




DEFINITIONS

- Crop Marketing Year
 - WHEAT: JUNE 1 TO MAY 31
 - CORN: SEPTEMBER 1 - AUGUST 31
 - SOYBEANS: SEPTEMBER 1 - AUGUST 31



MORE DEFINITIONS

- Futures
 - Futures contract: contract when a seller agrees to sell and buyer agrees to buy a specified amount of a specific quality of a commodity in the future. Contract has all items specified except price.
 - Why?
 - Biological nature of ag production
 - Prices unknown when production decision is made
 - Processors need year around supply



MARKETING PLAN

A **marketing plan** is an outline of price, date, and quantity objectives used to generate a reasonable return given the existing market conditions.



EXAMPLES

Commodity description	Date
Number of acres	Future contract
Contract date	Contract expiration
Contract length	Expected price
Contract start date	
Contract end date	
Contract weight	
Contract toll	

Price objective	3 Month objective
Contract start	
Contract end	
Contract weight	
Contract toll	
Contract start	
Contract end	
Contract weight	
Contract toll	
Contract start	
Contract end	
Contract weight	
Contract toll	

Risk objectives: the acceptable probability of failing to achieve a price objective

Decision rules, trigger prices and actions

Forward pricing decisions, futures, options, contracts

Evaluation (attach tabulars or summary of each trade)

Contract start	Contract end	Contract weight	Contract toll

Objectives met

Comments



Example-Preharvest



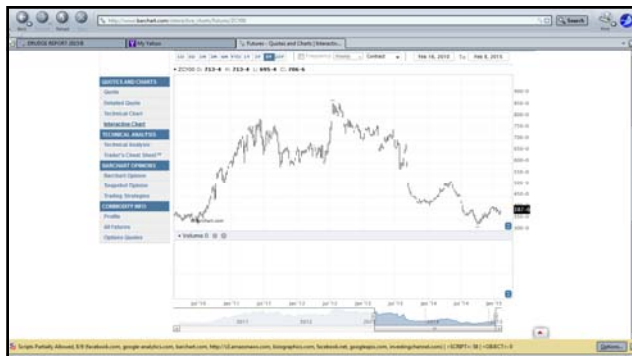
Grain Marketing
Center for Farm Financial Management
University of Minnesota
<http://www.cffm.umn.edu/GrainMarketing/marketingplans.aspx>

November 18, 2013
Corn: 2014 Pre-Harvest Marketing Plan
by Ed Usrey


Expected 2014 production: 90,000 bushels (600 acres @ 150 bushels per)
Objective: Buy crop insurance to protect my production risk, and have 75% of my anticipated corn crop (based on APH) priced by mid-June.

- Price 10,000 bushels at \$4.90 cash price (\$5.40 Dec. futures) using forward contract/futures hedge/futures fixed contract.
- Price 10,000 bushels at \$5.30c-\$5.60c, or by March 17, pricing tool to be determined ("bid").
- Price 10,000 bushels at \$5.70c-\$6.20c, or by April 15, pricing tool bid.
- Price 15,000 bushels at \$6.10c-\$6.60c, or by May 14, pricing tool bid.
- Price 10,000 bushels at \$6.50c-\$7.00c, or by May 26, pricing tool bid.
- Price the last 10,000 bushels at \$6.90c-\$7.40c, or by June 13, pricing tool bid.

Plan starts on January 1, 2014. Earlier sales may be made at a 50 cent premium to price targets noted above and would be limited to 30,000 bushels.
Ignore decision dates and make no sale if prices are lower than \$4.90 local cash price/\$5.40 December futures.
Exit all options positions by mid-September, 2014.



Example- Post Harvest



Grain Marketing
Center for Farm Financial Management
University of Minnesota
www.cffm.umn.edu/grain

Corn: 2014 Post-Harvest Marketing Plan
by Ed Usset

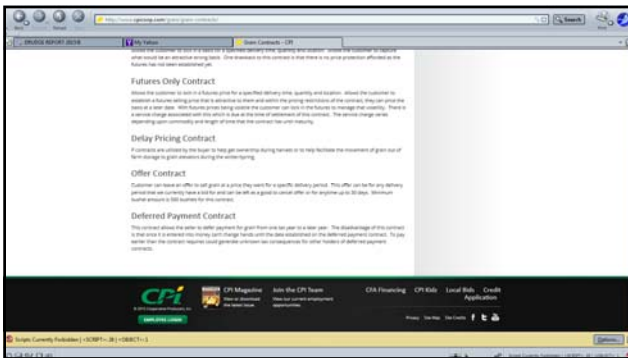
2014 production: 90,000 bushels (600 acres @ 150 bushels per)

Objective: Seek strategies that balance risk and reward in the current market environment. Hold no unpriced corn beyond July 1, 2015.

20,000 bushels priced @ \$5.03/bu with Dec'14 futures sales (October 24 closes, Dec'14 @ \$3.53, cash price @ 2.98/bu.); set the basis at 55 cents under the December contract and deliver. Final price is 4.48/bu (5.03/bu futures - 0.55 basis).

70,000 bushels. Place in storage and sell the carry with a sale of the July contract, trading at \$3.82/bu. The carry from December to July - 29¢ cents/bu - is very large and a great opportunity to sell the carry. Basis is also appealing - the basis is currently 55 cents under the December contract, and almost 85 cents under the Jul'15 corn contract. I expect a harvest basis of 85 cents under the July contract to narrow to 30 cents under the July by next May or June. Exit plan: Unwind my storage hedge when the cash basis reaches 30 cents under the July contract, or by June 20. If the basis reaches 30 under the July, I will receive a cash price of \$3.53/bu. (\$3.82/bu July futures + (-\$0.30) basis).





CASH OR SPOT MARKET

- When: Immediate or near-term delivery
- What: Commodities
 - Defined by minimum standards: # 1 yellow soybeans, #2 corn
 - Often set by USDA
- Where: Typically at buyer's location
 - Elevator, processor, auction



GRAIN FORWARD PRICING DECISIONS

- How Much to Forward Contract or Hedge?
 - For Pre-Harvest Pricing:
 - Max of 50%-75% of expected production (*average yields*)
 - *If have a short crop, use Crop Insurance Coverage revenues to help fill Forward Contract obligations*
 - **Recommended:** A disciplined grain marketing plan
- What Time Period to Set Grain Delivery In?
 - Examine Harvest vs Post Harvest Basis, Storage Returns, and Grain Delivery Opportunities
 - Timing of cash flow needs-the John Deere effect or Rental payment



FUTURES MARKET EXCHANGES

- Trading pits and Electronic pits
- Centralized pricing
 - Buyers and sellers represented
 - All information represented
- Perfectly competitive market
 - Open out-cry or electronic trading
 - Anyone with cash can participate



THE FUTURES CONTRACT

- Legally binding contract to *make* or *take* delivery of the commodity
 - Form (wt, grade, specifications)
 - Time (delivery date)
 - Place (delivery location)
 - Possession (seller delivers, buyer receives)



STANDARDIZED CONTRACT

- Certain delivery (contract) months
- Fixed size of contract
 - Grains 5,000 bushels
 - Livestock in pounds
 - Lean Hogs 40,000 lbs carcass
 - Live Cattle 40,000 lbs live
 - Feeder Cattle 50,000 lbs live
- Specified delivery points: few delivery points



HEDGING WITH FUTURES

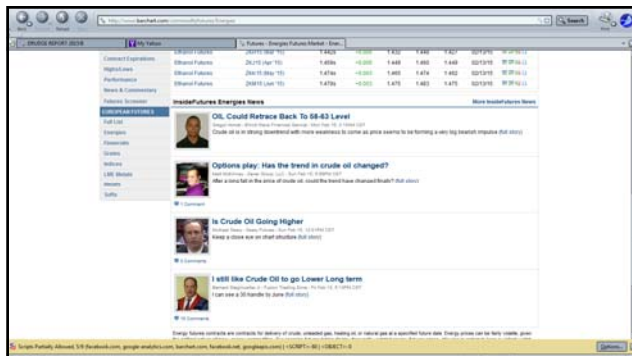
- Price Hedges on Grain Production
 - *(Prehedge)*: Analyze hedging opportunity
 - *Futures less Basis less Brokers' fees*
 - *(Placing the Hedge)*: Sell futures contract(s) nearest to the grain delivery period
 - In a "Short" or "sell" futures position
 - *(Closing Out the Hedge Position)*
 - Buy back futures contract(s)



EXAMPLES


- Objective: *Buy low, sell high*
- You can either *buy or sell* initially
 - Sell a December Corn contract initially
 - *Deliver corn in December OR,*
 - *Buy back at a later date*
 - Buy a February Live Cattle contract initially
 - *Take delivery of cattle in February OR,*
 - *Sell back at a later date*






MARGIN ACCOUNT

- *Highly leveraged trades*
 - *Margin is the earnest money that must be maintained in the trader's account*
 - *Often 5-10% of full value*
- *Margin account settled everyday*
 - *Must maintain account balance*
 - *Margin call*
- *Calculate as if you had to get out of the market every day.*



MARGIN ACCOUNT

- Initial margin: The amount needed to open and account.
- Maintenance margin: The minimum amount needed to keep and account open.
- "Mark to the Market" at the close of each trading day.



MARGIN ACCOUNT EXAMPLE

Day	Price	Chg	G/L	Margin
1	4.54	+0.01	+50	1050
2	4.58	-.04	-200	850
3	4.61	-.03	-150	700
4	4.52	+0.09	+450	1450

Below Maintenance Margin. Must make \$300 **margin call** to restore to initial margin 1000

Changes reflect the initial "sell" of the contract



RISKS OF MARKETING TOOLS

- **Options Volatility Risk**
 - Risk that option premiums will not change 1-for-1 with cash/futures as the price level changes
- **Production Risk if Pre-harvest Pricing**
 - Risk of being unable to deliver grain to fulfill a contract
- **Counter Party Risk**
 - Risk that a buyer won't fulfill their contract obligations
- **Control Risk**
 - Risk of market actions getting "out of control" before corrective actions can be taken by the seller




PRICE TREND EFFECTS ON CASH SALES & FORWARD CONTRACTS

Pricing Alternatives	Falling Futures	Rising Futures	Wider Basis	Narrower Basis
Cash Market Sales	(-)	(+)	(-)	(+)
Forward Cash Contract	None	None	None	None
Basis Contract	(-)	(+)	None	None
Hedge-to-Arrive (HTA)	None	None	(-)	(+)
Minimum Price Contract	None	(+)	None	None
Price Later Contract	(-)	(+)	(-)	(+)



FORWARD CONTRACT VS FUTURES HEDGE

- If Basis Projection is Accurate, then..
 - Forward Contract \$ = Futures Hedge \$
- Who Carries the Futures Account?
 - FC: Elevator contacts broker & pays any margin calls
 - Hedge: Producer works w. broker, pays margin calls
- Delivery Commitment?
 - FC: Delivery commitment of X bushels for \$X price
 - Hedge: No delivery commitment to elevator
- Basis Commitment?
 - FC: Set cash basis / Hedge: Varying cash basis




Summary of Tools Comparison

Method	Advantages	Disadvantages
Cash sales	<ul style="list-style-type: none"> • Easy to transact • Immediate payment • No set quantity 	<ul style="list-style-type: none"> • Minimize risk • No price protection • Less flexible
Forward contract	<ul style="list-style-type: none"> • Easy to understand • Flexible quantity • Locked-in price • Minimize risk 	<ul style="list-style-type: none"> • Must deliver in full • Opportunity loss if prices rise
Futures contract	<ul style="list-style-type: none"> • Easy to enter/exit • Minimize risk • Often better prices than forward contracts 	<ul style="list-style-type: none"> • Opportunity loss if prices rise • Commission cost • Performance bond calls • Set quantities
Options contract	<ul style="list-style-type: none"> • Price protection • Minimize risk • Benefit if prices rise • Easy to enter/exit 	<ul style="list-style-type: none"> • Premium cost • Set quantities • Commission cost

PRICE TREND EFFECTS ON FUTURES, OPTIONS

Pricing Alternatives	Falling Futures	Rising Futures	Wider Basis	Narrower Basis
Short Futures Hedge	None	None	(-)	(+)
Buy Put Options	None	(+)	(-)	(+)
Sell Cash & Buy Calls	None	(+)	None	None
Marketing Loans	None	(+)	(-)	(+)



**AREAS OF RISK EXPOSURE
FOR CASH SALES & FORWARD CONTRACTS**

Pricing Alternatives	Options Volatility	Prodn. Risk if Prehvst.	Counter Party Risk	Control Risk
Cash Market Sales	---	---	---	Yes
Forward Cash Contract	---	Yes	Yes	---
Basis Contract	---	Yes	Yes	Yes
Hedge-to-Arrive (HTA)	---	Yes	Yes	Yes
Minimum Price Contract	Yes	Yes	Yes	Yes
Price Later Contract	---	---	Yes	Yes



**AREAS OF RISK EXPOSURE
FOR FUTURES, OPTIONS & MARKETING LOANS**

Pricing Alternatives	Options Volatility	Prodn. Risk if Prehvst.	Counter Party Risk	Control Risk
Short Futures Hedge	---	Yes	---	Yes
Buy Put Options	Yes	Yes	---	Yes
Sell Cash & Buy Calls	Yes	---	---	Yes
Marketing Loans	---	---	---	Yes



GOALS IN GRAIN MARKETING

- Price Improvement
 - *To raise average grain selling price*
- Price Risk Reduction
 - *To reduce seller's downside price risk*
- Average Pricing via Sequential Sales
- Financial Management Oriented Goals
 - *Enterprise cost or whole farm profit objectives*
- Combination Goals
 - *Difficult to enhance price AND reduce risk*



IMPROVING THE SELLING PRICE OF GRAIN

- **Farmer's Most Common Marketing Goal:**
 - To improve average grain selling price!
 - To *maximize grain selling price* subject to the need to *manage harmful downside price risk*
- **Specific Goals: Getting better than the...**
 - Average price available
 - Middle (50%) price available
 - Harvest price



REDUCING GRAIN PRICE RISK

- **Goal:** Reducing price risk by protecting from harmful price moves
 - **Grain Sellers are motivated to:**
 - *Protect themselves from downside price risk*
 - *Possibility profit from price increases*
- **Tools for Reducing Grain Price Risk:**
 - **Forward Contracts & Hedges:** *To lock in prices*
 - **MPCs & Put Options:** *To set price floors*



COMBINING GRAIN MARKETING GOALS

Difficult to **Enhance Prices & Reduce Price Risk** at the same time

Example: Higher returns & price variability from pre-harvest futures hedges vs. buying put options

Principle of Price Risk Management

Higher net grain selling prices will tend to be sacrificed in terms of **lost pricing opportunities** or the **cost of managing price risk**


If Prices ↑: Cash Sales > Options-Fwd. Contracts

If Prices ↓: Fwd. Contracts > Options-Cash Sales



TYPES OF GRAIN MARKETING STRATEGIES

- **Routine Strategies**
 - Grain marketed annually at same time with same tool **regardless** of market conditions
 - **Example:** Preharvest hedge 1/3 of exp. production, sell 1/3 at harvest, store rest on farm for 6 months then sell
- **Systematic Strategies**
 - Allowing for yearly variation in marketing actions based on **Key Market Indicators**
 - **Key #1: Preharvest Prices vs. Reference Prices**
 - **Key #2: Years following Short Crops**



AVERAGE PRICING VIA SEQUENTIAL SALES

Deliberately pricing portions of the crop at different times of the marketing year

Average Pricing....
 (+) AVOIDS selling 100% at market LOWS
 (-) ALSO AVOIDS selling 100% at market HIGHS


Benefits of Average Pricing:

- ⇒ Adds structure & discipline to marketing plans
- ⇒ Form of price risk management



TYPES OF GRAIN MKTG. STRATEGIES (CONT.)

- **Strategies Using Expert Forecasts**
 - When people profit from their superior ability to forecast grain market trends & marketing decisions
 - In general, it is difficult for individuals to predict market price direction better than other market participants (AGMAS)
- **Strategies Using Market-Based Forecasts**
 - Using futures, options & basis information as key market indicators for making marketing decisions
 - **Key #1: "Wide" Cash Grain Basis @ harvest**
 - **Key #2: "Higher / Lower than normal" preharvest hedge profits**



HOW EFFICIENT ARE GRAIN FUTURES MARKETS AT DETERMINING GRAIN PRICES?



MARKETING CHALLENGES & BENEFITS

- **The Challenge of Grain Marketing Decisions**
 - Difficult to obtain higher grain selling prices!!
- **Grain Marketing's Relative Importance:** (K-State Studies of KFMA Farms for 1987-1996, 2007-2013, profitability 1/3s)
 - **High 1/3 vs Middle 1/3:**
 - Yields: +17%; Costs: -37%; Prices +12%, More Notill
 - **Low 1/3 vs Middle 1/3:**
 - Yields: -18%; Costs: +28%; Prices -12%, Less Notill
 - **Study Critique:** Not measuring effectiveness of marketing practices used, only Hi/Lo Profit
- **Production is 1st priority; Marketing 2+**



GRAIN PRICE DRIVERS

- Supply
 - Think 2012
- Demand
 - Think Ethanol



SOURCE MATERIALS

Dr. Daniel M. O'Brien,
Extension Agricultural Economist K-State University
Chad Hart, Iowa State University Grain Economist
Lee Schultz, ISU Livestock Economist
John Lawrence, ISU Livestock Economist
Ed Usset, U of MN Marketing Specialist






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