

**Your
profitability
partner**

2019
Western Canada
seed guide



Prograin[®]

A world of Soybean

SEMENCES PROGRAMAIN INC.

Your partner...



RON GENDZELEVICH FROM QUARRY SEED
AND MARC SAUMURE FROM PROGRAMAIN

That contributes to your success

Choosing Prograin and Quarry Seed means choosing a team of experts that will contribute to your success in soybean production.

From choosing the optimal variety for your needs to seeding and bringing your harvest to market, Prograin and Quarry Seed are committed to being responsive and support you at each of these stages so that you can maximize the profitability of your farm.

**Thank you
for placing your
trust in us,
year after year!**



SYLVAIN LEGAY,
ASSISTANT PLANT BREEDER

That constantly pushes the limits of research

One of the company's values is commitment to excellence. Achieving this begins with the development of soybean varieties that meet the most demanding criteria of agricultural producers.

Every year, Prograin invests substantial resources to develop new cultivars with considerable efforts made by the research team.

Researchers are working to develop soybean varieties that meet the performance needs of local producers based on criteria such as agronomy and yield.

Using advanced technologies, we are able to accelerate the development and evaluation of new varieties resistant to

certain soybean diseases such as IDC, *Phytophthora*, and tolerance to Sclerotinia.

By evaluating more than 50,000 plots that undergo strict testing every year, Prograin gives you access to the largest private soybean breeding and improvement program in Canada and, at the same time, a complete portfolio of soybean varieties that will meet your highest standards.

**A partner that
offers you new and
innovative products**



Very soon, we will be offering a new product that is unique in terms of the toughest weed control thanks to the best character traits available in the industry.

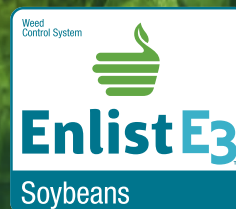
Local producers could soon benefit from the new Enlist™ weed control system in a high performance genetic strain developed by Prograin.

This new system offers the possibility of controlling weeds with a unique combination of three modes of action.

Prograin's Enlist E3 soybeans will provide tolerance to 2,4-D, glyphosate and glufosinate for an extended action mode and superior yield.

For more details, please contact your authorized Quarry Seed/Prograin seed dealer.

**Choose innovation.
Choose Prograin Enlist
E3™ soybeans!**



**That offers you
innovation**



**ROUNDUP READY 2
XTEND[®]
SOYBEANS**

8 GMO VARIETIES

FROM 2225 TO 2500 CHU

**Prograin's Roundup
Ready 2 Xtend[®] line
offers you increased
weed control.**

Soybean varieties that are developed and tested in our research test plots. This technology allows you to better control resistant weeds in your fields. This is how Prograin contributes to your success!

DAYO R2X

2225 CHU (RM 000.5)

STANDABILITY	9
SCLEROTINIA TOLERANCE	9
STABILITY - ADAPTABILITY	7
VIGOUR FOR NO-TILL	7
ADAPTABILITY TO 30"	6
IDC	9
IDC - 1.6	

DARIO R2X

2275 CHU (RM 000.8)

STANDABILITY	7
SCLEROTINIA TOLERANCE	7
STABILITY - ADAPTABILITY	8
VIGOUR FOR NO-TILL	8
ADAPTABILITY TO 30"	6
IDC: 7	7
IDC - 2.2	

DEVO* R2X

2350 CHU (RM 00.2)

STANDABILITY	7
SCLEROTINIA TOLERANCE	7
STABILITY - ADAPTABILITY	8
VIGOUR FOR NO-TILL	8
ADAPTABILITY TO 30"	6
IDC	8
IDC - 1.7	
*PENDING REGISTRATION	

DINERO* R2X

2400 CHU (RM 00.3)

STANDABILITY	7
SCLEROTINIA TOLERANCE	7
STABILITY - ADAPTABILITY	8
VIGOUR FOR NO-TILL	8
ADAPTABILITY TO 30"	6
IDC	8
IDC - 1.8	
*PENDING REGISTRATION	

...and cutting-edge genetics



NEW VARIETY NEW PERFORMING ULTRA-EARLY MATURING VARIETY

- + Medium-short plant offering a good standability
- + Contains a *Phytophthora* resistant gene (Rps 1k)
- + Excellent Sclerotinia tolerance
- + Soybean Cyst Nematode gene present
- ! Better adapted to light and fertile soils types
- ! Performs best in narrow spacing
- ! Best suited in conventional soil management



MEDIUM-SHORT
SLIGHTLY SLENDER



VARIETY THAT WILL BE APPRECIATED FOR ITS QUICK START IN SPRING

- + Very good yield potential for its maturity group
- + Among the earliest maturing variety on the market, well adapted to the short season regions
- + Stands out in minimum tillage
- + Good bushing capacity and excellent vigour
- ! Adapted to no-till
- ! Best in 15" spacing or less



MEDIUM-TALL
SLIGHTLY SLENDER



NEW VARIETY VARIETY THAT WILL BE APPRECIATED FOR ITS AGRONOMIC TRAITS

- + Extremely vigorous with early flowering and pod set
- + Very good yield potential for its maturity group
- + Among the earliest maturing variety on the market, well adapted to the short season regions
- + Stands out in minimum tillage
- + Good bushing capacity and excellent vigour
- ! Adapted to no-till
- ! Best in 15" spacing or less



MEDIUM-TALL
SLIGHTLY SLENDER



NEW VARIETY SOUGHT AFTER VARIETY FOR ITS STABLE PERFORMANCE

- + Very healthy robust plant that will impress from day 1
- + Very good yield potential for its maturity group
- + Stands out in minimum tillage
- + Good bushing capacity and excellent vigour
- ! Adapted to no-till
- ! Best in 15" spacing or less



MEDIUM-TALL
SLIGHTLY SLENDER

DYLANO R2X

2425 CHU (RM 00.4)

STANDABILITY	8
SCLEROTINIA TOLERANCE	8
STABILITY - ADAPTABILITY	8
VIGOUR FOR NO-TILL	7
ADAPTABILITY TO 30"	7
IDC	7
IDC - 2.2	

DUGALDO R2X

2450 CHU (RM 00.6)

STANDABILITY	9
SCLEROTINIA TOLERANCE	8
STABILITY - ADAPTABILITY	9
VIGOUR FOR NO-TILL	8
ADAPTABILITY TO 30"	8
IDC	8
IDC - 2.0	

DOMINGO R2X

2500 CHU (RM 00.8)

STANDABILITY	8
SCLEROTINIA TOLERANCE	8
STABILITY - ADAPTABILITY	7
VIGOUR FOR NO-TILL	7
ADAPTABILITY TO 30"	8
IDC	8
IDC - 1.9	

NEW VARIETY



A NEW VARIETY WITH GOOD PERFORMANCE, WELL ADAPTED TO EARLY-MATURING ZONES.

- ⊕ Very high yield potential
- ⊕ Unsurpassed standability in all growing conditions
- ⊕ Great white mold tolerance
- ⊕ Great adaptability to many row spacing options
- ⊕ Well adapted to 15" (or less) row spacing
- ⊕ Adapted to all soil types



MEDIUM-TALL
SEMI-BUSHY

NEW VARIETY



A MID-SEASON SOYBEAN THAT THE MANITOBA MARKET HAS BEEN WAITING FOR!

- ⊕ Great yield potential
- ⊕ Unsurpassed standability in all growing conditions
- ⊕ Great white mold tolerance
- ⊕ Excellent plant adaptability to all row spacings
- ⊕ Adapted to all soil types
- ⊕ Best adapted to 15" to 30" row spacing



MEDIUM-TALL
SEMI-BUSHY

A VARIETY THAT PERFORMS CONSISTENTLY IN DIFFERENT ENVIRONMENTS



- ⊕ Very good vigour at the start of the season and excellent standability
- ⊕ Excellent yield potential
- ⊕ Good-looking plant with above-average height
- ⊕ Very good Sclerotinia tolerance
- ⊕ Performs well in all soil types
- ⊕ Well adapted to 7" and 15" spacing with good bushing capacity to fill a 30" row



MEDIUM-TALL
SEMI-BUSHY

That offers you a
proven technology



Prograin Genuity® Roundup
Ready 2 Yield® soybeans
are the result of high-tech
characteristics that offer a yield
that exceeds your expectations.

2 GMO VARIETIES

FROM 2300 TO 2450 CHU

Opt for Prograin's quality seeds and
"know-how" to ensure excellent productivity!

TORRO R2

2300 CHU (RM 00.1)

STANDABILITY	7
SCLEROTINIA TOLERANCE	8
STABILITY - ADAPTABILITY	7
VIGOUR FOR NO-TILL	8
ADAPTABILITY TO 30"	4
IDC	9
IDC - 1.8	

KOSMO R2

2450 CHU (RM 00.5)

STANDABILITY	7
SCLEROTINIA TOLERANCE	8
STABILITY - ADAPTABILITY	8
VIGOUR FOR NO-TILL	7
ADAPTABILITY TO 30"	5
IDC	8
IDC - 1.9	



A VERY ROBUST SOYBEAN THAT WILL PROVIDE EXCEPTIONAL YIELD

- ⊕ Medium-sized plant with dark green foliage
- ⊕ Excellent yield potential for its maturity
- ⊕ Above-average standability
- ⊕ Slender soybean type with narrow leaves

- ⚠ Responds well to high population
- ⚠ Better suited to planting in narrow rows



TALL
SLIGHTLY SLENDER



THE VARIETY TO CHOOSE TO OBTAIN GOOD YIELD IN EARLY MATURITY AREAS

- ⊕ Very good vigour at the start of the season, perfect for short season areas
- ⊕ Good ability to branch for an early soybean variety
- ⊕ Plant taller than average with good standability
- ⊕ Good flower fertility that ensures good yields
- ⊕ Highest pod clearance on the market

- ⚠ Offers better results in narrow rows



TALL
SLIGHTLY SLENDER

THE RIGHT POPULATION: KEY TO OPTIMAL PROFITABILITY

Soybean cultivars do not all respond in the same way to different populations; that's why it's important to plant the recommended density of each variety. At Prograin Research Centre, we conduct rigorous population testing on our different varieties every year. The table below lists the recommended populations for 7", 14" and 30" row spacing's in order to obtain an optimal yield. From the population aimed in number of seeds/ha, you can determine the sowing rate in kg/ha with the number of seeds or the bag's weight indicated on the seeds bag. Here is an example of the calculation.

Data	Torro R2	Your variety
Target population by row spacing: see tables below	Row spacing: 22 in	Row spacing: _____ in
Grain size: indicated on the bag	Target population: 180,000 seeds/ac	Target population: _____ seeds/ac
Number of seeds per bag: see tables below	Grain size: 5900 seeds/kg	Grain size: _____ seeds/kg
	Number of seeds: 140,000/unit	Number of seeds: 140,000 /unit

Calculation of seeding rate

Method #1	$\frac{180,000 \text{ seeds/ac}}{140,000 \text{ seeds/unit}} = 1.29 \text{ unit/ac}$	$\frac{\text{seeds/ac}}{\text{seeds/unit}} = \text{_____ unit/ac}$
Method #2	$\frac{180,000 \text{ seeds/ac}}{5900 \text{ seeds/kg}} = 30.5 \text{ kg/ac}$	$\frac{\text{seeds/ac}}{\text{seeds/kg}} = \text{_____ kg/ac}$
Method #3 Bag weight (by calculation or the number indicated on the bag):	$\frac{140,000 \text{ seeds/unit}}{5900 \text{ seeds/kg}} = 23.73 \text{ kg/unit}$	$\frac{\text{seeds/unit}}{\text{seeds/kg}} = \text{_____ kg/unit}$
	1.29 unit/ac X 23.73 kg/unit = 30.6 kg/ac or 30.6 kg/ac X 2.2 = 67.32 lb/acre	_____ unit/ac X _____ kg/unit = _____ kg/ac _____ kg/ac X 2.2 = _____ lb/acre

GENUITY® ROUNDUP READY 2 YIELD® VARIETIES

All Genuity® varieties:
1 bag = 140,000 seeds



VARIETY	CHU (RM)	SEEDS/KG (MIN/MAX)	ROW Δ (INCHES)	SEEDS PLANTED /ACRE	SEEDING RATE (UNITS/ACRE)	SEEDS PLANTED /LINEAR M	TOLERANCE TO PHYTOPHTHORA	PUBESCENCE COLOUR	HILUM COLOR	PROTEIN %
TORRO R2	2300 (000.1)	5,500/6,200	7 22	210,000 180,000	1.50 1.29	9.2 25.9	None	Tawny	Black	n/a
KOSMO R2	2450 (00.6)	4,900/5,300	7 22	210,000 170,000	1.50 1.21	9.2 25.9	None	Tawny	Imperfect yellow	n/a

ROUNDUP READY 2 XTEND® VARIETIES

All Roundup Ready 2 Xtend® varieties:
1 bag = 140,000 seeds



VARIETY	CHU (RM)	SEEDS/KG (MIN/MAX)	ROW Δ (INCHES)	SEEDS PLANTED /ACRE	SEEDING RATE (UNITS/ACRE)	SEEDS PLANTED /LINEAR FT	TOLERANCE TO PHYTOPHTHORA	PUBESCENCE COLOUR	HILUM COLOR	PROTEIN %
DAYO R2X NEW	2325 (000.3)	5,300/5,500	7 15	210,000 170,000	1.50 1.21	9.2 16.0	None	Brown	Brown	n/a
DARIO R2X	2250 (000.8)	5,000/5,400	7 15	210,000 180,000	1.50 1.21	9.2 16.0	None	Brown	Brown	41
DEVO R2X NEW	2350 (00.1)	5,300/5,500	7 15	210,000 170,000	1.50 1.21	9.2 16.0	None	Brown	Brown	41
DINERO R2X NEW	2400 (00.3)	5,300/5,500	7 15	210,000 170,000	1.50 1.21	9.2 16.0	None	Brown	Brown	41
DYLANO R2X	2425 (00.4)	5,300/5,500	7 15	210,000 170,000	1.50 1.21	9.2 16.0	None	Brown	Brown	41
DUGALDO R2X	2475 (00.6)	5,300/5,900	7 15	210,000 170,000	1.50 1.21	9.2 16.0	None	Light brown	Imperfect yellow	41
DOMINGO R2X	2525 (00.8)	5,300/5,900	7 15	210,000 170,000	1.50 1.21	9.2 16.0	n/a	Light brown	Black	41

IP Program for Western Canada



An incomparable opportunity to increase your profitability.

How does it work?

- ⊕ You get access to Prograin's portfolio of early and top performing IP genetics.
- ⊕ You buy Prograin Certified seed from a Quarry Seed / Prograin authorized dealer.
- ⊕ You sign a Production Agreement.
We buy back 100% of your soybean crops.
- ⊕ You get a fixed premium for each bushel commercialized with Prograin.
- ⊕ You deliver your soybean crops to one of the designated sites in Manitoba or Saskatchewan.

\$60/acre*

Is the average premium we paid to our IP Western Canadian growers for the 2017 harvest.

WANT TO KNOW MORE?

Contact your Prograin seed dealer for more information on how you can increase your profitability per acre.

*Grade #1 soybean

A partner that offers you exceptional profitability



The IP soybean lineup offers all the advantages sought by producers :

3 NON-GMO VARIETIES

FROM 2350 TO 2475 CHU

- ⊕ Competitive premiums*
- ⊕ Varieties offering superior performance
- ⊕ 100% guaranteed crop buyback program**
- ⊕ Transportation logistic service tailored to your needs

* Requires to sign a contract.

** Prograin guarantees it will buy back your entire harvest, regardless of the actual yield.

ALASKA

2350 CHU (RM 00.2)

HIGH PROTEIN

STANDABILITY _____ 8
 SCLEROTINIA TOLERANCE _____ 7
 STABILITY - ADAPTABILITY _____ 7
 VIGOUR FOR NO-TILL: N/A
 ADAPTABILITY TO 30" _____ 5
 IDC: N/A

IDC - 1.9

MAXUS

2400 CHU (RM 00.3)

HIGH PROTEIN

STANDABILITY _____ 9
 SCLEROTINIA TOLERANCE _____ 8
 STABILITY - ADAPTABILITY _____ 8
 VIGOUR FOR NO-TILL _____ 6
 ADAPTABILITY TO 30" _____ 4
 IDC _____ 8

IDC - 1.9

OPUS

2500 CHU (RM 00.7)

HIGH PROTEIN

STANDABILITY _____ 8
 SCLEROTINIA TOLERANCE _____ 8
 STABILITY - ADAPTABILITY _____ 8
 VIGOUR FOR NO-TILL _____ 7
 ADAPTABILITY TO 30" _____ 4
 IDC _____ 7

IDC - 2.1



EARLY MATURITY VARIETY OFFERING GOOD PERFORMANCE

- ⊕ Slender plant with good standability
- ⊕ Slightly taller than average
- ⊕ High protein variety
- ⚠ Responds well to high population
- ⚠ Adapted to all soil types
- ⚠ Is best positioned in narrow rows (7 to 15")

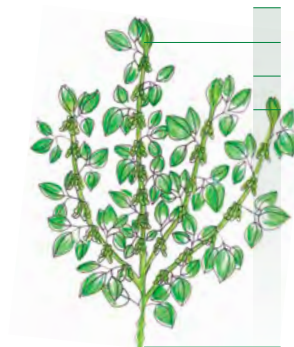


MEDIUM-TALL
SEMI-BUSHY



ALL AROUND POSITIVE RESULTS

- ⊕ Very aggressive vigor out of the ground with excellent standability.
- ⊕ High protein content
- ⊕ Good yield potential
- ⚠ Well adapted to all soil types
- ⚠ Best results if seeded at 7 or 15 inches spacing



MEDIUM-TALL
SEMI-BUSHY



VARIETY COMBINING PLANT PERFORMANCE AND HEALTH

- ⊕ Stable performance in short-season areas
- ⊕ Good yield potential
- ⊕ Very good standability and excellent vigor in the spring
- ⚠ Well adapted to all soil types
- ⚠ Sow in narrow rows : 7" and 15"



TALL
SEMI-BUSHY

A partner that offers you
varieties offering incomparable
performance

IP VARIETIES

All IP varieties:
1 bag = 110 000 seeds



VARIETY	CHU (RM)	SEEDS/KG (MIN/MAX)	ROW Δ (INCHES)	SEEDS PLANTED /ACRE	SEEDING RATE (UNITS/ACRE)	SEEDS PLANTED /LINEAR M	TOLERANCE TO PHYTOPHTHORA	PUBESCENCE COLOUR	HILUM COLOR	PROTEIN %
ALASKA* NEW	2350 (00.2)	5,500/6,200	7 15	210,000 170,000	1.5 1.21	9.2 16.0	n/a	Brown	Imperfect yellow	40
MAXUS NEW	2425 (00.3)	4,600/5,700	7 15	210,000 170,000	1.5 1.21	9.2 16.0	n/a	Brown	Yellow	39
OPUS	2500 (00.7)	4,600/5,700	7 15	210,000 170,000	1.5 1.21	9.2 16.0	Rps 1c	Brown	Yellow	40

THE RIGHT POPULATION: KEY TO OPTIMAL PROFITABILITY

Soybean cultivars do not all respond in the same way to different populations; that's why it's important to plant the recommended density of each variety. At the Prograin Research Centre, we conduct rigorous population testing on our different varieties every year. The table below lists the recommended populations for 7", 14" and 30" row spacings in order to obtain an optimal yield. From the population aimed in number of seeds/ha, you can determine the sowing rate in kg/ha with the number of seeds or the bag's weight indicated on the seeds bag. Here is an example of the calculation.

Necessary information to calculate	Maxus	Your variety
Row spacing: 7, 14 or 30 in	Row spacing: 14 in	Row spacing: _____ in
Target population by row spacing: for information see page 12	Target population: 190,000 seeds/ac	Target population: _____ seeds/ac
Seed size: Indicated on the bag	Seed size: 5,750 seeds/kg	Seed size: _____ seeds/kg
Number of seeds per bag: table at page 12	Number of seeds: 110,000/unit	Number of seeds: 110,000/unit

Seeding rate calculation

Method #1 step A	$\frac{190,000 \text{ seeds/ac}}{110,000 \text{ seeds/unit}} = 1.73 \text{ unit/ac}$	$\frac{\text{seeds/ac}}{\text{seeds/unit}} = \text{_____ unit/ac}$
Method #1 step B Bag weight indicated on the label or by calculation	$\frac{110,000 \text{ seeds/unit}}{5,750 \text{ seeds/kg}} = 19.13 \text{ kg/unit}$	$\frac{\text{seeds/unit}}{\text{seeds/kg}} = \text{_____ kg/unit}$
Method #1 step C	$1.73 \text{ unit/ac} \times 19.13 \text{ kg/unit} = 33 \text{ kg/ac}$	$\text{_____ unit/ac} \times \text{_____ kg/unit} = \text{_____ kg/ac}$
Method #2	$\frac{190,000 \text{ seeds/ac}}{5,750 \text{ seeds/kg}} = 33 \text{ kg/ha}$	$\frac{\text{seeds/ac}}{\text{seeds/kg}} = \text{_____ kg/ac}$
Conversion	$33 \text{ kg/ac} \times 2.2 = 72.6 \text{ lb/ac}$	$\text{_____ kg/ac} \times 2.2 = \text{_____ lb/ac}$



RETAILER AND PROCESSOR
IN TAIWAN AND CHINA

PRODUCT: TOFU AND SOY BEVERAGE

That brings value to your harvest... globally

As producers, you have successfully risen to the challenge of feeding approximately 17 million people around the world!

Our customers and distributors around the world, including South Korea, China, Japan and Taiwan, enjoy the Prograin varieties grown on your land because they offer a high protein content to produce very high quality tofu and soy beverage. For example, Marula is a popular variety of soybean

purchased by processors because of its high protein content and good bean size. Other varieties meet different dietary needs, which is why Prograin offers a diversified portfolio to meet the demands of our customers.





Prograin®

A world of Soybean

MONSANTO COMPANY IS A MEMBER OF EXCELLENCE THROUGH STEWARDSHIP™ (ETS).

Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. These products have been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from these products can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for these products. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

Roundup Ready 2 Xtend® soybean varieties contain genes that confer tolerance to glyphosate and dicamba. Agricultural herbicides that contain glyphosate will destroy crops that do not tolerate glyphosate and those that contain dicamba will destroy crops that do not tolerate dicamba. Contact your Monsanto dealer or call Monsanto Technical Support at 1-800-667-4944 for recommended Roundup Ready Xtend® crop system weed control programs. 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. Genuity and Design®, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup® are registered trademarks of Monsanto Technology LLC, Monsanto Canada, Inc. licensee.

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Certified seeds are synonymous with success. Certified seeds open the door to new opportunities.

Access to new and improved varieties

Efficient use of inputs

Quality assurance

Access to new markets

Support for future development of new varieties

It all starts with certified seeds.

Certified Seed

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The agronomic content of the 2019 Seed Guide was prepared and verified by agronomists Maxime Gratton, Philippe Lemaître, Miguel Provost and Marc Saumure.

2019
seed guide

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LITHO CANADA