Introduction to Grain Marketing

The following guide is designed to provide an overview introduction to grain marketing. It is based on the best available data and, whenever possible, links to additional sources of information have been provided. Users of this guide should see it as a starting point or refresher on grain marketing. They are encouraged to seek out other more-specific information to develop their own grain marketing strategy and plan.

The guide is laid out as follows:

1) Developing a Grain Marketing Plan: An introduction to marketing strategy, plans and considerations.
2) Grain Pricing and Contracting Alternatives: Outlining the pros and cons of the pricing, delivery and contracting choices available to producers.
3) Understanding Futures, Options and Hedging: An overview of these key marketing terms.
4) Understanding the basis: A detailed explanation of how prices are determined for all publicly traded crops.
5) Grain Storage as Part of a Marketing Strategy: Outlining the importance of storage in executing your marketing plan.

These five sections have been designed to stand alone and collectively to meet the needs of different readers. Should you have any feedback on this guide, please contact 306-787-5950.

Note: The Ministry of Agriculture does not endorse the marketing websites mentioned in this document.

1. Developing a Grain Marketing Plan

What is a marketing strategy and marketing plan?

Developing and implementing a sound marketing strategy and plan turns your ideas to more specific actions and is one of the first steps towards establishing a profitable farm business. The marketing strategy broadly summarizes the approach and overall goals you hope to achieve. In contrast, the marketing plan details the activities that will help get you there. In other words, the strategy is the "why" behind the work and the plan is the "when" and the "what." A strong marketing strategy and plan helps you make reasoned marketing decisions, manage price risk and improve market returns.

How to begin (make choices, set goals and get involved)

Grain and oilseed producers have many marketing choices available to them. These choices include what to grow and how to sell their products.

Producers need to evaluate all grain marketing alternatives, existing market trends and market signals to make sound marketing decisions. This planning process requires time and commitment. A wide array of pricing and contracts are available to producers through the elevator or a grain company, such as cash sales, deferred delivery contracts, futures-based contracts, option-based contracts, basis contracts, pool contracts and self-loaded producer cars.

A successful marketing strategy requires a commitment to a unique marketing plan based on the farm's individual needs. Crucial to success is active involvement in all aspects of marketing, i.e., gathering market information, analyzing market trends, preparing a plan and putting the plan into

action.

A sound marketing plan should include six key elements:

1. **Production and Production Risk**: Choose crops with the greatest income potential within the crop rotation used and understand the risk of growing that crop.

2. **Market Analysis**: Gather all information needed to make an informed and rational decision. Closely monitor the market and time grain sales for when prices are advantageous.

3. **Financial Position**: Understand production costs and farm cash flow needs.

4. **Marketing Strategies:** Reduce the risk of falling prices by using grain contracts and by managing storage.

5. **Actions and Timelines:** Identify target prices, sales tools, decision triggers and establish a timeline and critical responsibilities for implementing the plan.

6. **Evaluation:** Grain marketing is an ongoing activity; review the marketing strategy at least yearly.

Each of these considerations will be explored in more detail in the following sections of this document.

Having and sticking with a coherent pre-set marketing plan is critical to avoiding unnecessary price risk. The producer should constantly watch for price and market changes and adjust their market positions accordingly. Staying informed about the market helps ensure access to information needed to take advantage of price rallies. The marketing plan should also be reviewed and revised on a regular basis as supply and demand conditions change.

1. PRODUCTION AND RISK

1.1 Crop Selection

Based on experience and agronomic recommendations, examine the crops that could be considered in the production plan. Consider all the agronomic factors, including crop rotations, herbicides, equipment requirements and management needs for the farm. For more information on crop planning, see our Crop Planning Guide.

The farm manager will be ready to make crop choices after reviewing crop rotations, the cost of production, break-even and margin calculations and the market outlook. In making a final decision, farm managers should consider all production factors and choose which crops will maximize farm profitability and productivity within acceptable agronomic practices.

1.2 Risk Management Programs

Business Risk Management programs are in place to help producers manage risks from income declines, resulting from factors such as drought, flooding, low prices and increased input costs. The programs work together by providing protection for different types of losses, as well as cash flow options.

- **AgriInvest** helps cover small margin declines.
- **AgriStability** assists in cases of large margin declines caused by circumstances such as low prices and rising input costs.
- **Crop Insurance (AgriInsurance)** protects against production losses related to specific crops or commodities caused by natural hazards such as frost, drought, flooding and disease.
- **AgriRecovery** helps producers return their farm businesses to operation following disaster situations.

For more information on these programs, visit the Saskatchewan Crop Insurance Corporation website or contact the Ministry of Agriculture's Agriculture Knowledge Centre at 1-866-457-2377.

2. MARKET ANALYSIS

The definition of a good source of market information varies from one producer to another. Most producers are interested in the analysis and comments of an experienced grain market analyst. Producers may also be interested in the technical trends of commodity price charts. Some producers may want specific pricing recommendations, while others prefer general market information in their individual marketing plan.

It is generally accepted that good information should be unbiased, balanced and independent. It should reflect the views of all market players—buyers, sellers, grain companies, commodity organizations and producers. The information should be updated regularly as the market situation is never static and new developments frequently arise. Looking for alternate information sources that support (or critique) your current information is an important step to ensure you use the strongest possible information.

Sound market information should be free of any bias from an individual broker, trader or grain company that may have a vested interest in getting you to sell your grain or trade a commodity. Facts and statistics should back up good market information. Statistics that should be included are supply and demand tables and stocks-to-use ratios.

Market information is a valuable farm management tool, but only to the extent that it can make educated marketing decisions. The information should be used to choose the most profitable crops to grow, establish target prices, undertake forward contracting when appropriate and implement profitable sales after harvest. The objective should be to use the information in a predetermined plan.

There are several websites available that provide marketing information.

- AAFC Market Analysis Crops - agriculture.canada.ca
- Ag-Chieve
- Farm Link Marketing Solutions
- Farms.com
- LeftField Commodity Research
- MarketsFarm
- Pulse Market Report
- Farm Credit Canada
- Cargill
- PDQ Info

3. FINANCIAL POSITION

3.1 Production Costs

Determining your cost of production for the farm ensures that your Crop Insurance coverage is adequate to cover your operating costs. Production costs can be gleaned from the previous year's income and expense statements. For more information on production economics, visit the ministry website and search for the Crop Planning Guide**,** where there will be several pages based on the crops you are looking for.

3.2 Pricing

Estimate the cost of production for each crop. This can be used to determine the break-even price for the commodity. The break-even price for the commodity can be calculated by dividing the total cost per acre attributed to that crop by the expected yield. Break-even prices can then be compared to current market prices and the projected market outlook to help determine the most profitable crop. Pricing strategies should be geared to selling at prices above the break-even level. When establishing a price strategy and setting target (selling) prices, the cash cost, fixed cost and cash flow should all be considered.

Since the target price triggers a pricing or selling signal, discipline is required to ensure that the plan is carried out and sales are made when the market price hits the target price. Not being tempted to hold on for a higher price after the market has reached the target level is essential to avoid unnecessary price risk. Price speculation in a rising market can make you hold off on selling for too long, while panic selling near the bottom of a falling market can cause you to sell too early.

Since it is impossible to pick the top price consistently, you should set targets at an attainable level that will still yield a satisfactory profit. The goal should be to sell at prices above the year's average price, preferably in the top one-third of the annual price range. For example, if the price range for canola in the coming year is predicted to be between $600 and $630 per tonne, a realistic target price might be $620. *Note: This scenario is hypothetical and may or may not reflect actual market value.* For more information on farm financial management, visit the farm financial management page**.**

3.3 Other financial information

In addition to the above-mentioned financial information, the following should be considered when evaluating farm financial health:

- Financial forecast;
- Cash flow;
- Preferred margin; and,
- Constraints from debt and personal preference for taking risks.

4. MARKETING STRATEGIES

4.1 Grain Contracts

By utilizing some of the available pricing techniques, producers can boost market returns and reduce the risk of prices dropping before the actual sale and delivery of the grain.

The following are some of the pricing, delivery and contracting choices available to producers. Each alternative has advantages and disadvantages. The optimum choice for each producer will depend on

crop conditions, the market outlook and how much risk the producer is prepared to take. The terms and subtitles of each program may vary from company to company and may be slightly different than indicated in this document. Understanding the contract's terms, conditions and/or obligations is essential to making appropriate marketing decisions. Producers may wish to consult a professional before making any grain contracting decisions. **For more information on grain contracting, please read Section 2: Grain Pricing and Contracting Alternative.**

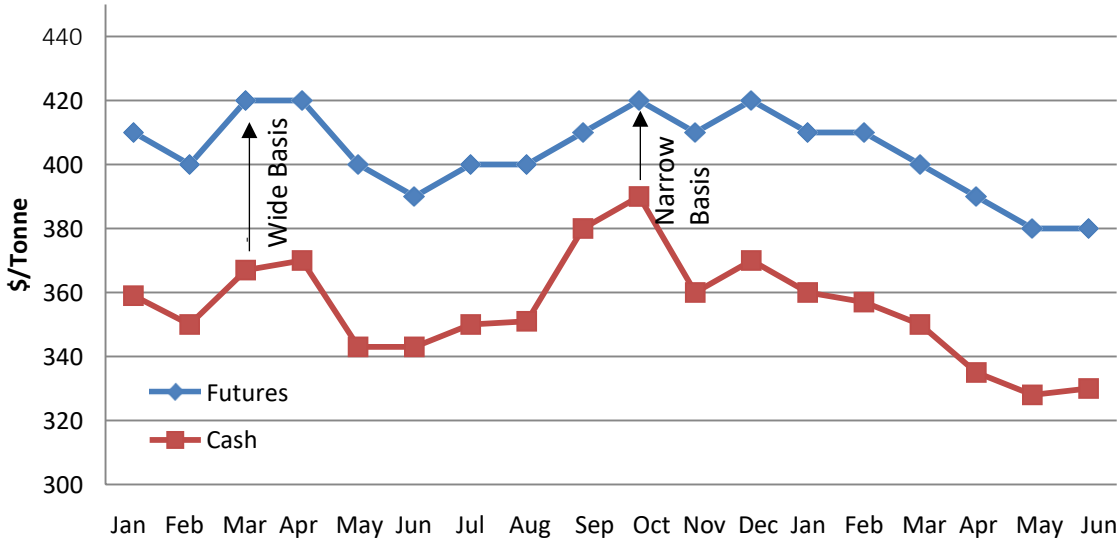
Below is a list of suggested resources:

PDQ
Richardson
Viterra
Paterson Grain
G3 Canada Ltd
Cargill
U.S. Wheat Associates
USDA

4.2 Forward Selling Strategies

Forward selling or forward pricing is a critical element of a marketing plan. It provides an opportunity to capture strong prices during a market rally before the crop is seeded or harvested. Forward pricing is triggered when market prices move up to the target or trigger price.

Hypothetical Grain Market Outlook



Forward pricing can be done using a deferred delivery contract, hedging on the futures market and/or purchasing a futures option or Price Protection Agreement (minimum price contract) through a grain company.

It may be prudent to forward sell only a portion of your expected production from a risk management

perspective. Farm managers should keep in mind the farm's cash flow requirement when making selling decisions.

> **Example:**
>
> Depending on market conditions, a farm manager could forward sell 10 to 15 per cent of an average crop at seeding and an additional 10 to 15 per cent in late summer when crop yields and condition are better known.

It is unwise and most likely not profitable to forward sell 100 per cent of expected production in case of a reduction in crop yield. The risk of prices moving higher after you have forward sold can be reduced by taking out a call option. The risk associated with crop failure may be reduced by purchasing put options.

4.3 Grain Storage as a Strategy

Determining if you will store grain and for how long will depend upon several financial and market factors. Fluctuations in commodity prices, basis patterns, short- and long-term interest rates as well as the cost of purchasing or renting storage facilities should all be considered in storage decisions.

Storing grain may be a worthwhile strategy when commodity prices are low and markets are expected to rally. However, the forecasted increase in prices should at least pay for the cost of storage. **Please visit Section 5: Grain Storage as Part of a Marketing Strategy for more information on grain storage.**

4.4 Futures

Purchasing futures contracts and options could also be a means of taking advantage of a price increase after the grain has been delivered.

- A "Call option" gives the producer the right but not the obligation to buy futures.
- A "Put option" gives the producer the right but not the obligation to sell futures.

A complete marketing plan requires some knowledge of how the futures market operates. Farm managers should be aware of the risks involved in futures trading and consider enrolling in a training program or contact a professional before engaging in futures trading. **For more information on this topic, please read Section 3: Understanding Futures, Options and Hedging.**

5. ACTIONS AND TIMELINES

The key to the success of the marketing plan is using a 12- to 18-month planning horizon. The plan should include different strategies for the pre-seeding, pre-harvest and post-harvest periods while striving to achieve the six key elements of a successful marketing plan. Use tools such as a checklist to facilitate the implementation of your marketing plan. Timely execution is essential for a successful marketing plan.

6. EVALUATION

A well-written marketing plan is not designed to achieve the top price on each sale of grain. It is intended to improve overall market returns through a planned approach to selling. Your year-end profits will determine the success of the plan.

Successful marketing plans don't happen without a good deal of effort and discipline. The discipline involved will help remove greed, speculation and panic from the pricing decision. The producer will attain higher market returns by pricing grain according to a pre-set objective and taking advantage of market trends and low basis levels.

Enrolling in a marketing training course is an excellent way to begin a marketing plan.

REFERENCES

The following sources of information were used in the development of this publication:

- Government of Alberta—Agricultural Marketing Guide
- Farms.Com
- Canadian Grain Commission
- International Grain Council
- Inside Futures
- Colorado State University
- Government of Alberta, Economics and Marketing—Choosing a Commodity Broker: Economics and Marketing—Choosing a Commodity Broker | Alberta.ca
- Farm Management Canada, Managing Market Risk: www.old.fmc-gac.com/strategic-business-planning/write-a-commodity-marketing-strategy-for-your-farm
- South Dakota State University, Writing a Commodity Marketing Plan: www.montana.edu/extensionecon/dynamicsinag/FS929.pdf
- Farm Management Canada, Managing Farm Business Risk

2. Grain Pricing and Contracting Alternative

Many producers wait until their crop is in the bin before looking at pricing and delivery choices. By starting sooner and utilizing the marketing techniques and programs available, you can boost returns and reduce the risk of prices dropping before the actual sale and delivery of the grain.

This document outlines some of the pricing, delivery and contracting choices available. Each alternative has advantages and disadvantages. The optimum choice will depend on crop conditions, market outlook, and the producer's overall tolerance for risk.

More detailed information on grain pricing, contracting and delivery alternatives are available from grain companies, brokers and grain contracting professionals. The terms and subtitles of each program may vary from company to company and may be slightly different than indicated in this document.

1. Deliver and Sell After Harvest

Producers receive cash price at delivery. This is the elevator company price less freight rate, handling and other relevant deductions.

Advantages:

- Simple and with an immediate cash payment.
- Protects against price erosion on the grain delivered and sold.

Disadvantages:

- Market prices may drop while waiting to deliver.
- Missed opportunities to pre-price or forward-sell during a period of strong prices (rally) in the spring or summer.

Good pricing opportunities may be missed if the elevator is congested, or the producer cannot deliver because of bad weather or busy schedules.

2. Deferred Delivery Contract

The producer agrees to deliver a specific quantity to the grain company at a particular price for a specified future (deferred) date. The producer receives a fixed discount on the futures price.

Advantages:

- A favourable price can be locked in and returns (profit) are known.
- No margin money is required as the grain company does the hedging.
- Grain can be sold before it is produced.
- Protects against a down-turn in the market; falling prices.
- Assured delivery opportunity.
- Opportunity to average price throughout the year with several contracts.
- Suppose only a portion of the expected crop production is contracted during the growing season. In that case, the balance of production can take advantage of any upturn in the market (market rally).

Disadvantages:

- Producer must provide the full tonnage for the contract.
- Producer must provide the quality specified in the contract.
- In a crop failure, the producer must make up potential losses to the grain company.
- Price is locked in, and the producer may miss out on a rising market (market rally after signing the contract).

3. Futures Based Contract

A futures-based contract allows producers to lock in a futures price and delivery period for a specific commodity while choosing the basis later. This type of contract may involve the purchase of options.

Advantages:

- Can lock in a favourable price before harvest, protecting against a price decline but not limiting some upside potential.

Disadvantages:

- Like a deferred delivery contract, the producer must guarantee the crop's quantity and quality under contract.
- Changes in the market need to be greater than the option premium cost to justify this strategy.

4. Basis Contract

The producer locks in at the basis level (same basis as is available for deferred delivery contracts) and agrees to deliver in a specific deferred delivery month. The deferred delivery futures contract is left unpriced until a later date. The producer has until the mid-way point of the month of the deferred delivery period to lock-in the futures price.

The cash price received is the futures price, as locked-in by the producer sometime before the midway point of the deferred delivery period, less the locked-in basis. **For more information on this topic, please visit Section 4: Understanding the Basis.**

Advantages:

- Opportunity to lock-in a narrow basis before delivery month.
- Attractive if market prices rise before delivery month.
- Futures price can be protected by hedging on the futures market or with a futures option contract.

Disadvantages:

- Futures market prices may drop in the intervening period, negating the narrow basis, unless hedged or protected by an option.
- Requires delivery during the deferred delivery month.
- In an inverted market, a producer cannot take advantage of a positive basis.

5. Futures Option Contract

This provides the producer with an option contract traded on the commodity market, which holds the right, but not the obligation, to obtain a designated futures contract at a specific price by a specified future date. No direct cash price for the grain is established for the producer. However, if the option is exercised, the producer can obtain the underlying futures contract, which can be used for hedging or price protection.

Advantages:

- As with minimum price contracts, the producer can establish a minimum price or floor price for a specific quantity of grain.
- The option contract can be sold (or offset), and the profit from the transaction can be used to offset any losses in the cash value of grain to be marketed.
- By taking out the option contract, the producer is not obligated to market the grain to any grain company. This flexibility may provide an opportunity to capture a lower basis.
- By taking out an option, the producer has more flexibility regarding delivery timing than a price protection or deferred delivery contract.
- There is less financial risk with an option contract than directly hedging on the futures market because there are no margin requirements.

Disadvantages:

- The producer incurs the cost of the option (premium). The cost of purchasing options may be expensive.
- Suppose the option is exercised and the producer obtains the underlying futures contract. In that case, there is financial risk in maintaining a margin on the futures position.

6. Production Contract

This agreement between a producer and a grain company, signed before seeding, describes the terms under which the crop will be grown and marketed. The contract normally outlines the variety to be grown, the size and location of the acreage, how much crop will be marketed by the company and at what price.

Typically, a fixed quantity is contracted (less than total expected production) at a fixed price. The price may not be directly related to any futures market price but instead reflects conditions facing the purchaser in the international market for that commodity.

Advantages:

- Guarantees a market for all or part of the production.
- The producer can lock in a fixed quantity price and take advantage of possible strong prices in late winter or the spring.
- There are various pricing and delivery alternatives available to the producer for the balance of production (production over and above the fixed price portion).

Disadvantages:

- Market prices may go up after harvest, negating any advantage on the fixed-price portion of the contract.
- In the event of a crop failure or degrading, the producer is not usually forced to guarantee the quality and the quantity of production (in most production contracts, there is an implied "act of God" clause). However, this aspect of the agreement should be clarified with the contracting company.

7. Flat Price Delivery Agreement

This is a fixed or flat price offered by a grain company on a specific tonnage of grain. The grain company may require a certain quality and quantity of grain needed to meet a sales commitment. The company may offer a flat price for a limited time throughout their elevator network to meet this commitment, regardless of the local freight rate or current basis levels.

Flat price programs are generally priced at a level that will trigger a significant amount of producer selling because it is attractive relative to the current price.

Advantages:

- It is simple, low risk, low cost and protects against future price erosion.
- The price is attractive relative to other opportunities.
- The grain company will offer the flat price program on a narrow basis (reduced marketing margin) as an incentive to provide immediate delivery opportunities.

Disadvantages:

- The opportunity to take advantage of a flat price does not last long; programs are booked up quickly.
- Must stay in touch with the elevator company regularly to not miss the opportunity.

Under some circumstances, such as volatile market conditions, prices may increase after the producer has committed to selling on the flat price program.

8. Grain Pricing Delivery Agreement

The producer sets a target price and tonnage at which they are prepared to sell and informs the local elevator manager. The producer establishes a standing pricing order with the grain company. If the market moves up and hits that price, a sale is automatically triggered. This can be done in the cash market, off the nearby futures or deferred months for the new crop.

The producer receives the target price on the day the sale is triggered. The futures price will be less than the basis and relevant deductions on the day the sale is made for deferred months.

Advantages:

- The producer can choose a price level that will provide a satisfactory profit.
- The producer can cancel the pricing agreement (in writing) at any time before it is executed, without penalty.

Disadvantages:

- The market may not rally, and the price may erode, causing a reduction in the overall net value of the grain. This strategy should be used in conjunction with other price protection strategies.

Under rapidly rising market conditions, the target price may be too low and automatically priced out at a low level.

9. Pool Contracts

Pool contracts average the market value of a commodity over a specified pooling period. The price received reflects the average price over months of market activities. These contracts may also include grade price differential (premium for higher grades and discount for lower grades).

The producer receives an average price over a pooling period. The producer receives partial payment at delivery, with the remainder at the end of the contract period.

Advantages:

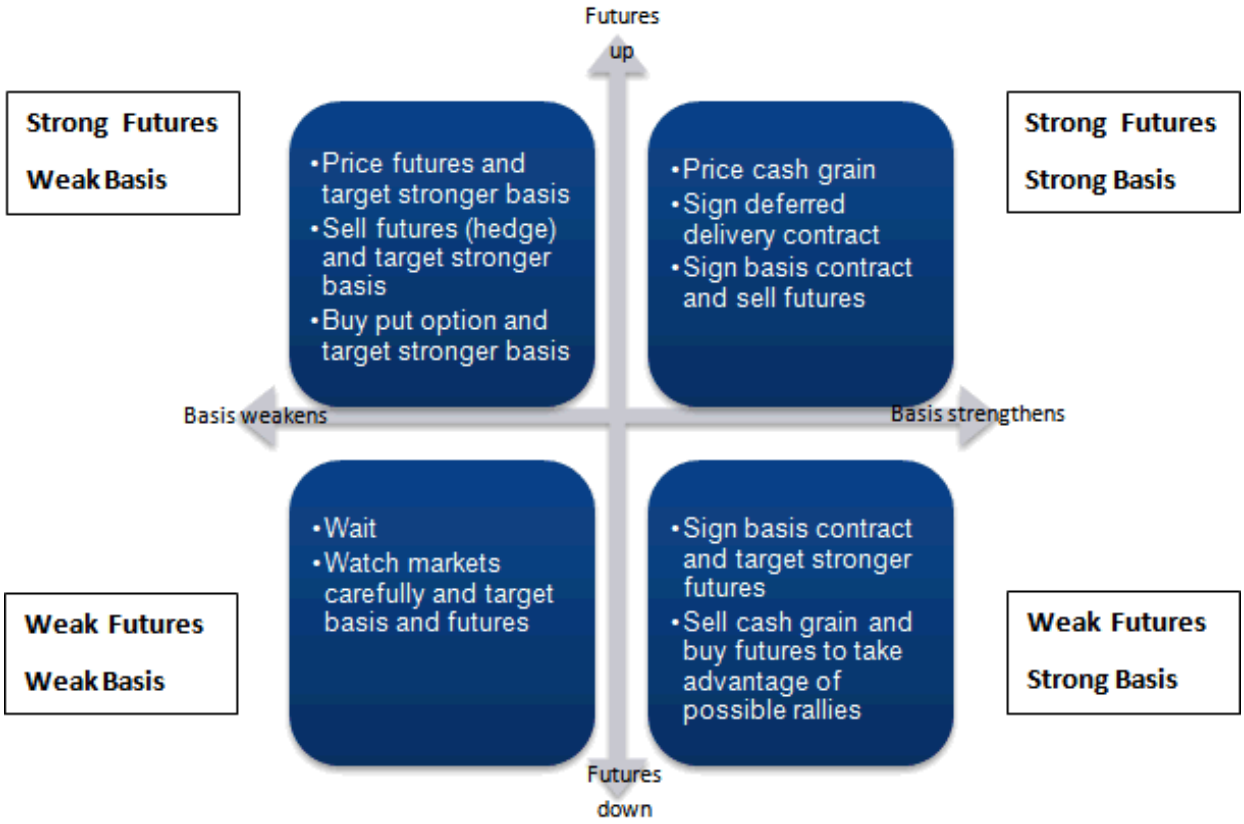
- Stabilize grain price fluctuations and generate returns across markets.
- Some pool contracts may include the benefit of an "act of God" clause.
- Avoid market lows.

Disadvantages:

- Producers may not be able to take advantage of a sudden market rally.
- Producers may need to negotiate the basis at the time of delivery.
- Producers only receive part of their payment at delivery, making cash-flow management more difficult.

Selecting the Proper Marketing Tool

The above reviews some of the contracts and tools available to producers to help mitigate price risk in different market conditions.



Source: Government of Alberta Grain Marketing Decision Grid.

The diagram reviews some of the contracts discussed in this document by comparing the advantages and disadvantages.

References

The following sources of information were used in the development of this publication:

- Cargill—Prairie Grain Marketing Contracts
- Paterson Grain—Grain Marketing
- Richardson Pioneer—Contracting Tools
- Viterra
- Government of Alberta—Introduction to Crop Marketing
- Government of Alberta—Agricultural Marketing Manual

RELATED LINKS

Marketing my Grain—Contracting: www.alberta.ca/crop-contracts.aspx

A complete understanding of the terms and conditions of grain contracts is essential for a producer to be aware of his rights and obligations and assist in implementing an effective grain marketing strategy. The above links provide information on the key elements that producers should understand before committing to a specific contract to market their grain.

3. Understanding Futures, Options and Hedging

What is a Futures Market?

A futures market, also known as an exchange, is where buyers and sellers trade commitments to make or take delivery of commodities. Commodities traded in this way include agricultural and forestry products, base and precious metals, various sources of fuel or energy, stock indexes and financial instruments. Exchanges exist and operate because the rules, price reporting and product offerings (futures contracts) enable its members and clients (firms and individuals) to manage the price and physical risks associated with the operation of their businesses.[1]

Futures prices are constantly being discovered through continuous, worldwide flows of information that influence buyers' and sellers' current and future supply and demand expectations. The futures market is linked to the cash market, so the price discovery process in the futures markets serves to determine prices in both markets.

Futures markets trade contracts that specify a standardized commodity, quality, quantity, location and delivery period.

- These contracts are binding legal agreements to make or take delivery of specified commodities.
- Futures markets are primarily used for price discovery and risk management. In this sense, they are financial instruments and are rarely used to transfer the commodity.
- For a trade to occur in the futures market, a buyer and seller must agree on a price. **There must be a promise to deliver (the seller) and take delivery (the buyer).** This commitment can be offset so that there is no actual delivery of the physical commodity.

The Futures Contract

Primarily through the electronic matching of bid and ask prices, a price is determined, and an agreement is reached between the buyer and the seller to make a transaction (i.e., enter a contract). **For every seller, there must be a buyer, and for every buyer, there must be a seller** for a futures trade to occur:

- The **seller** of a futures contract enters a commitment to make delivery of a specified commodity. This is called a **short** position.
- The **buyer** of a futures contract enters a commitment to take delivery of a specified commodity. This is called a **long** position. Note it is only a commitment to make or take delivery.
- The **seller's** obligation to make delivery of the product is with the clearing association of the exchange.
- The **buyer's** obligation is to take delivery of the product and pay the price to the clearing association. The clearing association pays the seller.[2]

Options

Managing price risk and capturing good pricing opportunities are two of the main objectives of a sound marketing plan. Agricultural futures options can assist in achieving those goals.

What is an Option?

An option is an instrument derived from a futures contract. The purchaser of an option has the right, but not the obligation, to buy or sell a commodity futures contract by a specified future date in

exchange for a premium payment (the cost of the option contract). It is entirely up to the purchaser to use that right or exercise the option outlined in the contract.

Type of Options

Put Options: A put option gives the buyer the right to sell the underlying commodity named in the option contract. The buyer of the put option is not obligated to take any action if it is not profitable to do so. The most significant potential loss the purchaser could incur with a put option is limited to the cost of the option (premium).

Call Options: A call option conveys the right to buy the underlying commodity. As with put options, the buyer of a call option is not obligated to take any action if it is not profitable to do so. The potential loss will be limited to the cost of the option.

When to use Options?

Options can be used to establish a minimum floor price for a commodity while retaining upside price potential. Options can also be used to take advantage of a price rise after grain has been sold.

- **Using a Call Option to Capture a Price Rally:** A farm manager can use a call option to take advantage of a price rally after selling the grain. It involves purchasing a call option, which includes the right to buy the underlying futures contract.

It is most often used during the crop year when a decision has been made to market grain early. This is usually done to take advantage of a narrow basis or increase cash flow without giving up the opportunity to benefit from a subsequent price rally.

- Processors, such as canola crushers, can also use call options to protect against a price increase.
- **Using Put Option to Establish a Floor Price:** farm managers can use options to establish a floor price for their unsold commodity without giving up the chance to benefit from a price increase.

For example, in September a farm manager may decide to protect against a price decline on his harvested grain but does not want to limit his ability to take advantage of a future price rally. The farm manager would buy a put option and establish a floor price to establish this price protection.

Grain Company Option Based Contracts (Price Protection Contracts):

Most line elevator companies offer option-based contracts. In these contracts, the elevator company will offer a "minimum price guarantee contract" (for spot grain deliveries), with an opportunity to lock in a higher price anytime over the 90 days. They may also offer a ”price protection contract“ for deferred delivery.

Under both types of contracts, the grain company uses options to guarantee the minimum price while retaining the opportunity to offer the farm manager a higher price if the market moves up. In most cases, the grain companies’ option-based contracts are an attractive alternative to farm managers buying their options directly.

Important Terms

Option Holder

The option holder is a farm manager, processor or speculator who buys an option contract for a fee from the option seller (writer). The option holder has the right to exercise the option.

Premium

The premium is the cost per tonne paid for the option contract. The premium varies according to the supply and demand for the various options traded and price volatility in the commodity market.

Strike Price or Exercise Price

The strike price, also known as the exercise price, is the price of the futures contract designated in the option contract.

Exercising an Option

The option holder exercises the option when he exchanges his option for the underlying futures contract at the strike price outlined in the option contract.

Offset

A farm manager can offset an existing options position by engaging in an equal and opposite transaction. For example, suppose you initially bought a 100 tonne November put option contract. In that case, you can offset it by selling a 100 tonne November put option contract.

Underlying Future

The underlying futures contract is the asset upon which the option contract is based. It refers to a specific futures contract on the Commodity Exchange, such as November Canola at $600 per tonne.

Expiry Date

Option contracts typically expire on the third Friday of the month before the underlying futures month. The expiry date is the last day on which the option is valid. On that day, the option buyer loses the right to exercise the contract.

Hedging

A transaction to minimize the risk of loss due to adverse price fluctuations. In the futures market, a hedge is a purchase or sale of a futures contract, opposite a position held in the cash market, usually made as a temporary substitute for a cash transaction to be made later.

Hedging

Hedging, by strict definition, is the act of taking opposite positions in the cash and futures markets. To understand what a hedge is, first recognize that there are two markets:

- The cash market is the physical market where farm production is actually bought and sold; and
- The commodity futures market is the paper market where futures contracts are bought and sold.

For example, a farmer intends to plant a field of canola. Even before seeding, he acquires or buys canola production with inputs of fuel, fertilizer, seed and chemicals, and his land and labour. When he buys these inputs, he has purchased a canola crop. In other words, he has purchased a piece of the cash canola

market. Suppose he hedges the crop at some time during the growing season by selling futures contracts. In that case, he then has an opposite position in the cash market (bought production) and the futures market (sells futures).

The hedge locks in the price by taking the opposite position in the futures market (sell) to what he has (buy) in the cash market. If the hedge is in place, a drop in the price of canola futures will make the growing, or cash grain, worth a smaller amount, but the seller's short futures hedge will be worth more. The money lost in one market and the money made in the other will balance each other off very closely.

Hedging, used with common sense, allows a producer to lock in favourable prices until actual deliveries can be made.

The mechanics of placing the hedge are simple; the difficulty lies in knowing when to place the hedge.

- Farm Management Canada: National Risk Management Programs

References

These useful sources of information were used in the development of this publication.

- AgriResponse
- Government of Alberta: Using Hedging to Protect Farm Product Prices

The content for this publication was provided in part by Farm Management Canada.

4. Understanding the Basis

The **basis** is a fundamental part of how cash prices are determined for all publicly traded crops. Understanding the basis and how to use it in an effective marketing management strategy are crucial to achieving favourable market prices.

What is the basis?

The basis is the difference between the futures price and the local cash price offered by grain buyers.

- **Negative basis** (subtracted from the nearby futures' prices) reflects the cost of marketing grain from one point of sale to another (e.g., from the country elevator to seaport). Traditionally, the basis included costs incurred by the grain company such as transportation, administration, interest and storage. In addition, the basis now reflects the grain company's opportunity to make new sales or to complete existing sales.
- **Positive basis** (added to the nearby futures prices) is used as an incentive by grain buyers to motivate farm managers to sell their grain. Positive basis occurs in an inverted market.

Basis levels will vary between regions due to differences in transportation costs, local demand and competition between buyers.

Example:

Negative Basis (Narrow)	Negative Basis (Wide)	Positive Basis
Futures Prices $498.50 /T **Basis -$10.50** **Cash Price: $488.00**	**Futures Prices $498.50 /T** **Basis -$61.50** **Cash Price: $437.00**	**Futures Prices $498.50 /T** **Basis $30.50** **Cash Price: $529.00**

The information above is only an example and does not reflect actual commodity prices or basis levels.

How are the basis and the street price of commodities that are not traded on a futures market calculated?

In some cases, the elevator price of a commodity with no futures market is calculated by considering its historical relationship to a traded crop. For example, some companies will calculate the price of flaxseed based on the price of canola.

The commodity is in high demand. The supply and demand of that commodity will also have a major impact on the street price. In some cases, prices are negotiated between the grain companies and processors through a bid/ask process, resulting in higher prices when stocks are depleted. From that sale price, grain companies will deduct a basis: the cost of getting the commodity to the buyer, such as rail and other freight costs, storage and elevation.

Why is the basis important?

The basis affects the net price received by farmers and can impact farm income. When considering sales or pricing decisions, the following factors should be taken into account:

- **Variability:** Farm managers should pay attention to the basis level because it can vary significantly throughout the year.
- **Compare Prices:** Monitoring the basis at several buyers is advisable. Individual grain companies have their own sales and marketing programs and differing requirements for grain at various times during the year.
- **Timing:** Through careful monitoring of the basis, farm managers can best decide when and where to market their grain to get the most attractive prices.

What do changes in the basis mean?

Changes in the basis can be a signal to the producer to deliver grain, store it or lock in a price. As basis levels increase *(or become wider),* grain companies give the producer a signal that there is less demand for a specific commodity at that particular time. Basis levels are sometimes wide at harvest time or under circumstances when supplies in the system are abundant.

Conversely, declining basis levels are a sign for the producer to deliver. When the basis level drops or becomes positive, it is a sign from the marketplace that it needs supplies.

A changing basis and the signals these changes provide can be categorized into one of four marketing situations. These are summarized below.

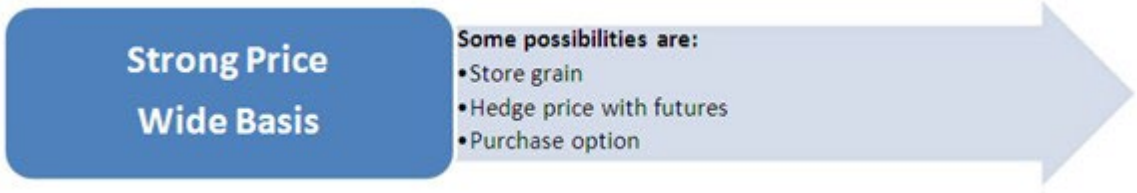
1. Cash market prices are strong, and the basis is wide.

In this situation, the futures market prices are strong, possibly because of tight supplies on the international market. However, supplies at the local level are large and more than adequate to meet demand. Abundant local supplies usually mean reduced competition for those supplies, resulting in broad basis levels.

One option to consider in this situation is to sell on the futures market. The farm manager would then capture the short-term strength in the futures market without being locked into the wide basis in the local cash market.

> *NOTE: Producers should understand the implications of futures contracts before using this strategy. It is wise to seek the advice of a qualified professional before selling on the futures market.*

Depending on the farm's financial capacity, a farm manager could also store grain (if higher prices are forecasted), monitor the basis level and deliver when the basis narrows. The federal government's Advance Payments Program may assist producers in limiting the financial risk of such a marketing strategy.



2. Cash market prices are strong, and the basis is narrow or positive.

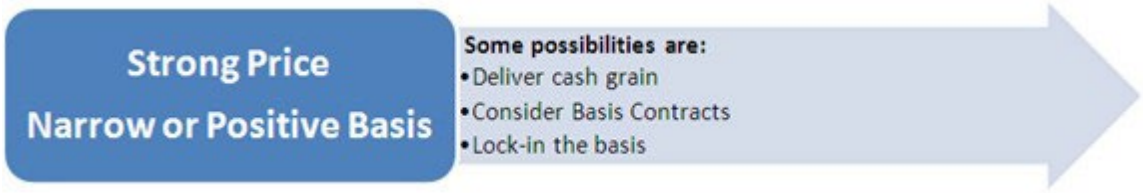
This is a strong signal to deliver grain. It means market demand is outpacing available supplies. In this situation, not only are futures prices strong, but local grain buyers are aggressively bidding up prices (basis becoming narrow or positive) to attract deliveries.

There is a strong incentive to deliver and take cash settlement under this situation. When the futures market is strong, delivery ensures that the producer gets a good price in relation to international market conditions.

The narrow basis also ensures that the farm manager is minimizing marketing costs. The producer is marketing when competitive pressures have reduced marketing margins of grain buyers, which will add to the farm's net return.

This situation may also be a good opportunity for farm managers to lock in an attractive price for next

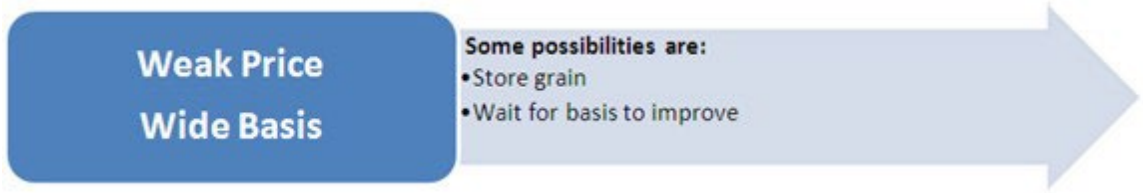
year's crop. The strong futures price and the narrow basis for the new crop may be captured by taking out a deferred delivery contract (if available). Deferred delivery contracts allow the producer to lock in an attractive futures price for delivery of the new crop in a deferred month at a fixed basis level.



3.Cash market prices are weak, and the basis is wide.

This situation signals to store grain and wait for the futures price to rise or the basis to drop. For example, conditions in the local market often improve (basis narrows) after the initial harvest pressure subsides.

This condition often occurs at harvest when the price is under pressure because of ample supplies at the local level (wide basis) and the international level (weak futures price).

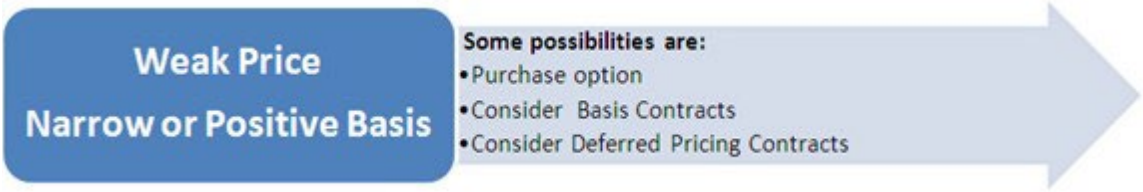


4.Cash market prices are weak, and the basis is narrow.

This is the market condition where futures prices are weak. Still, competition at the local level is strong, resulting in a narrow or positive basis. The market is calling for delivery. However, the farm manager may be reluctant to do so because of the low futures price.

One option to consider in this situation is to deliver grain from the bin to take advantage of low marketing costs while leaving the grain unpriced but with basis locked in.

Alternatively, the producer could sell and seek to take advantage of any rise in the market after delivering priced grain by purchasing futures. In this case, the farm manager transfers the price risk from grain in the bin to the futures contract. This is known as business speculation. Though farm managers may profit from a rise in futures prices, the farm will suffer a loss if the futures price drops.



References

The following sources of information were used in the development of this publication:

- Chicago Board of Trade: Buyer's Guide to Managing Price Risk
- CME Group: Self-Study Guide to Hedging with Grain and Oilseed Futures and Options
- Grain News: Understanding Basis
- Government of Alberta: Basis - How cash grain prices are established

5. Grain Storage as Part of a Marketing Strategy

Given a choice, many producers would prefer to market their crop right off the combine without storing it on the farm. However, that's not always possible. Contract requirements, tight delivery and shipping opportunities, and expectations for higher prices in the future can often make farm storage a necessity.

In many cases, cash flow needs and lack of bin space can pressure producers into selling before they want. In other cases, producers may hold on to their grain too long, waiting for prices to go up, only to watch markets plateau or drift even lower.

This raises questions about the role of grain storage in grain marketing. Should grain storage be used as a marketing strategy to wait out periods of low prices? How long can grain be stored economically before the costs of on-farm storage outweigh the benefits of holding the grain? Are there any good alternatives to on-farm grain storage?

Whether to store grain and for how long depends on several factors: the short-term price trend, the anticipated long-term market outlook, the basis level, interest rates, quality risks and the cost of physical storage.

1. Cost of Grain Storage

The cost of grain storage is significant, but producers often overlook it. There are several types of storage costs. They fall into one of the following categories:

1.1 Fixed Costs

Bin costs can be divided into fixed and variable costs. Fixed costs (also known as ownership costs) include depreciation, investment and insurance. Depreciation is the loss in value of an asset over time due to wear and tear and obsolescence.

The original cash cost of the physical storage is the amount initially paid. The cash salvage value is the estimated value of this asset at the end of its depreciation life. Typically, the cash salvage value is 10 per cent of the original cash cost. The insurance premiums for protection from wind, fire, impact, hail, lightning and vandalism are also considered fixed costs.

1.2 Variable Costs

The variable cost of grain storage is the investment required to maintain safe and adequate storage:

- A repair allowance should be included for bins secured to a wood floor to allow for repairs and replacement;
- Utility costs should also be considered if a forced-air grain drying system is used;
- Handling costs that include labour and equipment usage;
- Shrinkage; and,
- Possible spoilage and grade loss should also be considered.

1.3 Opportunity Cost

Interest is a significant cost of holding grain in the bin. The actual interest cost to an individual producer depends on their cash flow situation. For most farmers, it is the cost of current outstanding credit. Their interest cost would be equal to the value of the grain times the interest charged on their operating loan or line of credit. Other producers, who do not have debts, would consider their interest cost as the rate of return they could make on their investments.

This calculation can be used to gauge the carrying cost of stored grain. For example, suppose the current interest rate on an operating loan is 10 per cent, wheat is worth $250 per tonne, and it is held for 14 months. In that case, the interest cost of holding wheat for that time would be $29.17 a tonne. *[The above figures are not intended to reflect market value but are merely used to explain the calculation.]*

2. The Potential for Price Erosion

Storing unpriced grain is a form of speculation—speculation that the price will go up. However, the price may not go up, and the total value of the grain in storage may drop. Holding grain in a declining market is a significant risk. Meanwhile, the opportunity cost of holding the grain continues to pile up. Producers can protect themselves from a loss of the value of their stored commodity by one of a number of price protection strategies. The strategy may include fixing a price through a grain company on a deferred delivery contract, utilizing a price protection contract, or hedging on the futures market.

The general economic principle applied to storing grain is that the longer it is held; the more expensive storage becomes. Consequently, the longer the grain is stored, the higher net prices need to rise before profitable storage.

3. How can I learn more?

Numerous courses and workshops are available to assist in learning commodity marketing strategies. For more information on the training courses available on grain marketing, contact the Agriculture Knowledge Center toll-free line at 1-866-457-2377.

Related Links

Iowa State University: Cost of Storage Grain

Iowa State University has developed a fact sheet and a useful online grain storage cost calculator to assist producers in calculating the cost of their grain storage.

Government of Alberta: Grain Storage as a Marketing Strategy

Alberta Agriculture and Rural Development published a fact sheet to inform producers on the advantages and disadvantages of farm storage as well as the cost of using storage as part of a grain marketing strategy.

This document is intended for information purposes only. Readers should consult a professional before making any grain contracting or marketing decisions.