

RURAL ECONOMY

DEPARTMENT OF RURAL ECONOMY

1993 ANNUAL REPORT



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

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1993 ANNUAL REPORT

**Department of Rural Economy
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March 1994

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FOREWORD

Challenges and Achievements: Rural Economy in 1993

The year 1993 encompassed challenges and achievements for the Department of Rural Economy. Staff contributed to developing the new undergraduate programs of the Faculty that were launched so successfully in September 1993. Rural Economy continues to provide rural social science course offerings to students in the programs in this Faculty, including the Agriculture and Forestry Bachelors degree programs, the Agriculture/Food Business Management program (this is a joint program with the Faculty of Business) and the Environmental and Conservation Sciences (ENCS) program. The latter has proved to be very popular. Nearly one-quarter of the students in the ENCS program are choosing to major in the Environmental Economics and Policy specialization, giving Rural Economy a substantial role in their studies.

Rural Economy's graduate programs continued to draw excellent students--51 in total in 1993--both from Canada and many other nations. Numbers of students held prestigious scholarships and awards. Others were supported by research grants of faculty; these grants increased in number and value in 1993. The M.Sc. thesis of Jo Ann Sandhu was recognized as an Outstanding Masters' Thesis by the Canadian Agricultural Economics and Farm Management Society. New directions and ventures included the development of agroforestry specializations in the M.Sc. and M.Ag. programs. A joint specialization in environmental and natural resource economics in the Ph.D. programs in Rural Economy and Economics was introduced.

Staff and students in Rural Economy, with the assistance of colleagues from Alberta Agriculture and the Alberta Agricultural Economics Association, hosted the 1993 joint annual meeting of two major groups--the Western Agricultural Economics Association (which encompasses agricultural economists from the Western U.S. and Canada) and the Canadian Agricultural Economics and Farm Management Society. Many friends of the department helped with the successful local arrangements for this meeting. This was followed by a reunion of previous and current alumni and staff. It is pleasing to note that as a result of fund raising associated with donations made by previous and current students and staff, an endowment fund for the Rural Economy's Eric Berg Reading Room is being established.

Changes occurred as two staff members moved on to new challenges in their lives. Barb Johnson, who headed the Reading Room for the previous 11 years, married Malcolm Profit and now lives in Canmore. Joan Fulton moved to an Assistant Professor position at Colorado State University, Fort Collins. Gail Robinson joined Rural Economy as librarian. Tim Richards, a native of Red Deer, completing Ph.D. studies at Stanford University, was a visiting Assistant Professor in Rural Economy. Len Bauer and Bill Phillips returned from study and administrative leaves, while Vic Adamowicz and Mel Lerohl left on study leaves.

The focus in Rural Economy on international studies and research continued throughout 1993 with numbers of staff and students involved in the rural outreach project with Maejo University in northern Thailand, as well as the on-going project on the valuation of trees with the University of Zimbabwe and a project to strengthen institutions in Kenya. Visiting scholars from China, Thailand, Zimbabwe, the United States and Australia worked in the department during 1993. Canadian graduate students in Rural Economy worked on field research in The Gambia, Lesotho, Zimbabwe and Thailand.

In 1993 Rural Economy was the recipient, for the third year, of the Alberta Agricultural Research Institute Professorship award in Marketing, held by Jim Eales. The Industry-University Council directing the newly endowed program of the Cooperative Chair in Agricultural Marketing and Business established the selection committee for this chair, a position that will contribute to teaching and research in Rural Economy.

The year ahead will continue to pose challenges of constrained resources. It is our objective to meet these by building and maintaining excellence in teaching and research in selected areas of social science that are of importance to rural people and rural activities.

Michele Veeman
Chair

DEPARTMENT STAFF

Academic Staff

- W.L. Adamowicz, Ph.D. (Minnesota); Associate Professor; Natural Resources, Econometrics, Forest Economics.
 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.
 J.H. Copeland, M.Sc. (Alberta); Faculty Service Officer; Computing and Statistical Analysis.
 J.S. Eales, Ph.D. (California, Davis); Associate Professor; Agricultural Marketing.
 D.S. Gill, Ph.D. (Cornell); Professor; Rural Sociology, Extension Education.
 S.R. Jeffrey, Ph.D. (Minnesota); Assistant Professor; Production Economics, Business Management.
 M.L. Lerohl, Ph.D. (Michigan State); Professor; Policy, Production Economics.
 M.K. Luckert, Ph.D. (British Columbia); Assistant Professor; Forest Economics, Natural Resources.
 E.C. Murray, Ph.D. (Pennsylvania State); Professor; Rural Sociology.
 F.S. Novak, Ph.D. (Illinois); Assistant Professor; Production Economics, Finance.
 W.E. Phillips, Ph.D. (California at Berkeley); Professor; Natural Resources, Forest Economics.
 T.J. Richards, Visiting Assistant Professor, Food Research Institute, Stanford University, for the period September 1, 1993 - April 30, 1994.
 E.W. Tyrczniewicz, Ph.D. (Purdue); Professor and Dean; Policy, Transportation.
 M.M. Veeman, Ph.D. (California at Berkeley); Professor and Chair; Marketing, Trade; Policy.
 T.S. Veeman, Ph.D. (California at Berkeley); Professor; Development, Natural Resources.

Associated Academic Staff

- L.F. Constantino, Ph.D. (British Columbia); Adjunct Professor (World Bank); Forest Economics.
 G.W. Lamble, Ph.D. (Texas A & M); Adjunct Professor (Faculty of Extension); 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 (Faculty of Business); Finance, Management.
 B.T. Oleson, Ph.D. (Minnesota); Adjunct Professor (Canadian Wheat Board); Marketing, Trade.
 M.B. Percy, Ph.D. (Queen's); Adjunct Professor (Faculty of Arts); 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 (Forestry Canada); Forest Economics.

Support Staff

- J. Boucher, Computing Assistant
 L. Bruce, Graduate Secretary
 K. Horton, Senior Accounts Clerk (effective Feb. 1/93)
 B. Johnson, Librarian (to July 23/93)
 G. Robinson, Information Officer (effective Sept. 1/93)
 W. Williamson, Department Secretary
 D. Zrobok, Library Assistant

Sessional Lecturers & Research Associates

- G. Armstrong, Research Associate
 B. Brindle, Sessional Lecturer
 A. Fantino, Research Associate
 E. Munro, Sessional Lecturer
 T. Richards, Visiting Assistant Professor
 K. Smith, Sessional Lecturer

AWARDS

- Chigume, Solomon M. - IDRC Scholarship
 Cmoluch Sandhu, Jo Ann - CAEFMS Best Thesis Award 1992
 Gebremedihen, Atakelty - U. of A. PhD Scholarship
 Henry, John - Canadian Bureau for International Education, CIDA Award
 Karugia, Joseph - Kenya-Canada General Training Programme Scholarship
 Kunkhlande, Godfrey - IDRC Scholarship
 Matose, Frank - IDRC Scholarship
 Mulinge, Wellington - Kenya-Canada Agricultural Research Scholarship
 Parker, Derek - CIDA Scholarship
 Quagraine, Kwamena - Canadian Commonwealth Scholarship
 Salami, Habib - Islamic Republic of Iran, Ministry of Culture and Higher Education Scholarship
 Tanguay, Mark - National Sciences and Engineering Research Council of Canada Scholarship
 - Walter H. Johns Graduate Fellowship

OFFICES

- Apedaile, Leonard P. - President, Canadian Rural Restructuring Foundation
 Bauer, Len - Chairman, Canada Expert Committee on Farm Management Services Society Executive
 Jeffrey, Scott - Councillor, Canadian Agricultural Economics and Farm Management Society Executive

ON LEAVE

- W.L. Adamowicz - July 1, 1993 - June 30, 1994
 M.L. Lerohl - July 1, 1993 - June 30, 1994

GRADUATE STUDENTS COMPLETING PROGRAMS IN 1993

- Condon, Barbara. Economic Valuation of Non-Timber Resources in Newfoundland. MSc (Adamowicz)
 Dailly, Sally. An Analysis of Risk and Return in Hog Finishing. MAg (Novak)
 Kisko, Adrienne. Social Integration of Newcomers in a Rural Community: The Case of Vegreville, Alberta. MSc (Gill)
 Jennings, Sarah M. Wood Quality and Forest Management in British Columbia. PhD (Percy/Adamowicz)
 Morton, Karen M. Economic Effects of Environmental Quality Change on Recreational Hunting in Northwestern Saskatchewan. MSc (Adamowicz)
 Munro, Earl V. Retained Ownership of Beef Calves in Alberta: A Simulation. MSc (Novak)
 Needham, Daniel A. Economic Analysis of Intensive Silviculture on a Mixed-Wood Site in Manitoba on Crown Tenured Lands. MSc (Phillips/White)
 Owino, Adda Z. Fertilizer Demand by Smallholder Farmers in Kenya. MSc (Fulton)

- Peters, Tamantha. A Random Utility Analysis of Southern Alberta Sportfishing. MSc (Adamowicz)
- Ryning, Ken. Stochastic Dominance Analysis Using a Biophysically Modelled Crop Production Function. MAg (Bauer)
- Salkie, Fiona. An Economic Analysis of Sustainable Forest Management on Farm Woodlots in Saskatchewan. MSc (Luckert/Phillips)
- Watson, David. An Economic Analysis of Recreational Fishing and Environmental Quality Changes in the Upper Oldman River Basin. MSc (Adamowicz)

GRADUATE STUDENTS COMMENCING AND CONTINUING PROGRAMS THROUGH 1993

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|--|---|
| Akabua, Kojo, Ph.D. (Phillips) | Mataya, Charles, Ph.D. (Veeman, M.) |
| Alavalapati, Janaki, Ph.D. (Percy/Luckert) | Matose, Frank, M.Sc. (Gill) |
| Baragar, Edith, M.Ag. (Murray) | Maw, Wai Lin, M.Sc. (Percy/Luckert) |
| Bedford, Evan, M.Sc. (Gill) | McLeod, Kristine, M.Sc. (Adamowicz) |
| Block, Ray, M.Ag. (Jeffrey) | Mulinge, Wellington, M.Sc. (Adamowicz) |
| Buchanan, Gary, M.Ag. (Gill) | Olson, Mark, M.Ag. (Gill) |
| Chigume, Solomon, M.Ag. (Phillips) | Orlick, Charles, M.Sc. (Bauer) |
| Dosman, Donna, M.Sc. (Luckert/Phillips) | Parker, Derek, M.Sc. (Apedaile) |
| Freeman, Ruth, M.Sc. (Veeman, T.) | Pattison, Marilea, M.Sc. (T. Veeman/Phillips) |
| Fullerton, David, M.Sc. (Apedaile) | Pletsch, Paul, M.Sc. (Veeman, M.) |
| Gebremedihen, Atakelty, Ph.D. (Apedaile) | Quagraine, Kwamena, M.Sc. (Eales) |
| Gelfand, J., M.Sc. (Gill) | Royer, Sean, M.Sc. (T. Veeman) |
| Graham, Laura, M.Sc. (Phillips) | Salami, Habib, Ph.D. (Veeman, T.) |
| Hatton-Macdonald, Darla, Prob. Ph.D. (Adamowicz) | Staples, Blaine, M.Ag. (Novak/Bauer) |
| Henry, John, M.Sc. (Veeman, T.) | Swan, Christine, M.Sc. (Lerohl/M. Veeman) |
| Horner, Bruce, M.Ag. (Jeffrey) | Tanguay, Mark, M.Sc. (Adamowicz/White) |
| Karugia, Joseph, Ph.D. (Eales) | Watson, Leslie, M.Sc. (Murray) |
| Korber, Dianne, M.Sc. (Beckley) | Wouters, Keri, M.Sc. (Murray) |
| Kundhlande, Godfrey, M.Sc. (Luckert) | Xu, Xiaosong, Ph.D. (Jeffrey/Novak) |
| Macauley, Dorothy, M.Sc. (Phillips/Luckert) | |

VISITING SPEAKERS

- Mr. Dan Lutz, Manager, Development and Analysis, Agri-Food Development Branch, Agriculture Canada. *Challenges for Change: Government Expenditures in the Prairie Agri-food Industry.* February 1.
- Mr. Dan Lutz, Manager, Development and Analysis, Agri-Food Development Branch, Agriculture Canada (joint with Ed Tyrchniewicz and David Walker). *Ideology and Agricultural Economic Analysis.* March 8.
- Mr. David Walker, Head, Market Analysis Branch, Alberta Agriculture (joint with Ed Tyrchniewicz and Dan Lutz). *Ideology and Agricultural Economic Analysis.* March 8.
- Dr. Nora Keating, Professor and Chair, Dept. of Family Studies, University of Alberta. *Stake in Farm and Family: A Two Generation Perspective.* March 15.
- Dr. Brenda Munro, Assistant Professor, Dept. of Family Studies, University of Alberta. *Stake in Farm and Family: A Two Generation Perspective.* March 15.
- Mr. Chuck Sterling, Branch Head, Market Analysis and Statistics Branch, Alberta Agriculture. *Problems with Measuring Financial Strength of Farm Families.* March 22.
- Mrs. Coreen Moroziuk, Farm Structure Statistician, Market Analysis and Statistics Branch, Alberta Agriculture. *Problems with Measuring Financial Strength of Farm Families.* March 22.
- Mrs. Ruvimbo Chimedza, Professor, Dept. of Agric. Econ. & Extension, University of Zimbabwe. *Energy Strategies for Rural Households.* April 1.

- Mrs. S. Mutepfa, Assistant Secretary, Ministry of Environment & Tourism, Government of Zimbabwe. *Overview of Zimbabwe and the Environment*. June 22.
- Mr. D. Marongwe, Assistant Secretary, Ministry of Environment & Tourism, Government of Zimbabwe. *Overview of Zimbabwe and the Environment*. June 22.
- Miss M. Mukahanana, Under Secretary, Ministry of Environment & Tourism, Government of Zimbabwe. *Overview of Zimbabwe and the Environment*. June 22.
- Mr. E. Chigudu, Acting Deputy Director, National Economic Planning Commission, Government of Zimbabwe. *Overview of Zimbabwe and the Environment*. June 22.
- Dr. Godfrey Mudimu, Head, Dept. of Agric. Econ. & Extension, University of Zimbabwe. *Maintaining Household Food Security in the 1990s: The Challenge for Zimbabwe*. September 2.
- Mr. Thomas M. Beckley, Visiting Ph.D. Candidate, University of Wisconsin-Madison. *Sociological Issues in Co-Management and Dependence in Prairie Forestry*. October 18.
- Dr. Brian T. Oleson, Executive Director (Planning), Canadian Wheat Board, Winnipeg. *Agribusiness and the University: CWB as a Case Example*. November 1.
- Professor Shufang Zhu, Dean, Faculty of Agric. Econ. & Mgmt., Southwest Agricultural University, Chongqing, Sichuan Province, PRC. *Structural Transition of Agriculture and Government Economic Behaviour in Taiwan and Mainland China*. November 29.
- Ms. Johanna Pluske, Ph.D. Candidate, University of Western Australia. *Finding Farmers' Values of Information Using the Contingent Valuation Method*. December 6.

VISITING STUDENTS

- Mrs. Johanna Margaret Pluske, Visiting Ph.D. Candidate, Department of Agricultural Economics, School of Agriculture, University of Western Australia, Needlands, Australia, for the period June 15, 1993 - June 30, 1994.
- Mr. Günter Ruchti, Undergraduate Student, Department of Agricultural Economics, University of Hohenheim, Stuttgart, W. Germany, for the period October 25, 1993 - March 31, 1994.

VISITING SCHOLARS

- Mr. Thomas Beckley, Ph.D. Candidate, Department of Rural Sociology, University of Wisconsin-Madison, for the period June 15, 1993 - June 30, 1994.
- Mr. Damkerng Chamnanca, Instructor, Department of Computing Science, Maejo Institute of Agricultural Technology, San Sai, Chiangmai, Thailand, for the period Nov. 6-16, 1993.
- Mrs. Ruvimbo Chimedza, Professor, Department of Agricultural Economics and Extension, University of Zimbabwe, for the period March 30 - April 5, 1993.
- Mr. H. Deng, (Institute of Agricultural Modernization, Academia Sinica) Visiting Scholar from Chinese Academy of Social Sciences; for the period July 1, 1988 - July 31, 1994.
- Mr. Charas Kayai, Head, Department of Computing Science, Maejo Institute of Agricultural Technology, San Sai, Chiangmai, Thailand, for the period November 6-16, 1993.
- Dr. Grant Milne, Ontario Ministry of Natural Resources on Secondment to the Ministry of the Environment and Tourism, Government of Zimbabwe, June 22, 1993.

- Dr. Godfrey Mudimu, Head, Department of Agricultural Economics and Extension, University of Zimbabwe, for the period August 31, 1993 - September 7, 1993.
- Dr. Nalinee Roograngsree, Vice President for International Affairs, Maejo Institute of Agricultural Technology, San Sai, Chiangmai, Thailand, for the period July 2, 1993 to July 19, 1993.
- Dr. Ahnon Tiangtrong, President, Maejo Institute of Agricultural Technology, San Sai, Chiangmai, Thailand, for the period July 2, 1993 - July 19, 1993.
- Professor Shufang Zhu, Dean, Faculty of Agricultural Economics and Management, Southwest Agricultural University, Chongqing, Sichuan Province, PRC for the period May 15, 1993 to December 27, 1993.

INTERNATIONAL ACADEMIC ACTIVITIES

Staff

- Adamowicz, W.L. is on sabbatical leave to do research on environmental economics at the University of Newcastle (United Kingdom) and at the University of Stirling (Scotland). He will also participate at the Centre for Social and Economic Research on the Global Environment at the University of East Anglia with a focus on environmental policy employing interdisciplinary perspective from July 1993 to July 1994.
- Apdeaille, L.P. presented a seminar on joint learning, technological change and induced innovation in agroforestry at Oxford University. He also researched agricultural systems at l'Institut National de la Recherche Agronomique, Montpellier, France from December 3-19, 1993.
- Bauer, L. studied and researched German and European approaches to farm management education at the University of Hohenheim (Stuttgart, Germany) and Humboldt University (Berlin) from April 1, 1993 to June 30, 1993.
- Gill, D.S., coordinator for International Activities, Merged Faculties of Agriculture, Forestry and Home Economics and U of A Director of the Faculty's CIDA supported Maejo Institute of Agricultural Technology Rural Outreach Project, visited Maejo University to review progress on various components of the project from December 28, 1993 to January 10, 1994.
- Luckert, M.K. co-ordinated and gave lectures at a workshop at the University of Zimbabwe for the "Value of Trees" project from August 19 to September 6, 1993.
- Lerohl, M.L. presented a paper and attended an IAAE Interconference Symposia for Agricultural Economists Educational and Research Agenda for Nations in Transition in Kiev, Ukraine from October 7 to October 19, 1993. He also attended the 8th Congress of the European Association of Agricultural Economists in Straesa (Italy) from September 5 to September 10, 1993.
- Murray, E. attended a Women in Management Task Group meeting, UNEDIL Project, in Nairobi from January 25-28, 1993. She made an administrative visit to Kenyatta University for the ICDS/CIDA linkage project in Nairobi, Kenya from January 29 to February 2, 1993. Next she presented a seminar on Women Managers in Africa and visited the University of Zimbabwe in relation to Leslie Watson's field work from February 2 to 5, 1993. An administrative visit to Kenyatta University was made for the ICDS/CIDA linkage project in Nairobi, Kenya from June 1-3, 1993 and a supervisory visit to the University of Zimbabwe relating to L. Watson's field research, IDCR "Value of Trees" Project.
- Phillips, W.E. visited the Maejo Univesity, Thailand from January 24 to February 12, 1993 in conjunction with the U of A/CIDA linkage project to present a public lecture, review research progress and work with colleagues on applied social sciences curricula and agro-forestry issues. He also visited the University of Zimbabwe from March 15 to March 31, 1993 in conjunction with the IDRC/U of A/U of Z "Value of Trees" Project to give seminars, discuss project plans and meet with potential graduate students.

Students

- Henry, John is researching production and productivity in the ground nut sector and assisting with teaching mathematics at the Main Agricultural College (Gambia College) in The Gambia from September 1993 to May 1994.
- Parker, Derek researched Agroforestry for the Rural Poor in Lesotho for the Unitarian Service Committee of Canada on the Ketane Integrated Project in Maseru, Lesotho from May to December 1993.
- Ward, Jeff focussed his research on Developing Countries: Thailand Case Study of Agricultural Cooperatives at the Maejo Institute of Agricultural Technology in Thailand from July 25 to December 23, 1993.
- Watson, Leslie researched the value of trees as exhibited by the planting and maintenance around the home area for the "Value of Trees Project" at the University of Zimbabwe, Harare, Zimbabwe from February 23 to September 15, 1993.

PUBLICATIONS 1993¹

Books and Chapters in Books

- Adamowicz, W.L., W. White and W. Phillips. 1993. *Forestry and the Environment: Economic Perspectives*. Commonwealth Abstracts Bureau International, Oxon, U.K., 304 p.
- Adamowicz, W.L. and P.C. Boxall. 1993. "Economic Aspects of Hoofed Mammals in Alberta." In B. Stelfox (ed.), *Alberta's Hoofed Mammals*. Lone Pine Press. pp. 119-126.
- Fletcher, S.B., W.A. White, W.E. Phillips and L.F. Constantino. 1993. "Prairie Province Forest Dependent Communities: Methodology, Empirical Results and Welfare Implications." In David Bruce and Margaret Whittle (eds.), *Forest Dependent Communities: Challenges and Opportunities*. Saskville, N.B.: Rural and Small Town Research and Studies Programme, Mount Allison University. pp. 1-25.
- Novak, F.S. and G.D. Schmitkey. 1993. "Stochastic Dynamic Programming Models: An Application to Agriculture." In C.R. Taylor (ed.) *Applications of Dynamic Programming to Agricultural Decision Problems*. Westview Press. pp. 127-144.
- Schmitkey, G.D. and F.S. Novak. 1993. "A Dynamic Programming Analysis of a Variable Amortization Loan Plan." In C.R. Taylor (ed.) *Applications of Dynamic Programming to Agricultural Decision Problems*. Westview Press. pp. 171-197.

Journal Articles

- Adamowicz, W.L., V. Bhardwaj and B. Macnab. 1993. "Experiments on the Difference Between Willingness to Pay and Willingness to Accept." *Land Economics* November 69:416-427.
- Bauer, L., G. Mumey and W. Lohr. 1993. "Longevity and Genetic Improvement Issues in Replacing Dairy Cows." *Canadian Journal of Agricultural Economics* 41:71-80.
- Bernard, J.T., Bouthillier, L. and M.K. Luckert. 1993. "L'application de la methode des comparables a la foret publique Quebecoise." *L'Actualite Economique, Revue L'analyse Economique* 69(2):53-69.
- Eales, J.S. and L.J. Unnevehr. 1993. "Simultaneity and Structural Change in U.S. Meat Demand." *American Journal of Agricultural Economics* 75:259-68.

¹ A listing of previous publications is contained in University of Alberta, Department of Rural Economy *Publications 1989-1993*.

- Fulton, J.R. and W.L. Adamowicz. 1993. "Factors Which Influence the Commitment of Cooperative Members to Their Organization." *Journal of Agricultural Cooperation* 8:39-53.
- Laplante, B. and M.K. Luckert. 1993. "The Wastepaper Dilemma: Will Newsprint Recycling Legislation Kill Two Birds With One Stone?" *Society and Natural Resources* 6:361-379.
- Luckert, M.K. and D. Haley. 1993. "Canadian Forest Tenures and the Silvicultural Investment Behaviour of Rational Firms." *Canadian Journal of Forest Research* 23:1060-1064.
- Luckert, M.K. and W. Adamowicz. 1993. "Empirical Measures of Factors Affecting Social Rates of Discount." *Environmental and Resource Economics* 3(1):1-22.
- Luckert, M.K. 1993. "Property Rights for Changing Forest Values: A Study of Mixed Wood Management in Canada." *Canadian Journal of Forest Research* 23(4):688-699.
- Luckert, M.K. 1993. "What is the Value of Standing Timber? Difficulties in Merging Theory with Reality." *Forestry Chronicle*. 69(6):680-685.
- Maina, S. and Murray, E. 1993. "Factors that Affect Women as Mediators of Family Nutrition in Kenya." *Canadian Home Economics Journal* 43(3):105-110.
- Murray, E. and Maina, S. 1993. "Transforming Women's Roles as Mediators of Family Nutrition: Education, Policy and Research Options." *Canadian Home Economics Journal* 43(3):139-143.
- Thompson, S., J. Eales and D. Seibold. 1993. "Comparison of Liquidity Costs Between the Kansas City and Chicago Wheat Futures Contracts." *Journal of Agricultural and Resource Economics* 18(2):185-97.
- Veeman, M.M., X.Y. Dong and T.S. Veeman. 1993. "Price Behaviour of Canadian Farmland." *Canadian Journal of Agricultural Economics* 41(2):197-208.
- Veeman, M. 1993. "A Comment on the Continental Barley Market Debate." *Canadian Journal of Agricultural Economics* 41(3):283-7.
- Yen, S.T. and W.L. Adamowicz. 1993. "Statistical Properties of Welfare Measures from Count Data Models of Recreation Demand." *Review of Agricultural Economics* 15(2):203-215.

Proceedings, Abstracts and Posters

- Apedaile, L.P., D. Freshwater and P. Ehrensaft. 1993. "Cross-subsidies, Predation and the Restructuring of Rural Places and Single Industry Town Economies." In: Rounds, R.G. (ed.) *Restructuring Industrial Production and Tradeable Services in Rural Canada in the 1990s*. ARRG Working Paper Series No. 3. Rural Development Institute, Brandon. pp. 22-23.
- Apedaile, L.P. 1993. "Enhancing Results from Participatory Rural Development." In: Rounds, R.C. (ed.) *The Structure, Theory and Practice of Partnerships in Rural Development*. ARRG Working Paper Series, No. 5. Rural Development Institute, Brandon. pp. 47-54.
- Apedaile, L.P., R.D. Bollman, W. Reimer and J.C. Stabler. 1993. "Manufacturing and Services: Stimulating Rural Economies." In: Fuller, A. and Rounds, R.C. *Stimulating Rural Economies for the 2000s; The Challenge for Rural Manufacturing and Tradeable Services*. ARRG Working Paper Series No. 4. Rural Development Institute, Brandon. pp. 3-26.
- Apedaile, L.P. 1993. "A Synthesis; Joint Venture Learning for Development." In: Fuller, A. and Rounds, R.C. *Stimulating Rural Economies for the 2000s; The Challenge for Rural Manufacturing and Tradeable Services*. ARRG Working Paper Series No. 4. Rural Development Institute, Brandon. pp. 111-114.
- Bauer, Leonard. 1993. "Economic Concepts Underlying Compensation for Fixed Costs in Partial Takings." *Proceedings of the Alberta Expropriation Association Annual Conference*. Red Deer, Alberta. 4 p.

- Faminow, M.D. and S.R. Jeffrey. 1992. "Nearly Optimal Solutions to Mathematical Programming Models: Potential and Applications to Agriculture." Proceedings of the Tercer Seminario Latinoamericano de Agromatica. San Jose, Costa Rica. pp. 109-18.
- Freeman, R.E. and T.S. Veeman. 1993. "Economic Aspects of Transferable Water Rights in Alberta." In: D. Manz, *Water and the Wilderness: Development, Stewardship, Management*. Proceedings of the 46th Annual Canadian Water Resources Association, Banff, Alberta. pp.261-278.
- Jeffrey, S.R. 1992. "Efficiency in Milk Production: A Canada-U.S. Comparison." *Canadian Journal of Agricultural Economics* 40(4):653-62.
- Salkie, F., M. Luckert and W. Phillips. 1993. "An Analysis of Sustainable Forest Management on Farm Woodlots in Saskatchewan." Proceedings of the International Union of Forestry Research Organizations Symposium, Fredericton, New Brunswick. pp. 205-214.

Staff Papers and Project Reports

- Bauer, L. and D. Dusche. 1993. *Risk management: Designing Risk Management Strategies*. (Self directed learning module). British Columbia Ministry of Agriculture, Fisheries and Food and the Faculty of Extension, University of Alberta. 36 p.
- Bauer, L. and D. Dusche. 1993. *Risk management: Identifying Risk Attitudes*. (Self directed learning module). British Columbia Ministry of Agriculture, Fisheries and Food and the Faculty of Extension, University of Alberta. 25 p.
- Bauer, L. and D. Dusche. 1993. *Risk management: Identifying Risk Sources*. (Self directed learning module). British Columbia Ministry of Agriculture, Fisheries and Food and the Faculty of Extension, University of Alberta. 29 p.
- Bauer, L. and D. Dusche. 1993. *Risk management: Measuring Degrees of Risk*. (Self directed learning module). British Columbia Ministry of Agriculture, Fisheries and Food and the Faculty of Extension, University of Alberta. 34 p.
- Bauer, L. and F. Novak. 1993. *Risk and Return Dimensions: Cow-Calf and Grain Enterprise Combinations*. Project Report 93-11, Department of Rural Economy, University of Alberta, Edmonton. 28 p.
- Bauer, L. and G. Bradshaw. 1993. *What is it that Farm Managers Do?* Staff Paper 93-02, Department of Rural Economy, University of Alberta, Edmonton. 21 p.
- Condon, B. and W.L. Adamowicz. 1993. *Household and Moose Hunting Survey Results for Newfoundland*. Project Report 93-05, Department of Rural Economy, University of Alberta, Edmonton. 60 p.
- Eales, J.S., M.M. Veeman and J. Fulton. 1993. *Canadian Demand for Meats*. Project Report 93-10, Department of Rural Economy, University of Alberta, Edmonton. 63 p.
- Fulton, J. and M. Bhargava. 1993. *Milk Marketing by Dairy Cooperatives in India*. Project Report 93-02, Department of Rural Economy, University of Alberta, Edmonton. 31 p.
- Lacuna-Richman, C., D.S. Gill and E.C. Murray. 1993. *Cooperative and Rural Development: The Case of Dayap Credit Cooperative and Development Inc., Philippines*. Project Report 93-09, Department of Rural Economy, University of Alberta, Edmonton. 17 p.
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RESEARCH PROJECTS

Research Completed January 1 - December 31, 1993

- Anderson, A.W., L. Bauer. "Analysis of Production Costs for Farmer Owned Feed Mills." Funded by Farming for the Future (Alberta Agriculture).
- Apedaile, L.P. "Social and Economic Restructuring in Rural Canada: Opportunities and Impacts of the North American Free Trade Agreement." Unfunded.
- Apedaile, L.P. "Structural Projections for Alberta Grain Production to Year 2001." Funded by Agricultural Research Council of Alberta.
- Bauer, L. "Development of Farm Manager's Resource Reference System." Funded by Alberta Agriculture.
- Bauer, L., F.S. Novak. "Risk and Return Dimensions of Cow-Calf/Grain Enterprise Combinations." Funded by Farming for the Future (Alberta Agriculture).
- 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. "Centralization Versus Decentralization of Decision Making Authority." Funded by Office of the Dean.
- Fulton, J.R. (in collaboration with M. Bhargava, Faculty of Business). "Dairy Cooperatives in India." Funded by the Fund for Support of International Development Activities, University of Alberta.
- Fulton, J.R. "Fertilizer Use by Small Scale Farmers in Kenya." Funded by Kenya High Commission.
- Fulton, J.R., W.L. Adamowicz. "Member Loyalty to Cooperatives. Unfunded (in collaboration with Alberta Wheat Pool).
- Fulton, J.R., J.S. Eales. "The Effect of Advertising and Demographic Characteristics on the Demand for Beef." Funded by Alberta Agricultural Research Institute.
- Gill, D.S. "Maejo Institute of Agricultural Technology Rural Outreach Project - Thailand." Funded by Canadian International Development Association.
- Gill, D.S. and B. Matthews. "Changes in the Bread Winner Role: Punjabi Family in Transition." Unfunded.

- Gill, D.S., C. Lacuna-Richman. "Cooperatives and Aspects of Rural Development: The Case of Dayap Credit Cooperative and Development Inc., Philippines." Funded by Fund for the Support of International Development Activity.
- Gill, D.S. and C. Lacuna-Richman and G.W. Lamble. "Local Institutions and Customs in Agricultural and Rural Development." Unfunded.
- Haigh, R.J., W.E. Phillips. "A Socioeconomic Evaluation of the North American Waterfowl Management Plan in Alberta." Funded by NAWMP.
- Jeffrey, S.R., G.V. Johnson. "Economic Evaluation of Irrigated Crop Production in Grenada." Unfunded.
- 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., W.E. Phillips. "Principles for Evaluation and Compensation for Timber Damages, Land Withdrawal and Disruption of Operations." Funded by Forest Management Agreement Holders of Alberta.
- 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.
- Luckert, M.K., F. Salkie and W. Phillips. "An Economics Analysis of Factors Influencing the Forest Management and Harvesting Decisions of Private Woodlot Owners in Northern Saskatchewan."
- Novak, F.S., J.S. Eales. "Profitability and Risk of Retained Ownership of Beef Calves." 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. "Develop a Conceptual Framework for Comparing the Economic Merits of Potential Harvesting Systems From Standing Timber to Free-to-grow." Funded by Forestry Canada.
- Veeman, M.M. "Canadian Agriculture and GATT: An Economic Analysis of Article XI." Funded by Farming for the Future Council (Alberta Agriculture).
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- Adamowicz, W.L., P.M. Boothe. "Environmental/Economics Study Group." Funded by Alberta Environment.
- Adamowicz, W.L., K. Morton. "Non Timber Values Associated with Recreational Hunting in N.W. Saskatchewan." Funded by Forestry Canada.
- Adamowicz, W.L., M.K. Luckert, M. Tanguay. "Costs and Benefits of Environmental Improvements: The Case of Woodland Caribou in N.W. Saskatchewan." 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., F.S. Novak. "Environmental and Financial Sustainability of Forest Management Practices." Funded by Forestry Canada.

- Adamowicz, W.L., P. Boxall. "The Evaluation and Incorporation of Non-Timber Goods and Services in Integrated Resource Management Decisions." Funded by Forestry Canada.
- Adamowicz, W.L., P. Boxall. "The Measurement of Non-Timber Values: An Investigation of Travel Cost Methodologies." Funded by Forestry Canada.
- Alavalapati, J., M.K. Luckert, W.L. Adamowicz. "A Vector Autoregression Approach to Modelling the Pulp and Paper Industry in Canada." Unfunded.
- Apedaile, L.P., H.I. Freedman, S. Schilizzi, M. Solomonovich. "Dynamics and Persistence of Interacting Agricultural Systems: Incomes, Wealth and Environmental Degradation." NSERC and SSHRC.
- Apedaile, L.P., S. Schilizzi. "Application of Theories of Complex Dynamical Systems to Micro, Meso and Macro Linkages in Rural Economies." Unfunded.
- Apedaile, L.P., P. Murphy, C. Opio. "Economic Impact of Improved Agroforestry Practices on the Fragility of Rural Zambian Household Economies." Funded by IDRC/ICRAF.
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- Apedaile, L.P. Zhu, S. and Calkins, B. "Structural Change in Agriculture and Transitions in Economic Governances in China, Taiwan and Canada." Unfunded.
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- Eales, J.S., M.M. Veeman. "Marketing of Value-Added Agricultural and Food Products." Funded by Alberta Agricultural Research Institute.
- Gill, D.S. "A Select International Bibliography of Agriculture Extension Education." Unfunded.
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- Gill, D.S., A. Kisko. "Social Integration of Newcomers in an Alberta Community: Decentralization of Alberta Environmental Research Centre to Vegreville." Funded by CRF (University of Alberta).
- Gill, D.S., B. Matthews. "Agricultural Services for Women Farmers in Africa." Unfunded.
- Gill, D.S., A.M. Moreno and Renata Keenan. "Participatory Policies in Land Tenure Reform: A Comparative Analysis of Nicaragua and El Salvador." Unfunded.
- Jeffrey, S.R. "Demand for Forages in Western Canada." Funded by the University of Manitoba, Faculty of Agriculture.
- Jeffrey, S.R. "Evaluation of Alternative Tenure Arrangements for Western Canadian Farm Operations." Self-funded.
- Jeffrey, S.R., M.K. Entz. "Economic Analysis of Forage Production Systems." Self-funded.
- Jeffrey, S.R., M.D. Faminow. "The Use of Nearly Optimal Linear Programming in Management Decision Making." Self-funded.
- Lerohl, M.L. "Grain-Livestock Industry Research." Funded by Alberta Agriculture.
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- Luckert, M.K., J. Alavalapati. "The Short Run Supply Behaviour of Timber Quota Holders in Alberta." Funded by Forestry Canada.
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- Luckert, M.K., G. Armstrong and D. Haley. "Efficiency Implications of Separating Ownership from Management on Crown Forest Lands." Unfunded.
- Luckert, M.K., T. Beckley, D. MacAuley, E. Murray and W. Phillips. "Non-market Valuation Biases Due to Aboriginal Cultural Characteristics in Northern Saskatchewan." Funded by Canadian Forest Service.
- Luckert, M.K., P. Kennedy and B. Laplante. "Economic Instruments for Municipal Solid Waste Management." Funded by Environment Canada
- McGill, W.B., J.J. Feddes, S.R. Jeffrey, N.G. Jumay, J.J. Kennell and Leonard. "Sustainability of Manure Management." Funded by CAESA.
- Murray, E. "Kenyatta University Up-Grading of Home Economics Project." Funded by Canadian International Development Association.
- 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., S. Jeffrey. "Economic Analysis of NISA." Funded by SSHRC.
- 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.
- Phillips, W.E. and M. Luckert. "Economic Analysis of Private Forest Woodlots." Funded by Natural Resources Canada.
- Phillips, W.E., W. White. "Studies and Research in Forest Economics Associated Within Renewable Resource Management." Funded by Forestry Canada.
- Phillips, W.E., et al. "Value of Trees (Alberta/Zimbabwe)." Funded by IDRC.
- 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. "Economic Impacts of Supply Management." Unfunded.
- Veeman, M.M. "Export Markets for Canadian Grain." Unfunded.
- Veeman, M.M. "Political Economy of Farm Policy." Unfunded.
- Veeman, M.M., C. Mataya. "The Impact of Currency Devaluation on Agricultural Trade: The Case of Malawi." Funded by The Rockefeller Foundation.
- Veeman, T.S. "Capital Formation, Technical Change and Profitability in Prairie Agriculture." Funded by Alberta Agricultural Research Institute.
- Veeman, T.S. "Economic Aspects of Transferable Water Rights in Alberta." Funded by Alberta Water Resources Commission and Alberta Environment.

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).