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Using Options to Follow a Rising Market

This is number five in a series of six NebGuides on Agricultural Options. It discusses how to use the options market effectively to protect us from our own emotions.

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An interesting aspect of marketing is psychological. Many people make a mental decision to market grain when a specific price is reached. However, when the market begins to trend upward and hits that imaginary price level, the farmer previously facing low prices is 1) optimistic for even higher prices, and 2) wants to obtain the highest possible price to offset losses incurred during low prices. What generally happens is 1) no action is taken when our mental price is reached, 2) producers ride the market up and 3) when the market breaks, producers are reluctant to sell in a downtrending market because of belief the market will rebound.

One key to successful marketing is to combine psychological make-up (beliefs and feelings) with the reality that a producer will never sell all the grain at the highest price "because we all know it's going higher." However, during a rising market we can or should sell most of our crop during the highest part of the market.

The question: is it possible to use the options market, at low cost, to follow a rising market and secure price protection when the market breaks downward? Put a different way, can we use the options market effectively to protect us from our own emotions?

When using an options contract, the producer should realize that although risk is being assumed it can be managed at little cost.

For example, let's use the soybean market because it represents a widely fluctuating market, and producers often have the attitude that when soybeans reach \$8.00 "we know it's going to \$10.00 and when it hits \$10.00, it's going to \$12.00." What usually happens is the market peaks and breaks fast, and we are left holding our soybeans.

Let's assume that we establish a \$7.00/bu price to meet production costs and allow a small profit. If the soybean market is around \$5.00, then \$7.00 would look quite attractive. To continue our scenario, the

market begins to rise and goes from \$5.00 to \$6.00. We could buy a put option to guarantee us the \$7.00 which is in-the-money by \$1.00. Because we would be buying an option with a strike price above the current market price, the premium value would be relatively expensive. Let's assume that the premium value is \$1.00. When we deduct \$1.00 from the strike price of \$7.00, the producer would net only \$6.00, or the current market price. Because the market is trending upwards, and because buying the \$7.00 option requires a hefty insurance price of \$1.00/bu which would not allow the \$7.00 price return originally established, the producer would continue to follow the market upward.

The market continues to rise and reaches the \$7.00 price level. An at-the-money put option would cost about 10 cents. Reviewing the other strike prices, we find that for a premium of \$.02/bu we could purchase an out-of-the-money put at the \$6.75 strike price level. The producer decides that for two cents, it is worth investing in an insurance policy to establish a price level of \$6.75 and bearing a \$.25 risk should the market drop. The market continues to rise to \$8.00 and we again review the premium schedule. Purchasing the \$9.00 put option, with an associated premium of \$1.00 would net less than \$8.00. Looking at the premium list we find we can insure a \$7.75 out-of-the-money put for three cents. If the market fell, we would net \$7.71, thus we purchase the \$7.75 (which is above the price level of \$7.00 we previously would accept). At this point, we have invested only five cents, two cents at \$6.75 and three cents at \$7.75 and are still in a position to follow the market up.

The market continues to rise to \$9.00 and by this time, "the whole world believes the market will reach \$10.00." We are still looking for cheap protection, and if we buy a \$10.00 in-the-money put, it will cost us more than a dollar per bushel. In relation to the net price and the capital expenditure, we determine the premium is too high. But, we can purchase an \$8.75 out-of-the-money put for another \$.03 per bushel. At this point we have invested a total of \$.08 to protect our soybeans at \$8.75 and we have three option contracts. Remember, one major difference between options and futures contracts is that once the premium is paid we are not obligated to do anything with those contracts unless we wish to. In this case, as long as the futures market is above the strike price or the options contract, the paper contract is worthless.

In the preceding example it was assumed that the producer produced 5,000 bushels of soybeans. In the example we purchased 3 - 5,000 bushels put contracts.

The reader should note a major difference between purchasing options and hedging (selling) futures exists here. If we had sold 15,000 (3-contracts) of soybean futures we would have been speculating on 10,000 bushels more than was raised. This exposes the producer to unlimited risk on 10,000 bushels. In the option market the maximum amount of risk exposure is the amount of the total premium paid.

To continue our scenario, the market rises to \$9.10 and then breaks to \$8.50. Now, we have a soybean contract at \$8.75 that is protecting our price above the current market price level. If we exercise the options contract, we acquire a futures contract and are hedged on the futures market at \$8.75. We could also offset the options contract because it (\$8.75) is in-the-money and has value in relation to the current market price. Either way, we have protected our beans at \$8.75. While the highest price of \$9.00 was not obtained, we will market our beans on the upper side of the market, and will have also spent very little for our insurance policy or our premiums (\$.08) as compared to having purchased in-the-money puts.

Since we protected our bean crop with three different option contracts, let's say we exercise the \$8.75 option contract and must decide how to use the remaining two contracts.

Although we have no obligation to do anything with our other two contracts, we must remember that we are now in a downtrending soybean market, and that beans can decline rather drastically. If the futures

price on soybeans falls below our strike prices of (\$7.75 and \$6.75) before the contract's expiration date, those contracts go from out-of-the-money puts to in-the-money puts and are worth money. In this situation, we could offset our options contract and make money in the change in value of premium. Therefore, do not discard those contracts, but follow the market to determine if a profitable relationship occurs between the strike prices, current futures price, and changing premium values.

Conclusion

This NebGuide portrays a marketing plan which allows the producer to establish market prices in an uptrending market, realizing that those prices will not be set at the exact market top, but will be established in the upper range of prices. This marketing plan allowed the farmer a cheap price insurance policy.

Although higher strike prices were available, the farmer chose to select out-of-the-money puts which had strike prices lower than the current market price. By doing so, the farmer established a relatively high price with a low capital expenditure for his price insurance. Contrasting this alternative was the opportunity to purchase in-the-money puts. These puts, although having a higher strike price also had an associated high premium expense. This expense, when weighed against the minimal expense of an out-of-the-money put, became unattractive to the farmer.

As prices continued upward, the farmer chose to purchase more out-of-the-money puts. When the market peaked and started to turn downwards, the farmer had already established his price levels on the upward side of the market. If the market drops below his established strike price on his options contract he will then be in a position to exercise them and establish a futures position. He may also have the opportunity to offset his put options as the premiums increase in value due to out-of-the-money puts becoming in-the-money puts as prices fall below his established strike prices.

AGRICULTURAL GRAIN OPTIONS

This series includes the following NebGuides which may be obtained at your local Cooperative Extension office.

- *G85-768, Basic Terminology for Understanding Grain Options*
- *G85-769, Options Contract Specifications on grain Futures Contracts*
- *G85-770, An Introduction to Grain Options on Futures Contracts*
- *G85-771, Evaluating Grain Options Versus Futures Contracts*
- *G85-772, Using Grain Options to Follow a Rising Market*
- *G85-773, How to Evaluate Grain Pricing Opportunities*

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