# SUSAN M. CAPALBO (updated 11/2022)

### Brief bio

Dr. Capalbo is Professor of Applied Economics at Oregon State University (2008-current), Department Head from 2008-2016 and most recently Senior Vice Provost for Faculty Affairs (2016-2021). She received her Ph.D. in Agricultural and Resource Economics from the University of California-Davis. Her previous appointments include Professor at Montana State University, Fellow at Resources for the Future, and a visiting ADVANCE Fellow at Columbia University. Dr. Capalbo has served as Chair of the Steering Committee for the OSU's Strategic Plans (SP3.0 and SP4.0) and for Vision 2030 and is a member of the National Academy of Sciences' Board on Agriculture and Natural Resources (BANR). She is currently a Commissioner for the Northwest Commission for Colleges and Universities (<u>NWCCU</u>). Her research focuses on valuing the nonmarket benefits of public goods and services, ecosystem services, agricultural productivity and sustainability, climate change and food systems.

Senior Vice-Provost, Office of the Provost (2016-2021) Oregon State University 628 Kerr Administration Building, Corvallis Oregon 97331 541-737-0732 (Sara Daly, Exec Admin) susan.capalbo@oregonstate.edu

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### **EDUCATION:**

Ph.D., Agricultural Economics, University of California-Davis, 1982 M.S., Resource Economics, University of Rhode Island B.A., Economics, University of Rhode Island

## HIGHLIGHTS OF RECENT PROFESSIONAL ACTIVITIES:

- RESEARCH: Science-based economic policy and decision support software for agricultural, environmental, and resource issues
- RESEARCH: Climate change research and policy; sustainable development, resilience and tradeoffs • Co-Lead, US National Climate Assessment report for the PNW, 2013-2014
- RESEARCH: Rethinking Land Grant Universities and research partnerships for 2012 and beyond • Metrics for University outcomes (research, academic, outreach)
- DIVERSITY, INCLUSION AND EQUITY: changing University landscapes
  - Co-Chair, OSU President/Provost's Self Study Committee on Diversity, Equity and Inclusion, 2011-2012; participant with OSU's ADVANCE grant
  - Creator of Montana State University's ongoing program on Undergraduate Research Internships for Enhancing Diversity in Science and Engineering. 2006 http://www.montana.edu/wrt/PresScholars8.html
  - PI on Montana State University's NSF/ADVANCE Leadership grant, \$299,677 (2006-2010)

- MSU NCAA Certification Subcommittee Chair, *Equity, Welfare, and Sportsmanship*, 2001-2002
- LEADERSHIP APPOINTMENTS AT THE UNIVERSITY LEVEL
  - Senior Vice-Provost for Academic Affairs, Oregon State University, 2016-present
  - Accreditation Liaison Officer, NWCCU, OSU 2016-2019, lead for OSU NWCCU reaccreditation report and visit, 2019.
  - o Co-Chair OSU Strategic Vision 2030 committee, 2016-2017
  - Chair, OSU Strategic Planning committee, 2018-2019
  - Chair, OSU Strategic Planning Committee, 2013-2014
  - o Department Head, Applied Economics, OSU 2008-2016
  - Chair, Hatfield Marine Science Center 10-year Comprehensive Review, Fall 2010; and member, Implementation Committee for HMSC, 2011-2012
  - o Research Office "Tiger Team" for Interdisciplinary Research Projects, 2010-2011
  - o President's Committee on the Status of Women, 2010-2011
  - o MSU Athletic Committee, 2002-2005
  - $\circ$   $\:$  Numerous P&T and Search Committees at OSU and MSU  $\:$
  - o Member, NAS Board on Agriculture and Natural Resources (BANR) 2014-present
  - Member, USAID Technical Advisory Committee for Integrated Pest Management Innovation Lab (IPM IL, formerly CRSP) and External Evaluation Panel of IPM CRSP, 2009-2016

# **EMPLOYMENT HISTORY:**

Senior Vice-Provost, Oregon State University, Corvallis, OR 2016-2021 Professor, Department of Applied Economics, Oregon State University, 2008-present

## **Previous:**

- Department Head and Professor, Department of Applied Economics (formerly Agricultural & Resource Economics) Oregon State University, Corvallis, OR 2008-2016
- Director, Applied Economics Graduate Program, Oregon State University, Corvallis, OR 2012-2015
- Director of Special Projects, Office of the Vice President for Research, Creativity and Technology Transfer, Montana State University, Bozeman, MT, August 15, 2002-2008 (75% time)
- Professor, Department of Agricultural Economics and Economics, Montana State University, Bozeman, MT, 2002-2008
- Assistant/Associate Professor, Department of Agricultural Economics and Economics, Montana State University, Bozeman, MT, 1987-2001
- Visiting Research Fellow, National Center for Food and Agricultural Policy, Resources for the Future, Washington, DC; and Visiting Scholar, ERS/USDA, Washington, DC, 1989-1990
- Visiting Lecturer, University of California-Davis, 1987
- Fellow, National Center for Food and Agricultural Policy, Resources for the Future, Washington, DC, 1984-1986
- Assistant Professor, Department of Agricultural and Resource Economics, University of Maryland, College Park, MD, 1982-1983
- Postgraduate Research Agricultural Economist, Department of Agricultural Economics, University of California-Davis, 1980-1982
- Economist, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce, Washington, DC, 1976-1977

# HONORS AND FELLOWSHIPS:

Roy G. Arnold/Agricultural Research Foundation Leadership Award (Oregon State University) 2014 Board on Agriculture and Natural Resources (BANR), NAS May 2013-present Western Agricultural Economics Association (WAEA) Distinguished Scholar, 2012

- Marie Tharp Fellow, Earth Institute, Columbia University, New York, NY (Visiting Appointment AY 07-08)
- Bryn Mawr College and HERS, Mid-America Summer Institute for Women in Higher Education Administration, June-July 2002

Honorable Mention, Outstanding Journal Article, Journal of Agricultural and Resource Economics, 1994 Outstanding Journal Article Award, Northeastern Journal of Agricultural and Resource Economics, 1992 Phi Kappa Phi, Omicron Delta Epsilon 1976

Visiting Research Fellow, National Center for Food and Agricultural Policy, Resources for the Future, 1989-1990

AAEA Travel Grant Award for IAAE Meetings, 1985

Outstanding Teaching Assistantship Award, University of California-Davis, 1978

Henry Jastro Regents Fellowship, University of California-Davis, 1978-1980

Honor Society, University of Rhode Island, 1970-1974

Phi Kappa Phi, URI 1970-1974

## LEADERSHIP AND SERVICE:

## National and Regional Boards and Committees:

Commissioner, NWCCU, 2017-present Member, Technical Advisory Committee (TAC) for Integrated Pest Management Innovation Lab (IPM IL) Member, Board on Agriculture and Natural Resources (BANR), National Academy of Science, May 2013present Lead Author, US National Climate Assessment Report (PNW Team), 2012 Chair (elected), AAEA National Association of Agricultural Economics Administrators, 2011-2012 External Evaluation Panel for the IPM CRSP project at Virginia Tech, 2009 Cornell University, Agricultural Economics Departmental Site Review, 2009 Montana NSF/EPSCOR Advisory Committee, 2004-2007 Lariat Network/Internet2 Task Force, 2004-2006 NSF, Panel Review for Research on Gender in Science and Engineering, 2004-2006 USDA/NRI, Watershed Processes and Water Resources Panel, 2004 USDA/CSREES Departmental Site Review for Utah State University, 2001 USDA/CSREES Departmental Site Review for University of Nevada-Reno, 1998 NRICGP/USDA Panel Manager, Markets and Trade, 1995-1996 National Research Council, Water Resource and Technology Board subcommittee on "Valuing Groundwater," 1994-1997 USDA review team for University of Nevada-Reno, Dept. of Ag Econ, 1997 NRI Review Panel for Markets and Trade, Washington, DC, May 1994 Regional Project W-133, Costs and Benefits for Resource Valuation, 1994-present **Professional Organizations:** AAEA NAAEA Chair, 2011-2013 AAEA Mentoring Task Force, 2010-2013 AAEA Executive Board, 2002-2005 Chair, Quality of Research Discovery Award, AAEA Awards Committee, 2000, 2001 Masters' Thesis Award Committee, Western Agricultural Economics Association, Spring 2001 AEA Awards Committee member of Quality of Research Discovery Award, 1999, 2010, 2011 AAEA Task Force on "Economic and Environmental Data Needs," 1994-1997 Director, Western Agricultural Economics Association, 1992-1994

Chairperson, AAEA Quality of Research Discovery Award Committee, 1991, 1992

American Agricultural Economics Association, Awards Selection Committee, 1988-1991

Chairperson, Western Agricultural Economics Association, M.S. Thesis Award Committee, 1990

Western Agricultural Economics Association, Awards Selection Committee, 1989, 1990

#### **Membership:**

Member, American Agricultural Economics Association Committee for Women in Agricultural Economics (CWAE) Member, American Economic Association Member, Canadian Economic Association Member, Western Agricultural Economics Association Member, Association of Environmental and Resource Economists Member, American Association of University Women

### **Editorial Boards:**

Editorial Council, Choices, 2015-2017
OSU Press Board, 2012-2016
Associate Editor, American Journal of Agricultural Economics, 1990-1994
Special Review Committee, American Journal of Agricultural Economics 75th Anniversary Issue, 1992
Editorial Council, Western Journal of Agricultural Economics, 1988-1990
Reviewer for: Selected papers, American Agricultural Economics Association, 1988-92 and Western

Agricultural Economics Association 1989-1992; American Journal of Agricultural Economics;

Journal of Agricultural and Resource Economics; Western Journal of Agricultural Economics;
Journal of Marine Resource Economics; Journal of Economics and Environmental Management;
Journal of Productivity Analysis; Land Economics; Resources for the Future Press; Westview Press,
Review of Agricultural Economics

Reviewer for National Marine Fisheries Service Sea Grant Proposals

### **OSU Departmental and University Service:**

CAS/OSU Leadership Academy Mentorship program 2022-2023 Departmental Policy and Planning committee Chair, Search committee in Applied Economics for two tenure-track faculty position (2021-2022) Special Advisor, OSU Cascades P&T process 2021-2022 University level COVID-19 committees, 2019-2021; lead for workgroup on Faculty Chair, University P&T committee, 2017-2021 ALO, OSU NWCCU rep, 2016-2019 Chair, AEC Departmental search committee for tenure track positions Co-Chair, OSU Strategic Visioning committee, 2016-2017 Chair, OSU Strategic Plan 2018-2019 **Applied Economics Graduate Faculty** Graduate Faculty, School of Public Policy Member, OSU Marine Studies Initiative committee, 2014-present Chair, OSU Strategic Planning Task Force, 2013-2014 Chair, Search Committee for FW Department Head, 2015 Chair, Search Committee for CSS Department Head, 2013-2014 Co-Chair President's and Provost's Self Study Committee on Diversity, Equity and Inclusion, 2011-2012 Member, Search Committee, Dean of Forestry, 2011-2012 Member, Implementation Committee for HMSC, 2011-2012 Member, Research Office "Tiger Team" for Interdisciplinary Research Projects, 2010-2011 Member, President's Committee on the Status of Women, 2010-2011 Rural Studies Program Task Group, 2011 Chair, Hatfield Marine Science Center 10-year Comprehensive Review, Fall 2010 Search Committee Chair, Sun Grant Regional Director, 2011 Governor's Global Warming Commission's NR Subcommittee on Agricultural Carbon Sequestration, 2008-09 College of Agriculture, P&T Committee, 2010-2011

Department of Crop & Soil Science, P&T Committee, 2008-present Climate Change Initiative Hiring Committee, 2008-present Sun Grant Director, Hiring Committee, 2008 **MSU Departmental and University Service:** President's Cabinet, 2002-2008 Information Technology Advisory Committee, 2004-2005 MSU Athletic Committee, 2002-2005 College of Agriculture, P&T Committee, 2002-2003 Advisory Committee, Diversity Awareness Office, VP for Student Affairs, 2002 NCAA Certification Steering Committee, 2001-2002 NCAA Certification Subcommittee Chair, Equity, Welfare, and Sportsmanship, 2001-2002 MSU Salary Review Committee, 2000-2002 Search Committee, Department of Land, Resources, and Environmental Sciences, Assistant Professor of Landscape Analysis and Management, 2001-2002 Search Committee, College of Agriculture, Assistant/Associate Professor in Agricultural Biological Risk Analysis, 2001 MSU EPSCoR Infrastructure Proposal Development Committee, Winter-Spring 2000 MSU Search Committee, Dean of College of Business, 2000 Search Committee, Dean, College of Business, 1999-2000 Search Committee, Director of Health Sciences, 1997 College of Agriculture, Promotion and Tenure Committee, 1995-1996 University Grievance Committee, 1994-1996 University Budget Committee, 1993-1996 University Productivity, Quality and Outcomes Task Force, 1994-1995 University Long Range Planning Committee, 1992-1997, Chair 1993-1995 Search Committee for Director, Yellowstone Center for Mountain Environments, 1993-1994 P&T Committee, Entomology Research Lab, 1993 Departmental Advisory Committee, 1988-89, 1989-90, 1991-92, 1992-93 Search Committee for the Dean of College of Agriculture and Director, AES, 1991-1992 Plant and Soil Science Search/Recruitment Committee, 1990-1991 Departmental Search/Recruitment Committee, 1987-88 (member), 1988-89 (member), 1990-91 (co-chair)

### **RESEARCH AND TEACHING FIELDS:**

#### **Research Expertise:**

Sustainable Ag and Food Systems Multidisciplinary Research Integration and Data Platforms Environmental-Economic Tradeoff Analysis Climate Change and Carbon Sequestration Natural Resources; Environmental Quality Productivity Analysis and Production Theory Rural Health Care and Cost-Benefit Analysis **Teaching Expertise:** Food Systems Production and Development Economics Environmental Economics Natural Resources Valuation Benefit Cost Analysis Microeconomics, Principles and Intermediate Imperfect Competition

### Agricultural Economics

**Graduate Students at OSU:** Isabel Guerra, Nadine Hanhan, Jeff McCaulou, Tyler West, Flavius Badau, Yukiko Hashida, Jenna Way

Previous Other Graduate Students/committees: 30+

## GRANTSMANSHIP

### **Under Current Review:**

"Converting plant fiber-based biowastes from agricultural and food production to sustainable, economically viable, and hydrophobic molded pulp packaging products", NIFA Foundational Grant, USDA

Proposal Lead PI: Jooyeoun Jung OSU, Food Science and Technology, due date Oct 6, 2022 Awarded:

- "Interdisciplinary climate change research and extension for building sustainable agroecological systems". March 2016 – March 2019 \$99,274.
- "Pacific Northwest Climate Hub Outreach Project 2015-16," \$50,000 (07/01/15 6/30/16).
- "Environmental Sustainability Tradeoff Assessment and Research (ESTAR) Program to Support the Gates Foundation Grants and Portfolio Strategies", Bill and Melinda Gates Foundation, 2012-2014, \$136,000.
- "Developing a Sustainable Biofuels System in the PNW: Economic, Policy and Commercialization Analysis," USDA/NIFA (co PI).2012-2016 \$350,000.
- "Pacific Northwest Climate Impacts Research Consortium," NOAA, Philip Mote, lead PI, \$2,052,051 (08/31/2010-2015).
- "Graduate Education in the Economics of Mitigating and Adapting to Climate Change," USDA/NNF Fellowship grant, 2012-2016. \$241,000.
- "PNW Climate Impacts Research Consortium (CIRC)," NOAA, co PI, lead PI is Philip Mote. OSU OCCRI, 4 years, \$750,000. 2010-2014. http://pnwclimate.org/partners
- "Big Sky Carbon Sequestration Phase III: Economic Assessment of Geological Sequestration Opportunities in the NW and Northern Great Plains" DOE/NREL (MSU lead institution) (co PI with John Antle) \$987,000 (2011-2014).
- "Regional Approaches to Climate Change in Pacific Northwest Agriculture", USDA/NIFA CAP Grant, awarded to UI, OSU, WSU, \$20,000,000 (Feb 2011-Feb 2016). (co PI with John Antle from OSU) (OSU share \$4,000,000).
- "Economic Implications of Climate Change Policy on Oregon Agriculture." Oregon Wheat Commission, Principal investigators: W. K. Jaeger, S.M. Capalbo. ARF. \$19,984.
- "Planning a Long-Term Agricultural Project for Dryland Agroecosystems of the Inland Pacific Northwest." Principal investigators: S.D. Eigenbrode, S.M. Capalbo. National Institute of Food and Agriculture (NIFA/USDA) September 2009-September 2011. \$200,000.
- "Grass Seed Research." Principal investigators: B. Eleveld and S.M. Capalbo. OSU Agricultural Research Foundation. February 2009-June 2010. \$60,000.
- "Carbon Registries and Protocols." Principal investigator: S.M. Capalbo. Kansas State University. December 2008-March 2009. \$15,466.
- "Norman E. Borlaug International Agricultural Science and Technology Fellows Program." Oregon State University. October 2008. \$5,000.
- "Terrestrial Carbon Sequestration Options in the Northwest Region." Principal investigator: S.M. Capalbo. USDA grant/subcontract from KSU. Montana State University. July 2008-October 2008. \$47,317.
- "NSF ADVANCE Leadership Award: Big Sky Leadership Initiative to Advance Women Into Careers in Research Leadership", award #0545393 PI: Capalbo, S.M., Monahan, S, Graumlich, L, Jacobs, G (2006-2010) \$299,677

http://www.nsf.gov/awardsearch/showAward?AWD ID=0545393&HistoricalAwards=false.

"Big Sky Carbon Sequestration Partnership, Phase II." Principal investigator: S.M. Capalbo. Department of Energy/NREL Fossil Energy Research and Development Program. October 2005-September 2009, \$17,900,000. Further information available at www.bigskyco2.org.

- "Investing in People: Valuing a More Diverse Engineering Workforce." National Science Foundation, October 2005-September 2006, \$191,422. Principal investigator: S.M. Capalbo; Co-Investigators: A. Camper and N. Ballenger. For more information visit: http://www.montana.edu/wrt/.
- "Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS)." Principal investigator/coordinator for MSU: S.M. Capalbo. \$15,000,000 received from USDA Crop Insurance legislation. MSU share of funding to be approximately \$1,320,000 for 2002-2003 (extended to August 2006). Further information available at www.casmgs.montana.edu.
- "Big Sky Carbon Sequestration Partnership." Principal investigator: S.M. Capalbo. Department of Energy, Fossil Energy Research and Development Program. October 2003-September 2005, \$1,997,889. Further information available at www.bigskyco2.org.
- "Agricultural Research Leadership for the 21st Century." USDA/ERS. Principal investigator: S.M. Capalbo. September 2003-September 2005, \$20,000.
- "Close Coupling of Ecosystem and Economic Models: Adaptation of Central U.S. Agriculture to Climate Change." Research proposal funded by USEPA program on Assessing the Consequences of Interactions between Human Activities and a Changing Climate. Principal investigators: J.M. Antle, S.M. Capalbo, S. Mooney, E. Elliott, and K. Paustian; October 2000-September 2003, \$1,420,860 (extended to February 2005). Summary available at www.climate.montana.edu.
- "A Measurement and Monitoring Protocol for Policies Designed to Sequester Soil Carbon." USDA-NRI, Principal investigators: S. Mooney, J.M. Antle, and S.M. Capalbo, 2002-2003, \$58,000 (extended to November 2004).
- "The Environment, Resource Use and Society." Part of the "Reinventing the Core: Research/Creative Experience" project funded by the William and Flora Hewlett Foundation. Principal investigators: S.M. Capalbo and S. Mooney; AY 2002-2003, \$4,000.
- "Economically Optimal Spatial Scale for Integrated Analysis of Agricultural Production Systems." National Science Foundation, Methods and Models for Integrated Assessment Program. Principal investigators: J.M. Antle, S.M. Capalbo, S. Mooney, and K. Paustian; June 2000-November 2003, \$275,000. Summary available at www.climate.montana.edu.
- "Policy Design and Implications for Ag Soil C Sequestration." USDA National Research Initiative Competitive Grants Program. Principal investigators: J.M. Antle, S.M. Capalbo, and S. Mooney; FY 2000-2001, \$70,000. (One-year extension to 6-30-02.)
- "Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS)." Environmental Protection Agency. Principal investigators: J.M. Antle and S.M. Capalbo; MSU portion of grant for FY 2000-2001, \$23,500. Summary available at www.climate.montana.edu.
- "Testing Hypotheses in Integrated Impact Assessments: Climate Variability and Economic Adaptation in Great Plains Agriculture." U.S. Department of Energy, National Institute for Global Environmental Change. Principal investigators: J.M. Antle, S.M. Capalbo, and J. Hewitt. 2-year proposal submitted in 1998, first year funding approved for 1998-1999, \$130,000; second year funding approved for 1999-2000, \$130,000. (Extension to 6-30-02.)
- "Heterogeneity and Scale in Modeling the Economic Impacts of Climate Change in Great Plains Agriculture." DOE/NIGEC. Principal investigators: J. Antle, S. Capalbo, and J. Hewitt; 1996-1999, \$520,693.
- "Analyzing Health Services Decision-Making in Rural Montana Communities." Federal Office of Rural Health Care Policy, DLHHS. Principal investigators: S.M. Capalbo, R. Flaherty, and J. Shreffler; 1996-1997, \$49,893.
- "Economic and Environmental Tradeoffs in Assessing Sustainability: A Study of Dryland Agriculture." USDA/NRICGP. Principal investigators: S.M. Capalbo and J.B. Johnson; October 1995-September 1997, \$130,475.
- "Economic Impact Assessment of IPM: Advisory Committee." USDA/ERS proposal. Principal investigators: J.M. Antle and S.M. Capalbo; June 1995-September 1997, \$23,000.
- "Heterogeneity and Scale in Modeling the Economic Impacts of Climate Change on Agriculture in Great Plains and Northern Rocky Mountains Ecosystems." Seed money grant from Great Plains Regional

Center for Global Climate Change. Principal investigators: J.M. Antle, S.M. Capalbo, and J.A. Hewitt; Summer 1995, \$14,985.

- "Economics and Sustainability of Crop and Livestock Agriculture in the Northern Plains and Foothill Mountain Environments." USDA/CSRS/ACE. Principal investigators: S.M. Capalbo, J.M. Antle, and J.B. Johnson; June 1992-June 1996, \$111,079.
- "Economic and Physical Model Integration for Analysis of the Impacts of Agricultural Chemical Use on Ground Water Quality." USDA/ERS/RTD. Principal investigators: J.M. Antle and S.M. Capalbo; June 1992- September 1995, \$131,314. (Additional \$10,000, November 1993).
- "Agricultural Chemical Use and Sustainability of Andean Potato Production." Rockefeller Foundation. Principal investigators: J.M. Antle and S.M. Capalbo (MSU) and C. Crissman (CIP); 1990-1995, \$337,000.
- "International Comparisons of Agricultural Productivity: Theory and Measurement." Cooperative agreement with USDA/ERS/ATAD, No. 58-3AEL-8-00062. Principal investigator: S.M. Capalbo; August 1988-September 1991, \$36,793.
- "Economic Analysis of the Bullhead Water Quality Project." Principal investigators: J. Antle, S. Capalbo, and D. Griffith; November 1990-September 1991, \$6,000.
- "Measurement of Agricultural Pollution Externalities: Towards an Integration of Disciplinary Models, Methods, and Data." Cooperative agreement with USDA/ERS/RTD, No. 58-3AEM-9-80058. Principal investigator: S.M. Capalbo; September 1989-May 1990, \$29,754.
- "Environmental and Health Costs of Agricultural Chemical Use in Southeast Asia Rice Production." Rockefeller Foundation. Principal investigators: J.M. Antle, S.M. Capalbo (MSU), and P. Prabhu (IRRI); January 1989-December 1990, \$158,500.
- "The Measurement and Evaluation of Agricultural Pollution Externalities." Resources for the Future Small Grant. Principal investigators: J.M. Antle and S.M. Capalbo; July 1988-June 1989, \$19,236.
- "Agricultural Productivity: Measurement Issues, Data Development, and Policy Linkages." Cooperative agreement with USDA, No. 58-319V-6-00059. Principal investigators: K. Farrell and S.M. Capalbo; May 1986-September 1987, \$35,000.
- "Productivity in the Food and Agricultural Sector: Sources of Growth, Potential Constraints, and National Public Policy Implications." Rockefeller Foundation Grant No. RF-83012 to Resources for the Future. Principal investigators: K. Farrell and S.M. Capalbo; 1984-1986, \$300,000.

## SELECTED PUBLICATIONS AND PRESENTATIONS:

### **Under Review:**

- Dundas, Steven., Susan. Capalbo, &. James Sterns (forthcoming release Jan 2023) "The Economic Implications of Climate Change for Oregon", sixth Oregon Climate Assessment, (lead organizer, OSU OCCRI)
- Antle, J. M. and S. M. Capalbo. 2021 (revised 2022). Economic and Policy Research Challenges and Opportunities. Oregon State University.

### **Refereed Publications:**

- Houston, L. L., Capalbo, S. M., Seavert, C. F., Dalton, M., Bryla, D., & Sagili, R. (2018). Specialty fruit production in the Pacific Northwest: adaptation strategies for a changing climate. *Climatic Change*. Published. <u>https://doi.org/10.1007/s10584...</u>
- Susan M. Capalbo, John M. Antle, and Clark Seavert. 2017. Next generation data systems and knowledge products to support agricultural producers and science-based policy decision making. *Agricultural Systems*, Vol. 155 pp 191-199. <u>https://doi.org/10.1016/j.agsy.2016.10.009</u>

- Long, D.S., J.D. McCallum, C.T. Martin and S. Capalbo. (2016) "Net Returns from Segregating Dark Northern Spring Wheat by Protein Concentration during Harvest" *Agronomy Journal*. Vol. 108, pp 1– 11.
- Lauer, C., J. McCaulou, J. Sessions, S. Capalbo (2015) "Biomass Supply Curves for Western Juniper in Central Oregon, USA, under alternative business models and policy." *Forest Policy and Economics*, vol 59, Oct pp 75-82.
- Antle, J., S. Capalbo and L. Houston. (2015) "Using big data to evaluate agro-environmental policies." *Choices: The Magazine of Food, Farm and Resource Issues*, 30(3). Available online: <u>http://www.choicesmagazine.org/choices-magazine/submitted-articles/tapping-into-big-data-to-improve-agro-environmental-outcomes.</u>
- Capalbo, S.M. (2015). "Congress on Adapting Food Production to a Changing Climate," summary paper, *Renewable Resources Journal*, Vol 29-2015, Number 1.
- Antle, J.M., S.M. Capalbo. (2010) "Adaptation of Agricultural and Food Systems to Climate Change: An Economic and Policy Perspective." *Applied Economics Perspectives and Policy (AEPP)* 32(3): 386-416.
- Capalbo, S.M., Wu, C., Goldberg, D., Matter, J. and A. Slagle. (2009). "Economic dimensions of geological CO2 storage: Key factors in an assessment of sub-seafloor and continental sequestration options." *Energy Procedia* 1(1) Feb 2009. Pages 2745-52. http://dx.doi.org/10.1016/j.egypro.2009.02.045
- Mooney, S., K. Gerow, J.M. Antle, S.M. Capalbo, and K. Paustian. (2007). "Reducing Standard Errors by Incorporating Spatial Autocorrelation into a Measurement Scheme for Soil Carbon Credits." *Climatic Change* 80(1-2):55-72.
- Antle, J.M., S.M. Capalbo, K.H. Paustian, and M.K. Ali. (2007). "Estimating the Economic Potential for Agricultural Soil Carbon Sequestration in the Central United States Using an Aggregate Econometric-Process Simulation Model." *Climatic Change* 80(1-2):145-171.
- Antle, J.M., S.M. Capalbo, E.T. Elliott, and K.H. Paustian. (2004). "Adaptation, Spatial Heterogeneity, and the Vulnerability of Agricultural Systems to Climate Change and CO2 Fertilization: An Integrated Assessment Approach." *Climatic Change* 64(3):289-315.
- Capalbo, S.M., J.M. Antle, S. Mooney, and K.H. Paustian. (2004). "Sensitivity of Carbon Sequestration Costs to Economic and Biological Uncertainties." *Environmental Management* 33(S1):S238-S251.
- Mooney, S, J.M. Antle, S.M. Capalbo, and K. Paustian. (2004). "Design and Costs of a Measurement Protocol for Trades in Soil Carbon Credits." *Canadian Journal of Agricultural Economics* 52(3):257-287.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K.H. Paustian. (2004). "Influence of Project Scale and Carbon Variability on the Costs of Measuring Soil Carbon Credits." *Environmental Management* 33(S1):S252-S263.
- Capalbo, S., J.M. Antle, S. Mooney and K.H. Paustian. (2004). Sensitivity of Carbon Sequestration Costs to Economic and Biological Uncertainties. *Environmental Management* 33 (S1): S238 S251.
- Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott, and K.H. Paustian. (2003). "Spatial Heterogeneity, Contract Design, and the Efficiency of Carbon Sequestration Policies for Agriculture." *Journal of Environmental Economics and Management* 46(2):231-250.
- Antle, J.M., S.M. Capalbo, and S. Mooney. (2002). "Farming the Environment: Spatial Variation and Economic Efficiency in Soil; Developing Policies for Carbon Sequestration and Agriculture." *Choices* 17(4):24-25.
- Capalbo, S.M., T.J. Kruzich, and C.N. Heggem. (2002). "Strengthening a Fragile Rural Health Care System: Critical Access Hospitals and Telemedicine." *Choices* 17(4):26-29.
- Antle, J.M and S.M Capalbo. (2002). "Agriculture as a Managed Ecosystem: Policy Implications." *Journal* of Agricultural and Resource Economics 27(1):1-15.
- Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott, and K.H. Paustian. (2002). "A Comparative Examination of the Efficiency of Sequestering Carbon in US Agricultural Soils." *American Journal of Alternative Agriculture* 17(3):109-115.
- Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott, and K.H. Paustian. (2002). "Sensitivity of Carbon Sequestration Costs to Soil Carbon Rates." *Environmental Pollution* 116(3):413-422.

- Antle, J.M. and S.M. Capalbo. (2001). "Econometric-Process Models for Integrated Assessment of Agricultural Production Systems." *American Journal of Agricultural Economics* 83(2):389-401.
- Antle, J.M., S.M. Capalbo, E.T. Elliott, H.W. Hunt, S. Mooney, and K.H. Paustian. (2001). "Research Needs for Understanding and Predicting the Behavior of Managed Ecosystems: Lessons from the Study of Agroecosystems." *Ecosystems* 4(8):723-735.
- Antle, J.M., S.M. Capalbo, S. Mooney, E. Elliott, and K. Paustian. (2001). "Economic Analysis of Agricultural Soil Carbon Sequestration: An Integrated Assessment Approach." *Journal of Agricultural and Resource Economics* 26(2):344-367.
- Antle, J.M., S. Capalbo, J. Johnson, and D. Miljkovic. (1999). "The Kyoto Protocol: Economic Effects of Energy Prices on Northern Plains Dryland Grain Production." *Agricultural and Resource Economics Review* 28(1):96-105.
- Capalbo, S.M. and C.N. Heggem. (1999). "Valuing Rural Health Care: Issues of Access and Quality." *American Journal of Agricultural Economics* 81(3):674-679. (invited paper, peer reviewed)
- Shreffler, M.J., S.M. Capalbo, R.J. Flahery, and C.N. Heggem. (1999). "Community Decision-Making About Critical Access Hospitals: Lessons from Montana's Medical Assistance Facility Program." *The Journal of Rural Health* 15(2):180-188.
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- Friesen, J., S.M. Capalbo, and M. Denny. (1991). "Testing Short Run Factor Demand Models in Canadian and U.S. Agriculture." *Canadian Journal of Economics* 24(3):624-638.
- Capalbo, S.M., V.E. Ball, and M.G.S. Denny. (1990). "International Comparisons of Agricultural Productivity: Development and Usefulness." *American Journal of Agricultural Economics* 72(5):1292-1297.
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- Capalbo, S.M. (1988). "Measuring the Components of Aggregate Productivity Growth in U.S. Agriculture." *Western Journal of Agricultural Economics* 13(1):53-62.
- Capalbo, S.M. (1986). "Temporary Equilibrium Production Models for a Common Property Renewable Resource Sector." *Journal of Econometrics* 33(1):263-284.
- Capalbo, S.M. and M. Denny. (1986). "Testing Long-Run Productivity Models for the Canadian and U.S. Agricultural Sectors." *American Journal of Agricultural Economics* 68(3):615-625.

#### **Refereed Books:**

- Crissman, C.C., J.M. Antle, and S.M. Capalbo, eds. (1998). Economic, Environment, and Health Tradeoffs in Agriculture: Pesticides and the Sustainability of Andean Potato Production. Dordrecht/Boston/London: Kluwer Academic Publishers, 12 chapters, 281 pp.
- Capalbo, S.M. and J.M. Antle, eds. (1988). *Agricultural Productivity: Measurement and Explanation*. Washington, DC: Resources for the Future, Johns Hopkins University Press, 403 pp.

### **Refereed Chapters in Books and Other Peer-Reviewed Publications:**

- Capalbo, S.M., C. Seavert, J.M. Antle, J.Way, L.L. Houston. 2017. Understanding Tradeoffs in the Context of Farm-Scale Impacts: An Application of Decision-Support Tools for Assessing Climate Smart Agriculture. Food and Agriculture Organization of the United Nations (FAO) 2017 L. Lipper et al. (eds.), Climate Smart Agriculture, Natural Resource Management and Policy 52, DOI 10.1007/978-3-319-61194-5 9.
- Laurie Houston, Clark Seavert, Susan Capalbo, John Antle. 2017. Chapter 12: Farm Policies and the Role for Decision Support Tools, in Advances in Dryland Farming in the Inland Pacific Northwest. Eds. Georgine Yorgey and Chad Kruger, Washington State University Extension, EM108. http://extension.wsu.edu/publications/pubs/em108/
- Dalton, M. M., J. Bethel, S. M. Capalbo, J. E. Cuhaciyan, S. D. Eigenbrode, P. Glick, L. L. Houston, J. S. Littell, K. Lynn, P. W. Mote, R. R. Raimondi, W. S. Reeder, S. L. Shafer, and A. K. Snover (authors). (2013). "Executive Summary." *In Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*, edited by M. M. Dalton, P. W. Mote, and A. K. Snover, Washington, DC: Island Press.
- Snover, A. K., P. Glick, S. M. Capalbo. (2013). "Chapter 1, Introduction: The Changing Northwest." In Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities, edited by M. M. Dalton, P. W. Mote, and A. K. Snover, Washington, DC: Island Press.
- Raymondi, R. R., J. E. Cuhaciyan, P. Glick, S. M. Capalbo, L. L. Houston, and S. L. Shafer. (2013).
  "Chapter 3, Water Resources: Implications of Changes in Temperature and Precipitation." *In Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*, edited by M. M. Dalton, P. W. Mote, and A. K. Snover, Washington, DC: Island Press.
- Reeder, W. S., P. Ruggiero, S. L. Shafer, A. K. Snover, L. L. Houston, P. Glick, J. A. Newton, and S. M. Capalbo. (2013). "Chapter 4, Coasts: Complex Changes Affecting the Northwest's Diverse Shorelines." *In Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*, edited by M. M. Dalton, P. W. Mote, and A. K. Snover, Washington, DC: Island Press.
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- Eigenbrode, S. D., S. M. Capalbo, L. L. Houston, J. Johnson-Maynard, C. Kruger, and B. Olen. (2013).
  "Chapter 6, Agriculture: Impacts, Adaptation, and Mitigation." *In Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*, edited by M. M. Dalton, P. W. Mote, and A. K. Snover, Washington, DC: Island Press.
- Bethel, J., S. Ranzoni, and S. M. Capalbo. (2013). "Chapter 7, Human Health: Impacts and Adaptation." In Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities, edited by M. M. Dalton, P. W. Mote, and A. K. Snover, Washington, DC: Island Press.
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- Antle, J.M. and S.M. Capalbo. (1997). "Integrated Assessment of IPM Impacts: An Overview." In S. Lynch, C. Greene, and C. Kramer-LeBlanc, eds., *Proceedings of the Third National IPM Symposium/Workshop*, USDA/ERS Publication Number 1542, pp. 33-40.
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- Capalbo, S.M. and R.J. Howitt. (1985). "Bioeconomic Supply and Imperfect Competition: A Policy Model for an Internationally Utilized Resource." In *Proceedings of Second Conference of International Institute of Fisheries Economics and Trade*, July.
- Farrell, K. and S.M. Capalbo. (1985). "Natural Resource and Environmental Dimensions of Agricultural Development: Coping with the Tradeoffs." In *Proceedings of the 1985 International Association of Agricultural Economists Conference*.

#### **Technical Reports:**

Capalbo, S.M. (2005). "Big Sky Carbon Sequestration Partnership: Phase I." Final Technical Report, September 26, 2003 thru September 25, 2005, to the U.S. Department of Energy, December.

### Website Publications:

- E.A. Cech, S.M. Capalbo, and H.M. Sherick. "Are Diversity Investments Worthwhile? An Analysis of Impacts of Diversity Efforts on Graduation Rates for Engineering Students." Dec. 2008. http://arec.oregonstate.edu/diversity/diversity3.html
- S.M. Capalbo and E.A. Cech. "Valuing Diversity: An Initial Look at Developing Diversity Indexes for Engineering." Dec. 2008. http://arec.oregonstate.edu/diversity/diversity3.html
- Antle, J.M., S.M. Capalbo, and J.A. Hewitt. (2001). "Testing Hypotheses in Integrated Impact Assessments: Climate Variability and Economic Adaptation in Great Plains Agriculture." Great Plains Region Annual Progress Report, July 1, 2000 to June 30, 2001. The National Institute for Global Environmental Change (NIGEC). http://nigec.ucdavis.edu/publications/index.htm.
- Antle, J.M., S.M. Capalbo, and J.A. Hewitt. (2000). "Testing Hypotheses in Integrated Impact Assessments: Climate Variability and Economic Adaptation in Great Plains Agriculture." Great Plains Region Annual Progress Report, July 1, 1999 to June 30, 2000. The National Institute for Global Environmental Change (NIGEC). http://nigec.ucdavis.edu/publications/index.htm.
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- Antle, J.M., S.M. Capalbo, and J.A. Hewitt. (1998). "Heterogeneity and Scale in Modeling the Economic Impacts of Climate Change in Great Plains Agriculture." Great Plains Region Annual Progress Report, July 1, 1997 to June 30, 1998. The National Institute for Global Environmental Change (NIGEC). http://nigec.ucdavis.edu/publications/index.htm.
- Other publications available at www.casmgs.montana.edu and www.climate.montana.edu.

### Abstracts:

- Capalbo, S.M. and C.E. Overton. (1990). "Comparability of International Data on Agricultural Outputs and Inputs." *American Journal of Agricultural Economics* 72(5):1330.
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- Capalbo, S.M., J.M. Antle, M. Denny, R. Lopez, R. Kopp, and W. Huffman. (1984). "Developments in Measuring and Modeling Agricultural Productivity." *American Journal of Agricultural Economics* 66(5):890.

### **Op Ed Publications:**

Capalbo, S.M. (1996). "Making Sense of Sustainability." Montana Farmer, February.

### **Unpublished Papers and Working Papers:**

- Shropshire, D. and S. Capalbo. (2005). "Policy Implications from Regional Energy Growth." In the proceedings of the Fourth Annual Conference on Carbon Capture and Sequestration, *Developing Potential Paths Forward Based on the Knowledge, Science and Experience to Date*, Alexandria, VA, May 2-5.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K.H. Paustian. (2003). "Uncertainty in Econometric-Process Models: The Case of Soil Carbon Sequestration." Working Paper 2003-101, Department of Agricultural and Applied Economics, University of Wyoming.
- Kruzich, T.J. and S.M. Capalbo. (2002). "Issues in Rural Health Care: Trends and Legislation Concerning Telemedicine and the Critical Access Hospital Program." Staff Paper 2002-2, Department of Agricultural Economics and Economics, Montana State University, November.
- Antle, J.M., S.M. Capalbo, and J. Hewitt. (2000). "Testing Hypotheses in Integrated Impact Assessments: Climate Variability and Economic Adaptation in Great Plains Agriculture." FY 1999/2000 Annual Report, National Institute for Global Environmental Change, http://nigec.ucdavis.edu.
- Antle, J.M., S.M. Capalbo, C.N. Heggem, R.T. Clark, N.A. Norton, and R.A. Selley. (2000). "Farm-Level Characteristics of Southern Nebraska Farms/Ranches with Annually-Planted Crops." Research Discussion Paper No. 44, Trade Research Center, Montana State University.
- Capalbo, S.M. and C.N. Heggem. (1998). "Evaluating Telemedicine in Rural Settings: Issues and Applications." Research Discussion Paper No. 23, Trade Research Center, Montana State University.
- Antle, J.M., S.M. Capalbo, J.B. Johnson, and W.E. Zidak. (1998). "A Spatially Explicit Econometrics-Based Stochastic Simulation Model of Montana Dryland Grain Production." Research Discussion Paper No 21, Trade Research Center, Montana State University, October.
- Johnson, J.B., W.E. Zidack, S.M. Capalbo, and J.M. Antle. (1998). "Production Costs for Annually-Planted Crops Produced on Dryland Cropland, Northern Montana MLRA 52." Departmental Special Report No. 28, Department of Agricultural Economics and Economics, Montana State University, July.
- Johnson, J.B., W.E. Zidack, S.M. Capalbo, and J.M. Antle. (1998). "Production Costs for Annually-Planted Crops Produced on Dryland Cropland, Northeastern Montana MLRA 53A." Departmental Special Report No. 25, Department of Agricultural Economics and Economics, Montana State University, July.
- Johnson, J.B., W.E. Zidack, S.M. Capalbo, and J.M. Antle. (1998). "Production Costs for Annually-Planted Crops Produced on Dryland Cropland, East Central Montana MLRA 54." Departmental Special Report No. 26, Department of Agricultural Economics and Economics, Montana State University, July.
- Johnson, J.B., W.E. Zidack, S.M. Capalbo, and J.M. Antle. (1998). "Production Costs for Annually-Planted Crops Produced on Dryland Cropland, Southeastern Montana MLRA 58A." Departmental Special Report No. 27, Department of Agricultural Economics and Economics, Montana State University, July.
- Capalbo, S.M., R. Flaherty, and J. Shreffler. (1997). "Evaluating the Medical Assistance Facility (MAF) Model for Delivery of Rural Health Care." Report to the Office of Rural Health Policy, DHHS.

- Johnson, J.B, W.E. Zidack, S.M. Capalbo, and J.M. Antle. (1997). "Farm Level Characteristics of Larger Central and Eastern Montana Farms with Annually-Planted Dryland Crops." Departmental Special Report No. 22, Department of Agricultural Economics and Economics, Montana State University, October.
- Johnson, J.B, W.E. Zidack, S.M. Capalbo, and J.M. Antle. (1997). "Fertilizer Use and Costs on Larger Central and Eastern Montana Farms with Annually-Planted Dryland Crops." Departmental Special Report No. 23, Department of Agricultural Economics and Economics, Montana State University, October.
- Johnson, J.B, W.E. Zidack, S.M. Capalbo, J.M. Antle, and D. Webb. (1997). "Farm Level Characteristics of Larger Central and Eastern Montana Farms with Annually-Planted Dryland Crops." Departmental Special Report No. 21, Department of Agricultural Economics and Economics, Montana State University, August.
- Antle, J.M. and S.M. Capalbo. (1997). "Integrated Assessment of IPM Impacts: An Overview." Proceedings of the Third National IPM Symposium/Workshop. Economic Research Service Special Report, Washington DC, May.
- Antle, J.M., S.M. Capalbo, J.B. Johnson, and W.E. Zidak. (1996). "Economics and Sustainability of Crop and Livestock Agriculture on the Northern Plains and Foothill-Mountain Environments." Final Report to ERS/USDA, May.
- Antle, J.M., S.M. Capalbo, J.B. Johnson, and W.E. Zidack. (1995). "Montana Sustainable Agriculture Economic Impact Study: Physical and Economic Crop Production Data," February.
- Antle, J.M., S.M. Capalbo, J.B. Johnson, and W.E. Zidack. (1995). "Economics and Sustainability of Crop and Livestock Agriculture in the Northern Plains and Foothill Mountain Environments," December.
- Antle, J.M., S.M. Capalbo, J.L. Hutson, and R.J. Wagenet. (1995). "Economic and Physical Model Integration for Analysis of the Impacts of Agricultural Chemical Use on Ground Water Quality," December.
- Antle, J.M. and S.M. Capalbo. (1995). "IPM Impact Assessment Group Meeting Background Document," June.
- Antle, J.M., S.M. Capalbo, and C.C. Crissman. (1992). "Integrated Economic, Environmental, and Health Analysis of Policy Options for the Carchi Project." Paper prepared for the Rockefeller Foundation, March.
- Antle, J.M. and S.M. Capalbo. (1988). "Pollution Externalities and the Economic Evaluation of Agricultural Technologies." Paper prepared for Rockefeller Foundation, April.
- Antle, J.M. and S.M. Capalbo. (1988). "Hickson Neutrality and Bias in Multiple Output Technologies." Working paper, Department of Agricultural Economics and Economics, Montana State University, March.
- Capalbo, S.M. (1988). "A Summary and Evaluation of Selected Regional Databases for U.S. Agriculture." Report prepared for cooperative agreement with USDA and Resources for the Future, Washington, DC, January.
- Capalbo, S.M. (1987). "Canadian Agriculture: Cost Share and Econometric Estimates of the Aggregate Technology, 1961-1980." Report prepared for the Directorate for Food, Agriculture, and Fisheries, OECD, Paris, December.
- Capalbo, S.M. (1987). "Toward Estimating the Opportunity Cost of Instream Flows in the Pacific Northwest." Project report for the Quality of the Environment Division, Resources for the Future, Washington, DC, October.
- Capalbo, S.M., T. Vo, and J. Wade. (1985). "An Econometric Database for the U.S. Agricultural Sector." Resources for the Future, Washington, DC, Discussion Paper No. RR85-01, revised July 1986.

### **Invited Presentations:**

Antle, J.M. and S.M. Capalbo. (2015). "New Approaches to Data and Analytics for Farm and Policy Decisions," presented at International Association for Food Protection Conference, Portland, OR, July 25-28.

- Capalbo, S.M. (2014). "Environmental Compensation in the US: Economics and Room for Improvement," presented at Agricultural Outlook Forum: The Changing Face of Agriculture. February 20-21, 2014, Washington DC.
- Capalbo, S.M. (2011). "Framing Tipping Points for Policy Analysis". National Council for Science and the Environment's 11th National Conference on Science, Policy, and the Environment: *Our Changing Oceans*, January 19-21, 2011, Washington, DC.
- Capalbo, S.M., (2010). "Low Carbon Green Growth in US Agriculture", Keynote Presentation, Korean Rural Economic Institute, International Seminar on Green Growth in Agriculture, Seoul, Korea, November 19.
- Capalbo, S.M. (2009). "Economic Dimensions of Carbon Sequestration: How Does It Stack Up?" ASPO International Peak Oil Conference. Presented at Denver, CO October 11-13.
- Capalbo, S.M. (2008). "Climate change: economics implications and opportunities for agriculture." Presented at Oregon Global Warming Commission Natural Resource Committee Meeting on Global Warming and Agriculture, Salem, Oregon July 15.
- Capalbo, S.M. (2008). "Leadership and Other Challenges Facing Agricultural & Resource Economics Departments". Presented at Kansas State University, October 20.
- Capalbo, S.M. (2003). "Johannesburg Summit 2002 (WSSD): Implications for Research and Analysis in Environmental and Resource Economics." Presented at the 25th International Conference of the International Association of Agricultural Economists (IAAE), Durban, South Africa, August 16-22.
- Capalbo, S.M., Antle, J.M., and S. Mooney. (2001). "Quantifying Carbon Sequestration Costs in the Northern Great Plains: An Integrated Assessment Approach." Presented at the USDA/EPA forum on *Forestry, Agriculture, and Greenhouse Gas Modeling*, National Conservation Training Center, Shepherdstown, WV, October 1-3.
- Capalbo, S.M. and J.M. Antle. (2001). "Prospects for Agricultural Carbon Sequestration: An Economic Assessment." Paper presented at the Western Economics Association annual meetings, San Francisco, July.
- Antle, J.M. and S.M. Capalbo. (2001). "Agriculture as a Managed Ecosystem: Implications for Econometric Analysis of Production Risk." Paper presented at the SER-IEG-31 meetings on *A Comprehensive Assessment of the Role of Risk in Agriculture*, Gulf Shores, AL, March 22.
- Antle, J.M., S.M. Capalbo, and S. Mooney. (1999). "Optimal Spatial Scale and Economic and Environmental Tradeoffs." Selected Paper presented at AAEA Annual Meetings, Nashville, TN, August.
- Antle, J.M. and S.M. Capalbo. (1999). "Economic Models for Integrated Assessment of Agricultural Production Systems." Paper presented at the Global Change in Terrestrial Ecosystems Conference, Reading, UK, September.
- Antle, J.M., S.M. Capalbo, and S. Mooney. (1999). "Designing Efficient Policies for Agricultural Soil Carbon Sequestration: Economics of Soil C Sequestration in the Northern Plains." Invited presentation at *Exploring Opportunities for Carbon Sequestration: A National Conference*. Missoula, MT, October.
- Antle, J.M., S.M. Capalbo, and S. Mooney. (1999). "Designing Research to Analyze Climate Change Impacts Dryland Grain Production in the Northern Plains." Invited presentation at Climate Change Meeting the Challenge/Seizing the Opportunities UMAC Conference, University of North Dakota, Grand Forks, November 14-16.
- Capalbo, S.M. (1999). "Valuing Rural Health Care: Issues of Access and Quality." Invited presentation at the AAEA session on *Discrete Choice Demand Models for Rural Health Policy Evaluation*, New York, January.
- Capalbo, S.M. and C.N. Heggem (1998). "Evaluating Telemedicine in Rural Settings: Issues and Applications." Invited presentation at the UDSA workshop on Rural Telecommunications, Washington, DC, September.
- Capalbo, S.M., R. Flaherty, and J. Shreffler. (1998). "The Critical Access Hospitals: Determining What's Right for Your Community." Invited presentation to the annual Northwest Regional Rural Health Conference, Spokane, WA, March.

- Capalbo, S.M. (1998). "The Experience of Montana's Medical Assistance Facilities." Invited presentation at the University of Washington's Rural Health Care Conference, Seattle, May.
- Capalbo, S.M. and J.A. Hewitt. (1998). "Valuing Natural Assets: An Application to Yellowstone National Park." Presentation for the 125th Anniversary of YNP, Bozeman, MT, May.
- Antle, J.M. and S.M. Capalbo. (1996). "Integrated Assessment of IPM Impacts: An Overview." Invited presentation at the Third National IPM Symposium/Workshop, Washington, DC, February 28.
- Antle, J.M. and S.M. Capalbo. (1996). "Quantifying Agriculture-Environment Tradeoffs to Assess Environmental Impacts of Domestic and Trade Policies." Presented at the conference *European Agriculture at the Crossroads: Competition and Sustainability*, University of Crete, Rethimno, Crete, May.
- Antle, J.M. and S.M. Capalbo. (1994). "Pesticides, Productivity and Farmer Health: Implications for Regulatory Policy and Agricultural Research." Invited paper, ASSA/AAEA meetings, Boston, January.
- Antle, J.M., S.M. Capalbo, and C.C. Crissman. (1993). "Endogenous Timing of Decisions in Econometric Production Models." Invited paper, WAEA meetings, August.
- Antle, J.M. and S.M. Capalbo. (1991). "Integrating Economic and Physical Models for Analyzing Environmental Effects of Non-Point Source Pollution." Invited presentation at the AERE Workshop on *Controlling Non-Point Source Pollution*, June 6 and 7.
- Capalbo, S.M. (1990). "International Productivity Comparisons: Development and Usefulness." Invited paper for the 1990 AAEA Meetings, Vancouver, BC.
- Capalbo, S.M. and T. Phipps. (1990). "Designing in Environmental Quality: Possibilities in U.S. Agriculture." Invited paper for AEI Conference on "Is Environmental Quality Good for Business?" Washington, DC, June.
- Capalbo, S.M. (1990). "Use of Ground Water Models in Economic Policy Analysis." Invited presentation to Resource and Policy Consortium, Washington, DC, May.
- Capalbo, S.M. and J.M. Antle. (1998). "Towards Incorporating Social Costs in Returns to Agricultural Research." Invited paper presented at 1988 Winter ASSA/AEA Meetings, December.
- Capalbo, S.M. and K. Farrell. (1985). "Natural Resources and Environmental Dimensions of Agricultural Development: Coping with the Tradeoffs." Invited paper presented at the Nineteenth International Conference of Agricultural Economics, Malaga, Spain, August.
- Capalbo, S.M. (1985). "Comparing Structural Production Models for U.S. Agriculture." Invited paper presented at Conference on Current Issues in Productivity, Graduate School of Management, Rutgers, State University of New Jersey, December.

#### Selected Conference/Workshop Presentations:

- Capalbo, SM, (2010) Presentation at AAEA 2010 meetings, July 26-28 Track session on "Undergraduate degrees: Environmental and Resource economics programs in a Changing Academic Climate"
- Capalbo, S.M. (2009) Measures of Departmental and Faculty Research Productivity, Performance evaluation, and Salary Raise Distribution Strategies. Panel discussion, led by Octavio Ramirez, University of Georgia, at the National Association of Agricultural Economics Administrators Conference, Washington, D.C., September 24.
- Capalbo, S.M., C. Wu, D. Goldberg, J. Matter, and A. Slagle. (2009) Economic Dimensions of Geological CO2 Storage: Incorporating Uncertainty and Long Term Costs into Assessments of Sequestration Options. Presented at Agricultural & Applied Economists Association Annual Meeting, Milwaukee, WI, July 26-28.
- Capalbo, S.M., C. Wu, D. Goldberg, J. Matter, and A. Slagle. (2008) "Economic Dimensions of Geological Co2 Storage: Key Factors In An Assessment Of Sub-Seafloor And Continental Sequestration Options." Presented at 9th International Conference on Greenhouse Gas Control Technologies, Washington, D.C. November 16.
- Capalbo, S.M. (2005). Phase I and Phase II Planning presentations at the Big Sky Carbon Sequestration Partner Planning meeting, Bozeman, MT, December 1-2.

- Capalbo, S.M. (2005). "Storing Carbon Waste Underground." Presented to the Idaho Energy Symposium, "Energy, Business, and the Public Sector: Opportunities and Challenges," Idaho State University, Pocatello, ID, November 5.
- Capalbo, S.M. (2005). "The Big Sky Carbon Sequestration Partnership." Presented to Montana's Energy Future Symposium, Bozeman, MT, October 19.
- Capalbo, S.M. and L. Jones. (2005). "Montana's Energy Development: Overview of Potential Impacts." Presented to Montana's Energy Future Symposium, Bozeman, MT, October 18.
- Capalbo, S.M. (2005). "DOE Regional Carbon Sequestration Partnerships Phase I Program Overview and Phase II Kickoff." Pittsburgh, PA, October 12-14.
- Capalbo, S.M. (2005). "Big Sky Carbon Sequestration Partnership Regional Overview and Opportunities for Future Collaborators under Phase II." Presentation at MIT, Boston, MA, October 9-10.
- Capalbo, S.M. (2005). "Big Sky Carbon Sequestration Partnership Regional Program Overview." Presented to the Powering the Plains Workshop, Minneapolis, MN, October 6.
- Capalbo, S. (2005). "Bioethanol and Energy Opportunities." Presented at the American Society of Agricultural Engineers Annual International Meeting, Tampa, FL, July 17-20.
- Capalbo, S.M. (2005). "Big Sky Carbon Sequestration Regional Partnership and Implications for IGCC Power Technologies." Presented to the Coal Power Project Development conference, Denver, CO, June 1-3.
- Capalbo, S.M. and T. Krueger (2005). "Big Sky Carbon Sequestration Regional Partnership with Energy Northwest." Presented to the NWPPA Annual Meeting, Palm Springs, CA, May 25-26.
- Capalbo, S.M. (2005). "Big Sky Carbon Sequestration Regional Partnership." Presentations to Energy Northwest and Portland General, Portland, OR, May 17-19.
- Capalbo, S.M. (2005). "Big Sky Regional Carbon Sequestration Partnership." Fourth Annual Conference on Carbon Capture and Sequestration, *Developing Potential Paths Forward Based on the Knowledge, Science and Experience to Date*, Alexandria, VA, May 2-5.
- Shropshire, D. and S. Capalbo. (2005). "Policy Implications from Regional Energy Growth." Presented at the Fourth Annual Conference on Carbon Capture and Sequestration, *Developing Potential Paths Forward Based on the Knowledge, Science and Experience to Date*, Alexandria, VA, May 2-5.
- Capalbo, S.M. (2005). "Big Sky Carbon Sequestration Regional Partnership." Presented to the University of Massachusetts review team, Hartford, CT, April 27-29.
- Antle, J., S. Capalbo and K. Paustian. (2005) "Estimating the Economic Potential for Agricultural Soil Carbon Sequestration in the Central U.S. Using an Aggregate Econometric-Process Simulation Model." Presented at the Third USDA Symposium on Greenhouse Gases and Carbon Sequestration in Agriculture and Forestry, Baltimore, MD, March 21-24.
- Capalbo, S.M. (2004). "Economics of Carbon Sequestration." Presented at the Consortium of Agricultural Soils Mitigation of Greenhouse Gases Conference, *Carbon Sequestration: Opportunities in the Eastern Corn Belt*, Indianapolis, IN, December 15-16.
- Capalbo, S.M. (2004). "Big Sky Carbon Sequestration Regional Partnership: Update." Presented at the Regional Carbon Sequestration Partnerships Annual Program Review Meeting, Pittsburgh, PA, November 16-17.
- Capalbo, S.M. (2004). "Big Sky Carbon Sequestration Regional Partnership: Terrestrial Sequestration." Presented at the Regional Carbon Sequestration Partnerships Annual Program Review Meeting, Pittsburgh, PA, November 16-17.
- Capalbo, S., T. McLing, and R. Smith. (2004). "Carbon Sequestration: The Big Sky Regional Partnership." Presented at the Western Fuels Symposium, Billings, MT, October 13-14.
- Capalbo, S., S. Mooney, and K. Paustian. (2004). "Sensitivity of Carbon Sequestration Costs to Economic and Biological Uncertainties." Presented at the INRA and INEEL Symposium, *Environmental and Subsurface Science Applied to Energy, Nuclear, and National Security Research*, Spokane, WA, September 21.
- Capalbo, S.M. (2004). "Overview of Big Sky Partnership and Terrestrial Sequestration." ASME Carbon Sequestration Symposium, Idaho National Engineering and Environmental Laboratory (INEEL), Idaho Falls, ID, August 26.

- Capalbo, S.M. (2004). "Overview of Big Sky Partnership and Terrestrial Sequestration." Presentation at the Pioneer Hi-Bred International, Inc. meeting, Des Moines, IA, August 18-19.
- Capalbo, S.M. (2004). "Big Sky Regional Carbon Sequestration Partnership: Overview." Presented at the Western Governors' Association 2004 Annual Meeting, Santa Fe, NM, June 20.
- Capalbo, S.M. (2004). "Big Sky Regional Carbon Sequestration Partnership: Sources and Sinks." Presented at the Western Governors' Association 2004 Annual Meeting, Santa Fe, NM, June 20.
- Antle, J.M., S. Capalbo, and K. Paustian. (2004). "Estimating Economic Potential for Ag Soil Carbon Sequestration Using the Opportunity Cost Approach: Results for the Central United States." Presented at the Third Annual Conference on Carbon Capture and Sequestration, Alexandria, VA, May 4.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K. Paustian. (2004). "What are the Economic Costs of Measuring and Monitoring Soil Carbon?" Presented at the Third Annual Conference on Carbon Capture and Sequestration, Alexandria, VA, May 3-6.
- Capalbo, S.M. and J.M. Antle. (2004). "MSU Project Plan and Approach." Presented at the Big Sky Carbon Sequestration Regional Partnership Meeting, Los Alamos National Laboratory, Los Alamos, NM, March 1-3.
- Antle, J.M. and S.M. Capalbo. (2004). "Integrating Economic and Biophysical Models for Assessing Carbon Sequestration Potentials through Land Use Changes." Presented at the Big Sky Carbon Sequestration Regional Partnership Meeting, Los Alamos National Laboratory, Los Alamos, NM, March 1-3.
- Antle, J.M. and S.M. Capalbo. (2004). "Economic Potential for Soil C Sequestration in the Central U.S.: The Opportunity Cost Approach." Presented at the Agriculture and Energy Industry Partnerships for Soil Carbon Sequestration to Offset Greenhouse Gases conference at Texas A&M University, College Station, TX, January 21.
- Capalbo, S.M. and D.E. Shropshire. (2004). "Montana Regional Carbon Sequestration Partnership." Presented at the 7th Electric Utilities Environmental Conference, *Air Quality, Global Climate Change and Renewable Energy*, Tucson, AZ, January 19-22.
- Capalbo, S.M. (2003)."The Northern Rockies and Great Plains Regional Carbon Sequestration Partnership." Presented at the Department of Energy Regional Carbon Sequestration Partnership Kickoff Meeting, Pittsburgh, PA, November 3-4.
- Antle, J.M. and S.M. Capalbo. (2003). "Synergies, Surprises and Schwarzenegger: Designing Policy-Relevant Science." Presented at the Center for Natural Resources Policy Analysis, University of California, Davis, October 23.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K.H. Paustian. (2003). "Uncertainty in Econometric-Process Models: The Case of Soil Carbon Sequestration." Paper presented at the American Agricultural Economics Association Annual Meetings, Montreal, Quebec, July 27-30.
- Capalbo, S.M. (2003). "Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS)." Informal presentation and poster for the Governor of Montana and State Legislators, Helena, MT, February 6.
- Capalbo, S., J.A. Antle, S. Mooney, and K. Paustian. (2003). "Sensitivity of Carbon Sequestration Costs to Scale and to Economic and Biological Uncertainties." Presented at the Allied Social Science Association (ASSA) Annual Meetings, Washington, DC, January 5.
- Antle, J.M., R. Bricklemyer, S.M. Capalbo, R. Engel, and P. Miller. (2002). "Montana State University Research on Soil Carbon Sequestration." Presented at the Power Generation/Industry Workshop, Governor's Carbon Sequestration Working Group, Helena, MT, December 12.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K.H. Paustian. (2002). "Costs of Measuring Soil Carbon." Presented at the USDA Carbon Symposium on Natural Resource Management to Offset Greenhouse Gas Emissions, Raleigh, NC, November 20.
- Capalbo, S.M., J.M. Antle, S. Mooney, and K.H. Paustian. (2002). "Spatial Heterogeneity and Scale: Implications for Carbon Sequestration Policies for Agriculture." Presented at the USDA Carbon Symposium on Natural Resource Management to Offset Greenhouse Gas Emissions, Raleigh, NC, November 19.Antle, J.M., S.

- Mooney, S.M. Capalbo, K.H. Paustian. (2002). "Design and Cost of a Measuring and Monitoring Scheme for Soil Carbon Credits." Presented at the Soil Science Society of America annual meetings, Indianapolis, IN, November 11.
- Paustian, K., J. Antle, S. Capalbo, and S. Mooney. (2002). "Science, Policy and Economics of Agricultural Sequestration." Presented at the Environmental Defense Annual Science Day, Menlo Park, CA, September 19.
- Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott, and K.H. Paustian. (2002). "Montana State University Program on Climate Change and Greenhouse Gas Mitigation." Presented to the Governor's Carbon Sequestration Working Group, NCRS Office, Missoula, MT, October 21.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K.H. Paustian. (2002). "Soil Carbon Measurement Costs and Protocols Using a Linked Economic and Biophysical Model." Presented at the Forestry and Agriculture Greenhouse Gas Modeling Forum, Shepherdstown, WV, October 9.
- Mooney, S., J.M. Antle, S.M. Capalbo, and K.H. Paustian. (2002). "A Measurement Protocol for Soil C: Influence on Efficient Contract Design." Selected paper presented at the AAEA Annual Meetings, Long Beach, CA, July 30.
- Antle, J.M., S.M. Capalbo, S. Mooney, E.T. Elliott, and K.H. Paustian. (2002). "Opportunity Costs of Supplying Soil C: Sensitivity to Estimated Soil C Rates." Poster presented at the AAEA Annual Meetings, Long Beach, CA, July 28-31.
- Antle, J.A., S. Capalbo, S. Mooney, E. Elliott, and K. Paustian. (2002). "Spatial Heterogeneity, Contract Design, and the Efficiency of Carbon Sequestration Policies for Agriculture." Paper presented at the 2rd World Congress of Environmental and Resource Economists, Monterey, CA, June 25.
- Antle, J.M., S.M. Capalbo, S. Mooney, H.W. Hunt, and K.H. Paustian. (2002). "Close-Coupling of Ecosystem and Economic Models: Adaptation of Central U.S. Agriculture to Climate Change." Presented at EPA STAR annual review, Washington, DC, January 15.
- Antle, J.M. and S.M. Capalbo. (2001). "Agriculture as a Managed Ecosystem: Policy Implications." Invited paper presented at the meetings of the Western Agricultural Economics Association, Logan, Utah, July 10.
- Antle, J., S. Capalbo, S. Mooney, E. Elliott, and K. Paustian. (2001). "Spatial Heterogeneity and the Design of Efficient Policies for Soil Carbon Sequestration." Invited presentation at a seminar at North Dakota State University, July 26.
- Antle, J., S. Capalbo, S. Mooney, E. Elliott, and K. Paustian. (2001). "Could Agriculture Compete in a Market for Carbon?" Paper presented at a meeting on Carbon Sequestration held by the Montana Carbon Offset Coalition, Bozeman, February 7.
- Antle, J., S. Capalbo, S. Mooney, E. Elliott, and K. Paustian. (2001). "Could Agriculture Compete in a Market for Carbon? Results from a Study of Montana Dryland Grain Production." Paper presented at the 4th Annual National Wheat Industry Research Forum sponsored by the National Association of Wheat Growers, New Orleans, February 2.
- Antle, J.M., S.M. Capalbo, and S. Mooney. (2000). "Econometric Analysis of Soil Carbon Sequestration." Selected paper presented at AAEA Annual Meetings, Tampa, FL, August.
- Capalbo, S.M. (2000). "Policy Design Issues for Carbon Sequestration in Forestry and Agriculture." Organized this symposium at the AAEA Annual Meetings, Tampa, FL, August.
- Capalbo, S.M. (2000). "Policy Design for Carbon Sequestration in Dryland Agriculture in the Great Plains." Presented at the *Policy Design Issues for Carbon Sequestration in Forestry and Agriculture* symposium at the AAEA Annual Meetings, Tampa, FL, August.
- Antle, J.M., S.M. Capalbo, and S. Mooney. (2000). "Policy Design and Carbon Sequestration Costs." Paper presented at the Advances in Terrestrial Ecosystem Carbon Inventory, Monitoring and Sequestration USFS Conference, Raleigh, NC, October 3-5.
- Antle, J.M., S.M. Capalbo, and J.A. Hewitt. (2000). "Testing Hypotheses in Integrated Impact Assessments: Climate Variability and Economic Adaptation in Great Plains Agriculture." Annual report presented at the annual meeting of the National Institute for Global Environment Change (NIGEC), Lincoln, NE, April 2-3.

- Antle, J.M., S.M. Capalbo, and S. Mooney. (2000). "Economics of Agricultural Soil C Sequestration in the Northern Plains." Presented at a departmental seminar at the University of Arkansas, June 15.
- Antle, J.M. and S.M. Capalbo. (2000). "Economics of Soil Carbon Sequestration." Presented at a departmental seminar at Washington State University, March 8.
- Antle, J.M. and S.M. Capalbo. (2000). "Climate Change and Carbon Sequestration: An Integrated Assessment Analysis." Presented at a departmental seminar at the University of Rhode Island, October 13.
- Antle, J.M. and S.M. Capalbo. (2000). "Econometric-Process Models and Integrated Assessment Analysis." Presented at a departmental seminar at Oregon State University, October 20.
- Capalbo, S.M. (1997). "Evaluating Economic and Environmental Tradeoffs in Agricultural Production Systems." Presentation at the *Forward Planning Concepts: Application and Interpretation*, Western Regional Meetings for County Extension Agents, Big Sky, MT, October 6-9.
- Capalbo, S.M., W. Koo, J. Antle, and J. Johnson. (1997). "Implications of Changes in International Market Conditions and Domestic Policies for Wheat Producers and Agricultural Sustainability in the Northern Plains." Presented at the workshop on *The Economics of World Wheat Markets: Implications for North America*, sponsored by the Trade Research Center at Montana State University-Bozeman, May 29-June 1.
- Capalbo, S.M. (1996). "Modeling the Economic Impacts of Climate Change in the Great Plains Region." Presentation to the National Institute for Global Climate Change Annual Workshop, Nebraska City, NE, October 9-10.
- Johnson, J., J. Antle, and S.M. Capalbo. (1995)."Results of Sustainable Agriculture Pilot Project in Montana." Symposium presentation at the AAEA meetings, Indianapolis, IN, August.
- Antle, J. and S. Capalbo. (1995). "Incorporating Economic Environmental and Health Evaluations into IPM Research." Presentation at USDA/IPM Workshop, Big Sky, MT, July.
- Antle, J. and S. Capalbo. (1995). "Role of Economics in Ecosystem Management: Agricultural Landscapes." Presentation at the MRC Conference, *Ecosystem Management in the Northern Rockies: Integrating Forest, Agriculture, and Wilderness Landscapes,* Montana State University, June 22-24.
- Capalbo, S.M., J.M. Antle, and J. Johnson. (1994)."Sustainable Agriculture in Northern Plains and Foothill Mountain Environments." Symposium presentation at the AAEA meetings, San Diego, CA, August.
- Antle, J.M., S.M. Capalbo, and C.C. Crissman. (1992). "Integrated Economic, Environmental, and Health Analysis of Policy Options for the Carchi Project." Paper presented for the conference, *Measuring the Health and Environmental Effects of Pesticides*, Bellagio, Italy, April.
- Capalbo, S.M., J. Friesen, and M. Denny. (1990). "Dynamic Factor Demands in U.S. and Canadian Agriculture." Selected paper for 1990 AAEA meetings, Vancouver, BC, August.
- Capalbo, S.M. (1990). "The Measurement and Valuation of Agricultural Chemical Use: An Economist's Perspective." Paper presented at American Association for Advancement of Science (AAAS) meeting, New Orleans, LA, February.
- Capalbo, S.M. (1987). "The Effects of Technical Change on the Use and Value of Natural Resources." Paper presented at Resources for the Future/USDA Workshop, *Linkages Between Natural Resources and International Trade*, Washington, DC, March.
- Capalbo, S.M. (1986). "Measuring the Components of Agricultural Productivity." Selected paper presented at Annual Meetings of the American Agricultural Economics Association, Reno, NV.
- Capalbo, S.M. and M. Denny. (1985). "Testing Productivity Models." Paper presented at Annual Meetings of ASSA/AEA, Dallas, TX, December 1984; revised version presented at Annual Meetings of CEA, Montreal, Quebec, Canada.
- Capalbo, S.M. (1984). "Transboundary Renewable Resources and Imperfect Competition: The Implications for Fishery Management Policy." Paper presented at the Sixth Annual Conference of the Society for Economic Dynamics and Control, Nice, France, June.
- Capalbo, S.M. and R. Howitt. (1984). "Bioeconomic Supply and Imperfect Competition: A Policy Model for an Internationally Utilized Resource." Paper presented at Second Conference of the International Institute of Fisheries Economics and Trade, Christ Church, New Zealand, August.