

RURAL ECONOMY

1994 ANNUAL REPORT



Department of Rural Economy
Faculty of Agriculture, Forestry,
And Home Economics
University of Alberta
Edmonton, Canada

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March 1995

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Foreword

Adapting, Changing and Building: Rural Economy in 1994

During 1994 the Department of Rural Economy has adapted to challenges of budget pressures, streamlined and adjusted course offerings in response to the growth of enrollments in the successful new undergraduate programs of the Faculty of Agriculture, Forestry and Home Economics, and continued to build on its strong graduate programs.

Rural Economy course offerings were adapted and changed to contribute to the requirements of the new undergraduate degree programs in Environmental and Conservation Sciences (ENCS), Agriculture/Food Business Management, and the Agriculture and Forestry B.Sc. programs. Department course offerings will continue to be changed to respond to the needs, in particular, of the large number of ENCS students choosing to specialize in the Environmental Economics and Policy stream of that very successful new program and the smaller, but steadily growing, B.Sc. programs in Agriculture/Food Business Management. The strength of Rural Economy's graduate programs in agricultural economics, forest economics and rural sociology is reflected in the high proportion of graduate students who are supported by research funds awarded to faculty in competitive competitions and the many excellent students, from a variety of countries, numbers of whom hold competitively awarded scholarships and awards. It is pleasing that a Rural Economy M.Sc. student was, again, singled out for an outstanding thesis award in 1994. Karen Morton's thesis, titled "Economic Effects of Environmental Quality Change on Recreational Hunting in Northwest Saskatchewan" (supervised by Wiktor Adamowicz) was selected for this award by both the Canadian Agricultural Economics and Farm Management Society and the American Agricultural Economics Association. Rural Economy will have its graduate programs assessed by the University's Faculty of Graduate Studies and Research in 1995; we expect to contact numbers of previous graduate students by way of a survey to gain their input and advice on ways to strengthen further the graduate programs.

In 1994 Rural Economy was fortunate to be awarded the Alberta Agricultural Research Institute Professorship in Value-Added Marketing for a second term, to December 1996. Jim Unterschultz was appointed to this position and joined the Department as Assistant Professor in October 1994. Jim Eales, who previously held the AARI professorship position, left to take up a position at Purdue University.

Other changes in staff and positions during the year included the return of Wiktor Adamowicz and Mel Lerohl from sabbatical leaves. Three faculty members, Scott Jeffrey, Martin Luckert and Frank Novak were promoted from Assistant to Associate Professor. Rural Economy was fortunate to have contributions to teaching and research in rural sociology from visiting resource sociologist, Tom Beckley, in 1994. We expect further staffing changes in 1995 with the filling, during the year of two academic positions. One, in agricultural marketing, is available from an earlier resignation. The other, the cooperative chair in agricultural marketing and business, is an endowed chair position provided by contributions from the cooperative and group marketing sector. Brian Oleson was appointed as the inaugural chairholder for a period during 1994/95. A continuing appointment will be made in early 1995. The filling of the marketing and cooperative chair positions will greatly strengthen teaching and research in agribusiness and marketing issues. The Cooperative Chair program in Rural Economy during 1994 included a workshop on cooperative education in which Michael Cook, Ron Knutson and Murray Fulton outlined the organization and program of teaching and research related to agricultural cooperatives in their home institutions, the University of Missouri, Texas A and M and the University of Saskatchewan, respectively.

Budget exigencies led to the loss of the librarian position held by Gail Robinson. Maintenance of the department reading room, formally known as the Eric R. Berg Memorial Reading Room is a high priority for Rural Economy and this is being achieved with the efforts of Dawn Zrobock, now the sole support staff member in charge of this resource. This research-oriented collection now contains some 17,000 catalogued items, 150 journals, 18 USDA publications and 43 Statistics Canada series. It is one of the more substantive specialized collections of agricultural and resource economics and rural sociology in North America. The endowment fund to support the continuing costs of maintaining this collection is gradually growing, due to the generosity of current and previous staff, students, and friends.

Again in 1994, staff and students had the opportunity for involvement in international research and teaching through the ongoing project on the valuation of trees, with the University of Zimbabwe, and a project to strengthen institutions in Kenya. Funding for a new Faculty project focussed on agroforestry, involving staff and students in Rural Economy, with Maejo University in northern Thailand and Laos was achieved during 1994. M.Sc. students in Rural Economy with interests in pursuing M.Sc. research on economic or rural sociology aspects of agroforestry will also have opportunities to do this overseas through a faculty-wide project involving the International Centre for Research in Agroforestry with the University of Alberta and Laval University.

We expect that 1995 will be a year of continued budgetary challenges. We plan to meet these challenges by building in areas of strength, and by continuing to strive for excellence in teaching and research in selected areas of social science that are of importance to rural people and activities.

Michele Veeman
Chair

Department Staff

Academic Staff

W.L. Adamowicz, Ph.D. (Minnesota); Associate Professor; Environmental Economics, 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); Associate Professor; Production Economics, Business Management.
M.L. Lerohl, Ph.D. (Michigan State); Professor; Policy, Production Economics.
M.K. Luckert, Ph.D. (British Columbia); Associate Professor; Forest Economics, Natural Resources.
E.C. Murray, Ph.D. (Pennsylvania State); Professor; Rural Sociology.
F.S. Novak, Ph.D. (Illinois); Associate 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

T.M. Beckley, Ph.D. (Wisconsin); Adjunct Professor; Forest Sociology.
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.
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 (Canadian Forest Service); Forest Economics.

Support Staff

J. Boucher, Computing Assistant
L. Bruce, Graduate Secretary
K. Horton, Senior Accounts Clerk
G. Robinson, Information Officer (to May 1994)
W. Williamson, Department Secretary
D. Zrobok, Library Assistant

Sessional Lecturers & Research Associates

G. Armstrong, Research Associate
B. Brindle, Sessional Lecturer
A. Fantino, Research Associate
F. Salkie, Research Associate
Y. Peng, Research Associate

Awards

Chigume, Solomon M. - IDRC Scholarship
Dosman, Donna - John Proskie Memorial Scholarship
Gheblawi, Mohamed - CBIE - Canadian Commonwealth Scholarship and Fellowship Program
Hailu, Atakelty - U. of A. PhD Scholarship
Karugia, Joseph - Kenya-Canada General Training Programme Scholarship
Kundhlande, Godfrey - IDRC Scholarship
Matose, Frank - IDRC Scholarship
Mdluli, Funekile - CBIE - Canadian Commonwealth Scholarship and Fellowship Program
Morton, Karen - 1994 CAEFMS and 1994 AAEA Master's Thesis Awards
Mulinge, Wellington - Kenya-Canada Agricultural Research Scholarship
Pattison, Marilea - Margaret (Peg) Brown Award in Environmental Studies and Wildlife Resources
Quagraine, Kwamena - CBIE - Canadian Commonwealth Scholarship and Fellowship Program
Sabetghadam, Ahmad - Islamic Republic of Iran, Ministry of Culture & Higher Education Scholarship
Salami, Habibollah - Islamic Republic of Iran, Ministry of Culture and Higher Education Scholarship
Viney, Bruce - The Winnipeg Commodity Exchange Centennial Fellowship Award
Zhao, Yue - U. of A. Ph.D. Scholarship

Offices

Apedaile, L.P. - President, Canadian Rural Restructuring Foundation
Bauer, L. - Chairman, Canada Expert Committee on Farm Management Services Society Executive
Gill, D.S. - Director, Human Resources Development for Sustainable Agroforestry and Environmental Conservation Project in Northern Thailand
Jeffrey, S. - Councillor, Canadian Agricultural Economics and Farm Management Society Executive
Murray, E. - Director, University of Alberta/Kenyatta University, ICDS/CIDA Project
Veeman, T. - President Elect, Canadian Agricultural Economics and Farm Management Society

On Leave

Adamowicz, W.L. - July 1, 1993 - June 3, 1994
Apedaile, L.P. - Appointed McCalla Research Professor - September 1, 1994 - June 20, 1994
Lerohl, M.L. - July 1, 1993 - June 30, 1994

Graduate Students Completing Programs in 1994

- Gelfand, Jan B. Participating in Planned Social Change: A Case Study of the Participatory Practices of the Fundacion San Isidro in Colombia. M.Sc. (Gill)
- Henry, John. A Productivity Analysis of the Gambian Groundnut Sector. M.Sc. (T. Veeman)
- Mataya, Charles S. Micro and Macroeconomic Effects of Currency Devaluation: The Case of Malawi. Ph.D. (M. Veeman)
- Matose, Frank M. Local People's Uses and Perceptions of Forest Resources: An Analysis of a State Property Regime in Zimbabwe. M.Sc. (Gill)
- Olson, Mark A. Improving Technology Transfer Process in Agriculture: The Case of the Chinook Applied Research Association in Alberta. M.Ag. (Gill)
- Staples, Blaine S. A Review of Cropping Decision Models. M.Ag. (Bauer)
- Tanguay, Mark R. An Economic Evaluation of Woodland Caribou in Northwestern Saskatchewan. M.Sc. (Adamowicz/Luckert)
- Watson, Leslie C. Tree Planting and Maintenance Behaviour in Nyahunura Ward, Zimbabwe. M.Sc. (Murray)

Graduate Students Commencing and Continuing Programs Through 1994

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| Adilu, Shiferaw, Ph.D. (Veeman, M.) | Kuperis, Peter, M.Sc. (Veeman, M.) |
| Akabua, Kojo, Ph.D. (Adamowicz/Phillips) | McLeod, Kristine, M.Sc. (Adamowicz) |
| Alavalapati, Janaki, Ph.D. (Luckert/Percy) | Mdluli, Funekile, Ph.D. (Murray/Gill) |
| Baragar, Edith, M.Sc. (Gill) | Mulinge, Wellington, M.Sc. (Phillips) |
| Bedford, David, M.Sc. (Gill) | O'Donnell, Jamie, M.Sc. (Adamowicz) |
| Block, Ray, M.Ag. (Jeffrey) | Orlick, Charles, M.Sc. (Bauer) |
| Boxall, Peter Ph.D. (Luckert/Adamowicz) | Parker, Derek, M.Sc. (Lerohl) |
| Buchanan, Gary, M.Ag. (Gill) | Parkins, John, M.Sc. (Gill) |
| Cauvier-Lepine, Sylvie, M.Sc. (Murray) | Pattison, Marilea, M.Sc. (Luckert/White) |
| Chigume, Solomon, M.Ag. (Phillips) | Pearson, Angela, M.Sc. (Veeman, T.) |
| Deans, Florence Mae, M.Sc. (Beckley/Gill) | Phakisi, Stephen, M.Sc. (Veeman, M.) |
| Dolphin, Maureen, M.Sc. (Veeman, T.) | Quagraine, Kwamena, M.Sc. (Veeman, M.) |
| Dosman, Donna, Ph.D. (Adamowicz/Murray) | Rodrigues, Philippa, M.Sc. (Luckert) |
| Fullerton, David, M.Sc. (Apedaile) | Royer, Sean, M.Sc. (Veeman, T.) |
| Gheblawi, Mohamed, Ph.D. (Phillips) | Rush, Bonnie, M.Sc. (Phillips) |
| Graham, Laura, M.Sc. (Phillips) | Sabetghadam, Ahmad, Ph.D. (Gill/Murray) |
| Hailu, Atakelty, Ph.D. (Apedaile) | Salami, Habibollah, Ph.D. (Veeman, T.) |
| Hansen, Jamie, M.Sc. (Apedaile) | Sean, Christine, M.Sc. (Lerohl) |
| Hatton MacDonald, Darla, Ph.D. (Adamowicz/Luckert) | Viney, Bruce, M.Sc. (Novak) |
| Just, Lesley, M.Sc. (Murray) | Ward, Jeffrey, M.Sc. (Tyrchniewicz) |
| Karamagi, Innocent, M.Sc. (Veeman, T.) | Wouters, Keri, M.Sc. (Murray) |
| Karugia, Joseph, Ph.D. (Veeman, M.) | Wytinck, Sonya, M.Sc. (Veeman, T.) |
| Korber, Dianne, M.Sc. (Luckert/Beckley) | Xu, Xiaosong, Ph.D. (Jeffrey/Novak) |
| Kundhlande, Godfrey, Ph.D. (Luckert) | Zhao, Yue, Ph.D. (Apedaile) |

Visiting Speakers

- Prof. Julian Alston, Van Vliet Chair, University of Saskatchewan; and Professor, University of California, Davis. *Evaluating Primary Product Promotion: Returns to Generic Advertising by Producer Cooperatives in a Small Open Economy*. May 6, 1994.
- Mr. Terrence J. Appleby, Supervisor, Conservation & Sustainable Agriculture, Production Economics Branch, Alberta Agriculture, Food & Rural Development, Edmonton. *Behavioural Issues in the Transition to Conservation Farming*. March 28, 1994.
- Dr. John Braden, Winegard Alumni Visiting Professor, University of Guelph; and Research & Programme Director, The Arkleton Trust and Arkleton Research, U.K. *Economic Adjustments on European Farm Households: New Evidence 1980-1990*. April 11, 1994.
- Dr. Martín Delgado, Director General, Centro de Investigación y Desarrollo de los Recursos Naturales de Sonora, Mexico. *The Sonoran Model of Economic Development*. Oct. 11, 1994.
- Dr. Matthias Dennhardt, Institute of Farm Management, Faculty of Agriculture and Horticulture, Humboldt University, Berlin. *Challenges Facing Agriculture in Eastern Germany*. Dec. 7, 1994.
- Dr. Merle D. Faminow, Professor & Associate Head, Dept. of Agricultural Economics & Farm Management, University of Manitoba, Winnipeg. *Valuing Genetic Characteristics in Beef Cattle Using Conjoint Analysis*. April 8, 1994.
- Dr. Mei Fangquan, Professor and Director, Macro Agriculture Research Development, Chinese Academy of Agricultural Sciences, Beijing. *Sustainable Grain Production with Chemical Fertilizers*. January 27, 1994.
- Dr. Günter Filler, Institute of Farm Management, Faculty of Agriculture and Horticulture, Humboldt University, Berlin. *Challenges Facing Agriculture in Eastern Germany*. Dec. 7, 1994.
- Dr. Charles W. Howe, Professor of Economics and Director, Environment & Behavior Program, University of Colorado. *Designing Environmental and Resource Policies in a Federation of States*. Oct. 4, 1994.
- Dr. Bruno Jean, Professor, Dept. of Sociology, Université du Québec à Rimouski, Québec. *Rurality and Rural Policy: Some Considerations for Sustainable Rural Development*. February 28, 1994.
- Dr. Sitanon Jesdapipat, Assoc. Professor and Dept. Head, Dept. of Agricultural Economics & Extension, Maejo University, Chiangmai, Thailand. *Participatory Conservation of Forest and Water Resources in Northern Thailand*. Aug. 4, 1994.
- Dr. Jack Mintz, Arthur Andersen Professor of Taxation, Faculty of Management, University of Toronto. *Issues in Agricultural Taxation*. March 14, 1994.
- Dr. Brian Oleson, Executive Director, Planning and Communications Directorate, Canadian Wheat Board, Winnipeg. *A Vision for Cooperative Education and Research*. Nov. 9, 1994.
- Mr. Günter Ruchti, Visiting Student, Hohenheim University, Germany. *New Directions for German Agriculture*. February 7, 1994.
- Mr. Larry E. Ruud, Grain Market Analyst, Market Analysis & Statistics Branch, Alberta Agriculture, Food & Rural Development, Edmonton. *Drivers to Change in Grain Markets and Farmer Expectations*. March 21, 1994.
- Mr. James I. Rude, Market Economist, Agriculture Canada, Ottawa. *Canadian Dairy Processing in an Imperfectly*

Competitive Market Structure with Increasing Returns to Scale. Sept. 26, 1994.

Dr. Steven Schilizzi, Sr. Research Scientist, Institut National de la Recherche Agronomique, Montpellier, France.
Integrating Agro-ecological and Socio-economic Rural Dynamics. March 3, 1994.

Dr. Roger Sedjo, Senior Fellow and Director, Forest Economics and Policy Program, Resources for the Future,
Washington, D.C. *The Role of Forests in Climate Change: Alberta Implications.* Dec. 19, 1994.

Mr. Kenneth Smith, General Manager, Alberta Agricultural Products Marketing Council, Edmonton. *Resolving Conflict
in the Public Sector.* January 24, 1994.

Visiting Students

Mrs. Johanna Margaret Pluske, Visiting Ph.D. Candidate, Department of Agricultural Economics, School of
Agriculture, University of Western Australia, Nedlands, Australia. June 15, 1993 - June 30, 1994.

Mr. Günter Ruchti, Undergraduate Student, Department of Agricultural Economics, University of Hohenheim, Stuttgart,
W. Germany. October 25, 1993 - March 31, 1994.

Visiting Scholars

Dr. Thomas Beckley, Department of Rural Sociology, University of Wisconsin-Madison: June 15, 1993 - December 31,
1994.

Dr. John Braden, Winegard Alumni Visiting Professor, University of Guelph; and Research & Programme Director, The
Arkleton Trust and Arkleton Research, U.K.: April 9-11, 1994.

Mr. Honghai Deng, Visiting Scholar, Chinese Academy of Social Sciences (Institute of Agricultural Modernization,
Academic Sinica): July 1, 1988 - July 31, 1994.

Dr. Matthias Dennhardt, Institute of Farm Management, Faculty of Agriculture and Horticulture, Humboldt University,
Berlin.: Dec. 1-8, 1994.

Dr. Mei Fangquan, Professor and Director, Macro Agriculture Research Development, Chinese Academy of
Agricultural Sciences, Beijing: January 27 - Feb. 4, 1994.

Dr. Günter Filler, Institute of Farm Management, Faculty of Agriculture and Horticulture, Humboldt University, Berlin.:
Dec. 1-8, 1994.

Ms. Svetlana V. Grigorieva, Sr. Research Associate, Market Economy Institute, Russian Academy of Sciences,
Moscow: April 26 - May 20, 1994.

Dr. Sitanon Jesdapipat, Assoc. Professor and Dept. Head, Dept. of Agric. Econ. & Extension, Maejo University,
Chiangmai, Thailand: Aug. 2-7, 1994.

Dr. Violeta B. Lopez-Gonzaga, SEAMEO-Jasper Fellowship Scholar and Executive Director, Institute for Social
Research and Development, University of St. La Salle, Bacolod City, Philippines: Nov. 14-18, 1994.

Mr. Ian Moncrieff, Sr. Lecturer, Farm Management, Muresk Institute of Agriculture, Curtin University, Northam, W.
Australia: June 20-24, 1994.

Dr. Godfrey Mudimu, Professor, Dept. of Agric. Econ. & Business, University of Zimbabwe, Harare: Dec. 8-19, 1994.

Mr. Vitaly Ovsienko, Member, Editorial Board, Osnovy Publishers, Kiev, Ukraine: Oct. 20-Nov. 2, 1994.

Prof. Eduardo Wilches Rojas, Professor, Universidad Pedagogica Tecnologica de Colombia, Facultad Seccional Duitama, Escuela de Administracion Agricola, Duitama, Boyaca, Colombia: June 1 - Aug. 31, 1994.

Mrs. Elena V. Ryumina, Principal Research Fellow, Market Economy Problems Institute, Russian Academy of Sciences, Moscow: March 22 - April 12, 1994.

Dr. Steven Schilizzi, Sr. Research Scientist, Institut National de la Recherche Agronomique, Montpellier, France: March 1-11, 1994.

Dr. Roger Sedjo, Senior Fellow and Director, Forest Economics and Policy Program, Resources for the Future, Washington, D.C.: Dec. 19-21, 1994.

Dr. Boonrawd Supa-Udomlerk, Director, MIAT Rural Outreach Project, Maejo Institute of Agricultural Technology, San Sai, Chiangmai, Thailand: January 22 - February 1, 1994.

Mr. Yuri Yevdokimov, Sr. Scientist, Doctor of Economics, Gas Research Institute of Ukrainian Academy of Sciences, Kiev, Ukraine: February 22 - June 30, 1994.

International Projects and Academic Activities

A new project was approved in 1994 and will continue for 3 years: *Human Resources Development for Sustainable Agroforestry and Environmental Conservation in Northern Thailand.*

D.S. Gill, Director

Funded by Canadian International Development Association

The following project was completed in 1994: *Maejo Institute of Agricultural Technology Rural Outreach Project, Thailand.*

D.S. Gill, Director

Funded by Canadian International Development Association

Student activities during the year included work towards thesis research by J. Ward and K. Wouters who completed field research in Thailand.

The following project was funded in 1988 and will end in 1995: *University of Alberta/Kenyatta University Link Project*

E.C. Murray, Director

ICDS/CIDA Funded

During this year one master's candidate and one Ph.D. candidate completed their programs. On-going institutional support was provided.

The following project started in 1992 and will continue into 1997: *Alberta/Zimbabwe Value of Trees Project*

W.E. Phillips, Director

Funded by IDRC

L. Watson, F. Matose and S. Chigume all had completed Master's degrees by the end of December, 1994. L.

Graham and G. Kundhlande undertook thesis field research in Zimbabwe. M. Luckert undertook staff exchange research in Zimbabwe and L. Just and A. Gobel began thesis research as part of the project during the year.

Other international activities in 1994 include the sabbatical leave of W.L. Adamowicz to do research on environmental economics at the University of Newcastle (United Kingdom) and at the University of Stirling (Scotland). J. Henry researched production and productivity in the ground nut sector and assisted with teaching mathematics at the Main Agricultural College (Gambia College) in The Gambia from September 1993 to May 1994. D. Parker gathered data for a study of the costs of soil erosion and the effects of selected techniques in Lesotho in late 1993 to early 1994.

Publications 1994¹

Books and Chapters in Books

- Filion, F. and W. Adamowicz. 1994. Socioeconomic Evaluation of Biodiversity. In: *Biodiversity in Canada: A Science Assessment*. Minister of Supply and Services, Ottawa, p. 221-242.
- Gill, D.S., C. Lacuna-Richman and G.W. Lambie. 1994. Local Social Institutions and Customs in Rural development. In: K.C. Roy and C. Clark (eds.) *Technological Change and Rural Development in Poor Countries*. Oxford University Press, New Delhi, p. 153-173.

Refereed Journal Articles

- Adamowicz, W.L. 1994. Habit Formation and Variety Seeking in a Discrete Choice Model of Recreation Demand. *Journal of Agricultural and Resource Economics* 19 (1):19-31.
- Adamowicz, W.L., J. Louviere and M. Williams. 1994. Combining Stated and Revealed Preference Methods for Valuing Environmental Amenities. *Journal of Environmental Economics and Management* 26 (3):271-292.
- Adamowicz, W.L., V. Bhardwaj and B. Macnab. 1994. Experiments on the Difference between Willingness to Pay and Willingness to Accept: Reply. *Land Economics* 70 (4): 523-524.
- Adamowicz, W.L., J.J. Fletcher and T. Tomasi. 1994. "Functional Form and the Statistical Properties of Welfare Measures: Reply." *American Journal of Agricultural Economics* 76 (4):958-959.
- Apedaile, L.P., H.I. Freedman, S.G.M. Schilizzi and M. Solomonovich. 1994. Equilibria and Dynamics in an Economic Predator-Prey Model of Agriculture. *Mathematical and Computer Modelling* 19 (11):1-15.
- Jeffrey, S.R. and V.R. Eidman. 1994. Organizational Adjustments for Upper Midwestern Dairy Farmers. *Journal of the American Society of Farm Managers and Rural Appraisers* 58 (1):51-59.
- Laplante, B. and M.K. Luckert. 1994. Impact of Newsprint Recycling Policies on Canadian Waste Production and Forests. *Canadian Public Policy* 20 (4):400-414.
- Luckert, M.K. and J.T. Bernard. 1993. What is the Value of Standing Timber? Difficulties in Merging Theory with Reality. *Forestry Chronicle* 69 (6):680-685.
- Miranda, M.J., F. Novak and M. Lerohl. 1994. Aggregate Acreage Response in the Canadian Prairies Under the Western Grains Stabilization Program. *American Journal of Agricultural Economics* 76 (2):270-276.
- Novak, F.S. and G.D. Schmitkey. 1994. Effects of Including Bankruptcy on Dynamic Investment Decisions. *Journal of Agricultural and Resource Economics* 19 (2):263-269.

¹A listing of previous publications is contained in University of Alberta, Department of Rural Economy *Publications 1990-1994*.

Novak, F.S., G.W. Armstrong, C.R. Taylor and L. Bauer. 1994. An Analysis of Cropping Decision Rules. *Agricultural Systems* 46:19-31.

Phillips, W.E., T.J. Haney and W.L. Adamowicz. 1993. An Economic Analysis of Wildlife Habitat Preservation in Alberta. *Canadian Journal of Agricultural Economics* 41 (4):411-418.

Woodard, P., D. Needham, W. Phillips and L. Constantino. 1994. A Christmas Tree Market Analysis: Implications from Alberta, Canada Data. *Forestry Chronicle* 70 (4):443-448.

Yen, S.T. and W.L. Adamowicz. 1994. Participation, Trip Frequency and Site Choice: A Multinomial-Poisson Hurdle Model of Recreation Demand. *Canadian Journal of Agricultural Economics* 42 (1):65-76.

Oral Presentations, Posters, Proceedings and Abstracts and Other Items

Adamowicz, W.L., P.C. Boxall and D.O. Watson. 1993. An Economic Analysis of Recreational Fishing in Southern Alberta. *Trout Canada* Winter:32-34.

Adamowicz, W.L. 1994. "Alternative Valuation Techniques, Comparison and Movement Toward a Synthesis." Presented at the conference: Environmental Valuation in Context, Durham, UK, March. Also presented at the conference: Social Costing: Principles and Practices, Saskatoon, Saskatchewan, September 22-23.

Adamowicz, W.L. 1994. "Non-Timber Values and Fire Management Economics." Paper presented at the conference: The Economics of Forest Fire Management, Winnipeg, Manitoba, November 28-30.

Adamowicz, W.L. 1994. "Stated Preference Methods for Valuing Environmental Amenities." Presentations at: University of Stirling, Department of Economics, March; European Agricultural Economic Association Meetings, Zaragoza, Spain, February; UK Agricultural Economics Society Annual Meetings, Exeter, April; University College, London, May.

Adamowicz, W.L. 1994. Water Conservation: An Economic Perspective. Proceedings of "Every Drop Counts", National Water Conference, Winnipeg, Manitoba. D. Shrubsole and D. Tate (eds). Canadian Water Resources Association, Cambridge, Ontario. p. 227-233.

Adamowicz, W., J. Swait, P. Boxall, M. Williams and J. Louviere. 1994. "Perceptions, Scaling and Choice Sets: Issues in Combining Revealed and Stated Preference Methods for Environmental Valuation." Paper presented at the Fourth Annual Meeting of the Canadian Resource and Environmental Economics Study Group (CREE)/Groupe d'Études sur les Ressources et l'Environnement, Calgary, Alberta, October 1-2. Also presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.

Adamowicz, W., T. Beckley, D. Hatton MacDonald, L. Just, M. Luckert, E. Murray and W. Phillips. 1994. "In Search of Forest Resource Values of Aboriginal Peoples: The Applicability of Non-Market Valuation Techniques." Paper presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15. Also presented at the Fifth International Symposium on Society and Resource Management, Fort Collins, Colorado, June 7-10. Also presented at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9. Also presented at Valuation of Trees Seminar, University of Zimbabwe, Harare, August.

Akabua, K.M. 1994. "The Value of Moose Hunting in Newfoundland: Application of Discrete Choice Random Utility Models Using Lottery Rationing Data." Presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.

Akabua, K.M., W. Adamowicz, W. Phillips, P. Trelawny and B. Condon. 1994. "A Model of the Demand for Lottery Rationed Moose Hunting Within the Western Newfoundland Model Forest." Presented at the Annual Meeting of the Canadian Forest Service Modelling Group, Pasadena, Newfoundland, September 6-9.

Alavalapati, J.R. 1994. "Welfare and Distributive Analysis of a Stumpage Price Increase Policy." Presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.

Alavalapati, J.R. and M.K. Luckert. 1994. "Adoption of Agroforestry Practices in India: A Logit Analysis." Presented at the Fifth International Symposium on Society and Resource Management, Fort Collins, Colorado, June 7-10.

Alavalapati, J.R. and M.K. Luckert. 1994. "Effects of Timber Harvest Regulations on the Economy of British Columbia: A CGE Analysis". Invited seminar presentation at Department of Rural Economy, University of Alberta, Edmonton, Alberta, February 14. Also presented to the Southern Forest Economic Workshop, Savannah, Georgia, March 27-29.

Alavalapati, J.R. and M.K. Luckert. 1994. "Short-run Timber Supply Behaviour of Quota Holders in Alberta." Presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15. Also an invited presentation at the conference: Forestry Toward 2000, Department of Forest Science, University of Alberta, Edmonton, Alberta, April.

Alavalapati, J.R., M.G. Percy and M.K. Luckert. 1994. Effect of Timber Harvest Regulations on the Economy of British Columbia: A CGE Analysis. Proceedings of the "Southern Forest Economists Workshop", Savannah, Georgia. p. 14-41.

Apedaile, L.P. and D. Fullerton. 1994. "Mediation by Rural Institutions in a Global Economy." Presentation at the 6th National ARRG Conference, Grande Prairie. October 13.

Apedaile, L.P. and D. Fullerton. 1994. "Rural Institutional Restructuring in a Global Economy." Presentation to the Annual ARRG Workshop, St. Clement, Quebec. May 13.

Apedaile, L.P., W. Reimer and J. Stabler. 1994. "Toward a Whole Rural Policy for Canada." Presentation before the Joint Standing Committee of the House of Commons and the Senate of Canada on Agriculture, Agrifood and Forestry. Ottawa. October 4.

Armstrong, G., F. Novak and W. Adamowicz. 1994. "Environmental and Financial Sustainability of Forest Management Practices." Paper presented at conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.

Beckley, T. 1994. "Alternative Institutional Mechanisms for Forest Management: A Comparison of Industrial, Co-Managed, Community, and Private Land Forests." Presented at the Annual Meeting of the Rural Sociological Society, Portland, Oregon, August.

Beckley, T. M. 1994. "Co-Management and Controversy in Northwest Saskatchewan's Forest." Presented at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9.

Beckley, T. 1994. "Community Stability: The Relationship Between Economic and Social Well-Being." Keynote Address to the Model Forest Network, Port Alberni, B.C., May.

Beckley, T. 1994. "Forest Sociology." Presentation to Western Economic Diversification Committee, Saskatoon, Saskatchewan, January.

- Beckley, T.M. and A. Sprenger. 1994. "Social, Cultural and Political Dimensions of Forest-Dependence in the Communities of the Lower Winnipeg Basin." Presented at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9.
- Boxall, P.B. 1994. "Back-Country Recreation Research in the Rainy River/Lake of the Woods Drainage Area." Presented at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9.
- Boxall, P.B. 1994. "Forest Recreation Demand in the Rocky Mountain Foothills: Improving Existing Data and the Use of GIS." Presented at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9.
- Boxall, P.B. 1994. "Non-Market Valuation of Forest Recreation: An Examination of Wilderness Use in East Manitoba." Seminar presentation at Department of Rural Economy, University of Alberta, Edmonton, Alberta, December 5.
- Boxall, P.B. 1994. "Perceptions, Scaling and Choice Sets: Issues in Combining Revealed and Stated Preference Methods for Environmental Valuation." Presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.
- Boxall, P.B. 1994. "Pricing Non-Market Forest Values." Presentation to the Weyerhaeuser Canada Ltd. Forestry Workshop, Grande Prairie, Alberta, July.
- Boxall, P.B. 1994. "A Survey of Alberta Anglers' Attitudes Toward Bull Trout and Fisheries Management." Presentation at Friends of the Bull Trout Conference, Calgary, Alberta, May.
- Boxall, P.B. 1994. "Valuing Back-Country Recreation: The Importance of Forest Ecosystems and Park Management Features in the Canadian Shield Region." Presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.
- Condon, B. and W. Adamowicz. 1994. "Valuation of Selected Non-Timber Resource in Newfoundland." Proceedings of the UFRO Conference on Forest Survey Design, Monte Verita, Adcona, Switzerland, May.
- Cymbal, W. and M. Veeman. 1994. "Canadian Agriculture and Article XI: An Economic Analysis of Tariffication for Poultry Products." Invited Paper at the conference: World Agriculture in a Post-GATT Environment: New Rules, New Strategies, University of Saskatchewan, Saskatoon, June 13-15.
- Deans, F.M. 1994. "Experiencing Widowhood in Rural Alberta." Paper presented at the Fifth Conference on Rural and Farm Women in Historical Perspective, Washington, D.C., December 1-4.
- Deans, F.M. 1994. "Toll-Free Stress Lines: Helping the Rural Community in Canada's Prairie Provinces." Paper presented at the Joint Meetings of the Alberta Women's Institutes and Women of Unifarm 1994 Convention, Olds College, Olds, Alberta, May 24-26.
- Dosman, D. and E. Murray. 1994. "Toward Role Clarity: Gender Issues in Natural Resource-Based Industries in Canada." Presented at the Fifth International Symposium on Society and Resource Management, Fort Collins, Colorado, June 7-10.
- Fullerton, D.F. 1994. "Making Rural Business Activities More Tradeable in a Free Trade Environment." Invited presentation at the 6th National ARRG Conference, Grande Prairie, October 14.
- Fullerton, D.F. 1994. "The Nature of Rural Trading Economies in Alberta and Nebraska. Presented at the Canadian Economic Association Meetings, Calgary, Alberta, June 10-13.

- Fullerton, D.F. 1994. "Prospects for Tradeables Development in Rural Sonora, Mexico." Seminar presentation at Department of Rural Economy, University of Alberta, Edmonton, Alberta, October 17.
- Gebremedihen, A.H. and M. Veeman. 1994. "Determinants of the Allocation of Expenditure on Cereal Imports: The Case of Djibouti." Selected contributed paper presented at the 1994 Annual Meetings of the American Agricultural Economics Association, San Diego, California, August 7-10.
- Gebremedihen, A.H. and M.M. Veeman. 1994. Selected Paper Abstract "Determinants of the Allocation of Expenditure on Cereal Imports: The Case of Djibouti, 1975-1991." *American Journal of Agricultural Economics* 76(5):1252.
- Gelfand, J.B. 1994. "Participatory Rural Research: A Case from Colombia, South America." Seminar presentation at Department of Rural Economy, University of Alberta, Edmonton, Alberta, November 7.
- Gill, D.S. 1994. Progress Report on CIDA-Supported Maejo Institute of Agricultural Technology Rural Outreach Project. Material prepared for the Tripartite (Alberta, CIDA, Maejo) Evaluation Committee visit, February 16-24.
- Gill, D.S. 1994. "Agricultural Extension Education in the Comparative Perspective." Presentation to Graduate Students and Staff at Maejo University, Thailand, January .
- Hatton MacDonald, D. and M. Veeman. 1994. "Valuing Housing Characteristics: A Case Study of Single Family Homes in Edmonton, Alberta." Presented at the Canadian Economic Association Meetings, Calgary, Alberta, June 10-13.
- Henry, J. 1994. "A Productivity Analysis of the Gambian Groundnut Sector." Seminar presentation, Department of Rural Economy, University of Alberta, Edmonton, Alberta, October 3.
- Jeffrey, S.R. 1994. Costs of Milk Production: A Canada-U.S. Comparison. In: *Advances of Dairy Technology*. Volume 6. Proceedings of the "1994 Western Canadian Dairy Seminar". Department of Animal Science, University of Alberta. p. 119-131.
- Just, L.K. and E.C. Murray. 1994. "Barely Visible: Inuit Women in Statistical Data." Presented at Human Ecology of the North Series, Canadian Circumpolar Institute, University of Alberta, Edmonton, Alberta, February 3.
- Korber, D. and T.M. Beckley. 1994. "Economic Base Theory and Forest Dependent Communities: An Explanation and Analysis of the Theory with Regard to Native People in the Forested Region of the Prairie Provinces." Invited presentation at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9.
- Korber, D. and T. Beckley. "Sociology's Potential to Improve Forest Management." Presented at the Fifth International Symposium on Society and Natural Resources Management, Fort Collins, Colorado, June 7-10.
- Kundhlande, G. 1994. "Measuring Rates of Time Preference of Communal Area Households in Zimbabwe." Presented at a workshop organized by "Value of Trees" project at the University of Zimbabwe, August 8.
- Kundhlande, G. 1994. "Time, Discounting and Resource Use Decisions." A class presentation to BSc (Agriculture) students at the University of Zimbabwe, August 12.
- Luckert, M.K. 1994. "Economic Instruments for Sound Forest Management." Invited presentation at the conference: Economic Instruments for Environmental Issues, Edmonton, Alberta, May.
- Luckert, M.K. 1994. "Economic Issues Associated with Value of Trees in Zimbabwe." Invited presentation at Agroforestry Workshop, Edmonton, Alberta, May.

- Luckert, M.K. 1994. "Efficiency Implications of Silvicultural Expenditures from Separating Ownership and Management on Canadian Forest Lands." Presented at the conference: Forestry and the Environment: Economic Perspectives II, Banff, Alberta, October 12-15.
- Luckert, M.K. 1994. "Problems Governments Face When Designing Forest Tenure Systems." Invited paper presented at the conference: Economic and Legal Aspects of Forest Management." Moscow, Russia, June.
- Luckert, M.K. 1994. "Tenures as Economic Instruments for Multiple Forest Values." Invited paper presented at Forestry Workshop, Canadian Institute of Resources Law, Calgary, Alberta, May.
- Luckert, M.K. 1994. "Valuation of Natural Resources--The Case of Resources of Native Americans." Invited presentation at the Value of Trees Seminar, University of Zimbabwe, Harare, August.
- Mataya, C.S. and M. Veeman. 1994. "The Behaviour of Private and Public Investment in Malawi." Selected contributed paper presented at the Canadian Economic Association Meetings, Calgary, Alberta, June 10-13.
- Mataya, C.S. and M. Veeman. 1994. "Trade Balance and the J-Curve Phenomenon in Malawi." Selected contributed paper presented at the XXII International Conference of Agricultural Economists, Harare, Zimbabwe, August 22-29.
- McLeod, K. 1994. "Incorporating Perceptions of Site Quality for Moose Hunting in a Travel Cost Model." Seminar presentation at Department of Rural Economy, University of Alberta, Edmonton, Alberta, March 7.
- McLeod, K., P. Boxall and W. Adamowicz. 1994. The Hunters' Perspective. *The Alberta Game Warden* 30-31.
- Mulinge, W. and W.E. Phillips. 1994. "Property Rights and Resource Management in Northern Kenya." Department of Agricultural Economics, University of Nairobi, Kenya, August 11. Also presented at the Kenya Agricultural Research Institute, Nairobi, Kenya, August 16.
- Murray, E. 1994. Women in Natural Resource-Based Industries in Canada. Poster Session for "Research Revelations '94", University of Alberta.
- Pattison, M. 1994. "Ecological Economics for a Changing World." Invited presentation at the conference: Changing Gears: Quality Culture '94, Wetaskiwin, Alberta, October 3-4.
- Pattison, M. 1994. "Forest Regeneration Standards and Tenure: Principal Agent Analysis." Invited presentation to the Officials of Saskatchewan Environment and Resources Management, September. Also presented at the conference: Our Northern Forests: An Interdisciplinary Symposium on Wildlife, Forests and People, Winnipeg, Manitoba, November 6-9.
- Pattison, M. 1994. "Reforestation Agreements: Insights from Principal-Agent Economics." Invited presentation to Officials of Saskatchewan Environment and Resources Management, Prince Albert, Saskatchewan, September.
- Salami, H. 1994. "Estimation of Production Structure for the Iranian Crop Sector." Contributed paper presented at the AIC/CAEFMS Conference, Regina, Saskatchewan, July 10-14.
- Schnitkey, G. and F. Novak. 1994. Alternative Formulations of Risk Preferences in Dynamic Investment Models. Proceedings of "Risk Modelling in Agriculture: Retrospective and Perspective". Gulf Shores, Alabama. p. 117-132.
- Veeman, M. 1994. "Prospects for Canada's Red Meats in the New Trading Environment." Invited Paper, Canadian Agricultural Economics and Farm Management Association, Regina, July 12.

- Veeman, M. and L. Arthur. 1994. "Venturing into the Political Market of Agricultural Regulation: A Case Study of Power Relationships in the Political Process". G. Coffin, A. Schmitz, and K. Rosaasen, editors. Proceedings of "Supply Management in Transition Towards the 21st Century." Macdonald Campus of McGill University, St. Anne de Bellevue, Quebec, June 28-30, p. 61-71.
- Veeman, T. 1994. "Can We Afford Free Water and Free Water Rights?" Environmental Research and Studies Centre, University of Alberta, Public Symposium on Economic Instruments for Environmental Protection, March 17-18.
- Veeman, T. 1994. "Natural Resource Accounting--Measuring Sustainable Development." The Environmental Council of Alberta Workshop on Environmental Accounting: The Opportunities and Challenges for Business and Government, Calgary, February 16 and in Edmonton, February 17.
- Veeman, T. and A. Fantino. 1994. Empirical Measurement of Multifactor Productivity in Canadian Agriculture. In Conference Proceedings of "Measuring Agricultural Productivity and Related Data for Regional, National and International Comparisons", S. Narayanan, and J. King, editors. Policy Branch, Agriculture and Agri-Food Canada, Ottawa. p. 108-117.
- Ward, J.D. 1994. "Performance of Cooperatives in Developing Countries: Thailand Case Study." Seminar presentation at Department of Rural Economy, University of Alberta, Edmonton, Alberta, October 31.
- Watson, D. and M. Lerohl. 1994. Reflecting Productivity Losses Due to Erosion in Physical and Financial Accounts for Agricultural Soils. Proceedings of International Symposium "Models of Sustainable Development". Universite Pantheon-Sorbonne, Paris. Volume I:403-414.
- Woodard, P.M., W.L. Adamowicz and O.J. Bolster. 1994. An Economic Assessment of Forward Looking Infrared Technology for Reducing Forest Protection Costs in Alberta. *Wildfire* 3 (2):17-25.

Extension and Technology Transfer

- Bauer, L. 1994. The Risk Reduced Crop Program Planner. Computer Spreadsheet Program. Revised version for Excel 5.
- Bauer, L. and T.J. Loughheed. 1994. The Integrated Financial Statement Forecaster. Computer Spreadsheet Program. Revised version for Excel 5.
- Bauer, L. 1994. Managing the Modern Farm Business: Identifying Risk Attitudes. Second Edition (Self Directed Learning Module). Faculty of Extension, University of Alberta. 25 p.
- Bauer, L. 1994. Managing the Modern Farm Business: Identifying Risk Sources. Second Edition (Self Directed Learning Module). Faculty of Extension, University of Alberta. 30 p.
- Bauer, L. 1994. Managing the Modern Farm Business: Measuring Degrees of Risk. Second Edition (Self Directed Learning Module). Faculty of Extension, University of Alberta. 34 p.
- Bauer, L. 1994. Managing the Modern Farm Business: Designing Risk Management Strategies. Second Edition (Self Directed Learning Module). Faculty of Extension, University of Alberta. 39 p.
- Bauer, L. 1994. ALTASIM, The Alberta Farm Business Simulator, Operators Manual. Revised Edition. Department of Rural Economy, University of Alberta, 50 p.

Staff Papers and Project Reports

- Adamowicz, W.L., K. Willis and G. Garrod. 1994. *Public Perceptions and Valuation of Waterways*. Department of Agricultural Economics and Food Marketing, University of Newcastle, Newcastle upon Tyne, England. 31 p. + Appendices.
- Adamowicz, W.L., P.C. Boxall, J.J. Louviere, J. Swait and M. Williams. 1994. *Stated Preference Methods for Environmental Valuation*. Staff Paper 94-07, Department of Rural Economy, University of Alberta, Edmonton. 26 p.
- Adamowicz, W., T. Beckley, D. Hatton MacDonald, L. Just, M. Luckert, E. Murray and W. Phillips. 1994. *In Search of Forest Resource Values of Aboriginal Peoples: The Applicability of Non-Market Valuation Techniques*. Staff Paper 94-08, Department of Rural Economy, University of Alberta, Edmonton. 28 p.
- Alavalapati, J.R.R., M.K. Luckert and W.L. Adamowicz. 1994. *Short-run Dynamics of the Canadian Wood Pulp Industry: A Vector Autoregression Analysis*. Staff Paper 94-09, Department of Rural Economy, University of Alberta, Edmonton. 35 p.
- Apedaile, L.P., Freedman, H.I., S.G.M. Schilizzi and M. Solomonovich. 1994. *A Predator Prey Model for Shares of Wealth Between Industry and Agriculture*. Staff Paper 94-01, Department of Rural Economy, University of Alberta, Edmonton. 27 p.
- Armstrong, G., F. Novak and W. Adamowicz. 1994. *Environmental and Financial Sustainability of Forest Management Practices*. Project Report #5003, Forestry Canada. 89 p.
- Bouthillier, L., B. Laplante and M.K. Luckert. 1994. *Reflexion Economique sur le Rendement Soutenu, le Developpement Durable et L'amenagement des Ressources Forestieres*. Refereed paper distributed by Forestry Canada, Quebec Branch. 58 p.
- Cymbal, W. and M.M. Veeman. 1994. *Canadian Agriculture and GATT: An Economic Analysis of Article XI*. Project Report 94-03, Department of Rural Economy, University of Alberta, Edmonton. 106 p.
- Gill, D.S., A. Kisko and E.C. Murray. 1994. *Social Integration of Newcomers to a Rural Community: The Case of Vegreville, Alberta*. Staff Paper 94-05, Department of Rural Economy, University of Alberta, Edmonton. 28 p.
- Kisko, A., D.S. Gill and E.C. Murray. 1994. *Community Attachment in Vegreville, Alberta*. Staff Paper 94-02, Department of Rural Economy, University of Alberta, Edmonton. 26 p.
- Luckert, M.K. 1994. *Efficiency Implications of Silvicultural Expenditures from Separating Ownership and Management on Canadian Forest Lands*. Forest Economics and Policy Analysis Research Unit. Working Paper No. 208. University of British Columbia. 27 p.
- Luckert, M.K. and D. Haley. 1994. *The Allowable Cut Effect (ACE) as a Policy Instrument in Canadian Forestry*. Forest Economics and Policy Analysis Research Unit. Working Paper 196. University of British Columbia. 23 p. + Appendices.
- Manyeh, M.A., D.S. Gill, B. Matthews and E.C. Murray. 1994. *Factors Constraining Women Farmers' Access to Agricultural Extension Services in Sierra Leone*. Staff Paper 94-04, Department of Rural Economy, University of Alberta, Edmonton. 21 p.
- Morton, K., W.L. Adamowicz and P. Boxall. 1994. *Economic Effects of Environmental Change on Recreational Hunting in Northwestern Saskatchewan*. Project Report 94-02, Department of Rural Economy, University of Alberta, Edmonton. 72 p.

- Murray, E. and D. Dosman. 1994. *Gender Issues in Natural Resource-Based Industries in Canada: An Analysis and Conceptual Framework*. Staff Paper 94-11, Department of Rural Economy, University of Alberta, Edmonton. 18 p.
- Novak, F.S. and J.R. Unterschultz. 1994. *An Economic Analysis of the Relationships Between Alberta and United States Livestock Markets*. Project Report 94-01, Department of Rural Economy, University of Alberta, Edmonton. 40 p.
- Novak, F.S. and G.D. Schnitkey. 1994. *A Dynamic Analysis of Management Strategies for Alberta Hog Producers*. Project Report 94-04, Department of Rural Economy, University of Alberta, Edmonton. 18 p.
- Salkie, F.J., M.K. Luckert and W.E. Phillips. 1994. *An Economic Analysis of Landowner Propensity for Woodlot Management and Harvesting in Northwestern Saskatchewan*. Project No. CS 5001, Canada-Saskatchewan Partnership Agreement in Forestry. Canadian Forest Service. 32 p.
- Solomonovich, M., L.P. Apedaile, H.I. Freedman, S.G.M. Schilizzi and L. Belostotski. 1994. *Impacts on Recovery Rates and Terms of Trade on Strange Attractors and Predictability in Sustainable Agriculture*. Staff Paper 94-06, Department of Rural Economy, University of Alberta, Edmonton. 38 p.
- Veeman, M.. 1994. *NAFTA and GATT: Prospects for Canada's Red Meat Sectors in a New Trading Environment*. Staff Paper 94-10, Department of Rural Economy, University of Alberta, Edmonton. 22 p.
- Veeman, T.S. and A.A. Fantino. 1994. *The Economics of Agricultural Chemical Use in Prairie Agriculture: Productivity and Environmental Impacts*. Project Report 94-05, Department of Rural Economy, University of Alberta, Edmonton. 50 p.
- Watson, D. and M. Lerohl. 1994. *Reflecting Productivity Losses Due to Erosion in Physical and Financial Accounts for Agricultural Soils*. Staff Paper 94-03, Department of Rural Economy, University of Alberta, Edmonton. 17 p.

Research Projects Completed January 1 - December 31, 1994

- Adamowicz, W.L. and F.S. Novak. "Environmental and Financial Sustainability of Forest Management Practices." Funded by Forestry Canada.
- Adamowicz, W.L. and K. Morton. "Non Timber Values Associated with Recreational Hunting in N.W. Saskatchewan." Funded by Forestry Canada.
- Adamowicz, W.L., M.K. Luckert and 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 and M.K. Luckert. "Study on the Costs and Benefits of Environmental Improvement on Forest Lands." Funded by Forestry Canada.
- 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.
- Eales, J.S. "Marketing of Value-Added Agricultural and Food Products." Funded by Alberta Agricultural Research Institute.
- Gill, D.S. and 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. and F.M. Matose. "Local Peoples' Uses and Perceptions of Forest Resources: An Analysis of a State Property Regime in Zimbabwe. Funded by IDRC.

Luckert, M.K., W.E. Phillips and F. Salkie. "Economic Analysis of Factors Influencing the Forest Management and Harvesting Decisions of Private Woodlot Owners in N.W. Saskatchewan." Funded by Forestry Canada.

Novak, F.S. and L. Bauer. "A Dynamic Analysis of Risk Management Strategies for Alberta Hog Producers." Funded by Alberta Agricultural Research Institute.

Veeman, M.M. and C. Mataya. "The Impact of Currency Devaluation on Agricultural Trade: The Case of Malawi." Funded by The Rockefeller Foundation.

Veeman, M.M. "Canadian Agriculture and GATT: An Economic Analysis of Article XI." 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).

Research in Progress as of December 31, 1994

Adamowicz, W.L. and P.M. Boothe. "Environmental/Economics Study Group." Funded by Alberta Environment.

Adamowicz, W.L. and P. Boxall. "The Evaluation and Incorporation of Non-Timber Goods and Services in Integrated Resource Management Decisions." Funded by Forestry Canada.

Adamowicz, W.L. and P. Boxall. "The Measurement of Non-Timber Values: An Investigation of Travel Cost Methodologies." Funded by Forestry Canada.

Alavalapati, J., M.K. Luckert and W.L. Adamowicz. "A Vector Autoregression Approach to Modelling the Pulp and Paper Industry in Canada." Unfunded.

Apedaile, L.P. "New Tradeables, Rural Alliances, and Liberalizing Trade: A Prairie Rural Development Strategy." Funded by Association of Alberta Municipalities and Counties and Human Resources Development Canada.

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., S. Zhu and B. Calkins. "Structural Change in Agriculture and Transitions in Economic Governances in China, Taiwan and Canada." Unfunded.

Apedaile, L.P., R. Bollman, C. Barnard and B. Calkins. "Comparative Study of Canada/United States Structural Change in the Structure of Agriculture." Statistics Canada.

Apedaile, L.P., H.I. Freedman, S. Schilizzi and M. Solomonovich. "Dynamics and Persistence of Interacting Agricultural Systems: Incomes, Wealth and Environmental Degradation." NSERC and SSHRC.

Bauer, L. "A Comparison of Risk Between Continuous and Fallow Cropping Regimes." Funded by Alberta Agriculture, Farming for the Future.

Bauer, L. and D. Bushe. "Development of Farm Business Management Training Modules: Various Topics." Funded by University of Alberta, Alberta Agriculture and B.C. Ministry of Agriculture.

- Beckley, T. "Co-management and Controversy in Northwest Saskatchewan's Forest." Funded by Canadian Forest Service.
- Beckley, T.M. "Forest Sociology." Funded by Canadian Forest Service.
- Beckley, T.M. "Lower Liard Valley Forest Use Survey." Funded by Canadian Forest Service.
- Beckley, T. "Social, Cultural and Political Dimensions of Forest-Dependence in the Communities of the Lower Winnipeg Basin." Funded by the Rural Development Institute and Canadian Forest Service.
- Gill, D.S. "A Select International Bibliography of Agriculture Extension Education." Unfunded.
- Gill, D.S. and J. Gelfand. "An Assessment of Participatory Research Techniques for Rural Development in Colombia." Funded by IDRC.
- Gill, D.S. and G. Buchanan. "Economic Development Activities and Strategies: A Comparative Analysis of Northeastern Alberta Communities." Unfunded.
- Gill, D.S. and M. Deans. "Tradable Firms in Rural Communities: Employer and Employee Participation in Organizations and Social Networks." Funded by Human Resources Development Canada.
- Gill, D.S., A.M. Moreno and R. 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. and M.D. Faminow. "The Use of Nearly Optimal Linear Programming in Management Decision Making." Self-funded.
- Jeffrey, S.R. and T. Richards. "Hedonic Pricing of Dairy Bulls: An Alternative Index of Genetic Merit." Funded by AARI Matching Grants Program and Alta Genetics Inc.
- Lerohl, M.L. "Grain-Livestock Industry Research." Funded by Alberta Agriculture.
- Lerohl, M.L. "Short and Intermediate Term Effects on Alberta Beef Producers of Canada-U.S.-Mexico Freer Trade." Funded by Alberta Agricultural Research Institute.
- Lerohl, M.L. "The Impact of South American Integration on the North American Beef Market." Funded by AARI, Farming for the Future Project.
- Luckert, M.K. "Efficiency Implications of Separating Ownership from Management on Canadian Forest Lands." Unfunded.
- Luckert, M.K. and J. Alavalapati. "The Short Run Supply Behaviour of Timber Quota Holders in Alberta." Funded by Forestry Canada.
- Luckert, M.K. and D. Haley. "Problems Governments Face When Designing Forest Tenures." Unfunded.
- Luckert, M.K. and D. Haley. "The Role of Forest Tenures in Providing for Sustainable Forestry." Funded by Sustainable Development Research Institute, University of British Columbia.
- Luckert, M.K., M. Pattison and W. White. "Analysis of Compliance of Forest Tenure Holders with Regeneration Requirements." Funded by the Canadian Forest Service.

- Luckert, M.K., P. Kennedy and B. Laplante. "Economic Instruments for Municipal Solid Waste Management." Funded by Environment Canada.
- Luckert, M.K., T. Beckley, D. Hatton MacDonald, L. Just, E. Murray and W. Phillips. "Non-market Valuation Biases Due to Aboriginal Cultural Characteristics in Northern Saskatchewan." Funded by Canadian Forest Service.
- McGill, W.B., J.J. Feddes, S.R. Jeffrey, N.G. Juma, and J.J. Kennelly. "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. "An Economic Analysis of Alternative Whole Farm Stabilization Programs." Funded by AARI Matching Grants Program. Matching Funds from SSHRC Project re: NISA.
- Novak, F.S. "An Evaluation of Pricing and Delivery Strategies for Alberta Beef Producers." Funded by AARI, Farming for the Future Project.
- Novak, F.S. and S. Jeffrey. "Economic Analysis of NISA." Funded by SSHRC.
- Phillips, W.E. and 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 W. White. "Studies and Research in Forest Economics Associated With Renewable Resource Management." Funded by Forestry Canada.
- Phillips, W.E., et al. "Value of Trees (Alberta/Zimbabwe)." Funded by IDRC.
- Phillips, W.E. and W.L. Adamowicz. "Value of Wildlife in Alberta." Funded by Alberta Environmental Protection, Fish and Wildlife Services.
- Tyrchniewicz, E.W. "Forestry Sector's Interface with the Transport Sector." Funded by Forestry Canada.
- Tyrchniewicz, E.W. and M.L. Lerohl. "Grain Handling and Transportation Efficiency Study." Funded by Alberta Economic Development and Trade.
- Unterschultz, J.R. "Marketing of Value-Added Agricultural and Food Products." Funded by Alberta Agricultural Research Institute.
- Veeman, M.M. "Economic Impacts of Supply Management." Unfunded.
- Veeman, M.M. "Export Markets for Canadian Grain." Unfunded.
- 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.