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EDUCATION

<u>Date</u>	<u>Degree</u>	<u>Institution</u>
1973	B.S.	Pennsylvania State University (Agronomy)
1978	M.S.	Pennsylvania State University (Agricultural Economics)
1981	Ph.D.	University of Illinois, Urbana (Agricultural Economics)

AREAS OF PROFESSIONAL WORK

Crop and Livestock Production Economics, Farm Machinery Economics, Biomass Energy Economics, and Economic Impact Analysis

PROFESSIONAL EXPERIENCE

June 1988 to present	Extension Economist and Professor (2002-present), Associate Professor, (1991-2002), and Assistant Professor (1988-1991), Department of Applied Economics, University of Minnesota
July 2006 to June 2007	Visiting Scholar, Chief Economist's Office of Energy Policy and New Uses, U.S. Department of Agriculture, Washington, D.C. (Sabbatical Leave from the University of Minnesota)
1981-1988	Assistant Professor, Department of Agricultural Economics, Cornell University
1978-1981	Research Assistant, Department of Agricultural Economics, University of Illinois
1978, 1975-1976	Research Assistant, Department of Agricultural Economics and Rural Sociology, Pennsylvania State University
1977	Economist, Bahamas Agricultural Research, Training and Development Project, with Pennsylvania State University (USAID), North Andros Island, Bahamas

TEACHING RESPONSIBILITIES

Apec 4501 Financial Modeling, 2004 – 2015

PUBLICATIONS

Chapters & Published Papers (* = juried)

* Grev, A.M.; E.C. Glunk; M.R. Hathaway; W.F. Lazarus; and K.L. Martinson. 2014. "The effect of small square-bale feeder design on hay waste and economics during outdoor feeding of adult horses." Journal of Equine Veterinary Science 34:1269-1273.

- * Lazarus, W.F., W.L. Headlee, and R.S. Zalesny Jr. "Impacts of Supplyshed-Level Differences in Productivity and Land Costs on the Economics of Hybrid Poplar Production in Minnesota, USA," Bioenergy Research 8(2015):231-248.
- * Lazarus, W.F., D. Mulla, and D. Wall. "A spreadsheet planning tool for assisting a state agency with cost-effective watershed scale surface water nitrogen planning," Journal of Soil and Water Conservation 69(2014),2:45A-50A.
- * Delbridge, T. A., C. Fernholz, R. King, and W. Lazarus. "A Whole-Farm Profitability Analysis of Organic And Conventional Cropping Systems," Agricultural Systems 122(2013): 1-10.
- * Alonso, C., P. Davies, D. Polson, S. Dee, and W. Lazarus. 2013. "Financial implications of installing air filtration systems to prevent PRRSV infection in large sow herds," Preventive Veterinary Medicine 111(3-4).
- * Martinson, K., K. Cleary, J. Wilson, W. Lazarus, W. Thomas, and M. Hathaway. 2012. "Round-Bale Feeder Design Affects Hay Waste and Economics During Horse Feeding," Journal of Animal Science 90: 1047–1055.
- * Martinson, K., Cleary, K., Ross, K., Wilson, J., Lazarus, W., Thomas, W., and Hathaway, M. 2011. Round-bale feeder design affects hay waste and intake during horse feeding. *J. Anim. Sci.* Vol. 89, E-Suppl. 1; pg 319.
- * Cleary, K., K. Martinson, J. Wilson, W. Lazarus, W. Thomas, and M. Hathaway. 2011. "Round-Bale Feeder Design Affects Hay Waste and Economics During Horse Feeding." Journal of Equine Veterinary Science. 31: 292-293.
- * Fore, Seth R., Paul Porter, William Lazarus. "Net Energy Balance of Small-Scale On-Farm Biofuel Production: Canola- and Soybean-Based Biodiesel and Straight Vegetable Oil Biofuels," Biomass & Bioenergy (Volume 35, Issue 5, May 2011, Pages 2234-2244).
- * Lazarus, William F., Douglas G. Tiffany, Ronald S. Zalesny Jr., and Don E. Riemenschneider. "Economic Impacts of Short Rotation Woody Crops for Energy or Oriented Strand Board: A Minnesota Case Study," Journal of Forestry (April/May 2011:149-156).
- * Fore, Seth R., William Lazarus, Paul Porter, and Nicholas Jordan. "Economics of Small-Scale On-Farm Use of Canola and Soybean for Biodiesel and Straight Vegetable Oil Biofuels," Biomass & Bioenergy (Volume 35, Issue 1, January 2011, Pages 193-202).
- * Gallagher, P., W. Lazarus, H. Shapouri, R. Conway, F. Bachewe, and A. Fischer. "Cardiovascular Disease-Risk Benefits of Clean Fuel Technology and Policy: A Statistical Analysis," Energy Policy 38(2009):1210-1222.
- *Gallagher, P., W. Lazarus, H. Shapouri, R. Conway and J. Duffield. "Cancer-Risk Benefits of Clean Fuel Technology and Policy: A Statistical Analysis," Energy Policy 37(2009):5113-5124.
- Lazarus, W. "Swine Industry," in Encyclopedia of Rural America: The Land and the People, Second Edition, Volume 2. Gary Goreham, Editor, Grey House Publishing, Millerton, NY, 2008, pp. 949-952.
- Lazarus, W.F. "Farm-based Anaerobic Digesters as an Energy and Odor Control Technology: Background and Policy Issues," Agricultural Information Bulletin 843, Office of Energy Policy and New Uses, Office of the Chief Economist, United States Department of Agriculture, February 2008.
- Beddoes, J.C., K. S. Bracmort, R.T. Burns, and W.F. Lazarus. "An Analysis of Energy Production Costs from Anaerobic Digestion Systems on U.S. Livestock Production Facilities," Technical Note No. 1, USDA Natural Resources Conservation Service, October 2007.
- *Lazarus, W. and M. Rudstrom. "The Economics of Methane Digester Operation on Minnesota Dairy Farms" Review of Agricultural Economics 29(Summer 2007):349-364.

Lazarus, W. "Book Review of 'Win-Win? The Paradox of Value and Interests in Business Relationships,'" by Andrew Cox. Earlsgate Press, 2004," American Journal of Agricultural Economics, v. 89, no. 2, May 2007, pp. 351-353.

*Ujszaszy, B., T.L. Burgess-Champoux, M. Reicks, W. Lazarus, and L. Marquart. "It's Time for Whole Grain Products in School Meals." Journal of Child Nutrition & Management. 28, Issue 2 (Fall 2004), <http://www.asfsa.org/childnutrition/jcnm/04fall/>

*Lazarus, W.F., D.E. Platas, and G.W. Morse. "IMPLAN's Weakest Link: Production Functions or Regional Purchase Coefficients?" Journal of Regional Analysis and Policy 32(2002):33-48.

*Lazarus, W.F., D.E. Platas, and S. Guess-Murphy. "Evaluating the Economic Impacts of an Evolving Swine Industry: The Importance of Region Size." Review of Agricultural Economics 24(2002):458-473.

*Lazarus, W.F. and R.G. Koehler. "Economics of Applying Nutrient-Rich Manure at Low Rates." Review of Agricultural Economics 24(2002):141-159.

*Doye, D., R. Jolly, R. Hornbaker, T. Cross, R.P. King, W.F. Lazarus, and A. Yeboah. "Case Studies of Farmers' Use of Information Systems." Review of Agricultural Economics 22(2000):567-585.

*Doye, D., R. Jolly, R. Hornbaker, T. Cross, R.P. King, W.F. Lazarus, A. Yeboah, and E. Rister. "Farm Information Systems: Their Development and Use in Decision Making (A publication of the NC-191 regional committee on Farm Information Systems)." North Central Regional Research Publication 345, Iowa State University, Extension Distribution Center, Ames, IA, August 2000, 74 pages.

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*Jofre, E., D. Streeter and W.F. Lazarus. "Impact of Computer Information Systems on Dairy Farm Management Decisions." Agribusiness 6(1990):463-474.

*Lazarus, W.F., D. Streeter and E. Jofre. "Management Information Systems: Impact on Dairy Farm Profitability." North Central Journal of Agricultural Economics 12(1990):267-278.

*Lyman, B.E., R.A. Levins, M.A. Schmitt and W.F. Lazarus. "Commodity Programs and Sustainable Cash Grain Farming: A Minnesota Case Study." Journal of Soil and Water Conservation 45(1990):86-88.

*Lazarus, W.F., D. Rutz, R. Miller and D. Brown. "Costs of Existing and Recommended Manure Management Practices for Muscoid Fly Control on Dairy Farms." Journal of Economic Entomology 82(1989).

*Lazarus, W.F. and T.R. Smith. "Adoption of Computers and Consultant Services by New York Dairy Farmers." Journal of Dairy Science 71(1988):1667-1675.

*Lazarus, W.F. and R.E. Pitt. "Economic Feasibility of Diesel Fuel Substitutes From Oilseeds in New York State." Energy in Agriculture, 3(1984):211-221. Elsevier Science Publishers B.V., Amsterdam, the Netherlands.

*Lazarus, W.F. and B.L. Dixon. "Agricultural Pests as Common Property: Control of the Corn Rootworm." American Journal of Agricultural Economics 66(1984):456-465.

*Lazarus, W.F. and E.R. Swanson. "Insecticide Use and Crop Rotation Under Risk: Rootworm Control in Corn." American Journal of Agricultural Economics 65(1983):738-47.

*Lazarus, W.F. and J.T. Scott. "A Present Value Analysis of Returns to Irrigation in South Central Illinois." North Central Journal of Agricultural Economics 3(1981):63-70.

*Lazarus, W.F., L.D. Hoffman and E.J. Partenheimer. "Evaluation of Selected Cropping Systems on Pennsylvania Dairy Farms." Journal of Northeastern Agricultural Economics Council (1981):43-57.

In-House Publications

Externally Peer Reviewed Prior to Publication

Xiarchos, I.M. and W. Lazarus, "Factors Affecting the Adoption of Wind and Solar-Power Generating Systems on U.S. Farms: Experiences at the State Level", Office of Energy Policy and New Uses, U.S. Department of Agriculture. Published in July 2013. Online at: http://www.usda.gov/oce/reports/energy/07242013_W&S_web.pdf

Gustafson, C. and Lazarus, W. "Budgeting Methods for Comparing a Biomass Energy Crop to an Existing Crop." Published on 8/30/2010. Online at: http://www.extension.org/pages/Budgeting_Methods_for_Comparing_a_Biomass_Energy_Crop_to_an_Existing_Crop

Lazarus, W.F. "Economics of Anaerobic Digesters for Processing Animal Manure, eXtension fact sheet, last updated on 10/5/2010 and November 09, 2009. Online at: http://www.extension.org/pages/Economics_of_Anaerobic_Digesters_for_Processing_Animal_Manure

Koehler, R., W.F. Lazarus, and M. Spiehs. "The 'Other Fertilizer': The Economic Value of Swine Finishing Manure," M1234, University of Minnesota Extension, St. Paul, 2008.

Lazarus, W.F. and M. Rudstrom. "Profits from Manure Power? Economic Analysis of the Haubenschild Farms Anaerobic Digester." Part of the Haubenschild Manure Digester Study of Environmental Impacts and Economic Consequences of Alternative Dairy Systems a fact sheet series by the Minnesota Project Incorporated, the USDA Natural Resources Conservation Service, and the University of Minnesota, September 2004.

Lazarus, W. and R. Selley. "Suggested Procedures for Estimating Farm Machinery Costs," Staff Paper P02-16, Dept of Applied Economics, U of MN, 217 COB, St. Paul, December 2002, 30 pages.

Lazarus, W. and R. Selley. "Suggested Procedures for Estimating Farm Machinery Costs for Extension Audiences," Staff Paper P01-13, Dept of Applied Economics, U of MN, 217 COB, St. Paul, October 2001, 28 pages.

Lazarus, W.F., J. Conlin, K. Edberg, S. Carpenter, D. Johnson, and J. Linn. "Economic Topic IID, Industry Structure and Competitiveness, and Economic Topic IIE, Profitability and Economic Viability", in A Summary of the Literature Related to the Social, Environmental, Economic and Health Effects, Generic Environmental Impact Statement on Animal Agriculture, prepared by the University of Minnesota for the Minnesota Environmental Quality Board, July 1999, 250 pages.

Lazarus, B., M. Boehlje, and D. Dahl. "Structural Change in the Swine Industry." Minnesota Agricultural Economist No. 660, February 1990.

Lazarus, W.F., D. Streeter and E. Jofre. "Impact of Management Information Systems on Dairy Farm Profitability." Staff Paper P89-30, August 1989.

Lazarus, W.F. Cash Versus Accrual Accounting Information for Dairy Farm Management. Staff Paper 87-22, Department of Agricultural Economics, Cornell University, July 1987. (Paper presented at the annual meeting of American Agricultural Economics Association, East Lansing, Michigan.)

Casler, G. and W.F. Lazarus. "Economic Opportunities for Field Crops" in New York Agriculture 2000. Donald G. Butcher, Project Director, State of New York Executive Chamber, Albany, New York, 1984.

Internal Peer Review

Lazarus, B. "How Do Farmland Values Respond to Changes in Returns and Rents?" Minnesota Agricultural Economist, Winter 2000, pp. 1, 9-11. (No. 699) Also updated and published in July 2001 as "Farmland Value Response to Changes in Returns and Rents, 1983-2000," downloadable at: <http://apex.umn.edu/faculty/wlazarus/rent2000.pdf>.

Lazarus, B. "Economic Considerations in Swine Production Contracts," in Proceedings, Marketing, Production and Manure Contracts in Today's Pork Industry, seminar presented in Austin and Jackson, Minnesota, July 27-28, 1999, pp. 47-52.

Lazarus, W.F. "Using Surveys and Farm Records to Track Farm Land Rental Rates." Minnesota Agricultural Economist, Fall 1996, pp. 1, 7-11. (No. 686)

Lazarus, W.F. and Johnston, L.J. Sow Pools in a Swine Production System. St. Paul: University of Minnesota, Minnesota Extension Service, September 1995, 21 pages.

Lazarus, W.F. "The 1994 Minnesota Rural Real Estate Market: The Farm Cash Rental Market." Minnesota Agricultural Economist, Winter 1995, pp. 1-3. (No. 679)

Lazarus, W.F. "Introduction," "The Changing Livestock Industry," "The Changing Swine Industry," "Public Policies and Values Related to Structural Change in the Livestock Industry," "Popular Views and Academic Theories About the Economy," and "Energy Utilization and Structural Change in the Livestock Industry," in Structural Change in the Livestock Industry, (Notebook for extension educators), June 1995, 16 pages.

Lazarus, B. and R. Alderfer. "Economic Factors to Consider in Retained Ownership Decisions." Proceedings, Cow-Calf Days, Minnesota Extension Service, eight locations, February, 1993, pp. 17-23.

Alderfer, R. and B. Lazarus. "Management Tips and Economic Decision Rules for Beef Producers." Proceedings, Cow-Calf Days, Minnesota Extension Service, eight locations, February, 1993, pp. 24-29.

Lazarus, W. "An Economic Perspective on Manure Management." Proceedings, Livestock Waste Management Conference, Minnesota Extension Service, St. Paul, Minnesota, January 19-20, 1993, pp. 86-97.

Lazarus, B. and B. Koehler. "Large Swine Units -- What Are the Issues?" Minnesota Pork Journal, Vol. 2, No. 2, University of Minnesota Swine Center, St. Paul, March-April, 1992.

Lazarus, W. "The Controversy Over Swine Multiplier Units." Minnesota Agricultural Economist No. 667, Fall 1991.

Lazarus, W.; Dave Nordquist; and V. Eidman. "Economics of Some Swine Production Systems With Reference to Animal Welfare." Staff Paper P91-49, November 1991.

Lazarus, W.F. "Midwest Pork Producers' Business Characteristics, Performance and Technology." Economic Report ER90-2, Department of Agricultural and Applied Economics, University of Minnesota, May 1990.

Lazarus, W.F. "Economic Impacts of the Crop Management Program on Western New York Dairy Producers." A.E. Research 88-11, Department of Agricultural Economics, Cornell University, September 1988.

Lazarus, W.F. "Christmas Tree Economics: Net Present Value Analysis Using Lotus 1-2-3." A.E. Extension 87-18, Department of Agricultural Economics, Cornell University, July 1987.

No Formal Peer Review Prior to Publication

Articles:

Lazarus, W. "Tips for Trimming Machinery Costs." in Dairy Initiatives Newsletter Volume 11, Issue 2 (Summer 2002), University of Minnesota Extension Service, pp. 10-11.

Lazarus, W. "Economics of Modernization." in Dairy Initiatives Newsletter Volume 11, Issue 1 (Spring 2002), University of Minnesota Extension Service, pp. 6-7. Accompanied by companion paper "The Economics of Dairy Facility Modernization," March 2, 2002, <http://apec.umn.edu/faculty/wlazarus/diarticleexpanded.pdf>, 15 pages.

Lazarus, B. "Commentary: The Changing Swine Industry and Public Policy." Swine Health and Production, 3(1995): 3, pp. 121-5.

Bulletins:

Lazarus, W.F. and M. Darger. The Economic Impact of the Health Sector on the Economy of the First Care Medical Services Service Area, East Polk County, Minnesota, Research Report Prepared for the Office of Rural Health and Primary Care, Minnesota Department of Health. October 22, 2003, 30 pages.

Lazarus, W.F. and M. Darger. The Economic Impact of the Health Sector on the Economy of the Shetek Hospitals Service Area, Murray County, Minnesota, Research Report Prepared for the Office of Rural Health and Primary Care, Minnesota Department of Health. May 27, 2003, 30 pages.

Lazarus, W.F. and M. Darger. The Economic Impact of the Health Sector on the Economy of the Aitkin County/Riverwood Healthcare Center Service Area, Aitkin County, Minnesota, Research Report Prepared for the Office of Rural Health and Primary Care, Minnesota Department of Health. June, 2003, 30 pages.

Lazarus, W.F. and M. Darger. The Economic Impact Of The Health Sector On The Economy Of The Chippewa County-Montevideo Hospital Market Area, Chippewa County, Minnesota, Research Report Prepared for the Office of Rural Health and Primary Care, Minnesota Department of Health. May 2003, 28 pages.

Lazarus, W.F. and D. Nelson. The Economic Impact of the Health Sector on the Economy of Renville County, Minnesota, Research Report Prepared for the Office of Rural Health and Primary Care, Minnesota Department of Health. October 2002, 27 pages.

Lazarus, W.F., G.W. Morse, D. Platas, and S. Guess-Murphy. Economic and Local Government Impacts of the Minnesota Pork Industry, Final Research Report Prepared for the Minnesota Pork Producers Association, March 2000, 63 pages.

Lazarus, W.F. and B.L. Buhr. Minnesota Pork Industry Review, bulletin published by the Minnesota Pork Producers Association, June 1994, 66 pages.

Erickson, D.E. and W.F. Lazarus. Five-Year Progress Report 1973-77: The Test-Demonstration Farm Program in Wayne, Wabash, and White Counties, A.E. 4501, Coop. Ext. Service, University of Illinois at Urbana-Champaign, Nov. 1980.

Lazarus, W.F., L. D. Hoffman and E. J. Partenheimer. Economic Comparisons of Selected Cropping Systems on Pennsylvania Cash Crop and Dairy Farms with Highly Productive Land. Pennsylvania Agricultural Experiment Station Bulletin 828, University Park, February 1980.

Processed at University of Minnesota:

Grev, A., E. Glunk, M. Hathaway, W. Lazarus, and K. Martinson. 2014. The effect of small square-bale feeder design on hay waste, hay intake, and economics during outdoor feeding of adult horses. 2 pages. University of Minnesota Extension Factsheet. <http://www.extension.umn.edu/agriculture/horse/nutrition/effect-of-small-square-bale-feeder-design/index.html>

Lori Krider, Geoff Kramer, Brad Hansen, Joseph Magner, Linse Lahti, Brenda DeZiel, Lu Zhang, Joel Peterson, Bruce Wilson, Bill Lazarus and John Nieber. Cedar River Alternative Ditch Designs: The Assessment of a Self-Sustaining Ditch Design in Mower County, Minnesota, Minnesota Pollution Control Agency Final Report.

Lazarus, W.F. "Machinery Cost Estimates." University of Minnesota Extension Service, June 2014, 8 pages. Online at: <http://www.apec.umn.edu/faculty/wlazarus/documents/machdata.pdf>.

Hachfeld, Gary L.; Lazarus, William F.; Nordquist, Dale; and Loppnow, Rann. Cropland Rental Rates for Minnesota Counties. St. Paul, MN: University of Minnesota Extension, July 2014. Online at : <http://www.cffm.umn.edu/Publications/pubs/FarmMgtTopics/RentalRates.pdf>.

Tuck, B and W. Lazarus. Economic Impact of a Second Generation Biofuels Facility, University of Minnesota Center for Community Vitality, 10/2013, at <http://www1.extension.umn.edu/community/economic-impact-analysis/reports/docs/2013-Brainerd-Emergency-EIA.pdf>.

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Lazarus, W.F. Minnesota Crop Cost & Return Guide for 2011. University of Minnesota Extension Service, November 2010. Online at: <http://faculty.apec.umn.edu/wlazarus/documents/cropbud.pdf>.

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Lazarus, William F. and Douglas G. Tiffany, "Economic Impacts of Establishing Short Rotation Woody Crops to Support Energy Production in Minnesota," Staff Paper P09-2, 1/2009

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Bachewe, F., Lazarus, W., Goodrich, P., Drewitz, M. & Balk, B. Review of the Literature on The Economics of Central Anaerobic Digesters, Staff Paper P08-09. St. Paul, Minnesota: Department of Applied Economics, University of Minnesota, October 2008.

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Lazarus, W.F. and R. Selley. "Minnesota Farm Machinery Economic Cost Estimates for 2004." FO-6696, University of Minnesota Extension Service, October 2003, 11 pages.

Lazarus, W.F. "How Big is Minnesota's Food and Agricultural Industry?," Staff Paper P02-14, December 2002, 14 pages.

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Lazarus, W.F. "Minnesota Farm Machinery Economic Cost Estimates for 1998." FO-6696, Minnesota Extension Service, 1998, 10 pages. Also continued refinement of accompanying spreadsheet template, <http://apecon.agri.umn.edu/crop.html>.

Lazarus, W.F. "Farm Machinery Economic Costs for 1998: Minnesota Estimates With Expanded Tillage Data for the U.S. and Canada." Staff Paper P98-5, Dept of Applied Economics, U of MN, 217 COB, St. Paul, April 1998, 16 pages.

Lazarus, W. 1998. Sheep Industry Business Retention and Enhancement Strategies Program: Research Results, Strategies, and Suggested Recommendations, Dept of Applied Economics, U of MN, 217 COB, St. Paul, 44 pages.

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Lazarus, W.F. "Farm Machinery Economic Costs for 1997: Minnesota Estimates With Expanded Tillage Data for the U.S. and Canada." Staff Paper P97-7, May 1997, 15 pages, <http://agecon.lib.umn.edu/mn/p97-07.html>.

Nordquist, Dave and Bill Lazarus in cooperation with members of the State Farm Labor Coordinating Committee and E.J. Weness. "Farm Labor Laws and Regulations in Minnesota, 1997." FM303, Department of Applied Economics, University of Minnesota, December 1997, 16 pages.

Love, P and Lazarus, W. 1997. Stearns County Dairy Retention and Enhancement Program Research Report (and Summary Report), Minnesota Extension Service, Dept of Applied Economics, U of MN, 217 COB, St. Paul, 45 pages.

Koehler, B., W.F. Lazarus, and B.L. Buhr. Swine Networks in Minnesota: Resources for Decision Making. Staff Paper P96-6, April 1996, 32 pages. Also developed accompanying spreadsheet template, <http://plato.agricola.umn.edu/pignet/>

Morrison, Robert B. and William F. Lazarus. "The Economics of Production Contracting." The College of Veterinary Medicine Reporter, v.1, no.8, January-April 1996, pp. 7-8.

Lazarus, W.F. "Farm Machinery Economic Costs for 1996: Minnesota Estimates With Expanded Tillage Data for the U.S. and Canada." Staff Paper P96-15, October 1996, 16 pages.

Lazarus, W.F. "Minnesota Farm Machinery Economic Cost Estimates for 1996." AG-FO-6966, Minnesota Extension Service, June 1996, 6 pages.

Koehler, B., Lazarus, B. and Buhr, B. "Networking Strategies - What's Happening?" in 1996 University of Minnesota Swine Day Proceedings, St. Paul: University of Minnesota, Minnesota Extension Service, December 1995, p. 1.

Morrison, R.B. and Lazarus, W.F. "Economics of Production Contracting," in 1996 University of Minnesota Swine Day Proceedings, St. Paul: University of Minnesota, Minnesota Extension Service, December 1995, pp. 2-6.

Swine Focus Team, Lazarus, B. and Buhr, B., coordinators. "Appendix: Publications Available on Networking and Segregated Early Weaning in Swine Production." in 1996 University of Minnesota Swine Day Proceedings, St. Paul: University of Minnesota, Minnesota Extension Service, December 1995, 28 pages.

Morse, George, Inhyuck Ha, Bernard J. Colin, Brian Buhr and William Lazarus. "Research Report - Becker/Otter Tail Dairy Retention and Enhancement Program," April 1995. St. Paul: University of Minnesota, Minnesota Extension Service, 1995, 50 pages.

Lazarus, W.F. "First Looks at the New Agricultural Census for Minnesota - Livestock Industries More Concentrated." Minnesota Agricultural Economist, No. 678, Fall 1994, 2 pages.

Lazarus, W.F. "Minnesota's Farm Cash Rental Market: (year) with estimates for (year)." FO-6323, January 1994 and 1995.

Lazarus, B., A. Brudelie, J. Christensen, E. Fuller, V. Richardson, D. Talley, E. Weness, and L. Westman. "Minnesota Farm Custom Rate Survey For (year)." AG-FS-3700, 1993-4.

Thomas, K.H., M. Smith and W.F. Lazarus. "Minnesota's Farm Cash Rental Market: 1992; with estimates for 1993." FM-665, April 1993.

Koehler, B. and B. Lazarus. "Minnesota Swine Industry Unit Size and Industry Structure Issues." and Lazarus, B.; J. Shurson; J. Hawton; and L. Johnston. "Surviving Low Hog Prices." in 1992 Swine Correspondence Course, Minnesota Extension Service.

Lazarus, W.F., E. Fuller and Dave Nordquist. "Minnesota Farm Custom Rate Survey For (year)." AG-FS-3700, 1989-92.

Fuller, E., W.F. Lazarus and Dave Nordquist. "Minnesota Farm Machinery Economic Cost Estimates for (year)." AG-FO-2308. 1989-92.

Fuller, E., W.F. Lazarus and Dave Nordquist. "What to Grow in (year)." Series, FS-AG-ECON-22 to FS-AG-ECON-30. 1989-92.

Lazarus, W. "Status of the Minnesota Pork Industry." Minnesota Pork Journal, Vol. 1, No. 1, University of Minnesota Swine Center, St. Paul, February, 1991.

Lazarus, W. "Are You Keeping Up With Industry Improvements in Productivity?" 1991 Minnesota Swine Research Report, Minnesota Extension Service, St. Paul, January, 1991.

Lazarus, W.F. "Productivity Variation Over Time in Minnesota Farrow-to-Finish Swine Operations." Staff Paper P90-60, October 1990.

Lazarus, W.F. "Comments on Structural and Productivity Trends in the Swine Industry and Minnesota's Competitive Position." Staff Paper P90-59, October 1990.

Lazarus, W.F., ed. "Selected Farm Management/Marketing Materials for Minnesota County Extension Offices." Farm Management Series 10, June 1990.

Lazarus, W.F. "Midwest Pork Producers' Characteristics and Planned Use of Somatotropin." Staff Paper P90-35, May 1990.

Legg, T., W. Lazarus, R. Levins, and M. Schmitt. "Reducing Nitrogen Applications to Manured Corn: An Opportunity to Save Money and Protect the Environment." Staff Paper P90-28, March 1990.

Fuller, E., W.F. Lazarus and Dave Nordquist. "What to Grow in 1990." Series, FS-AG-ECON-22 to FS-AG-ECON-30, revised 1990.

Lazarus, W.F., E. Fuller and Dave Nordquist. "Minnesota Farm Custom Rate Survey For 1990." AG-FS-3700, revised 1990.

Fuller, E., W.F. Lazarus and Dave Nordquist. "Minnesota Farm Machinery Economic Cost Estimates for 1990." AG-FO-2308, Revised 1990.

Lazarus, B. and R. Epley. "Achieving Competitiveness in the Swine Industry." Lesson 2 for Swine Correspondence Course, December 1989.

Burk, B. and W.F. Lazarus. "U.S. Hog and Pork Imports in Perspective." in Swine Update, Minnesota Extension Service, July 1989.

Fuller, E., W.F. Lazarus and Dave Nordquist. "What to Grow in 1989." Series, FS-AG-ECON-22 to FS-AG-ECON-30, revised 1989.

Lazarus, W.F., E. Fuller and Dave Nordquist. "Minnesota Farm Custom Rate Survey For 1989." AG-FS-3700, 1989.

Fuller, E., W.F. Lazarus and Dave Nordquist. "Minnesota Farm Machinery Economic Cost Estimates for 1989." AG-FO-2308, Revised 1989.

Fuller, E. and W.F. Lazarus. "Controlling Drought Related Economic Damage: Options for a Dairy Farm, August 1988." in Management Responses to the Drought, AG-MI-3585, 1988

Lazarus, W.F., B.J. Conlin and J.G. Linn. "Profit-Enhancing Strategies After the Drought." in 1988-89 Minnesota Dairy Report, AG-BU-2235, 1988.

Lazarus, W.F. and B. Larson. "Which Beef Housing System For You?" handout and presentation at 1988 Beef Feeders Days, December 6-9, 1988, published in 1989 Minnesota Cattle Feeders Report.

Lazarus, W.F. USDA Disaster Assistance Program, Sept. 1988. (mimeo)

Lazarus, W.F., E. Fuller and J. Conlin. Economic Considerations for Managing Your Dairy Herd When Forage Supplies Are Short, July 1988. (mimeo)

Twenty-eight staff papers on dairy farm business analysis, crop production economics, and computer decision aids published at Cornell University are not itemized here.

Popular Press Articles:

Levins, R.A. and W.F. Lazarus. "A Milk Marketing Board for Minnesota?" University of Minnesota Extension Service news release, March 5, 2002. Published in Dairy Star, March 9, 2002, p.4; Agweek, v.17, no.31, March 11, 2002, p. 3; and Minnesota Agriculture, March 19, 2002, p.3.

Lazarus, W. "For Small Farms: Household Income Safety Net Better Than Commodity Programs?" and "Safety Net Programs Hard to Implement," University of Minnesota Extension Service news releases, August 3, 2001, on the Internet at <http://www.extension.umn.edu/>, also published in The Land, August 17, 2001; Agweek, September 3, 2001; and Fruit Growers News, October 2001.

Murrell, T.S., William F. Lazarus and Larry G. Bundy. "Evaluating the Profitability of Starter Fertilizer for Various Nitrogen and Propane Costs: A Wisconsin Corn Grain Example." News and Views, a regional newsletter by the Potash and Phosphate Institute, 655 Engineering Drive, Suite 110, Norcross, GA, 30092-2837, March 2001.

Koehler, Bob, Bill Lazarus and Brian Buhr. "Producer Surveys Provide Insights on Production Networks." Feedstuffs, June 3, 1996 (reprint of first section of staff paper P96-6).

Morrison, Robert B. and William F. Lazarus. "The Economics of Production Contracting." The College of Veterinary Medicine Reporter, v.1, no.8, January-April 1996.

Spreadsheets:

Robot.xlsm, at <http://faculty.apec.umn.edu/wlazarus/documents/robot.xlsm>

Machdata.xlsm, at: <http://faculty.apec.umn.edu/wlazarus/interests-farmmachinery.html>

Cropbud.xlsm, at: <http://faculty.apec.umn.edu/wlazarus/interests-croplivestock.html>

Air_Quality_Econ.xlsm, at: <http://faculty.apec.umn.edu/wlazarus/interests-water.html>

NBMP.xlsm, at: <http://faculty.apec.umn.edu/wlazarus/interests-water.html>

CONFERENCE PAPERS/PROFESSIONAL MEETING PRESENTATIONS/POSTERS (*=SELECTED)

Mulla, D.J., W. Lazarus, D. Wall. "A Nonpoint Source Nitrogen Reduction Plan for Minnesota Surface Waters," American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, November 2-5, 2014, Long Beach, CA.

Gregg A. Johnson, G.A., J.D. Gamble, D.J. Smith, C.C. Sheaffer, D.A. Current, W. Lazarus, D.L. Wyse and D.S. Zamora. "Production and Economics of Perennial Woody and Herbaceous Biomass Crops in Alley-Cropping Systems,"

American Society of Agronomy/Crop Science Society of America/Soil Science Society of America International Annual Meeting, November 2-5, 2014, Long Beach, CA.

W.F. Lazarus, "Minnesota Watershed Nitrogen Reduction Planning Tool," presented at the National Farm Business Management Conference, Overland Park, KS, 6/9-13/13.

W.F. Lazarus, "Minnesota Watershed Nitrogen Reduction Planning Tool," presented at the "From Waste to Worth: Spreading Science and Solutions" conference, Denver, CO, 4/1-5/13.

W.F. Lazarus, "Interdisciplinary Research to Mitigate Agriculture's Impact on Water Quality," Invited seminar to faculty of the Department of Agricultural Economics, King Saud University, Riyadh, Saudi Arabia, October 8, 2012.

* Jacobson, L. D., D. R. Schmidt, W. F. Lazarus, R. Koehler. "Reducing the Environmental Footprint of Pig Finishing Barns, ASABE Meeting Presentation, Paper Number: 1110589, 2011 ASABE Annual International Meeting, Gault House, Louisville, Kentucky, August 7 – 10, 2011.

* Martinson, K., J. Wilson, K. Cleary, W. Lazarus, W. Thomas, and M. Hathaway. 2011. "Round-Bale Feeder Design Affects Hay Waste and Economics During Horse Feeding." In Proceedings: 72nd Minnesota Nutrition Conference. Pg. 66. Owatonna, MN.

Martinson, K., J. Wilson, K. Cleary, W. Lazarus, W. Thomas, and M. Hathaway. 2011. "Round-Bale Feeder Design Affects Hay Waste and Economics During Horse Feeding." In Proceedings: 2011 American Forage and Grassland Council Annual Conference [CD-ROM Computer File]. French Lick, IN.

*Jose A. Hernandez, Leslie Everett, and William Lazarus. Maximizing the Economic Benefits of Manure to Reduce Nutrient Loading, Paper 384-4. ASA/ CSSA/SSSA Annual International Meeting, San Antonio, TX, Oct. 16-19, 2011.

*Delbridge, T.A.; C. Fernholz; W. Lazarus; R.P. King. Whole-Farm Profitability Analysis of Organic and Conventional Cropping Systems, Selected Paper 13376, American Agricultural Economics Association Annual Meeting, Pittsburgh, PA, July 26, 2011.

*Martinson, K., K. Cleary, K. Ross, J. Wilson, W. Lazarus, W. Thomas and M. Hathaway. "Round-Bale Feeder Design Affects Hay Waste and Economics During Horse Feeding," accepted for presentation at the American Society of Animal Science, summer 2011, New Orleans, LA.

*Cleary, K., K. Martinson, J. Wilson, W. Lazarus, W. Thomas and M. Hathaway. "Round-Bale Feeder Design Affects Hay Waste and Economics During Horse Feeding," accepted for presentation in the Production and Management section of the 2011 Meeting of the Equine Science Society, 5/31-6/3/2011, Murfreesboro, TN.

*Lazarus, W.F. "Comparison of Switchgrass, Short-Rotation Woody Crops, Corn Stover, and Corn Cob Budgets for Minnesota," presented at AAEA organized symposium, "Production Costs for Energy Crops and Crop Residues," which I also organized, Denver, CO, July 27, 2010.

Morse, George, William Lazarus, and Elton Mykerezi. "State Specialists' Views of Minnesota's Evolving Extension System, Poster 10417," AAEA annual meeting, Denver, CO, July 27, 2010.

*Hernandez, J.A., W. Lazarus, L. Everett. "Maximizing the Economic Benefits of Manure to Reduce Nutrient Loading." Poster, 2009. In 2010 Agronomy Abstracts. American Society of Agronomy. Madison, WI.

Lazarus, W.F. "Anaerobic Digester Technology," presented at "The Role of Extension in Energy" conference, Little Rock, Arkansas, June 30-July 1, 2009.

*Gallagher, P., W. Lazarus, H. Shapouri, R. Conway and J. Duffield. "Some Health Benefits of U.S. Clean Air Policy: A Statistical Analysis," Paper Presented at the International Energy Economics Association Annual Meeting, Istanbul, Turkey, June 20, 2008.

*Bracmort, K., R. Burns, J. Beddoes, and W. Lazarus. "An Analysis of Anaerobic Digester System Costs on U.S. Livestock Production Systems, Paper 084643," presented at the 2008 American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting, Rhode Island Convention Center, Providence, Rhode Island, June 29-July 2, 2008.

Lazarus, W. "Economics of Agricultural Methane Digesters as a Potential Energy Source," Presented to the USDA Office of Energy Policy and New Uses, December 6, 2006. (Attended by representatives of USDA-CSREES, USDA-Rural Development, USDA-ARS, USDA-NRCS, the USDA Office of Climate Change, the Department of Energy, and the EPA.

Goodrich, P. and W. Lazarus, "On-Site Learning From Community Digesters In Europe," Biocycle Conference, Minneapolis, MN, October 30-November 1, 2006.

*Lazarus, W. "Energy From Pre-collected, Pre-processed Biomass (aka Livestock Manure)" presented at organized symposium "Harvesting the Wind and Other On-Farm Renewable Energy Sources – Profitability, Policies and Pitfalls," 2006 American Agricultural Economics Association Annual Meeting, Long Beach, CA, July 25, 2006.

Lazarus, B. "Pricing Forages Based on Production and Harvesting Costs." in Proceedings of the First Annual I-29 Dairy Conference, Sioux Falls, South Dakota, January 31, 2006.

*Lazarus, W.F. and M. Rudstrom. "Are Anaerobic Digesters a Cost-Effective Odor Control Technology for Livestock Farms?" Poster presented at "Minnesota's Renewable Energy Research: Status & Opportunities" Conference, sponsored by the Minnesota Environmental Initiative, Brooklyn Center, Minnesota, November 14, 2003.

*Lazarus, W.F. and M. Rudstrom. "Are Anaerobic Digesters a Cost-Effective Odor Control Technology for Livestock Farms?" Poster presented at the American Agricultural Economics Association annual conference, Montreal, Canada, July 27-30, 2003.

*Lazarus, W.F. and M. Rudstrom. "Financial Feasibility of Dairy Digester Systems Under Alternate Policy Scenarios, Valuations of Benefits, and Production Efficiencies: A Minnesota Case Study." Presented at: Anaerobic Digester Technology Applications in Animal Agriculture: A National Summit, June 2-4, 2003, Raleigh, North Carolina, <http://www.mnproject.org/pdf/raleigh4.pdf>. Summary also published as "Study Analyzes Financial Feasibility of Anaerobic Digester," in *BioCycle Journal of Composting and Organics Recycling*, by JG Press, www.biocycle.net, vol. 44, no. 9, September 2003, pp. 8-10.

*Lazarus, W.F., K.A. Janni and J.K. Reneau. 2003. "Economics of Successful Stall Barn Modernization." Presented at the Fifth International Dairy Housing Conference on January 29-31, 2003 in Fort Worth, TX. IN: Proc. Fifth Int. Dairy Housing Conf., ASAE, St. Joseph, MI. pp. 117-124.

Platas, D., G. Morse, and W. Lazarus. "Regional Purchase Coefficients for Swine Operations: Where Do Pigs Get What They Want?" Presented at the Mid-Continent Regional Science Association, Duluth, Minnesota, June 1, 2001, 13 pages.

Meyer, Steve R. and Bill Lazarus. "How Can We Price Early-Weaned Pigs?" paper presented at the World Pork Expo, Indianapolis, IN, June 5, 1997, 24 pages.

*Lazarus, W.F., D. Streeter and E. Jofre. "Impact of Management Information Systems on Dairy Farm Profitability." Selected paper presented at the 1989 annual meeting of the American Agricultural Economics Association, August 1989. Abstract in American Journal of Agricultural Economics 71(1989):1352.

*Lazarus, W.F. "Cash Versus Accrual Accounting Information for Dairy Farm Management". Selected paper presented at the 1987 annual meeting of the American Agricultural Economics Association, August 1987. Abstract published in American Journal of Agricultural Economics, December 1987.

Lazarus, W.F. "Extension Programs that Successfully Integrate the Subject Matter of Marketing, Risk and Financial Management with Adult Educational Principles: Managing the Dairy Farm Business During the Cost-Price Squeeze." Paper presented at the National Extension Workshop on Marketing, Risk and Financial Management, Minneapolis, Minnesota, April 2-4, 1984. Abstract published in Proceedings issue, pp. 29-32.

*Lazarus, W.F. and S. Trerise. "Crop Budget and Machinery Cost Calculator for Electronic Spreadsheets." Contributed Software for the Conference on Microcomputers in Farm Management Extension, at Purdue University, West Lafayette, Indiana, August 3-4, 1983. Abstract published in Proceedings issue, pp. 194-196.

*Lazarus, W.F. and B.L. Dixon. "Private Versus Social Optima in Agricultural Pest Management: An Application to Corn Rootworms in the Midwestern United States." Paper presented at the Third Economics and Control Conference of the Society for Economic Dynamics and Control, at Lyngby, Denmark, June 22-24, 1981.

Baker, C., D. Dunn and W.F. Lazarus. "Risks in Federal Land Bank Lending." Paper presented at the Second International Conference on Research Issues in Rural Finance, Calgary, Alberta, Canada, August 20-September 1, 1979.

OTHER PRESENTATIONS

Lazarus, W. "Minnesota Watershed Nitrogen Reduction Planning Tool" Invited seminar to the University of Minnesota Water Resources Center, 2/7/14.

Lazarus, W. and J. Hernandez. "Can We Reduce Manure Nutrient Loading by Helping Producers to Calculate its Economic Value?" Invited webinar for the State Level Nutrient Reduction Strategies web series, U.S. Environmental Protection Agency Region 5, 2/19/14.

GRANTS AND CONTRACTS

P.I. and my role	Project Title	Funder	Year Funded
Megan Lennon (MN Board of Water & Soil Resources)	Crop and Soil Health Initiatives in Southeastern Minnesota Cover (\$253,000)	Legislative-Citizen Commission on MN Resources	2014
Lawrence A. Baker, et al. (co-investigator)	Waste Not: Closing the Loop on Organics Wastes (\$422,972)	MNDrive Food Ventures	2014
Lazarus, W. & Mulla, D. (principle invest.)	Phosphorus addition to the NBMP spreadsheet (\$67,002)	MN Pollution Control Agency	2014
Jordan, et al. (co-investigator)	Landlabs: Developing Sustainable Bioenergy Systems by Integrating Technology R&D with Policy, Economic, and Ecological Analysis and Innovation (\$375,000)	Institute for Renewable Energy & the Environment	2013
Endres, et al. (co-investigator)	Assessing welfare of dairy calves when using automated calf feeders in the upper Midwest (\$500,000)	USDA-NIFA	2012
Sheehan (co-investigator)	Expansion of Al-Corn Dry Grind Ethanol Plant to Second Generation Biofuel Production (\$40,000)	Nextgen	2012
Kenneth J. Valentas, et.al. (co-investigator)	Integrated Thermochemical Biorefinery for Production of Biofuels, Phosphorous, Hydrochar and Agricultural Fertilizers from Animal Manures and Municipal Waste (\$500,000)	IREE	2012

Johnson, G. (co-investigator)	Prod. and Econ. of Perennial-based woody and herbaceous crops under alley-cropping systems (\$558,958)	USDA-Sun Grant Initiative	2011
Mulla, D. (co-investigator)	Nitrogen Budget Assessment (\$43,550)	MN Pollution Control Agency	2011
Lazarus, W. (P.I.)	Adoption of Renewable Energy on U.S. Farms (\$10,000)	USDA Office of Energy Policy and New Uses	2011
Wyse, D. (co-investigator)	Developing Intermediate Wheatgrass for Sustainable Co-production of Fuel and Food (\$695,000)	U of MN Institute of Renewable Energy & the Environment	2011
Janni, K. (co-investigator)	Mitigation Monitoring and Microbial Assessment of Gas-Phase Biofilters and Extension Outreach (\$381,274)	USDA National Institute of Food and Agriculture	2011
Moore, K. (Iowa State U., U of Minnesota, and seven other universities, co-investigator)	CenUSA Agro-ecosystem Approach to Sustainable Biofuels Production via the Pyrolysis-Biochar Platform (\$25 million)	USDA National Institute of Food and Agriculture	2011
W. Lazarus	Economics of Short Rotation Woody Crops Where Soil Types and Other Locational Factors Vary (joint venture, \$34,972)	USDA Forest Service	2010
Baidoo, Sam (U of M S. Research & Outreach Ctr)	Minimizing Hunger in Group-Housed Gestating Sows Through Modification of The Feeding Regime (\$700,000)	USDA NIFA	2010
W. Lazarus	Pricing and contract structures for a RIM Clean Energy Program (\$10,000 supplement to overall project by Steve Taff for crop enterprise budgets)	State of Minnesota	2008
W. Lazarus (P.I.)	Health and Environmental Benefits of Bioenergy Crop Production, Cooperative Agreement (\$55,502)	USDA Office of Energy Policy and New Uses	2007
W. Lazarus and D. Tiffany (P.I.)	Wood Processing Plant Economic Impact Analysis, Supplementary Funding (\$15,000)	USDA Forest Service	2007
W. Lazarus (P.I.)	Promotion of Cost-Effective Production and Efficient Utilization of Energy in U.S. Agriculture, Cooperative Agreement (\$78,593)	USDA Office of Energy Policy and New Uses	2006
P. Goodrich (co-investigator)	Developing and Evaluating an On-farm Hydrogen Fueling Station	IREE, U of MN	2005
P. Goodrich (co-investigator)	Manure Methane Digester Compatible Wastes and Electrical Generation (\$100,000)	MN Leg. Comm. on Natural Resources	2005
W. Lazarus, R. Koehler and M. Spiehs (P.I.)	Liquid Swine Finishing Manure Land Application Economics and Impacts (\$10,000)	MN Pork Board	2005
W. Lazarus (P.I.)	Dairy Farm Digesters (Economic Analysis Subcontract to MN Project Inc., \$23,000)	MN Leg. Comm. on Natural Resources	2005
L. Marquart, W. Lazarus, Reicks, M. and Z. Vickers	Increasing Whole Grain Intake by School Children (\$189,874)	National Institutes of Health	2005
W. Lazarus and Phill	Assessing Impediments to Success in Sustainable	U of M Center	2004

Arnold (MN Sustainable Farming Ass'n)	Agriculture in Central MN Region (\$10,000)	for Urban and Regional Affairs	
W. Lazarus and D. Tiffany (P.I.)	Wood Processing Plant Economic Impact Analysis (\$39,556)	USDA Forest Service	2004
Gengenbach, B.	Integrating Minnesota's Food Systems (\$45,000)	U of M COAFES	2002
W. Lazarus (P.I.)	Minnesota Rural Healthworks – Pilot Study (\$5,000) and Followup Study (\$21,000)	MN Department of Health	2002
M. Rudstrom, W. Lazarus	Dairy EQIP Project, for \$26,567	The Minnesota Project, Inc.	2001
B. Durgan (U of M leader), W. Lazarus (topic leader), G. Morse, R. Levins, C. Phillips and J. Schimmel	Generic EIS on Animal Agriculture, Technical Work Papers for Scoping Document Topics D, E, & F. (Economics), for 59,000	Minnesota Environmental Quality Board	2000
Philip Goodrich, Gerald Shurson, et al.	Best Technologies for Reducing Odor Emissions from Curtain-Sided, Deep Pit Swine Finishing Buildings, for \$90,000	MN Pork Producers Assn	1999
B. Durgan (U of M leader), W. Lazarus (Section D/E leader), et al.	Generic Environmental Impact Statement on Animal Agriculture, Summary of the Literature Related to the Social, Environmental, Economic and Health Effects, Section D, "Industry Structure and Competitiveness" and Section I, "Profitability and Economic Structure," for \$41,503	Minnesota Environmental Quality Board	1999
W. Lazarus and George Morse	Economic and Local Government Impacts of the Minnesota Swine Industry, \$32,000	MN Pork Producers Assn	1998
Larry Jacobson, David Schmidt, W. Lazarus	Economic Evaluation of Manure Storage Covers, (with Biosystems and Agricultural Engineering), for \$14,500	MN Pork Producers Assn	1998
W. Lazarus (MN contact)	Impacts of Structural Change in the Dairy Industry, regional project NE-177	CREES	1996
Brian Buhr and W. Lazarus	Developing Networking Strategies for Minnesota Swine Producers, for \$15,000	MN Pork Producers Assn	1995
Brian Buhr, W. Lazarus, et al.	Understanding and Responding to Structural Change in the Livestock Industry, for \$12,000	U of MN Extension	1995
W. Lazarus and Brent Woodward	Economic Analysis of Beef Cattle Operations Using SPA Guidelines, for \$23,300	U of MN Extension	1995
Larry Jacobson, W. Lazarus and Lee Johnston	Sow Pools - A Cooperative Pork Production System, for \$7,300	MN Pork Producers Assn	1994
W. Lazarus	Changing Structure of the U.S. Agribusiness Sector, for \$7,034	MSI Insurance	1994
Vern Eidman, Sally Noll, and W. Lazarus	Larson farm case study, for \$3,000	Larson farms	1993
W. Lazarus	Farm-Level and Industry-Level Adjustments in the Minnesota Swine Industry	Agricultural Experiment Station	1992
Robert Morrison et al.	Use of the Swine Production Information System PigCHAMP to Determine the Contribution of Facility Utilization to Herd Productivity. project	Agricultural Experiment Station	1992
W. Lazarus	Profitable Adjustment Opportunities for Minnesota Pork Production	Agricultural Experiment Station	1989

W. Lazarus	Integrated Farm Management Information Systems (grant-in-aid)	Graduate school	1988
W. Lazarus	Improving Tactical Farm Management	Hatch funds	1982
R. Milligan, et al.	Northern New York Dairy Management Project	Northern NY Ag Dev Prog	1985
W. Lazarus	Economics of Field Crop and Dairy Pest Management in NY	Hatch funds	1982
W. Lazarus	Production and Marketing of Hay as a Cash Crop in the Northeast	Northern NY Ag Dev Program	1984
W. Lazarus, et al.	Use Value Assessment. State funding, 1982-83 (co-principal investigator)	State of New York	1982

GRADUATE STUDENT COMMITTEES (*=AT MINNESOTA):

<i>Student</i>	<i>Degree</i>	<i>Department</i>	<i>Assignment</i>	<i>Completed</i>
*Andrew Smale	MS	ApEc	Adviser	
*Tom Nickerson	PhD	BBE	Member	
*Timothy Bruce	MS	BBE	Member	2013
*Carmen Alonso	MS	Vet Med	Member	2012
*Jin-Young Moon	PhD	ApEc	Member	2011
*Seth Fore	MS	Agronomy	Co-Adviser	2009
*Bernadett Ujszaszy	MS	ApEcon	Adviser	2004
*Dan Drewitz	MS	ApEcon	Adviser	2003
*Nisha Lima	MS	ApEcon	Member	2002
*Diego Platas	PhD	ApEcon	Co-Adviser	2000
*David Resch	MEd	Work, Community and Family Education	Member	1997
*Bill Chambers	MS	ApEcon	Adviser	1996
*Dary Talley	MS	ApEcon	Member	1996
*Jeff Gillespie	Ph.D	ApEcon	Member	1993
*Edmund Tavernier	PhD	ApEcon	Adviser	1992
*Joseph Matlhare	MS	ApEcon	Member	1992
*Bruce Lyman	MS	ApEcon	Member	1989
Eduardo Jofre	MS	ApEcon	Adviser	1988
Walter Bowen	Ph.D	Agronomy	Member	1986
Dale Johnson	MS	AgEcon	Member	1986
Donna Tatro	MS	Natural Resources	Member	1986
Gabriel Comeau	M Prof St	AgEcon	Member	1985
Kim Foglia	M Prof St	AgEcon	Member	1985
Mauro Mariani	MS	AgEcon	Member	1984

SERVICE

DEPARTMENTAL COMMITTEES AND SERVICE (*=AT MINNESOTA):

2014	*Extension promotion committee
2013	*Communications Committee
2007-12	* Outreach Committee, Seminar Committee
2003	*Publications/Web Policy Committee
1989, 1992-2003	* Outreach (Extension) Committee
1998	*Search Committee, Assistant Professor, Farm Management Extension/Research
1992-4,	* Publications Committee
1996-2001	

1990, 1994-95 *Seminar Committee
 1988 *Awards Committee
 1985 Search Committee, Assistant Professor of Agricultural Economics with emphasis on information systems
 1984 Seminar Committee
 1983, 1986 Computing Committee

COLLEGE SERVICE (*=AT MINNESOTA):

2007 CFANS Bio-Economy Task Force

UNIVERSITY-WIDE AND COMMUNITY SERVICE (*=AT MINNESOTA):

2000-present *North Central Farm Management Extension Committee, Minnesota representative (co-chair 2013-2014, chair 2014-2015).
 2000-01 *Department of Animal Science and Center Heads task force to develop a business plan for U of MN swine facilities (considering degree of self-funding and pricing arrangements among Research and Outreach Centers).
 2001 *Reviewed proposal for the USDA-CREES Small Business Innovation Research Program.
 1998-99 *MN EQB Animal Agriculture Generic Environmental Impact Statement Technical Resource Group
 1998-2000 *Alternative Swine Production Systems Task Force (MISA)
 1998 *COAFES St. Paul Campus Waste Management Committee
 1998 *USDA-CREES review panel for Fund for Rural America proposals on livestock waste management
 1997-98 *County Extension Day Planning Committee
 1997-98 *Search Committee - CVM Swine Production Medicine position
 1997-98 *Passing on the Farm Center Board of Directors
 1994-2001 *State of Minnesota Farm Labor Coordinating Committee
 1990 *Search Committee - Assistant Professor in Animal Science with emphasis on swine
 1982-1988 Interdepartmental Field Crops Program Committee
 1984-1988 Dairy/Field Crops Integrated Pest Management Commodity Committee
 1986 Cooperative Extension Information System Task Force
 1986 Spring Wheat Task Force
 1986-1988 Artificial Intelligence Task Force

SERVICE TO PROFESSIONAL SOCIETIES:

2008 – Associate editor, Agronomy Journal
present

1982 - Reviewer of manuscripts for Agricultural Systems, Agronomy Journal, Agricultural Finance Review, American Journal of Agricultural Economics, BioEnergyResearch, Biomass and Bioenergy, Environmental Science and Technology, Industrial Crops and Products, International Food and Agribusiness Management Review, Journal of Agricultural and Applied Economics, Journal of Agricultural and Resource Economics, Journal of Agribusiness, Journal of Economic Entomology, Review of Agricultural Economics, Southern Journal of Agricultural Economics, Swine Health and Production, Western Journal of Agricultural Economics, and ERS E-Outlook reports.

SERVICE TO NATIONAL ORGANIZATIONS AND OTHER STATES:

2014 Team member for external review of the Agricultural Economics and Economics Department at Montana State University.

2007 Reviewer of research proposals for USDA-CSREES, SARE Program, and the Missouri Life Sciences Research Board.

HONORS

Excellence in Educational Programming in Community Vitality Award, Minnesota Association of Extension Educators, 2003

Distinguished Group Extension Program Award, American Agricultural Economics Association, 1984, group member

Outstanding Ph.D. Thesis Award, American Agricultural Economics Association, 1982

OTHER

PROFESSIONAL IMPROVEMENT

Attendance at Professional Association Meetings as Participant & Presenter

American Agricultural Economics Association, 1983, 1987, 1989, 2000, 2006, 2007

Attendance at Workshops/Conferences/Symposia as a presenter

North Central Regional Extension Triennial Specialist Workshop, Lincoln, Nebraska, May 19-22, 1997

National Extension Workshop on Marketing, Risk and Financial Management, 1984

Attendance at Workshops/Conferences/Symposia - not as a presenter

National Public Policy Education Conferences, in St. Paul, Minnesota in September 1999 and in Albany, New York in September 2000.

North Central Regional Extension Triennial Specialist Workshops, Ames, IA in 1988, St. Louis, MO in 1991, and E. Lansing, MI in 2000.

Agricultural and Rural Law Institute, Minnesota State Bar Association, Chanhassen, MN, February 12, 1999

Minnesota Rural Options: Developing Extension's Capacity to Address the Current and Long-term Changes in Agriculture, Alexandria, MN, January 13-15, 1999

U of M Extension Service Annual Conference, Duluth, October 6-8, 1998

Agricultural Contracts: Freedom or Restraint Agricultural Policy Conference, Iowa State University Center for Agricultural and Rural Development Fall Conference, September 4, 1998

MN Dept of Agriculture Livestock Business Structure Summit, St. Paul, July 7, 1998

U of M Extension Service Livestock Systems Specialization staff development/program planning meeting, June 11-12, 1998

North Central Regional Risk Management Software Workshop, Lincoln, NE, May 20-21, 1998
U of M Extension Service Financial and Business Management Specialization staff development/program planning meeting, April 14-15, 1998
Dairy Policy Conference, Hudson, WI, April 8, 1998
Swine Extension Educators Conference, National Pork Producers Council, Des Moines, IA, September 1997
Midwest Outlook Conference, St. Paul, MN, August 1997
Transforming Conflict, Minnesota Extension Service, Brainerd, MN, May 1997
American Agricultural Economics Association, 1995, 2004, 2005
Midwest Banking Institute, 1988-1989
Minnesota Farm Managers and Appraisers Tour and Annual Meeting, 1988-1989
National Conference on Computers in Agricultural Extension, Orlando, 1988
Toastmasters International, 1985-1986
Grantsmanship Workshop, Cornell University, 1983

Other

Completed Economic Development Online web-based course, "Business Retention & Expansion Research Reports", October 2001