New Agricultural Options Increase Your Hedging Power

The drought of 2012 and another series of USDA crop estimates that caught both buyers and sellers leaning the wrong way at various times may have seemed unusual, but they really were not. The global grain markets had just gone through severe droughts in Eastern Europe and the former Soviet Union in 2011, a group of Southern Hemisphere crop disruptions including both floods and droughts in 2010-2011, food riots in various parts of the world leading to the so-called Arab Spring in 2011 and a number of global policy decisions affecting both inflation expectations and currency valuations from 2008 onwards.

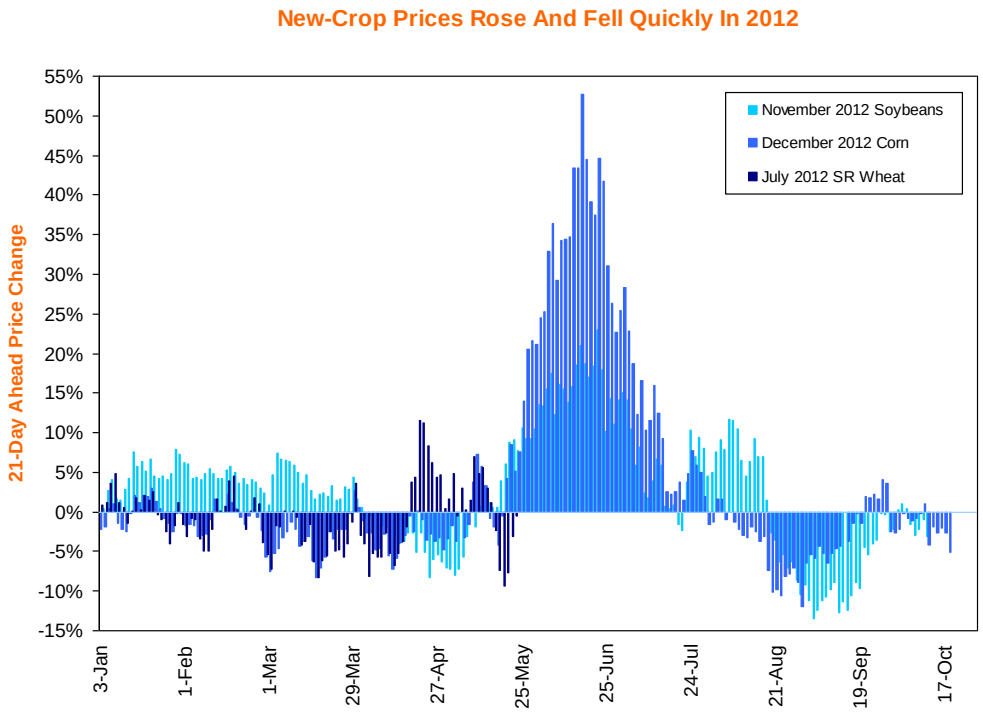
The 2013 crop year could promise more of the same. While the Southern Hemisphere 2012-2013 growing season has been progressing with no more than the usual concerns, continued dry weather across the U.S. wheat belt reminds us short-term droughts or even long-term changes in growing patterns can be more than one-year affairs. Agricultural economics already embed a weather carryover in the form of reduced corn carryover on the supply side and reduced cattle herds and impaired ethanol distillation economics on the demand side.

Higher prices will do what higher prices have always done, encourage expanded production. While planting intentions for 2013 will not be known with reasonable certainty until the March 2013 USDA Planting Intentions report, estimates of 100 million acres of corn, up from 2012's 96.4 million acres, are being discussed…as are reductions down to 93.1 million acres. Even with a large Southern Hemisphere soybean crop, rising global soy demand could lead to a shift from corn to soybean acreage.

The 2012 Experience

Risk exists and must be managed. What separates successful buyers and sellers in the grain markets from the also-rans is how they use risk management tools for not only for defense against adverse events but for putting themselves in position to take advantage of the 2012-like price turns that always seem to arise. How many 100-year floods have you seen in your career?

Unexpected price changes never arrive at your convenience, as the 2012 experience indicates. No one viewing the world ahead in April or May 2012 could have anticipated the sudden arrival of the drought and its effect on new-crop prices, particularly for corn and soybeans. Moreover, once prices peaked in August, they turned lower into the harvest season.



Commercial hedgers who tried to time the market beforehand with futures were faced with the usual considerations of deciding when and at what price to hedge. Farmers who sold futures in advance had margin financing problems;

grain buyers who did not have long positions in place before the drought found themselves in the scary position of buying into a series of new highs in June and July.

The Option Advantage

This is where options in general and a suite of new options in particular shine. Farmers have been familiar with standard put options, which give them the right but not the obligation to sell at a fixed price, and grain buyers have been equally familiar with call options, which give them the right but not the obligation to buy at a fixed price. These positions when combined with an underlying cash market position give farmers a price floor with upside participation and grain buyers a price ceiling with downside participation. The known cost of the premium replaces the unknown costs of margin financing and the potentially huge costs of foregone gains in the cash market position.

The newer option products include calendar spread options between contract months, weekly expiration options and short-dated new-crop options. Calendar spread options are based on the price and volatility of the spread itself rather than the price level. In 2012, bull spreads between, say, September and July in corn and soybeans would have been very useful for grain buyers who might have been rolling long futures positions forward between contract months. For more information, please see www.cmegroup.com/trading/agricultural/grian-and-oilseed/grain-calendar-spreads-options.html#cso.

Advantages Of Short-Dated Options

Options are suited far better than futures to combining profit-seeking with hedging. Any option price contains a time premium affected by both the time remaining to expiration and implied volatility. While option traders find this time premium valuable in a number of applications, more of it is not necessary when approaching a known event happening at a known time, such as a USDA crop report. Here you want to be rewarded quickly for being right and to limit the consequences of being wrong.

In option terminology, you want to maximize the absolute delta, or expected movement of the option's price with respect to the underlying market. You also want to minimize the total cost involved, which in practice means reducing the time premium of the option. As two of the components of time premium, volatility and interest rates are out of your control, let's focus on a third component, the time remaining to expiration. This is where the weekly and short-dated new crop options come into play.

The weekly expiration options, which expire on Fridays that are not already standard or serial option expirations, and exercise into the next futures expiry provide a low-cost and highly leveraged tool for trading around events such as USDA crop reports or economic reports. For more information on weekly options, please see www.cmegroup.com/trading/agricultural/weekly-options-on-grain-futures,.html.

Short-Dated New Crop Options

One of the most exciting new options are the short-dated new crop options. These options use new crop months – July for wheat, November for soybeans and December for corn – as their underlying asset. However, instead of using the standard expiration date, they use the expiration dates for earlier months. For example, while the December 2012 option on December 2012 corn expired on November 23, 2012, the September 2012 option on December 2012 corn expired on August 24, 2012. For more information on short-dated new crop option cycles, please see www.cmegroup.com/trading/agricultural/short-dated-new-crop-options.html.

Jack Scoville, senior market analyst at the Price Futures Group in Chicago, notes: "I feel like short-dated options offer a lot of chances for many to participate in the USDA crop reports and that they give the buyer a defined risk that is manageable. These types of options are especially valuable in the current environment of high volatility and prices."

The short-dated new crop options also offer the advantage of being active over a long window of time, such as a planting season or a growing season. This reduces the need to be right immediately as in the case of the weekly options. Unlike the calendar spread options, which settle to the spread between months, the short-dated new crop options provide the same price-capping and price-flooring capabilities seen in standard options on futures.

Restated, a grain buyer who is concerned about a single event, such as a crop report arriving at a known time, can use the weekly options. A grain buyer exposed to purchases made over a longer window of time or to events arriving months from now, such as the March 2013 Planting Intentions report, can use either standard options or short-dated new crop options. A case study of the latter is presented below.

Short-Dated New Crop Options Case Study

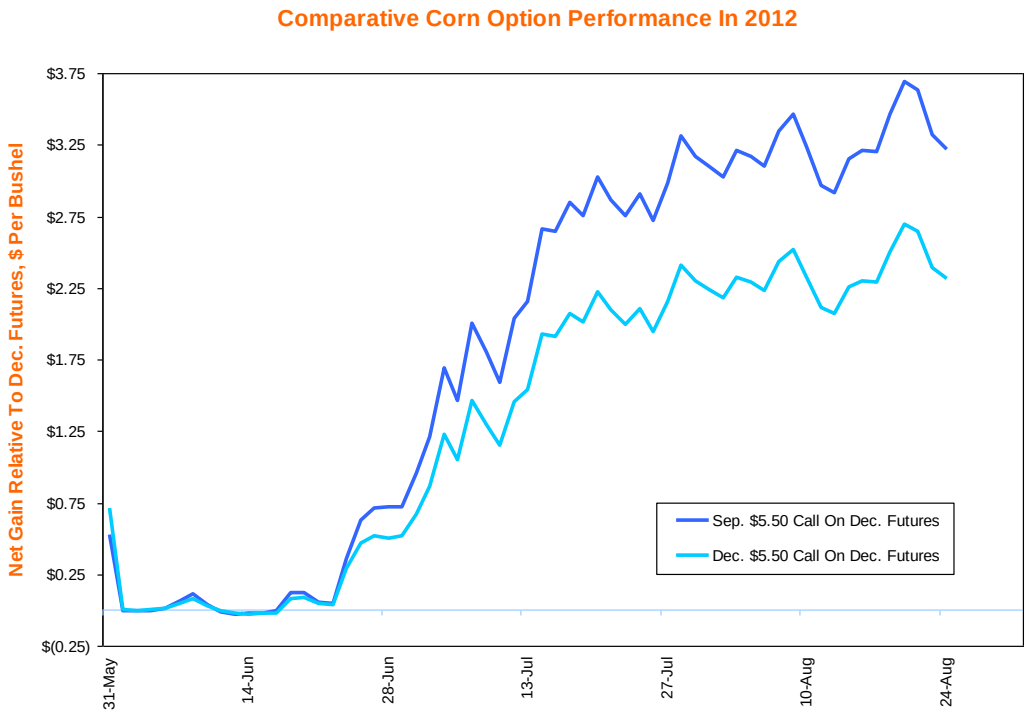
Let's go back to May 31, 2012 when December 2012 corn was trading at $5.22 and, more important, had been drifting lower from the $5.80 level in January. Corn buyers interested in capping feed costs could have gone long December futures at this price and been done with it. Alternatively, buyers could have bought either standard December call options or short-dated September/December call options at a strike of their choosing. Let's use a slightly out-of-the-money $5.50 strike.

Here are the trades:

1. Buy September short-dated call options on December for $0.205 in a (1/.39) delta ratio for a total cost of $0.53 per bushel (total cost of $530,000 for one million bushels), or
2. Buy standard December call options for $0.3125 in a (1/.44) delta ratio for a total cost of $0.71 per bushel (total cost of $710,000 for one million bushels)

The net gains relative to the base case of going long December futures are presented below; the price histories are reconstructed from prevailing price, volatility and interest rate data. Three weeks into the trade, the two option positions and the futures position look the same. Once prices broke out to the upside after June 20th and kept rising swiftly into early August, the advantage of the standard December options to the future becomes clear and the advantage of the September/December options to the standard December options becomes even clearer.

The essence of trading is putting yourself in the position where good things can happen to you. The relative trade gains here are one example of that. The long December futures position would have gained $2.87 per bushel for a gain of $2.87 million over a one million bushel position. The standard December options would have gained an *additional* $2.31 per bushel and the short-dated September/December options would have gained an *additional* $2.31 and $3.22 per bushel, respectively, for *incremental* gains of $2.31 and $3.22 million over a one million bushel position.



There is no magic here, just the mechanics of option pricing in action. The short-dated option had a lower cost at initiation, a lower delta mandating a slightly higher hedge ratio and a higher option gamma, or rate of change in that delta relative to the change in December corn prices. If prices had declined, the overall exposure of the short-dated option would have been lower, and in the event of a large price decline the loss of the option premium would have been less than the loss on the comparable long December futures position.

Other Applications

The simple principles behind short-dated new crop options create useful trading opportunities. As Mark Gold, CEO of Top Third Ag Marketing notes, "I have found the use of short-dated options can benefit out farm producer clients' ability to manage risk. These options can be used in strategic times, for example, before a major crop report to help farmers minimize risk while maximizing potential marketing opportunities."

Gold added, "Short-dated options can be a very effective teaching mechanism to help farmers learn the proper use of options because the cost of the premium is reduced as a result of lower time value." Indeed, the use of short-dated new crop options allows you to capture resulting price volatility with less time premium cost and greater leverage (gamma) than would be available from the standard-expiration new crop options.

The two options can be spread against one another to create a time-dependent profit profile. For example, July options on December corn futures expired on June 22, 2012. If grain buyers who feared adverse weather during the pollination season bought December/December call options and sold July/December options, they would have gained on both legs of the spread with the actual results depending on the strikes used.

Anyone who has been involved in the commercial grain business over the years has felt a need at one time or another for an instrument with the properties of short-dated new crop options. Now they exist.