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Risk Management Tools for Livestock Producers and Educators

2000 Southern Region Outlook Meeting

Atlanta, GA

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Risk Management Tools for Livestock Producers and Educators

■ Sources of risk for livestock producers :

- Production risk
- Price risk
- Financial risk
- Policy/International trade risk
- Legal/Regulatory risk
- Human Resource risk



Production risk

- Primarily weather related, usually drought. The most difficult problem facing producers.
 - Feeding decisions
 - Early weaning decisions
 - Culling decisions



Production risk - Drought Management

- Drought impacts more than just current period production and most of the investment/disinvestment decisions are related to noncurrent assets.
- Sensitivity analysis using capital budgeting tools needs to be employed in addressing the problems of feeding decisions, early weaning decisions and culling decisions.



Production risk- Drought Management

	1991	1992	1993	1994	1995	1996	1997	1998
Observations	40	94	32	60	45	36	25	35
Calving Percentage	83.5	87.1	88.2	86.3	85.2	86.2	84.1	87.0
Calving Death Loss Percentage	3.6	3.7	2.8	4.6	3.8	2.6	5.6	3.2
Calf Crop Percentage	80.0	83.4	84.8	81.7	81.6	83.6	77.6	83.9

SPA data from a total of 387 observations over eight years are included for herds located in Alabama, Florida, Georgia, Missouri, Mississippi, New Mexico, Oklahoma, and Texas.



Production risk - Drought Management

- Sensitivity analysis using capital budgeting tools should be employed in addressing the problems of feeding decisions
 - Develop a baseline net present value analysis for the major age groups of cows in the herd.
 - Parameterize the feed component of cow maintenance cost in the present period.
 - Maximum feed outlay given when the net present value is zero.



Production risk - Drought Management

- Sensitivity analysis using capital budgeting tools should be employed in addressing the problems of early weaning decisions
 - Develop a baseline net present value analysis for the major age groups of cows in the herd.
 - Parameterize the weaning weight and feed component of cow maintenance cost in the present period along with the subsequent calf crop.
 - Decision rule would be to select the largest net present value between early weaning and baseline.



Production risk - Drought Management

- Sensitivity analysis using capital budgeting tools should be employed in addressing the problems of culling decisions
 - Develop a baseline net present value analysis for the major age groups of cows in the herd.
 - Decision rule would be to cull the age groups of cows in the herd with the smallest net present value.



Production risk

- Capital budgeting tools require information from good production and financial record keeping systems.
- Southern Extension Farm Management Committee's Record-keeping Subcommittee (Dr. Damona Doye, chair) is sponsoring a cattle record keeping workshop at the SAEA winter meetings in Fort Worth on Jan 30-Jan 31.
- Southern Extension Farm Management Committee's Record-keeping Subcommittee (Dr. Damona Doye, chair) is sponsoring a financial record keeping workshop after the Southern Extension Committee meetings in Ashville in June 2001.



Production risk

- A very good review of beef cattle production record keeping systems may be found at <http://www.ansi.okstate.edu/exten/beef/> titled CR-3279 "Cow-calf Production Record Software" by Dr. Sally Dolezal.
- A paper on the use of capital budgeting models in cow-calf production management titled "Analyzing Replacement Stock Alternatives (RM1-4)" can be found at trmep.tamu.edu/cg/list.htm .
- Spreadsheet templates in Lotus and Excel format of capital budgeting models may be found at agfacts.tamu.edu/~lfalcone/llfmasterframeset.html .



Price risk

- Management of price risk through development of marketing plans :
 - Setting price objectives - includes cost of production estimates and analysis of the firm's financial position
 - Fundamental and technical market analysis
 - Evaluation of marketing alternatives
 - Development of marketing strategies
 - Implementation and evaluation of plan



Price risk

- Southeastern Beef Cattle Marketing School being hosted at Clemson during October 22-25, 2000 and organized by Dr. Jim Rathwell (864 656-3475) will concentrate on development of marketing plans for cattle producers.
- There are many good resources available on the Internet related to price risk management.
- Marketing education using simulation techniques has been well received by Extension audiences. The "Fed Cattle Market Simulator" developed at Oklahoma State University is a very good tool to use in teaching pricing concepts at the wholesale beef and live cattle level.

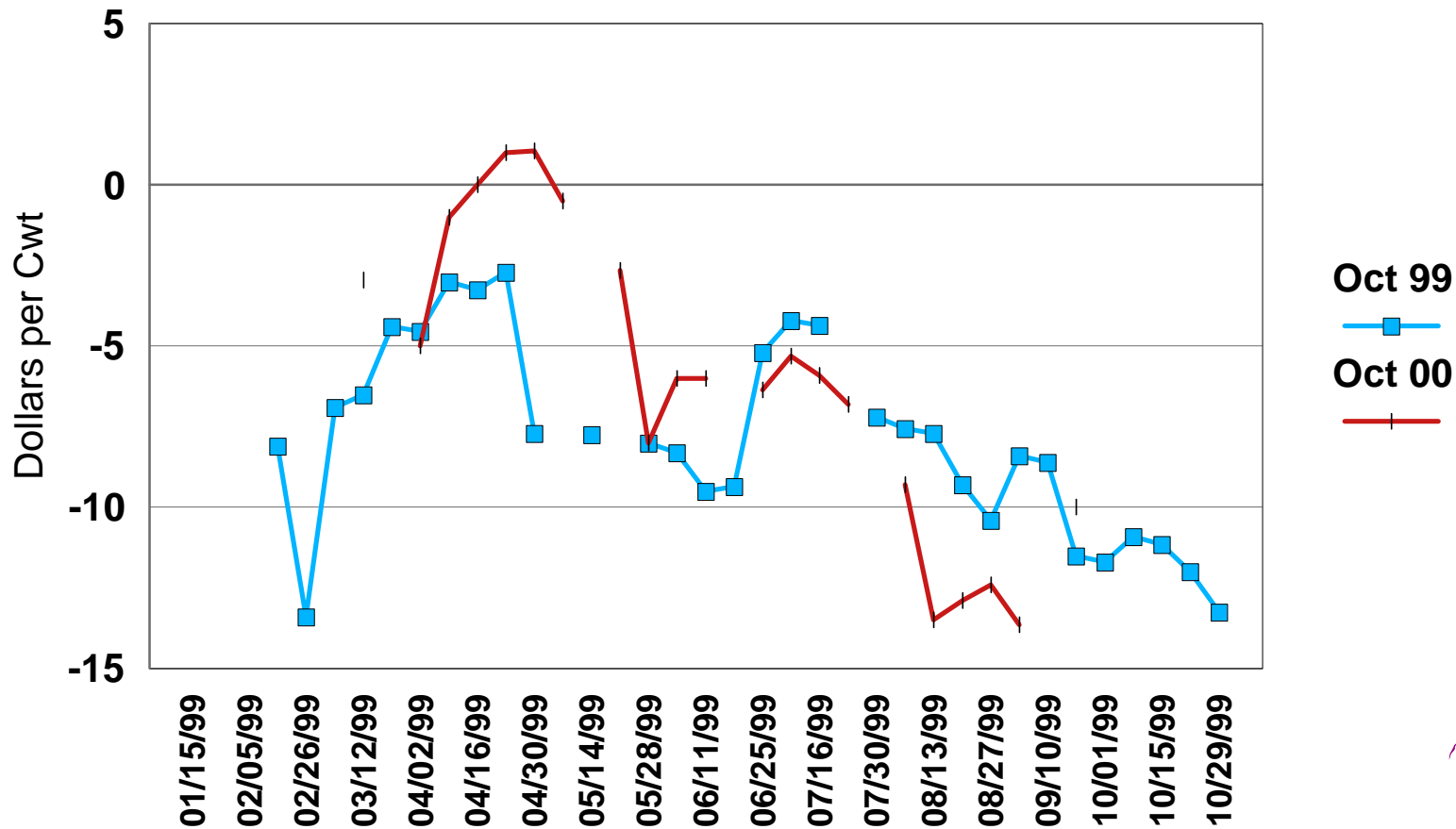


Price risk

- Until the introduction of the Stocker Cattle Futures Contract and Options by the Chicago Mercantile Exchange there has not been a good vehicle to shift price risk at the cow-calf level using futures and options.
- Since this is a new tool, I would like to present some information related basis performance over the past two seasons to determine if basis patterns have been predictable.



October Stocker Basis at Beeville, Texas for 500-600 Medium and Large #1 Steers



Price risk

- The "Stocker Cattle Market Workshop" has been developed to familiarize cow-calf producers with price risk management techniques built around the cash markets, forward cash contracts, and stocker cattle futures and options introduced by the Chicago Mercantile Exchange.
- Participants are introduced to concepts of how price targets can be set for their calves, how basis levels can be estimated, and how seasonal and cyclical price patterns may be used to the advantage of cow-calf producers.



Stocker Cattle Market Workshop

- The workshop includes development of a scenario that provides a participant the financial and production information necessary to develop a marketing plan for the exercise.
- Participants are then provided market information in six separate periods, in which they may execute any portion of their marketing plan. These marketing plans can include selling directly into a cash market, selling with futures and options on futures and forward cash contracting.
- Production risk is incorporated by having the participant draw for any one of three states of nature.
- Participants are then separated by states of nature and provide the entire group with explanations of their marketing plan and how that plan was executed.



Stocker Cattle Market Workshop

- The participant with the largest return for each state of nature is provided a prize.
- The final part of the workshop is an evaluation by participants.
- This workshop is based on the format of the Risked Assessed Management and Marketing workshops developed at Kansas State and the Stocker Marketing Workshop developed by the Chicago Mercantile Exchange.



Financial risk

- Education efforts targeted towards cow-calf producers on financial risk management are very timely given the current position in the cattle cycle.
- Good tools are available to address how changes in activities such as herd expansion, land acquisition by lease or purchase and retained ownership will impact the financial position and performance of the ranch.
- Oklahoma State Fact Sheets WF-237 "Farm and Ranch Stress Test" and WF-238 "Farm and Ranch Financial Trends Worksheet" are excellent introductory materials.
- Oklahoma State's Integrated Farm Financial Statements Software is a very good planning tool working from the enterprise level to develop whole ranch financial statements.



Conclusion

- Encourage interested educators to attend the SEFMC sponsored meetings at Fort Worth and Ashville.
- Many good risk management tools are available that address problems faced by cattle producers.
- If you have any suggestions for regional trainings with regard to risk management that could be sponsored by the SEFMC, please contact me at L-falconer@tamu.edu .

