

RURAL ECONOMY

DEPARTMENT OF RURAL ECONOMY

1991 ANNUAL REPORT



Department of Rural Economy
Faculty of Agriculture and Forestry
University of Alberta
Edmonton, Canada

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T6G 2H1

February 1992

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FOREWORD

This will be the last time that I write the foreword to the Department's annual report series. My term as Department Chair ends on June 30, 1992. It has been a challenge and a privilege to serve in this role and I look forward to returning to my former professorial place. The past five years have been productive ones for the Department with significant changes in staff positions, increased research funding and output, and increased graduate student numbers. I wish my successor the very best as the Department of Rural Economy and the Faculty of Agriculture and Forestry begin to undergo major program curriculum changes and restructuring.

The year 1991 saw the arrival of two new professorial staff members and one support staff member. Among the year's activities and accomplishments is yet another record year of graduate student program completions. Twenty-one out of the 261 former graduate students to complete their programs since the Department was founded in 1962 did so in 1991. This report also contains current and completed research projects as well as a new list of publications. Awards and offices held by staff and students this past year are again noteworthy. Our seminar series has been very active as reflected in the list of visiting speakers from around the world contained herein.

Once again it is our hope that this report is of interest and use to our valued publics - our graduates, friends, colleagues and the public at large, both at home and abroad.

W.E. Phillips
Chair

DEPARTMENT STAFF

Academic Staff

W.L. Adamowicz, Ph.D. (Minnesota); Associate Professor; Natural Resources, Econometrics.
 A.W. Anderson, M.Sc. (Alberta); Associate Professor; Operations Research.
 L.P. Apedaile, Ph.D. (Iowa State); Professor; Policy, Development.
 L. Bauer, Ph.D. (Oregon State); Professor; Farm Management, Production Economics.
 L.F. Constantino, Ph.D. (British Columbia); Associate Professor; Forest Economics (to July 15, 1991).
 J.H. Copeland, M.Sc. (Alberta); Faculty Service Officer; Computing and Statistical Analysis.
 J.S. Eales, Ph.D. (California, Davis); Associate Professor; Agricultural Marketing.
 J.R. Fulton, Ph.D. (Minnesota); Assistant Professor; Marketing, Cooperatives, Organizational Structure.
 D.S. Gill, Ph.D. (Cornell); Professor; Rural Sociology, Extension Education.
 R.J. Haigh, Ph.D. (Alberta); Assistant Professor; Rural Sociology, Rural Development.
 M.L. Lerohl, Ph.D. (Michigan State); Professor; Policy, Production Economics.
 M.K. Luckert, Ph.D. (British Columbia); Assistant Professor; Forest Economics (effective December 1, 1991).
 E.C. Murray, Ph.D. (Pennsylvania State); Professor; Rural Sociology (effective July 1, 1991).
 D.G. Murri, M.S. (Utah State); Associate Professor; Rural Sociology (to June 30, 1991).
 R.R. Norby, M.Sc. (Alberta); Administrative Professional Officer; Administration.
 F.S. Novak, Ph.D. (Illinois); Assistant Professor; Production Economics, Finance.
 W.E. Phillips, Ph.D. (California at Berkeley); Professor and Chair; Natural Resources.
 E.W. Tychniewicz, Ph.D. (Purdue); Professor and Dean; Policy, Transportation.
 M.M. Veeman, Ph.D. (California at Berkeley); Professor; Marketing, Trade.
 T.S. Veeman, Ph.D. (California at Berkeley); Professor; Development, Natural Resources.

Associated Academic Staff

L.F. Constantino, Ph.D. (British Columbia); Adjunct Professor; Forest Economics (effective July 15, 1991).
 H. Deng (Inst. of Agriculture Modernization, Academia Sinica); Visiting Scholar from Chinese Academy of Social Sciences; Operations Research.
 G.W. Lamble, Ph.D. (Texas A & M); Adjunct Professor; Adult and Extension Education, Program Management.
 H.C. Love, Ph.D. (Iowa State); Professor Emeritus; Production Economics.
 T.W. Manning, Ph.D. (Minnesota); Professor Emeritus; Natural Resources.
 G.A. Mumey, Ph.D. (Washington); Adjunct Professor; Finance, Management.
 B.T. Oleson, Ph.D. (Minnesota); Adjunct Professor; Marketing, Trade.
 M.B. Percy, Ph.D. (Queen's); Adjunct Professor; Natural Resources, Forest Economics.
 T.A. Petersen, Ph.D. (Washington State); Professor Emeritus; Farm Management, Extension.
 J.J. Richter, Dr. Rer. Pol. (Graz, Austria); Professor Emeritus; Marketing, Trade.
 W.M. Schultz, Ph.D. (Oklahoma State); Professor Emeritus; Production Economics, Natural Resources.
 W.A. White, Ph.D. (Simon Fraser); Adjunct Professor; Forest Economics.

Support Staff

J. Boucher, Secretary
 L. Bruce, Stenographer/Receptionist
 E. Culver-James, Library Assistant (to June 30, 1991)
 S. Hammond, Secretary/Bookkeeper
 B. Johnson, Librarian
 C. Shier, Senior Analyst (to June 30, 1991)
 W. Williamson, Department Secretary
 D. Zrobok, Library Assistant (effective Sept. 3, 1991)

Sessional Lecturers & Research Associates

G. Armstrong, Research Associate
 X. Dong, Research Associate
 A. Fantino, Research Associate
 K. Smith, Sessional Lecturer

AWARDS AND OFFICES

- Adamowicz, W.L. - Editor, Canadian Journal of Agricultural Economics
- Alavalapati, J. - University of Alberta Ph.D. Scholarship
- Apedaile, L.P. - Associate Editor, Canadian Journal of Agricultural Economics
- Bauer, L. - Canadian Farm Business Management Award for Excellence
- Book Review Editor, Canadian Journal of Agricultural Economics
- Fulton, J.R. - Director, Alberta Agricultural Economics Association
- Gelfand, J. - 1991 T.W. Manning Book Prize Award for Academic Achievement in Rural Sociology
- International Development Research Centre (IDRC) Research Fellowship
- Lacuna, C. - University of Alberta/CIDA Scholarship
- Lamble, G.W. - Past President, Canadian Society of Extension
- Lerohl, M.L. - Associate Editor, Canadian Journal of Agricultural Economics
- Mataya, C. - Rockefeller Foundation African Dissertation Internship Award
- Mulinge, W. - Kenya-Canada Agricultural Research Scholarship
- Norby, R. - Director, Alberta Agricultural Economics Association
- Owino, A. - Kenya-Canada Agricultural Research Scholarship
- Salami, H. - Islamic Republic of Iran, Ministry of Culture and Higher Education Scholarship
- Tanguay, M. - Walter H. Johns Graduate Fellowship
- Tyrchniewicz, E.W. - Elected to the Board of Trustees, International Centre for Research in Agroforestry (ICRAF), Kenya
- Unterschultz, J. - 1991 T.W. Manning Book Prize Award for Academic Achievement in Agricultural Economics
- Veeman, M.M. - Past President, Canadian Agricultural Economics and Farm Management Society
- White, W.A. - Associate Editor, Forestry Chronicle

ON LEAVE

- G.W. Lamble August 1, 1991 - July 31, 1992
- E.C. Murray July 1, 1991 - June 30, 1992
- M.M. Veeman July 1, 1990 - June 30, 1991
- T.S. Veeman July 1, 1990 - June 30, 1991

GRADUATE STUDENTS COMPLETING PROGRAMS IN 1991

- Anielski, Mark. Forestry Economic Rents in Alberta - Efficient and Equitable Treatment. MSc (Percy)
- Boxall, Peter. A Nonparametric Analysis of the Travel Cost Model of Recreation Demand. MSc (Adamowicz)
- Chen, Peter. An Analysis of Market Demand for Meats in Canada. PhD (M. Veeman)
- Cymbal, Wendy. Article XI of the GATT, Supply Management and Tariffication: Issues Facing the Canadian Egg and Poultry Industries in the Uruguay Round. MSc (M. Veeman)

- Fletcher, Stephen. Economic Analysis of Forest Dependent Communities in the Prairie Provinces of Canada. MSc (Phillips/White)
- Hamal, Krishna. The Economic Analysis of Production and Productivity Growth in the Nepalese Crop Sector. PhD (T. Veeman)
- Haney, Ted. Wildlife Habitat on Alberta Private Lands: An Analysis of Land Use Trade-offs. MSc (Phillips)
- Hazelwood, Jack. Farm Management Training Needs Assessment for Alberta Agriculture. MAg (Gill)
- Knox, Kelly. Information Needs of Alberta Pork Producers. MSc (Murri/Hawkins)
- Liu, Guangzhi. Risk Dimension of Cropping Systems in the Family Farm Setting of Heilongjiang Province, China. MSc (Bauer)
- Magnusson, Gisele. A Net Revenue Maximization Model for Alberta Barley Trade with the North West United States. MSc (Lerohl)
- McKinnon, Duncan. A Study of Optimal Locations: Competitiveness of the Alberta Cattle Feeding Industry with U.S. Regions. MSc (Lerohl)
- McNaughton, Noel. Holistic Resource Management for Prairie Community Development: A Model. MAg (Gill)
- Moreno, Alvaro. Participatory Policies in Land Reform: A Comparative Analysis of El Salvador and Nicaragua. MSc (Gill)
- Oberg, Neal. Farm Machinery Depreciation: Empirical Estimates of Mean and Variance. MAg (Mumey)
- Peterson, Dan. The Effect on Volumes and Values of Alternative Harvest Regimes: An Alberta Case Study. MSc (Constantino/Percy)
- Rusli, Yetti. Forest Taxation and the Wood Products Industry in Indonesia. MSc (Constantino/Phillips)
- Ryan, Michael. An Economic Analysis of the Alberta Sheep Industry. PhD (Hawkins/M. Veeman)
- Sandhu, Gurmit. Economic Structural Analysis of the Alberta and Canadian Agricultural Sectors. PhD (Phillips)
- Si, Yisheng. Analysis of Grain Production and Productivity in the People's Republic of China. MAg (T. Veeman)
- Unterschultz, James. Risk and Returns in Cattle Finishing in Alberta. MSc (Novak)

GRADUATE STUDENTS CONTINUING PROGRAMS THROUGH 1991

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| Akabua, Kojo, M.Sc. (Phillips/Bauer) | Melvin, Richard, M.Sc. (Novak) |
| Alavalapati, Janaki, Ph.D. (Percy) | Mulinge, Wellington, M.Sc. (Apedaile) |
| Archibald, Stephen M.Ag. (Bauer) | Myhre, Mark, M.Sc. (Lerohl) |
| Bedford, Evan, M.Sc. (Gill) | Needham, Dan, M.Sc. (White/Phillips) |
| Cmoluch, Jo Ann, M.Sc. (M. Veeman) | Olson, Mark, M.Ag. (Gill) |
| Condon, Barbara, M.Sc. (Phillips) | Owino, Adda, M.Sc. (Fulton) |
| Cupples, Sally, M.Ag. (Bauer) | Parlardg, Karen, M.Sc. (M. Veeman) |
| Erdman, Douglas, M.Ag. (Bauer) | Peters, Tamantha, M.Sc. (Adamowicz) |
| Freeman, Ruth, M.Sc. (Eales) | Pick, Arthur, M.Ag. (Gill) |
| Gelfand, J., M.Sc. (Gill) | Pletsch, Paul, M.Sc. (M. Veeman) |
| Gyori, Lee Anne, M.Sc. (Lerohl) | Ryning, Ken, M.Ag. (Bauer) |
| Jennings, Sarah, Ph.D. (Percy) | Salami, Habib, M.Sc. (Bauer) |
| Kisko, Adrienne, M.Sc. (Gill) | Siran, Sulisty, M.Ag. (Phillips) |
| Kjaer, Nis, M.Sc. (Mumey) | Staples, Blaine, M.Ag. (Novak/Bauer) |
| Lacuna, Celeste, M.Sc. (Gill) | Tanguay, Mark, M.Sc. (Adamowicz/White) |
| Mataya, Charles, Ph.D. (M. Veeman) | Watson, David, M.Sc. (Adamowicz) |
| Maw, Wai Lin, M.Sc. (Percy) | Watson, Leslie, M.Sc. (Murray) |

VISITING SPEAKERS

- Mr. Doug Walker, Forest Management Coordinator and Mr. Rick Bonar, Fish & Wildlife/Recreation Coordinator, Weldwood of Canada Limited, Hinton Division. "Integrated Timber and Wildlife Management." January 14 and 21.
- Dr. J. Knetsch, Professor, Simon Fraser University. "Environmental Valuation: Wrong Questions?" March 7.
- Dr. Alf Birch, Alberta Water Resources Commission. "Water Conservation and Transferable Water Rights." July 10.
- Dr. Edith Depetris de Guiguet, Associate Professor, Litoral National University, Santa Fe, Argentina. "The Argentinian Grain Marketing System and the Involvement of Cooperatives." July 15.
- Mr. Greg J. Arthaud, Ph.D. Candidate, University of Minnesota. "Integrated Timber, Wildlife and Recreation Management: Spatial and Temporal Issues." August 2.
- Dr. Alfons Weersink, Assistant Professor, University of Guelph. "Economics of Weed Control Strategies." September 5.
- Dr. John Murphy, Lecturer, University College Dublin and 1990-91 Van Vliet Professor, University of Saskatchewan. "Rates of Return to Research in Agriculture: Selected Issues." September 19.
- Dr. Robert Young, Professor, Colorado State University. "Systems Economics and the Design of Water Allocation Institutions." September 23.
- Dr. Elwin Smith, Conservation Economist, Alberta Agriculture. "The Economics of Soil Erosion." September 30.
- Professor Christine Kovachazy, Rural Affairs, National Planning Commission, Paris. "Rural Development: New Balances, New Functions, New Approaches." October 21.
- Dr. Brian Oleson, Executive Director (Planning), Canadian Wheat Board. "The Grain Price War: Implications for Institutional Change." October 31.
- Dr. William Rivera, Extension and Agricultural Education, University of Maryland. "Extension Education in Marketing: A Global Perspective." November 7.
- Mr. J. Shannon Neibergs, Ph.D. Candidate, Department of Agricultural Economics, Texas A & M University. "A Comparison of Recommended Farm Accounting Procedures Between Canada and the United States." December 2.
- Dr. Meena Venkateswaran, Post Doctoral Research Fellow, Department of Agricultural Economics and Rural Sociology, Auburn University. "Advertising of Non-Alcoholic Beverages: A Test of the Mutual Cancellation Hypothesis." December 5.

PUBLICATIONS 1991¹

Books and Chapters in Books

Apedaile, L.P. 1991. "An Exploration of Policy for European Rural Economies After 1992." In M. Tracy, (ed). *Rural Policy Issues*. The Arkleton Trust, Enstone, Oxon, U.K. p. 145-169.

Journal Articles

- Adamowicz, W.L. and T. Graham-Tomasi. 1991. "Revealed Preference Evaluation of Nonmarket Benefit Techniques." *Journal of Environmental Economics and Management* 20 (1):29-45.
- Bauer, Leonard. 1990. "Risk and Returns in Agricultural Assets; Measurement Issues." *Canadian Journal of Agricultural Economics*. 38 4 (Part I):667-675.
- Chen, P.Y. and M.M. Veeman. 1991. "An Almost Ideal Demand System for Meats with Habit Formation and Structural Change." *Canadian Journal of Agricultural Economics* 39 (2):223-235.
- Gellner, B., L. Constantino and M. Percy. 1991. "Dynamic Adjustments in the United States and Canadian Construction Industries." *Canadian Journal of Forest Research* 21 (3):326-332.
- Hawkins, M.H. and M.L. Lerohl. 1991. "The Alberta Hog Industry Problem of the 1960s: Its Definition and Resolution." *Agricultural Economics* 5:211-222.
- Jennings, S., W.L. Adamowicz and L. Constantino. 1991. "Macroeconomic Impacts on Canada's Lumber Sector." *Canadian Journal of Forest Research* 21 (March):288-299.
- Luckert, M.K. 1991. "Effect of Canadian Forest Tenures on Rent Distributions and Resource Allocations: A British Columbia Case Study." *Forest Science* 37(5):1441-1462.
- Luckert, M.K. 1991. "The Perceived Security of Institutional Investment Environments of Some British Columbia Forest Tenures." *Canadian Journal of Forest Research* 21 (3):318-325.
- Marothia, D.K. and W.E. Phillips. 1990. "Economics of Soil Erosion Control from the Farmer's Perspective: A Peace River Survey." *International Journal of Ecology and Environmental Sciences* 16:85-96.
- Sandhu, G.S. and W.E. Phillips. 1991. "Optimum Forest Rotation in an Imperfect Stumpage Market with a Changing Demand Function." *Land Economics* 67 (2):240-254.
- Unnevehr, L.J. and J.S. Eales. 1991. "U.S. Beef Product Prices and Trade Liberalization." *Journal of Agribusiness*. In press.
- White, W.A. 1991. "Economics and Sustainable Forest Development: The Case of Soil Degradation." *Forestry Chronicle* 67(1):19-22.

Other Refereed Publications

Fox, G., W. Adamowicz, G. Debailleul, P. Thomassin. 1990. "Agriculture and the Environment: Economic Dimensions of Sustainable Agriculture." Report of the Canadian Agricultural Economics and Farm Management Society ad hoc Committee on Sustainable Agriculture to the Agricultural Institute of Canada and the National Science Council. CAEFMS Occasional Publication No. 1, Guelph, Ontario. 45 p.

¹ A listing of previous publications is contained in University of Alberta, Department of Rural Economy *Publications 1985-1989*.

- Freshwater, D., P. Ehrensaft and L.P. Apedaile. 1991. *The Implications of Global Restructuring of Primary Industries on the Development of Rural and Single Industry Regions*. Employment and Immigration Canada. Ottawa. 42 p.
- Gill, D.S. and J. Alavalapati. 1991. "An International Bibliography on Social Forestry with Emphasis on Forestry Extension Education." Monticello, Illinois: Vance Bibliographies, Public Administration Services Bibliography #P3079. 74 p.

Proceedings, Abstracts and Posters

- Adamowicz, W.L. 1990. "Time Series Models in Econometrics." Proceedings: The All-Alberta Applied Statistics and Biometrics Workshop. L.Z. Florence and L.A. Goonewardene editors. Alberta Environment Center, Vegreville, Alberta. AECV-91P1. p. 5-14.
- Adamowicz, W.L. 1991. "Why Present Papers at Scientific Conferences." Paper presented at the CSE Section of the AIC Annual Conference, Fredericton, NB, July 27-31. Appearing as "The Presentation of Scientific Papers at Conferences: The Perspective of the Scientist." In the *Canadian Society of Extension Bulletin* 45 (Fall):3-4.
- Adamowicz, W.L. and P.C. Boxall. 1991. "A Southern Alberta Recreational Fishery Use Model." Paper presented at the Great Plains Fishery Workers Association Annual Meeting, Lethbridge, Alberta, February 4-6. Abstract in: Proceedings and Abstracts of the 40th Anniversary Workshop of the Great Plains Fishery Workers Association.
- Apedaile, L.P. 1991. Poster: "Complex Dynamical Systems and Limit Cycles Shed Light on Sustainable Agriculture and Cooperation." XXI International Conference of the International Association of Agricultural Economists, Tokyo.
- Dunlop, D.M. and M.L. Lerohl. 1990. "The Impact of a Change in the Western Canadian Grain Transportation Policy." *Canadian Journal of Agricultural Economics* 38 (4):1029.
- Eales, J. and L. Unnevehr. 1991. "The Inverse Almost Ideal Demand System." Proceedings of the NCR-134 Conference on Applied Commodity Price Analysis, Forecasting, and Market Risk Management. p. 401-17.
- Gill, D.S. 1991. "India's Progress in Agriculture and Rural Development During the Past 40 Years." In P. Krishnan (Ed.) *Proceedings of University of Alberta India Week 1990*. Edmonton: Shastri Indo Canadian Institute, University of Alberta Committee. p. 32-46.
- Heaps, T.M. and W.A. White. 1991. "Economic Analysis of Forest Fertilization." In J.D. Lousier et al (eds.) *Improving Forest Fertilization Decision-Making in British Columbia*. Proceedings of Forest Fertilization Workshop, March, 1988. British Columbia Ministry of Forestry, Victoria. p. 108-121,
- Lerohl, M.L. 1990. "The Western Canadian Farm Policy Dilemma: Abstract." *Canadian Journal of Agricultural Economics* 38 (4):557.
- Parliament, Claudia, Joan Fulton, and Zvi Lerman. 1990. "Cooperatives and Investor-Owned Firms: Do They March to the Same Drummer?" In *Co-operative Development*. Bold, June M. and Murray E. Fulton (Ed.) Selected Papers from the 1989 Meetings of the Canadian Association for Studies in Co-operation. Published by the Canadian Association for Studies in Co-operation. p. 21-34.
- Stroh, B. and W. Lamble. 1991. "Motivating Changes: Technology Transfer." In *Making Soil Conservation Pay*. Proceedings of the 1991 Soil Conservation Workshop and Alberta Conservation Tillage Society 13th Annual Meeting. Edmonton, Jan. 15-17, 1991. p. 80-101.

- Tyrchniewicz, E.W. 1991. "Role of Transport in Alternative Futures for Prairie Agricultural Communities." In *Alternative Futures for Prairie Agricultural Communities*. (Edited by J. Martin). Faculty of Extension, University of Alberta. p. 85-96.
- Tyrchniewicz, E.W. 1991. "Partnership: A Focus on Technology." *Proceedings of a CARC Conference on Partnerships: A Focus on Technology*. p. 39-40.
- Unnevehr, L., J. Eales, G. Nelson, and Young-Chul Kim. 1991. "Asian Poultry: Structural Change in Demand and Supply." *Proceedings of the NCR-134 Conference on Applied Commodity Price Analysis, Forecasting, and Market Risk Management*. p. 287-98.
- Veeman, M.M., Terrence S. Veeman, and X.Y. Dong. 1991. "Accounting for Export Market Performance of Major Wheat Exporters." Selected poster and poster presentation at XXI International Conference of Agricultural Economists, Tokyo.
- Veeman, Terrence S., Maxine Sudol, Michele M. Veeman and X.Y. Dong. 1991. "Abstract: Cereal Import Demand in Developing Countries." *IAAE XXI Meeting, Japan, Contributed Paper Abstracts*. Tokyo. 35 p.
- Yen, S.T. and W.L. Adamowicz. 1990. "Modeling Trip Level Choice as a Poisson Variable." In *Proceedings of the Business and Economics Statistics Section*. American Statistical Association, Virginia. 571 p.

Staff Papers and Project Reports

- Adamowicz, W.L. 1991. *Habit Formation in a Discrete Choice Model of Recreation Demand*. Staff Paper 91-11. Department of Rural Economy, University of Alberta, Edmonton. 16 p.
- Adamowicz, W.L. 1991. *Valuation of Environmental Amenities*. Staff Paper 91-06. Department of Rural Economy, University of Alberta, Edmonton. 20 p.
- Adamowicz, W., G. Armstrong and G. Lee. 1991. *Structural Versus Nonstructural VAR Models of Agricultural Prices and Exports*. Staff Paper 91-03. Department of Rural Economy, University of Alberta, Edmonton. 23 p.
- Alavalapati, J. and D.S. Gill. 1991. *Social Forestry: A Conceptual Analysis*. Staff Paper 91-07. Department of Rural Economy, University of Alberta, Edmonton. 18 p.
- Alavalapati, J. and D.S. Gill. 1991. *Adoption of Social Forestry Practices in West Godavari District India: An Empirical Analysis*. Project Report 91-07. Department of Rural Economy, University of Alberta, Edmonton. 44 p.
- Apedaile, L.P. 1991. *A Synthesis of Restructuring Issues for the Development of Rural Economies*. Staff Paper 91-01. Department of Rural Economy, University of Alberta, Edmonton. 29 p.
- Apedaile, L.P. 1991. *Dynamical Systems and Limit Cycles for Modelling Sustainable Agriculture and Cooperation*. Staff Paper 91-02. Department of Rural Economy, University of Alberta, Edmonton. 12 p.
- Armstrong, G., W. Phillips and J. Beck. 1991. *An Opportunity Cost Criterion for Scheduling Timber Harvest: A Comparison of Area and Volume Based Approaches*. Staff Paper No. 91-05. Department of Rural Economy, University of Alberta, Edmonton, and Working Paper 160, Forest Economics and Policy Analysis (FEPA) Research Unit, University of British Columbia. 13 p.
- Bauer, L. and M. Blanch. 1991. *Farm Business Education in Canada: The Programs and Capacities of Canadian Universities and Colleges*. Project Report 91-01. Department of Rural Economy, University of Alberta, Edmonton. 37 p.

- Eales, J.S. and L.J. Unnevehr. 1991. *The Inverse Almost Ideal Demand System*. Staff Paper 91-12. Department of Rural Economy, University of Alberta, Edmonton. 24 p.
- Fletcher, S., W. White, W. Phillips and L. Constantino. 1991. *An Economic Analysis of Canadian Prairie Provinces' Forest Dependent Communities*. Project Report 91-05. Department of Rural Economy, University of Alberta, Edmonton. 62 p.
- Haigh, R.J. and D.S. Gill. 1991. *Achieving Sustainability in Resource Dependant Communities: Some Implications for Policy*. Staff Paper 91-10. Department of Rural Economy, University of Alberta, Edmonton. 16 p.
- Haley, D. and M.K. Luckert. 1991. *The Effects of Canadian Forest Tenures on the Organizational Structure and Capital Budgeting Procedures of Forestry Firms: A British Columbia Case Study*. Economics and Policy Analysis Research Unit. Working Paper 167. University of British Columbia. 30 p.
- Haney, T.J., W.E. Phillips and W.L. Adamowicz. 1991. *Private Landowner Wildlife Habitat in Alberta: An Economic Analysis of Retention and Development*. Project Report 91-04. Department of Rural Economy, University of Alberta, Edmonton. 114 p.
- Haney, T.J., W.E. Phillips and W.L. Adamowicz. 1991. *Wildlife Habitat Preservation Programs on Private Lands: A Survey of Selected Provinces, States, and Territories of Canada and the United States*. Project Report 91-02. Department of Rural Economy, University of Alberta, Edmonton. 74 p.
- Haney, T.J., E. Ewaschuk, W.E. Phillips and W.L. Adamowicz. 1991. *Retention and Development of Wildlife on Private Lands: An Annotated Bibliography*. Staff Paper 91-04. Department of Rural Economy, University of Alberta, Edmonton. 24 p.
- Leplante, B. and M.K. Luckert. 1991. *The Wastepaper Dilemma: Can Newsprint Recycling Legislation Kill Two Birds with One Stone?* Cahier 91-26. Department of Economics, Laval University, Quebec. 33 p.
- Luckert, M.K. 1991. *Tenures for Mixed Wood Management: A Framework for Policy Analysis*. Working Paper 164. Forest Economics and Policy Analysis Research Unit. University of British Columbia. 44 p.
- Luckert, M.K. and D. Haley. 1991. *Canadian Forest Tenures and Silvicultural Investment Behavior of Rational Firms*. Working Paper 166. Forest Economics and Policy Analysis Research Unit. University of British Columbia. 17 p.
- McKinnon, D.M. and M.L. Lerohl. 1991. *A Study of Optimal Location: Competitiveness of the Alberta Cattle Feeding Industry with U.S. Regions*. Project Report 91-06. Department of Rural Economy, University of Alberta, Edmonton. 57 p.
- Mumey, Glen. 1991. *The Alberta Heritage Fund in 1990*. Information Bulletin Number 4. Western Centre for Economic Research, University of Alberta, Edmonton. 12 p.
- Needham, D., W. Phillips, P. Woodard and L. Constantino. 1991. *Growing Christmas Trees in Alberta: A Market Analysis and Feasibility Study*. Project Report 91-08. Department of Rural Economy, University of Alberta, Edmonton. 134 p.
- Novak, F.S., G.A. Mumey and J. Unterschultz. 1991. *An Economic Analysis of Risk Management Strategies for Alberta Beef Feeders*. Project Report 91-03, Department of Rural Economy, University of Alberta, Edmonton. 128 p.
- Novak, F.S. and J. Unterschultz. 1991. *Hedging Canadian Feedlot Cattle Revisited*. Staff Paper 91-09. Department of Rural Economy, University of Alberta, Edmonton. 19 p.
- Thompson, S., J. Eales, and Siebold, D. 1991. *Comparison of Liquidity Costs Between the Kansas City and Chicago Wheat Futures Contracts*. Staff Paper 91-14. Department of Rural Economy, University of Alberta, Edmonton. 19 p.

- Unnevehr, L., J. Eales, G. Nelson, and Young-Chul Kim. 1991. *Asian Poultry: Structural Change in Demand and Supply*. Staff Paper 91-13. Department of Rural Economy, University of Alberta, Edmonton. 15 p.
- Veeman, T.S., M. Sudol, M.M. Veeman and X. Dong. 1991. *Cereal Import Demand in Developing Countries*. Staff Paper 91-08. Department of Rural Economy, University of Alberta, Edmonton. 11 p.

UNPUBLISHED PAPERS, REPORTS AND OTHER DOCUMENTS

- Adamowicz, W.L. 1991. "Economic Dimensions of Sustainable Agriculture." Paper presented at the AAEA annual meetings, Red Deer. May 1-2.
- Adamowicz, W.L. 1991. "Non-market Valuation Techniques." Paper presented at Sustainable Agriculture: Economic Perspective and Challenges. Winnipeg, Manitoba. May 5-7.
- Adamowicz, W.L. 1991. "Valuation of Environmental Amenities." Paper presented at Agriculture and Water Quality: An Interdisciplinary Symposium. Guelph, Ontario. April 22-23.
- Adamowicz, W., G. Armstrong and G. Lee. 1991. "Structural Versus Nonstructural VAR Models of Agricultural Prices and Exports." Contributed paper to the CAEFMS section of the AIC annual conference, Fredericton, NB. July 27-31.
- Apedaile, L.P., P. Ehrensaft and D. Freshwater. 1991. Opening Presentation: "Global Restructuring of Primary Industries." AARG Annual Rural Policy Seminar. Coaticook, P.Q. April 17.
- Apedaile, L.P. 1991. Discussion Paper: "Agricultural Trade Liberalization: Comparison of Japanese, European, Thai and American Perspectives." XXI International Conference of Agricultural Economists Hokkaido Program: Naganuma Symposium. Naganuma, Japan. September 2. 6p.
- Bauer, L. 1991. "The State of Farm Finance in Alberta." Paper presented to the Alberta Agricultural Economics Association. Red Deer, Alberta. May 2.
- Bauer, L. 1991. "Financial Statements for Agriculture: The Canadian Experience." Paper presented to the National Farm and Ranch Business Management Education Association. Kennewick, Washington. June 19-13.
- Fletcher, S., W. White, W. Phillips and L. Constantino. 1991. "Economic Analysis of Forest Dependent Communities in the Prairie Provinces of Canada." A Paper Presented at the 30th Annual Meeting of the Western Regional Science Association, Monterey, California. February 24-28. 19 p.
- Fletcher, S., W. White, W. Phillips and L. Constantino. 1991. "Prairie Provinces Forest Dependent Communities: Methodology, Empirical Results, and Welfare Implications." A Paper Prepared for the Innovative Rural Communities Conference, Charlottetown. June 23-26. 44 p.
- Fulton, J.R. and W.L. Adamowicz. 1991. "Factors Which Influence the Commitment of Cooperative Members to Their Organization." Paper presented at Michigan State University, East Lansing, Michigan. December 30.
- Gill, D.S. 1991. "Extension's Odyssey to the Future: A Canadian Perspective." Paper presented to the Cooperative Extension Unit of American Association of Adult and Continuing Education Annual Meeting in Montreal, October 14-15, 1991. 21 p.
- Haigh, R.J. and D.S. Gill. 1991. "Social Restructuring in Resource Dependent Communities: Implications for Long Term Rural Economic Viability." AARG Conference Stimulating Rural Economies for the 2000's, Camrose, Alberta. October 24.

- Haigh, R.J., A.L. Kisko and D.G. Murri. 1991. "An Examination of Knowledge, Attitude and Practice of Soil Conservation Among Alberta Farmers." Report submitted to the Soil Conservation and Development Branch, Alberta Agriculture, Edmonton. 92 p.
- Lerohl, M.L. 1991. Conference paper presentation: "Sustainability of Prairie Crop Rotations." CAEFMS/Science Council on Sustainable Agriculture. Winnipeg. May 7.
- Luckert, M.K. 1991. "Changing Values of Natural Resources and the Evolution of Property Rights: The Case of Wilderness." Invited paper delivered at the Fifth Annual Conference of the Canadian Institute of Resources Law, Ottawa. 34 p.
- Luckert, M.K. 1991. "Obstacles to Growing Timber for a Competitive Forest Products Industry." Paper delivered to the Canadian Association of Forest Economists, Picton, Ontario. 17 p.
- Luckert, M.K. and D. Haley. 1991. "The Silvicultural Investment Behavior of Forestry Firms in Canada: A British Columbia Case Study." Paper delivered to a meeting of the Western Forest Economists, Wemme, Oregon. 24 p.
- Luckert, M.K. and J.T. Bernard. 1991. "What is the Value of Standing Timber?: Difficulties in Merging Theory with Reality." A report commissioned by Forestry Canada, Quebec Region. English and French versions. 21 p.
- Phillips, W. 1991. "Selected Agricultural Issues and Research Needs." A Paper Presented at the Nova Scotia Agricultural College, Truro. July 18. 16 p.
- Thanupon, N. and D.S. Gill. 1991. "Socio-Economic Studies of Rural Life in Northern Thailand: A Reference List." Faculty of Agriculture and Forestry and Maejo Institute of Agricultural Technology ILP Paper #1. 23 p.
- White, W., W. Phillips, S. Fletcher and L. Constantino. 1991. "Measures of Dependency and Policy Impacts of the Forest Industry on Rural Places." A Paper Presented at the Stimulating Rural Economies for the 2000's Conference, Camrose. October 23-25. 41 p.
- Woodard, P., D. Needham, W. Phillips and L. Constantino. 1991. "Christmas Trees and Ornaments as Cash Crops." A Paper Presented at the Alternatives in Agriculture Conference, Grande Prairie. November 6-8. 5 p.
- Yen, S.T. and W.L. Adamowicz. 1991. "A Multinomial Poisson Hurdle Model of Recreation Demand." Presented at the Annual Meetings of the American Statistical Association, Atlanta, Georgia. August 19-22.

RESEARCH PROJECTS

Research Completed January 1 - December 31, 1991

- Adamowicz, W.L., P. Boxall. "Investigations in Nonmarket Benefit Estimation." Unfunded.
- Bauer, L., G. Liu. "Risk Dimension of Cropping Systems in the Family Farm Setting of Heilongjiang Province, China." Funded by Black Dragon River Consortium (University of Alberta).
- Constantino, L.F., M. Percy. "Interactions Between the Canadian Forest Sector and the Macro Economy." Funded by Forest Economics and Policy Analysis Unit (University of British Columbia) and Canadian Forestry Service.
- Constantino, L.F., M. Percy. "Development and Evaluation of the North American Timber Assessment Market Model." Funded by Canadian Forestry Service.
- Constantino, L.F., W.E. Phillips, P. Woodard. "Feasibility Study of Christmas Trees in Alberta." Funded by Alberta Forestry, Lands and Wildlife.
- Haigh, R.J., D.G. Murri. "Approaches to Soil Conservation Among Alberta Farmers - Phase I." Funded by Alberta Agriculture.
- Lerohl, M.L., G. Magnusson, P. Gamache. "Economic Feasibility of International Trade in Feedgrains Between Alberta and the Northwestern USA." Funded by Farming for the Future Council (Alberta Agriculture).
- Lerohl, M.L. "An Assessment of the Extent to Which Selected Government Policies and Programs Inhibit the Adoption of Soil Conservation Practices in Alberta." Funded by Alberta Agriculture / Prairie Farm Rehabilitation Association.
- Moreno, A. and D.S. Gill. "Peasants' Perceptions and Attitudes About Land Reform in Nicaragua with Particular Reference to Changes in Community Power Structure." Funded partially by University of Alberta.
- Novak, F.S. "Investigating the Magnitude and Direction of Potential Biases in Dual Models of Production." Funded by Central Research Fund (University of Alberta).
- Novak, F.S., G. Mumey. "An Economic Analysis of Risk Management Strategies for Alberta Beef Feeders." Funded by Farming for the Future Council (Alberta Agriculture.)
- Novak, F.S., G. Armstrong. "An Assessment of Economic Rents in Alberta Forest Sector." Unfunded.
- Phillips, W.E., G. Sandhu. "Frontier Cost Function Analysis of Agriculture Production." Funded by Alberta Agricultural Research Trust.
- Phillips, W.E., J. Beck, G. Armstrong. "Economic Investigation of the Interrelationship Between Transportation and Silvicultural Expenditures in Forest Management." Funded by Canadian Forestry Service.
- Phillips, W.E., W.L. Adamowicz, T. Haney. "Wildlife Habitat on Alberta Private Lands: An Analysis of Land Use Trade-Offs." Funded by Recreation, Parks and Wildlife Foundation.
- Veeman, T.S., Y. Si. "Economic Analysis of Chinese Grain Production and Productivity." Funded by Black Dragon River Consortium (University of Alberta).
- White, W., S. Fletcher, W. Phillips and L. Constantino. "Economic Analysis of Forestry Dependent Communities in the Prairie Provinces of Canada." Funded by Forestry Canada.

Research in Progress as of December 31, 1991

- Adamowicz, W.L. "Validation of Non Market Benefit Estimation Techniques." Funded by University of Alberta.
- Adamowicz, W.L., M. Veeman, T. Veeman, A. Fantino. "Macroeconomic Impacts on Canadian Agricultural Prices." Funded by Farming for the Future Council (Alberta Agriculture).
- Adamowicz, W.L. "A Socio-Economic Evaluation of Sportfishing Activity in Southern Alberta." Funded by Alberta Forestry, Lands and Wildlife. (Fisheries Enhancement Fund).
- Adamowicz, W.L., P.M. Boothe. "Environmental/Economics Study Group." Funded by Alberta Environment.
- Adamowicz, W.L. "Recreational Values in the Highwood/Little Bow Region." Funded by Alberta Environment.
- Adamowicz, W.L. "Study of Non-Timber Values and Compilation of Selected, Federal, Provincial and Territorial Non-Timber Forest Resource Values." Funded by Forestry Canada.
- Adamowicz, W.L., W. White, W.E. Phillips, M.K. Luckert. "Study on the Costs and Benefits of Environmental Improvement on Forest Lands." Funded by Forestry Canada.
- Adamowicz, W.L., M.K. Luckert. "On Empirical Measures of the Social Rate of Discount." Funded by University of British Columbia, Forest Economics and Policy Analysis Research Unit (FEPA).
- Anderson, A.W., H. Deng. "A Model for Optimizing the Combination of Conservation and Production Activities on an Alberta Farm." Funded by Agriculture Canada, Research Branch.
- Apedaile, L.P. "Structural Projections for Alberta Grain Production to Year 2001." Funded by Agricultural Research Council of Alberta.
- Apedaile, L.P. and S. Schilizzi. "Application of Theories of Complex Dynamical Systems to Micro, Meso and Macro Linkages in Rural Economies. Unfunded.
- Apedaile, L.P., P. Ehrensaft and D. Freshwater. "Effects of Global Economic Restructuring on Rural Economies." Unfunded
- Apedaile, L.P., P. Murphy, and C. Opio. "Economic Impact of Improved Agroforestry Practices on the Fragility of Rural Zambian Household Economies." Funded by IDRC/ICRAF.
- Bauer, L. "Modifications to ALTASIM - Alberta Farm Business Management Simulation." ...
- Bauer, L., A.W. Anderson. "Analysis of Production Costs for Farmer Owned Feed." Funded by Farming for the Future (Alberta Agriculture).
- Bauer, L., F.S. Novak. "Analysis of Risk and Returns in Hog Finishing." Funded by Farming for the Future (Alberta Agriculture).
- Bauer, L., F.S. Novak. "An Economic Analysis of Alternative Cropping Decision Models Uncertainty". Funded by Farming for the Future (Alberta Agriculture).
- Bauer, L., D. Busch. "Development of Farm Business Management Training Models." Funded by University of Alberta, Alberta Agriculture and B.C. Ministry of Agriculture, Fisheries and Food.
- Constantino, L.F. "Supply-Demand Scenarios for the Canadian Forest Sector." Funded by Forestry Canada.
- Constantino, L.F. "Methods for Forest Sector Analysis in Developing Countries." Funded by World Bank.
- Constantino, L.F., J. Alavalapati, Y. Rusli, S. Siran. "Tropical Deforestation and Policy Reform." Funded by University of Alberta and FAO of United Nations.

- Eales, J.S., W.E. Phillips. "Marketing of Value-Added Agricultural and Food Products." Funded by Alberta Agricultural Research Institute.
- Eales, J.S., M.M. Veeman, J.R. Fulton. "Product Aggregation and Structural Change in Canadian Red Meat Demand." Funded by Alberta Agricultural Research Institute.
- Fulton, J.R. "Benefits and Costs of Computers in Distance Education." Unfunded.
- Fulton, J.R. "Centralization Versus Decentralization of Decision Making Authority." Funded by Office of the Dean.
- Fulton, J.R. "The Effect of Organization Structure on Innovation." Funded by Central Research Fund (University of Alberta.)
- Fulton, J.R. "Equity and Growth in Co-operatives." Unfunded.
- Fulton, J.R. and W.L. Adamowicz. "Member Loyalty to Cooperatives. Unfunded (in collaboration with Alberta Wheat Pool).
- Gill, D.S., M. Thompson. "Commodity Systems Analysis of Sugar Beet Growing in Southern Alberta." Funded by Central Research Fund (University of Alberta).
- Gill, D.S. "Maejo Institute of Agricultural Technology Rural Outreach Project - Thailand." Funded by Canadian International Development Association.
- Gill, D.S., L. Bauer, C. Moerth. "Identification of Key Factors in the Decision-Making Process Among Farm Operators in Alberta." Funded by Farming for the Future Council (Alberta Agriculture).
- Haigh, R.J. "Approaches to Soil Conservation Among Alberta Farmers - Phase II." Funded by Alberta Agriculture, The Conservation and Development Branch.
- Haigh, R.J. "A Follow-Up Study of Attitudes and Practices Related to Conservation Tillage Among Alberta Farm Operators." Funded by Alberta Conservation Tillage Society.
- Lerohl, M.L. "Grain-Livestock Industry Research." Funded by Alberta Agriculture.
- Lerohl, M.L., F.S. Novak. "Assessment of the Effect of the Policy Environment on Farm Decision-Making." Funded by Alberta Agricultural Research Institute.
- Luckert, M.K. "Efficiency Implications of Separating Ownership from Management on Canadian Forest Lands." Unfunded.
- Luckert, M.K., J.T. Bernard. "Analysis of Stumpage Collection Systems." Funded by Laval University GREEN.
- Luckert, M.K., D. Haley. "The Allowable Cut Effect: Phenomena or Policy Tool?" Funded by University of British Columbia, Forest Economics and Policy Analysis Research Unit (FEPA).
- Luckert, M.K., B. Leplante. "Issues and Effects of Newsprint Recycling." Funded by Laval University GREEN.
- Luckert, M.K., L. Bouthillier, B. Leplante. "Translating Concepts of Sustainable Development into Policy Tools for Forest Management: A Quebec Case Study." Funded by Forestry Canada.
- Murray, E. "Kenyatta University Up-Grading of Home Economics Project." Funded by Canadian International Development Association.
- Novak, F.S. "An Economic Analysis of Alternative Cropping Decision Models." Funded by Agriculture Canada.

- Novak, F.S., L. Bauer. "A Dynamic Analysis of Risk Management Strategies for Alberta Hog Producers." Funded by Alberta Agricultural Research Institute.
- Novak, F.S., J.S. Eales. "An Econometric Analysis of the Behavior of U.S. and Canadian Livestock Markets." Funded by Alberta Agricultural Research Institute.
- Phillips, W.E., L. Bauer. "Alberta Farmland Asset Returns in the Context of Portfolio Investment." Funded by Alberta Agricultural Research Institute.
- Phillips, W.E., W. White. "Studies and Research in Forest Economics Associated Within Renewable Resource Management." Funded by Forestry Canada.
- Phillips, W.E., W. White. "Develop a Conceptual Framework for Comparing the Economic Merits of Potential Harvesting Systems From Standing Timber to Free-to-grow." Funded by Forestry Canada.
- Phillips, W.E., W.L. Adamowicz. "Study to Derive a Framework for the Evaluation of Non-Timber Values in the Context of Timber Production With Specific Reference to Wildlife Concerns." Funded by Forestry Canada.
- Tyrchniewicz, E.W. "Forestry Sector's Interface with the Transport Sector." Funded by Forestry Canada.
- Tyrchniewicz, E.W., M.L. Lerohl. "Grain Handling and Transportation Efficiency Study." Funded by Alberta Economic Development and Trade.
- Veeman, M.M. "Canadian Agriculture and GATT: An Economic Analysis of Article XI." Funded by Farming for the Future Council (Alberta Agriculture).
- Veeman, M.M., C. Mataya. "The Impact of Currency Devaluation on Agricultural Trade: The Case of Malawi." Funded by The Rockefeller Foundation.
- Veeman, M.M., T.S. Veeman, P. Chen, K. Hamal. "Demand for Red Meats and Related Foods in Canada." Funded by Farming for the Future Council (Alberta Agriculture).
- Veeman, M.M., T.S. Veeman, A. Fantino, K. Hamal, M. Sudol, X.Y. Dong. "Export Markets for Canada's Foodgrains and Feedgrains." Funded by Farming for the Future Council (Alberta Agriculture).
- Veeman, T.S. "The Economics of Agricultural Chemical Use in Prairie Agriculture: Productivity and Environmental Impacts." Funded by Farming for the Future Council (Alberta Agriculture).