The Minimum Price Contract

Curriculum Guide

I. Goals and Objectives

A. Learn what a minimum price contract is, and how it is constructed.
B. Learn the advantages and disadvantages of minimum price contracts.
C. Learn how selecting different call strike prices will impact the price floor and upside potential of a minimum price contract.

II. Description/Highlights

A. Minimum price contracts are one of many pricing tools producers can use. Like any other marketing tool, the minimum price contract has its own distinctive set of advantages and disadvantages.

B. There are a number of ways that different combinations of futures, options and cash contracts can be used to establish minimum price arrangements. One of the most common is the one offered through the local elevator, which is usually a combination of a forward cash contract with the elevator, and the purchase of a call option.

C. To calculate his minimum price contract offer, the elevator manager will start with the relevant futures contract (possibly harvest time delivery) and adjust for the expected local basis. This gives him a forward contract price, from which he can then subtract the cost of the premium for the selected call option and any other costs such as commission charges or interest.. Remember that one of the advantages of this method is that there is no basis risk since you are using a forward contact. On the other hand, remember that having the forward contract means that you are tied to delivery.

D. If by harvest, the futures price has risen above the strike price, the call premium should be worth at least the difference between the them. In that case, the producer would receive his minimum price plus the value of the call option premium. By adding the gain from the call premium to the minimum contract price, the producer ends up with a net final price above his minimum price floor. Remember that the producer could sell his call option before harvest, if he felt that the market met his upside objective, or if he thought the price was about to decline. If the call option is sold before harvest, the profit from the option can be added to the minimum price, and the produce again has a flat price contract.

E. If by harvest, the futures price has declined below the strike price, the call premium should be worth close to $0.00. In this case, the producer would receive the minimum price, and the call option would expire worthless. As prices fell, in this case, the producer was protected from the price decline since he had a forward contract that assured him a minimum price.

F. At any point in time, there are always a number of different strike prices trading. The elevator may allow the producer to choose the call option he would prefer to use. In this way, the producer is able to have some control over the minimum price he will receive, as well as the amount of upside potential if the market rallies. Selecting a call option with a higher strike price, will reduce the premium paid and result a higher minimum price. However, if the market moves higher, the call option with lower strike price and higher premium would allow the producer to receive more of the market price increase.

III. Potential Speakers

A. Extension Economists
B. Local Elevator Managers

IV. Review Questions

1. Assume the new crop futures price is at $2.90/bu., and the elevator is willing to offer a forward contract at a basis of $0.10 cents under the new crop futures. The $290 call option is trading at $0.15/bu., and for a charge of $0.02 per bu., for commission in interest, the elevator will buy the call option for you, and change the forward price contract into a minimum price contract. Assuming a minus.10 basis, what would you or price floor be for this minimum price contract.

   A) $2.90 B.) $2.73 C.) $3.07 D.) $2.63
   Answer — D.) $2.63 ($2.80-0.15-.02=$2.63)

2. Using the above situation, what would your final price be if you delivered your grain at harvest, with futures was at $4.00/bu., and your call option worth $1.10/bu. What would be the final price you receive from your minimum price contract.

   A) $2.63 B.) $4.00 C.) $3.73 D.) $3.05
   Answer — C.) $3.73 ($2.63+$1.10=$3.73) or ($2.80+$1.10-$0.15-$0.02=$3.73)

3. Do you have delivery risk with this contract?

   A) yes B.) no
   Answer — A.) yes (You are still tied to delivery by the forward contract.)

V. For More Details

McDonald, Hugh J. “The Minimum Price Contract”. Producer Marketing Management - Fact Sheet #9, N.C.R. Extension Publication No. 217.

“Minimum Price Contracts - Another Marketing Tool”. Chicago Board of Trade, Chicago Il.

“Offering Farmers Cash Contracts”. Grain Merchandiser Series, Chicago Board of Trade, Chicago Il.

! Advantages

- ☞ Lock in a minimum price, and still have upside potential
- ☞ Provides some leverage in obtaining credit
- ☞ Establishes price floor and helps in production management decisions
- ☞ No need to deal directly in futures or options markets
- ☞ Limited risk, no margin calls

! Disadvantages

- ☞ Must pay premium and any transaction charges
- ☞ Delivery of grain to specific elevator required
- ☞ May lose option time value

Upside Potential

January

December corn futures	$2.72
Forward contract for October delivery	$2.82
December $2.70 call premium	$0.22
Commission and interest	-$0.02
Minimum/floor price	$2.58

Harvest / October

December futures	$4.00
December $2.70 call premium	$1.30
Cash price	$4.10

Final result

Minimum price	$2.58
December $2.70 call premium	+$1.30
Final price	$3.88

Downside Protection

January

December corn futures	$2.72
Forward contract for October delivery	$2.82
December $2.70 call premium	$0.22
Commission and interest	-$0.02
Minimum/floor price	$2.58

Harvest / October

December futures	$2.00
December $2.70 call premium	$0.00
Cash price	$2.10

Final result

Minimum price	$2.58
December $2.70 call premium	+$0.00
Final price	$2.58

Selecting Different Call Options

January

Futures price	.... $2.72		
Strike price	.... $2.70	$2.80	$2.90
Forward contract price	.... $2.82	$2.82	$2.82
Call premium	.........-$0.22	-$0.17	-$0.13
Commission and interest	.........-$0.02	-$0.02	-$0.02
Minimum/floor price	.... $2.58	$2.63	$2.67