Managing Volatility in Livestock Commodities

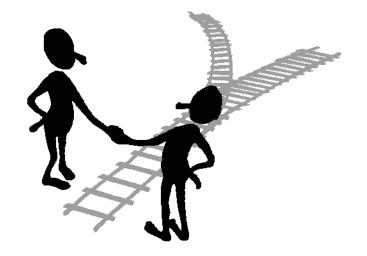
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Where Do We Want to Go?

- Reduced Risk?
 - Reduced volatility = greater certainty
 - Lower risk = lower returns





Where Do We Want to Go?

- Reduced Risk?
 - Lower volatility = greater certainty
 - Lower risk = lower returns
- Manage the risk(s) we are willing to accept at levels we are comfortable with

Where Do We Want to Go? Risk Management Strategies



Where Do We Want to Go? Types of Risk Preference

Risk Averse



Risk Neutral



• Risk Loving



- Better risk management
 - Evaluate risk(s)
 - Develop strategy
 - Use available tools



How Do We Get There? Tools Available

- Insurance
- Disaster Assistance Programs
- Risk Analysis



How Do We Get There? Tools Available

Insurance

- Price insurance
- Margin insurance
- Forage insurance
- Revenue insurance
- Non-insured Disaster Assistance Program
- Disaster Assistance Programs
- Risk Analysis



How Do We Get There? Price Insurance

- Livestock Risk Protection (LRP)
 - Designed to insure against declining market prices.
 - Producers may select from a variety of coverage levels and insurance periods that match the time the commodity would normally be marketed.

How Do We Get There? Price Insurance cont.

- Livestock Risk Protection (LRP)
 - Feeder cattle
 - Calves, steers, heifers, predominantly Brahman, and predominantly dairy cattle
 - Under 600 pounds or 600-900 pounds
 - 37 States Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

How Do We Get There? Price Insurance cont.

- Livestock Risk Protection (LRP)
 - Fed cattle
 - Steers and heifers 1,000 to 1,400 pounds
 - Up to 2,000 head per SCE
 - No more than 4,000 head per producer for each crop year
 - 37 States Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

How Do We Get There? Price Insurance cont.

- Livestock Risk Protection (LRP)
 - Swine
 - Up to 10,000 head of hogs per SCE
 - No more than 32,000 head per producer for each crop year
 - 37 States Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

How Do We Get There? Price Insurance cont.

- Livestock Risk Protection (LRP)
 - Lamb
 - Between 50 and 150 pounds
 - Up to 2,000 head per SCE
 - No more than 28,000 head per producer for each crop year
 - 28 States Arizona, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, Nevada, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

How Do We Get There? Margin Insurance

- Livestock Gross Margin (LGM)
 - Provides protection against the loss of gross margin (market value of livestock minus feeder cattle and feed costs)
 - LGM uses futures prices to determine the expected gross margin and the actual gross margin



How Do We Get There? Margin Insurance cont.

- Livestock Gross Margin Cattle
 - 11-month insurance period
 - Only cattle sold for commercial or private slaughter primarily intended for human consumption
 - 20 States Colorado, Illinois, Indiana, Iowa, Kansas, Michigan,
 Minnesota, Missouri, Montana, Nebraska, Nevada, North Dakota,
 Ohio, Oklahoma, South Dakota, Texas, Utah, West Virginia, Wisconsin and Wyoming

How Do We Get There? Margin Insurance cont.

- Livestock Gross Margin Swine
 - 6-month insurance period
 - Only swine sold for commercial or private slaughter primarily intended for human consumption
 - 20 States Colorado, Illinois, Indiana, Iowa, Kansas, Michigan,
 Minnesota, Missouri, Montana, Nebraska, Nevada, North Dakota,
 Ohio, Oklahoma, South Dakota, Texas, Utah, West Virginia, Wisconsin and Wyoming

How Do We Get There? Margin Insurance cont.

- Livestock Gross Margin Dairy
 - Gross margin LGM-Dairy (market value of milk minus feed costs)
 - 11-month insurance period
 - Only milk sold for commercial or private sale primarily intended for final human consumption from dairy cattle
 - 48 States Contiguous 48 states

How Do We Get There? Forage Insurance

- Forage Seeding and Forage Production
 Insurance
 - Covers losses of plantings of perennial alfalfa, perennial grasses, or a mixture thereof intended for harvest
 - Does not cover harvest by grazing
 - Does not cover over-aged stands

How Do We Get There? Forage Insurance cont.

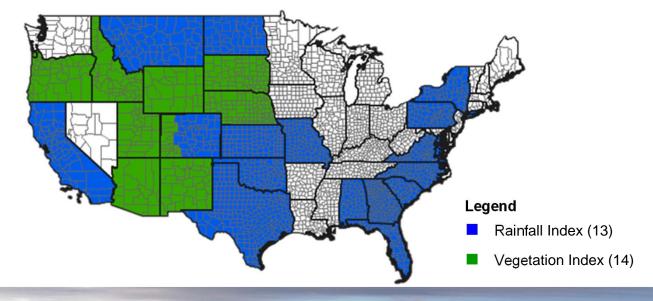
- <u>Vegetation Index</u> and <u>Rainfall Index</u> Pasture,
 Rangeland, Forage Pilot Insurance Program (PRF)
 - Designed to give forage and livestock producers insurance protection for losses of forage produced for grazing or harvested for hay
 - Covers a specific geographical area known as a grid
 - Coverage based on experience of the entire grid. NOT based on individual farms, ranches, or specific weather stations

How Do We Get There? Forage Insurance cont.

Vegetation Index and Rainfall Index - PRF

 Available in six regions across the country to test performance in various climates, soils, and weather

conditions

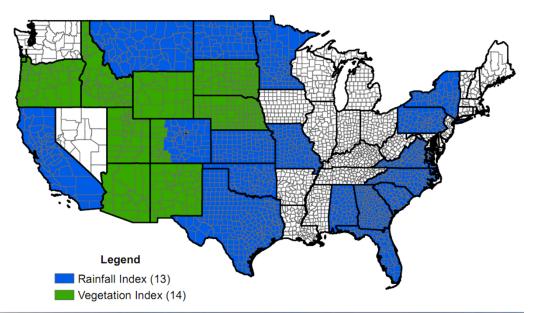


How Do We Get There? Forage Insurance cont.

Apiculture pilot insurance program

Provides a safety net for

beekeepers' primary income sources – honey, pollen collection, wax, and breeding stock





How Do We Get There? Revenue Insurance

- Adjusted Gross Revenue (AGR) and Adjusted Gross Revenue Lite (AGR-Lite)
 - Provide protection against low revenue due to unavoidable natural disasters and market fluctuations that affect income during the insurance year
 - Cover most farm-raised crops, animals, and animal products are eligible for protection



How Do We Get There? Revenue Insurance cont.

- Adjusted Gross Revenue (AGR)
 - 18 States California (selected counties), Connecticut, Delaware, Florida (selected counties), Idaho (selected counties), Maine, Maryland (selected counties), Massachusetts, Michigan (selected counties), New Hampshire, New Jersey, New York (selected counties), Oregon (selected counties), Pennsylvania (selected counties), Rhode Island, Vermont, Virginia (selected counties), and Washington (selected counties)

How Do We Get There? Revenue Insurance

- Adjusted Gross Revenue Lite (AGR-Lite)
 - 35 States Alabama, Alaska (selected counties), Arizona, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Kansas, Maine, Maryland, Massachusetts, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York (selected counties), North Carolina, Oregon, Pennsylvania (except Philadelphia County), Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

Non-insured Disaster Assistance Program (NAP)

- Available if there is no RMA actuarial offering for the commodity in the county
- Offered by the Farm Service Agency (FSA)
- Covers crops that are non-insurable, including crops grown for food, fiber, and livestock feed
- Covers low yields, loss of inventory, or prevented planting losses



How Do We Get There? Tools Available

- Insurance
- Disaster Assistance Programs
 - Supplemental Revenue Assistance (SURE)
 - Livestock Forage Disaster Program (LFP)
 - Livestock Indemnity Program (LIP)
 - Emergency Livestock Assistance Program (ELAP)
- Risk Analysis



How Do We Get There? SURE Program

- Provides disaster assistance to farms/ranches:
 - In a county where a disaster is declared by the Secretary of Agriculture, or
 - In a county adjacent to a declared county, or
 - Have experienced a farm wide crop loss in excess of 50 percent of expected production
- To be eligible, producers must buy crop insurance or Noninsured Disaster Assistance Program (NAP) for all acres of economically significant crops
- An eligible farm/ranch disaster payment is linked to the dollar amount of crop insurance coverage the farm obtains

How Do We Get There? Livestock Forage Disaster Program (LFP)

- Provides compensation to eligible livestock producers who have suffered grazing losses due to qualifying <u>drought</u> or <u>fire</u>
- To be eligible, producers must purchase rangeland insurance or Non-insured Disaster Assistance Program (NAP) for all forage acres

How Do We Get There? Livestock Indemnity Program (LIP)

- Provides payments to eligible livestock owners and contract growers for livestock death losses in excess of normal mortality due to adverse weather
- Does NOT have a risk management purchase requirement for program benefit eligibility
- Payments are based on eligible losses due to adverse weather conditions

How Do We Get There? ELAP Program

- ELAP covers losses NOT covered under other disaster assistance programs: SURE, LFP, or LIP
- Payments are limited to \$100,000 per year per person or legal entity, a combined limit with SURE, LFP, and LIP

How Do We Get There? ELAP Program cont.

Covered losses include:

- Grazing losses due to adverse weather or eligible loss conditions
- Loss of forage or feedstuffs raised by livestock producers
- Cost of transporting additional feed to eligible livestock
- Costs of purchasing additional feed above normal quantities
- Payments for death loss above normal mortality rates
- Loss of feed intended for honeybees or farm-raised fish.
- Honeybee colony or hive losses due to colony collapse disorder
- Losses due to fish deaths from weather or eligible loss conditions
- Livestock, honeybee or farm-raised fish losses that are not related to adverse weather or eligible loss conditions

How Do We Get There? ELAP Program cont.

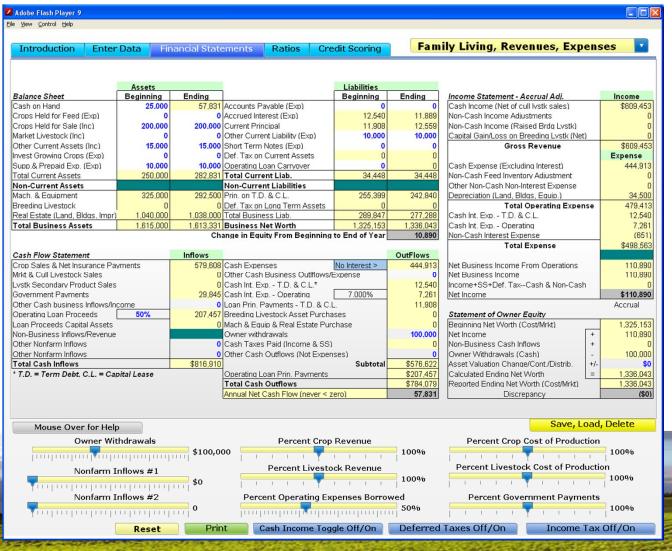
- ELAP has a risk management purchase requirement:
 - To be eligible for ELAP payments, producers on a farm or ranch must purchase insurance for each insurable crop excluding grazing land.
 - For non-insurable crops, producers must purchase NAP coverage when available, except grazing lands.
 - Persons without insurance or NAP coverage may be exempt from the risk management purchase requirement if they are socially disadvantaged, limited resource, or a beginning farmer or rancher

How Do We Get There? Tools Available

- Insurance
- Disaster Assistance Programs
- Risk Analysis
 - Financial Analysis
 - Price Risk Analysis
 - Price and Production Risk Analysis

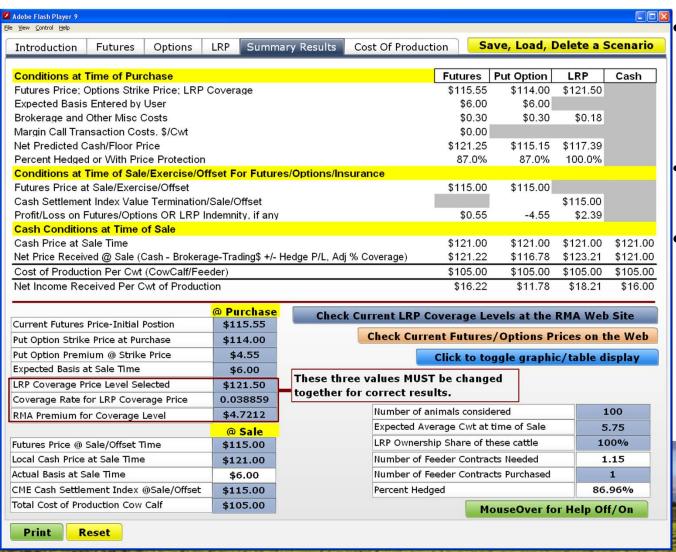


How Do We Get There? Financial Analysis: RDFinancial



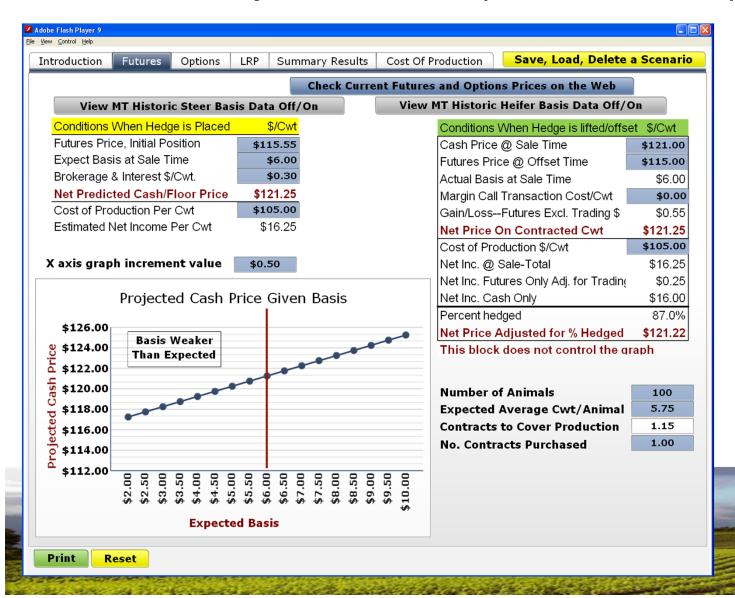
- Ag In Uncertain Times "Determining Financial
 Health (RDFinancial)"
 webinar offered on
 November 18, 2009
- http://FarmManagement.org/ AgInUncertainTimes
- Click on Recordings in the right sidebar

How Do We Get There? Price Risk Analysis: Futures, Options, LRP Comparison



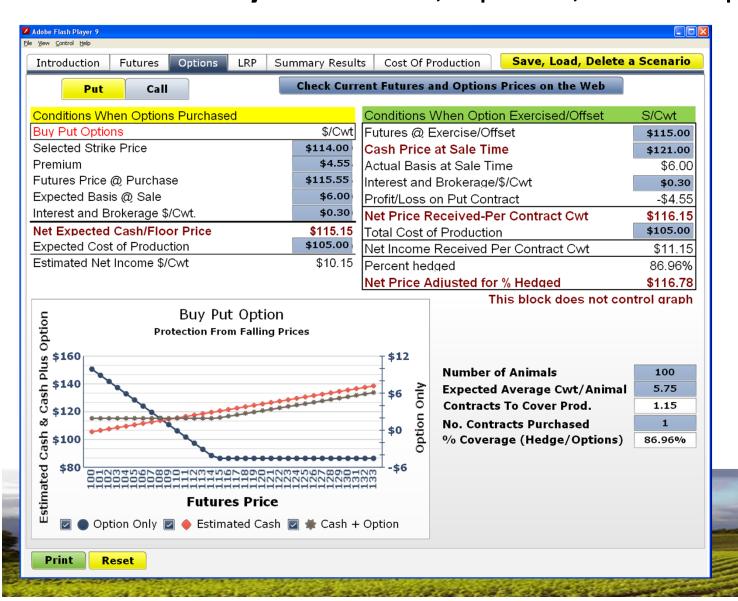
- Farm Management Wiki tool "Futures, Options, LRP Comparison"
- http://FarmManagement.org/ Wiki
- Click on Contents >
 Tools > "Futures
 Options LRP
 Comparison"

Price Risk Analysis: Futures, Options, LRP Comparison cont.



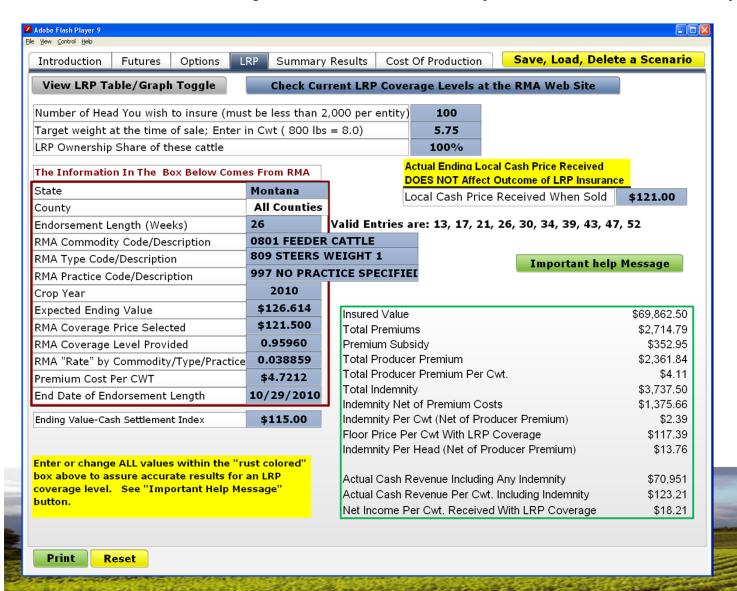
Futures Assumptions

Price Risk Analysis: Futures, Options, LRP Comparison cont.



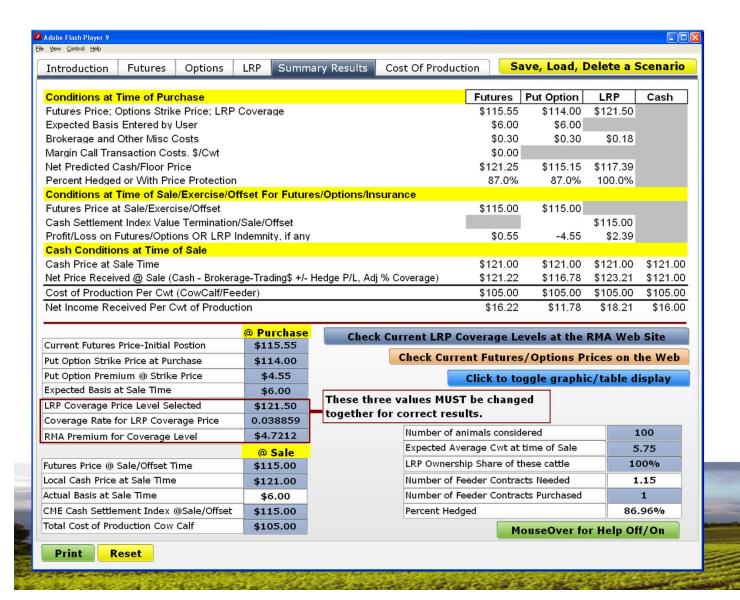
Options Assumptions

Price Risk Analysis: Futures, Options, LRP Comparison cont.



LRP Assumptions

How Do We Get There? Price Risk Analysis: Futures, Options, LRP Comparison cont.



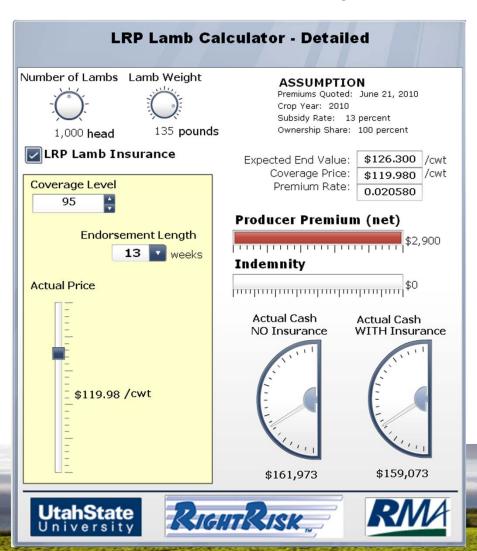
Summary Results

Price Risk Analysis: Cull Cow Marketing and Feeding Alternatives

Cull Cow Feeding Calculator and Price Forecaster This calculator is designed to predict cull cow prices 1-6 months into the future. The price prediction is based on historical seasonal price relationships and historical relationships between cull cow grades. The price prediction is also based on the body condition score and expected market class for the cows. Enter data in the clear cells and the calculator will calculate the grey cells. Average daily gain can be negative on some rations. After entering feeding costs on the next screen, the calculator will determine your expected net return from feeding and calculate an expected break-even selling price. Present Date (mm/dd) 12/8 Present BCS of Cull Cows Estimated Cow Weight (lbs.) Present Market Price for a Cutter/Lean 85%-90% Lean(\$/cwt) Estimated Value Today (\$/head) 0.00 Number of Days on Feed Expected Avg Daily Gain (lbs.) Expected Final Weight (lbs.) Expected Sale Date (mm/dd) 12/8 No Commercial Market Expected BCS of Cull Cows 3.0 Expected Market Price for a Cutter/Lean 85%-90% Lean(\$/cwt) 0.00 Estimated Value at end of feeding (\$/head) 0.00 Reset Next

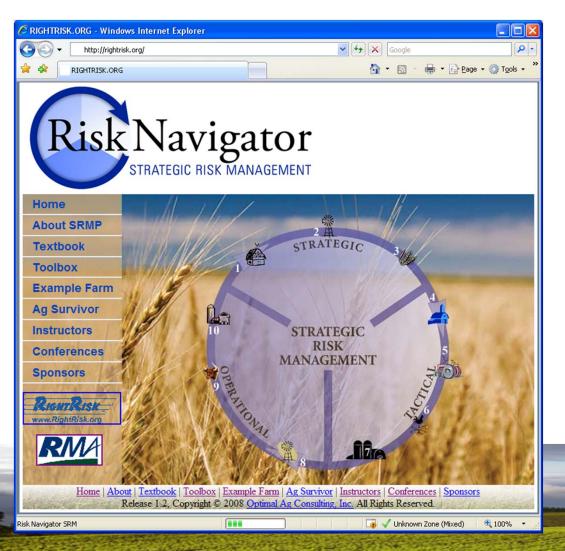
- Farm Management
 Wiki tool "Cull Cow Marketing"
- http://FarmManagement.org/ Wiki
- Click on Contents > Tools > "Cull Cow Marketing"

How Do We Get There? Price Risk Analysis: LRP Lamb



- Farm Management Wiki tool "LRP Lamb"
- http://FarmManagement.org/ Wiki
- Click on Contents > Tools > "LRP Lamb"

Price and Production Risk Analysis: Risk Navigator tools



- Farm Management Wiki tool "Risk Navigator"
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Price and Production Risk Analysis: Risk Navigator tools



- Risk Profiler
- Stochastic Budget
 Generator
- Risk Ranker
- Risk Influence Calculator
- Value At Risk
- Over 40 tools in all. . .

Managing Volatility in Livestock Commodities

How Do We Get There?

Tools Available

Insurance

- Disaster Assistance Programs
- Risk Analysis



