



Using the Futures Market

Before we discuss how the futures market can be applied to your particular situation, it's important to have a basic understanding of what the futures market is and how it works.

Put simply, the futures market allows for public price discovery. In other words, the price someone is willing to pay for a quantity of canola at a given period in time, and the price someone is willing to sell that same quantity of canola for, is arrived at in public through an open bidding system. The bidding takes place daily during the week on the floor of the Winnipeg Commodity Exchange .

The Winnipeg Commodity Exchange does not buy or sell canola nor does it influence or set the price. Rather, it acts as a forum where buyers and sellers of canola, through their brokers, can meet to exchange or "trade" set amounts (contracts) of canola for some future period known as the delivery month.

While the basic concept of a futures market may be simply public or open price discovery, its application at the farm level can be complicated and not well understood unless you take the time to understand how it works. This section will provide you with an overview. However, before you attempt to use the futures market you should talk to a variety of people who use futures as part of their business practice. This would include not only brokers but farmers experienced in using the futures market.

There are two types of participants in futures trading, hedgers and speculators. A hedger is someone who has an interest in selling or buying the actual commodity. A seller is interested in prepricing canola that he will have for sale in the future in order to avoid a price decline. A buyer is interested in prepricing canola that he will need at some time in the future in order to avoid a price increase. A speculator is someone who has no interest in the actual canola. He is interested solely in profiting from the price movement.

Before we talk about hedging, which is what most farmers have in mind when they use the futures market, it's worth understanding the role of the speculator in the market. Speculators add liquidity to what otherwise could be a thin market. This means that, without the activities of the speculators buying and selling contracts, there may not be enough actual buyers or sellers of canola on a given day to conduct trades for those who want to hedge .

From time to time there is concern that the speculators will control market prices. However, this should not be the case as long as there is a workable delivery system. If speculators bid the futures price of a commodity too high in relation to the actual market conditions, those who have the commodity for sale would sell futures contracts at the inflated price and actually deliver against the contract when the delivery month arrived. The speculator would then be forced to take delivery of the commodity and sell it at actual market price, which would be under what he had to pay for his futures contract. Or he could try to sell his contract. He would most likely not find a buyer at the inflated price and therefore would take a loss.

If speculators attempted to drive the price too far down in relation to the actual market conditions, users of canola would buy the futures contracts and request delivery in the delivery month. In order to deliver, the speculator would have to go into the cash market and buy canola at more than for what he sold the

contract. Or he could attempt to buy back the contract so he would not be required to deliver. However it is unlikely he would find a seller at his depressed price, so he would end up losing.

In theory, the threat of delivery or the threat of demanding delivery prevents speculators from controlling the market. The threat of delivery ensures that there is an orderly relationship between the cash and futures market.

Hedging

A hedge is a method of decreasing the risk of holding a cash position (the actual commodity) by taking an offsetting position in the commodity or futures market.

As an owner of canola, a hedge will protect you against downward price movement. However it will not allow you to take advantage of upward price movement. Therefore, before you consider hedging, you need to consider the likelihood of prices moving up or down during the life of the futures contract. If, for example, you are in a market that has more potential to decline than go up you may decide to hedge. When you hedge you are in effect "locking in" a price.

When you hedge you are selling a futures contract, with the intention to either deliver against the contract in the delivery month or, prior to the delivery month, sell your canola into the cash market and buy back a futures contract in the same amount which you previously sold.

In order to validate your trade, that is, ensure that you are committed to it, you must deposit a portion of the value of the contract with your broker. Usually it amounts to ten percent or less than the total contract value. This is called margin. Your brokerage house must post margin security with the Commodity Exchange to cover the position of its clients. Consequently, your broker requires that you deposit margin money with his brokerage house.

When determining whether the futures price is acceptable you must know your cost of production, the cost of storing your canola until you deliver it to either the cash or futures market, the cost of interest on your stored canola, and the cost of the interest on your margin money.

You may decide, for your particular marketing strategy, that you do not want to commit all your crop to one futures price . So you may decide to hedge only a part of your crop at any one time. This would be particularly important in the situation when you are hedging early in the season before your crop is harvested, and you are not yet sure as to the total quantity of canola you will have.

The following is an example of a perfect hedge in a declining market. On July 1 a farmer decides the price of canola meets the parameters he has set. The street price is \$210. He thinks that the price may drop. However, because his crop is not harvested he can't sell his canola. The basis, the spread between the current street price and the post-harvest futures, is \$35. The farmer locks in a price by selling a November contract for \$245. By the time he has his canola harvested, and is ready to deliver it, on October 1, the market has declined by \$10 and he sells his canola to the local elevator for \$200 per tonne. He then buys a November contract at \$235. If you look at his net return, the decline in the cash market is offset by the gain in the futures, and he has locked in a price of \$210.

Example 1: Perfect hedge in a declining market

Date	Futures Transaction	Cash Transaction	Street Price	Basis
July 1	Sell \$245		\$210	\$35
Oct 1	Buy \$255	Sell \$220	\$220	\$35
	Loss \$10			Increase \$10

Net return = gain on futures + return from cash

\$210 = \$10 + \$220

Now assume in Example 2 that all the circumstances are the same except the farmer is wrong and instead of prices declining, they actually go up. He still has accomplished what he wanted. He locked in a price at \$210. (Remember, the \$210 price met his predetermined parameters.) He lost \$10 on the futures market but the street price rose \$10.

Example 2: Perfect hedge in a rising market

Date	Futures Transaction	Cash Transaction	Street Price	Basis
July 1	Sell \$245		\$210	\$35
Oct 1	Buy \$255	Sell \$220	\$220	\$35
	Loss \$10			Increase \$10

Net return = loss on futures + return from cash

\$210 = (- 10) + \$220

The key concept to understand about hedging is that in order to be hedged, you must not sell a contract which is larger than your cash position (the amount of canola you own). When you deliver your canola, you must sell an amount equal to the future position you hold, and you must immediately buy back the contract. In other words your cash and futures positions must always balance. They must be equal and opposite. You are not concerned with the amount of movement in the market because when you are hedged a loss in the futures means an increase in the cash, and vice versa, resulting in no net change to your financial position.

Whenever you are out of balance you are speculating. When you are speculating, price movement will put you in a loss or gain position. As long as you have not closed out your position, that is you have not bought back your contract, you have an obligation to deliver canola in the amount of your short contract during the delivery month. Buying back the contract cancels your obligation to deliver. Another way to view hedging is that it provides you with a floor price, but it does not let you take advantage of a rise in the market.

At times you will find there may be a lack of liquidity in the market - that is, there are not enough buyers or sellers to complete a trade. This would be of particular concern to you as a hedger if you were trying to buy back a contract in a fast moving up trending market. You could find yourself faced with a situation where no one would want to sell a contract in anticipation of increasing prices. In a fast uptrending market, in order to protect yourself, buy back your futures contract before you sell cash canola.

Once the futures contract is bought back you can sell your grain. As a seller you can ride out the uptrend or sell now accepting whatever gains you have made. Example 3 shows what would happen if cash canola was sold on October 1 but the futures contract wasn't bought back till October 5, after a series of limit moves.

Example 3: Uptrending market - cash grain is sold before futures contract is bought back

Date	Futures Transaction	Cash Transaction	Street Price	Basis
July 1	Sell \$245		\$210	\$35
Oct 1	\$260	Sell \$225	\$225	\$35
(No contracts or sale)				
Oct 5	Buy \$300			
	Loss \$55		Increase \$15	
Net return = loss on futures + return from cash				
\$170 = (-\$55) + \$225				

Conversely in a fast moving downtrending market, you need not be as concerned because if you can't buy back the contract you stand to gain. However, it is unlikely you would face this situation because as a buyer in a down market you should attract willing sellers who want to sell before further price drops.

Example 4: Downtrending market - cash grain is sold before contract is bought back

Date	Futures Transaction	Cash Transaction	Street Price	Basis
July 1	Sell \$245		\$210	\$35
Oct 1	\$225	Sell \$190	\$190	\$35
(No contracts for purchase)				
Oct 3	Buy \$205			
	Gain \$40		Decline \$20	

Net return = gain on futures + return from cash

$$\$230 = \$40 + \$190$$

Further, a hedge is not an elimination of risk, it is a reduction of risk. What was discussed in the previous examples was a perfect hedge. However, hedges are rarely perfect because not only can there be price movement but also basis movement. Usually though, changes in basis are smaller and more gradual than changes in prices. Also, basis level changes tend to be more predictable. Factors affecting basis are local, such as farmers' price expectations, local supplies, quotas, elevator space, crusher demand and transportation. On the other hand, factors that affect price levels are usually foreign such as grain embargoes, crop failure, or other factors for which you have less access to information. Once you have hedged, you have eliminated a large portion of the price level risk but you are still open to basis risk. Consider the following example. On July 1 the street price was \$215. November futures were \$250. By October 1 the cash price had dropped to \$200. The basis had also widened from \$35 to \$40. The farmer received \$5 less than he had anticipated or \$210 because the basis moved against him.

Example 5: Effect of a basis change on a hedge

Date	Futures Transaction	Cash Transaction	Street Price	Basis
July 1	Sell \$250		\$215	\$35
Oct 1	Buy \$240	Sell \$200	\$200	\$40
		Gain \$10		Decline \$15

Net return = gain on futures + return from cash

$$\$210 = \$10 + \$200$$

The Mechanics of Trading

As a farmer you cannot directly enter into a trade on the Winnipeg Commodity Exchange, you must work through someone who has a seat on the Exchange. This person is known as a broker. In order to work with a broker you must open an account with his brokerage firm. Opening an account involves establishing your financial credibility, and depositing enough money to cover a percentage of the value of the contracts (margin) you wish to trade. Each brokerage house will have its own terms and conditions. It is important that you understand those conditions and that you understand what you are liable for in any trade.

The broker who handles the trade for you acts only as your agent and bears no financial obligation. He can provide information or advice based on his knowledge and experience. He should not decide what or when to buy or sell. That is your decision, based on the requirements of your farming operation.

When you place a sell order, the broker sells a contract for a given quantity on your behalf on the floor of the Exchange. Prior to the trade you indicate the price range in which you want to sell a contract. The

market can move up or down during a trading day depending on trading activity. Each day the price movement is limited to an amount predetermined by the Exchange. For canola, the maximum price move up or down is \$10 per tonne. Limit moves occur under very volatile markets. Under such conditions, the Exchange may expand the limit after a number of consecutive days of limit moves.

In any event, the broker will attempt to sell your contract at the price you have set. If the market does not reach the price you have indicated, it means there are no buyers willing to pay the price for which you want to sell on that day. When you sell a contract you are said to be short and when you buy a contract you are said to be long. You can trade in Job (20 tonne) or Board (100 tonne) Lots, or any combination of these.

When a buyer is found, the transaction is submitted, at the end of the trading day, to the Commodity Clearing House. The clearing house acts as an internal accounting system for the Exchange, matching sales with purchases, ensuring proper margins are maintained, and settling accounts.

The clearing house simplifies the trading transactions, because when you decide to buy back your contract, your broker does not have to find the original buyer of the contract. For example, you sell a November Board Lot contract in July. In October you deliver 100 tonnes of canola to the cash market. You now want to buy back your November contract. Your broker enters the trading floor offering to buy a November Board Lot contract. The person who originally bought your contract might not wish to sell it. Another person agrees to sell you 100 tonnes. After the trade is made, the clearing house acts as the intermediary, allowing the trade to be impersonal but financially secure.

In effect, you buy your contract from the clearing house, and the seller sells to the clearing house. The house does not have to match individual buyers to sellers, rather it matches short positions with long positions to ensure the positions balance. This facilitates trade because there is an independent third party, with no financial interest in the trade, verifying that there is in fact an equal number of long and short trades. The clearing house enables you to liquidate your position without requiring the original person with whom you traded to liquidate his position as well.

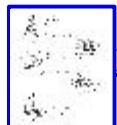


Figure 1. Mechanics of Trading in Futures

Margin Money

There are two types of margin: the initial margin and maintenance margin. The initial margin is an initial flat sum deposit. Maintenance margin is an amount which must remain in the account after all losses are deducted from the initial margin. The Board of Governors of the Commodity Exchange sets the minimum initial and maintenance margin level. Individual brokerage houses may require more than the minimum initial margin. If your account reaches the maintenance level, your broker will make a margin call requesting that you deposit more money in the account.

This is an important concept which you must understand before you enter into a hedge. During the time you hold your short position, if the market goes up you will be called to provide additional margin money. When the price moves upward, you then have a contract that has more value, and you are required to cover that increased value. A margin call can be quite substantial, depending on the size of your contract. You must be prepared to handle it out of your own funds or have a line of credit to cover

it.

Let's work through an example. Suppose the maintenance margin on a 100 tonne lot of canola is \$1000 (or \$10 per tonne) and the initial margin is \$1200 or \$12 per tonne. You would have to deposit \$1200 initially. You then sell a January futures for \$245 per tonne. If the price for a January futures increases, you are in a paper loss position until you buy back the contract, and you would be called to deposit more margin.

The following steps are involved:

- Deposit \$1200 with your broker.
- Sell a contract worth \$24,500.

Price increases \$5 per tonne. Total increase of \$500. You now have a contract which is worth \$500 more than it was when you sold it. You must cover that increase out of your margin deposit. Since your margin deposit will be drawn down from \$1200 to \$700, which is below the margin requirement, you will be requested to supply \$300 to bring your margin deposit up to the maintenance level of \$1,000.

In very volatile markets the price could move up the limit for several consecutive days, and you could face repeated margin calls. You must be able to meet these calls or you could find yourself forced to buy a contract back at an inopportune time. An inopportune time would mean a time when you weren't prepared to sell your cash canola. In order to protect the brokerage house, the broker is obligated to take you out of the market, by buying a contract, if you cannot meet your margin calls.

Margin calls could run into several thousands of dollars depending on the size of the contract you hold and the amount of price movement over the life of the contract. During busy times of the year you may find it difficult to be available when margin calls might come. You can set up a three way arrangement between yourself, the brokerage house and your bank. This arrangement would allow your broker to contact your bank directly when margin money is required, and draw on a line of credit. When establishing this arrangement, it is important that your banker understands the concept of margin calls and that you are hedging not speculating. Otherwise, if substantial draws are made on your line of credit, and your banker mistakenly views this as speculation and becomes concerned about security, you may be forced out of the market at an inopportune time.

Before you decide to hedge you must not only consider the cost of carrying your canola to some point in the future (interest and storage), but you must also consider the cost of interest on any money you may be required to deposit for margin calls. The futures price should be high enough to cover these costs.

Choosing the Hedge Month (Carrying Costs and Spreads)

Part of the decision-making process in hedging is choosing the month you wish to sell. The first thing to consider is your anticipated delivery period for your cash canola. You would not hedge in the same month that you intend to deliver. For example, if you were going to sell canola in November, you would not sell a November futures. Such a close hedge would not allow you enough leeway, if for some reason you find you can't close out your futures position (buy your contract back). However, if you are delivering late in the crop year, you would not want to hedge in a new crop month. Available months for canola contracts are August, September, November, January, March and June. Your broker's advice would be useful in selecting a hedge month.

You also need to consider the spreads between the contract months. As a seller you want to sell a month which is relatively overpriced to the other months. In a perfect market the prices of futures months differ by the cost of holding canola (interest and storage) from the nearby month to the future months. However perfect markets rarely occur. A restriction or oversupply could cause one month to be overpriced relative to another by more than the carrying cost, or an inverse market could occur if there is lack of supply in the nearby months. (Buyers bid up the price in order to encourage sales in the short term rather than in the future.)

In a situation of inverse markets it is advisable that you seek professional advice from those experienced in the futures market. Experienced traders should be aware of situations in the cash market which are affecting the futures market causing the inversion. They can therefore provide you with some opinions as to the overall strength and duration of the higher price levels, and the advisability of selling all or a portion of your crop.

Once you decide on which futures month to sell, you are not locked into that month if you find you cannot sell your cash grain prior to the delivery month. You can roll your contract over into the next futures month. You would buy back your futures contract for the nearby month and sell a contract for some future month. You should roll your contract over as soon as you know you will not be delivering before the contract month you hold. If you are intending to rollover into another futures month discuss your plan with your broker so that he can watch the market for the most advantageous spread at which to buy back your contract .

The most important factor in determining the spread between months is the quantities for sale. If there is excessive supplies available, prices will tend to be depressed in the nearby months in order to provide buyers and sellers with incentive to store surplus quantities. If supplies are limited, there is less downward pressure on the nearby months and the market will not be forced to full carry. Full carry means that successive futures months differ in price by the full amount of interest and storage charges that it takes to hold canola from one month to the next.

Any factor which affects the flow of canola to the market will affect the spread between months:

- **price:** lower prices restrict the flow because farmers become reluctant sellers, and consequently narrow the spread between the nearby months;
- **transportation:** if transportation is restricted, delivery to Vancouver is restricted and the spread narrows in the nearby months;
- **quota:** if quota restricts supplies an artificial shortage is created, narrowing the spread;
- **interest rates:** higher rates increase the cost of carrying canola from month to month, widening the spread;
- **price levels:** higher canola prices increase the cost of carrying (interest charges, etc.), widening the spread.

Delivering Against a Futures Contract

In addition to the more widely used delivery options discussed later in the chapter, you have the option of delivering your canola against your futures contract. The fact that you have sold a futures contract indicates that someone in the market wants your canola, and is willing to accept delivery of it for the agreed price.

The number of actual deliveries against futures contracts, as a percentage of total business done on the

Exchange is small. The logistics of arranging transportation and/or storage space to coincide with the delivery month is often more complex than the average farmer is willing to undertake.

Although the cash and futures price should come together at the point of delivery during the delivery month, sometimes aberrations do occur, for reasons mentioned previously, which can make delivery on the futures contract more profitable. If the spread between cash and futures is wider than what it would cost you to get your canola into position, you would want to consider delivering on your contract. You need to be aware of cash to futures spreads at delivery position relative to the time you are considering for delivery. You must remember the carrying charges involved when determining whether to deliver on a contract or sell at the local elevator and buy back the contract. If you deliver against a January contract, you would not receive payment until sometime in January. If you were able to deliver to the cash market immediately in November you would receive your money immediately. In your calculation of which delivery route would be most profitable, include the interest and storage costs associated with carrying the canola the extra two months.

If you do decide to deliver, you can truck your canola to one of the six inland terminals (Edmonton, Calgary, Lethbridge, Moose Jaw, Saskatoon or Winnipeg) or, after August 1, 1995, some 60 alternate delivery points. When delivering, your canola must be in store and the warehouse receipts available in order to allow eight clear business days prior to the last day of the delivery month. You must pay transportation and elevation costs of moving your canola from the inland terminal to in-store the Vancouver terminal. For delivery, you must book space in advance of delivery. You should give your broker at least three to four weeks notice of your intention to deliver, and even then there may not be space available at the terminal.

Once you have decided to make delivery, and you have confirmed transportation and/or storage, you must notify your futures broker who in turn notifies the Winnipeg Commodity Clearing Ltd. Your broker sends a delivery notice to Winnipeg Commodity Clearing Ltd. It assigns the delivery notice to the buyer who has held the futures contract the longest and notifies him of your intention to deliver. The buyer takes delivery of the product and provides payment to your broker who in turn puts the money in your account.

MANITOBA

Binscarth	N.M. Paterson
Boissevain	N.M. Paterson
Crystal City	N.M. Paterson
Dauphin	MPE
Deloraine	MPE
Dundonald	UGG
Elm Creek	Cargill
Fairfax	N.M. Paterson
Fanneystelle	UGG
Glossop	Pioneer
Harte	MPE
Holland	N.M. Paterson
Norman	UGG
Rosser	MPE
Winkler	MPE
Winnipeg	AGPRO / P&H

ALBERTA

Barrhead	UGG
Calgary	Cargill
Edmonton	Cargill
Elk Island	Pioneer
Gaudin	UGG
Hines Creek	UGG
Lethbridge	Cargill
Medicine Hat	P&H
Morinville	UGG
Olds	Pioneer
Vegreville	UGG
Westlock	UGG

SASKATCHEWAN

Birch Hills	UGG
Canora	Cargill/SWP
Carrot River	SWP/Pioneer
Davidson	SWP
Dixon	UGG
Estevan	SWP
Eyebrow	SWP
Foam Lake	SWP
Grenfell	N.M. Paterson
Hodgeville	SWP
Humbolt	SWP
Indian Head	N.M. Paterson
Ituna	SWP
Kamsack	SWP
Kipling	SWP
Langenburg	UGG/SWP
Lloydminster	SWP
Luseland	SWP
Meadow Lake	SWP
Melfort	SWP/UGG
Melville	UGG
Moose Jaw	AGPRO
Rosetown	Cargill
Saskatoon	AGPRO/P&H
Saskatoon North	SWP
Unity	SWP
Wadena	SWP/Pioneer
Waldron	SWP
Weyburn	SWP
White Star	SWP

BRITISH COLUMBIA

Fort St. John Cargill

ONTARIO

Thunder Bay Cargill

Points to Remember when considering Your options on the Futures Market:

- Understand the difference between hedging and speculation.
- Remember you can face margin calls and you must be able to cover these calls.
- When weighing one option over another, calculate the cost of interest associated with either margin calls or carrying your canola into the future.

- Know your cost of production, otherwise you cannot establish a price at which to hedge.
 - Establish a good relationship with your banker, so that he understands your intent when you hedge.
 - Talk to a number of brokerage houses before selecting a broker. You must be able to communicate fully and honestly with your broker.
 - Only you can decide when and in what amount to hedge your crop.
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