR Clubroot

Clubroot was first identified in the Langdon area of North Dakota in 2013. 2014 saw severe symptoms in a number fields. Multiple risk management approaches are recommended including the use of resistant cultivars, crop rotations and reduced tillage.

The DefendR Clubroot trait is resistant to all previously identified pathotypes (2, 3, 5, 6, & 8), but also has intermediate resistance or better to the recently identified 5x pathotype. BrettYoung will continue to commercialize DefendR-rated Clubroot resistant genetics coupled to high yielding, high performance varieties.
Canola Portfolio – Summary of Key Characteristics

<table>
<thead>
<tr>
<th>Variety</th>
<th>System</th>
<th>Yield Potential*</th>
<th>Average % Oil Content</th>
<th>Plant Height (inches)</th>
<th>Blackleg Rating</th>
<th>Major Gene ID</th>
<th>Clubroot Rating</th>
<th>Clubroot Rating</th>
<th>Seed Size</th>
<th>Relative Days to Maturity*</th>
<th>Seedling Vigor</th>
<th>Lodging Rating</th>
<th>Adaptability for Direct Harvest</th>
<th>Harvestability</th>
</tr>
</thead>
<tbody>
<tr>
<td>6070 RR</td>
<td>Genuity® Roundup Ready®</td>
<td>1</td>
<td>2</td>
<td>42</td>
<td>R - C</td>
<td>Rlm 3</td>
<td>-</td>
<td>-</td>
<td>M</td>
<td>91</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Excellent</td>
</tr>
<tr>
<td>NEW</td>
<td>Genuity® Roundup Ready®</td>
<td>1</td>
<td>3</td>
<td>42</td>
<td>R - CE&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Rlm 3+4</td>
<td>R</td>
<td>-</td>
<td>M</td>
<td>91</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>Excellent</td>
</tr>
<tr>
<td>NEW</td>
<td>Genuity® Roundup Ready®</td>
<td>1</td>
<td>2</td>
<td>43</td>
<td>R (Multi-genic)</td>
<td>Undisclosed</td>
<td>R</td>
<td>-</td>
<td>M</td>
<td>91</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>Excellent</td>
</tr>
<tr>
<td>NEW</td>
<td>Genuity® Roundup Ready®</td>
<td>1</td>
<td>1</td>
<td>42</td>
<td>R (Multi-genic)</td>
<td>Undisclosed</td>
<td>-</td>
<td>-</td>
<td>M</td>
<td>92</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Excellent</td>
</tr>
<tr>
<td>6080 RR</td>
<td>Genuity® Roundup Ready®</td>
<td>1</td>
<td>2</td>
<td>41</td>
<td>R - C</td>
<td>Rlm 3</td>
<td>-</td>
<td>-</td>
<td>M</td>
<td>90</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>Excellent</td>
</tr>
<tr>
<td>6074 RR</td>
<td>Genuity® Roundup Ready®</td>
<td>1</td>
<td>3</td>
<td>43</td>
<td>R - C</td>
<td>Rlm 3</td>
<td>-</td>
<td>IT</td>
<td>M</td>
<td>91</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>Excellent</td>
</tr>
<tr>
<td>5545 CL</td>
<td>Clearfield®</td>
<td>1</td>
<td>2</td>
<td>43</td>
<td>R - CE&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Rlm 3+4</td>
<td>-</td>
<td>-</td>
<td>M</td>
<td>90</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

1 Estimated yield potential based on Canadian Registration Co-op trial and US University Trial results
2 Maturity based on NDSU and private trial data converted to 90 DTM bias

**Ratings**

1 = Excellent
2 = Very Good
3 = Good
4 = Fair

**Oil Content Rating**

1 = >2.5% above variety checks
2 = 1 – 2.5% above variety checks
3 = 0 – 1% above variety checks
4 = < variety checks

**Seed Size (seeds per lb)**

L = Large (<100K)
M = Medium (100K to 120K)
S = Small (>120K)

**Disease Rating**

R = Resistant
IT = Increased Tolerance vs susceptible varieties (WCC/RCC – approved protocols)

Industry-Leading Varieties

Realize your yield potential with BrettYoung canola. BrettYoung has industry-leading varieties in the Genuity® Roundup Ready® and Clearfield® systems, sourcing the best technology and genetics to keep your business profitable.

**Canola Portfolio – Summary of Key Characteristics**

Developed by: NEW CANOLA PORTFOLIO

**Harvestability in canola goes hand-in-hand with a hybrid’s ability to resist lodging. The first factor of an easy harvest is putting down a good swath; lodging and resistance is the key. The second factor is ease of combining.**

We select products that have excellent standability and harvesting characteristics to carry the Excellent Harvestability rating. The harvestability rating is based on plot trial data and field scale experience. Excellent Harvestability is the hallmark of our canola portfolio.
Control What You Can Control

Manage the factors of success within your control to be optimally prepared for the factors beyond your control.

Hybrid Selection

Hybrids are developed with yield, maturity and disease resistance as the key selection criteria. Selecting the proper hybrid for your situation is key for maximum yield performance.

Disease Management

Blackleg, Clubroot, and Sclerotinia are significant diseases plaguing canola crops in the Northern US.

Blackleg:
The management of the disease involves an integrated system: field scouting, use of resistant varieties, crop rotation and fungicide application.

Clubroot:
Choosing resistant hybrids, crop rotation, reduced tillage, and proper equipment sanitation are all key management practices to reduce Clubroot incidence.

Sclerotinia:
Choosing varieties with excellent standability and genetic resistance, along with field monitoring and fungicide applications when conditions warrant, are the best approach to managing Sclerotinia.

Seed Early

Data from university research conducted in the Northern US show the potential benefits in yield outweigh the risks of frost damage by seeding canola early. Considerations when seeding early include increasing the seeding rate to account for higher seedling losses early in spring. We recommend increasing target seedling rate by 10–20% for early season planting.

Seed to a Target Population

Canola has traditionally been seeded at 5 lbs per acre. This was fine when all varieties were open-pollinated. Modern hybrids can vary significantly in seed size and can perform better at lower plant populations than previous research has shown with open-pollinated varieties. Target for populations of more than five plants per square foot for hybrid varieties.
Fertilize for Optimum Yield

Nitrogen and sulfur are key nutrients for high canola yields. A 2000 lb/acre crop will use 120–140 lbs/acre of nitrogen and 25–30 lbs/acre of sulfur. Canola is a high user of sulfur relative to other crops. Sulfur is taken up by canola in the sulfate form. Elemental sulfur is not immediately available to the canola plant, so fertilizer programs incorporating sulfate fertilizer are recommended for sulfur-deficient soils.

Early Weed Control

Weeds are highly competitive, and can use up resources — moisture, nutrients, access to sunlight — that would otherwise be available to the crop. Yield loss from weed competition can be significant. Best practices are to control weeds early with a combination of pre-seed weed control and one in-crop application before the 4-leaf stage.

Monitor Insects Early

Canola is susceptible to damage early in the spring by flea beetles. Seed is treated with insecticide to protect against flea beetle damage. Under certain conditions, flea beetle pressure may require additional post-emergent insecticide applications. Monitor the crop at emergence for flea beetle pressure. If damage is evident, monitor closely and be prepared to spray if cotyledon damage exceeds 10–20%. Once plants are larger at the 1-2 leaf stage, the canola is able to outgrow the potential damage. Early damage to cotyledons and stems at emergence and cotyledon stage is normally protected by Helix Vibrance seed treatment but needs to be monitored closely.

Swath Timing

Don’t swath too early. Research indicates that the optimum time to swath is when an average of 60% seed color change (SCC) appears on the main stem. Delaying swathing of any canola variety up to this stage can typically improve yield and quality through increased seed size, reduced green seed and higher oil content, while avoiding economic shattering losses prior to or during swathing.

Dry Crops Sufficiently

Improper storage of canola can be costly. Dry canola as soon as possible, and if you can’t dry tough or damp canola immediately, aerate continuously and move canola between bins to prevent spoilage. Store canola at 10% moisture or lower and monitor bins for heating.
Maximize the growth potential of your crops by incorporating biologicals as part of your fertility program. Biologicals increase the nutrient uptake in plants resulting in healthier crops and higher yields.
PHOSPHATE SOLUBILIZER

An Innovative Formulation of a Well-Proven Active

Description
There is a beneficial relationship between Recover™ PO₄ and the growing root. The active organism, Penicillium bilaii (Pb) in Recover PO₄, feeds off sugars and other exudates from the roots; in turn, the Pb releases compounds (organic acids, etc.) that break the bonds that bind phosphate in a form that plants cannot normally access. Therefore, when you use Recover PO₄, you are “recovering” phosphate already in the soil for the benefit of this season’s crop and making the phosphate you applied in this and past seasons more efficient.

Active Ingredient: Penicillium bilaii
7.2 x 10⁸ CFUs/ml

Formulation: Liquid

Crops: Alfalfa, Canola, Chickpeas, Corn, Dry Beans, Lentils, Peas, Soybeans, Wheat (spring and winter)

Application: On-seed

Package Size: 13.5 oz (400 ml), 2.1 qt (2 L)

Phosphorous Uptake With and Without Penicillium bilaii
Penicillium bilaii enhances the plant’s phosphorous uptake at all fertilizer application rates.

When and where to use Recover PO₄
Use Recover PO₄ as part of your phosphate fertility program:

1. Use in fields where soil tests show low to medium levels of available phosphate.
   - If soil tests recommend to apply 10 to 15 lbs/acre of phosphate – just use Recover PO₄
   - If soil tests recommend to apply 15 to 25 lbs/acre of phosphate – apply the lower amount of recommended phosphate and use Recover PO₄

2. Use in fields with high pH and high calcium levels. These soils will more readily tie-up phosphate, thus there is more phosphate to release from the soil and recover for your crop.

3. Use Recover PO₄ on the seed and reduce the amount of seed-placed phosphate to avoid any potential seedling damage from high seed-placed phosphate applications.

Contact your local ag-retailer or BrettYoung for more information.

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Toll Free:
800-665-5015

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