

2024

**PIONEER® BRAND
PRODUCTS & SERVICES.**





MANAGE YOUR CLEARFIELD CANOLA AS A PRODUCTION SYSTEM FROM PRE-SEED TO POST HARVEST

PRE-SEED

Not only does a pre-seed application give your canola the best possible start, it can provide multiple effective modes of action, delaying the onset of herbicide resistance.

Prospect™

Arylex™ active

HERBICIDE



Reduces early season competition from weeds such as cleavers and kochia for a clean start to the growing season.



Controls winter annual and perennial weeds.



Leads to smaller, more evenly staged weeds at in-crop herbicide timing.



Increases harvest efficiency.



Fewer weed seeds returned to the soil seed bank.



Significantly improves yield potential vs. untreated crops.



3 effective modes of action when tank-mixed with glyphosate.

IN-CROP



An in-crop application in the Clearfield system is not as straight forward as glyphosate tolerant canola systems. With proper planning and an early application, weed control can be just as effective. Set yourself up for success by applying Ares™ SN or Amity™ WDG herbicides in the early weed stages.

Weed Staging: Up to 4 Leaf

Ares™ SN

HERBICIDE

Amity™ WDG

HERBICIDE

Additional Weed Control

Other in-crop herbicides can be tank mixed with Ares SN and Amity WDG to boost weed control and provide another mode of action.

Lontrel™ XC

HERBICIDE

A tank mix partner such as Lontrel™ XC herbicide can provide top-growth control of perennial and annual sow thistle as well as Canada thistle.

Other herbicides, such as Facet® L, can be added to help control flushing cleavers. And if you need a boost with grassy weed control, Assure® II can be tank mixed with your in-crop application.

Always follow the label or reach out to a Corteva agronomist to discuss tank mix options.

POST-HARVEST

Whether you're planning on seeding Clearfield canola or a cereal crop the following spring, applying a fall pre-seed herbicide can set you up for success.

Ahead of Clearfield canola

A fall application of Edge® can provide long-lasting control of weeds such as kochia and redroot pigweed by controlling seedlings as they germinate. It also adds another mode of action to the Clearfield production system that is not commonly found in other herbicides.

Ahead of cereals

Once you've harvested your Clearfield canola, get a head start on the following spring by applying a pre-seed herbicide. A fall applied pre-seed herbicide such as Korrex™ II or Paradigm™ PRE herbicides can control weeds such as volunteer canola, dandelions, Canada thistle and take care of winter annuals before they become a bigger problem in the spring.

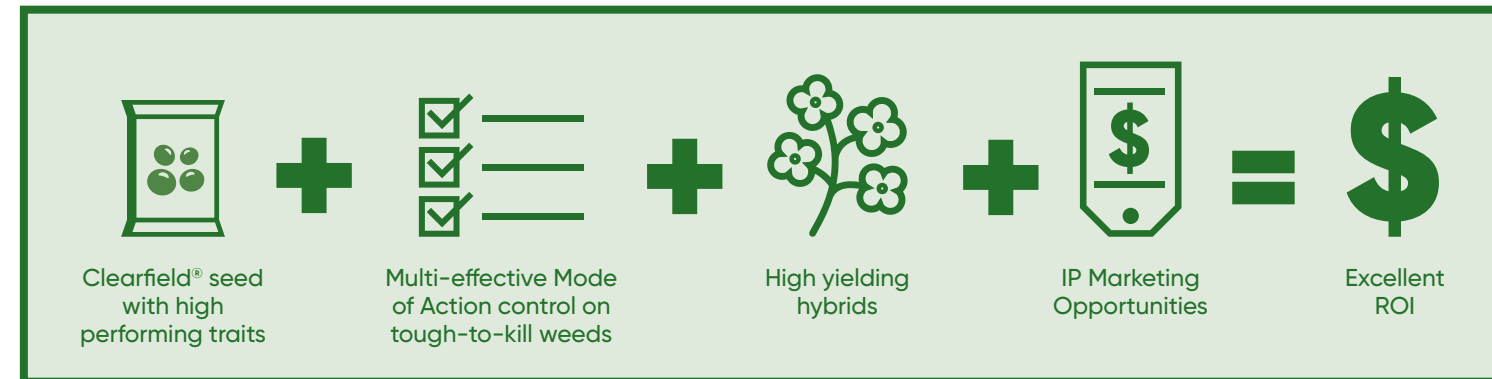
Korrex™ II

HERBICIDE

Paradigm™ PRE

Arylex™ active

HERBICIDE



Through Pioneer® brand canola, the Clearfield® production system offers growers access to differentiated grain marketing opportunities through Identity Preserved (IP) production contracts. These IP contracts can provide you with cash flow certainty and a superior return on investment by offering premium pricing and flexible delivery periods that are not offered out to all canola systems.

Contact your local grain buyer for details on Pioneer® brand Clearfield® canola production contracts. .

P508CL

P508CL – a high-yielding Pioneer Protector® canola with the Clearfield® herbicide tolerant trait that provides resistance to blackleg and options for harvest timing

P514CL

P514CL – a Pioneer Protector® clubroot hybrid with both adult and seedling blackleg resistance in one package with the Clearfield® herbicide trait

DEFINING HERBICIDE RESISTANCE:

Herbicide Resistance is the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to it (e.g., clodinafop resistant wild oats).

- The Clearfield Production System should include multiple herbicide groups within one season to help address resistance concerns.
- The use of multi-effective modes of action can delay the onset and spread of herbicide resistant weeds.

The next big thing in canola is here.



Optimum® GLY is an advanced herbicide-tolerant trait technology.

The next big thing in canola is here.

Unlock the genetic potential of your canola with Optimum® GLY*—a herbicide-tolerant trait technology designed to deliver top yield potential and agronomic trait performance.

What does Optimum GLY canola deliver?



Improved crop safety.

Optimum GLY enables farmers to make herbicide applications at the optimal time and rate without impacting the yield potential of the hybrid.



Enhanced, broad-spectrum annual and perennial weed control with effective rates of glyphosate.

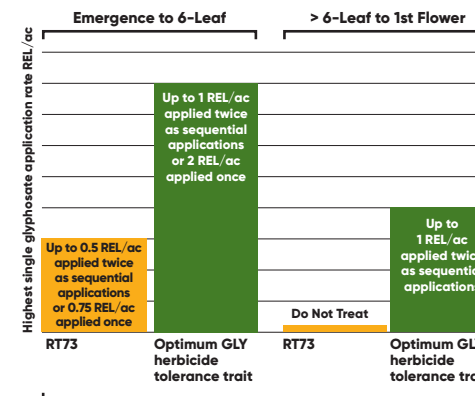
Optimum GLY offers canola producers an excellent weed control system to deliver improved annual and perennial weed control over competitive herbicide systems.



Greater convenience and flexibility when spraying.

Optimum GLY expands the window of application, allowing farmers the flexibility to time their herbicide application to maximize weed removal options. This gives producers time to cover large acres or clean up late flushes of weeds without the risk of yield impact from late-season applications.

Flexible rates and application timing up to first flower



Total maximum application of 2 REL/ac per season

- Apply as 1 application from emergence to 6-leaf stage Or –
- Apply as 2 sequential applications of up to 1 REL/ac from emergence to 1st flower
- Sequential applications must be at least 14 days apart
- Allows management of hard-to-control weeds and enhanced crop safety



RT73 - 0.5 REL/ac applied sequentially at 4 leaf and 1st flower (not a labeled application timing)

Optimum GLY herbicide tolerance trait 0.5 REL/ac sequentially applied at 4 leaf and 1st flower

1 REL = 360g a.e. per L. Always read and follow herbicide label directions.
RT73 = Roundup Ready® Canola.

Weed Control Timing

Plant Optimum GLY canola.

Apply glyphosate herbicides. No later than 1st flower.



Make the herbicide applications you need without impacting the yield potential of the hybrids you love.

Designed to optimize growth, benefits of Optimum GLY include:

- Improved crop safety
- Enhanced weed control
- A wider window of application
- Excellent yield potential and agronomic trait performance

Visit Optimumgly.ca to learn more about the latest innovation from our cutting-edge research centres.



Pioneer Protector® Brand Canola

Yield, performance and the protection of the Pioneer Protector® traits!

- › Pioneer Protector® brand canola offers high-yielding, consistently-performing canola hybrids with the added benefit of the Pioneer Protector® traits that:
 - Provide solutions to various agronomic and harvest management challenges on farmer's fields
 - Manage weed resistance with the strength of the Pioneer® canola portfolio - high yields, consistent performance and Pioneer Protector® traits available in all herbicide tolerant systems

Pioneer Protector® Clubroot Hybrids

Pioneer Protector® clubroot hybrids provide high yields and protection against multiple races of clubroot across Western Canada. They are for canola growers who want:

- › High yields and leading-edge protection against clubroot
- › To prevent disease establishment and minimize clubroot spore levels by using clubroot resistant hybrids
- › Multiple sources of clubroot resistance available in Pioneer Protector® Clubroot hybrids allows for a proactive approach to clubroot management



All Pioneer Protector® brand canola hybrids will include the Pioneer Protector® clubroot trait, a critical tool against a growing disease threat to Western Canadian farmers.

Pioneer Protector® Sclerotinia Hybrids

High yields and the consistent performance of Pioneer Protector® canola hybrids with built-in resistance to the yield-robbing disease sclerotinia.

- › Canola hybrids with the Pioneer Protector® Sclerotinia resistance trait are for growers looking to manage the risk of sclerotinia infection and achieve high yields by:
 - **Reducing sclerotinia incidence** by over 65%, as well as reducing overall severity
 - **Season-long control** - providing protection from sclerotinia throughout the entire growing season
 - **Convenience** - protection is planted with the seed
 - **Peace of mind** - providing increased flexibility and insurance when timing fungicide applications for additional control
 - **Maximizing yield** - canola seed with Pioneer Protector® Sclerotinia + a fungicide maximizes protection and reduces yield loss under severe disease pressure



Hybrid	Maturity	Herbicide Tolerant Trait	Pod Shatter Score	Source of Clubroot Resistance	Clubroot	Blackleg	Blackleg	Sclerotinia	Fusarium Wilt	Verticillium Stripe	Early Growth	Green Seed Content	Standability	Plant Height
45M35	5	Roundup Ready	7			MR	7		R		8	8	8	8
45CM39	5	Roundup Ready	7	CR2	R	R	7		R	4	8	8	7	7
44H44	4	Roundup Ready	6	CR1	R	R	7		R	2	8	8	7	7
45H42	5	Roundup Ready	5	CR1	R	R	8		R	3	8	8	8	7
P612L	6	LIBERTY LINK	7	CR4	R	R	7		R	4	8	8	7	8
P505MSL	5	LIBERTY LINK	7	CR1	R	R	7	6	R	5	9	8	7	8
NEW P516L	5	LIBERTY LINK	6	CR6	R	R	7		R	6	8	8	7	
P509L	5	LIBERTY LINK	5	CR1	R	R	7		R	2	8	8	7	7
P508MCL	5	Clearfield	7			R	7		R	4	8	8	7	8
P514CL	5	Clearfield	6	CR5	R	R	8		R	3	7	8	7	8
NEW P515G	5	Optimum GLY	7	CR1	R	R	7		R	5	7		7	8
NEW P511G	5	Optimum GLY	7	CR3	R	R	7		R		7		8	7
NEW P510G	5	Optimum GLY	5	CR3	R	R	7	6	R	5	7		8	7

NEW = New Product
 Ratings: 9 = Outstanding | 1 = Poor | Blank = Insufficient Data
 Maturity: 9 = Late | 6 = Medium | 5 = Medium-Early | 3 = Early; 1 = Very Early

For complete definitions and disclaimers related to product descriptions, characteristic ratings and disease ratings, and all other information contained herein, see page 46.

► Featured Canola Hybrids

P612L



- Superior yield potential
- New source** of Clubroot resistance - **CR4** (2F, 3H, 5I, 6M, 8N, 2B, 3A, 3D, 11A, and 8E)
- R for Blackleg
- Pod Shatter Reduction Score - 7

P612L 109%

DEKALB® DKLL 83 SC 100%

N=3

P612L 109%

DEKALB® DKLL 84CR SC 100%

N=6

NEW
P516L



- Excellent yield potential
- New source** of Clubroot resistance - **CR6** (2F, 3H, 5I, 6M, 8N, 2B, 3A, 3D, 5X, 11A, 8E)
- Good Resistance against Verticillium Stripe (Score - 6)
- R for Blackleg
- Pod Shatter Reduction Score - 6

P516L 101%

DEKALB® DKLL 82 SC 100%

N=8

P516L 101%

InVigor® L356PC 100%

N=13

P505MSL



- Superior yield potential
- Clubroot resistance - **CR1** (2F, 3H, 5I, 6M, 8N)
- Average resistance against Verticillium Stripe (Score - 5)
- R for Blackleg
- Pod Shatter Reduction Score - 7

P505MSL 103%

DEKALB® DKLL 83 SC 100%

N=5

P505MSL 104%

DEKALB® DKLL 84CR SC 100%

N=6

P509L



- Excellent yield potential for early maturity
- Clubroot resistance - **CR1** (2F, 3H, 5I, 6M, 8N)
- Below average protection on Verticillium Stripe (Score - 2)
- R for Blackleg
- Pod Shatter Reduction Score - 5

P509L 103%

DEKALB® DKLL 82 SC 100%

N=26

P509L 100%

InVigor® L356PC 100%

N=14

► Featured Canola Hybrids

P508MCL



- Excellent yield potential
- Below average protection on Verticillium Stripe (Score - 4)
- R for Blackleg
- No Clubroot resistance
- Pod Shatter Reduction Score - 7

P508MCL 109%

Canterra CS2500CL 100%

N=33

P508MCL 111%

BrettYoung BY5125-CL 100%

N=30

NEW
P515G*



- Excellent yield potential
- Clubroot resistance - **CR1** (2F, 3H, 5I, 6M, 8N)
- Average Resistance against Verticillium Stripe (Score - 5)
- R for Blackleg
- Pod Shatter Reduction Score - 7

P515G 101%

DEKALB® DKTF 98 CR 100%

N=24

NEW
P511G*



- Excellent yield potential
- Clubroot resistance - **CR3** (2F, 3H, 5I, 6M, 8N, 2B, 3A, 3D, 5X, 11A)
- R for Blackleg
- Pod Shatter Reduction Score - 7

P511G 100%

45CM39 100%

N=24

NEW
P510G*



- Excellent yield potential
- New Source of Clubroot resistance - **CR3** (2F, 3H, 5I, 6M, 8N, 2B, 3A, 3D, 5X, 11A)
- Sclerotinia Resistance - Reduces sclerotinia by up to 65%
- Average Resistance against Verticillium Stripe (Score - 5)
- R for Blackleg
- Pod Shatter Reduction Score - 5

P510G 102%

45CS40 100%

N=24

Featured Canola Hybrids

45CM39



- Superior yield potential
- New Source of Clubroot resistance - CR2 (2F, 3H, 5I, 6M, 8N, 2B, 3A, 3D, 5X)
- Average resistance against Verticillium Stripe (Score - 4)
- R for Blackleg
- Pod Shatter Reduction Score - 7

45CM39 104%

DEKALB® DKTF 97 CRSC 100%

N=46

45CM39 105%

BrettYoung BY 6204TF 100%

N=7

44H44



- Excellent yield potential
- Clubroot resistance - CR1 (2F, 3H, 5I, 6M, 8N)
- R for Blackleg
- Below average resistance against Verticillium Stripe Score - 2
- Pod Shatter Reduction Score - 6

44H44 107%

DEKALB® 75-42CR 100%

N=4

44H44 103%

DEKALB® DKTF 99 SC 100%

N=19

Source: (2020-2022) 3-year yield summary results from Steward Research Sites across Western Canada.



LumiGEN® seed treatments are designed, verified and proven to work with Pioneer® brand seed genetics, helping farmers establish healthy, uniform crops and maximize productivity.

Days to Maturity



▶ We Have Clubroot's Number.

Pioneer® brand canola hybrids with the Protector® Clubroot trait provide high yields and protection against multiple clubroot races across Western Canada. They also provide:

- ▶ High yields and leading-edge protection against clubroot
- ▶ Prevention against disease establishment and minimize clubroot spore loads. 85%+ of the Pioneer® brand product line-up offer clubroot protection.
- ▶ Multiple sources of clubroot resistance allowing for a proactive/effective approach to clubroot management

All newly registered Pioneer® brand canola hybrids will include industry-leading clubroot sources to help manage this growing disease threat to Western Canadian farmers.

The Clubroot ratings by canola hybrid below with specific pathotype information can help growers make informed decisions on canola hybrid seed purchases for their farm.

Herbicide Trait	Canola Hybrids	Corteva CR Groups*	Clubroot Pathotypes										
			Initial Pathotypes					New Pathotypes				2020 Pathotypes	
			2F	3H	5I	6M	8N	3A	3D	5X	2B	11A	8E
Roundup Ready CANOLA	45M35	No CR	S	S	S	S	S	S	S	S	S	S	S
Clearfield Production System for Canola	P508MCL	No CR	S	S	S	S	S	S	S	S	S	S	S
Roundup Ready CANOLA	44H44, 45H42, 45CS40	CR1	R	R	R	R	R	S	S	S	S	S	S
LIBERTY LINK	P501L, P506ML, P505MSL, P509L	CR1	R	R	R	R	R	S	S	S	S	S	S
NEW optimum GLY	P515G	CR1	R	R	R	R	R	S	S	S	S	S	S
Roundup Ready CANOLA	45CM39	CR2	R	R	R	R	R	R	R	R	S	S	S
NEW optimum GLY	P510G, P511G	CR3	R	R	R	R	R	R	R	R	R	R	S
LIBERTY LINK	P612L	CR4	R	R	R	R	R	R	S	R	R	R	R
Clearfield Production System for Canola	P514CL	CR5	R	R	R	R	R	R	R	R	R	R	R
LIBERTY LINK	P516L	CR6	R	R	R	R	R	R	R	R	R	R	R

Resistant
Susceptible

*CR groups contain different Clubroot resistant gene packages



Plants showing galls on roots from a canola hybrid with CR1 Clubroot resistance planted on a field with significant clubroot pathotype race shift.



Pictures of race shift in Alberta.

Source: Photo taken July, 2022 near Camrose, AB

▶ Pod Shatter Reduction Scores

Pioneer Protector® canola Pod Shatter Reduction scores align to the Canola Council of Canada's scale to help growers understand the shatter tolerance of specific canola hybrids.

The Pod Shatter Reduction score for a hybrid (1-9) creates a guide for a grower to understand the pod shatter risk for each canola hybrid as an option for straight cutting.

- ▶ Hybrid performance, with respect to pod shatter, can vary across Western Canada. Talking to your local Pioneer Sales Representative or Area Agronomist can help with understanding pod shatter reduction risk level of a hybrid in your area.
- ▶ Tolerance to pod shatter will not prevent pod drop.

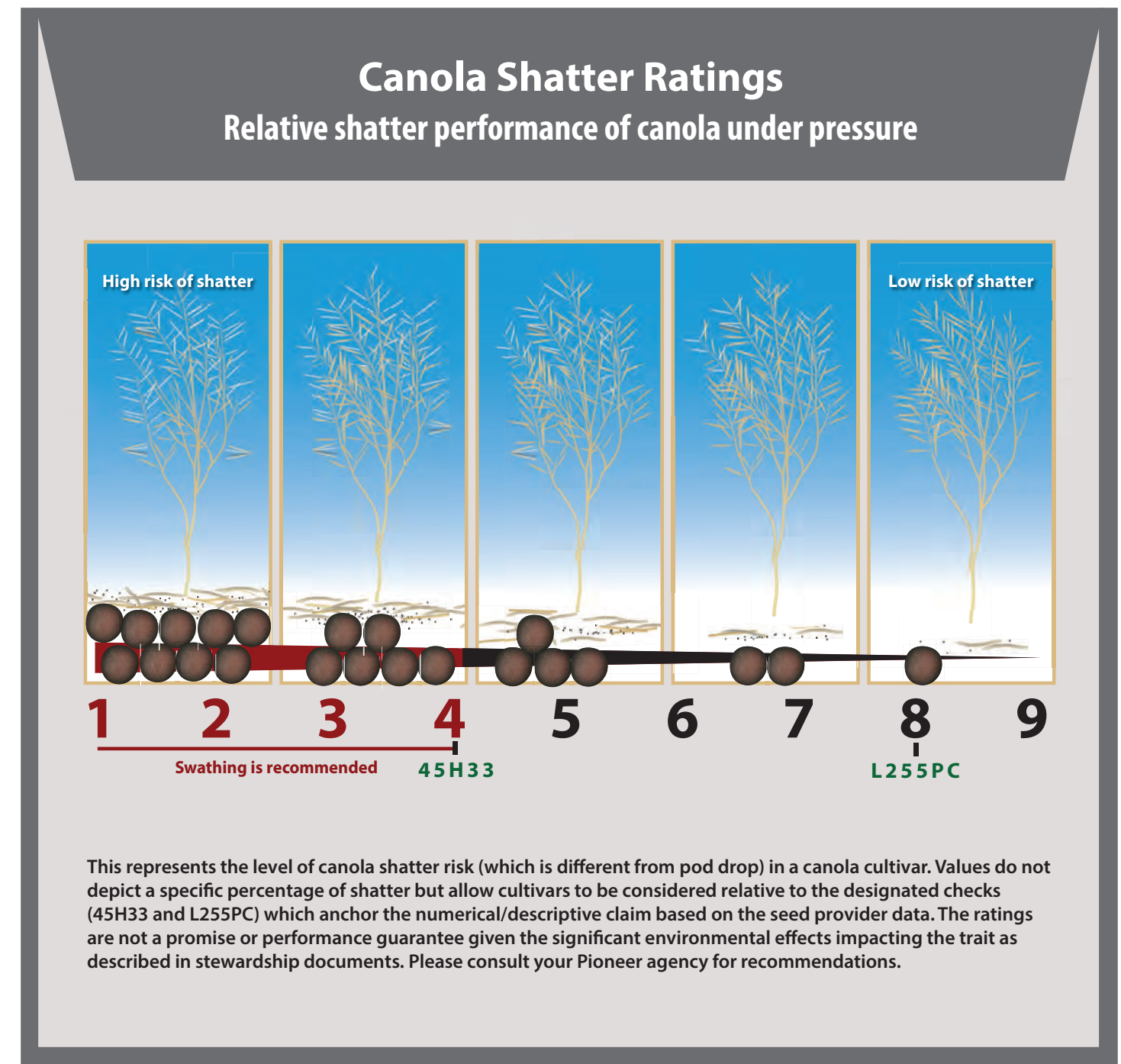
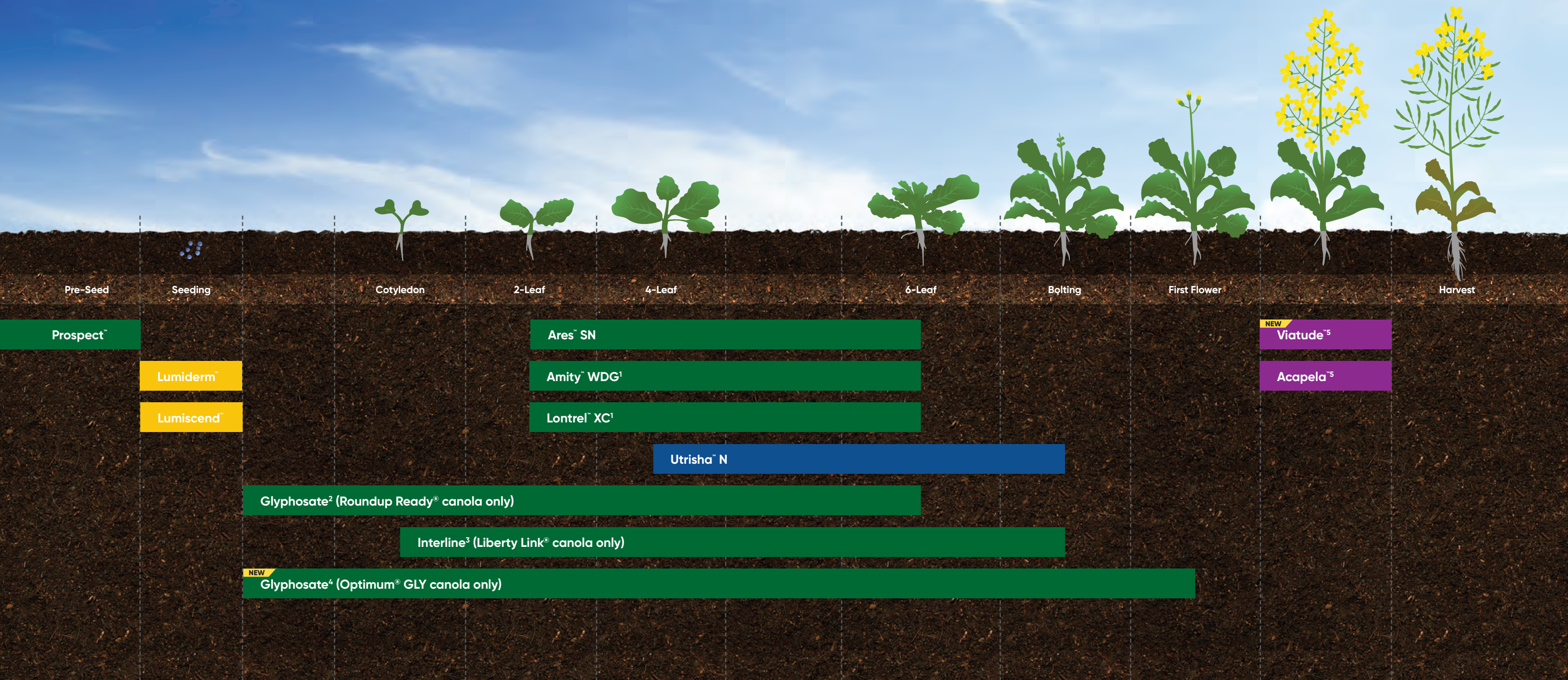


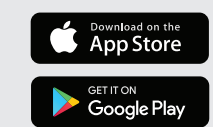
Image source: Canola Council of Canada

Crop Protection Application Timing



■ Herbicide
 ■ Seed Treatment
 ■ Nutrient Efficiency Biostimulant
 ■ Fungicide

Download the Corteva Agriscience Field Guide app! It's a straightforward and easy tool to help you choose the right herbicides, insecticides and fungicides to protect your crop and maximize your profit potential.






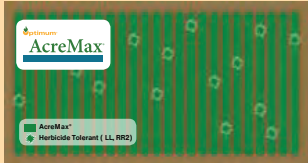


¹ Clearfield® canola only ⁴ Optimum® GLY canola only
² Roundup Ready® canola only ⁵ 20-50% bloom
³ Liberty Link® canola only

ALWAYS READ AND FOLLOW LABEL DIRECTIONS

► Corn Traits and Technologies

Maximized Yields And Simplified Refuge Compliance

Pioneer is committed to delivering integrated refuge products that provide growers with increased flexibility and convenience for insect resistance management (IRM). The Pioneer® brand integrated refuge product lineup brings multiple modes of action for insect protection, to help increase overall farm yields by reducing refuge and extending the durability of important traits.

			
Pests Controlled	European Corn Borer Fall Armyworm Black Cutworm	European Corn Borer Fall Armyworm Black Cutworm Western Corn Rootworm Northern Corn Rootworm	European Corn Borer Corn Earworm Fall Armyworm Black Cutworm
Pests Suppressed	Corn Earworm	Corn Earworm	
Description	Single-bag product with integrated corn borer refuge	Single-bag product with integrated corn borer and corn rootworm refuge	Single-bag product with integrated corn borer and corn rootworm refuge
Benefits	Ultimate simplicity Maximized farm yields Technology preservation	Maximum yields Technology preservation Proven performance Multiple modes of insect protection	Maximum Yields Three modes of action against above ground pests Enlist herbicide system - with built in tolerance to 2,4-D choline in Enlist herbicide, glyphosate, glufosinate and FOP herbicides (Ex: Assure II)
Refuge	Integrated refuge; no separate refuge required	Integrated refuge; no separate refuge required	Integrated refuge; no separate refuge required
Refuge Examples			

TIME FOR AN
UPGRADE



TWO advanced trait packages.
THREE modes of action against above-ground pests.
FOUR herbicide tolerances.





Product overview

- Exceptional broad-spectrum protection against above-ground pests
- Stacked with the Enlist™ corn trait for multiple modes of action against tough weeds

Farmer benefits

- Long-lasting insect control against black cutworm, fall armyworm, European and southwestern corn borers and corn earworm
- Herbicide flexibility with tolerance to 2,4-D choline in Enlist™ herbicides, glyphosate, glufosinate and FOP herbicides (i.e. Assure® II)
- Enlist™ weed control system provides a whole-farm solution across corn and soybean acres
- Available in Corteva Agriscience™ genetics with best-in-class yield potential

How does PowerCore® trait technology stack up?

	Primary Pest Controlled	PowerCore® Enlist® corn	VT Double PRO® corn
 Black cutworm		✓	NONE
 Corn earworm		✓✓	✓✓
 European corn borer		✓✓✓	✓✓
 Fall armyworm		✓✓✓	✓✓

3 modes of action

Checkmarks represent number of modes of action for control over specified pest.

Consult Enlist herbicide labels for weed species controlled. Always read and follow label directions. PowerCore® multi-event technology developed by Corteva Agriscience and Monsanto. ®PowerCore and Genuity VT Double PRO are registered trademarks of Bayer Group. Always follow IRM, grain marketing and all other stewardship practices and pesticide label directions. * AMVAC Chemical Corporation.


Hybrid	Technology Segment	Market Segment	CHU	CRM	Silk CRM	Physiological CRM	GDUs to Silk	GDUs to Physiological Maturity	Stalk Strength	Mid-Season Brittle Stalk	Root Strength	Stress Emergence	Drought Tolerance
P6909R	RR2	HAE	1950	69	70	77	890	1810	7	6	6	4	6
P6910AM [†]	AM,LL,RR2	HTF	1950	69	69	69	880	1610	5	7	5	4	6
39F44	AM,LL,RR2	HTF	2000	73	70	72	890	1680	4	6	4	7	5
P7202AM [™]	AM,LL,RR2	HAE	2050	72	69	76	880	1790	5	7	6	4	6
NEW P72068AM^{™*}	AM,LL,RR2	HTF	2050	72					5	5	6	4	7
P7211AM [™]	RR2	HAE	2050	72	70	74	890	1730	6	5	5	4	7
P7213R	RR2	HAE	2050	72	75	74	950	1730	4	6	7	6	5
P7389AM [†]	AM,LL,RR2	HAE	2075	73	73	73	920	1710	6	5	6	4	7
P7417AM [™]	AM,LL,RR2	HAE	2125	74	76	77	960	1810	5	5	5	4	6
P7455R	RR2	HAE,HTF	2100	74	74	75	940	1760	8	7	8	5	6
P7527AM [™]	AM,LL,RR2	HAE,HTF	2150	75	78	77	980	1810	5	6	5	5	7
P7527AMXT [™]	AMXT,LL,RR2	HAE,HTF	2150	75	78	77	980	1810	5	6	5	5	7
P7574AM [™]	AM,LL,RR2	HTF	2150	75	77	76	970	1790	6	5	4	6	5
P7822AM [†]	AM,LL,RR2		2250	78	78	74	980	1730	6	6	4	6	6
P7822R [†]	RR2		2250	78	78	74	980	1730	6	6	4	6	6
P7844AM [™]	AM,LL,RR2		2225	78	78	82	980	1940	6	5	6	4	6
P7958AM [™]	AM,LL,RR2		2275	79	84	83	1060	1960	6	4	7	5	6
P8048AM [†]	AM,LL,RR2		2350	80	79	80	990	1890	6	6	6	4	6
NEW P82288AM^{™*}	AM,LL,RR2	HAE	2400	82					6	5	6	5	7
P8294AM [™]	AM,LL,RR2		2400	82	85	82	1070	1940	5	6	4	5	6
P8294Q [†]	Q,LL,RR2		2400	82	85	82	1070	1940	5	6	4	5	6
P8407 [†]			2425	84	85	85	1100	2020	7	4	5	4	7
P8407AM [™]	AM,LL,RR2		2450	84	85	85	1100	2020	7	4	5	4	7
P8407Q [™]	Q,LL,RR2		2450	84	85	85	1100	2020	7	4	5	4	7
P8581R	RR2		2575	85	94	89	1180	2120	8	5	7	5	7
P8588AM [™]	AM,LL,RR2	HTF	2600	85	83	87	1040	2070	5	6	5	4	7
P8602AM [†]	AM,LL,RR2	HTF	2600	86	84	86	1060	2040	5	7	6	5	7
NEW P87040AM^{™*}	AM,LL,RR2	HTF	2575	87					5	6	6	5	6
P8820Q [™]	Q,LL,RR2	HTF,HES	2575	88	88	92	1100	2190	6	4	7	4	6
P8859AM [™]	AM,LL,RR2	HTF,HES	2600	88	84	86	1060	2040	6	6	6	6	7
P8859Q [†]	Q,LL,RR2	HTF,HES	2600	88	84	86	1060	2040	6	6	6	6	7
P90630AM ^{™*}	AM,LL,RR2	HTF	2650	90					5	5	6	5	7
NEW P90630Q^{™*}	Q,LL,RR2	HTF	2650	90					5	5	6	5	7
P9188AM [™]	AM,LL,RR2	HTF	2650	91	89	91	1120	2170	6	5	8	4	7
P9233Q [™]	Q,LL,RR2	HTF,HES	2650	92	89	93	1120	2220	5	3	7	4	6
P9316Q [†]	Q,LL,RR2	HTF	2750	93	85	90	1070	2140	5	5	6	4	7

Staygreen	High Residue Suitability	Grain Drydown	Ear Flex	Test Weight	Plant Height	Ear Height	Husk Cover	Foliar Fungicide Response-NLB	Goss's Wilt	Silage CRM	Silage Yield	Starch and Sugar, %	Fiber Digestibility	Silage Crude Protein	Milk Per Acre	Milk Per Ton	Beef Per Acre	Beef Per Ton	High Residue Suitability	Plant Staygreen
3	S	5	3	9	3	4	3	HP	4	69	6	9	5	6	7	7	7	7	S	3
5	S	3	3	7	4	4	4	HP	3	71	6	8	7	6	6	7	6	7	S	5
3	HS	6	2	7	3	4	3	HP	3	80	5	8	9	8	7	8	5	8	HS	3
	S	8	2	8	3	4	5	HP	3	71	5	9	9	8	7	8	7	8	S	
5	S	8		7	5	5	5	MP	6	73	8	7	6	8	7	6	7	6	S	5
3	S	6	2	7	3	4	4	MP	3	71	8	9	9	7	9	9	9	9	S	3
3	S	3	6	7	3	4	3	HP	3	71	6	8	8	9	6	9	6	9	S	3
6	S	3	4	6	5	5	6	MP	6	74	8	8	6	8	7	7	7	7	S	6
5	S	4	6	5	3	5	5	LP	5	74	8	7	9	9	7	7	7	7	S	5
4	HS	5	5	7	3	4	4	MP	5	74	8	9	8	8	7	8	7	8	HS	4
3	S	7	5	5	3	4	4	MP	5	75	9	8	9	8	9	9	9	9	S	3
3	S	7	5	5	3	4	4	MP	5	75	9	8	9	8	9	9	9	9	S	3
6	HS	5	3	6	6	6	5	HP	4	79	9	7	6	8	9	6	9	6	HS	6
5	HS	5	4	7	5	5	5	HP	5	74	8	7	6	7	8	6	8	6	HS	5
5	HS	5	4	7	5	5	5	HP	5	74	8	7	6	7	8	6	8	6	HS	5
6	S	7	4	5	5	6	6	LP	4	80	7	8	7	8	6	7	6	7	S	6
6	S	4	4	6	5	5	3	HP	5	75	7	5	7	7	7	6	7	6	S	6
5	S	7	5	6	5	6	6	LP	6	76	8	7	7	7	8	7	8	7	S	5
5	S	6	3	5	6	6	5	MP	6	81	8	7	7	7	8	8	8	8	S	5
6	S	5	4	5	7	7	4	MP	5	83	8	7	5	7	8	6	8	6	S	6
6	S	5	4	5	7	7	4	MP	5	83	8	7	5	7	8	6	8	6	S	6
5	S	4	6	5	5	5	6	LP	5	86	8	8	8	8	8	8	8	8	S	5
5	S	4	6	5	5	5	6	LP	5	86	8	8	8	8	8	8	8	8	S	5
5	S	4	6	5	5	5	6	LP	5	86	8	8	8	8	8	8	8	8	S	5
5	S	7	7	5	7	7	4	MP	5	89	8	6	5	8	7	7	7	7	S	5
6	S	3	7	6	4	6	5	LP	6	83	7	8	7	9	7	6	7	6	S	6
5	S	4	6	5	6	6	6	MP	5	81	7	8	7	6	6	7	6	7	S	5
5	S	5	6	6	6	6	5	MP	6	88	8	7	8	7	8	7	8	7	S	5
4	S	3	4	6	5	6	4	LP	6	85	6	8	6	7	6	6	6	6	S	4
5	HS	7	4	5	5	7	6	MP	5	82	7	8	7	7	7	7	7	7	HS	5
5	HS	7	4	5	5	7	6	MP	5	82	7	8	7	7	7	7	7	7	HS	5
4	S	3	4	6	5	7	5	MP	6	89	9	8	8	6	9	8	9	7	S	4
4	S	3	4	6	5	7	5	MP	6	89	9	8	8	6	9	8	9	7	S	4
4	S	4	5	6	4	4	6	LP	5	85	6	8	7	6	7	7	7	7	S	4
6	S	5	6	6	6	7	5	LP	6	90	8	8	7	6	8	8	8	8	S	6
7	S	5	3	7	5	6	6	LP	6	89	7	8	6	7	7	7	7	7	S	7





NEW = New Product
[†] = Introductory product. Quantities may be limited. Ratings: 9 = Outstanding | 1 = Poor | Blank = Insufficient Data
 All scores of integrated refuge products are based upon the major component. All Pioneer products are hybrids unless designated with AM1, AM, AML, AMT, AMX, AMXT and Q, in which case they are brands.

For complete definitions and disclaimers related to product descriptions, characteristic ratings and disease ratings, and all other information contained herein, see page 46.

► Featured Grain Corn Hybrids

<p>P6910AM™ 1950 CHU, 69 CRM</p> 	<ul style="list-style-type: none"> Very good yield for maturity Very good test weight Average root and stalk strength 	<table border="1"> <tr> <td>P6910AM™</td> <td>121.1 bu/ac</td> <td>3.8 bu/ac increase 0.7% drier moisture advantage N=34</td> </tr> <tr> <td>P7005AM™</td> <td>117.3 bu/ac</td> <td></td> </tr> <tr> <td>P6910AM™</td> <td>144.4 bu/ac</td> <td>4.0 bu/ac increase 3.3% drier moisture advantage N=15</td> </tr> <tr> <td>PRIDE Seeds A3993G2RIB</td> <td>140.4 bu/ac</td> <td></td> </tr> </table>	P6910AM™	121.1 bu/ac	3.8 bu/ac increase 0.7% drier moisture advantage N=34	P7005AM™	117.3 bu/ac		P6910AM™	144.4 bu/ac	4.0 bu/ac increase 3.3% drier moisture advantage N=15	PRIDE Seeds A3993G2RIB	140.4 bu/ac	
P6910AM™	121.1 bu/ac	3.8 bu/ac increase 0.7% drier moisture advantage N=34												
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P6910AM™	144.4 bu/ac	4.0 bu/ac increase 3.3% drier moisture advantage N=15												
PRIDE Seeds A3993G2RIB	140.4 bu/ac													
<p>P7211AM™ 2050 CHU, 72 CRM</p> 	<ul style="list-style-type: none"> Industry leader in early grain corn performance Shorter plant height with high yield potential for early maturity Strong performance in wide range of growing environments Very good test weight and grain quality 	<table border="1"> <tr> <td>P7211AM™</td> <td>131.4 bu/ac</td> <td>10.4 bu/ac increase 5.5% drier moisture advantage N=15</td> </tr> <tr> <td>DEKALB® DKC26-40RIB</td> <td>121.0 bu/ac</td> <td></td> </tr> <tr> <td>P7211AM™</td> <td>139.4 bu/ac</td> <td>6.7 bu/ac increase 0.9% drier moisture advantage N=13</td> </tr> <tr> <td>PRIDE Seeds A3993G2RIB</td> <td>132.7 bu/ac</td> <td></td> </tr> </table>	P7211AM™	131.4 bu/ac	10.4 bu/ac increase 5.5% drier moisture advantage N=15	DEKALB® DKC26-40RIB	121.0 bu/ac		P7211AM™	139.4 bu/ac	6.7 bu/ac increase 0.9% drier moisture advantage N=13	PRIDE Seeds A3993G2RIB	132.7 bu/ac	
P7211AM™	131.4 bu/ac	10.4 bu/ac increase 5.5% drier moisture advantage N=15												
DEKALB® DKC26-40RIB	121.0 bu/ac													
P7211AM™	139.4 bu/ac	6.7 bu/ac increase 0.9% drier moisture advantage N=13												
PRIDE Seeds A3993G2RIB	132.7 bu/ac													
<p>NEW P72068AM™ 2050 CHU, 72 CRM</p> 	<ul style="list-style-type: none"> Average plant height with high yield potential Good root strength Strong Goss Wilt rating for early grain market Very good test weight and grain quality 	<table border="1"> <tr> <td>P72068AM™</td> <td>158.5 bu/ac</td> <td>18.1 bu/ac increase 0.0% drier moisture advantage N=15</td> </tr> <tr> <td>PRIDE Seeds A3993G2RIB</td> <td>140.4 bu/ac</td> <td></td> </tr> <tr> <td>P72068AM™</td> <td>144.5 bu/ac</td> <td>3.5 bu/ac increase 5.7% drier moisture advantage N=20</td> </tr> <tr> <td>DEKALB® DKC24-06RIB</td> <td>141.0 bu/ac</td> <td></td> </tr> </table>	P72068AM™	158.5 bu/ac	18.1 bu/ac increase 0.0% drier moisture advantage N=15	PRIDE Seeds A3993G2RIB	140.4 bu/ac		P72068AM™	144.5 bu/ac	3.5 bu/ac increase 5.7% drier moisture advantage N=20	DEKALB® DKC24-06RIB	141.0 bu/ac	
P72068AM™	158.5 bu/ac	18.1 bu/ac increase 0.0% drier moisture advantage N=15												
PRIDE Seeds A3993G2RIB	140.4 bu/ac													
P72068AM™	144.5 bu/ac	3.5 bu/ac increase 5.7% drier moisture advantage N=20												
DEKALB® DKC24-06RIB	141.0 bu/ac													
<p>P7389AM™ 2075 CHU, 73 CRM</p> 	<ul style="list-style-type: none"> Top end yield for early maturity grain hybrid Strong Goss Wilt rating for early grain market Above average stalks and root strength Good Test Weight score 	<table border="1"> <tr> <td>P7389AM™</td> <td>132.9 bu/ac</td> <td>13.2 bu/ac increase 4.4% drier moisture advantage N=27</td> </tr> <tr> <td>DEKALB® DKC26-40RIB</td> <td>119.7 bu/ac</td> <td></td> </tr> </table>	P7389AM™	132.9 bu/ac	13.2 bu/ac increase 4.4% drier moisture advantage N=27	DEKALB® DKC26-40RIB	119.7 bu/ac							
P7389AM™	132.9 bu/ac	13.2 bu/ac increase 4.4% drier moisture advantage N=27												
DEKALB® DKC26-40RIB	119.7 bu/ac													

► Featured Grain Corn Hybrids

<p>P7455R 2100 CHU, 74 CRM</p> 	<ul style="list-style-type: none"> Excellent agronomics as a grain hybrid across various growing conditions/soil types Excellent stalk and root strength, very good drought tolerance Great grain quality with very good test weight Average Goss Wilt resistance score 	<table border="1"> <tr> <td>P7455R</td> <td>132.9 bu/ac</td> <td>11.3 bu/ac increase 3.6% drier moisture advantage N=31</td> </tr> <tr> <td>DEKALB® DKC26-40RIB</td> <td>121.6 bu/ac</td> <td></td> </tr> <tr> <td>P7455R</td> <td>141.7 bu/ac</td> <td>2.3 bu/ac increase 3.2% drier moisture advantage N=60</td> </tr> <tr> <td>DEKALB® DKC24-06RIB</td> <td>139.4 bu/ac</td> <td></td> </tr> </table>	P7455R	132.9 bu/ac	11.3 bu/ac increase 3.6% drier moisture advantage N=31	DEKALB® DKC26-40RIB	121.6 bu/ac		P7455R	141.7 bu/ac	2.3 bu/ac increase 3.2% drier moisture advantage N=60	DEKALB® DKC24-06RIB	139.4 bu/ac	
P7455R	132.9 bu/ac	11.3 bu/ac increase 3.6% drier moisture advantage N=31												
DEKALB® DKC26-40RIB	121.6 bu/ac													
P7455R	141.7 bu/ac	2.3 bu/ac increase 3.2% drier moisture advantage N=60												
DEKALB® DKC24-06RIB	139.4 bu/ac													
<p>P7527AM™ 2150 CHU, 75 CRM</p> 	<ul style="list-style-type: none"> Great yield to moisture performance Short plant with low ear insertion Late flowering hybrid with fast dry down Needs to be grown in zone 	<table border="1"> <tr> <td>P7527AM™</td> <td>154.3 bu/ac</td> <td>10.4 bu/ac increase 3.1% drier moisture advantage N=8</td> </tr> <tr> <td>DEKALB® DKC26-40RIB</td> <td>143.9 bu/ac</td> <td></td> </tr> <tr> <td>P7527AM™</td> <td>149.9 bu/ac</td> <td>4.7 bu/ac increase -1.3% drier moisture disadvantage N=4</td> </tr> <tr> <td>Maizex MZ 1200DBR</td> <td>145.2 bu/ac</td> <td></td> </tr> </table>	P7527AM™	154.3 bu/ac	10.4 bu/ac increase 3.1% drier moisture advantage N=8	DEKALB® DKC26-40RIB	143.9 bu/ac		P7527AM™	149.9 bu/ac	4.7 bu/ac increase -1.3% drier moisture disadvantage N=4	Maizex MZ 1200DBR	145.2 bu/ac	
P7527AM™	154.3 bu/ac	10.4 bu/ac increase 3.1% drier moisture advantage N=8												
DEKALB® DKC26-40RIB	143.9 bu/ac													
P7527AM™	149.9 bu/ac	4.7 bu/ac increase -1.3% drier moisture disadvantage N=4												
Maizex MZ 1200DBR	145.2 bu/ac													
<p>P7574AM™ 2150 CHU, 75 CRM</p> 	<ul style="list-style-type: none"> Great dual purpose hybrid - Well-suited grain performance and maturity for Red River Valley and Southern Alberta Excellent early season vigour and emergence Great silage characteristics with strong performance with excellent late season plant health 	<table border="1"> <tr> <td>P7574AM™</td> <td>159.6 bu/ac</td> <td>13.1 bu/ac increase 0.2% drier moisture advantage N=3</td> </tr> <tr> <td>DEKALB® DKC26-40RIB</td> <td>146.5 bu/ac</td> <td></td> </tr> <tr> <td>P7574AM™</td> <td>177.7 bu/ac</td> <td>10.9 bu/ac increase 0.0% drier moisture advantage N=3</td> </tr> <tr> <td>PRIDE Seeds A4323G2 RIB</td> <td>166.8 bu/ac</td> <td></td> </tr> </table>	P7574AM™	159.6 bu/ac	13.1 bu/ac increase 0.2% drier moisture advantage N=3	DEKALB® DKC26-40RIB	146.5 bu/ac		P7574AM™	177.7 bu/ac	10.9 bu/ac increase 0.0% drier moisture advantage N=3	PRIDE Seeds A4323G2 RIB	166.8 bu/ac	
P7574AM™	159.6 bu/ac	13.1 bu/ac increase 0.2% drier moisture advantage N=3												
DEKALB® DKC26-40RIB	146.5 bu/ac													
P7574AM™	177.7 bu/ac	10.9 bu/ac increase 0.0% drier moisture advantage N=3												
PRIDE Seeds A4323G2 RIB	166.8 bu/ac													
<p>P7822AM™ 2250 CHU, 78 CRM</p> 	<ul style="list-style-type: none"> Excellent early season performance with strong emergence and vigor Great test weight for maturity Excellent grain performance in MB 2022 season Consistent performance across various growing conditions/soil types Strong silage performance 	<table border="1"> <tr> <td>P7822AM™</td> <td>181.5 bu/ac</td> <td>9.8 bu/ac increase 3.7% drier moisture advantage N=4</td> </tr> <tr> <td>Thunder Seeds TH6977VT2PRIB</td> <td>171.7 bu/ac</td> <td></td> </tr> <tr> <td>P7822AM™</td> <td>188.1 bu/ac</td> <td>1.1 bu/ac increase 1.6% drier moisture advantage N=11</td> </tr> <tr> <td>DEKALB® DKC31-85RIB</td> <td>187.0 bu/ac</td> <td></td> </tr> </table>	P7822AM™	181.5 bu/ac	9.8 bu/ac increase 3.7% drier moisture advantage N=4	Thunder Seeds TH6977VT2PRIB	171.7 bu/ac		P7822AM™	188.1 bu/ac	1.1 bu/ac increase 1.6% drier moisture advantage N=11	DEKALB® DKC31-85RIB	187.0 bu/ac	
P7822AM™	181.5 bu/ac	9.8 bu/ac increase 3.7% drier moisture advantage N=4												
Thunder Seeds TH6977VT2PRIB	171.7 bu/ac													
P7822AM™	188.1 bu/ac	1.1 bu/ac increase 1.6% drier moisture advantage N=11												
DEKALB® DKC31-85RIB	187.0 bu/ac													

► Featured Grain Corn Hybrids

P7844AM™ 2225 CHU, 78 CRM



- ▶ Top end yield potential suited for Southern Manitoba (Red River Valley)
- ▶ Above average stalk and root strength scores
- ▶ Good Goss's Wilt resistance rating
- ▶ Consistent on all soil types, but preference on loam/sandy soils

P7844AM™	169.3 bu/ac	2.3 bu/ac increase 0.7% drier moisture advantage N=14
Thunder Seeds TH6977VT2PRIB	167.0 bu/ac	
P7844AM™	139.0 bu/ac	13.3 bu/ac increase -0.9% drier moisture disadvantage N=22
DEKALB® DKC24-06RIB	125.7 bu/ac	

NEW P8228AM™ 2400 CHU, 82 CRM



- ▶ Dual purpose hybrid - Very good silage hybrid and full season grain hybrid for Southern Manitoba
- ▶ Above average stalks and root strength
- ▶ Very good Goss's Wilt resistance rating

P8228AM™	182.2 bu/ac	7.0 bu/ac increase 0.8% drier moisture advantage N=11
DEKALB® DKC33-37RIB	175.8 bu/ac	
P8228AM™	178.8 bu/ac	9.0 bu/ac increase -1.4 drier moisture disadvantage N=13
DEKALB® DKC31-85RIB	169.8 bu/ac	



LumiGEN® seed treatments are extensively tested across multiple years, geographies and environments. LumiGEN has become a trusted mark of assurance in seed treatments.

► Featured Silage Corn Hybrids

P6909R 1950 CHU Silage



- ▶ Ultra-early silage corn hybrid
- ▶ Very good drought tolerance and stalk strength
- ▶ Good root strength

P6909R	17.56 t/ac	7.4% starch advantage N=4
DEKALB® DKC23-17RIB	15.93 t/ac	
P6909R	20.11 t/ac	0.1% starch advantage N=4
Maizex MZ 1200DBR	19.13 t/ac	

P7958AM™ 2275 CHU Silage



- ▶ Great dual purpose hybrid with strong yield potential.
- ▶ Good drought tolerance with very good root strength
- ▶ Moderate Goss's Wilt resistance
- ▶ Excellent silage characteristics and performance

P7958AM™	20.72 t/ac	4.5% starch advantage N=2
Maizex LF730CBR	17.65 t/ac	
P7958AM™	24.16 t/ac	-0.2% starch advantage N=2
DEKALB® DKC31-85RIB	23.21 t/ac	
P7958AM™	23.45 t/ac	1.2% starch advantage N=4
PRIDE Seeds AS1017RR EDF	23.15 t/ac	

P8294AM™ 2400 CHU, 82 CRM



- ▶ Excellent silage characteristics and performance
- ▶ Silage look: taller plant, big leaves
- ▶ High ear placement
- ▶ Good Goss's Wilt resistance rating
- ▶ Very strong late season plant health

P8294AM™	25.72 t/ac	3.3% starch advantage N=12
PRIDE Seeds AS1047RR EDF	25.60 t/ac	
P8294AM™	25.03 t/ac	-0.6% starch advantage N=4
PRIDE Seeds A5432G2	23.87 t/ac	

► Featured Silage Corn Hybrids

P8407AM™ 2450 CHU, 84 CRM



- ▶ Excellent silage characteristics and performance
- ▶ Dual-purpose corn product with excellent drought tolerance
- ▶ Very good stalk and root strength
- ▶ Average Goss's Wilt resistance

P8407AM™	26.06 t/ac	1.7% starch advantage
DEKALB® DKC29-89RIB	22.71 t/ac	N=2
P8407AM™	20.85 t/ac	12.9% starch advantage N=2
NorthStar Genetics NS932S	17.93 t/ac	

NEW P87040AM™ 2575 CHU, 87 CRM



- ▶ Excellent silage yield potential
- ▶ Average Stalk strength
- ▶ Above Average Root strength
- ▶ Very good Goss's Wilt resistance rating

P87040AM™	17.56 t/ac	7.4% starch advantage
DEKALB® DKC23-17RIB	15.93 t/ac	N=4
P87040AM™	20.11 t/ac	0.1% starch advantage
Maizex MZ 1200DBR	19.13 t/ac	N=4

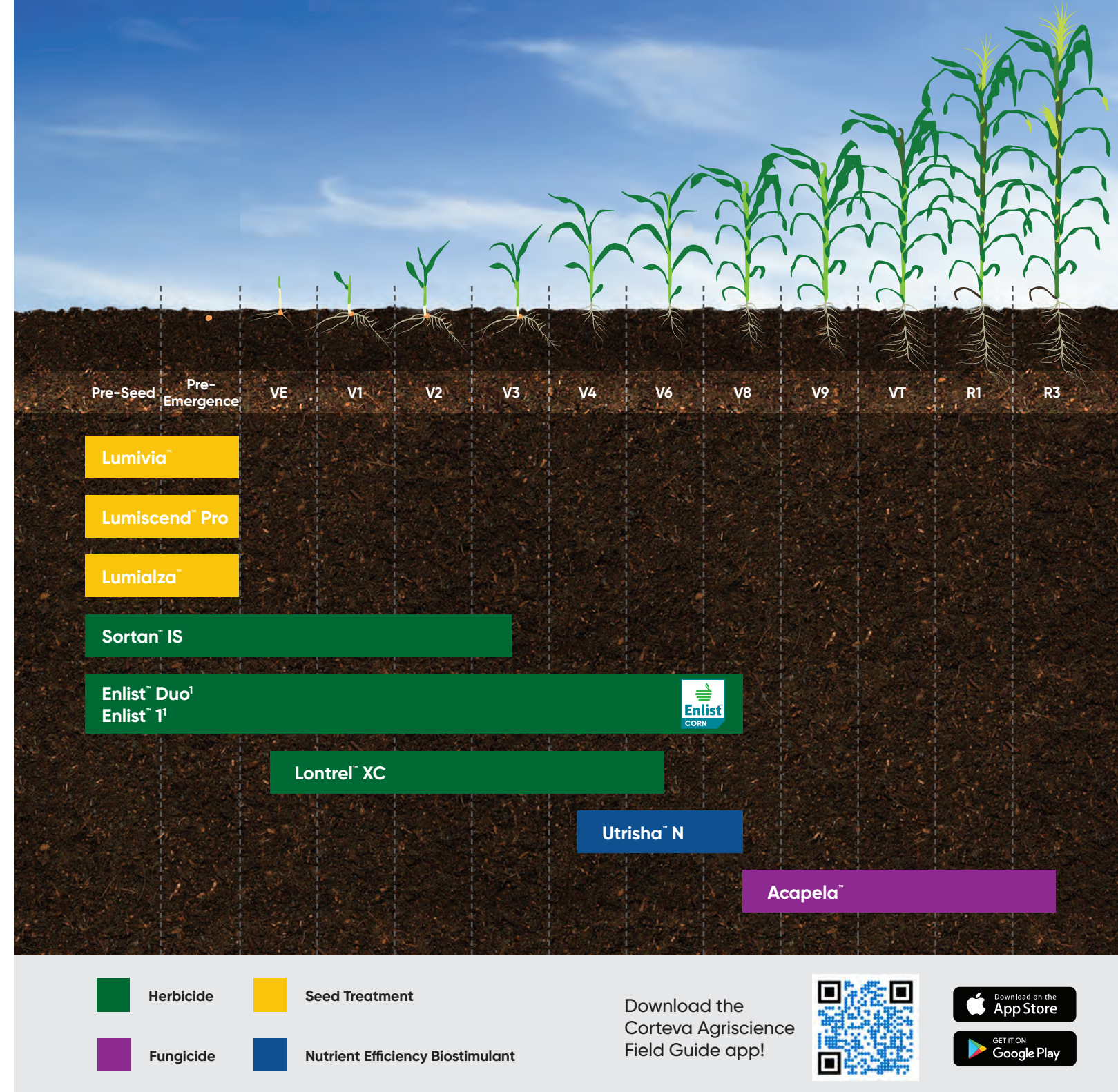
P8859AM™ 2600 CHU, 88 CRM



- ▶ Excellent Dual Purpose Hybrid
- ▶ Above average stalks, roots and Stress emergence
- ▶ Average test weight
- ▶ Average Goss Wilt

P8859AM™	25.56 t/ac	5.4% starch advantage
PRIDE Seeds AS1047RR EDF	24.75 t/ac	N=2
P8859AM™	24.56 t/ac	8.3% starch advantage
Thunder Seeds TH4386VT2PRIB	22.52 t/ac	N=2

► Crop Protection Application Timing



Download the Corteva Agriscience Field Guide app!



¹ Enlist™ herbicides applied post-emergence only on Enlist™ corn

ALWAYS READ AND FOLLOW LABEL DIRECTIONS

HIGH YIELDS AND CLEAN FIELDS.



High yields and clean fields. Choose Enlist E3™ soybeans. For control of tough weeds, Enlist™ herbicides offer choice and tank mix flexibility.

Enlist E3 soybeans. The best in beans. Period.



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Variety	Relative Maturity	Technology Segment	Canadian Heat Units	Harvest Standability	Field Emergence	Phytophthora Gene	Phytophthora Field Tolerance	Iron Chlorosis	Downy Mildew	White Mold	Sudden Death Syndrome	SCN Source	Cyst Nematode Race 1	Cyst Nematode Race 2	Cyst Nematode Race 3	Cyst Nematode Race 5	Cyst Nematode Race 14	Canopy Width	Plant Height for Maturity	% Protein @ 13% Moisture	% Oil @ 13% Moisture	Flower Color	Pubescence Colour	Hila Colour	Pod Colour
NEW P0009A28E™	000.9	E3	2250	8"	8"	1k	4"	6	5"	2"	-	-	1"	1"	1"	1"	5"	3	34.25	20.01	P	G	Y	BR	
P001A48X™	00.1	RR2X	2300	7	8	1c	5	5	6"	4"	-	-	-	-	3	2	6	5	34.36	20.68	P	T	TN	TN	
NEW P002A42E™	00.2	E3	2325	8"	8"	1c	4"	6	5"	3"	-	-	1"	1"	1"	1"	5"	4	34.38	19.94	P	G	Y	TN	
P003A97X™	00.3	RR2X	2350	6	7	1k	4	6	4	3"	PI88788	-	-	-	8	6	5	4	34.47	21.04	P	L	TN	BR	
P005A59E™	00.5	E3	2400	7	7	1c	3"	6	4"	6"	4"	-	-	-	4"	-	5"	4	34.37	19.97	P	L	BR	BR	
P006A37X™	00.6	RR2X	2425	7	7	1c	5	6	7"	4"	3"	-	-	-	1	1	5	5	34.06	20.86	P	T	BR	BR	
NEW P007A68E™	00.7	E3	2450	8"	7"	1c	5"	6"	6"	2"	-	-	1"	1"	1"	1"	5"	5	33.95	20.19	P	G	BF	BR	
P00A49X™	0.0	RR2X	2525	6	7	1c	5	7	5	5"	PI88788	-	-	-	8	8	4	6	34.22	20.7	P	L	BR	BR	
P00A75X™	0.0	RR2X	2525	6	7	1k	5	6	4	4"	-	-	-	-	2	3	6	5	33.51	21.62	P	G	IB	BR	

NEW = New Product
 Ratings: 9 = Excellent | 1 = Poor | Blank = Insufficient Data
 Ratings denoted with a double asterisk () reflect preliminary data subject to change when additional data becomes available.

For complete definitions and disclaimers related to product descriptions, characteristic ratings and disease ratings, and all other information contained herein, see page 47.



Look for the LumiGEN® logo on your seed bag and feel assured that you are using proven, industry-leading seed treatments that have been designed for Pioneer® seed genetics.

► Featured Soybean Varieties

NEW
P0009A28E™
2250 HU (RM 000.9)



- ▶ New E3 soybean variety for ultra-early market
- ▶ Strong yield and improved agronomic disease package with phytophthora RPS1K gene
- ▶ Well suited for narrow row spacing
- ▶ Above average Iron Chlorosis tolerance

P0009A28E™	36.4 bu/ac	3.7 bu/ac increase
Pioneer® brand P0007A73X™	32.7 bu/ac	N=4
P0009A28E™	36.6 bu/ac	1.6 bu/ac increase
Thunder Seed TH87003R2X	35.0 bu/ac	N=3

P001A48X™
2300 HU (RM 00.1)



- ▶ Reliable yield protected by durable disease package with phytophthora RPS1C gene with average field tolerance
- ▶ Consistent performance across all environments and planting dates
- ▶ Plant architecture suitable for all row spacing
- ▶ Average iron chlorosis tolerance

P001A48X™	44.0 bu/ac	2.0 bu/ac increase
Thunder Seed TH87003R2X	42.0 bu/ac	N=11
P001A48X™	44.0 bu/ac	Equal Yield
Syngenta® S003-Z4X	44.0 bu/ac	N=11

NEW
P002A42E™
2325 HU (RM 00.2)



- ▶ New E3 variety developed for all established production areas
- ▶ Yield performance protected by strong agronomic package with phytophthora RPS1C gene with average field tolerance
- ▶ Very good iron chlorosis tolerance (Score - 6)
- ▶ Very adaptable to all soil types and row spacing

P002A42E™	40.8 bu/ac	-0.4 bu/ac decrease
Pioneer® brand P003A97X™	41.2 bu/ac	N=11
P002A42E™	40.1 bu/ac	4.0 bu/ac increase
Pioneer® brand P000A24E™	36.1 bu/ac	N=10

P003A97X™
2350 HU (RM 00.3)



- ▶ Very high yield potential in an early maturity
- ▶ Offers Cyst Nematode protection with PI88788 gene
- ▶ Branch-like growth habit that promotes excellent canopy closure
- ▶ Above average iron chlorosis tolerance rating

P003A97X™	41.9 bu/ac	0.9 bu/ac increase
Pioneer® brand P005A83X	41.0 bu/ac	N=42
P003A97X™	39.9 bu/ac	3.7 bu/ac increase
Pioneer® brand P000A24E	36.2 bu/ac	N=11

► Featured Soybean Varieties

P005A59E™
2400 HU (RM 00.5)



- ▶ New mid-maturity E3 variety with good yield performance
- ▶ Strong early emergence and provides excellent iron chlorosis tolerance
- ▶ Maintains plant growth habit in all environments
- ▶ Very good early growth and harvest standability
- ▶ Phytophthora RPS1C gene

P005A59E™	41.9 bu/ac	0.1 bu/ac increase
Pioneer® brand P005A83X™	41.8 bu/ac	N=19
P005A59E™	39.2 bu/ac	-0.2 bu/ac decrease
Thunder Seed TH87003R2X	39.4 bu/ac	N=16

P006A37X™
2425 HU (RM 00.6)



- ▶ Market leading variety in Pioneer® brand line up
- ▶ Strong yield potential protected by dependable agronomic package
- ▶ Trusted performance across all yield environments

P006A37X™	42.3 bu/ac	0.4 bu/ac increase
DEKALB® DKB005-52	41.9 bu/ac	N=23
P006A37X™	40.5 bu/ac	1.1 bu/ac increase
Thunder Seed TH87003R2X	39.4 bu/ac	N=16

NEW
P007A68E™
2450 HU (RM 00.7)



- ▶ NEW high yielding E3 variety that offers excellent trait package
- ▶ Exceptional field tolerance to Iron Chlorosis with Phytophthora RPS1C gene
- ▶ Well suited to all row spacing and yield environments tested
- ▶ Very good field emergence and Excellent harvest standability

P007A68E™	51.2 bu/ac	0.4 bu/ac increase
DEKALB® DKB005-52	50.8 bu/ac	N=8
P007A68E™	51.2 bu/ac	0.3 bu/ac increase
Syngenta® S007-A2XS	50.9 bu/ac	N=8

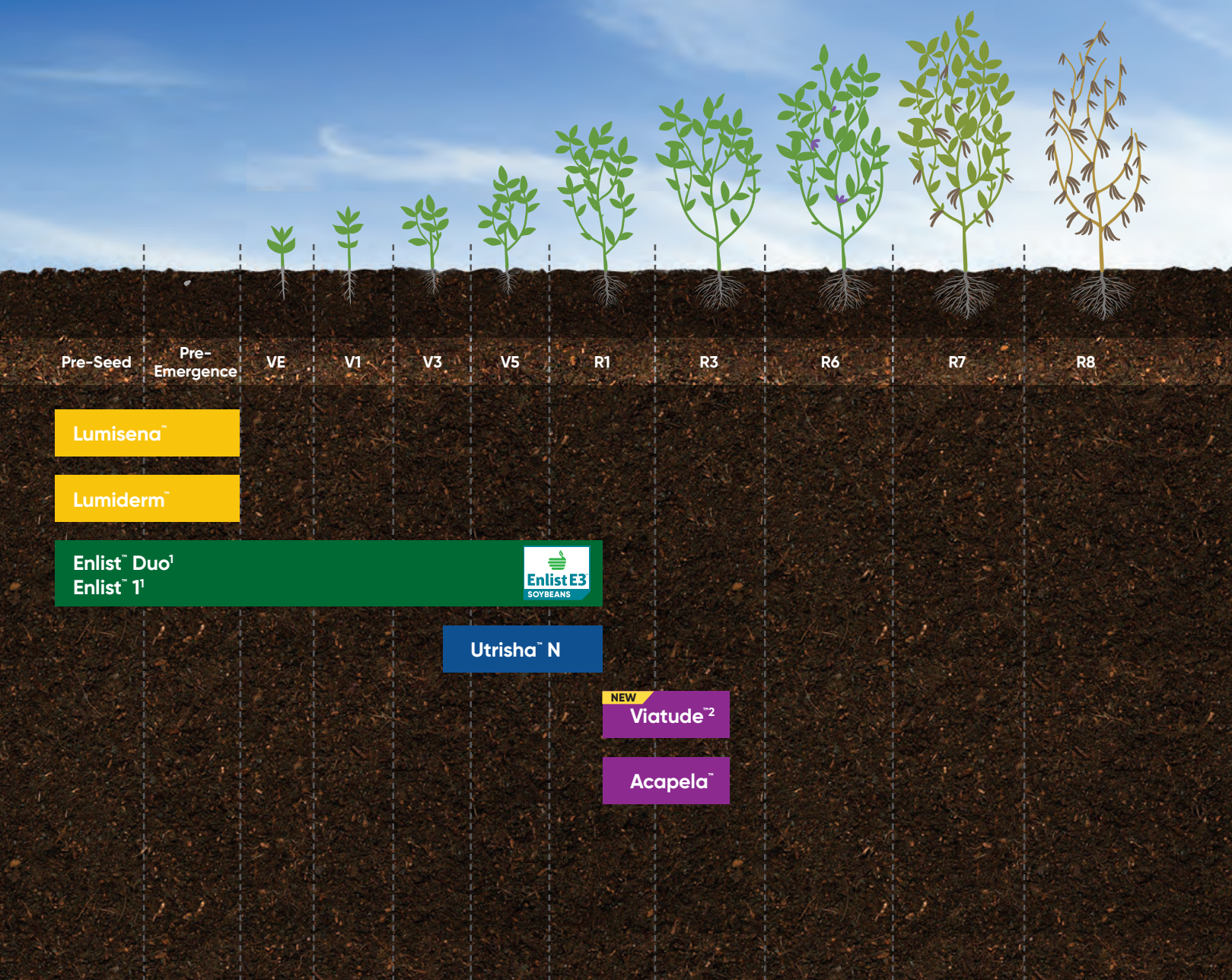
P00A49X™
2525 HU (RM 0.0)



- ▶ Full season maturity with complete agronomic trait package
- ▶ Built in Phytophthora tolerance with RPS1C gene and Cyst Nematode protection with PI88788 gene
- ▶ Very good Iron Chlorosis tolerance
- ▶ Designed for production in the River Valley of Manitoba

P00A49X™	39.3 bu/ac	1.2 bu/ac increase
DEKALB® DKB005-52	38.1 bu/ac	N=11
P00A49X™	38.7 bu/ac	Equal Yield
Syngenta® S007-A2XS	38.7 bu/ac	N=6

Crop Protection Application Timing



- Herbicide
- Seed Treatment
- Fungicide
- Nutrient Efficiency Biostimulant

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Pioneer® brand Sunflower

Variety	Herbicide System	Relative Maturity	Yield	Emergence	Drydown	Percent Oil	Mid-Oleic Score	High-Oleic Score	Self Fertility	Plant Height	Stem Curvature	Neck Strength	Stalk Strength	Root Strength	Rust Field Tolerance	Root Sclerotinia	Head Sclerotinia	Verticillium	Phomopsis	Midge Score	Downy Mildew Gene	Test Weight	Hull Score	PCT013
Mid-Oleic (NuSun® Oil)																								
P63ME80	ExpressSun	38	7	6	6	7	8	8	8	7	6	7	7		5	6		6	6		PI 2,8	7	4	5
High-Oleic																								
P63HE501	ExpressSun	35	8	6	7	6		7	7	6	7	6	7	7		5	6		7		PI 2,6,8	8		
P63HE60	ExpressSun	37	7	6	6	7		8	8	6	7	6	7	7		5	6		6	6	PI 2,8	8	4	5
P63HE920*	ExpressSun	39	8	6	6	7		8	7	7	7		7	6		7	7		6		PI 6,8	8		

Ratings: 9 = Outstanding | 1 = Poor | Blank = Insufficient Data
 *Pending registration
 For complete definitions and disclaimers related to product descriptions, characteristic ratings and disease ratings, and all other information contained herein, see page 48.

¹ For use only in Enlist® E3 soybeans
² Apply prior to disease development (R2 flowering stage)

ALWAYS READ AND FOLLOW LABEL DIRECTIONS

Pioneer® brand Alfalfa

Variety	Forage Yield	Fall Dormancy	Winterhardness	Stand Persistence	Stability or Lodging Resistance	Relative Forage Quality	Milk Yield per Acre	Disease Resistance Index	Seedling Root Rots	Aphanomyces Root Rot Multi-Race	Root & Crown Diseases	Stem & Crown Diseases	Vascular Wilt Diseases	Aphid Resistance	Anthraxnose (Race 1)	Aphanomyces Root Rot (Race 1)	Aphanomyces Root Rot (Race 2)	Bacterial Wilt	Fusarium Wilt	Phytophthora Root Rot	Verticillium Wilt	Stem Nematode	Northern Root-Knot Nematode	Southern Root-Knot Nematode	Pea Aphid	Spotted Aphid	Potato Leafhopper	
Conventional Muscle/High Yield Varieties																												
54VQ52	9	4	8	9	7	8	9	9	8	8	8	8	8	7	8	8	8	8	7	9	8	8				8	7	1
54Q29	9	4	8	9	7	8	9	9	8	8	8	8	8	8	8	9	7	9	8	9	8	8				8	7	1
55Q27	8	5	8	8	6	8	8	9	8	7	9	9	9	7	9	8	6	9	8	9	8	8				7	7	1
55V50	8	5	8	8	6	7	8	9	9	9	9	8	8	7	8	9	9	8	7	9	8	7	8			7	7	1
Forage Quality Varieties																												
NEW 54Q16	8	4	8	8	8	9	8	9	9	9	9	9	9	7	9	9	8	9	9	9	9	8				7		1
Premium Dormant Blends																												
54B66	7	4	8	7	7	7	7	7	7	6	8	8	7	7	8	7	5	8	7	8	7					7	7	1

NEW = New Product
Ratings: 9 = Outstanding | 1 = Poor | Blank = Insufficient Data

For complete definitions and disclaimers related to product descriptions, characteristic ratings and disease ratings, and all other information contained herein, see page 49.

Sila-Bac® brand Forage Additives

Crop-Specific Options Using Patented and/or Proprietary Bacterial Strains

	Sila-Bac® Brand Inoculants					Sila-Bac Brand Nutrivail® Feed Technology		
	1174	11H50	11C33	11B91	11G22	11CFT**	11AFT**	11GFT**
	Multi-Crop	Alfalfa	Corn Silage	HMC	Alfalfa/Grass/Cereals	Corn Silage	Alfalfa	Grass/Cereals
	Unique blend of patented and/or proprietary strains of <i>Lactobacillus plantarum</i> and <i>Enterococcus faecium</i>	Unique blend of patented and/or proprietary strains of <i>Lactobacillus plantarum</i> and <i>Enterococcus faecium</i>	Contains fast-acting* <i>L. buchneri</i> [†]	Contains fast-acting* <i>L. buchneri</i> [†]	Contains fast-acting* <i>L. buchneri</i> [†]	Contains <i>L. buchneri</i> [†]	Contains <i>L. buchneri</i> [†]	Contains <i>L. buchneri</i> [†]
Improves fermentation and reduces dry matter loss	X	X	X	X	X	X	X	X
Improves nutrient conservation	X	X	X	X	X	X	X	X
Significantly reduces heating on bunker/pile			X	X	X	X	X	X
Helps reduce heating in entire TMR			X	X	X	X	X	X
Improves fibre digestibility						X	X	X

RAPID REACT® AEROBIC STABILITY

Rapid React aerobic stability technology contains a proprietary bacterial strain that quickly goes into action, making feed ready in just 7 days.

Benefits include:

- ▶ Faster access to your most valuable input
- ▶ A consistently cool bunker face
- ▶ Extended bunklife

* Rapid React® aerobic stability[†] technology
 ** Patented, proprietary and unique *L. buchneri* strain found only in Nutrivail® Feed Technology products proven to improve rate of fiber digestibility.
[†] Improved aerobic stability and reduced heating is relative to untreated silage. Actual results may vary. The effect of any silage inoculant is dependent upon management at harvest, storage and feedout. Factors such as moisture, maturity, chop length and compaction will determine inoculant efficacy. For complete definitions and disclaimers related to product descriptions, characteristic ratings and disease ratings, and all other information contained herein, see page 49.

► Featured Sila-Bac® brand Inoculants

11CFT NUTRIVAIL <small>FEED TECHNOLOGY</small>	CORN FIBRE TECHNOLOGY	<ul style="list-style-type: none"> Multi-strain with <i>L. buchneri</i> Improves fibre digestibility Enables higher corn silage inclusion rates Reduces shrink and improves bunklife of the silage face during feedout
11GFT NUTRIVAIL <small>FEED TECHNOLOGY</small>	GRASS FIBRE TECHNOLOGY	<ul style="list-style-type: none"> Multi-strain with <i>L. buchneri</i> Improves fibre digestibility Improves forage energy density to help reduce supplemental feeding cost Improves grass/cereal fermentation
11B91 RAPID REACT <small>AEROBIC STABILITY</small>	HIGH-MOISTURE CORN	<ul style="list-style-type: none"> Multi-strain with <i>L. buchneri</i> Improves fermentation Retains nutrient content and enhances digestibility of ensiled high-moisture corn Provides improved bunklife and stable feed in 7 days
1189	HIGH-MOISTURE CORN	<ul style="list-style-type: none"> Helps corn ferment faster to retain more energy Retains nutrient content and enhances digestibility of ensiled, high-moisture corn
11H50	ALFALFA SILAGE	<ul style="list-style-type: none"> Improves dry matter digestibility Reduces dry matter loss Promotes faster, more efficient fermentation Helps improve alfalfa silage nutritional quality
11AFT NUTRIVAIL <small>FEED TECHNOLOGY</small>	ALFALFA FIBRE TECHNOLOGY	<ul style="list-style-type: none"> Multi-strain with <i>L. buchneri</i> Improves alfalfa fermentation Improves fibre digestibility Improves forage energy density to help reduce supplemental feeding cost
11C33 RAPID REACT <small>AEROBIC STABILITY</small>	CORN SILAGE	<ul style="list-style-type: none"> Multi-strain with fast-acting* <i>L. buchneri</i> Reduces heating, increases bunklife Minimizes dry matter loss Provides improved bunklife and stable feed in 7 days
1174	MULTI-CROP	<ul style="list-style-type: none"> Reduces dry matter loss Promotes faster silage fermentation, retaining more energy Improves forage quality for silage with higher energy
11G22 RAPID REACT <small>AEROBIC STABILITY</small>	GRASS/CEREAL	<ul style="list-style-type: none"> Multi-strain with fast-acting* <i>L. buchneri</i> Enhances fermentation in grass/cereal silage Minimizes aerobic dry matter loss Provides improved bunklife and stable feed in 7 days

Sila-Bac® brand inoculants 11C33, 11G22 and 11B91 – now with Rapid React aerobic stability technology – provide you with earlier aerobic stability for silage consistency and faster access to new crop feed, allowing maximum flexibility when managing feed inventory.

FLEX+ REWARDS

CORTEVA AGRISCIENCE™

GROW WITH CORTEVA AGRISCIENCE.

Choose from a portfolio of high-performing, world-class products, and earn rewards without compromising agronomics.

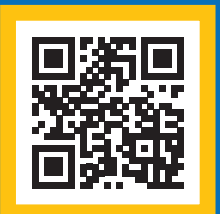
Flex+ Rewards gives you the flexibility to make the best agronomic decisions for your farm while saving money for your operation.

With **Flex+ Rewards**, choose from **eligible crop protection products** and **SAVE**.

Purchase seed and **SAVE MORE**.

Book early and **SAVE THE MOST**.

To calculate your Flex+ Rewards savings, scan here:



With Flex+ Rewards, you receive savings of up to **18% of MSRP** rewards on eligible crop protection products, when you purchase both crop protection and seed products in Western Canada from Corteva Agriscience.

CANOLA FOOTNOTES

* Introductory product. Quantities may be limited.
 ** Pending registration

Trait ratings provide key information useful in selection and management of Pioneer® brand products in your area. Scores are based on period-of-years testing through 2022 harvest and were the latest available at time of printing. Some scores may change after 2023 harvest. Contact your Pioneer sales professional before planting for the latest trait rating information.

IMPORTANT: Information and ratings are based on comparisons with other Pioneer® brand products, not competitive products. Information and ratings are assigned by Pioneer Agronomists and Research Managers, based on average performance across area of adaptation under normal conditions, over a wide range of both climate and soil types, and may not predict future results. Product responses are variable and subject to any number of environmental, disease and pest pressures. Please use this information as only part of your product positioning decision. Refer to pioneer.com/Canada or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product and for product placement and management suggestions specific to your operation and local conditions.

RATINGS: **9** = Excellent; **1** = Poor; Blank = Insufficient Data.

MATURITY: **9** = Late; **6** = Medium; **5** = Medium-Early; **3** = Early; **1** = Very Early.

HERBICIDE TOLERANT TRAIT:

Hybrids and varieties with the **Optimum® GLY** trait are tolerant to labeled rates of glyphosate herbicides. This technology allows for post-emergent applications of these herbicides without crop injury or stress (see herbicide label). Labeled herbicides should only be used over the top of those hybrids and varieties that contain the Optimum® GLY trait.

Hybrids and varieties with the **CLEARFIELD® trait (CL)** are tolerant to labeled rates of Amity™ WDG and Ares™ SN herbicides. This technology allows for post-emergent applications of these herbicides without crop injury or stress (see herbicide label). Labeled herbicides should only be used over the top of those hybrids and varieties that contain the CLEARFIELD trait. The unique Clearfield symbol and Clearfield® are registered trademarks of BASF.

Hybrids and varieties with the **LibertyLink® gene (LL)** are resistant to Liberty® herbicide. Liberty®, LibertyLink® and the Water Droplet Design are registered trademarks of BASF.

Hybrids and varieties with the **Roundup Ready® gene (RR)** are tolerant to labeled rates of Roundup® branded herbicides. This technology allows for post-emergent applications of Roundup without crop injury or stress (see herbicide label). Labeled Roundup herbicide should only be used over the top of those hybrids and varieties that carry the Roundup Ready designation. Roundup Ready® and Roundup® are registered trademarks of Bayer Group.



POD SHATTER REDUCTION SCORE: **9** = Low risk of Shatter, **1** = High Risk of Shatter.

SOURCE OF CLUBROOT RESISTANCE: Shows different source of Clubroot resistance. CR1 is different from CR2; CR2 is different from CR3, etc.

CLUBROOT: **R** = Resistant, **S** = Susceptible.

BLACKLEG: **R** = Resistant; **MR** = Moderately Resistant; **MS** = Moderately Susceptible;

S = Susceptible.

BLACKLEG SCORE: **9** = Resistant; **1** = Susceptible.

SCLEROTINIA: **9** = Highly Tolerant; **5** = Moderately Tolerant; **1** = Susceptible.

FUSARIUM WILT: **R** = Resistant; **S** = Susceptible. Current Fusarium rating is provisional and based on limited data.

VERTICILLIUM STRIPE: **9** = Resistant, **1** = Susceptible.

EARLY GROWTH: **9** = Excellent, **1** = Poor. Early growth is recorded when plants are at 4–6 leaf stage. It is a subjective evaluation of healthiness of plants and the soil area covered by their leaves.

GREEN SEED CONTENT: **9** = Very low count (desired); **1** = Very high count.

STANDABILITY: **9** = upright (desired) while **1** = Severely lodged

PLANT HEIGHT: **9** = Tall; **1** = Short (desired).

Pioneer® brand canola products are treated with Helix® Vibrance® seed treatment. Helix® and Vibrance® are registered trademarks of a Syngenta Group Company.

CORN FOOTNOTES

* Introductory product. Quantities may be limited.

** All scores of integrated refuge products are based upon the major component

*** All Pioneer products are hybrids unless designated with AM1, AM, AML, AMT, AMX, AMXT and Q, in which case they are brands.

Product performance in water-limited environments is variable and depends on many factors such as the severity and timing of moisture deficiency, heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. All products may exhibit reduced yield under water and heat stress. Individual results may vary.

IMPORTANT: Trait rating scores provide key information useful in selection and management of Pioneer® brand products in your area. Information and ratings are based on comparisons with other Pioneer brand products, not competitive products. Information and scores are assigned by Pioneer Research Managers. Scores are based on period-of-years testing through 2022 harvest and were the latest available at time of printing. Some scores may change after 2023 harvest. Scores represent an average of performance data across areas of adaptation, multiple growing conditions, and a wide range of both climate and soil types, and may not predict future results. All products within a hybrid family receive the same score unless observations indicate a significant difference. Individual product responses are variable and subject to a variety of environmental, disease and pest pressures. Please use this information as only one component of your product positioning decision. Refer to www.pioneer.com or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product and for product placement and management suggestions specific to your operation and local conditions.

RATINGS: **9** = Outstanding; **1** = Poor; Blank = Insufficient Data.

WHITE AND WAXY CORN RATINGS: Based on comparisons with other Pioneer brand products, not competitive products. Trait ratings for white and waxy products reflect comparison with non-modified yellow products of a similar maturity.

HYBRID FAMILY: Hybrid family identifies products that have the same base genetics. Manage products within the same family similarly.

TECHNOLOGY SEGMENT:

AM1 – Optimum® AcreMax® 1 insect protection system with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away.

AM – Optimum® AcreMax® insect protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton-growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products.

AMT – Optimum® AcreMax® TRIssect® insect protection system with RW, YGCB, HX1, LL, RR2. Contains a single-bag refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the Bt trait, and the Herculex® I gene. In EPA-designated cotton-growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIssect products.

AMX – Optimum® AcreMax® Xtra insect protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton-growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products.

AMXT (Optimum® AcreMax® XTreme) – Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the Bt trait and the Herculex® XTRA gene. In EPA-designated cotton-growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products.

Q (Qrome®) – Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the Bt trait, and the Herculex® XTRA gene. Qrome products are approved for cultivation in the U.S. and Canada. They have also received approval in a number of importing countries, most recently China. For additional information about the status of regulatory authorizations, visit <http://www.biotradestatus.com/>.

YGCB, HX1, LL, RR2 (Optimum® Intrasect®) – Contains the Bt trait and Herculex® I gene for resistance to corn borer.

YGCB, HXX, LL, RR2 (Optimum® Intrasect® Xtra) – Contains the Bt trait and the Herculex® XTRA gene for resistance to corn borer and corn rootworm.

RW, HX1, LL, RR2 (Optimum® TRIssect®) – Contains the Herculex® I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm.

AML – Optimum® AcreMax® Leptra® products with AVBL, YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton-growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Leptra products.

AVBL, YGCB, HX1, LL, RR2 (Optimum® Leptra®) – Contains the Agrisure Viptera® trait, the Bt trait, the Herculex® I gene, the LibertyLink® gene and the Roundup Ready® Corn 2 trait.

HX1 – Contains the Herculex® I insect protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm.

HXX – Herculex® XTRA contains the Herculex® I and Herculex® RW gene.

YGCB – The Bt trait offers a high level of resistance to European corn borer, southwestern corn borer

and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm.

LL – Contains the LibertyLink® gene for resistance to Liberty® herbicide.

RR2 – Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions.

Roundup Ready® is a registered trademark used under license from Monsanto Company.

Liberty®, LibertyLink® and the Water Droplet Design are registered trademarks of BASF.



MARKET SEGMENT: Designations indicate product is also suitable for the following market:

HAE – High Available Energy (Pork & Poultry Feed); **HTF** – High Total Fermentables (Dry-Grind Ethanol); **HES** – High Extractable Starch (Wet Milling); **WX** – Waxy; **WH** – White food corn; **YFC** – Yellow food corn; **AQ** – Optimum® AQUAmax® product; **BMR** – Brown MidRib Corn.

CRM (Comparative Relative Maturity): There is not an industry standard for maturity ratings so comparing product maturity and harvest moisture ratings between companies is usually difficult. Use the CRM rating to compare Pioneer® brand products with competitive products of a similar maturity and harvest moisture. CRM ratings, and harvest moistures, for products within a family may vary slightly, depending upon the level of insect (ECB and CRW) infestation. Conventional and straight products with the RR2 gene within a family will usually be 1-2 CRMs earlier than indicated, when insect infestations are moderate to heavy. One CRM difference is about ½ point of moisture difference at harvest.

PHYSIOLOGICAL CRM: Measures differences in maturity to zero milkline stage. To help decide if a new product fits your area's growing season, compare its physiological CRM to a product that you plant or one that is successfully used in your area.

GDUs TO PHYSIOLOGICAL MATURITY: Measures differences in growing degree units (GDUs) required to zero milkline stage. To help decide if a new product fits your area's growing season, compare its GDUs to physiological maturity to a product that you plant or one that is successfully used in your area.

MID-SEASON BRITTLE STALK: Ratings determined by frequency and severity of stalk snapping at lower to middle stalk internodes from conditions usually favored by rapid or optimum growth. Relative response of products can be affected by planting date, stage of growth, rate of growth, wind severity and other variables. Scores derived from both natural observations and artificial evaluation immediately prior to tasseling. **NOTE:** Scores do not reflect snapping enhanced by or due to herbicide interaction. The use of growth regulator herbicides such as 2,4-D and dicamba can increase the brittle snap potential of corn products. Products with lower brittle stalk ratings will require more caution and have a higher risk associated with the use of growth regulator herbicides. Early application, proper rates and application methods, along with both product and herbicide selection can help reduce this risk.

STRESS EMERGENCE: All products are expected to establish normal stands under average soil conditions. Stress emergence is a measure of the genetic ability or potential to emerge in the stressful environmental conditions of cold, wet soils or short periods of severe low temperatures, relative to other

Pioneer brand products. Ratings of 7-9 indicate very good potential to establish normal stands under such conditions; a rating of 5-6 indicates average potential to establish normal stands under moderate stress conditions; and ratings of 1-4 indicate the product has below average potential to establish normal stands under stress and should not be used if severe cold conditions are expected immediately after planting. Stress emergence is not a rating for seedling disease susceptibility, early growth or speed of emergence.

DROUGHT TOLERANCE: Drought tolerance is a complex trait, determined by a platform's ability to maintain yield in limited-moisture environments. A higher score indicates the potential for higher yields vs. other platforms of similar maturity in limited-moisture environments.

HIGH RESIDUE SUITABILITY: **HS** – Highly Suitable; **S** – Suitable; **MA** – Manage Appropriately; **X** – Poorly Suited; **NS** – Not Scored. Suitability rating based on field observations and a weighted calculation of gray leaf spot, stress emergence, anthracnose stalk rot or stalk strength, northern corn leaf blight, and Diplodia ear rot scores. High Residue Suitability ratings may vary by environment and geography.

GRAIN DRYDOWN: Compares products of similar maturity for rate of moisture loss during grain drydown. A higher score indicates faster drydown. A lower score indicates slower drydown, or a wider opportunity for silage and high-moisture corn harvest.

EAR FLEX: Score reflects the ability of a product to flex ear size as plant density is reduced, or as growing conditions improve.

TEST WEIGHT: Higher score indicates heavier test weight.

PLANT HEIGHT: **9** = Very Tall; **1** = Short.

EAR HEIGHT: **9** = High; **1** = Low.

GOSS WILT RESISTANCE: **8-9** = Highly Resistant; **6-7** = Resistant; **4-5** = Moderately Resistant; **1-3** = Susceptible

SILAGE CRM (Silage Comparative Relative Maturity): With no industry standard for silage maturity, comparing maturity and harvest moisture across various companies' corn-for-silage hybrids can be difficult. Pioneer silage CRM ratings provide a relative comparison among Pioneer® brand products of rates at which products reach harvestable whole plant moistures. It is on the same scale as the CRM rating provided for grain corn products and does not represent actual days from planting or emergence to harvest moisture or half milkline.

SILAGE YIELD: Based on whole-plant yield per acre (adjusted to 35% dry matter) from multi-year comparison with other products within a maturity range not exceeding 5 silage CRM units.

STARCH AND SUGAR, %: Percent starch and soluble sugars (DM basis) in the whole-plant sample predicted by NIRS.

FIBER DIGESTIBILITY: Based on 30-hour rumen-fluid based estimate of the percent of ruminally degradable neutral detergent fiber (NDF) as a percent of total NDF in whole-plant samples, predicted by NIRS. Brown MidRib Corn hybrids are designated with "B" since NDFD30 averages 6-8 percentage points higher than non-BMR silage hybrids. To optimize fiber digestibility, growers should consider use of BMR Corn hybrids.

SILAGE CRUDE PROTEIN: Based on the amount of crude protein in the whole plant, predicted by NIRS.

MILK PER ACRE: **9** = Outstanding; **1** = Poor, based on University of Wisconsin MILK2006 utilizing silage yield, nutrient content and digestibility.

MILK PER TON: **9** = Outstanding; **1** = Poor, based on University of Wisconsin MILK2006 utilizing silage nutrient content and digestibility.

SOYBEAN FOOTNOTES

* Introductory product. Quantities may be limited.

** All Pioneer products denoted with * are brand names.

** Ratings denoted with a double asterisk (**) reflect preliminary data subject to change when additional data becomes available.

Components of LumiGEN® seed treatments for soybeans are applied at a Corteva Agriscience production facility or by an independent sales representative of Corteva Agriscience or its affiliates. Not all sales representatives offer treatment services, and costs and other charges may vary. See your sales representative for details. Seed applied technologies exclusive to Corteva Agriscience and its affiliates.

IMPORTANT: Product responses are variable and subject to any number of environmental, disease and pest pressures. Please use this information as only part of your product positioning decision. Individual results may vary.

Trait ratings provide key information useful in selection and management of Pioneer® brand products in your area. Scores are based on testing through 2022 harvest and were the latest available at time of printing. Some scores may change after 2023 harvest. Information and ratings are based on average performance across area of adaptation under normal conditions, over a wide range of both climate and soil types and may not predict future results. Refer to www.pioneer.com or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product and for product placement and management suggestions specific to your operation and local conditions.

NUMERIC RATINGS: **9** = Excellent; **1** = Poor; Blank = Insufficient Data or variety not tested for that particular trait.

RELATIVE MATURITY: Shows the relative maturity group rating, with the digits preceding the decimal representing the general maturity group, and the digit following the decimal showing relative maturity within the group on a scale of 0 to 9, with 0 early and 9 late. For example, a soybean product with a relative maturity rating of 1.8 would be a late product in Group 1 maturity.

TECHNOLOGY SEGMENT:

Always follow stewardship practices in accordance with the Product Use Guide (PUG) or other product-specific stewardship requirements including grain marketing and pesticide label directions.

Always follow grain marketing, stewardship practices and pesticide label directions. Varieties with the Glyphosate Tolerant trait (including those designated by the letter "R" in the product number) contain genes that confer tolerance to glyphosate herbicides. Glyphosate herbicides will kill crops that are not tolerant to glyphosate.

Varieties with the **Roundup Ready 2 Yield® (RR2Y)** trait: **ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Roundup Ready® technology contains genes that confer tolerance to glyphosate, an active ingredient in Roundup® brand agricultural herbicides. Agricultural herbicides containing

glyphosate will kill crops that are not tolerant to glyphosate. Roundup Ready 2 Yield® is a trademark of Bayer Group.

Varieties with the **LibertyLink® (LL)** gene are resistant to Liberty® herbicide.

Liberty®, LibertyLink® and the Water Droplet Design are registered trademarks of BASF.

SOYBEAN FOOTNOTES CONTINUED...

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

Soybeans with Roundup Ready 2 Xtend® technology contain genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Roundup Ready 2 Xtend® is a registered trademark of Monsanto Technology LLC used under license.

Enlist E3® soybeans contain the Enlist E3 trait that provides crop safety for use of labelled over-the-top applications of glyphosate, glufosinate and 2,4-D herbicides featuring Colex-D® technology when applied according to label directions. Following burndown, the only 2,4-D containing herbicide products that may be used with Enlist® crops are products that feature Colex-D technology and are expressly labelled for use on Enlist crops. 2,4-D products that do not contain Colex-D technology are not authorized for use in conjunction with Enlist E3 soybeans.

WARNING: Enlist E3 soybeans are tolerant of over-the top applications of glyphosate, glufosinate, and 2,4-D. Accidental application of incompatible herbicides to this variety could result in total crop loss. When using 2,4-D herbicides, grower agrees to only use 2,4-D products that contain Colex-D technology authorized for use in conjunction with Enlist E3 soybeans. Always read and follow herbicide label directions prior to use.

Enlist® 1 and Enlist Duo® are the only 2,4-D products authorized for use with Enlist crops. Consult Enlist herbicide labels for weed species controlled. Additional product-specific stewardship requirements for Enlist crops, including the Enlist® Product Use Guide, can be found at www.EnlistCanada.ca Always read and follow label directions.

The transgenic soybean event in the Enlist E3® soybean was jointly developed and owned by Corteva Agriscience and M.S. Technologies, L.L.C. ® Enlist, Enlist E3, the Enlist E3 logo, and Colex-D are trademarks of Corteva Agriscience and its affiliated companies. Excellence Through Stewardship is a registered trademark of Excellence Through Stewardship.

(-) = Variety does not contain a herbicide resistant gene.



FIELD EMERGENCE: Rating based on speed and strength of emergence in sub-optimal temperatures. **1-3** = Below Average; **4-6** = Average; **7-9** = Excellent.

PHYTOPHTHORA RESISTANCE GENE: (-) = No specific gene for resistance.

Rps1^A = Contains Rps1c or Rps1k Phytophthora resistance.

Rps 1a = Provides resistance to races 1, 2, 10, 11, 13-18, 24, 26, 27, 31, 32 & 36.

Rps 1c = Provides resistance to races 1-3, 6-11, 13, 15, 17, 21, 23, 24, 26, 28-30, 32, 34, 36.

Rps 1k = Provides resistance to races 1-11, 13-15, 17, 18, 21-24, 26, 36, 37.

Rps 6 = Provides resistance to races 1-4, 10, 12, 14-16, 18-21, 25, 28, 33-35.

Rps 3a = Resistant to races 1-5, 8-9, 11, 13-14, 16, 18,

23, 25, 28-29, 31-35, 39-41, 43-45, 47-52, 54...

Rps 3c = Resistant to races 1-4, 10-16, 18-36, 38-54...

PHYTOPHTHORA FIELD TOLERANCE: Products with high tolerance scores have demonstrated an ability to thrive in the presence of Phytophthora races to which they lack specific resistance. In some products, tolerance is expressed only after the early seedling growth stage, making such products susceptible to damping off during emergence and early seed growth.

WHITE MOLD: Scores based on Pioneer research observations of comparative white mold tolerance among various soybean products across multiple locations and years. All products are capable of developing white mold symptoms under severe infestations. To our knowledge, there are no totally resistant products in the industry. However, differences exist in the ability of products to tolerate white mold (i.e., the rate at which the infection develops and the extent of damage it causes). These scores reflect those differences.

SCN RESISTANCE SOURCE: There are three sources of genetic resistance to SCN currently deployed in the marketplace: **PI88788; PI548402** (also known as Peking); **PI437654** (also known as Hartwig); **R** = Resistant to SCN but the source of that resistance is not yet identified.

SOYBEAN CYST NEMATODE [SCN]: Resistance to each of the major SCN races is scored on a **1-9** scale. **9** = Excellent resistance; **8-7** = Very good resistance; **6** = Good resistance; **5** = Average resistance; **4** = Below average resistance; **3-2** = Susceptible; **1** = Highly susceptible; to the specific race indicated.

CANOPY WIDTH: 9 = Extremely bushy; **1** = Very narrow.

PLANT HEIGHT FOR MATURITY: 9 = Tall; **1** = Short.

% PROTEIN AT 13% MOISTURE: Compare data within table only. Values can vary widely by growing season and region.

% OIL AT 13% MOISTURE: Compare data within table only. Values can vary widely by growing season and region.

SEED SIZE RANGE: Expressed in seeds per pound under normal growing conditions. Range is calculated over multiple years and locations. Since seed size may vary by growing season and region, check the "seeds/pound" information printed on the bag.

FLOWER COLOR: P = Purple; **W** = White.

PUBESCENCE COLOR: T = Tawny; **G** = Gray; **L** = Light tawny; **M** = Mixed.

HILA COLOR: BL = Black; **BR** = Brown; **TN** = Tan; **G** = Gray; **IB** = Imperfect black; **BF** = Buff; **Y** = Yellow (Clear); **M** = Mixed.

POD COLOR: BR = Brown; **TN** = Tan.

SUNFLOWER FOOTNOTES

IMPORTANT: Trait ratings provide key information useful in selection and management of Pioneer® brand products in your area. Scores are based on period-of-years testing through 2022 harvest and were the latest available at time of printing. Some scores may change after 2023 harvest. Contact your Pioneer sales professional before planting for the latest trait rating information. Information and ratings are based on comparisons with other Pioneer® brand products, not competitive products. Information and ratings are assigned by Pioneer Agronomists and Research Managers, based on average performance across area of adaptation under normal conditions, over a wide range of both climate and soil types, and may not predict future results. Product responses are variable and subject to any number of environmental, disease and pest pressures. Please use this information as only part of

your product positioning decision. Refer to ca.pioneer.com or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product and for product placement and management suggestions specific to your operation and local conditions.

RATINGS: 9 = Excellent; **1** = Poor; Blank = Insufficient Data.

DISEASE PRECAUTION: Grower should balance hybrid yield potential, hybrid maturity and cultural practice against anticipated risk of a specific disease and need for resistance. In high disease risk conditions, consider planting hybrids with at least a rating of 6 or higher to help reduce risk. When hybrids with disease ratings of 1 to 5 are planted in conditions of high disease pressure, the grower assumes a higher level of risk. If conditions are severe, even hybrids rated as resistant can be adversely affected. Independent of yield reduction, diseases can predispose plants to secondary diseases such as stalk rots. This requires individual field and hybrid monitoring for stalk stability and timely harvest when warranted.

DISEASE RATINGS: 9-8 = Highly Resistant; **7-6** = Resistant; **5-4** = Moderately Resistant; **3-1** = Susceptible; Blank = Insufficient Data.

HERBICIDE SYSTEM: Pioneer® brand sunflower hybrids with the ExpressSun® trait for resistance to tribenuron-methyl herbicides labeled for use with the ExpressSun trait. This unique sunflower system is designed to maximize weed control in sunflower crops, enhancing ease of production and yield. This system provides improved weed control over conventional hybrids with traditional herbicides.

RM (RELATIVE MATURITY): With no industry standard for maturity ratings, comparing hybrid maturity and harvest moisture ratings between companies is usually difficult. Use the RM rating to compare Pioneer® brand hybrids of a similar maturity and harvest moisture.

EMERGENCE: Ratings taken when first true leaf is visible.

MID-OLEIC SCORE: 9 = Consistently meets oleic level specifications for NuSun® oil.

HIGH-OLEIC SCORE: 9 = Consistently meets high-oleic specifications for high-oleic oil profile of 85%.

PLANT HEIGHT: Short stature is desirable. **9** = Short; **1** = Tall.

STEM CURVATURE: 9 = Erect; **8** = Semi-Erect (preferred); **7** = Semi-Pendulous (preferred); **6** = Pendulous; **5** = Fully Pendulous.

MIDGE SCORE: To our knowledge, there are no fully resistant hybrids in this industry. However, differences exist in the ability to tolerate insect pressure. These scores reflect those differences. Heavy midge pressure can cause extensive damage to any hybrid.

DOWNY MILDEW RACE RESISTANCE: Indicates downy mildew resistance to the races identified.

HULL SCORE: A relative expression of hullability and kernel chipping. **9** = completely hulled, high percentage of whole kernels; **1** = poor hulling, many broken kernels.

PCT OVER 13: Using a 13/64th screen, oilseed types are divided by kernel size. **9** = high percentage over 13/64; **1** = low percentage.

NuSun® is a registered certification mark of the National Sunflower Association.

ALFALFA FOOTNOTES

Trait Scores (9=Outstanding; 1=Poor; Blank = Insufficient Data, unless otherwise noted) are based upon period-of-years testing against other Pioneer® brand products through 2023. Pest resistance, dormancy and winterhardness ratings based on standard test protocols prescribed by the North American Alfalfa Improvement Conference (NAAIC). Ratings may change over additional years of data collection, or if NAAIC protocols change. Scores are assigned by Pioneer Agronomists and Research Managers from research data across a range of climates and growing conditions and may not predict future results. Variety responses are variable and subject to any number of environmental, disease and pest pressures. Please use this information as only part of your product positioning decision. Refer to ca.pioneer.com or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product.

Disease, Insect, and Nematode Pest Resistance Scores: NAAIC standardized test score: HR = Highly Resistant; **R** = Resistant; **MR** = Moderately Resistant; **LR** = Low Resistance; **S** = Susceptible; Blank = Insufficient Data. Pioneer **1-9** score: **9**=>70%, **8**=51-69%, **7**=41-50%, **6**=31-40%, **5**=23-30%, **4**=16-22%, **3**=11-15%, **2**=6-10%, and **1**=1-5% resistant plants in standardized tests.

HERBICIDE RESISTANCE: Always Read and Follow Pesticide Label Directions. Roundup Ready® Alfalfa (RRA) products and/or HarvXtra Alfalfa with Roundup Ready Technology (HVX) contain genes that confer tolerance to glyphosate. Glyphosate agricultural herbicides will kill crops that are not tolerant to glyphosate. Accidental application of incompatible herbicides to these alfalfa varieties could result in total crop loss. HVX alfalfa products contain the biotechnology-derived trait developed to maximize alfalfa quality compared to commercially available alfalfa products harvested at the same growth stage, by reducing the amount of lignin in the plant.

Do not export Pioneer® brand Alfalfa seed or crops containing Roundup Ready® and/or Pioneer® brand Alfalfa with HarvXtra® Technology, including hay or hay products, to China pending import approval. In addition, due to the unique cropping practices, do not plant this product in Imperial County, California. Crops and materials containing biotech traits may only be exported to, used, processed, or sold in jurisdictions where all necessary regulatory approvals have been granted for those crops and materials. It is a violation of national and international law to move materials containing biotech traits into jurisdictions where their import is not permitted. Growers should discuss these issues with their purchaser or grain handler to confirm the purchaser or handler's position on products purchased. For further information on the approval status of biotech traits, please visit www.biotradestatus.com.

Roundup Ready® and Roundup® are registered trademarks of Monsanto Technology LLC, used under license by Forage Genetics International, LLC. HarvXtra® is a trademark of Forage Genetics International, LLC. HarvXtra® Alfalfa with Roundup Ready® Technology is enabled with technology from The Samuel Roberts Noble Foundation, Inc.

FORAGE YIELD: Rating based on paired comparison data through 2018 for trials located in the U.S. Ratings for Pioneer® varieties 55H94 and 55H96 from trials with moderate to heavy potato leafhopper infestation, with no insecticide applied.

FALL DORMANCY: Fall dormancy ratings based on standard test protocols of the NAAIC.

1 = Very fall dormant, **11** = Non-dormant.

WINTERHARDINESS: EH = Extremely Hardy; **VH** = Very Hardy; **H** = Hardy; **MH** = Moderately Hardy; **NH** = Non-hardy; **VNH** = Very Non-hardy. Ratings based on research observations over life of stand.

STAND PERSISTENCE: Rating based on observations taken at end of stand life representing plant appearance and stand integrity after at least 3 harvest years.

STANDABILITY OR LODGING RESISTANCE: Score based on plant lodging observations (% of stems >45° angle) averaged across numerous areas of adaptation including Midwest and Western environments.

RELATIVE FORAGE QUALITY: Score based on forage analysis results and the Wisconsin Milk2006 formulas representing the impact of nutrient content and fiber digestibility.

MILK YIELD PER ACRE: Score based on forage analysis results and the Wisconsin Milk2006 formulas representing the impact of forage yield, nutrient content and fiber digestibility.

DISEASE RESISTANCE INDEX (DRI): Index based on the following pests: Bacterial wilt, Verticillium wilt, Fusarium wilt, Anthracnose, Phytophthora and Aphanomyces (Race 1) and Aphanomyces (Race 2). **HR** = 5 points; **R** = 4 points; **MR** = 3 points; **LR** = 2 points; **S** = 1 point. Highest possible **DRI** = 35 points.

INOCULANT FOOTNOTES

IMPORTANT: Information and ratings are based on relative comparisons with other Sila-Bac® brand forage additives within each specific crop, not competitive products. Information and ratings are assigned by Pioneer Forage Additive Research, based on average performance across area of use under normal conditions, over a wide range of both environment and management conditions, and may not predict future results. Product responses are variable and subject to any number of environmental and management conditions. Please use this information as only part of your product positioning decision. Refer to ca.pioneer.com or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product and for product placement and management suggestions specific to your operation and local conditions.

Fermentation – Rate and extent of pH decline and the composition of fermentation acids occurring in silage.

Nutrient Conservation – Retaining more sugar/starch and reducing protein degradation by rapidly reducing silage pH.

Fiber Digestibility – The digestibility of neutral detergent fiber (NDF) by the ruminant animal expressed as a percentage of the total NDF.