Risk Management Tools You Can Use

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Categories of Risk Management Tools

Financial Risk
Production Risk
Price Risk
Others

Overall Financial Risk

- **1) Know costs of production**
  - Your number one long term risk is associated with cost management
  - Use budgeting tools, track actual cost items compared with predictions, know unit cost of production
  - So the number one tool you need in your risk management toolkit is a pencil and paper, or a simple spreadsheet

Production Risk Management Tools

- Management options
- FSA Programs for livestock producers include
  - Supplemental Revenue Assistance Program (SURE)
  - Livestock Indemnity Program (LIP)
  - Livestock Forage Disaster Program (LFP)
  - Emergency Assistance for Lvstk, Honey bees, and Fish (ELAP)
  - Tree Assistance Program (TAP)

LIP

- Will compensate producers for livestock death losses
  - In excess of normal mortality due to adverse weather
  - Between 1/01/08 and 10/01/11
- No sign-up period. Apply when disaster apparent
  - Within 30 days of loss
- No disaster declaration required
- Payment = 75% of market value of livestock on day before death

Adverse Weather Events

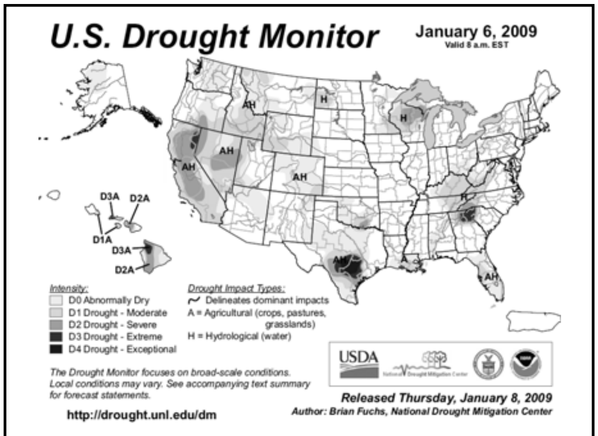
- Wildfire, Blizzard, Hurricane, Tornado, Lightning, Ice Storms, Earthquakes, Flood, Tropical Storm, Extreme cold or heat.
- Disease that caused death must be related to an eligible adverse weather event to trigger LIP
- Drought is not a trigger (because it is covered under LFP) unless it is associated with anthrax, a condition that is associated with drought

Eligible Livestock

- Beef and Dairy cattle (all weights), Buffalo, Beefalo, Equine, Elk, Reindeer, Deer, Sheep, Alpacas, Emus, Swine, Goats, Llamas, Poultry
- Must be livestock that normally graze
- Must be maintained for commercial use as part of a farming operation
- Ineligible – Hunting animals, Show animals, Pleasure animals, Rodeo Stock, Pets, Animals kept for home consumption

LFP

- Covers grazing losses due to drought, as determined by the intensity level of the U.S. Drought Monitor
  - Payments are 1, 2, or 3 monthly payments, depending on the intensity of the drought
- Rate is 60% of the lesser of
  - Feed grain equivalent
  - Monthly feed cost based on normal grazing land carrying capacity



Drought-Loss Categories

- D2 (severe drought): 8 consecutive weeks in any area of the county during the normal grazing period = 1 monthly payment
- D3 (extreme drought): any area of county at any time during the normal grazing period = 2 monthly payments

Drought-Loss Categories

- D3 (extreme drought): 4 weeks in any area of the county during the normal grazing period = 3 monthly payments
- D4 (exceptional drought): any area of county at any time during the normal grazing period = 3 monthly payments
- 3 months is the maximum payment on same livestock

Eligible Livestock and Forages

- Livestock normally grazing in an eligible county during the normal grazing period
  - During the 60 days prior to the qualifying drought (or fire) were owned, leased purchased, contracted for purchase, grown under contract, or disposed of due to drought conditions
- Native or improved pastureland with permanent vegetative cover
- Forages planted specifically for the purpose of grazing (small grain, forage sorghum)

To Be Eligible

- **Producer must either have purchased NAP coverage on the forage, or have purchased a forage insurance product for the months in which the drought occurs**

Price Risk Tools

- **Forward Contract (lock in price)**
- **Futures and/or options**
- **LRP or LGM**

Cash Forward Contracts

- Forward Contract – A contract for the sale of a cash commodity at a specific price for future delivery
- Similar to a short hedge with less negative and positive risks
- Price of forward contracts are lower than futures price because the buyer has to post margins and to pass on their risk

Futures Contract Months

CBOT Corn (C)

Futures Month	**DEC (Z)**	**MCH (H)**	**MAY (K)**	**JUL (N)**	**SEP (U)**
Calendar Month	SEP/OCT/NOV	DEC/JAN/FEB	MCH/APR	MAY/JUN	JUL/AUG

KCBT Wheat (KW)

Futures Month	**JUL (N)**	**SEP (U)**	**DEC (Z)**	**MCH (H)**	**MAY(K)**
Calendar Month	MAY/JUN	JUL/AUG	SEP/OCT/NOV	DEC/JAN/FEB	MCH/APR

Futures Contract Months

CME Feeder Cattle (FC)

Futures Month	**JAN**	**MCH**	**APR**	**MAY**	**AUG**	**SEP**	**OCT**	**NOV**
Calendar Month	NOV/DEC	JAN/FEB	MCH	APR	MAY/JUN/JUL	AUG	SEP	OCT

CME Live Cattle (LC)

Futures Month	**FEB**	**APR**	**JUN**	**AUG**	**OCT**	**DEC**
Calendar Month	DEC/JAN	FEB/MCH	APR/MAY	JUN/JUL	AUG/SEP	OCT/NOV

Quantities in Futures Contracts

Grain Futures Contracts:

- CBOT Corn – 5,000 bu
- KCBT Wheat – 5,000 bu
- CBOT Soybeans – 5,000 bu

Livestock Futures Contracts:

- Feeder Cattle – 50,000 lbs
- Live Cattle – 40,000 lbs

Who Uses the Futures Markets?

Hedgers vs. Speculators

- Hedger – Someone who shifts price risk in the cash market to the futures market by simultaneously holding opposite positions in the cash and futures markets until purchase or sell of the actual cash commodity
- Speculator – Someone who trades futures or options contracts with the intention of making a profit and does not own and/or control the actual cash commodity

Hedgers vs. Speculators

	Reasons for BUYING futures contracts	**Reason for SELLING futures contracts**
Hedgers	To lock in a price and thereby obtain protection against rising prices	To lock in a price and thereby obtain protection against falling prices
Speculators	To profit from rising prices	To profit from falling prices

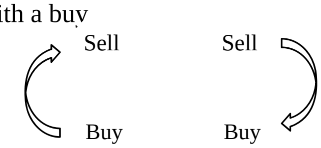
How to Trade Futures

- Set up an account through a broker
  - There will be a brokerage fee
  - Some are more knowledgeable about futures and options than others
  - Some may provide free quotes, charts, market research, etc.
  - Some may have different futures and options strategies that will better fit your operation

Futures Contracts

Futures Contracts

- Futures Contract – A legal obligation to deliver (sell) or accept delivery (buy) of a specific commodity with standardized contract terms
- You can be relieved of contracts (delivering or accepting delivery) by simply offsetting a buy with a sell or a sell with a buy



Standardized Futures Agreement

- *Commodity* – live cattle, feeder cattle, lean hogs, corn, soybeans, wheat, milk, etc
- *Quantity* – number of bushels or pounds of livestock (as well as range of weight for individual animals)
- *Quality* – specific U.S. grades
- *Delivery Point* – location of delivery
- *Delivery Date* – when contract terminates

"Short" or "Selling Short"

- Short – An initial sell position with a futures or options contract
  - The act of forward selling a cash position
- Used by agricultural producers and companies to lock in a price of a commodity they produce when they expect prices to decline
  - Short Hedge

Short
- Initially Sell in the Futures
- Offset by Buying in the Futures

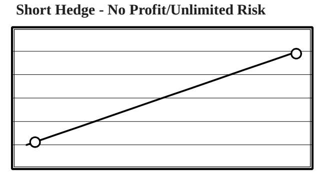
Short Hedge

Short Hedge – An initial sell in the futures market to offset a long cash position

	Risk	Profit
Prices Rise	Unlimited	None
Prices Fall	Goes away	Unlimited

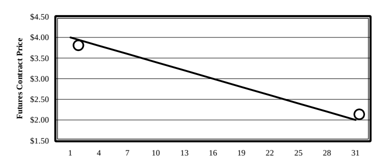
- There is unlimited risk if the market rises
  - The position is subject to on-going margin calls
- There is unlimited profit potential if the market falls
  - Money is deposited into your futures account even before the position is offset

Short Hedge - No Profit/Unlimited Risk



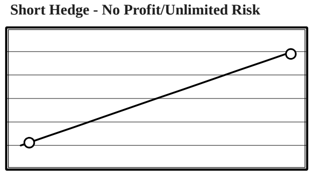
Sell in the futures:
- Sell low – Buy high
- As price climbs there is a great chance for margin calls

Short Hedge - Unlimited Profit/Decreasing Risk



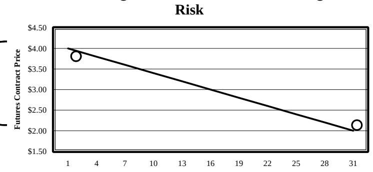
Sell in the futures:
- Sell high – Buy low
- As price falls there is no chance for margin calls

Short Hedge - No Profit/Unlimited Risk



Sell Day 1: $2.00
Buy Day 31: 4.00
Hedge Loss: $-2.00

Short Hedge - Unlimited Profit/Decreasing Risk



Sell Day 1: $4.00
Buy Day 31: 2.00
Hedge Gain: $2.00

Livestock Production Hedge

Cash Position	Futures Position
January 1 Buy feeder cattle at $95.00/cwt, place in feedyard (fed cattle price $86.00)	Sell JUN live cattle contract at $86.00
May 1 Cattle finished and sold at $84.00	Buy JUN live cattle contract at $84.00 + 2.00
Net Hedged Price = $84.00 + 2.00 = $86.00/cwt	

"Long" or "Buying Long"

- Long – An initial buy position with a futures or options contract
  - The physical ownership of a cash commodity
- Used by agricultural producers and companies to lock in an input price they purchase or plan to purchase when they expect prices to rise
  - Long Hedge

Long
- Initially Buy in the Futures
- Offset by Selling in the Futures

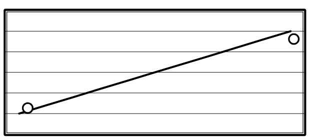
Long of Hedge

Long Hedge – An initial purchase in the futures market used to protect against an initial forward sell in the cash market

	Risk	**Profit**
Prices Rise	Decreasing	Unlimited
Prices Fall	Unlimited	None

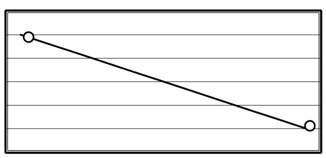
- There is unlimited profit potential if the market rises
  - Money is deposited into your futures account even before the position is offset
- There is unlimited risks if the market falls
  - The position is subject to on-going margin calls

Long Hedge - Unlimited Profit/Declining Risk

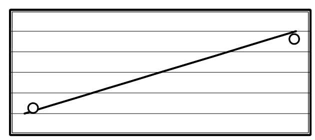


Buy in the futures:
• Buy low – Sell high
• As price climbs there is no chance for margin calls

Sell in the futures:
• Buy high – Sell low
• As price falls there is a great chance for margin calls

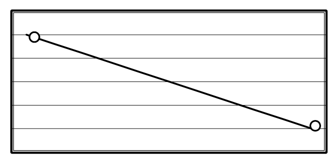


Long Hedge - Unlimited Profit/Decreasing Risk



Sell Day 31: $4.00
Buy Day 1: <u>2.00</u>
Hedge Gain: $2.00

Sell Day 31: $4.00
Buy Day 1: <u>2.00</u>
Hedge Loss: $-2.00



Double Whammy

- Double Whammy – A loss in the cash and loss in the futures

This is avoided by maintaining your futures position until the cash transaction takes place.

Cash Position	**Futures Position**
February 15 Buy soybeans at $7.50	Sell MCH at $8.50
Price Increases	
February 20 Cash is at $8.50	Buy MCH at <u>$9.50</u> - 1.00
THEN Price Decreases	
February 25 Sells at <u>$6.50</u> -1.00	
Net Selling Price = $6.50 -1.00 = $5.50/bu	

Margins and Margin Calls

Margins

- Margin – The initial amount of good faith cash that must be posted with a broker to enter into a futures position

- Maintenance Margin – The predetermined amount of the margin that triggers a margin call signifying that the position has lost enough money to require more cash to hold the position

Basis

Basis

- Basis – The difference between the cash price and the futures price

Basis = Local Cash Price – Futures Price

Basis = $5.00 cash - $6.00 futures
Basis = $-1.00

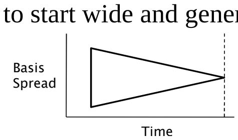
Basis

- Basis varies from one location to another

- Used to reflect:
  - Transportation costs
  - Carrying charges such as storage costs for grain
  - Marketing costs such as shrinkage for livestock
  - Supply and demand for a given commodity in a given location
    - For example, basis will be positive in an area where there is little supply and larger demand for a commodity

Basis

- Basis tends to start wide and generally narrows



- Basis becomes more positive, it is said to *strengthen*

- Basis becomes more negative, it is said to *weaken*

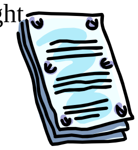
Livestock Production Hedge

Cash Position	Futures Position	Basis
January 1 Buy feeder cattle at $70.00/cwt, place in feedyard (fed cattle price $61.00)	Sell JUN live cattle contract at $62.00	-1.00
May 1 Cattle finished and sold at $58.00	Buy JUN live cattle contract at $59.50 + 2.50	-1.50 Change of $-0.50
Net Hedge Price = $58.00 + 2.50 = $60.50/cwt		

Options Contracts

Options Contracts

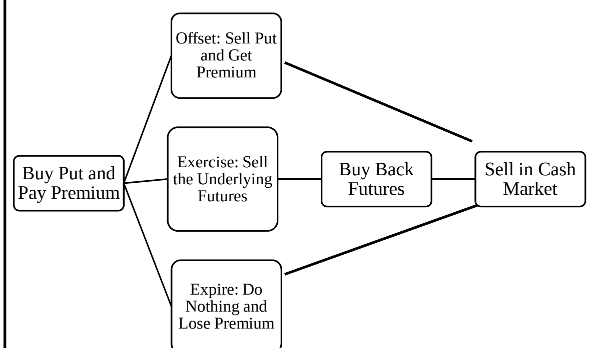
- Option – A contract that gives the buyer the right but not the obligation to obtain an item/service. The seller of the contract has an obligation to perform, should the buyer exercise the right.



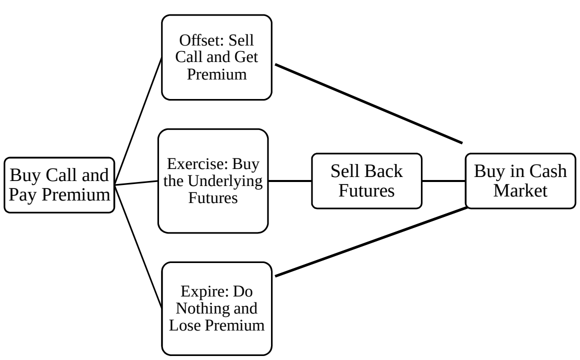
Types of Options Contracts

- Put – An option contract that the buyer has the right but not the obligation to sell a futures contract at specified price
  - Assume a short position – buying the right to sell at a contracted price
- Call – An option that the buyer has the right but not the obligation to purchase a futures contract at specified price
  - Assume a long position – buying the right to buy at a contracted price

Choices with a Put



Choices with a Call



Exercising An Option

Actions Taken	**Futures Situation**
Buy a call on APR feeder cattle at a strike price of $85.00/cwt for a premium of $2.00/cwt	Current price of APR feeder cattle at $86.00/cwt
Price Increase	
Exercise the call option and receive a buy position for the APR feeder cattle at $85.00/cwt. Sell APR feeder cattle futures at $90.00/cwt	APR feeder cattle increases to $90.00/cwt
+5.00 gain in futures -2.00 premium - .50 option brokerage fee - .50 futures brokerage fee Gain of $2.00/cwt	

Expiring An Option

Actions Taken	Futures Situation
Buy a call on APR feeder cattle at a strike price of $85.00/cwt for a premium of $2.00/cwt	Current price of APR feeder cattle at $86.00/cwt
Price Decrease	
Let the options contract expire and forfeit the $2.00/cwt premium	APR feeder cattle decreases to $82.00/cwt
-3.00 loss in futures -2.00 premium - .50 option brokerage fee <u>- .50</u> futures brokerage fee Loss of $6.00/cwt	

Do Not Exercise The Option!!!

How You Can use Futures to Manage Risk

Production Price Protection

- Production Hedge – Sell futures at harvest month and offset at harvest when you sell
- Storage Hedge – Sell futures at month of planned commodity liquidation and offset when you sell
- Rolling the Hedge – Shifting a production hedge into a storage hedge

Input Price Protection

- Input hedge - Buy futures at month of planned purchase and offset when you purchase input
- Rolling the Hedge – Shifting an input hedge from one contract month to another

- **Thank You**
- **Questions or Discussion !!!!**