

# Using Options to Hedge Farm and Ranch Inputs

# Advantages of Hedging Inputs with Call Options

- Protection from price increases
- Maintain ability to benefit from price declines
- When used with price protection on the output side, a profit margin can be locked in
- Figure 1. Ceiling With a Call Option

Strike Price

+ Call premium paid

+ Local basis (may be negative)

+ Brokerage fee/transaction costs

= Price Ceiling

# Illustration

- It is now August and CBT Corn future is trading at \$4.87 per bushel.
- Buys an at-the-money call option with a \$4.90 strike price.
- Premium is \$0.45 and the 3-year average basis is \$0.10
- Table 1. Sensitivity Table for the Call Option Hedge

Futures <u>Price</u>	Gain/Loss <u>on Call</u>	Net Price <u>Paid (1)</u>
\$4.60	(\$0.45)	\$4.95
\$4.70	(\$0.45)	\$5.05
\$4.80	(\$0.45)	\$5.15
\$4.90	(\$0.45)	\$5.25
\$5.00	(\$0.35)	\$5.25
\$5.10	(\$0.25)	\$5.25

(1) Includes -\$0.10 basis. Does not include brokerage fees or interest

# Window Strategy

- Can be used to reduce the premium cost
- A window is established by simultaneously buying a call option and selling a put option.
- Margin money required when writing options (selling the put)
- Can cause for a higher price floor
- Figure 2. Price Ceiling and Floor Price with a Window

## ***Price Ceiling***

Call Strike Price  
+ Call Option Premium  
- Put Option Premium  
+ Local Basis (may be negative)  
= Window Price Ceiling

## ***Floor Price***

Put Strike Price  
+ Call Option Premium  
- Put Option Premium  
+ Local Basis (may be negative)  
= Window Floor Price

# Window Strategy Illustration

- A producer feels the \$0.45 is too expensive
- Purchases a \$4.90 March call option for \$0.45
- Sells a \$4.70 March put for \$0.38
- Table 2. Window Strategy Ceiling and Floor Price

Price Ceiling	
Call Strike Price	\$4.90
Call Option Premium	+\$0.45
Put Option Premium	-\$0.38
Local Basis	<u>-\$0.10</u>
<i>Price Ceiling</i>	\$4.87

Floor Price	
Put Strike Price	\$4.70
Call Option Premium	+\$0.45
Put Option Premium	-\$0.38
Local Basis	<u>-\$0.10</u>
Floor Price	\$4.67

# Table 3. Estimated Results of Window Strategy for Farm/Ranch Inputs

Futures Price	Cash Price	Call Gain/Loss	Put Gain/Loss	Net Price (1)
\$4.50	\$4.40	(\$0.45)	\$0.18	\$4.67
\$4.60	\$4.50	(\$0.45)	\$0.28	\$4.67
\$4.70	\$4.60	(\$0.45)	\$0.38	\$4.67
\$4.80	\$4.70	(\$0.45)	\$0.38	\$4.77
\$4.90	\$4.80	(\$0.45)	\$0.38	\$4.87
\$5.00	\$4.90	(\$0.35)	\$0.38	\$4.87
\$5.10	\$5.00	(\$0.25)	\$0.38	\$4.87

(1) Includes -\$0.10 basis. Does not include brokerage fees or interest.