

# Agriculture and the 2008 Credit Crisis

## Price Risk Management in the Midst of a Credit Crisis

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Commodity producers and buyers often try to reduce the risk associated with price changes by participating in futures markets. Those who hedge with futures contracts or buy options on futures contracts participate in futures markets directly. Producers who lock in prices with cash forward contracts participate in futures markets indirectly. Elevators and merchants who offer such contracts usually transfer the price risk of contracts to end users or speculators by hedging in the futures market.

Because of the unprecedented volatility of many commodity markets during the past year, some cash forward contracting was suspended. Hedgers lacked the cash reserves or credit arrangements to maintain margin requirements as prices soared. Many farmers who wanted to lock in these historically high prices with their elevators or merchants were then left without an important marketing tool.

The present credit crisis in the U.S. and world economies may affect price risk management in the months ahead. Commodity prices,

while much lower than the highs of the past year, remain volatile. One likely outcome of the current economic climate will be tighter access to credit and increased interest rates. At the same time, rising input costs make it necessary for producers to secure more credit to continue their current levels of production.

Credit restrictions will make it more difficult for hedgers to finance and maintain margin calls. This would again severely limit the offering of cash forward contracts. If contracts are offered, they are likely to include a weaker basis (difference between the local cash price and the futures price) or have other fees or risk premiums attached. According to Matt Pierce of Futures International, "Until credit institutions can get their ducks in a row, they are not going to be able to extend credit for margin hedges or any kind of speculative hedges that want to come into our market" (McGinnis and Caldwell, 2008). Farmers could hedge their crops with futures contracts on their own, but there are two major drawbacks to doing so now. First, margin requirements are expensive and significant deposits will likely be required. This will strain budgets and divert capital resources from other uses. Second, while no one knows what future prices will be, the current market decline may be overdone. If economic conditions stabilize or improve, the

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current level of prices may be seen as relatively low over the course of the crop year. If and when the fund sector takes another large long position in agricultural futures, a large and unpredictable increase in prices could repeat the damage that cotton merchants experienced in March 2008. Hedgers were forced to liquidate futures positions on the price rally, only to face large losses in the subsequent price decline.

For producers who want to avoid margin calls and are concerned that they are pricing too soon or at prices that are too low, options on futures contracts offer a better alternative.

While futures contract hedges are best suited to times when prices are seen as choppy or moving in a sideways trend, options are best when:

- the market is characterized by major and sustained price trends, where significant margin calls can be involved; and
- there is a problem arranging for and maintaining and financing a margin account (Purcell, 1991).

But there are costs associated with trading options as well. Options will have much higher premiums in markets that are volatile than stable markets. In addition, options may be seen as an eroding investment, in that the time value of the premium will decline as the option approaches maturity.

As producers become more familiar with options-based marketing, they can use more sophisticated trading techniques to offset some of the drawbacks inherent with options. Hybrid trading strategies that buy or sell additional puts or calls in addition to the basic price protection provided by the purchase of a single option can lower the net amount paid for option premiums while still limiting exposure to margin calls. Such strategies are often referred to as windows or spreads. They are more complex than straightforward hedging strategies and often establish price ceilings as well as price floors. Other combinations of option strategies become profitable if prices move significantly either up or down, but not if prices remain stable (called straddles).

Options create a form of price insurance. The higher the price insured, the greater the premium. If prices increase,

the price insurance is not needed and the producer lets the option expire and sells at the higher price. If prices decline, the producer exercises his right to sell at the guaranteed price established by the option contract. Of course, the producer may also sell any option he has purchased prior to the expiration date. The profit or loss from this trade is the difference between the premium paid for the option and the premium received when it is sold, less commissions, interest, and any other fees.

Crop insurance products can also provide substantial security to farm income and are a vital part of overall risk management. Revenue protection products such as Crop Revenue Coverage (CRC) insure against a decline in market prices and against production losses. This policy guarantees a certain level of crop revenue based on price and yield. For revenue calculations, it uses the higher of an early-season price or the harvest price. An indemnity is paid when actual crop revenue falls below the insured level of crop revenue. The early-season price for hard red winter wheat in the Texas panhandle for the 2008/2009 crop is \$8.77 per bushel. Feed grain and cotton growers should be paying attention to the announcement of the CRC early-season price for row crops.

Agricultural producers today face volatile markets, tight credit, economic uncertainty and escalating input costs. Understanding and using risk management tools in this environment can reduce much of the price risk and may improve financial returns. At a time when the price guarantees of the farm bill are far below current prices and/or the costs of production for many crops, farmers can proactively weave together strategies that create an effective safety net suited to their particular situation.

## References

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- Purcell, Wayne D. *Agricultural Futures and Options*. New York: Macmillan Publishing Company, 1991.
- Additional publications on this topic are available at the Texas AgriLife Extension Bookstore (<http://agrilifebookstore.org>). Use the search term "risk management."

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