

Department of Agribusiness and Applied Economics

North Dakota State University

July 1, 2001 to June 30, 2002

Annual Report

### **The Mission of the Department of Agribusiness and Applied Economics**

The mission of this Department is to provide objective economic analysis to support informed decision making in areas of resource allocation, business management, and public policy for the people of North Dakota and beyond. Faculty and staff shall provide high-quality education programs for undergraduate and graduate students and for audiences across the state reached through University outreach efforts.

*from:*

*Departmental Rules of Governance*

*September 26, 2000*

<http://www.ext.nodak.edu/homepages/aeddept/minutes/Rules-of-Governance.htm>

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## **Introduction and Departmental Overview**

The Department of Agribusiness and Applied Economics strives to improve public and private decision making through teaching, research, and outreach activities soundly based on economic science.

Teaching programs include offering undergraduate majors in Agribusiness, Agricultural Economics, and Economics. A graduate M.S. degree is offered in Agribusiness and Applied Economics with options in applied research, agribusiness, transportation, and natural resource management. Departmental involvement in three new Ph.D. programs resulted from efforts undertaken in 2001-2. Economics options are available in the new Ph.D. programs in Transportation and Logistics, Food Safety, and Natural Resource Management.

Research projects resulted in 19 journal articles and 32 departmental reports in 2001. Topics ranged over a variety of production, marketing, and economic development topics relevant to the state and nation. The Department topped the list of NDSU units generating extramural funds in 2001. New and continuing grants and contracts totaled \$3,387,893 for the year.

Extension activities included service to North Dakota citizens through cooperative education programs, contributions to the development of the new Farm Bill, community economic development projects, and marketing, management and financing workshops for agricultural producers and local Extension staff.

Additional information about the Department and its associated research and outreach Centers can be found at:

The Department of Agribusiness and Applied Economics at North Dakota State University:

<http://www.ext.nodak.edu/homepages/aeddept/index.html>

The Center for Agricultural Policy and Trade Studies:

<http://www.ag.ndsu.nodak.edu/capt/>

The Quentin Burdick Center for Cooperatives:

<http://www.ag.ndsu.nodak.edu/qbcc/>

The North Dakota State Data Center:

<http://www.ndsu.nodak.edu/sdc/>

# **I. GOALS/ACCOMPLISHMENTS CURRENT YEAR (COLLEGE/UNIT)**

## **A. DISSEMINATION - INSTRUCTION AND STUDENT SUCCESS**

### **1. Teaching Initiatives**

Teaching initiatives in 2001-2002 primarily consisted of further refinements in the department's courses and programs of study. Faculty development efforts included selection of Stan Herren, Ed O'Relley, and Cheryl Wachenheim as Fellows of the Faculty Institute for Excellence in Learning (FIEL). The FIEL program emphasizes techniques involving active learning, cooperative learning, and problem-based learning for the improvement of student learning.

### **2. Incorporation of Technology in Teaching**

The Department continues to adopt new technology to enhance teaching. Class information is available on the web for all classes taught by the Department. Course information can be found at:

[http://www.ext.nodak.edu/homepages/aeddept/classes\\_spring.htm](http://www.ext.nodak.edu/homepages/aeddept/classes_spring.htm)

The Department's internet site continues to be updated with reports of student activities. New additions to the OnLocation site this year include reports from the NAMA team during the competition in Nashville and daily entries from the 11 students participating in this year's summer exchange program with the Ecole Superieure d'Agriculture in Angers, France.

Cole Gustafson taught ECON 202 (Principles of Macroeconomics) for the first time in the spring semester. Dr. Gustafson followed the departmental practice of posting class outlines on the web. As a departmental first, he used online testing in the class using BlackBoard resources. Plans for AY03 are to provide a completely online section of ECON 202.

### **3. Advising Efforts**

Students majoring in Agricultural Economics are assigned individual advisors. A rotating schedule of assignments assigns three faculty to incoming freshmen and transfer students each year. Faculty retain the same advisees during the students' progress through their undergraduate programs unless students request changes. The number of advisees assigned to each faculty member averages 13 students. There were 150 undergraduate students listed as Ag Econ (106 students), Agribusiness (41), or Economics (18) majors at the beginning of the spring 2002 semester on the list of students and advisors distributed from the Registrar's office.

Advisor:	Freshmen	Sophomores	Juniors	Seniors	Total
DeVuyst, C.	5	1	3	0	9
DeVuyst, E.	0	10	1	8	19
Herren, S.	0	1	3	2	6
Leitch, B.	3	2	2	10	17
Mack, L.	0	0	7	3	10
Nelson, B.	0	0	1	0	1
Nganje, W.	0	2	9	1	12
O'Relley, E.	1	0	1	4	6
Petry, T.	6	1	2	3	12
Shultz, S.	0	0	0	21	21
Wachenheim, C.	0	1	7	9	17
Wilson, W.	0	15	2	0	17
Others	1	1	1	0	3
Total	16	34	39	61	150

In order to assess the quality of undergraduate advising, an evaluation was conducted in the spring 2002 semester. Feedback was received from 45 current students in the program providing comments on 12 faculty advisors. Results indicated divergence in students' perceptions of advising effectiveness by the different faculty. Aggregated results for the Department are listed below:

My Advisor is well prepared to help me with:	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly
Course selection	22	13	4	3	1
Career planning	16	12	9	5	1
University life	17	13	10	2	1
My advisor cares about me	20	12	8	2	1
I would recommend my advisor to others	25	9	3	2	4

#### 4. Curriculum Development

##### *New or Modified Courses:*

AGEC 350 (AgriSales) – An applied course in business-to-business agricultural sales was approved in the spring as a permanent course. The course mirrors similar courses taught at universities with agribusiness programs. The course is designed as a service course for students in the College of Agriculture, Food Systems, and Natural Resources, as well as students in the agribusiness major.

AGEC 491 (Senior Agribusiness Seminar) – Cheryl DeVuyst developed a new course designed for students to report their internship experiences, both in written and oral forms. The course is a companion to the new internship requirement for the Agribusiness major.

BUSN 780 (Business Conditions Analysis) – To further collaboration with the College of Business Administration, Stan Herren developed a new macroeconomics course aimed at MBA students. Based upon the heterogeneous background of the students in economic preparedness, Herren offered a less technical course to MBA students. The adopted text emphasizes understanding and interpreting media analyses of macroeconomics similar to which MBA students will be exposed in their business careers. Students were engaged in extensive discussions of current macroeconomic events.

AGEC 744 (Agribusiness I: Agricultural Product Marketing and Agribusiness Strategy) and AGECE 746 (Agribusiness II: Agrifinance and Commodity Trading) – A two semester sequence of graduate courses in Agribusiness was offered for the first time in 2001-2002. Four of the department's Agribusiness faculty (C. DeVuyst, W. Njanje, C. Wachenheim, and W. Wilson) team taught the courses, contributing their combined knowledge in management, strategy, finance, and marketing to the graduate students.

Courses taught and FTEs generated for the 2000-2001 academic year are listed in Appendix A.

The faculty continue to teach courses in excess of their appointments funded from the resident instruction budget. The following table includes departmental faculty with teaching appointments, the number of student FTEs generated from coursework, independent studies, and master student thesis supervision during AY02, the proportion of their position funded from instructional accounts, and the excess being supported from research funds.

<i>Instructor</i>	<i>FTEs Generated</i>	<i>Appointment</i>	<i>Overload</i>
Bitzan,J*	0.083	0	0.083
Cooper*	0.276	0	0.276
DeVuyst,C	0.434	0.3	0.134
DeVuyst,E	0.798	0.35	0.448
Gustafson,C	0.712	0.2	0.512
Hearne,R	0.086	0.1	-0.014
Herren,S	1.439	1	0.439
Koo,W	0.164	0.1	0.064
Lambert,D	0.248	0.1	0.148
Leistritz,L	0.010	0	0.010
Leitch,B	2.399	1	1.399
Mack,L	2.235	1	1.235
Nelson,B	0.215	0.45	-0.235
Nganje,W	0.335	0.4	-0.065
O'Relley,E	1.405	1	0.405
Petry,T	1.551	0.75	0.801
Sarmiento,C	0.423	0.3	0.123
Saxowsky,D*	0.353	0	0.353
Shultz,S	0.471	0.2	0.271
Tolliver,D*	0.038	0	0.038
Wachenheim,C	0.552	0.4	0.152
Wilson,W	0.369	0.32	0.049
Total	14.595	7.970	6.625

\* - Indicate faculty from other units teaching courses in Agribusiness and Applied Economics.

*Economics* – Beginning in July 2001, the Department has responsibility for the Economics major. Course offerings will grow in the future if new faculty are added beginning July 2003. Several existing AGECE courses (AGECE 470, AGECE 480/680) were modified, converted to the ECON prefix, and added to the Economics program of study in 2001-2002.

## **5. Accreditation or Other Reviews**

No accreditation or other reviews were conducted during 2001-2002.

## **6. Activities in Student Recruitment/Retention, Enrollment Management, and Other Student Activities**

### Student Recruitment/Retention

#### *Undergraduate Students*

Undergraduate student recruitment efforts need to be increased for AY03. Freshmen majors listed in the spring advisee sheets listed 11 agribusiness majors, eight agricultural economics majors, and two economics majors. Preliminary enrollment figures derived from the summer orientation schedules for fall 2002 reflect further drops in the aggregate number of departmental majors: two new agribusiness majors, nine new agricultural economics majors, and three new economics majors.

Two potential avenues of recruitment will be pursued in AY03:

1. Awareness of the Agribusiness major must be increased. Hearsay reports indicate students interested in careers in agribusiness are enrolling in the CBA because the availability of the Agribusiness degree is not widely known. Actions will include school visits and distribution of the four color agribusiness brochures prepared last year
2. The department is forming a chapter of Omicron Delta Epsilon, the international honor society in Economics. This chapter will be a component of a new Economics Club anticipated to form in the fall 2003 semester. These activities will increase on-campus awareness of the Economics program as well as provide opportunities for interaction with high school Economics programs.

The department chair visited Economics instructors and career center advisors in the two Fargo public high schools in the fall of 2001, but there was no follow-through to these visits to meet with students. Follow-up and active participation in urban high school economics and business programs will be pursued in 2002-2003.

#### *Graduate Students*

2001 was an excellent recruitment year for the department's M.S. program in Agribusiness and Applied Economics. Twelve funded students began the fall semester (two were funded from non-NDSU sources). Only one of the students quit the program in the first weeks of the fall semester. Previous starting classes have averaged 5-6 new students each fall. The incoming class for the fall 2003 semester contains about a dozen new students, further reflecting the effectiveness of the recruitment activities, as well as the availability of teaching and research assistantship funds, for our M.S. degree.

The Department is a partner in three new Ph.D. programs: 1) Food Safety; 2) Natural Resource Management; and 3) Transportation and Logistics. All three programs will be launched in the fall 2002 semester. Five students choosing the transportation economics and



regulation option have been accepted into the program latter program. Funding is available for all five students, primarily from the Upper Great Plains Transportation Institute.

### *Enrollment Management*

Student records are maintained by front office staff. Number of students and contact information is available via these records.

### *Other Student Activities*

*Clubs* – The primary clubs for agricultural economics majors are the Agribusiness Club and the student chapter of NAMA. The Agribusiness Club hosts many fundraising and social events during the year. An annual award banquet in the spring honors both outstanding undergraduates and leaders in the state’s agribusiness industry. The NAMA chapter works all year in developing a marketing plan for an innovative agribusiness product. The chapter’s efforts culminate in presentations at the annual NAMA competition. Faculty participation is active in both groups.

The department petitioned the national office in June 2002 to form a chapter of Omicron Delta Epsilon, the international honor society in Economics. This chapter will be a component of a new Economics Club starting in the fall 2003 semester, given sufficient student interest.

*Scholarships* - The Department of Agribusiness and Applied Economics has one of the most successful scholarship programs on campus. \$33,400 was awarded to 43 deserving majors in the Department in 2001-2. The Student Services Committee spent considerable time distributing, monitoring, and generating correspondence for these scholarships.

## **7. Employment of Graduates**

Both graduate and undergraduate students from the Department continue to encounter excellent job prospects. Long term trends indicate approximately 30% of the graduating seniors return to family farming. The majority of the remaining graduates find employment with firms such as John Deere, ADM, Cenex, Farm Services Administration, and other agribusiness companies. The average entry level salary of the undergraduates, excluding those returning to farming, was over \$30,000. Personal contacts by several of the agribusiness faculty resulted in the recruitment and placement of several undergraduate and graduate students in high profile positions in firms such as ConAgra and U.S. Wheat Associates.

## **8. Senior Professors Teaching Freshman and Transfer Students**

There is no departmental policy emphasizing the teaching of freshman and transfer students by senior faculty.

## 9. Summer School Activities

Since assuming responsibility for the Economics program in July 2001, the Department now offers several summer courses. Courses offered during the summer of 2002 include ECON 201 (Principles of Microeconomics), ECON 202 (Principles of Macroeconomics), and ECON 324 (Money and Banking). In addition, faculty is involved in summer teaching through the Food Safety Institute (SAFE 490/690) and the summer study abroad program in France.

Summer graduate school efforts during the summer are focused on advisement of graduate students and overseeing thesis research.

## 10. Awards and Recognition of Faculty/Students

The following faculty awards were received during academic year 2001-2002:

Cheryl Wachenheim – National Outstanding Advisor Award, National Agri-Marketing Association. Nashville, TN. April 2002.

William Njanje – Tapestry of Diverse Talents, NDSU. Fargo, ND. December 2001.

Sandy Osborne – State Award of Meritorious Support Service, Epsilon Sigma Phi.

Kathleen Tweeten - Dr. George Morse Distinguished Business and Community Service Award, The Business Retention and Expansion International Association. Memphis, TN. May 2002.

## 11. Extension Service Teaching

*Extension Service Teaching Programs in AY02:*

### **Aakre, Dwight.**

**Wheat Quality Workshops** - provided analyses of the risks and rewards associated with alternative farming practices and input applications as they apply to producing quality wheat and durum. Three workshops were held around the state.

**Farm Policy Workshops**– Materials were presented addressing farm policy and the next farm bill at several locations, including the Devils Lake Round-up and the Bottineau Crop Improvement Meeting.

**Livestock Outlook and Marketing** - Educational materials dealing with livestock market outlook and marketing strategies were prepared and distributed were at numerous locations and events around the state, including the Jamestown Farm Show, Dairy Cow College, the Rugby Marketing Club, Farm Business Management In-service Workshop, the NCI Feedlot School, a Marketing Club Facilitators Conference, the Bowman Livestock Round Table, Cattle Feeders Workshops, and Ag Lenders Conferences

**Crops Outlook and Marketing** - Similar presentations addressed production cost, risk management, and marketing strategies for crops. Aakre presented these materials at the Minimum Till Forum, Renville Ag Appreciation Day, and sessions at the Northern Crops Institute.

Additional materials prepared and distributed dealt with irrigation investment costs and enterprise budgets for a variety of crops raised under irrigation. The impacts of irrigation on land lease rates were addressed at the North Dakota Water Users Conference.

**Flaskerud, George.**

Flaskerud is working with NDSU personnel to establish Internet-based video conferencing capability in North Dakota. The Technological Opportunities Program (TOP) of the National Telecommunications and Information Administration, U.S. Department of Commerce is providing the funding for the work. Project implementation has been enhanced through an excellent working relationship between Extension and the ND Farm Business Management Education Program. Working together, we have been able to start 43 marketing clubs during the past several years and progress now toward the capability of providing them with educational programs.

**Nelson, Bill.**

The Quentin Burdick Center for Cooperatives continues to offer executive training programs for the New Generation Cooperatives. Approximately 150 directors and CEOs, representing 20 cooperatives from 15 states have attended these programs. Programs have focused on governance, strategic planning and financial analysis and decision-making. Evaluations have been very positive and later feedback indicates that many cooperatives are putting into practice the concepts and tools presented at the programs.

**Swenson, Andy.**

Swenson organized and presented numerous workshops over the year, including "Computer Accounting for Farm, Home and Business," "Farm Policy: Past and Present," "Negotiating Land Rents," "Combining Marketing Strategies and Crop Insurance to Maximize Profits," "Recent Trends in ND Agriculture and the 2000 State Averages," Finpack farm financial management computer workshops, "Farm Profitability: Past and Future," "Financial Ratios," "Update on Farm Policy," "Tax Management for Ag Producers," "Characteristics of Successful Farm Operators," "N.D. Farm Financial Trends," "Ag Economy Projections," and presentations regarding oilseed profitability.

## **Tweeten, Kathleen.**

**Community Strategic Planning and assessment** – worked with planners and decision makers in various counties and towns around North Dakota to develop resource assessments and strategic plans.

**Entrepreneurship and Business Retention and Expansion** – prepared and presented educational materials addressing Agritainment and other farm and ranch recreation enterprises, promoted Youth Entrepreneurship – Mini-Society workshops this past year, and developed BR&E assessment and action plans for several communities around the state.

**Leadership Development** - Assisted in the development of a rural leadership proposal to Dr. Chapman as well as worked with groups around the state to promote leadership training.

## **B. RESEARCH/SCHOLARSHIP**

*The mission of this unit is to provide objective economic analysis and to support informed decision making in areas of resource allocation, business management, and public policy for the people of North Dakota and beyond (from the Department's mission statement adopted February 26, 1992).*

In addition to contributing new knowledge, economics research is essential to the maintenance of effective and relevant educational and outreach efforts. Individual faculty members are encouraged to develop research programs in their areas of specialization to increase the value of their contributions to the people of North Dakota.

### **1. Highlights of Research and Scholarly Activity (Calendar year 2001)**

#### *Departmental Initiatives*

The importance of the work in agricultural policy and international trade conducted by Won Koo was recognized this year by federal appropriations of over \$3,000,000 to conduct research and outreach activities in areas of importance to the agricultural economy of the Northern Great Plains. Dr. Koo has hired four assistant research professors, has provided summer financial support to departmental faculty to conduct trade and policy research, and organized a major conference on Farm Bill legislation in November 2001. Dr. Koo is supporting one M.S. student conducting trade research and will be supporting both M.S. and Ph.D. students in the coming academic year (2002-2003).

Departmental research addresses a wide variety of issues important to American producers and consumers:

## *Programmatic Research Highlights*

### **Biotechnology**

Biotechnology impacts all stages of the food chain. One project this year focused on decisions related to genetically-modified crops. Introduction and use of genetically-modified sugarbeets is a contentious issues in the Northern Great Plains. A study by Cheryl DeVuyst and Cheryl Wachenheim examined the decision-making process of a food processing sugar cooperative. The study outlined the structure for analyzing the impact of genetically-modified sugarbeets on the cooperative and its competitive environment.

Bill Wilson has collaborated with others in the Department in research related to GM crop marketing. Wilson et al.'s research results are being used by government agencies, firms and by commodity groups in making decisions about the disposition of GM wheat, one of the most fundamental issues confronting regional agriculture.

Agricultural biotechnology is advancing rapidly and is embracing all major crops. The adoption of genetically modified corn, soybeans, and cotton have reached high levels in the United States. Wheat is the next major crop confronting the biotechnology issue, but no commercial varieties of genetically modified (GM) wheat have been released yet. Primary opportunities for GM developments in wheat center around improvements that meet consumer and end-user needs/issues in addition to meeting producer efficiencies. Developers and proponents of GM wheat must focus on education of consumers and restoration of worldwide confidence in the regulatory systems. The most desired wheat quality trait among millers and bakers is the assurance of consistent quality. (Janzen, Mattson, and Wilson)

An initial assessment of the impacts following the release of GM wheat was conducted by Eric DeVuyst, Won Koo, Cheryl DeVuyst, and Richard Taylor. The researchers used a partial equilibrium model based on the World Wheat Simulation Model to determine market impacts under alternative scenarios of GM wheat adoption and consumer acceptance. Although producer gains were generally found to be small or negative, release of GM wheat generally is welfare enhancing for US and foreign consumers.

### **Livestock Economics**

Beef research projects should help improve the profitability of North Dakota cow-calf producers. One project completed by Eric DeVuyst and Renee Hawkins analyzes the impact of labor availability on optimal calving dates for North Dakota cow-calf producers. There is a large literature on biological aspects of alternative calving dates, but little economics research. In particular, there is little research investigating the interaction between labor availability and alternative calving dates. This issue is relevant for North Dakota beef cow operations, as most of these operations are diversified (*i.e.*, include some cropping) and unemployment in North Dakota is very low. Although there are biological reasons for delaying calving season until late spring, scheduling conflicts with cropping activities coupled with labor unavailability may render late spring calving as sub-optimal. Linear

programming model results indicated farmers following spring calving schedules are maximizing livestock and crop net returns subject to individual farm resource constraints.

Tim Petry has been involved with the Dakota Lamb Growers Cooperative since the idea of slaughtering and processing lambs in North Dakota first surfaced in 1995. Petry's assistance has resulted in lambs now being successfully processed and natural lamb products being marketed throughout the US. The privately-owned processing plant in south central ND has hired additional employees as a result of the increased lamb business. If the cooperative can reach its goal of processing 500 lambs per week, premiums of \$10 per hundredweight over market price will result in lamb producers receiving an additional \$325,000 per year. It has been estimated that each dollar received for livestock in ND generates approximately \$4.49 in increased economic activity due to the multiplier effect, so this effort will have a positive impact on the state.

### **Crop Economics**

Both the U.S. and world wheat economies are predicted to improve for the next ten years. World demand for both common and durum wheat are expected to grow faster than world production of the two wheat classes, resulting in gradual increases in prices, which are predicted to increase 5.3% for durum wheat and 1.1% for common wheat for the 2000-2010 period. World trade volumes of both classes of wheat are expected to expand, but trade volume of durum wheat may grow faster than common wheat. (Koo and Taylor)

Both the U.S. and world sugar economies are predicted to improve over the next ten years after the current oversupply is reduced. World demand for sugar is expected to grow faster than world supply, resulting in gradually increasing Caribbean sugar prices from 8.51 cents/lb in 2000 to 12.67 cents/lb in 2010. The U.S. wholesale price of sugar is projected to increase from 22.5 cents/lb in 2000 to 26.6 cents/lb in 2010, if the United States maintains its sugar programs. World trade volumes of sugar are expected to expand slightly. (Koo and Taylor)

Fusarium Head Blight (FHB), commonly known as scab, has been a severe problem for wheat and barley producers since 1993. A study by Nganje, Johnson, Wilson, Leistritz, Bangsund, and Tiapo provides an update of economic losses suffered by wheat and barley producers in scab-affected regions in the United States. Emphasis is placed on estimating direct and secondary economic impacts of yield and price losses suffered by wheat and barley producers from 1998 to 2000. Nine states are included in the analysis for three wheat classes. Three of the nine states were also used for the analysis of malting and feed barley. The cumulative direct economic losses from FHB in hard red spring (HRS) wheat, soft red winter (SRW) wheat, durum wheat, and barley is estimated at \$870 million from 1998 through 2000. The combined direct and secondary economic losses for all the crops were estimated at \$2.7 billion. Two states, North Dakota and Minnesota, account for about 55 percent of the total dollar losses.

Markets for agricultural products may be inefficient when signals do not adequately reflect product characteristics important to market participants. Determination of variety values is difficult for traditional releases and pose even greater valuation problems for future

genetically enhanced varieties. Lambert and Wilson developed a procedure to derive the value of different varieties in meeting buyer demands. An application to the hard red spring market wheat both validates the ability of the procedure to distinguish among varieties, as well as provides empirical support to the existence of Akerlof's lemon market in the release of wheat varieties.

Variety release decisions involve a number of tradeoffs, usually between grower and end-user characteristics as well as significant uncertainties about agronomic, quality, and economic variables. Dahl, Wilson, Johnson, and Njanje developed methodologies to value tradeoffs for grower and end-user characteristics for wheat. The models capture effects of variability in agronomic, quality, and economic variables. The models were applied for three experimental varieties and for two hypothetical varieties. Results indicate two of the experimental varieties provide improvements in grower and end-use value over most of the incumbents. Comparison of a risk adjusted portfolio model consisting of characteristics of end-use and grower values with traditional stochastic dominance techniques indicate similar results. However, the portfolio model does allow simultaneous consideration of correlation between grower and end-use values.

William Wilson contributed to the NDSWC's effort in the Section 301 trade case against Canada. The case was recently decided in NDSWC's favor. In looking at the details, some of the prevailing agreements in their favor were attributed to some of Wilson's research findings regarding price transparency, price discrimination, and details of Canadian rail legislation.

Wilson is guiding graduate student research on issues related to rail shuttle programs, an extremely controversial issue in the region and industry. Wilson has been asked recently to present testimony on these issues to a proposed hearing held by Senator Dorgan. The issue is not only extremely important to local business interests and to national agribusiness and transportation firms involved in the shipping and marketing of Northern Plains commodities, but the research can have important impacts on future applied research dealing with competition issues.

During the past decade, the grain shipping industry has become highly competitive and technologically advanced. These changes, along with the introduction of innovative shipping mechanisms, have made logistics management an important source of opportunity and risk for grain shippers. In this study, a stochastic simulation model was developed to evaluate the tradeoffs and effects of key variables on logistical performance in managing the grain supply chain. Average demurrage cost for the supply chain was \$2.03 million with the greatest cost being for railcars and the least cost being for barges. Of the stochastic variables modeled, changes in export demand had the greatest impact on demurrage costs.(Wilson, Carlson, and Dahl)

### **Farm Policy, Trade and Macroeconomics**

Farm profitability varies widely among producers, but the reasons for those differences are not clear. It is generally not known if the same farms are in the higher profit categories every year. Individual producer characteristics also vary substantially. Farm size, crop

yields, cost of production, debt structure, and land ownership are some of the traits that differ among farms. This study analyzed farm finance data from the North Dakota Farm and Ranch Business Management Program over the years 1996-2000 to determine if the characteristics of profitable farms were different from the characteristics of farms which were not as profitable. A secondary objective was to evaluate if farms remained in similar profit quartiles every year. The study confirmed the hypotheses that profitable farms tend to remain profitable and the set of less profitable farms continues to be dominated by better managed operations (Taylor, Koo, and Swenson)

Won Koo and his research staff in the Center for Agricultural Policy and Trade Studies (CAPTS) reformulated a theoretical model of foreign direct investment for the processed food industry. This study will provide a significant contribution to international trade literature in order to understand the important strategic distinctions between bulk commodity trade and capital flows and subsequent food processing and trade distributions.

CAPTS staff provided important policy support by analyzing the potential impacts of alternative farm bills on the Northern plains agricultural economy. Results were presented in the U.S. Senate and House hearings. Since the farm bill is directly related to this region's agricultural economy, the social and economic benefits of the studies on the region's economy are extremely significant.

Another area of significance in international commodity and food trade concerns the impact of the strong dollar on agricultural competitiveness in global markets using the most updated time series techniques. The preliminary results were presented in a U.S. Senate hearing. Since the United States exports about 50 percent of the agricultural commodities and products produced in the United States, it is very important to analyze factors affecting its competitiveness in the global markets. We found that exchange rates are one of major factors affecting our competitiveness. This finding will have significant implications in formulating trade policy.

Canadian exports of beef and live cattle to the United States have increased significantly since the late 1980s. Hog exports have increased since the mid-1990s. Major factors affecting exports of beef, pork, cattle, and hogs from Canada to the United States include the exchange rate, increased Canadian production, U.S.-Canada price differentials, and trade liberalization under the Canada - United States Free Trade Agreement of 1989. The research indicates increasing Canadian exports have resulted in small but significant reductions in U.S. domestic prices of beef, pork, and hogs. (Wachenheim, Taylor, and Mattson)

Pesticides have become a major farm production cost over the past 25 years. There are price and label differences for agricultural herbicides between the United States and Canada. Trade names are different in some cases, label restrictions vary, and weights and measures are different. The reasons for the price differences are unclear. Whether they are due to increased costs in labeling requirements, different levels of competition and use, or market segmentation is not determined. The largest total impact of using lower priced Canadian herbicide is on HRSW, followed by durum and corn. The largest per acre impact is for canola, corn, and HRSW. Herbicides with the largest total impact are Puma, followed by



Roundup and Fargo. Net farm income for large, medium, and small size representative farms would increase 3.8%, 4.6%, and 5.2%, respectively, if Canadian priced herbicides could be used in the United States. The statewide impact is \$1.46 per acre, but regional or individual impacts could be much greater depending on crops grown or the specific weed problem faced by the individual producer.(Taylor and Koo)

### **Value Added Agriculture**

Larry Leistritz and his team of researchers addressed the economic effects of production and processing of high-value crops. The analysis focused on irrigated potato production and processing in central North Dakota. Economic impact analysis included not only the on-farm effects resulting from a switch from dryland to irrigated crop production but also the effects associated with potato processing. The analysis addressed both construction/start-up and operational (on-going) impacts. The construction/start-up phase economic impact was estimated to be nearly \$28 million in added personal income, over \$44 million in new retail sales, and a total gross business volume of \$115 million. Annually recurring impacts from the operational phase included a personal income increase of over \$39 million, increased retail sales of almost \$44 million, and total business activity of \$131 million. Increased state tax collections were estimated to total \$2.7 million during the construction/start-up phase and \$2.8 million annually during the operational phase. This economic development activity resulted in a peak of 260 plant construction jobs and a permanent processing plant work force of 250 full-time equivalents. In addition, operational phase secondary employment was estimated to be 1,440 workers.

### **Economic Development, Land Values and Public Policy**

Larry Leistritz and his staff investigated impacts of conservation reserve designation for agricultural lands. North Dakota landowners have participated extensively in the CRP; over the past few years, the state's CRP acreage has fluctuated between 3.1 and 3.3 million acres. A survey of CRP landowners (more than 1,000 usable surveys) and personal interviews with almost 100 agricultural and community leaders provided insights about the effects of the CRP. Landowners and local leaders agreed that the program had been favorable for landowners and had produced a variety of wildlife and environmental benefits. Views were mixed regarding the program's effects on the local economy and population. Many local leaders and some landowners felt that the CRP posed problems for local farm supply and service sector firms, while others pointed out that increased recreational activity, especially hunting, had benefited many local businesses (e.g., motels, cafes, gas stations). Some community leaders felt the CRP speeded farm consolidation and rural depopulation, whereas others believed these changes would have occurred with or without the program and that the CRP had eased some of the transitions.

Richard Rathge continues to document the consequences of migration for the region. Rathge used 2000 Census data along with gross-flow files from the Internal Revenue Service (IRS). These files provide information on the change in tax filing (i.e., movement of filers), number of dependents, and income for individual returns. His analysis reveals that between 1998 and 1999, North Dakota lost over \$100 million as a result of the net exchange

in income among movers. In contrast, Colorado gained over \$1 billion during the same time period.

Steve Shultz has quantified the impact of floodplain location on property values in Fargo/Moorhead. These findings are being used to evaluate the feasibility of flood mitigation projects and to evaluate appraised values of residential properties targeted for flood mitigation buyouts.

Decision making based upon economic analysis improves the efficient use of local, state and federal flood mitigation funds. Shultz and Aakre are collaborating on the development of an automated agricultural land valuation model using GIS based data. This improved valuation model has the potential to enable county tax assessors to more equitably assess agricultural taxable land values within townships, especially in parts of North Dakota with highly heterogeneous soil productivity and crop yields. Such a land value model could also be used by state and Federal agencies to determine fair market rates for compensating landowners participating in conservation programs.

## **2. Grants/Contracts/Research**

New and continuing grants and contracts provided \$3,387,893 available as the adjusted budget for fiscal year 2001 (7/00-6/01). FY01 expenditures from these extramural sources through May 31, 2001 were \$761,318. Listed below are selected grants awarded to faculty in the department. Numbers do not add up to the adjusted departmental grant and contract budget due to sharing of grant resources among other departments and universities.

DeVuyst, C.S. "CWAE Tracking Survey – Continuation Funding" (On-going, received in 2000).

Gustafson, Cole, and Larry Leistritz. "Strategic Economic Feasibility & Impact of Biodiesel in North Dakota," North Dakota Soybean Council. \$9,500, May, 2002 – October, 2002.

Koo, Won. "Agricultural Trade and Policy Studies for the Northern Plains Region." U.S. General Service Administration. \$2,000,000. December 2000 - January 2004.

Koo, Won. "Bilateral Trade of Agricultural Commodities and Products under CUSTA." U.S. Customs Office, \$500,000. November 1999 - February 2002.

Koo, Won. "2002 Farm Bill: Issues and Alternatives," Funding for Conference held October 29-30, 2001, Farm Foundation. \$7,500.

Koo, Won. "Impacts of Alternative Farm Bill Proposals. "North Dakota Farmers Union. May – July, 2001. \$11,000.

Leistritz, F. Larry. "Regional Center for Rural Development in North Dakota 2002 Special Grant," USDA – CSREES, June 2002 – May 2004. \$35,331.

- Leistriz, F. Larry. "Socioeconomic Assessment Component of TEAM Leafy Spurge IPM Demonstration Project," Agricultural Research Service, USDA, 2000-2001, \$54,478.
- Leistriz, F. Larry. "Regional Center for Rural Development in North Dakota," USDA-CSREES, 2000-2002, \$35,700.
- Leistriz, F. Larry. "Socioeconomic Effects of Developing the Lignite Vision 21 Project Near South Heart, North Dakota," Great Northern Power Development, L.P., May 2002, \$48,491.
- Lesitriz, F. Larry. "Socioeconomic Assessment Component to TEAM Leafy Spurge IMP Demonstration Project," USDA. 2001-2002, \$74,549.
- Lesitriz, F. Larry. "Impacts of Hunters & Anglers in North Dakota" U.S. Dept. of Interior/Fish & Wildlife Service North Dakota Game & Fish Department, April 2002 – March 2003, \$5,483.
- Leistriz, F. Larry. "Resident and Non-Resident Characteristics, Expenditures and Economic Impacts of Hunters in North Dakota" U.S. Department of Interior/Fish & Wildlife Service North Dakota Game & Fish Department April 2002 – March 2003, \$6,580.
- Lesitriz, F. Larry. "Impact of Hunters & Anglers in North Dakota" U.S. Department of Interior/Fish & Wildlife Service North Dakota game & Fish Department April 2002 – March 2003, \$9,869.
- Nelson, William. "Economic Evaluation of Modified Field Pea/Canola Meal Rations for Swine," USDA/CSRS. 2000-2003, \$4,605.
- Nelson, William. "Hybrid Striped Bass Aquaculture" USDA – Michigan State, September, 2001 – August, 2002, \$13,650.
- Nganje, William. "Food Safety Risk Assessment," USDA – CSREES, May, 2002 – April 2004, \$122,212
- Nganje, William (with Cheryl DeVuyst collaborating). "Equity Management Issues in New Generation Cooperatives." USDA Cooperative Research Agreement No. RBS-00-13, Rural Business Cooperative Service, September 2000 - September 2002, \$66,666
- Nganje, William (with Cheryl DeVuyst collaborating). "Equity Management Issues in New Generation Cooperatives." USDA Cooperative Research Agreement No. RBS-00-13, Rural Business Cooperative Service, September 2000 - September 2002, \$66,666
- Nganje, William. "Economic Impact of Fusarium Head Blight in Wheat and Barley Under Alternative Risk Management Strategies" USDA/NDSU Fund #4825. May 2002 – April 2002. \$29,331.

- O'Relley, Edward. Fulbright-Hays grant received from the U.S. Department of Education For summer research in Argentina during June 27 – August 15, 2001. \$12,200.
- Petry, Timothy A. “Expanding Utilization of Dry Peas” USDA – CSREES, June 2001 – May 2004 \$17,452.
- Shultz, Steven. “Economic Feasibility of Spraying Cattail-Choked Wetlands,” USDA – APHIS, April, 2002 – September 2002. \$22,294.
- Rathge, Richard. “Regional Center for Rural Development in North Dakota 2002 Special Grant” USDA – CSREES June, 2002 – May 2004. \$51,969.
- Rathge, Richard. "Regional Center for Rural Development in North Dakota" USDA-CSRS, Co-PI. June 2000-2002, \$81,544,
- Rathge, Richard. North Dakota Kids Count Dakota Medical Foundation, Investigator. October 2000 – June 2001, \$14,300.
- Rathge, Richard. “Depopulation Symposium” U.S. General Accounting Office, PI, October 2000 – October 2001, \$57,000.
- Rathge, Richard. “Regional Center for Rural Development in North Dakota” USDA – CSRS, Co-PI, June 2001 – May 2003, \$81,357.
- Rathge, Richard. “Prenatal Risk Assessment Monitoring System” North Dakota Department of Health, PI. July 2001 – June, 2004, \$202,785.
- Rathge, Richard. “National Family Caregiver Support Program: North Dakota Initiative” North Dakota Department of Human Services, Co-PI, September 2001 – March 2003, \$443,724.
- Rathge, Richard. “North Dakota Needs Assessment of Long-Term Care” North Dakota Department of Human Services, PI. October 2001 – December 2002, \$114,800.
- Rathge, Richard. “North Dakota Rural Kids Count” Dakota Medical Foundation, PI. July 2001 – December 2001, \$10,000.
- Rathge, Richard. “North Dakota Kids Count” Annie E. Casey Foundation, PI. January 2001 – December 2001, \$28,300.
- Wachenheim, Cheryl. “Cool Season Food Legume Research Program” USDA/University of Idaho, July 2001 – September 30, 2003 \$2,440.

- Wilson, William W. and Cheryl Wachenheim. "Institutional and Market Factors Influencing the Biotechnology Adoption in Northern Grown Crops and Oilseeds" Agricultural Biotechnology–Social and Economic Effects, Initiative for Future Agriculture and Food Systems, USDA, Ag Econ Co-PI, \$208,425. Received October 2000, for 4 years
- Wilson, William W. "Market Research and Economics of White Corn" March SBARE-With ND Corn Growers. \$5,000.
- Wilson, William W. "Market Development Support" North Dakota State Wheat Commission, July 2001, 1 year. \$15,000.
- Wilson, William W. "Economics of Testing Certification and Segregation Strategies for GM Wheats" North Dakota State Wheat Commission, July 2001, 1 year, \$18,000.
- Wilson, William W. "Marketing of Wheat on a Nil Moisture Basis" North Dakota State Wheat Commission, July 2001, 1 year, \$8,000.
- Wilson, William W. and Bruce Dahl. "NRI 0101875 Demand and Marketing Mechanisms for Improved Quality Consistency" Accepted, April 10, 2001, 3 years, \$115,000.
- Wilson, William W. "Evaluation of Alternative IP/Niche Management and Procurement Strategies for New Generation Co Ops" Cooperative Marketing Division, Rural-Business-Cooperative Service, USDA, August 2000, 2 years, \$30,000.
- Wilson, William W. "Changes in Canadian Rail Transport Regulations/Practices" North Dakota State Wheat Commission, March 30, 2001, 1 year, \$7,000.
- Wilson, William W., and Demcey Johnson. "NRI Quality Consistency and Variety Development Strategies in Wheat" USDA/NRI 1998 Proposal," Expires August, 2001, \$80,000.

### **3. Articles/Books/Publications (Calendar year 2001)**

*Data regarding departmental publications are compiled on an annual basis. Consequently, publication lists cover the period January 1 – December 31, 2001.*

#### **Journal Articles for 2001**

1. Bangsund, Dean A., Dan J. Nudell, Randall S. Sell, and F. Larry Leistritz. 2001. "Economic Analysis of Using Sheep to Control Leafy Spurge." *Journal of Range Management* 54:322-329.
2. Bhuyan, Sanjib, and F. Larry Leistritz. 2001. "An Examination of Characteristics and Determinants of Success of Cooperatives in the Non-Agricultural Sectors." *Journal of Cooperatives* Vol. 16:46-62.

3. DeVuyst, E. A., D. Johnson, and W. Nganje. 2001. "Representations of Multi-attribute Grain Quality." *Journal of Agricultural and Resource Economics* 26(1):275-290.
4. Ipe, C. V., E. A. DeVuyst, J. B. Braden, and D. C. White. 2001. "Simulation of a Group Incentive Program for Farmer Adoption of Best Management Practices." *Agricultural and Resource Economics Review* 30(2):139-50.
5. Johnson, D. Demcey, William W. Wilson, and Matthew A. Diersen. 2001. "Quality Uncertainty, Procurement Strategies, and Grain Merchandising Risk: Vomitoxin in Spring Wheat." *Review of Agricultural Economics* 23(1):102-119.
6. Koo, Won W., Weining Mao, and Takeshi Sakurai. 2001. "Wheat Demand in Japanese Flour Milling Industry: A Production Theory Approach." *Agricultural Economics* Vol. 24(January):167-178.
7. Kraenzel, D.G. 2001. "Building Working Relationships in Agricultural Marketing." *Journal of Extension*. 39(1): [Building Working Relationships in Agricultural Marketing](#).
8. Leistritz, F. L., and Randall S. Sell. 2001. "Socioeconomic Impacts of Agricultural Processing Plants." *Rural America* 16(1):27-34.
9. Leistritz, F.L., and Randall S. Sell. 2001. "Socioeconomic Impacts of Agricultural Processing Plants." *Journal of Community Development Society* 32(1):130-159.
10. Leistritz, F.L., Sam Cordes, Randall S. Sell, John C. Allen, and Rebecca Vogt. 2001. "Characteristics of In-migrants to the Northern Great Plains: Survey Results from Nebraska and North Dakota." *Great Plains Research* 11 (Fall):275-99.
11. O'Relley, Z. Edward. 2001. "From Totalitarian Central Planning to a Market Economy: Decentralization and Privatization in Hungary." *The Journal of Private Enterprise* 17(1):111-23.
12. Root, Kenneth A., and F. Larry Leistritz. 2001. "Rural Community Response to the Closure or Downsizing of a Major Employer in the Upper Midwest." *Small Town* 30(2):12-27.
13. Sell, Randall S., Dean A. Bangsund, and F. Larry Leistritz. 2001. "Contribution of the Bison Industry to North Dakota's Economy." *American Journal of Alternative Agriculture* 16(3):106-113.
14. Shultz, S., and P. Fridgen. 2001. "Floodplains and Housing Values: Implications for Flood Mitigation Projects." *Journal of the American Water Resources Association* Vol. 37(June):595-603.

15. Shultz, S., and D. King. 2001. "The Use of Census Data for Hedonic Price Estimates of Open Space Amenities and Land Uses." *The Journal of Real Estate and Finance Economics* 22(1):239-252.
16. Wachenheim, C. J. 2001. "Using the Internet to Expand Participation in an International Study Experience." *NACTA Journal* 45(1):43-50.
17. Wachenheim, C. J., and E. A. DeVuyst. 2001. "Strategic Response to Mandatory Reporting Legislation in the U.S. Livestock and Meat Industries: Are Collusive Opportunities Enhanced?" *Agribusiness: An International Journal* 17(2):1-19.
18. Wilson, William W., and Bruce L. Dahl. 2001. "Import Tenders and Bidding Strategies in Wheat." *Review of Agricultural Economics*, 23(2):441-457.
19. Wilson, William W., and Matthew Diersen. "Competitive Bidding on Import Tenders: The Case of Minor Oilseeds." *Journal of Agricultural and Resource Economics* 26(1)(2001):142-157.

## **2001 Book Chapters**

- Koo, Won W. "Major Trade Issues in the U.S. and World Wheat Industry under the Upcoming WTO Negotiations." In *Agricultural Trade in the New Millennium*, Haworth Press, (forthcoming).
- Koo, Won W., and Lynn Kennedy. "Emerging Trade Issues in the U.S. and World Sugar Industry." In *Agricultural Trade in the New Millennium*, Haworth Press, (forthcoming).
- Wilson, W. "Changes in the Grain Marketing Industries in the United States and Canada." In *Challenges in Agricultural Trade Under CUSTA*, Won W. Koo, William W. Wilson, and D. Demcey Johnson, eds., New York, NY: Nova Scientific Publishers, (forthcoming).

## **Agribusiness & Applied Economics Reports for 2001**

*(Pointing on the title of a report will transfer the reader to an archived version of the research report)*

1. 2001 473  
[Valuation of New Spring Wheat Varieties: Tradeoffs for Growers and End-users](#), Dahl, Bruce L., William W. Wilson, D. Demcey Johnson, William Nganje  
[2001 473-S \(12-Page Summary\)](#)
2. 2002 472  
[Profit Consistency and Management Characteristics for Successful North Dakota Farms, 1995-2000](#), Taylor, Richard D., Won W. Koo, Andrew L. Swenson

3. 2001 471  
[\*Economic Analysis of the U.S. House of Representatives Farm Bill and Senate Agriculture Committee Farm Bill Proposal\*](#), Taylor, Richard D., Won W. Koo
4. 2001 470  
[\*Processed Food Trade and Foreign Direct Investment Under NAFTA\*](#), Mattson, Jeremy W., Won W. Koo
5. 2001 No. 469  
[\*Wheat Characteristics Demand and Implications for Development of Genetically Modified Grains\*](#), Janzen, Edward L., Jeremy W. Mattson, William W. Wilson
6. 2001 No. 468  
[\*Economic Analysis of Alternative Farm Bill Proposals\*](#), Taylor, Richard D., Won W. Koo
7. 2001 No. 467  
[\*Financial Characteristics of North Dakota Farms 1998-2000\*](#), Swenson, Andrew L.
8. 2001 No. 466  
[\*Does Exchange Rate Matter to Agricultural Bilateral Trade Between the United States and Canada?\*](#), Kim, MinKyoung, Won W. Koo
9. 2001 No. 465  
[\*2001 North Dakota Agricultural Outlook: Representative Farms 2001-2010\*](#), Taylor, Richard D., Won W. Koo, Andrew L. Swenson
10. 2001 No. 464  
[\*Economic Impacts of Fusarium Head Blight in Wheat and Barley: 1998-2000\*](#), Njanje, William E., Demcey D. Johnson, William W. Wilson, F. Larry Leistritz, Dean A. Bangsund, Napoleon M. Tiapo
11. 2001 No. 463  
[\*Modeling International Trade Impacts of Genetically Modified Wheat Introductions\*](#), DeVuyst, Eric A., Won W. Koo, Cheryl S. DeVuyst, Richard D. Taylor
12. 2001 No. 462  
[\*2001 Outlook of the U.S. and World Sugar Markets\*](#), Koo, Won W., Richard D. Taylor
13. 2001 No. 461  
[\*2001 Outlook of the U.S. and World Wheat Industries, 2000-2010\*](#), Koo, Won W., Richard D. Taylor
14. 2001 No. 460  
[\*Economic Analysis of the Farmers Union Farm Bill Proposal\*](#), Taylor, Richard D., Won W. Koo
15. 2001 No. 459  
[\*Canadian Exports of Livestock and Meat to the United States\*](#), Mattson, Jeremy W., Cheryl J. Wachenheim, Won W. Koo, Timothy A. Petry
16. 2001 No. 458  
[\*Evaluation of Changes in Grade Specifications for Dockage in Wheat\*](#), Wilson, William W., Bruce L. Dahl
17. 2001 No. 457  
[\*Logistics and Supply Chain Strategies in Grain Exporting\*](#), Wilson, William W., Donald C.E. Carlson, Bruce L. Dahl
18. 2001 No. 456  
[\*United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers\*](#), Taylor, Richard D., Won W. Koo



19. 2001 No. 455  
[\*United States and Canadian Agricultural Herbicide Costs: Impacts on North Dakota Farmers\*](#), Clow Aaron D. Clow, George K. Flaskerud
20. 2001 No. 454  
[\*White Wheat Market and Strategy Analysis for North Dakota\*](#), Janzen, Edward L., William W. Wilson
21. 2001 No. 453  
[\*Demand Estimation for Agricultural Processing Co-products\*](#), Wachenheim, Cheryl J., Patrick J. Novak, Eric A. DeVuyst, David K. Lambert
22. 2001 No. 452  
[\*Economic Impact of Production and Processing of Irrigated Potatoes in Central North Dakota\*](#), Coon, Randal C., F. Larry Leistritz
23. 2001 No. 451  
[\*U.S./Canada Grain Handling and Transportation Systems\*](#), Park, Joon J., Won W. Koo

### **Agribusiness & Applied Economics Miscellaneous Reports for 2001**

No. 190

[\*Farmer Education and Adoption of Slash and Burn Agriculture\*](#), Nganje, William, Eric C. Schuck, Debazou Yantio, and Emmanuel Aquach

No. 189

[\*Marketing Sustainable and/or Organic Products in Small Metro Areas\*](#) Coon, Randal C., F. Larry Leistritz

No. 188

[\*Adding an Exported Services Component to the North Dakota Input-Output Model's Business and Personal Services Sector\*](#), Nelson, William C., Ben Larson, Kathy Coyle

### **Staff Papers for 2001**

AAE 01006

[\*Identification of Economies of Scope in a Stochastic Production Environment\*](#), Curtis, Rita E., Camilo Sarmiento

AAE 01005

[\*Comparing End-use Values for North Dakota Hard Red Spring Wheat Varieties\*](#), Lambert, David K., William W. Wilson

AAE 01004

[\*North Dakota Lignite Energy Industry's Contribution to the State Economy for 2000 and Projected for 2001\*](#), Coon, Randal C., F. Larry Leistritz

AAE 01003

[\*Results of the North Dakota Land Valuation Model for the 2001 Agricultural Real Estate Assessment\*](#), Aakre, Dwight G., Harvey G. Vreugdenhil

AAE 01002

[\*Economic Contribution North Dakota Cooperatives Make to the State Economy\*](#), Coon, Randal C., F. Larry Leistritz

AAE 01001

[\*Operational Efficiency of a U.S./Canadian Wheat Pool: A Game Theory Analysis\*](#), Nganje, William E., Won W. Koo, Joon J. Park, Richard D. Taylor

#### **4. Selected Presentations before Professional Audiences (Calendar year 2001)**

- DeVuyst, C. S., 2001. "Tracking the Progress of Women and Minorities in AAEA." Organized Proceedings of the Annual Meetings of the American Agricultural Economics Association, Chicago, IL, Aug. 7. (Organized symposium invited presentation)
- DeVuyst, C. S., 2001. "Slotting Allowances and Failure Fees in the Retail Grocery Industry." Proceedings of the Annual Meetings of the American Agricultural Economics Association, Chicago, IL, Aug. 6. (Invited presentation)
- Wachenheim, C. and C. S. DeVuyst, 2001. "Genetically-Enhanced Sugarbeets." Proceedings of the Annual Meetings of the American Agricultural Economics Association, Chicago, IL, Aug. 6-8. (Selected poster)
- DeVuyst, C. S. and C. Wachenheim, 2001. "Genetically-Enhanced Sugarbeets: To be or not to be?" Presentation at the Maple Leaf Case Study Conference, Sydney, Australia, June.
- DeVuyst, C. S. and C. Wachenheim, 2001. "Framing Strategic Decisions About Genetically-Modified Inputs: The American Crystal Sugarbeet Case." Proceedings of the Annual Meeting of the International Food and Agribusiness Management Association, Sydney, Australia, June (Selected poster)
- Herren, Stan. "A Retrospective look at the Kennedy-Johnson Council of Economic Advisers' Attitudes Regarding Phillips Curve Tradeoffs" at the 2001 annual meeting of the Missouri Valley Economic Association
- Herren, Stan. "Public-Private Partnerships: The Governance Dilemma" with Karen A. Froelich at the 2001 Association for Research on Nonprofit Organizations and Voluntary Action conference
- Koo, Won. Price effects of Canadian agricultural exports to the United States, invited presentation, Department of agricultural economics, University of Saskatchewan, Saskatoon, Canada, February, 2001.
- Koo, Won. Impacts of NAFTA on the U.S. sugar industry, invited presentation, Department of food and resource economics, university of Florida, Gainesville, FL, March 28, 2001.

- Koo, Won. Competitive Tradeoff Between FDI and Trade, Organized Symposia organized by Christine Bolling, AAEA meeting, Chicago, August 7, 2001.
- Koo, Won. NFATA, CUSTA, and Agricultural Trade Flows: A Northern Plains Perspectives, Post-AAEA conference workshop, Titled “North American Trade Relationships: Policy Challenges for 2002 and Beyond, August 8, 2001, Chicago.
- Koo, Won. Direction of the 2002 Farm Bill, Korean Rural Economics Institute, July 24, 2001
- Koo, Won. Impacts of U.S. agricultural and trade policies on Korean agriculture, Lecture invited by the Provincial Governor, Jeju province auditorium, July 23, 2001, Jeju, Korea.
- Leistriz, F. Larry, Sam Cordes, Randall S. Sell, John C. Allen, and Rebecca (Filkins) Vogt. 2001. “Characteristics of In-Migrants to the Northern Great Plains: Survey Results from Nebraska and North Dakota,” paper presented at Southern Regional Science Association annual meetings, Austin, TX, April 5-7 (audience = 30).
- Leistriz, F. Larry and Dean A. Bangsund. 2001. “Economic Impacts of Proposed Changes in Management of National Grasslands in North Dakota,” paper presented at North Dakota Academy of Sciences Annual Meeting, Bismarck, April 26 (audience = 50).
- Leistriz, F. Larry, and Randall S. Sell. 2001. “Agricultural Processing Plants: Impacts for Rural Communities,” paper for presentation at International Association for Impact Assessment annual conference, Cartagena, Columbia, May 30 (audience = 35).
- Nganje, W. E., Tiapo Napoleon and William Wilson. “Crop Insurance Under Quality Uncertainty,” Selected paper, WAEA, Logan Utah, July, 2001.
- Neal Hooker and William Nganje, “ Interdisciplinary Food Safety Training: The Role of Economics”, Selected Paper presented at the Third International Food safety Conference, Guadalajara, Mexico, November 9-10, 2001.
- O’Relley, Z. Edward. Some Social and Economic Costs of Privatization. Paper presented at the 8<sup>th</sup> Annual meeting of the American Society of Business and Behavioral Sciences, Las Vegas, Nevada, February 21 – 26, 2001.

- O'Relley, Z. Edward. From Totalitarian Central Planning to a Market Economy: Decentralization in the Hungarian Economy. Paper presented at the Association for Private Enterprise Education International Convention, Washington, DC, April 8 – 10, 2001.
- Rathge, R. "Population Trends in the Great Plains" Great Plains Symposium, Oct. 15, Bismarck, ND.
- Sarmiento C., and P.G., Allen "Forecasting Performance from Modeling Risk Aversion" Presented at the International Symposium on Forecasting, Atlanta, GA (June 2001)
- Shultz, S. The Infeasibility of Wetland Restoration to Reduce Flood Damage in the Red River Valley: Would the Inclusion of Non-Market Wetland Values Make a Difference?' Annual Meeting of the W-133 Regional Research Project (Costs & Benefits of Public & Private Resource Policies Affecting Public & Private Land), Miami, Fl, 2/26/2001.
- Shultz, S. Feasibility of Wetland Restoration to Reduce Flood Damage in the Red River Valley. Western Agricultural Economics Association Annual Meeting, Logan Utah, July 9, 2001.
- Saxowsky, D.M. and C.J. Wachenheim. Re-specification of the Resources of Production Agriculture; Profits and Risk. Paper presentation at the 2001 Annual meeting of the Western Agricultural Economics Association, Logan, Utah.
- Novak, P., E.A DeVuyst, D. Lambert, and C.J. Wachenheim. Demand Estimation for Agricultural Processing Co-products. Paper presentation at the 2001 Annual meeting of the Western Agricultural Economics Association, Logan, Utah.
- Wachenheim, C.J. Building and Maintaining a Website On-location. Paper presentation at the 2001 Annual meeting of the Western Agricultural Economics Association, Logan, Utah.
- Wilson, W. "Tolerances, Economics and Traceability." Strategies for Coexistence in Crop Production. USDA-FAS, Minneapolis, Nov. 28, 2001.
- Wilson, W. Economic Issues and Challenges for Identity Preservation Strategies, to the 6<sup>th</sup> Annual Fields on Wheels Conference, Winnipeg, Manitoba, Nov 20, 2001.
- Wilson, W. Costs and Risks of Alternative Wheat Origination and Segregation Systems to Monsanto Wheat Industry Advisory Committee, October 3, 2001. St. Louis.
- Wilson, W. Tolerances, economics, and traceability to the USDA/IFAS sponsored seminar on Strategies for coexistence in crop production Minneapolis, November 27- 28, 2001.

Wilson, W. Wheat (US section 301 on Canada) to the Symposium on POLICY DISPUTES INFORMATION CONSORTIUM, Puerto Vallarta, Mexico March 7-9, 2002.

Wilson, W. International Perspective on GMO Wheat, to the Roundup Ready Wheat Grower Advisory Panel, July 16, 2001, Edmonton, Alberta.

Wilson, W. Logistical Costs of Marketing GM Wheats, to a seminar at the University of Manitoba, Winnipeg, November 24, 2001.

Wilson, W. ((joint with W. Nganje and N. Tiapo). Crop Insurance Under Quality Uncertainty, to the WAEA Annual Meetings, Logan Utah, July 10, 2001.

Wilson, W. Issues in development, adoption and marketing of GM Crops (e.g., wheat, barley, sugar beets, etc.) in Northern Tier Regions, Feb 13, 2001. Invited Seminar presentation at Iowa State University. Ames, IA.

## **C. OUTREACH**

### **1. Professional Service**

Several faculty members occupy national or regional positions in professional organizations. Cheryl DeVuyst serves on the American Agricultural Economics Association's Employment Services Committee, the Committee for Women in Agricultural Economics, and is co-editor of the Committee's newsletter. Eric DeVuyst serves as an associate editor for the Journal of Soil and Water Conservation. Cole Gustafson and Won Koo were reviewers for the USDA National Research Initiative's Markets and Trade Competitive Grants program. Gustafson was also a CSREES team reviewer for the Department of Economics at South Dakota State University. Stan Herren is the Director for Public Affairs for the Missouri Valley Economic Association. Larry Leistriz is Chair of Committee Assignments Task Force for the International Association for Impact Assessment. William Nganje serves on the Joint ESCOP-ECOP Food Safety Subcommittee. Richard Rathge is on the Board of Directors and the Advisory Committee of the Midwest Sociological Society, is on the Steering Committee of the National State Data Center Program, and serves on the Development Committee of the Rural Sociological Society. Bill Wilson continues to serve as a Director of the Minneapolis Grain Exchange.

### **2. Alumni Events and Other Community-Related Activities**

Department faculty are active in agricultural fraternities and sororities, attend reunion and honors banquets, and participate in agricultural shows and events in which College alumni are frequently present. Several faculty are active in the Fargo/Moorhead Chamber of Commerce committee on agribusiness.

### **3. Fund-Raising Accomplishments**

The Department of Agricultural Economics offers the largest scholarship program on campus. Over \$33,000 was granted to students in Agricultural Economics this year. Much

of the fund raising, coordination, and judging of applicants was done by Tim Petry prior to his transfer to the Extension Service.

Fund-raising for individual department-sponsored events, such as travel of the student NAMA chapter to the national competition in Denver in April, was conducted by students with organizational oversight by individual faculty members.

#### **4. Other Outreach Activities**

Department faculty continue to provide talks, lead discussions, and provide media information to a variety of state and national requests.

### **D. SPECIAL INITIATIVES**

#### **1. Cultural Diversity**

Departmental faculty increasingly reflect diversity. Cheryl DeVuyst, one of the department's three women faculty members, is active in national professional organization subcommittees promoting the role of women in agricultural economics. William Nganje was added to the NDSU Tapestry of Diverse Talents in December 2001. Won Koo serves on the U.S. Civil Rights Commission.

#### **2. Affirmative Action/Equal Opportunity**

The department continues to stress equal access to advertised positions. Selections for interviews, hiring decisions, annual evaluations, and promotion and tenure decisions are based entirely upon merit.

#### **3. Cooperation Programming/Interdisciplinary Efforts/Interinstitutional Activities**

Below is a listing of interstate research projects in which Agricultural Economics faculty are involved. In addition to these existing multi-state research projects, many faculty were involved in preparation and submission of multi-state, multi-discipline research/Extension proposals under the Initiative for Future Agriculture and Food Systems (IFAFS) RFP closing in May, 2001.

<b>Principal Investigator</b>	<b>Regional Committee/Title</b>
Lambert, David K.	NCA-12, Dept Chairs in Ag Econ from NC States
Lambert, David K.	NC-1003, Impact Analysis and Decision Strategies for Agricultural Research
Nganje, William and Cheryl DeVuyst.	NC-221, Financing Agriculture and Rural America: Issues of Policy, Structure, and Technical Change
Leistriz, F. Larry	NC-222, Impact of Technology on Rural Consumer

	Access to Food and Fiber Products
Leistriz, F. Larry	NE-162, Rural Economic Development, Alternatives in the New Competitive Environment
Nganje, William and Cheryl DeVuyst	NE-165, Private Strategies, Public Policies, and Food System Performance
Koo, Won W.	NCR-170, Research Advances in Agricultural Statistics
Koo, Won W.	NCR-179, Agricultural and Rural Transportation System
Nelson, William C.	NCR-194, Research on Cooperatives
Shultz, Steven D.	W-133, Benefits and Costs of Resource Policies Affecting Public and Private Land
Wachenheim, Cheryl J.	WCC-72, Agribusiness Research Emphasizing Competitiveness and Profitability

#### 4. International Activities

Faculty participated in many international activities this year. Training sessions for international wheat trading groups included presentations to groups from several countries. The Department has hosted visiting professors this year from Korea and Japan. Faculty activities have included trips to discuss wheat markets in Australia, Tunisia, and Thailand for Bill Wilson. Cheryl Wachenheim accompanied a group of 11 NDSU students to the *Ecole Supérieure d'Agriculture* in Angers, France for the month of June. Won Koo was invited to collaborate with faculty at two Chinese universities to establish joint teaching and research programs in agribusiness and international trade. Efforts are nearing completion to propose an M.S. degree in International Agribusiness, reflecting a collaborative effort between NDSU and the *Ecole Supérieure d'Agriculture* in Angers, France.

#### 5. Economic Development Efforts

One of the primary missions of the department is to aid in economic development efforts in North Dakota. Several faculty members are directly involved in economic development as a major component of their job responsibilities. Many of the grants, publications, presentations, and workshops listed earlier in the annual report reflect these efforts. Larry Leistriz, Richard Rathge, and Kathy Tweeten have primary responsibilities in economic development.

## 6. Assessment

### Undergraduate Program Assessment

#### *Intended Student Outcome #1: Proficiency in written communication*

Action: Student papers in AgEc 420, 444, and 491 were assessed.

Assessment: While student writing skills vary from inadequate to excellent, the overall writing skill level is judged to be acceptable. Students are able to focus on a topic and communicate their arguments.

An extensive writing assignment in Applied Agricultural Law (375) requires students to 1) develop a relevant question and revise it after receiving feedback from the instructor, an English instructor, and a classmate; 2) review a classmate's draft question and offer editorial and content suggestions; 3) research and draft a discussion/answer to a selected legal problem; and 4) revise the paper after receiving feedback from the instructor and English instructor.

Plan: Students will continue to be required to take communications courses in excess of the university's general education requirements. The following courses will continue to require extensive writing assignments: AGEC 350 (AgriSales), 375, 420, 444, 445, 446, and 491.

#### *Intended Student Outcome #2: Proficiency in oral communications.*

Actions: Faculty observed student presentations in AgEc 420, 450 and 451 (National AgriMarketing Association), and 491.

Assessment: While skill levels vary between students, overall oral communication skills are good. Students have become adept at incorporating technology, such as PowerPoint, into their presentations. The use of technology has added to, rather than detracted from, the students' abilities to present information.

Additionally, a small number of students have been followed through various courses, including NAMA, over the last 3 years. Their presentation/speaking skills have vastly improved. This improvement is likely due to student participation in NAMA, speaking requirements in several department courses, communication course requirements in the majors, and participation in student clubs/organizations.

Plan: Students will continue to be required to take communication courses in excess of the university's general education requirements. The following courses will continue to require extensive oral communication assignments: AGEC 350 (AgriSales), 420, 444, 445, 450, 451, and 491.



*Intended Student Outcome #3: Effective teamwork and group decision-making skills.*

Action: Student teams were evaluated in AgEc 374, 420, 445, 450 and 451 (NAMA), and 484. Both written and oral reports were evaluated.

Assessment: AGEC 374 (Cooperatives) relied upon student committees formed for the duration of the semester and assigned the following functions: 1. Internally organize the committees so that each member had a unique responsibility. The responsibilities were chairperson, secretary and communications, market analysis, cost and risk analysis, articles of incorporation and bylaws, business plan and the equity drive presentation; 2. Determine the type and optimal location of a business to be formed; and 3. Develop each component of the business plan and prepare and deliver a presentation of the plan. Teams met weekly, minutes were taken and distributed, and progress reports (drafts of each component) were submitted for review and comment.

AgEc 420, 450 and 451 rely almost exclusively on team projects. Student teams in 420 develop integrated farm business plans for actual case farms, present their analyses and recommendations to the class, and prepare written reports for the instructor. The 420 team reports are forwarded to the participating farmers. Past farmer participants have indicated that the teams' analyses and recommendations have been helpful in business planning. Student teams in 450 and 451 prepare a written market plan for an agribusiness venture and present the resulting marketing plans to the faculty, at the annual Agribusiness Club Banquet, and at a the national NAMA competition. AGEC 445 requires student teams to develop 20 page written reports and make oral presentations of the semester-long team projects. While the individual contributions to teams are difficult to judge, overall team products – presentations and written reports – are considered acceptable.

Plan: Extensive use of teamwork will continue in ECON 202 (web-based section), AGEC 242, 246, 339, 420, 450, 451, 445, 446, and 484.

*Intended Student Outcome #4: Ability to integrate subject matter knowledge and other basic skills to solve economic and management problems.*

This outcome will be assessed later in summer 2002 as part of an assessment of the department's general education courses.

*Intended Student Outcome #5: Ability to use computer technology.*

Action: In AgEc 339, students are tested (but not graded directly) on their ability to use spreadsheets. In the two versions of the 339 test (administered by the Mathematics Department), 43% and 45% of the students received at least a

“B” on questions addressing spreadsheet skills. 77% and 70% received at least a “C”. No students received an “F.” Students’ use of PowerPoint and other multimedia communication software is evaluated as part of several department courses. Required use of word processors, spreadsheets, the internet and email is standard in much of the curriculum. Both students participating in NAMA and in the summer French Study Abroad program are responsible for daily postings to a web journal available on the department’s website ( <http://www.ext.nodak.edu/homepages/aeddept/onlocation.htm> ).

**Assessment:** Students are increasingly skilled in technology usage. Students appear well prepared to employ these skills to solve problems, research information and communicate results.

**Plan:** Introductory courses, such as 242 and 246, will continue to require spreadsheet use. Use of communication technologies will continue to be required in numerous courses. An experimental online version of Econ 202 will be offered in the spring semester of 2003.

*Additional assessment activity:*

In AgEc 339, quantitative reasoning skills were assessed. Bill Martin from the Mathematics Department administered the exam. AgEc 339 is required for both the Agricultural Economics and Agribusiness degrees and is generally taken by students with junior standing. As was the case last year, students performed poorly on this exam. Algebra, calculus and statistics skills are all found lacking. The only bright spot was the students’ ability to use spreadsheets. In response to the exam, the department chair will be appointing an ad hoc committee to develop a plan to integrate the use of mathematics and statistics into more of the department’s courses.

### **Graduate Program Assessment**

*Intended Student Outcome #1: Students will demonstrate the ability to conduct research in Agricultural Economics using quantitative and qualitative methodology.*

**Action:** The quality of M.S. theses is evaluated by committee members and by faculty members participating in thesis defenses.

**Assessment:** The quality of the student research is judged adequate. Students are particularly skilled at addressing issues of regional interest. Based on these M.S. theses, econometric and mathematical programming skills are judged adequate.

**Action:** The department will continue to require courses in econometrics and operations research.

*Intended Student Outcome #2: Ability to integrate subject matter knowledge and other basic skills to solve economic and management problems.*

Action: Last year the department offered two re-designed courses in applied economics and agribusiness. The success of these two course at achieving this intended student outcome will be assessed as the current M.S. students begin defending their M.S. research during the 2002-2003 academic year.

### **Assessment Plan for 2002-2003.**

- ❑ The department will complete an assessment of the department's general education offerings in Summer 2002.
- ❑ A department committee will develop a plan to integrate mathematics and statistics more thoroughly into the undergraduate curriculum.
- ❑ Assessment criteria need to be updated to reflect the increase in undergraduate degrees available and options available to M.S. students.

## **7. Addressing Institutional Purposes**

Teaching – The department faces many new opportunities. Addition of the Economics program to the departmental mission poses many short run challenges but opens many new opportunities in the longer term. Faculty are involved in the implementation of new interdisciplinary Ph.D. programs in Food Safety, Natural Resource Management, and Transportation and Logistics. All three programs are beginning in the fall of 2002.

Research – The department enjoys a national reputation in several research areas. Research programs in international agricultural trade are well respected around the country. Several researchers continue to produce respected articles in nationally reviewed academic journals. Research of local interest has also identified costs associated with plant disease, international trade effects on North Dakota producers, and provided economic analyses of natural resource issues including floodplain characteristics and economic impacts of the Conservation Reserve Program. The Department was the top NDSU unit in the 2001 calendar year in terms of generating external grant dollars.

Outreach/Extension – Extension is the quintessential model of the engaged university. Efforts resulting from the transfer of Tim Petry to Extension will address value added livestock agriculture development within the state, an area receiving substantial focus by state government and agriculture organizations. Involvement with agribusiness firms and groups by several of the faculty increase the opportunities for mutually beneficial engagement. Neither Larry Leistritz nor Richard Rathge receive Extension support, yet both conduct numerous applied research projects having a direct impact on local and state government decision making.

## **8. College/Unit Planning; Functions/Activities/Accomplishments**

The Department continues to undergo many changes. The Department is implementing many course changes through course deletions, modifications, and development of new

courses. The planning procedure was initiated with the recommendations of the CSREES review in May 2000. Although there has been no decrease in the number of courses taught and, in fact, student FTEs generated has increased roughly 50% with the addition of the Economics program, substantial changes have occurred in the courses and programs offered by the Department. Problems confronting future efforts are resource constraints in staffing all of the courses identified to be important for the program.

Program concentration has also resulted from both the CSREES review as well as departmental directions identified over the last several years. We are continuing to place high importance on developing research, teaching, and outreach expertise in agribusiness. We have identified natural resources and international trade as important areas for the Department in economics. A department retreat in May 2002 re-emphasized the importance of these core areas. Resource constraints (i.e., faculty) continue to limit growth in these areas, however.

Future planning efforts will concentrate on prioritization of program focus areas as new resources become available.

#### **E. Other Goals**

The previous section (D.8) highlights the directions in which the department is moving, and the process developed to implement these changes.

## **II. COMMENTS**

*What each department's future plans are, future challenges and program strengths, as well as the overall unit.*

Teaching – We will continue to provide rigorous training in economics and agribusiness. The Department has reaffirmed its commitment to focusing on agribusiness and trade as key areas of expertise. The M.S. program has had two extremely good years in terms of recruitment and funding of new students (2001-2 and 2002-3). Additional resources are necessary to satisfy faculty concerns over the quality of training that can be provided to students concentrating on economics options within the new Ph.D. programs in Transportation and Logistics, Food Safety and Natural Resource management.

The number one challenge for the department's teaching program in 2002-2003 is to increase majors in the three undergraduate majors.

*How each department makes use of assessment data in decision making within the framework of the institution's mission and purpose.*

Results of the mathematical skills assessment conducted during the fall 2000 and 2001 semesters indicated a poor ability of many of our students to incorporate appropriate mathematical techniques in economic decision making. Departmental response will be to increase use of mathematics across the curriculum to reinforce skills learned in calculus or other math courses. Written and oral communication skills of the students are adequate in many cases, though continued concentration on and rigorous evaluation of written

assignments and oral and multimedia presentations is necessary to improve the communication skills of our students.

### III. APPENDIX.

#### A. AY 2002 courses

Spring 2002									
Instructor	Prefix	Course No	Title	Credits	Enrollment	% Response	Course Rating	Instructor Rating	FTEs
O'Relley,E	ECON	105	Elements of Economics	3	56	100%	4.00	4.20	0.210
Leitch,B	ECON	150	Quant. Econ	2	34	100%	3.94	4.26	0.085
Leitch,B	ECON	201	Principles of Microeconomics	3	183	100%	3.78	4.33	0.686
Leitch,B	ECON	201	Principles of Microeconomics	3	179	100%	3.87	4.27	0.671
Gustafson,C	AGEC	202	Principles of Macroeconomics	3	50	100%	3.58	3.58	0.188
Gustafson,C	ECON	202	Principles of Macroeconomics	3	103	100%	3.54	4.07	0.386
Mack,L	ECON	202	Principles of Macroeconomics	3	75	100%	3.88	3.95	0.281
Mack,L	ECON	202	Principles of Macroeconomics	3	164	100%	3.61	3.70	0.615
Petry,T	AGEC	244	Agric Mktg,Livestock Emphasis	3	79	100%	3.90	3.36	0.296
DeVuyst,C	AGEC	246	Agricultural Finance I	4	74	100%	4.35	4.33	0.370
Herren,S	ECON	324	Money&Banking	3	48	100%	3.97	4.22	0.265
Herren,S	ECON	324	Money&Banking	3	46	100%	3.96	4.19	0.254
Sarmiento,C	AGEC	344	Agricultural Price Analysis	3	50	100%	2.60	2.24	0.276
Nganje,W	AGEC	346	Agricultural Finance II	3	47	100%	4.28	4.54	0.259
O'Relley,E	ECON	341	IntermedMicro	3	34	100%	3.95	3.95	0.188
Cooper	ECON	343	IntermedMacro	3	50	100%	NA	NA	0.276
Shultz,S	AGEC	347	Principles Real Estate	3	25	100%	4.16	4.26	0.138
Shultz,S	BUSN	347	Principles Real Estate	3	47	100%	4.07	4.11	0.259
Nelson,B	AGEC	374	Cooperatives	3	26	100%	3.25	3.04	0.143
Nelson,B	BUSN	374	Cooperatives	3	9	100%	3.25	3.04	0.050
Wachenheim,C	AGEC	399	AgriSales	3	26	100%	4.44	4.22	0.143
DeVuyst,E	AGEC	420	Int Farm Mgmt	3	23	100%	3.94	4.41	0.127
Gustafson,C	AGEC	446	Agribusiness Finance	3	25	100%	3.91	4.23	0.138
Wachenheim,C	AGEC	451	NAMA II	2	7	100%	5.00	5.00	0.026
O'Relley,E	ECON	461	EconDev	3	13	100%	4.46	4.73	0.072
Hearne,R	ECON	482	Env Econ	3	15	100%	3.30	3.30	0.083

Shultz,S	AGEC	491	Nat Resource & Rural Econ Policy	1	12	100%			0.022
Wachenheim,C	AGEC	484	AgPolicy	3	54	100%	4.20	4.22	0.298
Wachenheim,C	AGEC	496	Field Exp	3	1	100%			0.006
Herren,R	ECON	494		3	1	100%	5.00	5.00	0.006
Nganje,W	AGEC	646	Agribusiness Finance	3	2	100%	NA	NA	0.021
Wilson,W	AGEC	744	Agricultural Marketing	3	11	33%	4.60	4.60	0.038
Wachenheim,C	AGEC	744	Agricultural Marketing	3	11	33%	4.20	4.40	0.038
Devuyst,C	AGEC	744	Agricultural Marketing	3	11	33%	3.70	3.40	0.000
Bitzan,J	AGEC	772	Rural Logistics	3	5	100%	4.80	4.40	0.052
Herren,S	BUSN	780	BusCond Anal	3	37	100%	NA	NA	0.385
Sarmiento,C	AGEC	791	Forecasting Econ. Time Series	1	1	33%	3.40	3.00	0.001
Koo,W	AGEC	791	Demand Models	1	5	33%	4.50	4.50	0.006
Hearne,R	ECON	793	Env Econ	3	1	100%	NA	NA	0.003
Leistriz,L	AGEC	793	Int Frm/Ranch Mgmt	3	1	100%	5.00	5.00	0.010
DeVuyst,E	AGEC	793	Int Frm/Ranch Mgmt	3	7	100%	4.20	5.00	0.073
Tolliver,D	AGEC	798	Masters Thesis	5	1	100%			0.017
DeVuyst,E	AGEC	798	Masters Thesis	1	1	100%			0.003
Wilson,W	AGEC	798	Masters Thesis	4	1	100%			0.014
Shultz,S	AGEC	798	Masters Thesis	1	1	100%			0.003
Koo,W	AGEC	798	Masters Thesis	4	1	100%			0.014
Devuyst,E	AGEC	798	Masters Thesis	1	1	100%			0.003
Nganje	AGEC	798	Masters Thesis	1	1	100%			0.003
Tolliver,D	AGEC	798	Masters Thesis	1	1	100%			0.003
Nganje,W	AGEC	798	Masters Thesis	1	1	100%			0.003
Wachenheim,C	AGEC	798	Masters Thesis	6	1	100%			0.021
Wachenheim,C	AGEC	798	Masters Thesis	5	1	100%			0.017
<b>TOTAL</b>									7.289

<b>Fall 2001</b>									
<b>Instructor</b>	<b>Prefix</b>	<b>Course No</b>	<b>Title</b>	<b>Credits</b>	<b>Enrollment</b>	<b>% Response</b>	<b>Course Rating</b>	<b>Instructor Rating</b>	<b>FTEs</b>
O'Relley,E	ECON	105	Elements of Economics	3	49	100%	4.25	4	0.184
Petry,T	ECON	201	Principles of Microeconomics-Econ	3	205	100%	3.56	3.50	0.769
O'Relley,E	ECON	201	Principles of Microeconomics-Econ	3	124	100%	3.89	3.92	0.465
Petry,T	ECON	201	Principles of Microeconomics-Econ	3	129	100%	3.68	3.71	0.484
Leitch,B	ECON	201	Principles of Microeconomics-Econ	3	219	100%	3.75	3.92	0.822
Mack,L	ECON	202	Principles of Macroeconomics-Econ	3	167	100%	3.80	3.88	0.627
Mack,L	ECON	202	Principles of Macroeconomics-Econ	3	134	100%	3.57	3.67	0.503
Leitch,B	AGEC	220	World Agricultural Development	3	36	100%	3.84	4.23	0.135
DeVuyst,E	AGEC	242	Farm & Agribusiness Management 1	4	87	100%	4.54	4.71	0.435
Herren,S	ECON	324	Money & Banking	3	44	100%	3.85	4.30	0.243
Herren,S	ECON	324	Money & Banking	3	51	100%	3.84	4.05	0.281
Lambert,D	AGEC	339	Quant Methods & Decision Making	3	45	100%	3.32	3.24	0.248
O'Relley,E	ECON	341	Intermediate Economics	3	52	100%	3.79	3.88	0.287
Mack,L	AGEC	342	Farm & Agribusiness Management 2	3	33	100%	2.87	3.00	0.182
Saxowsky,D	AGEC	375	Applied Agriculatural Law	3	64	100%	4.22	4.11	0.353
Mack,L	AGEC	380	Public Policy Choices	1	15	100%	3.93	3.86	0.028
Wilson,W	AGEC	444	Crops Marketing	3	18	100%	4.83	4.58	0.099
Wilson,W	AGEC	445	Agricultural Market Organization	3	22	100%	4.43	4.43	0.121
Nelson,B	AGEC	450	NAMA	1	9	100%	4.1	2.6	0.017
Koo,W	AGEC	470	Agricultural Trade	2	27	100%	3.21	2.63	0.099
Herren,S	AGEC	494	IS/Evolution of Econ Ideas	3	2	100%			0.011
DeVuyst,C	AGEC	491	AgBus Seminar	1	9	100%	4.22	4.44	0.017
Petry,T	AGEC	494	IS/Financial Mgmt	1	1	100%			0.002
Nelson,B	AGEC	494	IS/Cooperatives	3	1	100%			0.006
DeVuyst,C	AGEC	496	Field Experience	2	1	100%	5.00	5.00	0.004
DeVuyst,C	AGEC	496	FE/Ag Sales Exp	3	1	100%			0.006
Koo,W	AGEC	670	Agricultural Trade	2	3	100%	5.00	5.00	0.021
Shultz,S	AGEC	701	Research Philosophy	1	13	100%	3.27	3.27	0.045
Sarmiento,C	AGEC	710	Econometrics	3	14	100%	2.69	2.39	0.146



DeVuyst,E	ECON	741	Advanced Microeconomics	3	13	100%	4.62	4.85	0.135
Wilson,W	AGEC	746	Rural Ind. Finance	3	11	33%	4.14	4.14	0.038
DeVuyst,C	AGEC	746	Rural Ind. Finance	3	11	33%	4.14	4.43	0.038
Nganje,W	AGEC	746	Rural Ind. Finance	3	11	33%	4.14	4.14	0.038
Bitzan,J	AGEC	771	Non-Metro Trans Systems	3	3	100%	4.33	5.00	0.031
Wilson,W	AGEC	791	TTT/Spreadsh Dec Models	1	10	100%	4.22	3.89	0.035
Tolliver,D	AGEC	798	Masters Thesis	4	1	100%			0.014
Wilson,W	AGEC	798	Masters Thesis	4	1	100%	4.68	5.00	0.014
DeVuyst,E	AGEC	798	Masters Thesis	2	1	100%			0.007
Shultz,S	AGEC	798	Masters Thesis	1	1	100%	5.00	5.00	0.003
DeVuyst,E	AGEC	798	Masters Thesis	2	1	100%			0.007
DeVuyst,E	AGEC	798	Masters Thesis	2	1	100%	5.00	4.00	0.007
Koo,W	AGEC	798	Masters Thesis	7	1	100%			0.024
	AGEC	798	Masters Thesis	2	1	100%			0.007
Wilson,W	AGEC	798	Masters Thesis	3	1	100%			0.010
Tolliver,D	AGEC	798	Masters Thesis	1	1	100%	4.50	4.50	0.003
Nganje,W	AGEC	798	Masters Thesis	4	1	100%			0.014
Wachenheim,C	AGEC	798	Masters Thesis	1	1	100%			0.003
<b>TOTAL</b>									7.064