



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**Financing Agriculture and Rural America:  
Issues of Policy, Structure and Technical Change**  
Proceedings of the NC-221 Committee Annual Meeting  
Denver, Colorado  
October 7-8, 2002

Matthew A. Diersen, Editor  
Econ Pamphlet 2003-1  
June 2003

Department of Economics  
South Dakota State University  
Brookings, South Dakota

## Preface

This publication relates activities by guests and participants of the NC-221 Committee during the annual meeting held October 7-8, 2002. The meeting itself was graciously hosted by CoBank in Greenwood Village, Colorado, a Denver suburb.

The Executive Committee of James Ryan, Matthew Diersen, and Brent Gloy selected the papers and arranged the meeting. On behalf of the NC-221 committee we acknowledge the excellent presentations and insights shared by our invited speakers and panelists: Steve Staley, Renee Lloyd, Susan Hine, Norman Dalstead, Allen Featherstone, Pat Sullivan, and Eddy LaDue. The committee also acknowledges the assistance of Penny Stover in preparing this manuscript.

The selected papers are included along with two papers where only the presentations are available. The final views and editing decisions are those of the authors. More information about the NC-221 project, "Financing Agriculture and Rural America: Issues of Policy, Structure, and Technical Change" can be obtained at

<http://www.ace.uiuc.edu/NC221/>

Matthew A. Diersen  
NC-221 Vice-Chair, 2001-2002



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Larry Tidemann, Director of Extension, Associate Dean, College of Agriculture & Biological Sciences, South Dakota State University, Brookings. SDSU is an Affirmative Action/Equal Opportunity Employer (Male/Female) and offers all benefits, services, and educational and employment opportunities without regard for ancestry, age, race, citizenship, color, creed, religion, gender, disability, national origin, sexual preference, or Vietnam Era veteran status.

30 copies printed by CES at a cost of \$7.30 each. June 2003.

## Table of Contents

Preface .....	2
Agenda.....	4
Minutes.....	6
<b>Selected Papers</b>	
Determinants of Farm Credit Risk Migration Rates - <i>Cesar L. Escalante, Timothy A. Park, Peter J. Barry, and Ebru Demir</i> .....	10
Factors Affecting Chapter 12 Bankruptcy Filings in the United States: A Panel Data Model - <i>Bruce L. Dixon, Nan Ma, Bruce L. Ahrendsen, Latisha A. Settlage, and Jerome M. Stam</i> .....	22
A Study of the Risk of Issuing FSA Guarantees on Contract Land Sales to Beginning Farmers - <i>Charles Dodson</i> .....	41
A Comparative Study of the Financial Performance of Grain and Oilseed Farms in Ontario and Illinois - <i>Calum G. Turvey and Paul Ellinger</i> .....	60
Financial Management Practices and Farm Profitability - <i>Brent Gloy and Eddy LaDue</i> .....	93
An Empirical Examination of the Relationship Between Real Options Values and the Rate of Investment in the Food and Life Science Industries - <i>Luisa Menapace and Calum G. Turvey</i> .....	112
Government Program Payment Mechanisms, Crop Revenue Coverage Insurance, and the Return to Farm Land - <i>Allan W. Gray, Michael Boehlje, Brent A. Gloy, and Stephen P. Slinsky</i> .....	128
Evaluation of Risk Reductions Associated with Multi-Peril Crop Insurance Products – <i>Gary D. Schnitkey, Bruce J. Sherrick, and Scott H. Irwin</i> .....	149
Bank Risk Ratings and the Pricing of Agricultural Loans - <i>Nick Walraven and Peter J. Barry</i> .....	173
Farm Values and Financial Performance of Diversified Farms - <i>Ani L. Katchova</i> .....	186
<b>Additional Presentations</b>	
The Farm Sector Balance Sheet: A Partitioning of Operator, Landlord, and Contractor Contributions - <i>James T. Ryan</i> .....	194
A Bayesian Examination of Financial Constraints and Farm Investment - <i>Chad Hart and Sergio H. Lence</i> .....	203

## Agenda

Monday, October 7, 2002

7:30 Continental Breakfast

8:00 Greetings from NC-221 Chairman James Ryan

8:15 Invited Speaker: Steve Staley – CoBank  
“Practical Implications of Economic Capital Modeling to CoBank”

9:00 Invited Speaker: Renee Lloyd - National Cattlemen's Beef Association  
“Beef Industry Update”

9:45 Break

10:15 Selected Paper Session #1

Barry, P.J., T. Park, C.L. Escalante, and E. Demir. “Financial, Demographic and Structural Determinants of Farm Credit Risk Migration Rates.”

Dixon, B.L., N. Ma, B.L. Ahrendsen, L.A. Settlege, and J.M. Stam. “Factors Affecting Chapter 12 Bankruptcy Filings in the United States: A Panel Data Model.”

Dodson, C. and S. Koenig. “Analysis of Risks of USDA Guarantees on Contract Farmland Sales.”

12:00 Lunch

1:00 Selected Paper Session #2

Turvey, C.G. and P. Ellinger. “A Comparative Study of the Financial Performance of Grain and Oilseed Farms in Ontario and Illinois.”

Gloy, B. and E. LaDue. “Financial Management Practices and Farm Profitability.”

Menapace, L. and C.G. Turvey. “An Empirical Examination of the Relationship Between Real Options Values and the Rate of Investment in the Food and Life Sciences Industries.”

2:30 Sub-committees & Break

3:00 Selected Paper Session #3

Gray, A.W., M. Boehlje, B.A. Gloy, and S.P. Slinsky. “Government Program Payment Mechanisms, Crop Revenue Coverage Insurance, and the Return to Farm Land.”

Sherrick, B., G. Schnitkey, and S. Irwin. “The Impacts of Crop Insurance Usage on Farm-level Crop Revenue Distributions.”

Walraven, N. and P. Barry. “Bank Risk Ratings and the Pricing of Farm Loans.”

4:30 Business Meeting w/ comments from E. Hoilberg

5:00 End

Tuesday, October 8, 2002

7:30 Continental Breakfast

8:00 Special Session: "Research Ideas from Multiple Perspectives"

Panelists: Susan Hine (Colorado State University), Norman Dalstead (Colorado State University), Allen Featherstone (Kansas State University), Pat Sullivan (Economic Research Service), and Eddy LaDue (Cornell University)

10:00 Break

10:15 Selected Paper Session #4

Ryan, J.T. "The Farm Sector Balance Sheet: A Partitioning of Operator and Landlord Contributions."

Katchova, A.L. and C. Ciappa. "The Effect of Diversification on Farm Value and Financial Performance."

Hart, C. and S.H. Lence. "Cash Constraints and Farm Investment: A Bayesian Analysis"

12:00 Lunch

1:00 Business Meeting

2:00 End

## Minutes

NC-221 Financing Agriculture and Rural America: Issues of Policy, Structure, and Technical Change

Report as of November 8, 2002 covering: October 2001 – September 2002

**Administrative Advisor:**

Dr. Eric Hoiberg  
Iowa State University  
Agriculture Administration  
Ames, IA 50011

**Chair:**

Dr. James Ryan  
Economic Research Service  
United States Department of Agriculture  
1800 M Street, NW  
Washington, D.C. 20036

**Vice-Chair:**

Dr. Matthew Diersen  
South Dakota State University  
Economics Department  
Brookings, SD 57007

**Secretary:**

Dr. Brent Gloy  
Cornell University  
Dept. of Applied Economics and Management  
Ithaca, NY 14853

**Participants:**

Calum G. Turvey (Rutgers University), Ani Katchova (University of Illinois), Sergio Lence (Iowa State University), Eric Hoiberg (Iowa State University), Timothy Park (University of Georgia), William Nganje (North Dakota State University), Brent Gloy (Cornell University), Cesar L. Escalante (University of Georgia), Jason Henderson (Center for the Study of Rural America), Cole Gustafson (North Dakota State University), Eddy LaDue (Cornell University), James Ryan (Economic Research Service), Bruce Sherrick (University of Illinois), Matt Diersen (South Dakota State University), Bruce Dixon (University of Arkansas), Allen Featherstone (Kansas State University), Norman Dalstead (Colorado State University), Susan Hine (Colorado State University), Brian Brinch (Farmer Mac), Renee Lloyd (National Cattlemen's Beef Association), Patrick Sullivan (Economic Research Service), Charles Dodson (Farm Service Agency), Nick Walraven (Federal Reserve Board), Glenn Pederson (University of Minnesota), Steve Hanson (Michigan State University), and William Nganje (North Dakota State University)

**Annual Meeting Minutes**

The 2002 Annual Meeting of NC-221 was held October 7 and 8 in Denver, Colorado at the headquarters of CoBank. The meeting was called to order at 8:00 A.M. on October 7 by Chairman James Ryan. The first two items on the agenda were presentations by speakers from the agribusiness industry. The meeting began with a welcome and presentation by Steve Staley of CoBank. He spoke about the practical implications of economic and capital modeling from the perspective of CoBank. He encouraged the group to continue to conduct research on the implications of economic capital modeling. Next, Renee Lloyd of the National Cattlemen's Beef Association gave an update on the beef industry and how the association was working to add value for its members. Two of the tools that they have developed for their members, record keeping handbooks and benchmarking reports, were directly related to agricultural finance. She then discussed some of the challenges that the association faces when conducting educational programs for their members.

The participants spent the rest of the morning and early afternoon in 3 sessions of selected papers. The papers presented in these sessions addressed the objectives of NC-221 and were the products of the work of NC-221 members. A total of 9 papers were presented in these

sessions. Nearly all of the papers were the product of several multi-state, multi-institution collaborations. In total, the works of 26 authors were presented during the 3 sessions.

The papers were grouped into sessions according to subject matter. The first session addressed the general area of credit risk and the interaction of policy, credit risk, and credit delivery. The papers presented during the second selected paper session examined the factors that led to financial performance differences between Canadian and Illinois grain farms, the impact of financial management practices on farm profitability, and the factors influencing investment in food and life sciences industries. In the third session, two papers examined the impact of crop insurance on the returns to farming, and another examined the factors that influence agricultural loan pricing. The specific topics covered by these papers included:

- Determinants of credit risk migration rates
- Factors affecting Chapter 12 bankruptcy filings
- Analysis of USDA guarantees on contract land sales
- Financial performance of farms in Ontario and Illinois
- Financial management practices and farm profitability
- Real option values and investment in food and life sciences industries
- Government payments, crop insurance, and returns to farmland
- Crop insurance usage and farm level crop revenue distributions
- Bank risk ratings and farm loan pricing

The first day of the meeting ended with an update from the project adviser Dr. Eric Hoiberg. He described the process that must be followed to renew the project and complete the current project. Members were informed that the new NIMSS system must be used to submit the new proposal. Hoiberg also told that group that a proposal must include a statement of issues, justification, and objectives. In addition, a successful proposal should include a discussion of the methods, milestones, outreach, organization, and governance. It was believed that these materials needed to be completed by March 2003. Hoiberg encouraged the group to consider how they might broaden the scope or focus of the project.

The meeting resumed the next morning. In the initial session, a panel discussed 1) their views on the most pressing needs of the rural sector with respect to finance, and 2) how these needs presented opportunities for the members of NC-221. The first speakers on the panel informed the group of the finance related extension activities that had been taking place at Colorado State University. The group provided some perspective on unique approaches to extension and the finance problems they are addressing. The next speaker on the panel was Patrick Sullivan of the Economic Research Service. He identified a wide range of policy questions that the group might consider. Among the long list of issues that he raised were the distributional impacts of farm program payments/benefits, rural development and the financing of non-farm agribusinesses, and the impact of non-local ownership of banks on credit control and access. Dr. Sullivan encouraged the group that there were a wide number of policy questions that are important, remain unanswered, and for which agricultural finance is a critical component of the problem.

The next speaker on the panel was Eddy LaDue of Cornell University. Dr. Ladue discussed a variety of issues for the group's consideration. He categorized these issues according to farm level finance, financial institutions, and agricultural policy. At the farm level, the issues included looking at critical performance measures for farms across states. He pointed out that several states have farm record keeping associations and a greater effort should be made to summarize these results nationwide. He suggested that the regional research group would be particularly well suited for this type of project. Ladue also pointed out that there were significant



opportunities to expand the focus of the group beyond farm level finance and to conduct additional work with agribusiness finance. Because many of these problems are national in nature, the regional research approach is particularly well suited for these studies. In addition, he argued that there are still significant questions related to financing of small farms. At the institution level he discussed the need for a study of the competitiveness of the sector in light of the development of large financial institutions, as well as continuing to look at the impact of economic risk modeling required by the Basel accords, among other things. At the policy level he suggested there was a substantial need to look at the risk protection that is provided by government policy, how safety nets might function, and what impact these factors have on capital investment and capital asset values in agriculture.

The final panelist was Allen Featherstone of Kansas State University. Dr. Featherstone identified a number of issues that deserve the group's attention. Among other things, Featherstone identified several potential research topics. He suggested that one of the benefits of the regional research group is that a group can attack a big and somewhat risky project. He suggested that there is a need to examine how the entire grain and supply system value chain will reorganize in light of their continuing financial struggles. In addition, he sees a need to understand how much value managers and/or entrepreneurs create for agricultural businesses functioning as value added businesses as opposed to commodity production businesses. Related to this issue is the idea of lending on the basis of human capital versus collateral based lending. In order to attract funds to human capital based business, perhaps there is a need to examine the role that equity capital institutions might play in the rural economy. He also pointed out the importance of conducting research addressed at the recapitalization of the agricultural industry should a bioterrorism event occur. Featherstone also suggested that it is important to understand how the U.S. agricultural sector is competitively positioned internationally.

The panel was used to initiate a discussion of the NC-221 proposal submission. There were several perspectives offered on the directions that the group might take. It was determined that one might view the various directions along two dimensions: conceptual focus and area of application. The areas of interest that were identified on the conceptual focus dimension were 1) policy, 2) capital/credit availability, 3) financial institutions 4) financial management, and 5) macro impacts/competitiveness. Likewise, four potential areas of application were identified: farm level research, institution level research, agribusiness/food system research, and the rural economy. Members then discussed how their current NC-221 research fell along these dimensions. For instance, the group has made a considerable contribution in the policy area and a great deal of the work has focused on outcomes in the farm and food system sectors. It was decided that these dimensions would form an important research agenda and framework for the proposal. Further, it is believed that the regional research approach will facilitate much of this work. The group will now survey current and potential members regarding their interest in participating in such a project. Cole Gustafson of North Dakota agreed to chair the proposal writing committee. The additional members of the writing committee are Brent Gloy, Eddy LaDue, Matthew Diersen, and Allen Featherstone.

The agenda then turned to the next steps in finishing the current project. It was determined that the minutes from this meeting need to be filed within 60 days of the meeting, that an annual report be filed for this meeting, and that a termination report would need to be filed after the final meeting of the project in 2003. Eddy LaDue also reported on the status of the Agricultural Finance Review and encouraged submissions from group members.

The group then participated in a final selected paper session. During this session three papers were presented representing the work of 6 authors. The papers addressed topics relating to

the effect of diversification of financial performance, measuring operator and landlord contributions to the national farm balance sheet, and how credit constraints impact farm investment decisions.

The chair appointed a committee to determine a suitable location for the 2003 meeting. The committee was composed of Brent Gloy, Eddy LaDue, and Allen Featherstone. The committee reported that Kansas City had been identified as the first choice for the location of the meeting. It was agreed that the best potential host in Kansas City was the Federal Reserve Bank and the Center for the Study of Rural America. Minneapolis/St. Paul was chosen as the backup location. Tentative plans are that the meeting will be held on October 6-7, 2003.

The nomination committee reported that Timothy Park had agreed to be nominated as the secretary of the group. The group unanimously approved this selection. The group also unanimously approved Matthew Diersen as chairman and Brent Gloy as vice-chairman for 2002-2003.

Submitted by: Brent Gloy, NC-221 Secretary