

Factors Affecting Option Premium Values

Put Options

- A put option allows producers to establish a price floor or minimum selling price. With a put, the producer can benefit from a price rally in the futures contract.
- The buyer of a put option pays an option premium but does not have to establish a margin account.
- For this premium, the put option buyer has the right, but not the obligation, to sell a futures contract at a predetermined price known as the “strike” price.

Call Options

- Call options protect buyers from rising prices and allow them to set a price ceiling.
- Call options also can be used in place of storage following harvest.
- They give buyers the opportunity to profit from a post-harvest price rally.
- The call option buyer has the right, but not the obligation, to purchase a futures contract at the strike price.
- The buyer of a call option pays a premium.
- Losses are limited to the premium and commission costs, while the purchaser retains the opportunity to profit from a post-harvest price rally in the futures contract.

Strategies for Using Options

- Buying put options for protection against lower prices
- Buying call options for protection against escalating prices (a common strategy of commodity purchasers)
- Buying call options at harvest to profit from a post-harvest price increase.

Option Premium Specifics

- Option buyers pay option sellers a premium for the rights conveyed by the option contract.
- The option gives the buyer the right, but not the obligation, to take the underlying futures position, so the premium is his maximum financial liability.
- The option seller is obligated to take the opposite side of the futures position if the buyer takes his futures position, so the seller must set up a margin account and meet margin calls if the market moves against the option seller's position.
- Two specific aspects of a futures contract option are the underlying futures contract and the strike price.
- Option contract sizes are consistent with their underlying futures contract counterparts and are listed for each of the traded contract months of a commodity.
- Most options expire approximately a month before the associated futures contract. An exception is feeder cattle options that expire basically at the same time as futures contracts.

Option Strike Prices

- Option strike prices trade in specific increments above and below the price at which futures are trading for each commodity. Corn, oats and wheat are listed in 10-cent-per-bushel increments and soybeans are listed in 25-cent-per-bushel increments. Rice options are listed in 20-cent-per-hundredweight increments and cotton options are listed in 1-cent-per-pound increments.

Terminology of Option Premiums

- Intrinsic value is the built-in value of an option. It is the difference between the option strike price and the underlying futures price. For example, the intrinsic value of a \$4.70 December corn put when December corn futures are trading at \$4.60 is 10 cents ($\4.70 strike price - $\$4.60$ underlying futures price).
- Time value is equal to the option premium less intrinsic value. Time value reflects the risk that the option seller bears in selling the option to the buyer. For example, if a \$4.70 December corn put sold for 34 cents per bushel when December corn was trading at \$4.60, the put would have 24 cents per bushel of time value ($\$.34$ premium - $\$.10$ intrinsic value = $\$.24$ time value).

Classifications of Option Pricing

- In-the-Money – any option (call or put) that has intrinsic value is said to be in-the-money by the amount of its intrinsic value. For a call, it is the amount by which the futures price is above the strike price. For a put, it is the amount by which the futures price is below the strike price.
- Out-of-the-Money – A call option is said to be out-of-the-money if the underlying futures price is currently below the option strike price. A put option is out-of-the-money if the futures price is above the option strike price.
- At-the-Money – If the options strike price and the underlying futures price are the same.

Factors Affecting the Value of Premiums

- The relationship between the underlying futures price and the option strike price.
- The length of time remaining until expiration.
- Volatility of the underlying futures price.
- Interest rates

Option Pricing in Summary

- Premiums are determined by the interaction between buyers and sellers on the trading floor of the exchange. The two specific aspects of an option contract are the underlying futures contract and the strike price.
- The total cost of an option is the option premium multiplied by the size of the futures contract.
- Before expiration, the option premium will consist of its intrinsic value plus its time value. If an option has not intrinsic value (i.e. the option is at-the-money or out-of-the-money), its premium is entirely time value.
- An option's value at expiration will be equal to its intrinsic value (the amount by which it is in-the-money) because there is no time value remaining. This is true for both puts and calls. If an option has no intrinsic value at expiration it will expire worthless.
- The time value of an option's premium is primarily determined by the 1) relationship between the underlying futures price and the option strike price; 2) length of time remaining until expiration; 3) volatility of the underlying futures price; and 4) the interest rate