



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

# Agricultural Options-on- Futures: Tools That Can Reduce Your Risk

by Thomas Neal



Thomas Neal is president of TENCO Inc. and member, Board of Directors of the Chicago Board of Trade.

On the one hand you know that farming is a risky business. But, on the other hand, as a lender, you also know that minimizing risk is prudent business management. The trick then is minimizing *risk* in the *risky* business of farming. You can't control weather or crop prices, but you can protect an ag-related loan against adverse price movement by using agricultural options-on-futures.

While futures lock in a price, options can be used to set floor or ceiling prices to protect against adverse price moves. At the Chicago Board of Trade, both futures and options contracts are available for a broad range of agricultural products, including corn, wheat, soybeans, soybean meal, soybean oil and oats. Lenders, farmers, land owners, professional farm managers, processors, exporters, grain elevator operators and others can use these markets as one of their most effective risk management tools.

Options give the purchaser of a call (or put) the right, but not the obligation to buy (or sell) the underlying futures contract at a specified price. While both futures and options provide price insurance, options are more often the hedging tool of choice for farmers. That's because the purchaser's only cost during the option's life is the premium, regardless of which direction the market turns. Thus, it's possible to know the maximum dollar exposure at all times. The option seller shoulders the potential of unlimited risk.

## *Price Protection*

Probably the most effective way to illustrate how options can be used as price protection is by using actual prices over the course of a growing season. Let's take a corn producer in central Illinois who anticipates growing 130,000 bushels of corn (1,000 acres with a bushel per acre yield of 130). Harvest is usually completed around mid-October. His expected harvest basis, based upon his historical basis records, should be around 10 cents under the December corn futures price.

On May 7, 1990, December corn futures are trading at \$2.71 a bushel. The



producer's current cash forward bid for harvest delivery is 20 cents under the futures price, or \$2.51. The producer wants to hedge all of his production in light of the favorable prices. However, the wide basis in the forward contract is unattractive (minus 20 cents offered vs. minus 10 cents expected). He also wants to have flexibility should his production fall short. The forward contract contains no "act-of-God" clause and would force him to deliver 130,000 bushels, regardless of his production.

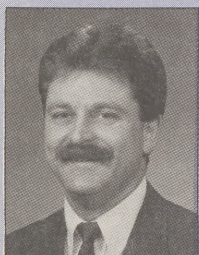
The producer decides to purchase December put options at the Chicago Board of Trade to cover his anticipated production. The maximum risk is the cost of the premium. Also, should the basis come in stronger at harvest as he expects,

a further gain will be realized when compared to the forward contract.

The producer purchases 26 December \$2.50 corn put contracts at a premium of  $7\frac{1}{2}$  cents per bushel to cover his expected production. (Each contract is for 5,000 bushels.) Assuming that basis at harvest is at the expected minus 10 cents, this results in a minimum price of  $2.32\frac{1}{2}$  (or 2.50 strike price minus the 10 cents expected basis and the  $7\frac{1}{2}$  cents premium). Keep in mind that should prices rise as the year progresses, the producer has the opportunity to participate. More importantly, the risk of falling prices, perhaps even falling below cost of production, is greatly reduced.

The rest of the growing season into harvest goes well. The market, pricing an above-average production season, moves lower into harvest. On October 17, 1990, December corn futures are trading at \$2.27 per bushel. Harvest basis at the producer's elevator was at minus 9 cents. That translates into a cash price of \$2.18 for the producer. The \$2.50 December puts which were purchased are now trading at 23 cents per bushel premium. If the producer had not hedged, his final price would have been \$2.18 per bushel for the 130,000 bushels.

To offset the hedge, the producer would sell 26 December \$2.50 put options for 23 cents per bushel. He subtracts the  $7\frac{1}{2}$  cents premium he paid to purchase them, resulting in a net gain of  $15\frac{1}{2}$  cents per bushel. When adding this gain to the final cash sale price of \$2.18 per bushel, the producer realizes a net sale price of  $2.33\frac{1}{2}$  per bushel. Note that the final sale price is a penny higher than the expected floor price of  $2.32\frac{1}{2}$ , due to a stronger than anticipated basis. See the accompanying chart on page 23.



While it's important to know the basics, sometimes "trial by fire" can be a good way to learn how to use options.

At least that's what Kent Hall believes. Hall is an agricultural lender with the First National Bank of Waverly in Waverly, Iowa.

"I certainly believe it is feasible for producers to use options to protect the bank's security interest and I encourage producers to use options," says Hall.

Hall encourages his clients to begin by educating themselves about the use of options. He urges producers to attend seminars and read the available literature. His bank even began a marketing club to teach the basics. But he also believes you can learn a lot by doing.

"To clients who have nailed down the basics of marketing, I have said 'Now just go do it, buy one options contract and see how it works' because oftentimes the best way to learn is by really getting your feet wet."

## Getting Started

Options can protect the bottom line, and that's good for both your client and yourself. But, how do you begin to use options? Those lenders who are involved with their clients who use options will tell you there are several ways (see sidebar).



One of the best ways to begin, however, is by educating yourself and your clients. Information is available from a number of sources, including the Chicago Board of Trade, which publishes pamphlets, guides and workbooks to teach producers how to market their crops through the use of options.

One way a lender can begin the educational process is through the organization of a marketing club for producers. A marketing club brings producers together as a group to learn the concepts and theories of agricultural marketing for use in their agribusiness operations. These clubs are unique in that they provide hands-on experience. They emphasize operational business decisions. Members act on the theories learned in class by applying them to real-life situations.

There are, in general, three types of clubs. These include Market Information Clubs, Paper Trading Clubs and Marketing Education Clubs. Market Information Clubs are the most informally structured of the three. Members meet periodically to review current market conditions, sponsor marketing seminars, and discuss marketing opportunities. A leader is responsible for organizing the meetings and lining up speakers.

Paper Trading Clubs are more formally structured. Members meet regularly to simulate trades in the futures and options markets. While no real money is used, club members "trade" just as they would if they used these markets as marketing alternatives in their farm operations. They

also sponsor educational programs and seminars to discuss marketing and its alternatives. A leader of the club is responsible for setting up guidelines for the group to paper trade, as well as assisting in program development. The club may choose to elect officers.

A third type of club, Marketing Education Clubs, may evolve from paper trading clubs. This club is generally more formal – bylaws and operating procedures are written and officers are elected. These clubs develop and implement a formal educational curriculum. Some Marketing Education Clubs have had members pool small amounts of money in order to actually trade in futures and options markets.

An agricultural lender can serve as the catalyst – the club organizer – for any of the three types of marketing clubs. The club organizer is responsible for organization of the first three to five meetings, the election of officers (if needed), locating a meeting place, and publicizing and running the first few meetings. He or she may also serve as an educational resource if they have a solid knowledge of marketing. If not, an alternate may be delegated to fill this roll.

It has been said that marketing is as important as agronomy in profitable crop production. And, what's important to producers, is important to the agricultural lender. Options can be a vital agricultural marketing tool, but like other business tools, it's important to use a disciplined and educated approach. ▲

### Using Options as Price Protection

| Using Options as Price Protection |                       |         |       |                 |       |
|-----------------------------------|-----------------------|---------|-------|-----------------|-------|
|                                   | Cash                  | Futures | Basis | \$2.50 Dec. Put |       |
| May 5                             | \$2.51                | \$2.71  | -.20  | Buy             | .07½  |
| Oct. 17                           | \$2.18                | \$2.27  | -.09  | Sell            | .23   |
| Net                               | -.33                  |         | +.11  |                 | +.15½ |
| <b>Hedging with Options:</b>      |                       |         |       |                 |       |
|                                   | Cash Price .....      |         |       | \$2.18          |       |
|                                   | Net Option Gain ..... |         |       | .15½            |       |
|                                   | Net Sale Price .....  |         |       | \$2.33½         |       |
| <b>No Hedge:</b>                  |                       |         |       |                 |       |
|                                   | Sale Price.....       |         |       | \$2.18          |       |



for secured creditors. EPA received more than 350 comments on the proposed rule which it said would provide "the certainty that lenders need, while simultaneously advancing environmental values."

The rule is an attempt to reverse the Fleet decision and to make clear that liability does not attach merely because investments are financed at facilities that happen to be contaminated or which contain hazardous substances. The draft rule has already been used by the EPA in a policy decision that positively assisted a Montana bank.

We expect the rule to be issued sometime in April. Many have analyzed the rule that was released last year for comment and believe that changes must be made in some areas to protect fiduciaries and lenders who assist those who own underground storage tanks. ABA will continue to call for legislative relief if the rule comes up short. ▲

To date, ABA has produced three manuals to help provide relief to bankers facing environmental pressure when making loan decisions:

- **Agricultural Lenders Guide to Environmental Liability** – addressing the special needs of ag lenders, with focus on pesticide use, biotechnology, etc.

- **Managing Environmental Risk: A Practical Guide for Bankers** – deals specifically with environmental problems with regard to commercial real estate loans; contains sample bank environmental policies.

- **A Guide to the Environmental Liability of Fiduciaries** – the most complete environmental guide for the trust professional in your bank.

---

For more information, or to order any of the products listed above, call ABA's Customer Service Center at 1-800-338-0626.

---

## DEVELOPMENT/continued from page 9

size fits all" approach has no home in this process, but partnerships with federal resources to help achieve these goals do.

In this partnership, State Councils are being supported with significant Federal resources to facilitate their work, particularly for maintaining an Executive Director to assure continuity. The non-Federal participants are providing a minimum of 25% of these resources.

This is not a grant program. It does not create the traditional pot of money, prescribing its uses, and causing rural areas to respond not because of the greatest need, but because of the resource availability. It does create a partnership. Those with the resources to address the needs and strategies of the states are involved in the strategic planning process and have come to agreement in addressing those needs.

The President has invited all of the Governors to participate in this process as we expand the effort into new states. Thirty-six responses were received expressing

a desire to form partnerships this year from the governors of states and territories. After reviewing the responses, the EPC Working Group recommended that, by the end of this year, partnerships be initiated in each. Secretary Madigan announced these new states in February and work has begun in several.

To complement the process of this new partnership, the President's Council on Rural America is completing its recommendations to the President to improve the coordination of Federal rural development resources. The Council recently met with the EPC Working Group and the leadership of the pilot State Rural Development Councils and anticipates completion of its recommendations to the President by July.

There is a new line of thinking in Washington regarding the approach to rural America's future, an approach that recognizes the value of partnership, collaboration, and the "bottom-up" process for problem solving. ▲