7. Proactive Spread Hedging

Orlen Grunewald <ogrunewa@ageconksu.edu>
Orlen Grunewald is a professor in the Department of Agricultural Economics at Kansas State University. He teaches undergraduate courses in food and agribusiness management and in commodity futures and options markets. He teaches a graduate course on computer decision tools in agribusiness in the Masters of Agribusiness program. His current research focuses on evaluating farm efficiency of Kansas farms to determine factors which influence efficiency in grain, cattle and dairy enterprises.

Abstract/Summary

Spreads can be used to add both consistency and profitability to a grain hedge. In this presentation, I will cover how the market uses spreads to ration grain from season to season, how spreads affect basis, and how spreads can assist in hedging grain.

HEDGING THE 2012 AND 2013 CROPS

2012 Risk and Profit Conference
Manhattan, Kansas
Presentation by Orlen Grunewald

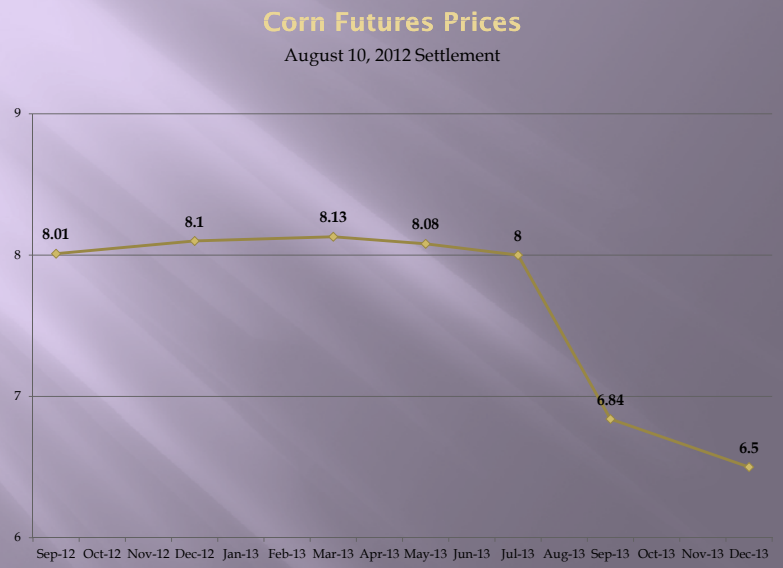
Objectives

- Explain the expected price patterns for the corn and soybean crops
- Elaborate on the risks involved in marketing the 2012 corn and soybean crops
- Discuss expected basis for corn and soybeans
- Marketing strategy for the 2012 crop
- A pro-active spread marketing strategy for the 2013 crop

Expected Price Pattern for Corn and Soybeans

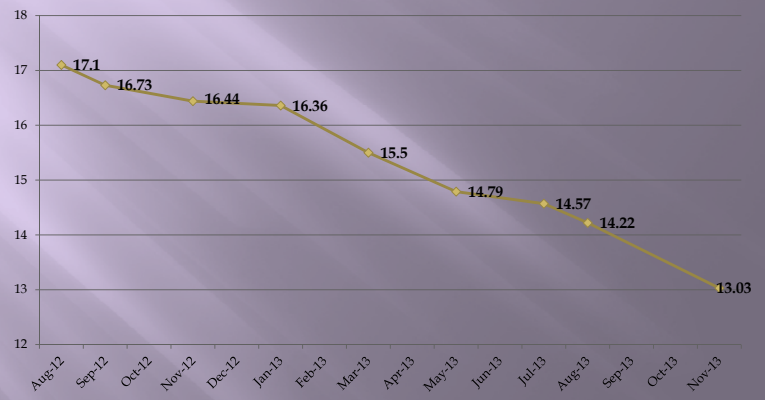
"Short Crops Have Long Tails"

- Corn and soybean prices should reach an early peak
  - Sometime around window of harvest
  - Then decline as the marketing year progresses
- With an early harvest
  - A price peak by September seems most likely



Soybean Futures

August 10, 2012 Settlement Prices



The Logic of this Expected Price Pattern

First

"The Crop Must Be Rationed"

Prices need to move sharply high in a relatively short time frame so that consumption is reduced to be in line with expected supplies

The Logic of this Expected Price Pattern

Second

"Back-to-Back Droughts are Rare"

A short crop is expected to be followed by much larger production in the following year as weather conditions return to normal

The Logic of this Expected Price Pattern

Third

"Revenue Protection Crop Insurance"

The February futures price, which sets the minimum payment for crop insurance, will provide producers with an incentive to go "all in" when planting the 2013 crops

The Logic of this Expected Price Pattern

Fourth

"The Tail"

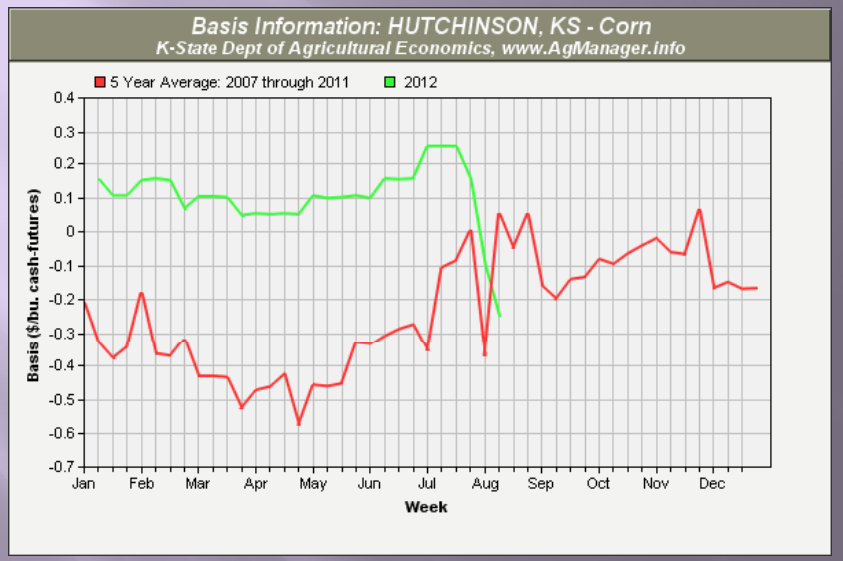
Once prices peak and start lower, an extended period of declining prices is required to re-build the livestock and poultry herds

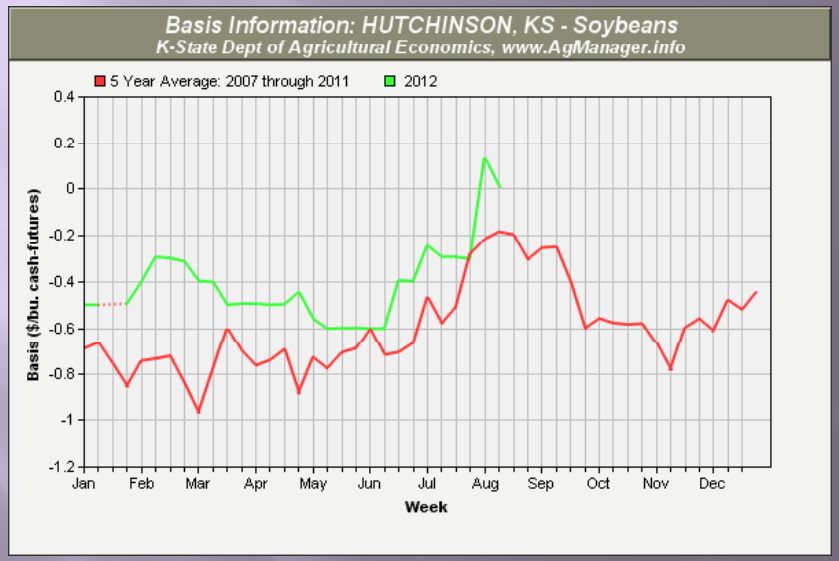
Short Crop Years for Corn

- Since 1970 the US has experienced 10 short crop years
- The price pattern generally followed the expected pattern described earlier
- Exceptions:
  - 1993 price peak occurred in January
  - 1995 price peak occurred in July following the harvest
  - 1991 and 2011 price peak occurred in August before harvest and again later in the marketing year

Short Crop Years for Soybeans

- Since 1970 the US has experienced 8 short crop years
- The price pattern generally followed the expected pattern described earlier
- Exceptions:
  - 1993 prices peaked in July before harvest and June after harvest
  - 1976 prices peaked in April following harvest
  - 2003 prices peaked in March following harvest





Marketing the 2012 Crop

The market is not paying you to store your crop

- Sell your crop for delivery off the combine or for delivery in January 2013
- Consider hedging the 2012 crop if you have Revenue Protection crop insurance prior to harvest

Mechanics of Revenue Protection Insurance

- Revenue Protection insurance is a revenue product that uses the higher of the projected or harvest price in setting its guarantee
- Projected prices in 2012 are:
  - $5.68 per bushel for corn
  - $12.55 per bushel for soybeans
- Harvest prices are averages of settlement prices during the month of October using the December 2012 corn contract and November 2012 soybean contract

Corn Hedging Example

- RP crop insurance for corn: **80% coverage level**
- Actual Production History Yield: **126 bushels**
- Hutchinson cash price in October: **10 cents** below December futures price
- Octobers futures price will be the harvest price for the RP product
- Hedge: **101 bushels** (126 bushels APH x .80 coverage level)
- December contract price is: **$8.10**
- Actual yield will equal: **80 bushels**

Corn Hedging Example

- December corn futures are sold at $8.10
- These futures contracts will be purchased in October at $7.10 or $1.00 lower
- Crop revenue = **$560 per acre** (80 yield x $7.00 cash price ($.10 below futures price)
- RP payment = **$149 per acre** (21 bushel shortfall x $7.10 settlement price)
- Hedging gain = **$101 per acre** (101 bushels x ($8.10 sale - $7.10 purchase)
- Total revenue = **$810 per acre** ($560 crop revenue + $149 RP payment + $101 hedging gain)

Corn Hedging Example

- Hedging the entire APH now will lock in the sum of crop revenue and the insurance guarantee regardless if prices go higher or lower
- Actual yield does not have much impact on total revenue
  - Lower yields will result in lower crop revenue and higher RP payments and vice versa
  - Slight differences in revenue as yields exist because of the basis
- Farmers would have to receive $6.43 per bushel at APH yields to equal this revenue example

Risks of this Strategy

- Prices could peak after the October settlement period, as occurred in 1993 and 1995
- Margin calls could occur if futures prices rise
- The example assumes that the harvest price is the same as the futures price less the basis when the hedge is lifted
  - This is not likely as the settlement price for crop insurance is based on an average of October settlement prices

2013 Corn Futures

JULY @ $7.98

DECEMBER @ $6.50

2013 Soybean Futures

JULY @ $14.55

NOVEMBER @ $13.03

Hedging the 2013 Crops

"The 2013 corn and soybean futures are trading at discounts to the 2012 crop futures"

- July corn is $1.48 above December
- July soybeans is $1.52 above November

Strategy

- Hedge corn (soybeans) using the July contract instead of the December (November) contract
  - If the spread narrows, as expected, buy back July futures and immediately sell the December (November) futures to continue your hedge
  - The spread between old crop and new crop futures should narrow over time as the crop is rationed
- Risk
  - North or South American weather problems may widen the old crop/new crop spread

Summary

- Sell the 2012 crop off the combine or shortly thereafter
- Watch the basis carefully for marketing clues
- Consider hedging up to the RP guarantee at these prices for the 2012 crop
- Consider hedging the 2013 crop using the July futures contract and rolling your hedge into December