

# Grain Merchandiser Series

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## Offering Farmers Cash Contracts

Gives an overview of how an elevator can increase its effectiveness and competitiveness in offering farmers cash contracts. EM11-8

2

## Improving Margins Using Basis

Looks at some of the trading techniques discussed in *Offering Farmers Cash Contracts* in more depth—emphasizing basis trading and advanced trading techniques to increase margins. EM15-1

## Partners for Success

This 11-minute videotape features grain merchandisers who offer a variety of cash contracts to producers and explains how they use the futures markets to offset their price risks. VHS format only. EM15-1



# Offering Farmers Cash Contracts

**I**t's no secret. In today's competitive business environment you have to work harder just to keep your current customers, not to mention, attracting new ones. The story is no different for grain merchandisers. Margins are tighter, competition is tougher, and you're working with farmers who want the best price and service. If you're a grain merchandiser feeling the competition, then this booklet is for you. *Offering Farmers Cash Contracts* describes a variety of cash grain contracts offered to farmers along with the advantages and disadvantages they provide both merchandisers and farmers. You'll notice, in some instances, the only advantage a strategy may offer is getting a farmer's commitment to sell you grain. While this may not seem like enough to tip the scales and begin offering a particular contract, if you want to increase your grain turnover . . . this may be the only advantage a strategy needs. Keep in mind, the actual specifics of a contract vary from one merchandiser to the next, and the information provided gives you a general idea of the type of contracts available and how merchandisers offset their risks.

The second book in the series, *Improving Margins Using Basis*, covers different trading strategies using Chicago Board of Trade contracts—to enhance your bottom line. If you'd like a copy of *Improving Margins Using Basis* or any other Chicago Board of Trade publication, call **800-THE-CBOT**.

# Forward Contracts

Forward contracts allow farmers to lock in a flat price for grain they plan to deliver some time in the future, e.g., they sell grain today and deliver it next month. Once you buy grain from a farmer using a forward contract, you should either resell the grain immediately in the cash market or hedge it by selling futures to protect yourself from changing prices.



“We would not be able to buy the quantities of grain that we do—not for the nearby, not for the forward positions that go out many months and even years out forward—if we didn’t have the protection of the futures market.”

Jay O’Neil  
grain merchandiser

If futures are used, generally the contract month corresponding to the farmer’s anticipated delivery date is used. The Chicago Board of Trade offers futures contract months covering three crop years so there’s usually an appropriate delivery month available for distant deliveries. However, if the grain purchased does not have a corresponding futures contract trading, the grain is typically hedged in the next futures contract month nearest to physical delivery. As new months become available, the hedge is rolled forward. The short hedge is lifted once the cash grain is sold.

Providing forward prices to farmers helps them make informed decisions on whether to store or sell grain. They can then use this information in developing effective marketing plans. The advantages and disadvantages of using forward contracts from the standpoint of a merchandiser and farmer follow:

Merchandiser	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Has farmer’s commitment to sell grain</li> <li>• Basis could strengthen before grain is resold</li> <li>• Capitalize on any improvement in futures spread if hedge is rolled</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility of farmer defaulting</li> <li>• Basis could weaken before grain is resold</li> <li>• Futures spread could deteriorate leading to a loss if hedge is rolled</li> <li>• Uncertain finance cost due to the possibility of margin calls</li> </ul>
Farmer	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Eliminates the risk of falling prices</li> <li>• Negotiable contract terms</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot benefit from improvement in basis or price</li> <li>• Must deliver grain or face possibility of penalty charges</li> </ul>

## Offering Forward Bids

Merchandisers use a combination of factors to determine the forward prices they offer to farmers, including:

- the current resale price for the grain
- basis history
- today's supply and demand fundamentals, and
- the current futures prices.

The first place to begin when constructing forward bids is at the terminal elevator, processor, exporter, or other firm to which you normally resell grain. By taking their forward bids and subtracting your freight, elevation, and margin, you can “back off” a forward price to offer your farmer clients.

You also can get an edge over other area elevators by offering a better forward price. This can be done by using basic merchandising techniques. Let's say you anticipate the basis improving before you actually resell the grain. Or you expect to sell large quantities of grain to a processor and he's willing to “push the bid,” paying a cent or two premium for a large volume sale. You can factor these added pennies into your forward bid depending on your confidence level and relationship with your buyer. Historical basis information for the seasonal time period in question and a good understanding of current fundamentals will help you in making your decision.

Forward bids are likely to go as far out as a year or more, ending with new-crop bids for one or several years. For example, it's January 2000 and you want to post corn bids for each month throughout 2000 as well as for new-crop '01 and '02 corn. One way to arrive at new-crop bids is by backing off the price as described earlier.

Another method to arrive at new-crop bids is using the futures market. This is especially valuable if your current grain buyer is not offering deferred bids such as a '02 new-crop corn bid. All you do in that case is determine a conservative yet reasonable basis for that time period, then subtract that number from the '02 new-crop futures price.

The Chicago Board of Trade lists key crop-year months three years into the future. For example, in January 2000, the CBOT listed corn contracts would be:

CROP YEAR 1	CROP YEAR 2	CROP YEAR 3
Mar '00	Jan '01	Jul '02
May '00	Mar '01	Dec '02
Jul '00	May '01	
Sep '00	Jul '01	
Nov '00	Dec '01	
Dec '00		

Listing three crop years out provides you with important long-term hedging vehicles. Additionally, price discovery that far forward gives you valuable market information to help you in making long-range management decisions.

#### Firm Offers

Another marketing alternative elevators can provide farmers is a firm offer arrangement—allowing farmers to sell grain to the elevator at an agreed upon “target” price. If the market reaches the targeted price, the two parties can enter into a forward contract locking in the agreed upon targeted price.

Firm offer arrangements are attractive to farmers as they automatically receive the price they want for their crop if it becomes available without having to watch the market. From the merchandiser’s perspective, firm offers are fairly easy to manage but you need to be aware there is the possibility a farmer may back away from the arrangement and not enter into a forward contract even if the target price is hit. In this case, you could end up with an unwanted short futures position.

Generally, firm offer contracts are used as a pre-harvest strategy but could also be used for grain in storage.

Here’s how it works. Once you enter into a firm offer arrangement with a farmer, you would place an open order to sell a futures contract(s) at the target price plus or minus your basis. If the futures market reaches the futures order price, the position is executed and the farmer’s crop is priced at the desired level.

For example, suppose you enter a firm offer arrangement in the spring with a farmer whose goal is to sell new-crop corn at \$2.60 per bushel. Currently, your new-crop buy basis is 30 under. You place an open futures order to sell December futures at \$2.90 per bushel:

Target price	\$ 2.60
New-crop basis	<u>.30</u> under
Open order to sell new crop futures	\$ 2.90

If December corn futures reach \$2.90, the farmer’s new-crop corn is priced at \$2.60, and you will have bought corn at 30 under December.

If your new-crop basis changes, you may need to adjust the open futures order. Referring to the previous example, if your new-crop basis changes to -35, you would have to change the futures order to sell new-crop December corn futures at \$2.95 so you can buy the farmer’s grain at the target price of \$2.60. Otherwise, you will end up paying a higher basis for the corn than you should.

# Basis Contracts

## Know Your Risk

Elevators allowing farmers to price cash contracts that require the elevator to simultaneously take a futures position are at risk if they offer cash contracts when the futures market is closed. Prices could move against the elevator before it puts on or takes off a hedge. To avoid this situation, some elevators stipulate that they will only offer these cash contracts when the futures market is open. Others wanting to attract more customers may allow farmers to open or close a contract after futures market hours, but factor the potential risk into the cash contract.

A basis contract allows a farmer to lock in a basis but leaves the futures price open. The negotiated contract can be for spot or deferred delivery but establishes a day by which the grain must be delivered and priced.

Once delivered, the title passes to the elevator, which can resell the grain immediately, whether or not the farmer has priced the contract. Even if the farmer has not priced the grain, most merchandisers, if asked, will pay an advance on the grain after it is delivered. The amount varies, but 80 percent of current value is common practice. Typically, elevators don't charge storage fees or interest on the advance.

Producers tend to be attracted to basis contracts because there's no storage fee or interest to pay, plus they can take advantage of higher prices—if prices rise. However, what's important for farmers to remember is that, while they've locked in basis, they're still open to price risk. If futures prices fall before the contract is priced out, they could get hurt. The advantages and disadvantages of using basis contracts follow:

Merchandiser	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Has farmer's commitment to sell grain</li> <li>• May resell grain prior to farmer pricing contract</li> <li>• Basis could strengthen before grain is resold</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility of farmer defaulting</li> <li>• Advance paid to farmer</li> <li>• If futures prices fall below the 80 percent paid advance, it could be difficult to recover loss from farmer</li> <li>• Basis could weaken before grain is resold</li> <li>• Incurs storage expenses and interest costs on advance if grain is not resold immediately upon delivery</li> </ul>

## Farmer

### ADVANTAGES

- Can take advantage of a price increase
- Protected against a weakening basis
- Doesn't have to pay storage or worry about storage-related problems
- Advance payment aids cash flow

### DISADVANTAGES

- Selling price could deteriorate if futures fall before grain is priced
- Can't benefit from basis improvement
- Must deliver grain or face possibility of penalty charges
- Quantities delivered may be restricted to the size of futures contracts
- Title transfer at delivery; could lose money if elevator goes bankrupt
- Reduced market flexibility if elevator only offers the contract or pricing during futures market hours

## Writing Basis Contracts

You can provide basis bids to farmers in a similar manner as forward bids, but, instead of offering a price, you offer basis. When the farmer wishes to price the contract, you would sell a futures contract. Once the sell order is filled, the farmer receives the corresponding futures price plus or minus the basis. For example, a farmer enters a basis contract in the spring to sell 5,000 bushels of wheat for harvest delivery at 20 under (-20) July futures. Shortly after the wheat is delivered, wheat futures are at \$3.02 per bushel. The farmer elects to price the basis contract, resulting in a cash price of \$2.82 per bushel ( $\$3.02 \text{ futures} - \$0.20 \text{ basis}$ ).



"The biggest reason we use the Chicago Board of Trade is just to give us more flexibility and also to protect our downside risk when we buy grain. We don't want to sit here and buy a couple thousand bushels of corn and see the thing go down a dime in one day."

Dave Nowlin  
grain merchandiser

Prior to the farmer pricing out the contract, there's no need to hedge your purchase. But if you sell the farmer's grain before he prices it and a cash price is established on the sale side, you need protection against rising prices. To hedge yourself, you can purchase futures. Then, at a later date, when the farmer prices the basis contract, you would make an offsetting futures sale.

Suppose you offered a farmer a basis contract of 20 under (-20) July wheat futures to be delivered and priced by June 15. The farmer delivers 5,000 bushels of wheat on June 2 but waits to price his wheat expecting prices to rise above the current futures level of \$3.

Even though the farmer hasn't priced the grain, you turn around and sell the wheat through a basis contract to a local miller at 6 under (-6) July. You and the miller agree to price out the basis contract at the current July futures price of \$3—giving a cash price of \$2.94 ( $\$3.00 \text{ futures} - \$0.06 \text{ basis}$ ). Now that you've established a cash sale price of \$2.94, you are at risk of prices rising since the farmer's contract is still open.

**Jun 2**

Sells cash wheat \$2.94  
Buys Jul futures \$3.00  
Sells basis -.06

**Jun 11**

Cash wheat priced by farmer \$3.17  
Sells Jul futures \$3.37  
Buys basis -.20

NET RESULT	
Purchased cash wheat Jun 11	\$3.17
Elevator's futures gain (\$3.37 sold futures - \$3.00 bought futures)	-.37
Elevator's net purchase price	\$2.80
Sold cash wheat Jun 2	\$2.94
Net gain	\$ .14

To protect yourself in case futures prices rise and preserve a 14-cent margin—the difference between the -20 buy basis and -6 sell basis—you purchase July wheat futures at the current price of \$3. Regardless of where prices move before the farmer prices out the basis contract, you'll be able to lock in a buy basis of 20 under and preserve the 14-cent margin.

By June 11, futures prices have risen and the farmer decides to price out his basis contract. You offset your long futures position by selling July futures at the current price of \$3.37, and the basis contract is priced out at \$3.17 (\$3.37 futures - \$.20 basis). As shown to the left, you were protected against the price rise and preserved a 14-cent margin on the basis contract.

**Farmer Elects to Roll the Basis Contract**

The farmer also has the opportunity to roll the basis contract. Say, instead of futures prices rising, as the farmer expected, they took a fall and were at \$2.90 by June 11. Yet, he feels prices will eventually rise. In this situation, the farmer elects to roll his basis contract to September futures. The July/Sep spread at the time is at a 6-cent carry, i.e., September futures are 6 cents higher than July futures. Since you have already sold the grain and are long July futures, you must move your hedge to the September contract by selling July and buying September. Only after the futures order is filled, can your elevator confirm a new basis contract.

**Jun 2**

Buys Jul wheat futures

**Jun 11**

Sells Jul wheat futures \$2.90  
Buys Sep wheat futures \$2.96

NET RESULT		
Elevator contracts farmer's cash wheat	\$-.20	Jul futures
Hedge rolled in a carry market Jun 11	-.06	
Transaction costs	-.01	
Farmer's new basis contract	\$-.27	Sep futures

Assuming the order is filled at a 6-cent carry, you would subtract the 6-cent carry and 1-cent transaction costs from the farmer's original basis of -20. This gives the farmer a new basis contract of -27 September. Because you were long futures, a carry spread is subtracted from the farmer's initial basis. If the market inverted, the spread would be added to the basis, thus improving the farmer's basis.

Offering farmers the flexibility to roll a basis contract provides them with additional marketing opportunities. At the same time, you preserved a 14-cent margin by using the futures market. Bottom line: If prices rose, you were protected since you were long futures.

# Basic Hedge-to-Arrive (HTA) Contracts

Hedge-to-arrive contracts permit the farmer to set a futures price level, but the basis is left open. Actually, a hedge-to-arrive contract is the opposite of a basis contract in which the basis is set and the futures price is left open (usually no later than the delivery date).

Farmers who enter hedge-to-arrive contracts typically like the current price level but believe the basis will strengthen. However, farmers using HTAa should be prepared to assume the financial risk that the basis could weaken.

The HTA contract transfers the futures price risk and opportunity from the farmer to the elevator on the contract date. Typically, the elevator hedges its price risk by selling futures to lock in the price level for the grain the farmer agrees to sell to the elevator.

The advantages and disadvantages of using hedge-to-arrive contracts for the merchandiser and the farmer follow:

Merchandiser	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Has farmer's commitment to sell grain</li> <li>• Can charge a service fee</li> </ul>	<ul style="list-style-type: none"> <li>• Farmer could default</li> <li>• Requires active management and monitoring</li> <li>• Requires an understanding of basis patterns and factors affecting basis</li> </ul>
Farmer	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Protected against falling futures price levels</li> <li>• Basis could strengthen</li> </ul>	<ul style="list-style-type: none"> <li>• Can't benefit from higher futures prices</li> <li>• Basis could weaken</li> <li>• Must deliver grain or face possible penalty charges</li> <li>• Could be charged a service fee</li> </ul>

### Writing a Hedge to Arrive

Assume on June 1, a farmer agrees to sell 5,000 bushels of soybeans for delivery by October 15 through a hedge-to-arrive contract with you. At the time, November soybean futures are at \$6 and the current basis of -40 deliver October is weak. You then place an order to sell November futures at \$6. Once the order is filled, you confirm the HTA contract. According to the terms of the contract, the basis level must be set by the farmer no later than the delivery date of October 15. On September 1, the basis had strengthened to -30 and the farmer decides to set the basis resulting in a cash sale price of \$5.70 per bushel (\$6 HTA price - \$.30 basis).

On the other hand, if the basis had never strengthened to the farmer's goal by the delivery day of October 15, the contract would be priced at the posted basis as of October 15. Say, the posted buy basis on October 15 was -45. In this situation the farmer would receive \$5.55 per bushel for his soybeans (\$6 HTA price - \$.45 basis).

# Delayed Price/No Price Established

## Exchanging Cash for Futures (EFPs)

Exchange for physicals (EFPs) is a common pricing method used among grain merchandisers who want to exchange a futures position for a cash position. More commonly known as “versus cash” or “futures exchange,” this is the only type of futures transaction allowed to take place outside the trading pit. Consequently, hedgers do not have to enter the futures pit to price a cash trade, eliminating the time lag between the cash transaction and the futures order. This single detail is so important to many cash commodity dealers that they will only trade cash against an exchange for futures.

EFPs take place between brokerage houses for customers holding corresponding physical transactions. Each party to the trade gives his or her broker the name of the other party's clearing firm. The trade is then made directly between the two clearing firms, bypassing the futures pit. However, all EFP transactions are reported in open interest and volume reports.

There are several ways an EFP can affect one's position. Depending on the hedgers' existing market positions when the transaction is initiated: (1) an EFP may liquidate both traders' futures positions (reducing open interest), (2) transfer a futures position from one trader to another (leaving open interest unchanged), or (3) create futures positions for both traders (increasing open interest).

For instance, suppose a grain exporter commits to a forward sale and

Delayed price (DP) contracts allow farmers to deliver their grain to the elevator but price and basis are left open until a later date. These contracts may or may not specify when the grain must be priced, although a pricing deadline is set more often than not. At delivery, title of the grain is transferred to the elevator. Delayed price contracts are usually offered at harvest and are generally used by farmers who do not have any or enough on-farm storage.

Typically, elevators will charge farmers a fee when offering delayed price contracts. In addition, some elevators will pay an advance on the grain if asked. In this case, farmers are usually charged interest on the advance.

One of the primary benefits of offering DP contracts is it encourages farmer movement of grain into an elevator even when the basis is weak and allows the elevator to continue to buy grain even if storage is full. This way a merchandiser can increase the volume of grain he turns over. Although DP contracts are very popular among farmers, they offer no protection against falling prices or a weakening basis. The advantages and disadvantages of using delayed price contracts for merchandisers and farmers follow:

Merchandiser	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Elevator can continue to purchase and ship grain even if storage is full</li> <li>• Has farmer's commitment to sell grain</li> <li>• Grain can be resold prior to farmer pricing contract, giving elevator additional capital until DP is priced</li> <li>• Charge a fee (in-charge)</li> </ul>	<ul style="list-style-type: none"> <li>• May lead to a basis loss because grain is generally sold immediately; basis loss could result from selling at a weaker harvest basis and buying grain at a stronger basis when farmer later prices DP contract</li> <li>• If DP charge is too cheap, may be forced to liquidate (for space) at a loss</li> </ul>
Farmer	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• No storage-related problems</li> <li>• Can wait to price the contract until prices and/or basis improve</li> <li>• Elevator may offer an advance payment</li> </ul>	<ul style="list-style-type: none"> <li>• Charged a fee (in-charge)</li> <li>• No protection if prices fall</li> <li>• No protection if basis weakens</li> <li>• Title passes to elevator at delivery; could lose money if elevator faces bankruptcy—but if farmer paid an advance, bankruptcy problem is somewhat alleviated</li> </ul>

Exchanging Cash for Futures (cont.)  
 simultaneously hedges with a futures purchase. The exporter makes a cash bid to an elevator operator expressed in basis. The elevator operator also has hedged (with a short futures position to protect against a possible decline in the value of the stored grain). Both the exporter and the elevator operator agree to the basis.

The elevator operator (short hedger) delivers the actual cash grain to the exporter (long hedger) in exchange for a long futures position from the exporter. That long position offsets the elevator's initial short futures position, ending the elevator operator's hedge. The grain exporter, in turn, acquires the actual grain needed for shipment and "gives" futures to the elevator (having the same effect of selling futures), automatically offsetting his initial long futures position. The cash grain price contracted between the elevator operator and grain exporter is determined by the agreed-upon basis plus the agreed-upon price the futures contracts were exchanged at.

In this example, open interest was reduced as their futures positions offset each other.

The attractiveness of EFPs varies depending upon the particular circumstances of the hedgers involved. But, generally speaking, one of the primary benefits of using EFPs is that they allow market participants to preserve the basis relationship of their cash trades.

### Offering Delayed Price Contracts

You can offer a DP contract in many ways and it varies from year to year depending on grain production, market fundamentals, and competition. The key is to be competitive, offering a contract that attracts farmers' grain into your elevator while protecting yourself in case the basis strengthens between the time you sell the grain and the farmer prices out the contract. If you project a strengthening basis, which would result in a basis loss, you should take this into account in determining the fee you charge a farmer.

For example, you might offer a DP with the following stipulation:

- 10-cent-a-bushel charge covering storage until December 1 and one tenth of a cent per day thereafter, to be priced by June 30.

Although unusual, sometimes in years when grain is in short supply, you might offer the DP contract free of an initial charge until a certain date with a daily rate thereafter: Free storage until December 1 and one tenth of a cent per day thereafter, to be priced by June 30.

Once in the elevator's facilities, title passes from the farmer to the elevator and the merchandiser can sell the grain at any time, regardless of whether the farmer has priced the grain or not. If the grain is sold prior to farmer pricing, the sale must be considered a short cash position and the elevator should establish a long hedge using futures. Without the long hedge, the merchant is open to unlimited price risk. When the grain is priced by the farmer, the long hedge is offset with a futures sale.

For example, you buy 10,000 bushels of DP corn from a farmer on November 15.

Your DP program at the time calls for a 10-cent flat charge until December 1 and one tenth of a cent thereafter.

Shortly after the farmer delivers the grain you sell the corn to the local processor at -5 March. At a later date, you and the processor agree to price the grain with a

**Nov 15**  
 Buys cash corn/no price established

**Nov 20**  
 Sells cash corn to processor \$2.42  
 Received long Mar futures/versus cash \$2.47  
 Sells basis -.05

**Feb 8**  
 Farmer prices DP corn \$2.46  
 Sells Mar futures \$2.61  
 Buys basis -.15

#### NET RESULT

Elevator's purchase price <b>Feb 8</b>	\$2.46
Elevator's futures gain (\$2.61 sold futures - \$2.47 versus cash purchase)	-.14
Elevator's net purchase price	\$2.32
Elevator's sale price <b>Nov 20</b>	\$2.42
Net basis gain	\$ .10

“versus cash” futures exchange at \$2.47. With a -5 sell basis, the corn is priced at \$2.42 (\$2.47 versus cash - \$.05 basis). Up until you sell the farmer’s grain, there’s no need to hedge the sale. But once the grain is resold to the local processor, you are at risk since the farmer has not priced out the contract. The versus cash position provides you with the price protection you need.

On February 8, the farmer decides to price his DP sale. Futures are at \$2.61 and the elevator’s current basis -15. You place an order to sell March futures at \$2.61. Once the sell order is confirmed at \$2.61, the farmer receives \$2.46 (\$2.61 futures - \$.15 basis) for his DP corn less any storage charges accumulated.

In essence, the versus cash position provides you a long hedge for protection against rising prices until the farmer prices out his grain. See the transactions in the highlighted box on page 13.

Your elevator also earned DP charges and storage fees from December 1 until the corn was priced on February 8, plus the use of money on the grain sold November 20. Based on the DP program of 10-cent flat charge until December 1 and one tenth of a cent thereafter, your gross DP earnings equal 20.2 cents.

Nov 15 flat DP charge	\$ .10
Dec 1 - Feb 8 <sup>1</sup> / <sub>10</sub> cent/day (70 days x \$.001) =	<u>.07</u>
DP charges	.17
Interest earned [\$2.42 x (.06 rate/365 days) x 80 days]	<u>.032</u>
Gross DP earnings	\$ .202*

\* Note: Some of these earnings will be offset by storage expenses if the elevator stores grain versus selling it immediately.

# Minimum Price Contracts

A minimum price contract (MPC) allows farmers to establish a minimum price for their grain. At the same time, the contract specifies a delivery time and pricing formula using options, giving farmers the opportunity to increase their selling price if futures prices increase before the option expires.

Merchandise	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Has farmer's commitment to sell grain</li> <li>• Basis could strengthen before grain is resold</li> <li>• Futures spread could improve leading to a gain if hedge is rolled</li> <li>• Can charge a service fee</li> </ul>	<ul style="list-style-type: none"> <li>• Farmer could default</li> <li>• Basis could weaken before grain is resold</li> <li>• Futures spread could deteriorate leading to a loss if hedge is rolled</li> </ul>
Farmer	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimum selling price established</li> <li>• Can benefit from a futures price rally</li> <li>• Protected from falling prices and a weakening basis</li> </ul>	<ul style="list-style-type: none"> <li>• Must deliver grain or face penalty charges</li> <li>• Cost of an option</li> <li>• Service charges</li> <li>• Can't benefit from an improvement in basis</li> <li>• MPC may be limited to size of futures contract</li> <li>• Reduced market flexibility if elevator only offers the contract or pricing during futures market hours</li> </ul>

## Position Balancing

Each cash contract offered to a farmer requires a specific futures or cash transaction to hedge against changing price levels. In essence, the goal of every grain operation, whether it is for a grain elevator, a processor, an exporter, etc., is to hold a balanced market position, i.e., remain even (neither long or short)

## How to Write a Minimum Price Contract

There are different ways to write an MPC. One of the more common methods is that an elevator offers a minimum price based on a specific strike price level. In essence, you buy the farmer's grain; sell cash or sell futures to hedge your purchase; and buy a call, which provides the farmer upside market potential, passing the cost on to the farmer. This way, the farmer establishes a minimum price for his grain, but can take advantage of rising prices. Sometimes a service fee is charged.

Position Balancing (cont.)  
as much as possible so that price movement is not a concern.

To maintain a neutral position, the first step is determining your market exposure—long or short. This information can be found in the company’s position report, which lists all cash and futures positions such as grain bought, grain sold, grain on hand, grain to arrive, grain to be priced such as DP (delayed price) or basis, and futures contracts bought and sold. There is a separate position report for each grain the elevator handles.

If the report indicates you are net long, more grain owned than sold, then rising prices will benefit the company while falling prices will hurt. Conversely, if you are net short, more bushels sold than bought, your company will benefit from falling prices and be adversely affected by rising prices. Remember, though, grain on hand that is not priced does not create price risk. Only after a farmer prices the grain or you’ve made an advanced sale are you at risk.

Based on the report, you can balance your position when necessary by hedging with futures or making a cash contract. For instance, if you’re long 10,000 bushels of cash corn, then you would sell two Chicago Board of Trade corn futures contracts or sell 10,000 bushels of cash corn. The opposite is also true. Because the process of hedging involves the use of standardized contracts consisting of either 5,000 bushels at the Chicago Board of Trade or 1,000 bushels at the MidAmerica Commodity Exchange, it’s sometimes difficult for you to maintain exactly a zero balance, but you should try to be as even as possible. Keep in mind, the position report will be updated several times during the day since your cash and futures positions are also changing throughout the day.

To learn more about accurate position balancing, check with an accountant or a consultant experienced in the field of grain merchandising.

Suppose a farmer wants to protect the price of 10,000 bushels of new-crop corn but also wants to take advantage of a possible market rally. December corn futures are trading at \$2.34 and new-crop basis is -20 December futures.

The farmer sells the corn to your elevator for new-crop delivery at \$2.14 (\$2.34 futures - \$.20 basis). You then hedge\* the purchase by selling 10,000 bushels December corn futures at \$2.34, intending to offset the hedge with a futures purchase when the corn is resold.

On the option side of the contract, you and the farmer agree to a 2.40 December corn call\*\* for 13 cents per bushel. The cost of the call lowers the price the farmer initially receives from you to \$2 (\$2.14 cash - .13 option cost - .01 transaction fee). No matter what happens to prices, the lowest price he’ll receive is \$2. However, if December corn rises above \$2.40 before the option expires and the farmer offsets his option, he could receive the extra money.

	Dec corn falls to \$1.90	Dec corn rises to \$3.00
Dec futures	\$ 1.90	\$ 3.00
Minimum price contract	2.00	2.00
Intrinsic value of 2.40 call*	+ .00 (call has no intrinsic value if market falls to \$1.90)	+ .60 (\$3 futures - \$2.40 strike option gain is added)
Net price to farmer	\$ 2.00	\$ 2.60

\*\*In this example, we’re only accounting for intrinsic value. Under actual market conditions, however, any remaining time value will affect the option’s premium when it is offset.

Before entering into this type of contract, every farmer should evaluate his market expectations and how much he’s willing to pay for the opportunity to make additional money.

While this may be one of the more common ways to offer a minimum price contract, others are available. For example, you can “spot the board” using the current nearby futures price level rather than a specific strike price level. This method requires you to estimate an option premium since exchange options trade in standard increments. This is a little more complicated strategy than the previous one, causing some elevators not to offer MPCs this way. However, it is an attractive pricing method for farmers—providing them additional flexibility.

\*If corn is sold immediately using a cash contract, a futures hedge is not required.

\*\*Strike prices for corn options are listed in 10-cent intervals. For example, if Dec corn futures are trading at \$2.34, strikes are listed at \$2, \$2.10, \$2.20, \$2.30, \$2.40, \$2.50, \$2.60, etc. Note: Five business days before a standard corn option month becomes the spot month, a 5-cent strike price interval is added. Serial corn options only trade in 5-cent intervals

# Maximum Price Contracts

Maximum price contracts allow farmers to establish a maximum price for grain they'll need to purchase for feeding purposes. The contract specifies a delivery time and pricing formula using options, which gives farmers the opportunity to lower the buying price if futures prices fall before the option expires.

Merchandise	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Grain sold to farmer</li> <li>• Basis could weaken before grain purchased for farmer</li> <li>• Futures spread could improve leading to a gain if hedge is rolled</li> <li>• Can charge a service fee</li> </ul>	<ul style="list-style-type: none"> <li>• Basis could strengthen before grain purchased for farmer</li> <li>• Futures spread could deteriorate leading to a loss if hedge is rolled</li> </ul>
Farmer	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Maximum price established</li> <li>• Benefits from falling futures prices</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of option premium</li> <li>• Service charge</li> <li>• Can't benefit from any improvement in basis</li> <li>• Size of maxi contract may be limited to size of futures contract</li> <li>• Reduced market flexibility if elevator only offers the contract or pricing during futures market hours</li> </ul>

## Establishing a Maximum Price Contract

A maximum price contract can be set up in a similar manner to the minimum price contract except that you buy a put to allow a farmer who purchases grain to benefit from falling prices. You sell cash grain to the farmer, buy cash or buy futures to hedge the sale, and then buy a put, passing on the cost to the farmer. This way, the farmer establishes a maximum price for the grain he's purchasing, but can take advantage of falling prices. Sometimes a service fee is charged.

For example, a farmer wants to purchase 5,000 bushels of corn for July delivery. Your elevator agrees to sell July corn for a maximum price of +10 July corn futures, which are currently trading at \$2.12. You sell the farmer corn at \$2.22 (\$2.12 futures + .10 basis) and buy July corn futures to hedge\* the sale.

On the option side of the contract, you and the farmer agree to a 2.10 July put\*\* for 15 cents. By adding the cost of the corn plus the cost of the option, the farmer knows that the maximum price he'll pay for corn is \$2.38 (\$2.22 cash price + \$.15 option cost + .01 transaction fee). No matter what happens to prices, the highest price the farmer will pay for corn is \$2.38. And, if there's a drop in the market with prices moving below the \$2.10 strike, his purchase price will be reduced accordingly.

	July corn falls \$1.80	July corn rises \$2.40
July futures	\$1.80	\$2.40
Maximum price contract	2.38	2.38
Intrinsic value of 2.10 put*	-.30 (\$1.80 futures - \$2.10 strike option gain is subtracted)	+.00 (put has no intrinsic value if market rises to \$2.40)
Net cost to the farmer	\$2.08	\$2.38

\*In this example, we're only accounting for intrinsic value. Under actual market conditions, however, any remaining time value will affect the option's premium when it is offset.

While this may be one of the more common ways to offer a maximum price contract, others are available. For example, you can “spot the board” using the current nearby futures price level rather than a specific strike price level. This method requires you to estimate an option premium since exchange options trade in standard increments. This is a little more complicated strategy than the previous one, causing some elevators not to offer maximum price contracts this way. However, it is an attractive pricing method for farmers—providing them additional flexibility.

\*If corn is purchased immediately to fill the contract, a futures hedge is not required.

\*\*Strike prices for corn options are listed in 10-cent intervals. For example, if July corn futures are trading at \$2.12, strikes are listed at \$1.80, \$1.90, \$2, \$2.10, \$2.20, \$2.30, \$2.40, etc. Note: Five business days before a standard corn option month becomes the spot month, a 5-cent strike price interval is added. Serial corn options only trade in 5-cent intervals.

# Minimum/Maximum Price Contracts

A minimum/maximum (mini/maxi) price contract allows a farmer to establish a minimum price for his grain but limits the upside price potential. The contract includes the purchase of a call and the sale of a call. Since the farmer collects an income from the call sale, the cost of the hedge is reduced.

While this contract appeals to farmers wanting to lower their hedge costs, farmers who expect a limited market rally may also be attracted to mini/maxi contracts.

Say, for example, a farmer wants to establish a minimum price for his bean crop, but wants to take advantage of a possible market rally. Even though he anticipates higher prices, he doesn't believe bean prices will go more than 40 cents over current futures prices during the next two months. So, the short call option written into the contract is about 40 cents higher than today's futures prices.

Merchandiser	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Has a farmer's commitment to sell grain</li> <li>• Basis could strengthen before grain is resold</li> <li>• Futures spread could improve leading to a gain if hedge is rolled</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility of farmer defaulting</li> <li>• Basis could weaken before grain is resold</li> <li>• Futures spread could deteriorate leading to a loss if hedge is rolled</li> <li>• Uncertain finance cost due to the possibility of margin calls on short call</li> </ul>
Farmer	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Minimum price established</li> <li>• Can benefit from rising prices up to the strike price of short call</li> <li>• Cost of hedge reduced by call sale</li> </ul>	<ul style="list-style-type: none"> <li>• Must deliver grain or face possibility of penalty charges</li> <li>• Maximum price established through sale of call</li> <li>• Cost of long call option</li> <li>• Service charges possible</li> <li>• Reduced market flexibility if elevator only offers the contract or pricing during futures market hours</li> <li>• May be limited to futures contract size</li> </ul>

“Days of waiting for that farmer to come into your elevator and sell you grain are over with. He’s out there grasping; saying ‘help me. I need help to survive in farming.’ And, I guess from the elevator’s standpoint, we’ve got to help him. If we ever quit, I think you’d see the elevator die down.”

Steve Myers  
grain merchandiser



#### Steps to Follow

The mini/maxi can be set up by taking the following steps: You buy grain, sell cash or sell futures to hedge the purchase, buy a call with a lower strike price, and sell a call with a higher strike price. A service fee may be charged with a mini/maxi contract.

Let’s look at an example. Suppose your elevator is offering \$5.42 for beans delivered in the fall. November futures are trading at \$5.67 and the basis is 25 under November futures.

The farmer feels beans could go between 40 and 60 cents higher and wants to benefit if he is right. And, at the same time, the \$5.42 offer gives him an acceptable profit—considering his production costs—so he would like to establish a minimum price.

You buy the beans at \$5.42 from the farmer and sell November futures. Upside futures potential is established by buying a 5.75 call for 15 cents. The 15-cent cost of the call is reduced by selling a 6.25 call for 7 cents. The results are as follows:

- The cost of the hedge is reduced from 15 cents to 8 cents by the sale of the 6.25 call.\*
- The minimum price the farmer will receive for the beans is \$5.33 (\$5.42 cash - .08 hedge cost - \$.01 transaction cost).
- The lower call (5.75) allows the farmer to gain from a market rally above 5.75. The higher call (6.25) limits the amount by which the farmer may profit. The net effect is that the farmer may benefit from a rally of up to 50 cents. Any increase in price above that will not improve the price received for the beans.
- The maximum price the farmer will receive for the beans is \$5.83 (\$5.33 minimum price + .50 predetermined upside potential—the difference between the strike prices 6.25-5.75)

\*Beginning with the January 2001 standard soybean option contract, strike price intervals change to 20 cents.

	Nov soybeans fall \$5.25	Nov soybeans rise \$6.50
Nov futures	\$5.25	\$6.50
Minimum price	5.33	5.33
Long 5.75 call intrinsic value*	.00 (call has no intrinsic value if market falls to \$5.25)	+.75 (\$6.50 futures - \$5.75 strike option gain is added)
Short 6.25 call intrinsic value*	.00 (call has no intrinsic value if market falls to \$5.25)	-.25 (\$6.50 futures - \$6.25 strike option loss is subtracted)
Net result	\$5.33	\$5.83

\*In this example, we're only accounting for intrinsic value. Under actual market conditions, however, any remaining time value will affect the option's premium when it is offset.



## Your Next Step

If you're interested in learning more about the mechanics of trading—back-to-back trading, hedging, basis trading, spreading, rolling hedges, and so on—your next step is to read *Improving Margins Using Basis*. This second publication in the series spends more time on actual trading examples and rolling hedges. If you're new to these concepts, be sure to order a copy of *Improving Margins Using Basis*.

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