



IDENTITY-PRESERVED SOYBEANS

Production Guide



Prograin®

A world of Soybean

Disclaimer

The information in this guide reflects knowledge of all stages of identity-preserved soybean production at the time of writing. Its use remains the sole responsibility of the reader.

Thanks

Prograin would like to thank everyone who contributed to the writing of this guide

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**It all starts with
certified seeds.**



The profitability of IP soybean

WHAT IS IP PRODUCTION?

Identity Preserved production is a closed loop system using conventional soybean varieties that are segregated from all other crops. There is a vast and increasing market for non-GMO soybeans for protein and specific end use traits.

WHY CHOOSE TO GROW IT?

To have the opportunity to increase profitability of your farming operation by growing a value-added product. With a guaranteed end use market, the producer will receive a \$2.00/bu premium.

PROFITABILITY COMPARISON BETWEEN IP AND ROUNDUP READY SOYBEAN

	CONVENTIONAL IP	R2
Seed Cost (210 K seeds/acre)	\$66.00	\$87.00
Seed Treatment	\$15.12	\$15.12
Inoculant	\$30.47	\$30.47
Pre Emergent Herbicide (\$15-25 Range)	\$25.00	\$10.00 GLYPHOSATE & "PURSUIT" RATE*
Post Emergent Herbicide	\$21.46 VIPER & UAN	\$10.00 2 REL GLYPHOSATE
TOTAL COST	\$158.05	\$152.59
Yield "X" Bushels per acre, \$11/bushel spot price at 40 bu/acre	\$440.00	\$440.00
IP Premium \$2/bushel	\$80.00	-
TOTAL REVENUE	\$520.00	\$440.00
Gross Return	\$361.95	\$287.41
IP Gross Return +/- vs R2 Production	\$74.54	

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Seed purchase & production agreement

It all starts with purchasing certified seed through an authorized Quarry Seed dealer or Program representative.

Program commits to buy back 100% of the production from its exclusive portfolio of non-GMO identity-preserved soybeans.

A production agreement must be signed before purchasing and receiving your certified seed. This agreement is mandatory.

As a dealer, you enter your customers profile and production agreement information into our Customer Center. Your customer will be given a login and password in order to review and provide an electronic confirmation.

Français English



TO LOG IN

Email

Password

[CREATE NEW PASSWORD](#)

[LOG IN](#)

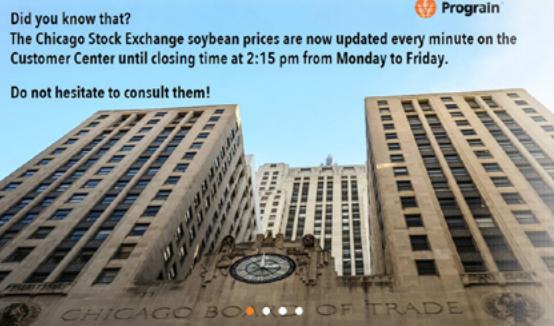
[Lost your Password](#)

Remember me

Welcome to the new CUSTOMER CENTER Program
Please use your email address as username.
Your password remains the same as before.
If you have forgotten your password, click [Forgot Password](#).

Did you know that?
The Chicago Stock Exchange soybean prices are now updated every minute on the Customer Center until closing time at 2:15 pm from Monday to Friday.

Do not hesitate to consult them!



*Identity-Preserved Soybeans
Production Guide*

If your customer is seeding separate fields or more than one variety an additional production agreement needs to be set up.

The total production is bought back by Program. Farm storage is required as the majority of production will need to be stored over winter. We take delivery throughout the winter and spring.

You must ensure that producers understand that they can not purchase our IP Varieties without a production agreement. The genetics of our IP varieties are only accessible with a production agreement.

This agreement protects both the producer and Program as partners by guaranteeing 100% buyback of their harvest.

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Pricing and premium

The customer center is the hub for all your customers' profiles, production agreements, pricing contracts and field verification information. As a Dealer you are responsible to complete this information with each of your customers.

You and your customer will be able to see live CBOT soybean prices, the local commercial price and our premium structure on our "Premium and Price Info" page.

VARIETIES PREMIUMS INFO		HARVEST YEA	CA EAST	Quality
		QUALI-PRO		
HARVEST DELIVERY (FALL DELIVERY 2017)		ON FARM STORAGE (WINTER/SPRING DELIVERY 2018)		
VARIETY	HARVEST PREMIUM 2017 GRADE 1	TOTAL PRICE	HARVEST PREMIUM 2017 GRADE 1	TOTAL PRICE
BAKARA	80 \$ /MT	ND	80 \$ /MT	494 \$ /MT
ORIA	115 \$ /MT	ND	130 \$ /MT	544 \$ /MT
PLATINA	95 \$ /MT	ND	110 \$ /MT	524 \$ /MT
TAURUS	95 \$ /MT	ND	110 \$ /MT	524 \$ /MT
QUENATTO	ND	ND	215 \$ /MT	629 \$ /MT
KONATTO	225 \$ /MT	ND	240 \$ /MT	654 \$ /MT
HANA	80 \$ /MT	ND	80 \$ /MT	494 \$ /MT
KORUS	95 \$ /MT	ND	110 \$ /MT	524 \$ /MT
HAKATA	115 \$ /MT	ND	130 \$ /MT	544 \$ /MT

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Agronomy

Please refer to Seed Guide for the available non-GMO varieties.

A slightly earlier variety should be selected than you would normally grow; plant first and harvest first to reduce your chance of contamination.



Field selection

It all starts with purchasing certified seed through an authorized Quarry Seed dealer or Program representative.

Avoid over rotation of soybean and canola to reduce white mold pressure and chances of *Phytophthora*.

Avoid alkaline or saline fields as these conditions can delay maturity in spots. Avoid low lying fields prone to flooding to eliminate stickiness or poor harvesting conditions. Also weeds like kochia prefer these areas and can increase earth tagging. These trouble spots should be harvested separately.

Remember, IP non-GMO soybean cannot be planted on the same land where there has been GMO or non-GMO soybean production in the previous crop rotation.

Make note of fields that have or will have future cropping restrictions due to herbicide use.

	CANOLA	CHICKPEAS	CORN	FLAX	LENTILS	PEAS	SUNFLOWERS	WHEAT
AUTHORITY	12		12		24			12
AUTHOR. SUPREME	36	36	12		36		12	12
FIERCE	24	24		24		24	24	
FOCUS	24	24		24		24	24	

As per label, months before planting this crop. Always read and follow label instructions.

Inoculant

Maximize your inoculant program to ensure the IP soybeans reach the highest possible protein levels.

The presence of good bacteria will allow for better development of the soybean root system by enabling increased nitrogen fixation, which is essential to the soybean plant's development. Double inoculation is important and when using granular, use the higher rates (8 – 12 lb/ac)

Weed management

Avoid fields that have high weed pressure. Know what kind of weeds that exist in your fields, so you can match these up with your overall herbicide program.

Fertility

A healthy fertility program is important; especially phosphate and potash that can help in achieving good yield and protein levels.

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Seeding

During seeding, check planting depth regularly to ensure proper germination and uniform growth. Optimum seeding depth is 0.75 – 1.5 inches.

Note: rolling increases soil cover by 0.25 - 0.50 inches.

For audit purposes, it is important to keep your certified seed bag labels for one year in case verification is required.

Confirm the recommended seeding rate for each variety. Seeding for optimal plant population is important. In early maturity zones, the maximum yield is reached at higher populations, while certain varieties have a greater yield at lower populations. In general, a seed population ranges from 175,000 – 210,000 seeds/acre.

Be sure to leave an isolation strip of 3 metres (10 feet) between each type of crop (soybean, corn, cereal, or other). Roadways, ditches, tree lines or tilled strips can be considered isolation strips.

If the neighbouring crop is of the same soybean variety, an isolation strip of 1 metre (3 feet) is sufficient.

Planting equipment must be properly cleaned to avoid contamination.

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Herbicides

Ensure effective weed control using only pesticides and herbicides registered in Canada and approved for use on soybean crops intended for human consumption.

There are many options for pre and post emergent herbicides in conventional soybean production.

WEED CONTROL OPTIONS OF VARIOUS PRODUCTS

Pre-emergent herbicides are the backbone of your overall IP program as they will extend initial periods of weed control.

AUTHORITY	AUTH. SUPREME	EDGE	FIERCE	FOCUS	VALTERA
S.R.P.	\$16.25	\$26.00	\$27.38	\$21.96	\$20.39
BROADLEAF WEEDS					
Cleavers	X	X	S		X
Cowcockle		X			
Dandelion			X		X
Hemp-nettle			S		
Kochia	X	X	X	X	S X
Lady's Thumb			S		
Lamb's Quarters	X	X	X	X	S X
Ragweed					X
Red Root Pigweed	X	X	X	X	X X
Russian Thistle				S	
Stink Weed		X			S
Volunteer Canola	S		S		S
Wild Buckwheat	X	X	X	X	S
Wild Mustard	S		X		S
GRASSY WEEDS					
Barnyard Grass		X	X		X
Downy Brome	X				X
Foxtail Barley					S
Green Foxtail	X	X	X	X	S
Japanese Brome	X				X
Wild Oats	S	S			S
Yellow Foxtail	X	X			X
RE-CROPPING RESTRICTIONS	YES	YES	YES	YES	

Knowing your field history and weed spectrum will aid you when making these early cropping decisions. Match your pre-emergent program to best control your weed spectrum. Watch out for herbicide residue in your crop restrictions.

POST-EMERGENCE

When necessary, spraying must take place before plants begin to flower. Below are some of the post-emergent options that are available. We have had experience with some of the ones listed below. But, always tailor any of your herbicide applications with your particular weed pressure. Always follow the directions on the label.

CENTURIAN OR POAST

Excellent control of grasses. Excellent crop tolerance.

ODYSSEY ULTRA

Good control of various grasses and broadleaf weeds.

REFLEX

Good control of broadleaf weeds. Must use high water volumes and needs warmer temperatures.

BASAGRAN

Fair control of broadleaf weeds. Must use high water volumes and needs warmer temperatures. Excellent crop tolerance.

VIPER ADV

Good control of various grasses and broadleaf weeds. Needs higher water volumes. Liquid 28 - 0 - 0 must be added.

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Field verification

Early in the growing season your Quarry Seed Dealer or authorized Program Representative should conduct an initial visit during this period to begin filling out the checklist for IP crop fields. This document will allow you to monitor any field work, seeding date, soybeans' growth, spraying applications and record any observations, in order to take preventive measures to avoid major problems before harvesting the identity-preserved soybeans. Keeping up-to-date records ensure accuracy of information.

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Harvest

You or your representative should tour the field before harvest time to determine if any potentially harmful weeds are present. These may need to be harvested separately.

Prior to the harvest, it is highly important to check weather and humidity conditions. Harvesting in ideal conditions will allow you to maximize quality and achieve Grade #1.

To eliminate any risk of contamination, all harvesting equipment such as combines, headers, augers, conveyors, trucks and grain bins must be thoroughly cleaned out from any other soybean or other crop material. Be sure to properly clean all threshing and harvest transport equipment (thresher, vehicles, trucks) to eliminate any risk of contamination.

Post-harvest your representative must fill out the IP field verification checklist, have you sign it, and return it to Program. This allows auditors who give accreditation for soybean traceability and quality to easily follow up on the production of identity-preserved soybeans.

Harvest samples (minimum 2kg) are required to be sent in to Quarry Seed office.

Storage¹

When storing several varieties of identity-preserved soybeans, each bin must be clearly identified to avoid accidental contamination.

Warm temperatures and high ambient humidity allow microorganisms to develop quickly in soybeans. Regular inspection of storage bins is necessary to ensure high-quality grains.

The following measures should be taken each season to optimize the quality of your stored crop.

Fall

- Thoroughly clean equipment (bins, screws, etc.).
- Make sure to minimize insects²:

Any residue remaining in the thresher can promote the development of unwanted insects.

Seal any leaks in the bin.

Apply an approved insecticide as needed before filling the bin.

- Level off grain in the top of the bin to flatten the cone.

- When filling the bin, start ventilation. Provide adequate ventilation during harvest time to cool soybeans and ensure an even temperature. Make sure that the outdoor temperature is 5 °C to 8 °C cooler than the grain temperature.

Also make sure to complete all aeration cycles to avoid cooling only part of the grain in the bin. The cool/warm grain interface can cause issues.

After the harvest, begin to adjust ventilation.

If the bin tends to get hot or if hot spots are detected, aerate!

It is essential to aerate periodically.

Aerate for a few hours every two weeks to maintain the temperature and help prevent odours from developing in the soybeans.

Winter

- Inspect the bin in several areas to ensure grain stability and to determine if any degradation has occurred.

- Check for rain or snow infiltration. Remove snow or damp soybeans as needed.

Spring

- Inspect bins again in several areas to check for damp, mouldy, or heated soybeans. Remove any questionable soybeans.

- Aeration is also recommended in dryer conditions, when there is a 5 °C difference between the inside of the bin and the air temperature.

Summer

- During the hot season, it is recommended to maintain aeration. This ensures that necessary adjustments are made to the bin's temperature, thus preventing hot spots which can lead to heated soybeans.

1. CEROM No. 03.01, "Ventilation, a tool for grain conservation" and No. 06.06, "The 5 key points of fall ventilation"

2. "The 10 tips of a soy expert" (Horst Bohner), article in *Le Bulletin des Agriculteurs*, by Celine Normandin, April 30, 2017

Marketing the customers IP soybean

Marketing the IP soybean crop is simple. In this section, you will find the factors to consider when determining your crop's strike price.

Once the production agreement has been approved/signed, a producer may begin to set a price for up to a maximum of 28 bu/ac contracted.

Based on the number of acres planted, the system establishes a number of soybean bushels for which the price can be set. For example, 160 acres = 4,480 bushels for which the producer can set a price.

A producer may set a price for a minimum block of 735 bushels (or 20 MT). At anytime you can review the Prograin Customer Center to check our current posted price.

To finalize any pricing, you must contact a specialist at Quarry Seed between 8:30 a.m. and 1:15 p.m. (Chicago Stock Market hours) to determine a strike price based on soybean stock market prices (Chicago Board of Trade).

A local regional elevator price will be established by Prograin. The full price for a producer is the CBOT + Basis + Variety premium.

The variety premium is guaranteed for one full year (from September 1 to August 31 of the following year).

Premiums are allocated for each variety intended for human consumption and are fixed for the entire year – they do not fluctuate.

The base price must be fixed (basis + CBOT) before delivery of the harvest; otherwise, the closing price of the day preceding the delivery will be applied.

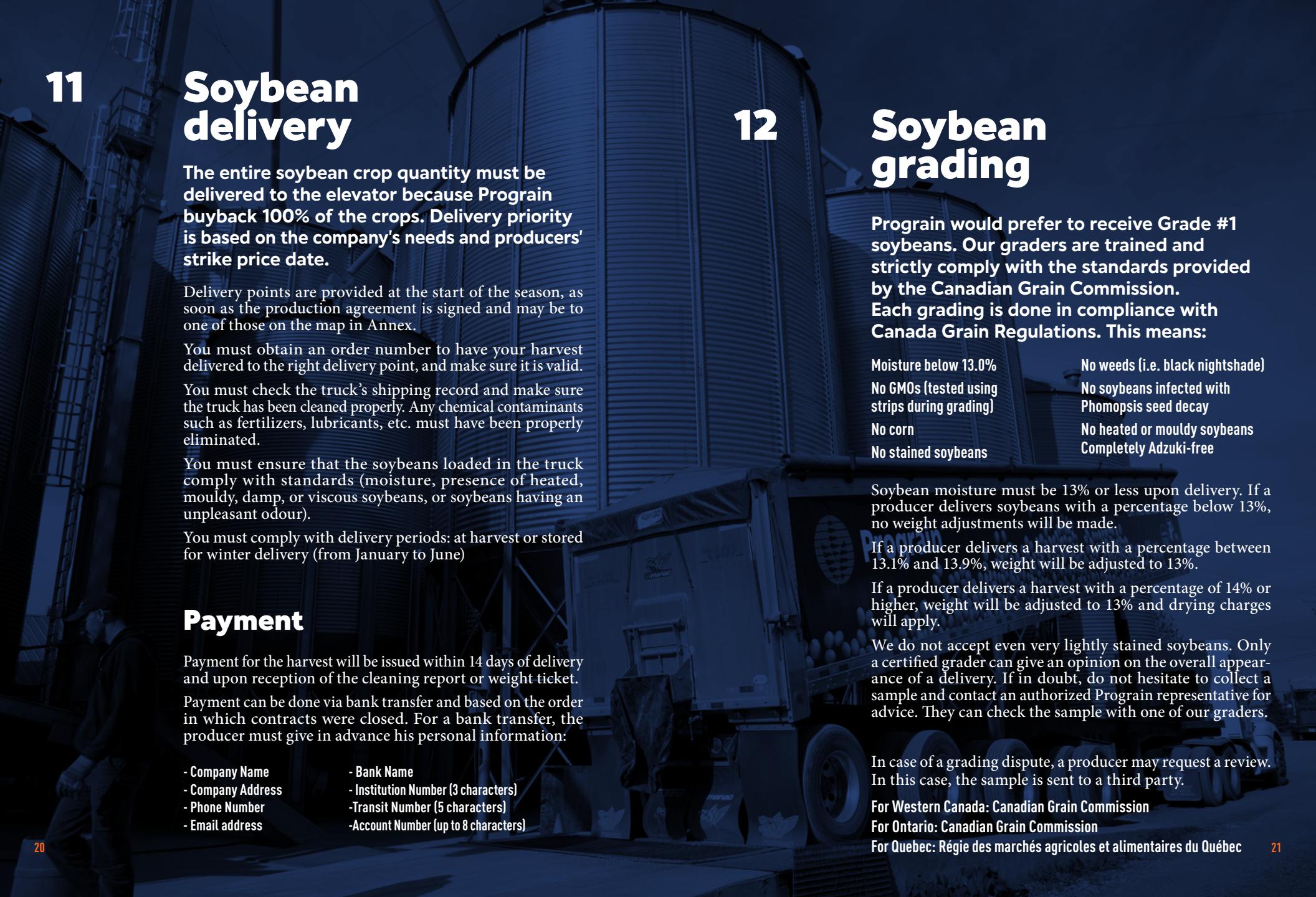
For more information on prices, visit the Customer Center on our website ([prograin.ca](#)), in the “Price Info” section.

Once you have fixed your price, a contract will be issued. You can sign the flat price contract electronically via the Customer Center.

We recommend accessing your account in the “Customer Center” on a regular basis to verify your soybean production information (production agreements, weigh slip reports, contracts, etc.).

Upon delivering your harvest, if the quantity of soybean is higher than that allowed for the contracted fixed price, the amount will be paid at the price of the day preceding the delivery.

In the event that a producer is unable to fulfill the purchase contract (the quantity of soybeans is lower than that specified in the contract and the current price is below its closing) due to a force majeure such as frost, hail, flooding, infestation, or drought, Prograin will cancel the balance of his contract. However, if the current price is above his closures, Prograin will be obliged to charge the difference to the customer. No transfer on closing price will be accepted between customers

A large industrial grain silo complex with several tall, cylindrical storage tanks in the background.
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Soybean delivery

The entire soybean crop quantity must be delivered to the elevator because Program buyback 100% of the crops. Delivery priority is based on the company's needs and producers' strike price date.

Delivery points are provided at the start of the season, as soon as the production agreement is signed and may be to one of those on the map in Annex.

You must obtain an order number to have your harvest delivered to the right delivery point, and make sure it is valid.

You must check the truck's shipping record and make sure the truck has been cleaned properly. Any chemical contaminants such as fertilizers, lubricants, etc. must have been properly eliminated.

You must ensure that the soybeans loaded in the truck comply with standards (moisture, presence of heated, mouldy, damp, or viscous soybeans, or soybeans having an unpleasant odour).

You must comply with delivery periods: at harvest or stored for winter delivery (from January to June)

Payment

Payment for the harvest will be issued within 14 days of delivery and upon reception of the cleaning report or weight ticket.

Payment can be done via bank transfer and based on the order in which contracts were closed. For a bank transfer, the producer must give in advance his personal information:

- Company Name
- Company Address
- Phone Number
- Email address

- Bank Name
- Institution Number (3 characters)
- Transit Number (5 characters)
- Account Number (up to 8 characters)

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Soybean grading

Program would prefer to receive Grade #1 soybeans. Our graders are trained and strictly comply with the standards provided by the Canadian Grain Commission. Each grading is done in compliance with Canada Grain Regulations. This means:

Moisture below 13.0%

No GMOs (tested using strips during grading)

No corn

No stained soybeans

No weeds (i.e. black nightshade)

No soybeans infected with Phomopsis seed decay

No heated or mouldy soybeans

Completely Adzuki-free

Soybean moisture must be 13% or less upon delivery. If a producer delivers soybeans with a percentage below 13%, no weight adjustments will be made.

If a producer delivers a harvest with a percentage between 13.1% and 13.9%, weight will be adjusted to 13%.

If a producer delivers a harvest with a percentage of 14% or higher, weight will be adjusted to 13% and drying charges will apply.

We do not accept even very lightly stained soybeans. Only a certified grader can give an opinion on the overall appearance of a delivery. If in doubt, do not hesitate to collect a sample and contact an authorized Program representative for advice. They can check the sample with one of our graders.

In case of a grading dispute, a producer may request a review. In this case, the sample is sent to a third party.

For Western Canada: Canadian Grain Commission

For Ontario: Canadian Grain Commission

For Quebec: Régie des marchés agricoles et alimentaires du Québec

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Other general conditions

The producer agrees to ensure that absolutely no soybeans of any of the varieties purchased, including supplied seeds, growing plants, or harvested soybeans, become the property of any other individual or corporation. In addition, the producer agrees not to use the harvest to seed his or her own farm.

To ensure the producer complies with the production conditions of identity-preserved soybeans, for the three years following the purchase of seeds from Semences Prograin or one of its authorized dealers, the producer grants a Prograin representative the right to inspect all fields and bins belonging to or rented by the producer.

The producer also authorizes the representative to collect samples, perform analyses, and examine and copy any registry, file, or receipt that the representative deems relevant to the proper execution of this agreement.

Upon request, the producer must provide Prograin with a list of all seeded sites, including those planted on the producer's behalf. The right to inspect fields and carry out analyses, as previously described, must be exercised with reasonable advance notice. Notice may be given by any means, including verbally or over the phone.



