CURRICULUM VITA OF JOHN P. REGANOLD

Phone: (509) 335-8856 ADDRESS: 115 Johnson Hall Department of Crop & Soil Sciences FAX: (509) 335-8674 email: reganold@wsu.edu Washington State University Pullman, WA 99164-6420 APPOINTMENT: Regents Professor of Soil Science & Agroecology FACULTY SPECIALIZATION: Soil Quality and Sustainable Agriculture **CONTENTS:** EDUCATION: B.A. German 1971 University of California, Berkeley 1974 University of California, Berkeley M.S. Soil Science Ph.D. Soil Science 1980 University of California, Davis PROFESSIONAL EXPERIENCE: 1971-1974 Research Assistant, University of California, Berkeley 1974-1980 Soil Scientist, U.S.D.A. Soil Conservation Service, Santa Cruz, San Luis Obispo, and Davis, California 1975-1976 Soils Instructor, Cabrillo College, Aptos, California Soils Instructor (Summer Session), Univ. of California, Davis & Berkeley 1977, 1978, 1980 1980-1983 Environmental Engineer, Utah International Inc., San Francisco, California 1983-now Regents Professor of Soil Science (as of 7/2006); Professor (as of 7/1994); Associate Professor (as of 7/1989); Assistant Professor (8/1983), Washington State University; appointment 60% teaching/40% research (8/1983 to 12/2001) and 55% research/45% teaching since 1/2002. 2006-now Director of the WSU AFS Organic Agriculture Systems Major

Director of the WSU Certificate in Organic Agriculture Program

2009-now

SCHOLARLY INTERESTS AND EXPERTISE:

1. Analyzing the sustainability and agroecology of farming systems, including biodynamic, conventional, integrated, no-till, organic, and perennial-grain farming systems; sustainability indicators measured include soil health, crop quality, financial performance, environmental quality, and social responsibility;

- 2. Analyzing soil quality metrics and land-use classification systems;
- 3. Analyzing and developing metrics for global food production systems and prime agricultural lands; and
- 4. Fostering critical thinking and problem-solving abilities with undergraduate and graduate students in the classroom and during advising sessions.

SCHOLARLY AWARDS AND RECOGNITIONS:

Associate Editor, *Journal of Life Sciences and Natural Resources Education*, 1986 to 1992 Contributing Editor, *Gourmet* magazine, 2004-2009

Board of Advisors, Scientific American, 2009-2016

R.M. Wade Foundation Award for Excellence in Teaching in the College of Agricultural, Human, and Natural Resource Sciences, Washington State University, 1988

President's (Sahlin) Faculty Excellence Award for Instruction, Washington State University, 1990

Junior Faculty Excellence Award in Research in the College of Agriculture and Home Economics, Washington State University, 1994

Nominated for the 1994 Australia Prize, Department of Industry, Technology and Commerce, Canberra, Australia

Distinguished Faculty Address Award, Washington State University, 2006

Regents Professor of Soil Science, Washington State University, 2006-now

Member, National Academy of Sciences 21st Century Agricultural Systems Committee, 2007-2010

Member, AGree Food Policy Research Committee, 2011-now

Science Research Award, The Organic Center, 2011

Elected to the Washington State Academy of Sciences in 2012

Invited TEDx talk at Washington State University on 26 April 2014

Natural Resources Defense Council and Berkeley Food Institute Growing Green Award: Sustainable Food and Farm Educator, 2014

American Society of Agronomy Organic Achievement Award, 2014

Eminent Faculty Award, Washington State University, 2015

Elected Fellow of the American Association for the Advancement of Science (AAAS), 2019

VISITING SCIENTISTS AND INNOVATORS:

Chuck Benbrook, Agroecologist, The Organic Center, Sandpoint, ID, 2004 and 2005

Mike Benziger, Benziger Family Winery, Glen Ellen, CA, 2015

Denise Breyley, Local Forager, Whole Foods Market Pacific Northwest, Seattle, WA, 2013-2015 Chuck Eggert, CEO, Pacific Foods, Tualatin, OR, 2009

Jerry Glover, Agroecologist, The Land Institute, Salina, Kansas, 2004 and 2005

David Huggins, Asst. Professor, Dept. of Soil Science, University of Minnesota, St. Paul, 1993 Wes Jackson, President, The Land Institute, Salina, Kansas, 1998

John Kiefer, Environmental Engineer, Utah International Inc., San Francisco, CA, 1984 Sasha Kramer, Agroecologist, Stanford University, Stanford, CA, 2003.

Carlo Leifert, Director, TESCO Centre for Organic Agriculture and Professor of Ecological Agriculture, University of Newcastle, Newcastle-on Tyne, England, 2016

James Lockhart, Lecturer, Department of Agricultural and Horticultural Systems Management, Massey University, Palmerston North, New Zealand, 1991

Alec McErlich, Head of Research, Small Planet Foods, Sedro Wooley, Washingotn, 2002
Don McFarland, President, Biological Farmers of Australia, Sidney, New South Wales, 1994
Ian Merwin, Assoc. Professor, Dept. of Horticulture, Cornell University, Ithaca, New York, 2000
Harold Mooney, Professor, Department of Biological Sciences, Stanford University, Stanford, CA, 2005

Alan Palmer, Senior Lecturer, Department of Soil Science, Massey University, Palmerston North, New Zealand, 1996 and 2003

James Parr, Soil Scientist, USDA Agricultural Research Service, Beltsville, Maryland, 1990 Jim Richardson, Science Photographer, National Geographic, Washington, DC, 2007.

Joe Rogoff, President, Whole Foods Market Pacific Northwest Region, Seattle, WA, 2013 Walter Robb, Co-CEO, Whole Foods Market, Austin, TX, 2012

Paul Saffigna, Associate Professor, Program in Environmental Sciences, Griffith University, Brisbane, Queensland, Australia. 1995

Bob Scowcroft, Exec. Director, Organic Farming Research Foundation, Santa Cruz, CA, 2004 Sieglinda Snapp, Professor, W.K. Kellogg Biological Station, Department of Plant, Soil and Microbial Sciences, Michigan State University, 2009

Steve Temple, Professor, Dept. Agronomy & Range Sci., Univ. of Calif., Davis, 1999 Alan York, Viticulture Consultant, Wholistic Estate Management, Hopland, CA, 2000, 2004.

INTERNATIONAL COLLABORATIONS:

J. Bay-Petersen, Food and Fertilizer Technology Center, Suwon, SOUTH KOREA Stéphane Bellon, INRA, Avignon, FRANCE

Trent Bunderson, Total LandCare, Lilongwe, MALAWI

Ken Cassman, ISPC of the CGIAR, University of Nebraska, Lincoln, NEBRASKA

Robert Costanza, The Australian National University, Acton, AUSTRALIA

Cindy Cox, International Food Policy Research Institute, Washington, D.C., USA

Miguel Elissalt and Jose Guillisasti, Emilliana Vineyards, Casablanca, CHILE

Alvaro Espinoza, Antiyal Vineyards and Winery, Paine, CHILE

Frank Eyhorn, Research Institute of Organic Agriculture, Frick, SWITZERLAND.

Tom Forge, Agriculture and Agri-Food Canada, Agassiz, British Columbia, CANADA Bruno Gérard, CIMMYT, Mexico City, MEXICO

Bruno Gerard, Chvivi i 1, Mexico City, MEXICO

H. Charles J. Godfray, Oxford Martin School, University of Oxford, Oxford, UK

Hans Herren, Millenium Institute, Washington, DC, USA

Marco Jacometti, Lincoln University, Lincoln, NEW ZEALAND

Zwide Jere, Total LandCare, Lilongwe, MALAWI

Johnny Johnston, Rothamsted Experitment Station, Rothamsted, UNITED KINGDOM

Claire Kremen, University of British Columbia, Vancouver, CANADA

Paul Kristiansen, University of New England, Armidale, New South Wales, AUSTRALIA

Michael Lee, Rothamsted Research North Wyke and Univ. of Bristol, UK

James Lockhart, Massey University, Palmerston North, NEW ZEALAND

Heidi Lumpkin, Asian Vegetable Research & Development Center, TAIWAN

Patrick Madden, World Sustainable Agriculture Association, Tokyo, JAPAN

Paul Mäder, Research Institute of Organic Agriculture, Frick, SWITZERLAND

Adrian Mueller, Federal Institutes of Technology, Zurich, SWITZERLAND

Alexander Mueller, TMG Think Tank for Sustainability, Berlin, GERMANY

Alan Palmer, Massey University, Palmerston North, NEW ZEALAND

Kyung-Ae Park, Korea Foundation Chair, University of British Columbia, Vancouver, CANADA

James Parr, Indian Society of Agronomy, New Delhi, INDIA

John Porter, University of Copenhagen, DENMARK

Jules Pretty, University of Essex, Colchester, UNITED KINGDOM

Navin Ramankutty, University of British Columbia, Vancouver, CANADA

Johan Rockström, Stockholm Resilience Centre, Stockholm, SWEDEN

Ignacio Romagosa, University of Lleida, Lerida, SPAIN

Paul Saffigna, Griffith University, Brisbane, Queensland, AUSTRALIA

Harpinder Sandhu, Flinders University, Adelaide, SA, AUSTRALIA

Nadia El-Hage Scialabba, TMG Think Tank for Sustainability, Berlin, GERMANY

Verena Seufert, Institute for Environ. Studies, VU Univ. Amsterdam, THE NETHERLANDS

Pete Smith, University of Aberdeen, Aberdeen, UK.

Acram Taji, University of New England, Armidale, New South Wales, AUSTRALIA

Christian Thierfelder, CIMMYT, Harare, ZIMBABWE

Jason Tylianakis, University of Canterbury, Christchurch, NEW ZEALAND

Steve Wratten, Lincoln University, Lincoln, NEW ZEALAND

PROFESSIONAL LEAVES:

1990-1991 12-month sabbatical at Massey University, Palmerston North, New	Zealand;
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conducted research measuring soil quality and financial performance of

biodynamic and conventional farms.

1997-1998 12-month sabbatical at University of Hawaii at Manoa, Honolulu; co-wrote

textbook, Natural Resource Conservation (published in 1998), and studied

tropical soils and farming systems.

2003-2004 12-month sabbatical at Fetzer Vineyards, Hopland, California, and University of

California at Davis, California; began work on co-edited book, *Organic Agriculture: A Global Perspective* (published in 2006), and conducted

agroecological research on research plots at McNab Ranch near Hopland, CA.

2009-2010 12-month sabbatical at The Land Institute, Salina, Kansas, and at Sustainable

Systems Design, Inc., Evergreen, CO; conducted research with (i) perennial grain systems and (ii) metrics for monitoring global farming systems, and revised my textbook, *Natural Resource Conservation: Management for a Sustainable*

Future (published in 2010).

PUBLICATIONS:

Books and Edited Books

1. Owen, O.S., D.D. Chiras, and J.P. Reganold. 1998. *Natural Resource Conservation: Management for a Sustainable Future, 7th edition.* Prentice Hall, Upper Saddle River, New Jersey. 594 pp.

- 2. Chiras, D.D., J.P. Reganold, and O.S. Owen. 2002. *Natural Resource Conservation: Management for a Sustainable Future, 8th edition.* Prentice Hall, Upper Saddle River, New Jersey. 640 pp.
- 3. Chiras, D.D. and J.P. Reganold. 2005. *Natural Resource Conservation: Management for a Sustainable Future, 9th edition.* Prentice Hall, Upper Saddle River, New Jersey. 644 pp.
- 4. Kristiansen, P., A. Taji, and J. Reganold (eds.). 2006. *Organic Agriculture: A Global Perspective*. CSIRO Publishing, Collingwood, Victoria, Australia. 449 pp.
- 5. Chiras, D.D. and J.P. Reganold. 2010. *Natural Resource Conservation: Management for a Sustainable Future, 10th edition*. Prentice Hall, Upper Saddle River, New Jersey. 659 pp.
- 6. Committee on Twenty-First Century Systems Agriculture (J.L. Kornegay, R.R. Harwood, S.S. Batie, D. Bucks, C.B. Flora, J. Hanson, D. Jackson-Smith, W. Jury, D. Meyer, J.P. Reganold, A. Schumacher, Jr., H. Sehmsdorf, C. Shennan, L.A. Thrupp, and P. Willis). 2010. *Toward Sustainable Agricultural Systems in the 21st Century*. National Research Council, The National Academies Press, Washington, D.C. 570 pp.

Refereed Journal and Magazine Articles

- 7. Reganold, J.P. and M.J. Singer. 1979. Defining prime farmland by three different land classification systems. *Journal of Soil and Water Conservation* 34:172-176.
- 8. Reganold, J.P. and M.J. Singer. 1984. Comparing farm production input/output ratios using two land classification systems. *Journal of Soil and Water Conservation*. 39:47-53.
- 9. Reganold, J.P. and J.B. Harsh. 1985. Expressing cation exchange capacity in milliequivalents per 100 grams and SI units. *Journal of Agronomic Education* 14:84-90.
- 10. Rozenbaum, S.J. and J.P. Reganold. 1986. State farmland preservation programs within the upper Mississippi River Basin: A comparison. *Landscape Planning* 12:315-336.
- 11. Reganold, J.P. 1986. The Land Capability Classification System. *Northwest Land Use Review* 2:11-13.
- 12. Reganold, J.P. 1986. Prime agricultural land protection: The Washington State experience. *Journal of Soil and Water Conservation* 41:89-92.
- 13. Reganold, J.P. and G.R. Christensen. 1986. Boundary Review Boards: A legislative approach to manage growth conflicts in the urban fringe in Washington State. *Landscape and Urban Planning* 13:183-197.
- 14. Reganold, J.P. 1986. Evaluating two different introductory soils texts by comparing student exam and homework scores. *Journal of Agronomic Education* 15:107-110.
- 15. Reganold, J.P., L.F. Elliott and Y.L. Unger. 1987. Long-term effects of organic and conventional farming on soil erosion. *Nature* 330:370-372.
- 16. Jennings, M.D. and J.P. Reganold. 1988. Policy and reality of environmentally sensitive areas in Whitman County, Washington, USA. *Environmental Management* 12:369-380.

17. Christensen, G.R., W.W. Budd, J.P. Reganold and F.R. Steiner. 1988. Farmland protection in Washington State: An analysis. *Journal of Soil and Water Conservation* 43:411-415.

- 18. Reganold, J.P. 1988. Comparison of soil properties as influenced by organic and conventional farming systems. *American Journal of Alternative Agriculture* 3:144-155.
- 19. Reganold, J.P. and J.F. Parr. 1988. IFOAM conference focuses on agricultural alternatives and nutritional self-sufficiency for developing countries. *American Journal of Alternative Agriculture* 3:186.
- 20. Huyck, L.M. and J.P. Reganold. 1989. Environmental policies and issues surrounding Holden Mine tailings: A case study of an orphaned mine. *Environmental Impact Assessment Review* 9:97-123.
- 21. Jennings, M.D. and J.P. Reganold. 1989. Local government policies toward environmentally sensitive areas in British Columbia, Canada; Washington and Oregon, USA. *Environmental Management* 13:443-453.
- 22. Reganold, J. 1989. Farming's organic future. New Scientist 122(10 June):49-52.
- 23. Reganold, J.P., R.I. Papendick and J.F. Parr. 1990. Sustainable agriculture. *Scientific American* 262(June):112-120.
- 24. Reganold, J.P. 1990. Organic and conventional farming: What's the difference? *Acres Australia: The Journal of Sustainable Agriculture* 4:30-33.
- 25. Reganold, J.P., R.I. Papendick, and J.F. Parr. 1990. Sustainable agriculture, the living soil. *Journal of Chiropractic* 27:61-67.
- 26. Jennings, M.D. and J.P. Reganold. 1991. Hierarchy and subsidy-stress as a theoretical basis for managing environmentally sensitive areas. *Landscape and Urban Planning* 21:31-45.
- 27. Jennings, M.D. and J.P. Reganold. 1991. A theoretical basis for managing environmentally sensitive areas. *Environmental Conservation* 18:211-218.
- 28. Mulla, D.J., L.M. Huyck and J.P. Reganold. 1992. Temporal variation in aggregate stability on conventional and alternative farms. *Soil Science Society of America Journal* 56:1620-1625.
- 29. Reganold, J.P., A.S. Palmer, J.C. Lockhart, and A.N. Macgregor. 1993. Soil quality and financial performance of biodynamic and conventional farms in New Zealand. *Science* 260:344-349.
- 30. Reganold, J.P. 1994. Statistical analyses of soil quality. Science 264:282-283.
- 31. Crowe, E.A., A.J. Busacca, J.P. Reganold, and B.A. Zamora. 1994. Vegetation zones and soil characteristics in vernal pools in the Channeled Scabland of eastern Washington. *Great Basin Naturalist* 54:234-247.
- 32. Reganold, J.P. 1995. Soil quality and farm profitability of biodynamic and conventional farming systems: A review. *American Journal of Alternative Agriculture* 10:36-45.
- 33. Reganold, J.P. and A.S. Palmer. 1995. Significance of gravimetric and volumetric measurements of soil quality under biodynamic, conventional, and continuous grass management. *Journal of Soil and Water Conservation* 50:298-305.
- 34. Klein, L.R. and J.P. Reganold. 1997. Agricultural changes and farmland protection in western Washington. *Journal of Soil and Water Conservation* 52:6-12.
- 35. Carpenter-Boggs, L., A.C. Kennedy, and J.P. Reganold. 1998. Use of phospholipid fatty acids and carbon source utilization patterns to track microbial community succession in developing compost. *Applied and Environmental Microbiology* 64:4062-4064.
- 36. Carpenter-Boggs, L., J.P. Reganold, and A.C. Kennedy. 2000. Effects of biodynamic preparations on compost development. *Biological Agriculture and Horticulture* 17:313-328.

37. Glover, J.D., J.P. Reganold, and P.K. Andrews. 2000. Systematic method for rating soil quality of conventional, organic, and integrated apple orchards in Washington State. *Agriculture, Ecosystems & Environment* 80:29-45.

- 38. Carpenter-Boggs, L., J.P. Reganold, and A.C. Kennedy. 2000. Biodynamic preparations: Short-term effects on crops, soils, and weed populations. *American Journal of Alternative Agriculture* 15:110-118.
- 39. Carpenter-Boggs, L., A.C. Kennedy, and J.P. Reganold. 2000. Organic and biodynamic management: Effects on soil biology. *Soil Science Society of American Journal* 64:1651-1659.
- 40. Glover, J.D., P.K. Andrews, and J.P. Reganold. 2000. Applying a soil quality index to conventional, integrated, and organic apple production systems. *Acta Horticulture* 525:217-228.
- 41. Reganold, J.P., J.D. Glover, P.K. Andrews, and H.R. Hinman. 2001. Sustainability of three apple production systems. *Nature* 410:926-930.
- 42. Reganold, J.P., J.D. Glover, P.K. Andrews, and H.R. Hinman. 2001. Melicoltura convenzionale, integrata o biologica? Una scelta difficile. *Fruitticoltura* 63:33-36.
- 43. Andrews, P.K., J.K. Fellman, J.D. Glover, and J.P. Reganold. 2001. Soil and plant mineral nutrition and fruit quality under organic, conventional, and integrated apple production systems in Washington State, USA. *Acta Horticulturae* 564:291-298.
- 44. Mazzola, M., P.K. Andrews, J.P. Reganold, and C. Andre Levesque. 2002. Frequency, virulence and metalaxyl sensitivity of *Pythium* spp. isolated from apple roots under conventional and organic production systems. *Plant Disease* 86:669-675.
- 45. Andrews, P.K. and J.P. Reganold. 2004. Research networking to evaluate the sustainability of horticultural production systems. *Acta Horticulturae* 638:359-368.
- 46. Peck, G.M., C. Richter, P.K. Andrews, and J.P. Reganold. 2005. Internationalization of the organic fruit market: The case of Washington State's organic apple exports to the European Union. *Renewable Agriculture and Food Systems* 20:101-112.
- 47. Reeve, J.R., L. Carpenter-Boggs, J.P. Reganold, A.L. York, G. McGourty, and L.P. McCloskey. 2005. Soil and winegrape quality in biodynamic and organically managed vineyards. *American Journal of Enology and Viticulture* 56:367-376.
- 48. Peck, G.M., P.K. Andrews, J.P. Reganold, and J.K. Fellman. 2006. Apple orchard productivity and fruit quality under organic, conventional, and integrated management. *HortScience* 41:99-107.
- 49. Kramer, S.B., J.P. Reganold, J.D. Glover, B.J.M. Bohannan, and H.A. Mooney. 2006. Reduced nitrate leaching and enhanced denitrifier activity and efficiency in organically fertilized soils. *Proceedings of the National Academy of Sciences USA* 103:4522-4527.
- 50. Reganold, J. 2006. Sustainability of organic, conventional, and integrated apple orchards. *Crop Management*. doi:10.1094/CM-2006-0921-16-PS
- 51. Glover, J.D., C.M. Cox, and J.P. Reganold. 2007. Future farming: A return to roots? *Scientific American* 297(Aug):82-89.
- 52. Huggins, D.R. and J.P. Reganold. 2008. No-till: The quiet revolution. *Scientific American* 299(July):70-77.
- 53. Hoagland, L., L. Carpenter-Boggs, J.P. Reganold, and M. Mazzola. 2008. Role of native soil biology in Brassicaceous seed meal-induced weed suppression. *Soil Biology and Biochemistry* 40:1689-1697.
- 54. Hoagland, L., L. Carpenter-Boggs, D. Granatstein, M. Mazzola, J. Smith, F. Peryea, and J.P.

Reganold. 2008. Orchard floor management effects on nitrogen fertility and biological soil activity in a newly established organic apple orchard. *Biology and Fertility of Soils* 45:11-18.

- 55. Reeve, J.R., J.L. Smith, L. Carpenter-Boggs, and J.P. Reganold. 2008. Soil-based cycling and differential uptake of amino acids by three species of strawberry (*Fragaria spp.*) plants. *Soil Biology and Biochemistry* 40:2547-2552.
- 56. Huggins, D.R. and J.P. Reganold. 2008. No-till farming: Justifiable herbicide? *Scientific American* 299(Nov):12.
- 57. Reeve, J.R., J.L. Smith, L. Carpenter-Boggs, and J.P. Reganold. 2009. Glycine, nitrate and ammonium uptake by classic and modern wheat varieties in a short-term microcosm study. *Biology and Fertility of Soils* 45:723-732.
- 58. Ross, C.F., K.M. Weller, R. B. Blue, and J.P. Reganold. 2009. Difference testing of Merlot produced from biodynamically and organically grown wine grapes. *Journal of Wine Research* 20:85-94.
- 59. Glover, J.D. and J.P. Reganold. 2010. Perennial grains: Food security for the future. *Issues in Science and Technology* 26(Winter):41-47.
- 60. Reeve, J.R., L. Carpenter-Boggs, J.P. Reganold, A. York, and W.F. Brinton. 2010. Influence of biodynamic preparations on compost development and resultant compost extracts on wheat seedling growth. *Bioresource Technology* 101:5658–5666.
- 61. TerAvest, D., J.L. Smith, L. Carpenter-Boggs, L. Hoagland, D. Granatstein, and J.P. Reganold. 2010. Influence of orchard floor management and compost application timing on nitrogen partitioning in apple trees. *HortScience* 45:637–642.
- 62. Reeve, J.R., C.W. Schadt, L. Carpenter-Boggs, S. Kang, J. Zhou, and J.P. Reganold. 2010. Effects of soil type and farm management on soil ecological functional genes and microbial activities. *ISME Journal* 4:1099-1107.
- 63. Glover, J.D., J.P. Reganold, L.W. Bell, J. Borevitz, E.C. Brummer, E.S. Buckler, C.M. Cox, T.S. Cox, T.E. Crews, S.W. Culman, L.R. DeHaan, D. Eriksson, B.S. Gill, J. Holland, F. Hu, B.S. Hulke, A.M.H. Ibrahim, W. Jackson, S.S. Jones, S.C. Murray, A.H. Paterson, E. Ploschuk, E.J. Sacks, S. Snapp, D. Tao, D.L. Van Tassel, L.J. Wade, D.L. Wyse, and Y. Xu. 2010. Increased food and ecosystem security via perennial grains. *Science* 328:1638-1639.
- 64. Reganold, J. 2010. The next revolution in farming. Scientific American 303(Sept):97.
- 65. Sachs, J., R. Remans, S. Smukler, L. Winowiecki, S.J. Andelman, K.G. Cassman, D. Castle, R. DeFries, G. Denning, J. Fanzo, L.E. Jackson, R. Leemans, J. Lehmann, J.C. Milder, S. Naeem, G. Nziguheba, C.A. Palm, P.L. Pingali, J.P. Reganold, D.D. Richter, S.J. Scherr, J. Sircely, C. Sullivan, T.P. Tomich, and P.A. Sanchez. 2010. Monitoring the world's agriculture. *Nature* 466:558-560.
- 66. Reganold, J.P., P.K. Andrews, J.R. Reeve, L. Carpenter-Boggs, C.W. Schadt, J.R. Alldredge, C.F. Ross, N.M. Davies, and J. Zhou. 2010. Fruit and soil quality of organic and conventional strawberry agroecosystems. *PLOS ONE* 5(9): e12346. doi:10.1371/journal.pone.0012346
- 67. Glover, J.D., J.P. Reganold, L.W. Bell, J. Borevitz, E.C. Brummer, E.S. Buckler, C.M. Cox, T.S. Cox, T.E. Crews, S.W. Culman, L.R. DeHaan, D. Eriksson, B.S. Gill, J. Holland, F. Hu, B.S. Hulke, A.M.H. Ibrahim, W. Jackson, S.S. Jones, S.C. Murray, A.H. Paterson, E. Ploschuk, E.J. Sacks, S. Snapp, D. Tao, D.L. Van Tassel, L.J. Wade, D.L. Wyse, and Y. Xu. 2010. Perennial questions of hydrology and climate. *Science* 330:33-34.
- 68. Reganold, J.P. 2011. Planting the seeds for perennials. Wheat Life 54(Jan):60-62.

69. Reganold, J.P., D. Jackson-Smith, S.S. Batie, R.R. Harwood, J.L. Kornegay, D. Bucks, C.B. Flora, J.C. Hanson, W.A. Jury, D. Meyer, A. Schumacher, Jr., H. Sehmsdorf, C. Shennan, L.A. Thrupp, and P. Willis. 2011. Transforming U.S. agriculture. *Science* 332:670-671.

- 70. TerAvest, D., J.L. Smith, L. Carpenter-Boggs, D. Granatstein, L. Hoagland, and J.P. Reganold. 2011. Soil carbon pools, nitrogen supply, and tree performance under several groundcovers and compost rates in a newly planted apple orchard. *HortScience* 46:1687–1694.
- 71. Sachs, J., R. Remans, S. Smukler, L. Winowiecki, S.J. Andelman, K.G. Cassman, D. Castle, R. DeFries, G. Denning, J. Fanzo, L.E. Jackson, R. Leemans, J. Lehmann, J.C. Milder, S. Naeem, G. Nziguheba, C.A. Palm, P.L. Pingali, J.P. Reganold, D.D. Richter, S.J. Scherr, J. Sircely, C. Sullivan, T.P. Tomich, and P.A. Sanchez. 2012. Effective monitoring of agriculture: A response. *Journal of Environmental Monitoring* 14:738-742.
- 72. Reganold, J.P. 2012. The fruits of organic farming. *Nature* 485:176-177.
- 73. Glover, J.D., J.P. Reganold, and C.M. Cox. 2012. Plant perennials to save Africa's soils. *Nature* 489:359-361.
- 74. Cuthbertson, D., P.K. Andrews, J.P. Reganold, N.M. Davies, and B.M. Lange. 2012. Utility of metabolomics toward assessing the metabolic basis of quality traits in apple fruit with an emphasis on antioxidants. *Journal of Agricultural and Food Chemistry* 60:8552-8560.
- 75. Reganold, J.P. 2013. Comparing organic and conventional farming systems: metrics and research approaches. *Crop Management* 12(1): doi.10.1094/CM-2013-0429-01-RS.
- 76. Klein, L.R., W.G. Hendrix, J.B. Kaytes, V.I. Lohr, R.D. Sayler, M.E. Swanson, W.J. Elliot, and J.P. Reganold. 2015. Linking ecology and aesthetics in sustainable agricultural landscapes: Lessons from the Palouse region of Washington, U.S.A. *Landscape and Urban Planning* 134:195-209.
- 77. Sandhu, H., S. Wratten, R. Constanza, J. Pretty, J.R. Porter, and J. Reganold. 2015. Significance and value of non-traded ecosystem services on farmland. *PeerJ* 3:e762 doi.org.10.7717/peerj.762.
- 78. Crowder, D.W. and J.P. Reganold. 2015. Financial competitiveness of organic agriculture on a global scale. *Proceedings of the National Academy of Sciences USA* 112:7611-7616.
- 79. TerAvest, D., L. Carpenter-Boggs, C. Thierfelder, and J.P. Reganold. 2015. Crop production and soil water management in conservation agriculture, no-till, and conventional tillage systems in Malawi. *Agriculture, Ecosystems and Environment* 212:285-296.
- 80. Reganold, J.P. and J.M. Wachter. 2016. Organic agriculture in the 21st century. *Nature Plants* 2(2):15221. doi.10.1038/NPLANTS.2015.221
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- 191. Reganold, J. P., W. J. Ruzzo and D. H. Hunter. 1982. Reclamation plan. *Permit Application to Conduct Surface Coal Mining Operations for Alton Mine*. Utah International Inc., San Francisco, CA. Vol. 3, 85 pp.
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- 219. Hammac, W.A., W.L. Pan, R.T. Koenig, A.-M. Fortuna, B.K. Lamb, and J.P. Reganold. 2016. Cropping system, agroecological zone, and nitrogen-use efficiency on greenhouse gas mitigation for biodiesel feedstock production. *AgroEnviron 2016:10th International Symposium on Agriculture and the Environment Abstracts*, Purdue University, West Lafayette, Indiana.
- 220. Davis, A.G., J.M. Wachter, L. Carpenter-Boggs, D.R. Huggins, and J.P. Reganold. 2018. Soil microbial community and biological function in organic and mixed crop-livestock systems on the Palouse. *Agronomy Abstracts*, American Society of Agronomy, Madison, WI.

MEDIA CITATIONS AND INTERVIEWS: IMPACT OF MY RESEARCH AND TEACHING ON THE GENERAL PUBLIC (only a sample follows)

Television and Film Interviews

- 1. TV interview with Karina Kelly for the science show *Quantum*, Australian Broadcasting Company, Sydney, Australia, 7/89.
- 2. TV interview with David Suzuki for the program *The Nature of Things*, Canadian Broadcasting Corporation (CBC), Vancouver, Canada, 7/90.
- 3. TV interview with Amanda Keller for the Australian science program *Beyond 2000*, Sydney, Australia, 2/92.
- 4. TV interview with Partha Manerjee for the Science and Technology News Network in New York City, aired by ABC affiliates nationwide, 4/18-19/01.
- 5. TV interview with Herb Weisbaum, KOMO-TV, Seattle, WA, 9/18/06.
- 6. Interview with Barbara Sumner Burstyn (Producer) for the film, *How to Save the World*, Barbara Sumner Burstyn, Cloud South Films, Ltd, Hastings, New Zealand, 2006.
- 7. Interview with Debra Garcia (Director and Producer) for film, *Symphonty of the Soil*, Lily Films, Mill Valley, California, 2007 & 2008.
- 8. Interview with Yen-Ming Lai (Director) for the film, *Toxic Bees--Human Intervention*, Public TV Service, Taipei, Taiwan, 2016.

Radio Interviews

- 9. Radio report on National Public Radio's "Morning Edition" with Bob Edwards, 11/25/87.
- 10. Live radio interview on alternative farming research with Jim Wishner, KWOI public Radio, Ames, Iowa, 12/9/87.
- 11. Three TV interviews for national news programs in Australia, 9/90.
- 12. Radio interview with Rob Sivak of "Voice of America", Washington, DC, 4/14/93.
- 13. Radio interview with with Dale Harrison of KWSU (NPR), 4/15/93.
- 14. Live radio talk show with Pat Schilling of KXLY in Spokane, Washington, 4/23/93.
- 15. Radio interview with Gary Claus of Northwest Agriculture News Service, 4/28/93.
- 16. Radio interview with Jacki Bonner of ABC Radio, Canberra, Australia, 6/3/94.
- 17. Radio interview with Jeb Sharp of NPR weekly program "Living on Earth", Boston, Mass, 6/2/97.
- 18. Radio interview with Richard Harris of NPR national news program "All Things Considered", 4/19/01.
- 19. Live radio interview with Mary Lou Finlay of CBC national news program "As It Happens", 4/30/01.
- 20. Live radio interviews with Dana Bales of BBC "The World Today", with Tara Ogden of BBC "Five Live Breakfast Program", and with Martin Bedford of BBC "Today Program", 5/18 & 19/01.
- 21. Radio interview with Jim Levins of CBC "Quirks and Quarks", 5/19/01.
- 22. Radio interview with Rob Sivak of "Voice of America", Washington, DC, 4/20/01.
- 23. Radio interview with Tom Banse, Northwest Public Radio and Northwest News Network, 5/30/06.
- 24. Live radio interview with Luis Sierra of "Local Dirt", KDVS-90.3 FM, Davis, CA, 9/28/06.

- 25. Live radio appearance on *Science Friday* with Ira Flatow, National Public Radio, 9/3/10.
- 26. Live radio appearance on Michael Olson's *Food Chain Radio* show, 5/14/11.
- 27. Live radio interview with Joe De Capua on *Voice of America*, 9/24/12.
- 28. Live radio interview with Julie Rose on *Top of the Mind*, BYU Radio, 6/10/15.

Magazine Stories

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- 30. "When are two farms better than one?", Science World, 10/20/89, 46(4):13-17.
- 31. "Organic farming: Golden apples", *The Economist*, 4/21/01, pp. 76-77.
- 32. "Organic farming yields bounty and taste", Delicious Living!, 9/01, p. 14.
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- 34. "Stars in their eyes", Harpers Wine and Spirit Weekly, 1/17/03, pp. 24-27.
- 35. "The world in a wineglass: Biodynamics helps vintners find the spirit of their land", *Monterey County Weekly*, 6/9/05, Cover Story.
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- 40. "Organic U", The New Farm, www.newfarm.com, accessed 5/27/06.
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- 42. "Growing success", Cover story, Horizon Air, August 2007. pp. 10-28.
- 43. "Our good earth", National Geographic, September 2008, pp. 80-107.
- 44. "Creative ways to energize your career", Science, Sept 12, 2008, pp. 1513-1518.
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- 48. "Organic agriculture key to feeding the world sustainably", *Science Daily*, February 3, 2016, www.sciencedaily.com/releases/2016/02/160203085855.htm.
- 49. "Why Organic Food Might Be Worth the High Price", *Time*, February 4, 2016, http://time.com/4206738/organic-food-worth-the-price-study/>.
- 50. "Planting Seeds: Sustainable agriculture programs produce global problem-solvers", *USA Today Special Edition*, April 1, 2018, pp. 88-92, https://issuu.com/studiogannett/docs/deptofagriculture final>.

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- 58. "Dandelions can ruin lawns, but they're great for the soil", *The Wall Street Journal*, 4/16/93, p. A5A.
- 59. "Study backs unusual farming method", Los Angeles Times, 4/16/93.
- 60. "Biodynamic farming: Sounds weird but some believe in it", Seattle Times, 4/16/93 p.E1.
- 61. "Study praises organic farmers", Spokesman-Review, 4/16/93, pp.A16, A18.
- 62. "Grapes grown with help of cosmos", The Utah Daily Journal, 9/8/98.
- 63. "Organic farming can be profitable", The New York times, 4/18/01.
- 64. "Estudo mostra que organico e mais viavel", Sao Paulo, Quinta-Feira, 4/19/01, p. A17.
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- 70. "Horns of plenty", The San Francisco Chronicle, 9/25/03.
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- 72. "Beyond organic", The Yakima Herald-Republic, 5/26/04.
- 73. "Whole earth or totally barmy?", *The Guardian*, 6/15/05.
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- 77. "WSU leads way in organic ag", Moscow-Pullman Daily News, 6/6/06, frontpage.
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- 79. "Major-ly organic: Washington State offers first organic farming degree", *Boulder Daily Camera*, 6/19/06, p. 4.
- 80. "Washington State offers organic farming degree", ABCnews.com, posted 6/21/06.
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- 88. "New study weighs in on organic vs. conventional debate", *GRIST* website, 9/2/10, http://www.grist.org/article/new-study-weighs-in-on-organicconventional-debate/>.
- 89. "Organic food is healthier, tastier, better for the environment: WSU study", *Huffington Post* website, 9/3/10, http://www.huffingtonpost.com/searchS/?q=reganold.
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- 91. "Is organic always best", USA Today, 12/21/10, pp. 1D-2D.
- 92. "Soil 'rock star' addresses ground value at Spokane exhibit", *Capital Press*, May 9, 2012, http://www.capitalpress.com/content/mw-Reganold-soil-presentation-050812-art.
- 93. "Big, smart and green: a revolutionary vision for modern farming", *Wired*, 10/19/12, http://www.wired.com/wiredscience/2012/10/big-smart-green-farming/>.
- 94. "WSU professor receives green award for sustainable food and agriculture", *Seattle PI*, 5/15/14, http://blog.seattlepi.com/boomerconsumer/2014/05/15/wsu-professor-receives-green-award-for-sustainable-food-and-agriculture/.
- 95. "Organic: Better for the body and soil", Northwest Farm and Ranch, June 30, 2014, p. 8.
- 96. "Moving agriculture into the 21st century: Dr. John Reganold at TEDxWSU 2014", Published on *YouTube* Jun 3, 2014, http://www.youtube.com/watch?v=NGBZZh8Oqyo.
- 97. "Jane Says: Don't Worry About Pesticide Residues in Compost", *Takepart*, 11/19/2014, http://www.takepart.com/article/2014/11/19/pesticides-organic-produce-compost.
- 98. "Can organic be profitable? If the price is right, study says", *Seattle Times*, June 1, 2015, http://www.seattletimes.com/seattle-news/can-organic-be-profitable-if-the-price-is-right-study-says/.
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- 100. "Organic farming isn't just environmentally friendly it's very good business for farmers", *Washington Post*, June 2, 2015, http://www.washingtonpost.com/news/energy-environment/wp/2015/06/02/organic-farming-isnt-just-environmentally-friendly-its-very-good-business-for-farmers/.
- 101. "Landwirtschaft: Bio kann sich für Bauern lohnen", *Der Spiegel*, June 2, 2015, http://www.spiegel.de/wissenschaft/natur/bio-lebensmittel-koennen-sich-fuer-bauern-lohnen-a-1036580.html.
- 102. "Organic agriculture is more profitable for farmers, study finds", *Huffington Post*, June 3, 2015, "http://www.huffingtonpost.com/2015/06/03/organic-agriculture-more-profitable_n_7497018.html?utm_hp_ref=healthy-living&ir=Healthy+Living>"http://www.huffingtonpost.com/2015/06/03/organic-agriculture-more-profitable_n_7497018.html?utm_hp_ref=healthy-living&ir=Healthy+Living>"http://www.huffingtonpost.com/2015/06/03/organic-agriculture-more-profitable_n_7497018.html?utm_hp_ref=healthy-living&ir=Healthy+Living>"http://www.huffingtonpost.com/2015/06/03/organic-agriculture-more-profitable_n_7497018.html?utm_hp_ref=healthy-living&ir=Healthy+Living>"http://www.huffingtonpost.com/2015/06/03/organic-agriculture-more-profitable_n_7497018.html?utm_hp_ref=healthy-living&ir=Healthy-li
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- 104. "Organic farming could feed the world, if only we would let it", *Huffington Post*, June 22, 2016, http://www.huffingtonpost.com/entry/organic-farming-potential-study_us_576ac075e4b065534f487ef2?4s3qzuewq8g9bxzuxr.

105. "Biodynamic: A different kind of farming", Capital Press, August 17, 2017, http://www.capitalpress.com/Organic/20170817/biodynamic-a-different-kind-of-farming.

106. "Agricultura mais ecológica depende de hábitos do consumidor, diz professor", *Folha de S.Paulo*, December 21, 2017, http://www1.folha.uol.com.br/mercado/2017/12/1944545-agricultura-mais-ecologica-depende-de-habitos-do-consumidor.shtml.

SELECTED INVITED PRESENTATIONS (only a sample follows of more than 300 given):

- 1. "Soil and Overburden Research Needs", Conference on Soil and Overburden Requirements for Successful Revegetation, Denver, Colorado, 1983.
- 2. "Prime Farmland Preservation in Washington State", Seminar, Washington State Conservation Committee, Pullman, WA, 1984.
- 3. "Agricultural Land Preservation in the U.S.", Seminar, WSU-IARC, Prosser, 1984.
- 4. "Soil Science: The Major and Career Opportunities", Recruiting presentation to Ellensburg High School students, WSU, 1985.
- 5. "Defining and Assessing Prime Farmland", Seminar, Program in Environmental Science and Regional Planning, WSU, 1986.
- 6. "Majoring in Soil Science", WSU/Community College In-Service Workshop for Agricultural Instructors, WSU, 1986.
- 7. "Soil Science: What is It?", Freshmen Student Orientation Meetings, WSU, 1986.
- 8. "Defining and Assessing Agricultural Land in the U.S.", Seminar, Department of Agronomy and Soils, WSU, 1986.
- 9. "Effects of Organic and Conventional Farming on Soil Erosion in the Palouse", Seminar, Department of Agronomy and Soils, WSU, 1987.
- 10. "Organic and Conventional Farming Systems", Seminar, Spokane County Conservation District, Spokane, WA, 1988.
- 11. "Environmentally Sensitive Areas: Policy and Reality", Washington State Environmental Health Association Annual Education Conference, Pasco, WA, 1988.
- 12. "Effects of Organic and Conventional Farming on Soil Productivity in the Palouse", Idaho Society for Energy and Environmental Education Annual Professional Meeting, Moscow, ID, 1988.
- 13. "Alternative Agriculture in the Palouse", Seminar, WSU Irrigation Research Center, Prosser, 1988.
- 14. "Alternative Agriculture in the Palouse", Seminar, WSU Agricultural Research Center, Puyallup, 1988.
- 15. "Conservation and Management of Natural Resources", CAHE Dean's Leadership Conference", WSU, 1989.
- 16. "Long-Term Effects of Organic and Conventional Farming on Soil Productivity", IFOAM International Scientific Conference, Ouagadougou, Burkina Faso, Africa, 1989.
- 17. "Use of Teaching Publications in the Classroom", Seminar, College of Agriculture and Home Economics, WSU, 1989.
- 18. "Long-Term Effects of Organic and Conventional Farming on Soil Productivity", Seminar, Program in Environmental Science and Regional Planning, WSU, 1989.
- 19. "Organic Farming", Seminar, Whitman County Senior Citizens, Pullman, WA, 1990.
- 20. "Organic and Conventional Farming Systems: A Comparison", Seminar, University of California, Berkeley, 1990.

21. "Long-Term Effects of Organic and Conventional Farming on Soil Erosion", Annual USDA-STEEP Meetings, Moscow, ID, 1990.

- 22. "Effects of Organic and Conventional Farming on Soil Productivity", Keynote speaker at the Queensland State Conference of the Biological Farmers of Australia, Dalby, Queensland, Australia, 1990.
- 23. "Effects of Organic and Conventional Farming on Soil Erosion", Keynote speaker at the New South Wales State Conference of the Biological Farmers of Australia, Orange, New South Wales, Australia, 1990.
- 24. "Soil Quality on Organic and Conventional Farms", Keynote speaker at the Victoria State Conference of the Biological Farmers of Australia, St. Arnaud, Victoria, Australia, 1990.
- 25. "Sustainable Agriculture in the United States", Seminar, Faculty of Agriculture & Horticulture at Massey University, Palmerston North, New Zealand, 1990.
- 26. "Sustainable Agriculture", Committee for Sustainable Agriculture Symposium, Big Sur, CA, 1990
- 27. "Alternative Farming in the United States", Seminar, The Royal Society of New Zealand, Palmerston North, New Zealand, 1991.
- 28. "Alternative Farming Research", Seminar, Ministry of Agriculture and Fisheries, Palmerston North, New Zealand, 1991.
- 29. "Organic Farming Research", Seminar, Faculty of Agriculture and Horticulture at Lincoln University, Lincoln, New Zealand, 1991.
- 30. "Organic Farming Research in the United States", Seminar, Steiner School of Agriculture, Hastings, New Zealand, 1991.
- 31. "Organic Agriculture in the World", Panel Discussion, World Sustainable Agriculture Association, Tokyo, Japan, 1991.
- 32. "Organic Farming Research in the United States and New Zealand", Seminar, Division of Environmental Sciences, Griffith University, Brisbane, Queensland, Australia, 1991.
- 33. "Agricultural Land Protection in the United States", Seminar, Faculty of Agriculture & Horticulture at Massey University, Palmerston North, New Zealand, 1991.
- 34. "Effects of Alternative and Conventional Farming Systems on Agricultural Sustainability", Keynote speaker at the Food and Fertilizer Technology Center Conference on Sustainable Agriculture for the Asian and Pacific Region, Suwon, South Korea, 1992.
- 35. "Organic Farming Research Needs", Inauguration of the Australian Chapter of the World Sustainable Agriculture Association, Griffith University, Brisbane, Queensland, Australia, 1992.
- 36. "Alternative/Conventional Paired-Farm Comparisons in Australia and New Zealand", Inauguration of the California Chapter of the World Sustainable Agriculture Association, California State University, Pomona, 1992.
- 37. "Soil Quality and Financial Performance of Biodynamic and Conventional Farms in New Zealand", Seminar, Oregon State University, Corvallis, 1993.
- 38. "On-Farm Research in the Tropics", Workshop on Long-Term Soil Management Experiments in the Tropics, Columbus, OH, 1993.
- 39. "Soil Quality and Financial Performance of Biodynamic and Conventional Farms in New Zealand", Ecological Farming Conference, Monterey, CA, 1993.
- 40. "Soil Quality and Financial Performance of Biodynamic and Conventional Farms in New Zealand", Seminar, Department of Crop and Soil Sciences, WSU, 1993.

41. "Effects of Biodynamic and Conventional Farming on Soil Quality: A Review", Kyusei Nature Farming Conference, Santa Barbara, CA, 1993.

- 42. "Biodynamic, Organic, and Conventional Farming: A Comparison", Seminar, Better Living Foundation, Moscow, ID, 1993.
- 43. "Research Methodology for Conducting Paired Farm Comparisons", Sustainable Agriculture Conference, Bellevue, WA, 1993.
- 44. "Research on Alternative and Conventional Farms: Working with Farmers", Seminar, Australian Farm Tour of the Palouse, WSU, 1993.
- 45. "Teaching Philosophy in the Classroom", Guest presentation, New Faculty Orientation, WSU, 1993
- 46. "Comparison of Soil Quality and Farm Profitability of Biodynamic and Conventional Farming Systems", Seminar, Queensland State Department of Agriculture, Brisbane, Australia, 1994.
- 47. "Soil Quality and Financial Performance of Biodynamic and Conventional Farms in New Zealand", Seminar, Department of Botany, WSU, 1994.
- 48. "Soil Quality and Financial Performance of Biodynamic and Conventional Farms", Seminar, Department of Plant, Soil, and Entomological Sciences, University of Idaho, 1994.
- 49. "Soil Quality and Profitability of Biodynamic and Conventional Farms", Seminar, Washington State Cereal Industry Symposium, Walla Walla, WA, 1995.
- 50. "Crop and Soil Quality of Organic, Integrated, and Conventional Apple Orchard Floor Management Systems", Washington State Horticultural Association 91st Annual Meeting, Wenatchee, WA, 1995.
- 51. "Organic, Integrated, and Conventional Apple Management Systems", Northwest Tree Fruit Cooperative Extension Agents Annual Meeting, Zillah, WA, 1996.
- 52. "Dryland Agriculture under Biodynamic, Organic, and Conventional Management in the Palouse", Palouse-Clearwater Institute tour, eastern Washington, 1996.
- 53. "Organic, Integrated, and Conventional Apple Management Systems", Washington State Organic Growers Conference, Richland, WA, 1997.
- 54. "Alternative farming systems can be sustainable", Seminar, University of Hawaii at Manoa, Honolulu, HI, 1997.
- 55. "What Makes a Good Teacher". Seminar, University of Hawaii at Manoa, Honolulu, HI. 1998.
- 56. "The Sustainability of Alternative and Conventional Farming Systems", Natural Resource Conservation Service, Hawaii, HI, 1998.
- 57. "What's the Difference between Alternative and Sustainable Agriculture", The Land Institute, Salina, KS, 1999.
- 58. "Soil Quality and Financial Performance of Biodynamic and Conventional Farms". Eco-Winegrowing Conference, McNab Ranch, Ukiah, CA, 2000.
- 59. "Soil Quality, Crop Yield, and Orchard Profitability of Organic, Conventional, and Integrated Apple Production Systems", IFOAM International Scientific Conference, Basil, Switzerland, 2000.
- 60. "Farming Systems", Wine Quality and Agro-Ecology Symposium, McNab Ranch, Ukiah, CA, 2001.
- 61. "Organic Farming Research Programs", WSU Organic Farming Symposium, Ellensburg, WA, 2001.

62. "Sustainability of Organic, Conventional, and Integrated Apple Production Systems", Seminar, Department of Crop & Soil Sciences, Pullman, WA, 2001.

- 63. "Integrated or Separate? Biodynamic, Sustainable and Organic Farming Practices", Unified Wine & Grape Symposium, Sacramento, CA, 2002.
- 64. "Is There Room for Pesticide-Free Foods?", Western Regional Agricultural Health and Safety Conference., Coeur D'Alene, ID, 2002.
- 65. "Farming Systems Research". Northwest Symposium on Organic and Biologically Intensive Farming Conference, Yakima, WA, 2002.
- 66. "Can Organic Farming Be Sustainable?", Invited seminar, Cornell University, Ithaca, NY, 2003.
- 67. "Sustainability of Alternative and Conventional Farming Systems", Leopold Center for Sustainable Agriculture, Iowa State University, Ames, Iowa, 2003.
- 68. "Sustainability of Biodynamic, Organic, Integrated, and Conventional Farming Systems", National Biodynamic Farming Conference, Ames, Iowa, 2003.
- 69. "Science behind Organic and Biodynamic Farming Research". Seminar, UC Davis Sustainable Agricultural Research and Education Program, Davis, CA, 2003.
- 70. "Biodynamics, Organics, and Sustainability", Napa Valley Grape Growers Association, Napa, CA, 2004.
- 71. "Soil and Winegrape Quality on Biodynamic and Organic Vineyards". Invited seminar, Mendocino County and Sonoma County winegrape growers, Hopland, CA, 2004.
- 72. "Research in Alternative Winegrape Production Systems", Lake County Winegrape Growers, Ceago Lago Winery, Nice, CA, 2004.
- 73. "Biodynamic Viticulture and Wines", Invited Presentation, The Walla Walla Institute for Enology and Viticulture, Walla Walla, WA, 2005.
- 74. "Biodynamics Viticulture and Wines in the United States", Napa Valley Grape Growers Association, Napa, CA, 2005.
- 75. "Perennial Grain Research at Washington State University", Invited Presentation, The Land Institute Fellowship Program, Matfield Green, Kansas, 2005.
- 76. "Sustainability of Organic Farming Systems", Invited Speaker, USDA Opportunities and Obstacles for Broader Adoption of Organic Agriculture Conference, Washington, DC, 2005.
- 77. "Biodynamic Viticulture", Keynote Speaker, Vinea Trust, Walla Walla, WA. 2006.
- 78. "Organic Agriculture: A New Major at Washington State University", Invited Seminar as part of Issues in Sustainable Agriculture Education, Cornell University, Ithaca, NY, 2006.
- 79. "Biodynamic Viticulture: Myth and Reality", Invited Presentation, Terroir 2006 Conference, Robert Mondavi Institute for Wine and Food Science, University of California, Davis, 2006.
- 80. "Getting Back to Basics: Farming's Organic Future", Washington State University Innovators Series, Rainier Club, Seattle, WA, 2006.
- 81. "Organic Research and Teaching at Washington State University", Keynote Speaker, Organic Farming Research Foundation Luncheon, Natural Products Expo West, Anaheim, CA, 2007.
- 82. "Soil Quality in Alternative Viticulture Systems", Symposium on Eco-Winegrowing Practices On California's North Coast, Hopland, California, 2007.
- 83. "Organic's Green Future", Washington State University Innovators Series, The Fairmount San Francisco, San Francisco, CA, 2007.
- 84. "What Do Studies Comparing Organic and Conventional Farming Tell Us?" Symposium on Organic Viticulture, Santa Cruz, Chile, 2007.

85. "Research Comparing Organic and Conventional Farming Systems", Senators Tester and Luger Briefing, Senate Building, Washington, DC, 2007.

- 86. "What Do Studies Comparing Organic and Conventional Farming Tell Us?" Seminar series entitled 'Farming for the Future', University of New Hampshire, Durham, 2008.
- 87. "Organic Viticulture: From Vine to Wine", Washington State University Innovators Series, Walla Walla, WA, 2008.
- 88. "Organic Research and Education at Washington State University", ARCS Visiting Committee (Seattle Chapter), Pullman, WA, 2008.
- 89. "What Do Studies Comparing Organic and Conventional Farming Tell Us?", Science & Technology Discovery Series, Technology Alliance, Seattle, WA, 2009.
- 90. "Metrics Used to Compare and Contrast Farming Systems", Metrics for Assessing Global Agriculture Symposium, The Earth Institute, Columbia University, NY, NY, 2009.
- 91. "The Soil's Role in Sequestering Carbon", 2009 World Food Prize Symposium: The Borlaug Dialogue on Food, Agriculture, and National Security in a Globalized World, Des Moines, IA. 2009.
- 92. "The Sustainability of No-Till Agriculture", Sackler Forum of the Royal Society/National Academy of Sciences: How Can Crop Science and Technology Contribute to Feeding Nine Billion People? London, UK, 2009.
- 93. "Healthy Soils for Sustainable Vineyard Systems", Michigan State Winegrape Growers via telecom at Colorado State University, Fort Collins, 2010.
- 94. "Discussing Symphony of the Soil", University of California, Berkeley, 2010.
- 95. "Soils and Their Health", Dig It! Symposium, Northwest Museum of Arts and Culture, Spokane, WA, 2011.
- 96. "Future Role and Challenges of Organic Agriculture in Global Food Production", IFOAM International Scientific Conference, Seoul, South Korea, 2011.
- 97. "Soil Health: 25 Years of On-Farm Comparison Studies", ASA Meetings, San Antonio, TX, 2011.
- 98. "Transforming U.S. Agriculture in the 21st Century", USDA Agricultural Outlook Forum, Washington, DC, 2012.
- 99. "Comparing Organic and Conventional Farming Systems: Metrics and Research Approaches", Ecology Seminar Series, Utah State University, Logan, 2013.
- 100. "Perennial Grain Systems: A Sustainable Response to Future Food Security Challenges", UN Food and Agriculture Organization, Rome, Italy, 2013.
- 101. "Our Farms, Our Soils, Ourselves: Connecting Ecosystems", 13th Annual Sustainable Agriculture and Food Systems Forum, Chicago, Illinois, 2015.
- 102. "Moving Agriculture into the 21st Century", Annual Tilth Producers of Washington Conference, Spokane, Washington, 2015.
- 103. "Sustainable Agriculture and Food Systems", International Conference on Promoting Sustainable Development in the DPRK, Pyongyang, North Korea, 2016.
- 104. "Sustainable Agriculture What Does This Mean Today and in the Future?", The Royal Swedish Academy of Engineering Sciences Symposium, Stockholm, Sweden, 2017.
- 105. "What 40 Years of Science Tells Us About Organic Agriculture", Invited Seminar, Rothamsted Research, North Wyke, UK, 2017.
- 106. "What 40 Years of Science Tells Us About Organic Agriculture", Invited Seminar, Research Institute of Organic Agriculture (FiBL), Frick, Switzerland, 2017

107. "Organic Agriculture in the 21st Century", Organics for Tomorrow's Food Systems NJF Organic Conference, Mikkeli, Finland, 2017.

- 108. "Sustainable Farming Systems in the 21st Century", Invited Seminar in "Hope in the Anthropocene: Sustainability Inspirations and Solutions" series., University of British Columbia, Vancouver, Canada, 2017.
- 109. "What 40 Years of Science Tell Us About Organic Agriculture", Keynote Address, HiPP Scientific Symposium on Organic Food, Kranzberg, Germany, 2018.

RESEARCH AND TEACHING GRANTS AND AWARDS FUNDED:

Principal Project Title		Granting Agency	Date Funded	Amount	
Investigator(s)					
Reganold, J. P.	Relationship of farm pro-	USDA Soil	1978-1980	\$19,500	
	duction input/output ratios	Conservation Service			
	to land classification systems		1004		
Reganold, J. P.	Lab/computer equipment for	WSU Agriculture	1983-1984	\$10,000	
	land-use research	Research Center	1006	**	
Reganold, J. P.,	Science instruction materials for		1986	\$258	
Lumpkin, T. A.	Soils 201 and Crops 101	Liberal Arts Program			
Reganold, J. P.	Audio/Video aids for soil	DuPont Corporation	1986	\$2,500	
	science instruction				
Reganold, J. P.	Measuring farmland conversion		1986	\$2,000	
	through the use of GIS	Research Development			
Reganold, J. P.,	Interdisciplinary land-use	WSU Office of Grant &	1986-1987	\$2,500	
Steiner, F. R.	research unit	Research Development			
Reganold, J. P.	Identifying land-use changes of	Washington State Dept.	1986-1987	\$7,200	
	specific soils using GIS	of Agriculture			
Reganold, J. P.	Computer analysis of	WSU Agriculture	1986-1987	\$7,500	
	LANDSAT imagery to	Research Center			
	determine land-use changes				
Huyck, L. M.,	Biological and morphological	WSU Office of Grant &	1987	\$2,000	
Reganold, J. P.		Research Development			
	farmed soils	•			
Jennings, M. D.,	ESA policies in Washington,	WSU Office of Grant &	1988	\$2,000	
Reganold, J. P.		Research Development			
Bezdicek, D. F.,	Sustainable agriculture and	WSU International Prog.	1988-1989	\$6,000	
Reganold, J. P.	agroforestry management	Devel. Office			
Mulla, D. J.,	Measuring aggregate stability in	USDA-STEEP	1988-1989	\$13,981	
Reganold, J. P.	Palouse soils				
Reganold, J. P.	Seasonal effects of organic and	USDA Agricultural	1988-1989	\$12,000	
	conventional farming	Research Service			
	on soil aggregate stability				
Reganold, J. P.	Travel to attend IFOAM	WSU Office of Research	1988-1989	\$2,100	
	Conference in Burkina Faso	& Int. Prog. Devel. Office		. ,	
Crowe, E. A.,	Soil & plant ecology in	WSU Office of Grant &	1989	\$2,000	
Reganold, J. P.	vernal pool systems	Research Development		+-,000	
Reganold, J. P.	Field trips in Soils 301	Verle Kaiser Foundation	1989-1990	\$1,000	
				7 - , 0 0 0	

PI(s) Project Title		Granting Agency	Date Funded	Amount	
Reganold, J. P.	Effects of sustainable and	USDA-STEEP	1989-1991	\$10,457	
	conventional agricultural				
	systems on soil erosion				
Reganold, J. P.	Sustainable agriculture in semi	USAID	1990	\$4,200	
	arid tropics of India				
Reganold, J. P.	The effects of sustainable	USDA-STEEP	1990-1993	\$17,120	
	agricultural systems on soil				
	erosion and productivity				
Reganold, J. P.,	Effects of alternative and conv.	USDA-LISA	1990-1992	\$35,000	
Bezdicek, D. F.	farming on soil quality				
Reganold, J. P.,	Soil quality & profitability of	Prince & Princess of	1990-1991	\$600	
Palmer, A. S.	alternative and conventional	Wales Sci Awd, Royal			
	farming systems	Society of New Zealand			
Reganold, J. P.	Soil conservation farming field	Verle Kaiser Conserv.	1990-1994	\$1,000	
	trips in Soils 201 & 301	Foundation			
Reganold, J. P.		Biological Farmers of	1990	\$2,000	
	<u> </u>	Australia			
	Australia for on-farm studies				
Reganold, J. P.	Attend the International	The MOA Foundation	1990	\$2,000	
,	Conference on Agriculture			. ,	
	for the 21st Century				
Reganold, J. P.,	Effects of biodynamic and	Massey University	1990-1991	\$5,000	
Palmer, A. S.	conventional farming on soil	Fertiliser and Lime		. ,	
,	_	Research Centre			
Reganold, J. P.,	Effects of biodynamic and	Massey University	1991	\$900	
Palmer, A. S.		Research Fund			
,	quality and farm profitability				
Reganold, J. P.	Inauguration of WSAA	The MOA Foundation	1991	\$1,200	
Reganold, J. P.	Initiating World Sustainable	The MOA Foundation	1991	\$3,000	
ε,	Agriculture Assoc. (WSAA)				
Saffigna, P.,		Australia Soil Bureau	1991-1995	\$220,000	
Reganold, J. P.	biologically sustainable soil			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Reganold, J. P.	Effects of biodynamic and	WSU International	1992	\$2,600	
ε,	conventional farming on	Program Development		. ,	
	agricultural sustainability	Office			
Reganold, J. P.,	Soil quality on biodynamic and	Massey University Agric.	1992	\$600	
Palmer, A. S.		Research Fund			
Reganold, J. P.	Effects of alt. and conv. farming	Asian Food & Fertilizer	1992	\$3,200	
ε,	systems on ag. sustainability	Technology Centre		. ,	
Reganold, J. P.	Inauguration of Australian and	World Sustainable	1992	\$2,500	
,	Calif. Chapters of WSAA	Agriculture Association		. ,	
Reganold, J. P.	Soil cons. computer database	Verle Kaiser Conserv.	1992-1994	\$2,478	
.,	for undergraduate students	Foundation		, ,	
Reganold, J. P.,	On-farm analyses of soil/crop	Organic Farming	1994-1996	\$3,420	
Andrews, P. K.	quality of 3 apple systems	Research Foundation		-2,.20	
Andrews, P. K.,	Soil & crop quality of three	Washington Tree Fruit	1995-1998	\$5,000	
	1 1	Research Commission	1775 1776	ψυ,ουσ	
Reganold, J. P.	apple production systems	IIVESEALCH COMMINSSION			

PI(s)	Project Title	Granting Agency	Date Funded	Amount
Reganold, J. P.	Soil conservation field trip	Verle Kaiser Conserv.	1995-1996	\$600
	and classroom aids	Foundation		
Reganold, J. P.,	Soil analyses of 3 apple mngt.	Northwest Food Alliance	1996	\$1,500
Andrews, P. K.	systems in Zillah			
Reganold, J. P.	Land use short course	Univ. of Lleida, Spain	1997	\$2,000
Reganold, J. P.,	Sustainability of conv., org.,	USDA NRI Com-petitive	1996-1999	\$160,000
Andrews, P. K.	& integrated apple systems	Grants Program		
Reganold, J. P.	Alternative agriculture can be sustainable.	Saskatchewan Crop Production Alliance	1997	\$2,500
Reganold, J. P.,	Sustainability of conv., org.,	USDA NRI Competitive	1999-2002	\$185,000
Glover, J.D.,	& integrated apple systems	Grants Program	1999 2002	φ102,000
Andrews, P. K	are integrated uppre systems	granic Tregrani		
Andrews, P.K.,	Enhancing technology transfer	International Marketing	2000-2002	\$25,000
Reganold, J.P.	of alternative practices into	Program for Agricultural	2000 2002	Ψ25,000
regunora, v.i .	Washington's apple industry	Commodities and Trade		
Reganold, J.P.	Developing org farming classes	WSU-Kellogg 2020	2001-2003	\$10,000
Andrews, P.K.,	Enhancing technology transfer	International Marketing	2001-2003	\$25,000
Reganold, J.P.	of alternative practices into	Program for Agricultural	2001-2003	\$25,000
Regaliola, J.1.	Washington's apple industry	Commodities and Trade		
Reeve, J.R.,	Biological Soil Quality of	The Land Institute	2002	\$6,000
Reganold, J.P.	Alternative Ag Systems	The Land Institute	2002	\$0,000
Reganold, J.P.	Organic gardening and farming	Small Planet Foods and	2002-2004	\$25,000
Reganoid, J.P.	curriculum	General Mills	2002-2004	\$25,000
D11 I D			2002 2007	¢252.000
Reganold, J. P.,	Sustainability of three apple	USDA NRI Competitive	2002-2007	\$253,000
Glover, J.D.,	production systems	Grants Program		
Andrews, P. K.	G . : 1 '1' . C . : 1	F 4 X7' 1	2002 2004	#25.000
Reganold, J.P.	Sustainability of organic and biodynamic vineyards	Fetzer Vineyards	2002-2004	\$25,000
Reganold, J.P.,	Developing WSU Organic	WSU-Kellogg 2020	2003	\$5,500
Peck, K.P.	Gardening Field Course	W 50-Kellogg 2020	2003	ψ5,500
Reganold, J.P.	Biological Soil Quality of	The Land Institute	2003-2004	\$2,000
Regaliola, J.1.	Alternative Ag Systems	The Land Histitute	2003-2004	\$2,000
	Alternative Ag Systems			
Reganold, J.P.	Ph.D. Graduate Assistantship	WSU-CAHE	2003-2005	\$30,000
Regaliola, J.F.	i ii.D. Graduate Assistantsiiip	WSU-CATIL	2003-2003	\$30,000
Reganold, J.P.,	Soil and strawberry quality	The Organic Center	2004-2007	\$120,000
Andrews, P.K.,	under organic and conventional			
Carpenter-Boggs,L				
Reganold, J.P.,	N-use efficiency in organic	Organic Cropping Research	2005-2006	\$25,000
	orchards using living	Program		
Hoagland, L.	mulch cover crops			
Carpenter-Boggs,	No-till livestock/grain rotation	USDA-SARE	2006-2008	\$123,122
L., Reganold, J.	for diversified farms			
	N-use efficiency in organic	Organic Cropping Research	2006-2007	\$25,000
	orchards using living	Program		\$20,000
Hoagland, L.	mulch cover crops	1 2 9 2 2 2 2		
	N supply and partitioning in	Organic Cropping Research	2007-2008	\$34,765
	understories of organic apples	Program	200, 2000	Ψ5 1,705
Carpenter-Doggs, L.	understories of organic apples	µ 10grain		1

PI(s)	Project Title	Granting Agency	Date Funded	Amount
Lange, B.M.,	High throughput profiling of	WSU Agriculture Researc	2008	\$83,241
Reganold, J.P.,	fruits for phytochemicals related			
Andrews, P.K.	to human health			
Reganold, J.P.	Learning organic agriculture	WSU-CSANR BIOAg	2008-2009	\$15,000
	at WSU	Program		
Lange, B.M.,	High throughput profiling of	WSU Agriculture Researc	2009	\$34,000
Reganold, J.P.,	WA crops for phytochem-icals	Center		
et al.	related to human health			
Benbrook, C.,	New tools and policies to reduce	David & Lucile	2009-2011	\$99,500
Reganold, J.,	nitrogen pollution and	Packard Foundation		
Liebman, M.,	greenhouse gas emissions			
Huggins, D.			2011 2012	#2 0.000
Reganold, J.P.	Developing the new WSU	Earthbound Farms	2011-2012	\$30,000
- 44	Organic Farm	- 10 - 1		40.470.000
Reganold, J.P.,		Pacific Foods	2012-2022	\$9,450,000
Bernardo, D.	Organic Farm			
Reganold, J.P.,	Sustainable intensification of	USAID-Africa RISING	2012-2013	\$110,000
Thierfelder, C.,	farming systems in Malawi			
Pannkuk, C.				
Reganold, J.P.,	Role of mixed crop/livestock	USDA-NIFA Organic	2012-2016	\$695,078
1 00 /	systems in transitioning to	Transitions		
	dryland organic farming in the			
et al.	Pacific Northwest			***
Reganold, J.P.,	Sustainable intensification of	CGIAR-CIMMYT	2012-2014	\$85,000
	cereal-based agroecosystems			
al.				400 -0 -
TerAvest, D.,	Borlaug Fellows in Global Food	USAID/Purdue Univ	2012-2014	\$39,736
Reganold, J.P., C.	Security Grant Program			
Pannkuk				*
Snyder, W.,	BAN-PESTS: biodiversity	USDA-NIFA Organic	2013-2017	\$747,955
Reganold, J.P.,	and natural pest suppression	Transitions		
et al.	~			4.50.4.50
Reganold, J.P.,	Sustainable intensification of	CGIAR-CIMMYT	2013-2015	\$69,468
	ē ;	CRP-MAIZE	20112015	#20.102
Snyder, W.,	Biodiversity and the natural	CSANR BIOAg	2014-2015	\$39,193
Besser, T.,	suppression of human pathogen			
Reganold, J.P.				**
Reganold, J.P.,	Introducing organic quinoa	WSU-ARC-ERI and	2014-2015	\$37,900
Benedict, C.,	production systems in the	CSANR BIOAg		
Crowder, D., et al.			20112010	#112 0 10
Crowder, D.,	Dynamics of woolly apple	Washington Tree Fruit	2014-2018	\$113,948
J. Reganold, V.		Research Commission		
Jones, B. Beers	conventional orchards	HIGDA MIEA C	2014 2010	Φ400 22.7
Snyder, W., T.	A natural approach to human-	USDA-NIFA Organic	2014-2018	\$498,235
Besser, T.,	pathogen suppression: can	Transitions		
Reganold, J., et al.	biodiversity fill the gaps	Wide to the control of the control o	2014 2010	0104010
Crowder, D.,	Evaluating aphid pest mgmt.	WSDA Specialty Crop	2014-2018	\$194,910
Reganold, J.,	1 •	Block Grant Program		
Jones, V., et al.	conv. apple orchards in WA			

PI(s)	Project Title	Granting Agency	Date Funded	Amount
Carpenter-Boggs,	Optimizing cover crop and	Agronomic Science	2015-2017	\$59,485
Adewale C.,	intercrop N management	Foundation		
Reganold, J.				
Kramer, D.,	MultispeQ sensor for plant and	McKnight Foundation	2014-2016	\$300,000
Reganold, J., et al.	soil measurements in Africa			
Reganold, J.P.,	Introducing organic quinoa	WSU-ARC-ERI and	2015-2016	\$40,136
Benedict, C.,	production systems in the	CSANR BIOAg		
Crowder, D., et al.	Palouse			
Murphy, K., S.	Nutritional Genomics and	WSU Grand Challenges	2016-2021	\$2,491,430
McGuire, S.	Smart Foods			
Palmer, G. Duncan,				
J. Reganold, et al.				
Murphy, K., D.	Breeding and agronomy of	USDA-NIFA Organic	2016-2021	\$1,999,950
Crowder, J.	quinoa for organic farming	Agriculture Research &		
Reganold, et al.	systems	Extension Initiative		
Wieme, R, J.	Introducing Organic Quinoa and	USDA-NIFA Western	2016-2019	\$24,954
Reganold	Grain Cropping Systems in the	SARE		
	Palouse			
Wieme, R. J.	Developing organic quinoa and	USDA-NIFA Predoctoral	2016-2019	\$93,657
Reganold	grain cropping systems in the	Fellowship		
	Pacific Northwest	_		
Reganold, J.P.	Managing soil on the Eggert	CAHNRS Ignite Undergrad	2016	\$2,500
	Family Organic Farm	Research Internship		
Reganold, J.P.	Weed management trials in an	CAHNRS Ignite Undergrad	2017	\$2,500
	organic apple orchard	Research Internship		
Reganold, J.P.	Chickens management on the	CAHNRS Ignite Undergrad	2018	\$2,500
	Eggert Family Organic Farm	Research Internship		
	-		Subtotal	\$18,776,077
Cooperator or 15	additional research grants			©2 950 000
Cooperator on 13	additional research grants		TOTAL	\$3,850,000
			IUIAL	\$22,626,077

TEACHING ACTIVITIES:

WSU Courses Taught

Course No. SoilS 101	Title Organic Gardening and Farming	Credit 3	Semesters Taught Sp & F 2002, Every Sp semester post-2002	Semester 8 to 20
SoilS 201	Soil: A Living System (Introductory Soil Science	3	Every semester between F 1983 and F 1990; every F of Sp semester post-1990	48 to 250
SoilS 201X	Introductory Soil Science (Correspondence Course)	3	F 1984 to F 1986	5

SoilS 301	Land Use and Soil Management	3	Every year from 1990 to 2001	15 to 40
CropS 412	Undergraduate Seminar	1	F 1989, 1991, 1993; Sp 1996, 1999, 2003, 2009	6 to 18
SoilS 495	Research Experience	1-3	Every F and Sp since 2006	1 to 2
SoilS 498	Professional Internship	3	Every semester and summer session since 2006	2 to 8
SoilS 499	Independent Study	1-3	Every F or Sp sem since 1984	1 to 2
SoilS 501	Graduate Soils Seminar	1	F 1985, Sp 1986	5
CropS 510/ SoilS 501	CSS Department Seminar	1	F 2016, Sp 2017	12-13
SoilS 503	Advanced Soil Analysis	3	Every F or Sp since 2001	1
SoilS 505	Teaching Practicum	1	Every F and/or S semester since 1983	1 to 2
SoilS 700	M.S. Student Research	3-40	Most semesters since 1984	1 to 3
SoilS 800	Ph.D. Student Research	3-30	Most semesters since 1988	1 to 2

Short-Courses Taught and Guest Lecturer in Other Courses

Short course, "Organic Agricultural Systems", Massey University, Palmerston North, New Zealand, 1991.

Short course, "Sustainable Agriculture", University of Idaho Enrichment Program, November and December 1993

Short course, "Sustainable Agriculture and Land Use", University of Lleida, Lerida, Spain, 1996.

One to ten guest lectures in each of the following WSU courses: Crops 101; ESRP 412 and 490; Horticulture 102, 200, 201, and 417; Natural Resource Sciences 303; and Soils 451, 452, and 503.

Graduate Students and Postdoctoral Research Associates

Graduate Students Supervised (Major Advisor)

Scott Rozenbaum. Identifying conversion of agricultural land and specific soils to nonagricultural uses through computer assisted processing of LANDSAT imagery. M.S. (Soil Science), May

1988. Scott went to work as a soil and wetland scientist for the environmental consulting company Shapiro & Associates in Seattle, WA, and now has his own environmental consulting business.

- Michael Jennings. Regulation of environmentally sensitive areas by local governments in the Pacific Northwest. M.R.P., August 1988. Mike became coordinator of the National GAP Analysis Program for the U.S. Fish and Wildlife Service, Moscow, ID and now heads research in the Western Region for The Nature Conservancy, University of Idaho, Moscow, ID.
- Leisa Huyck. Effects of organic and conventional farming on aggregate stability. M.S. (Environmental Science), August 1989. Leisa got an assistant professorship at Humbolt State University, CA, and now works for the SAREP Program at UC Davis.
- Elizabeth Crowe. Relationship of soils and vegetation communities in vernal pools in Washington State. M.S. (Environmental Science), May 1990. Elizabeth went to work as a plant ecologist, USDA Forest Service, Wallowa-Whitman National Forest, OR.
- Collete DePhelps. Methodology for conducting on-farm research in Washington State. M.S. (Environmental Science), May 1994. Collete began working in the Center for Sustaining Agriculture and Natural Resources at WSU and now works for the Palouse Clearwater Institute.
- Linda Klein. Assessment of farmland conversion to nonfarm uses in western Washington. M.S. (Soil Science), May 1995. Linda formed her own environmental consulting and editing company, LRK Communications, in Pullman, WA.
- Lynne Carpenter-Boggs. Development of biodynamic compost and its effects on soil quality. Ph.D. (Soil Science), August 1997 (Co-Chair with Dr. Ann Kennedy). Lynne got a position as a soil scientist with the USDA-ARS in Morris, Minnesota, conducting research in soil microbiology and is now a tenured Associate Professor in the Department of Crop & Soil Sciences, WSU.
- Duncan Cox. Effects of compost and fly ash on ridge-top soils in the Palouse. M.S. (Soil Science), December 1997 (Co-Chair with Dr. Dave Bezdicek). Duncan became a research scientist at the University of Idaho, carrying out no-till research for the STEEP III program.
- Jerry Glover. Effects of organic, integrated, and conventional farming on soil and apple quality and farm profitability. Ph.D. (Soil Science), December 2001. Jerry went to work as a soil scientist and agroecologist for The Land Institute and now works as a senior research advisor for the Bureau for Food Security with USAID. He was chosen by the journal *Nature* (4 December 2008) as one of the "Five Crop Researchers Who Could Change the World."
- Jennifer Reeve. Effect of biodynamic and organic vineyards on soil and wine quality. M.S. (Soil Science), December 2003. Jennifer advanced to the Soil Science Ph.D. program.
- Sasha Kramer. Microbial community composition and nitrogen fluxes in organic, integrated, and conventional agroecosystems. Ph.D. (Biology), Stanford University, California, December 2005 (Co-advised with Drs. H. Mooney and B. Bohannan). Sasha went on to help form and run a non-profit organization called Sustainable Organic Integrated Livelihoods or SOIL (www.oursoil.org).
- Lori Hoagland. Impact of soil biology on nitrogen cycling and weed suppression under newly established organic orchard floor management systems. Ph.D. (Soil Science), May 2007 (Co-Chair with Dr. Lynne Carpenter-Boggs). Lori is an assistant professor in horticulture at Purdue University.
- Jennifer Reeve. Soil quality, microbial community structure, and organic nitrogen uptake in organic and conventional farming systems. Ph.D. (Soil Science), August 2007 (Co-Chair with

- Dr. Lynne Carpenter-Boggs). Jennifer is now a tenured Associate Professor at Utah State University.
- Dan TerAvest. Tree and soil nitrogen responses to alternative ground cover management strategies in organic apple production. M.S. (Soil Science) December 2009. Dan advanced to the Soil Science Ph.D. program.
- Laurie Mooney. Ecological design of the WSU Organic Smartfarm. M.S. (Landscape Architecture), August 2012 (Co-advised with Jolie Kaytes). Laurie is now working as a landscape architect for Pacific Foods in Tualatin, OR.
- Dan TerAvest. Sustainable intensification of food production systems in Malawi. Ph.D. (Soil Science), May 2015. Dan went on to postdoc at Michigan State University and then cofound his own company, Our Sci, LLC, building a soil carbon monitoring system.
- Jonathan Wachter. [NSF-IGERT NSPIRE Fellow]. Role Of mixed crop-livestock systems in transitioning to dryland organic farming in the Pacific Northwest. Ph.D. (Soil Science) May 2017. Jonathan is now working with the Marin Agriculture Land Trust.
- Matt Jones. Dung beetles scavenging wildlife feces to suppress pathogenic diseases in diverse agroecosystems. Ph.D. (Entomology). May 2018 (Co-Chair with Dr. William Snyder). Matt went on to postdoc at the WSU Tree Fruit Research and Extension Center.
- Rachel Wieme. [NSF-IGERT NSPIRE Fellow]. Introducing organic quinoa production systems in the Pacific Northwest. Ph.D. (Soil Science) May 2019 (Co-Chair with Dr. Lynne Carpenter-Boggs). Rachel went on to postdoc at Washington State University.
- Scott Minckler. Permaculture: The Need for Increased Science. M.S. (Agriculture) December 2019. Scott for now will continue in his full-time job as a physical therapist but has interests in teaching at a community college in the future.
- Robert Butler. Sustainable food production systems in western Washington. M.S. (Agriculture). May 2020 (Co-Chair with Dr. Hying Tao).
- Alexandra Davis. Measuring ecosystem services in different farming systems. Ph.D. (Soil Science). May 2021 (Co-Chair with Dr. Dave Huggins).
- Cassandra Rieser. Soil quality in the drier Palouse Region. M.S. (Soil Science). December 2020 (Co-Chair with Dr. Dave Huggins).
- Mary Enges. Developing organic farm retreat for women military veterans. M.S. (Agriculture). May 2023.

Graduate Students Advised (Committee Member)

- Gary Christensen. Protecting agricultural lands in Washington State: Concerns, issues, and effectiveness. M.R.P., December 1986.
- Doug Osterman. Will the Conservation Title of the 1985 Farm Bill be an effective policy in controlling soil erosion in an eastern Palouse watershed? M.R.P., December 1987. Doug became a regional planner for the Snohomish County Planning Department, WA.
- Maureen Boling. Washington State general soils map. M.S. (Soils), May 1988.
- Ann Rodman. The effect of slope position, aspect, and cultivation on organic carbon distribution in the Palouse. M.S. (Soils), August 1988.
- Fred Pierson. New method for measuring aggregate stability. Ph.D. (Soils), December 1988.
- Mark Levick. Comparison of soil parameters on biodynamic and conventional farms. Honors (Soils), Massey University, New Zealand, October 1992.
- William Keis. Mapping and modeling potential erosion and slumping during lower granite reservoir drawdowns. M.S. (Environmental Science), August 1995.

Jeffrey Hopkins-Clark. Comparison of organic, integrated, and conventional farming systems in a commercial apple orchard. M.S. (Horticulture), May 1996.

- Eufemia Marqueses. Soil microbial properties of organic and conventional farms in Australia. Ph.D. (Environmental Science), Griffith University, Australia, December 2000.
- Kelly Cherrey. Laboratory column measurements of colloid transport in sediments from the Hanford DOE site. M.S. (Soils), May 2002.
- Gregory Peck. Apple orchard productivity and fruit quality under organic, conventional, and integrated management. M.S. (Horticulture), May 2004.
- Kevin Murphy. Organic wheat breeding. M.S. (Crop Science), December 2004.
- Kevin Murphy. Evaluation and selection for yield, weed suppression ability, competition traits and mineral nutrient content in organic and low-input wheat breeding systems. Ph.D. (Crop Science), May 2007.
- Matt Stowe. N-use efficiency in direct seed systems. M.S. (Soils), May 2007.
- Kristy Ott. Impacts of winter growing conditions on yield and nitrate accumulation in organically produced leafy greens. M.S. (Soil Science), May 2007.
- Stephen Bramwell. Effects of integrated vegetable-livestock farming on soil quality and energy consumption. M.S. (Soil Science), May 2008.
- Rita Abi-Ghanen. Optimizing biological nitrogen fixation and evaluating Iraqi extension education. Ph.D. (Soil Science), August 2009.
- Haly Ingle. Effects of climate on organically grown lettuces and spinach in hoophouses in northern climates. M.S. (Soil Science), May 2010.
- Lessando Gontijo. Prospects for the biological control of woolly apple aphid *Eriosoma lanigerum* (Homoptera: Aphididae) in Washington State. Ph.D. (Entomology), December 2011.
- Trivendhiran Pillai. Comparative assessment of soil properties and economic return of alternative farming systems. M.S. (Soil Science), May 2013.
- Cornelius Adewale. Farm-friendly tools for assessing nutrient availability and carbon footprint on organic farms. M.S. (Soil Science), December 2013.
- Jason Morrow. Resilience of farming systems to climate change. M.S. (Soil Science), Dec 2014.
- Jaimi Lambert. Effects of farm-to-school and garden-based programs on children's health and academic achievement. M.S. (Agriculture), December 2015.
- Ashley Hammac. Nutrient cycling in Pacific Northwest oilseed production. Ph.D. (Soil Science). December 2015.
- Catherine C. Crosby. Harnessing the microbiome for sustainability. Ph.D. (Soil Science). May 2016.
- Tabitha Brown. Variable rate nitrogen and seeding to improve nitrogen use efficiency. Ph.D. (Soil Science). May 2016.
- Harsimran Kaur. Defining current land use classification and shifts in Agroecological Classes based on bioclimatic variables for REACCH study region (Inland Pacific Northwest region). Ph.D. (Soil Science). August 2017.
- Cornelius Adewale. Estimating ecosystem services of agricultural systems. Ph.D. (Environmental Science), May 2018.
- Karol Krey. Links between soil quality, plant chemistry, and pest-insect population growth. Ph.D. (Entomology). August 2017.
- Julianne Kellogg. Breeding quinoa for the Pacific Northwest. M.S. (Crop Science), May 2017.
- Kristofor Ludvigson, Alternative Crops/Organic Quinoa Production Systems. M.S. (Crop Science), August 2017.

Ian Clark. Evaluation of above- and below-ground traits exhibited by amphiploid hybrids for potential as a perennial grain in the Pacific Northwest. M.S. (Crop Science), August 2017.

- Eli Bloom. Promoting native bee health and pollination services on diversified organic produce farms. Ph.D. (Entomology). May 2019.
- Robert Orpet. Evaluating aphid pest management and soil quality on organic and conventional apple orchards in Washington. Ph.D. (Entomology). December 2018.
- Henry Sintim, Evaluation of soil quality as affected by biodegradable plastic mulches. Ph.D. (Soil Science). May 2018.
- Khati, Kisusan. Sustainable agriculture and agroecology. M.S. (Agriculture), December 2020.
- Cedric Habiyaremye. No-till quinoa, millet, and food barley agronomy and variety trials. Ph.D. (Crop Science), May 2020.
- Aaron Appleby. Efficacy and economic viability of organic herbicides. M.S. (Agriculture), December 2018.
- Katherine Naasko. Soil health, fertility, and biogeochemistry. Ph.D. (Soil Science), December 2021.
- Rinkal Saini. Soil quality on alternative farming systems. M.S. (Soil Science), May 2022.
- Scott, Brianna. Biodynamic farming in Washington State. M.S. (Agriculture), May 2023.
- Julianne Kellogg. Advancing Biofortification: Methodology, Breeding Thresholds, and Human Health Impacts. Ph.D. (Crop Science), May 2023.

Postdocs

- Dave Huggins (Soil Science). Comparison of the effects of low-input and conventional farming on soil productivity in the Palouse. August 1990 to December 1991.
- Carolina A. Torres (Horticulture). Strawberry quality and nutritional quality under organic and conventional management. February 2005 to February 2006.
- Canming Xiao (Soil Science). Effect of organic and conventional farming on soil health and strawberry quality. July 2005 to June 2007.
- Dan TerAvest (Soil Science). MultispeQ: A deployable sensor for the PhotosynQ network to enable critical plant, soil and seed measurements for African breeders and extension agents. May 2015 to June 2016.
- Rachel Wieme (Soil Science). Agronomy of quinoa in organic farming systems. May 2019 to May 2020.

Undergraduate Advising

Undergraduate advisor to Soil Science majors and minors since 1983 and Organic Agriculture Systems majors since 2006; currently advise about 20 students.

Advise at least 15 students in the WSU Online Organic Agriculture Certificate Program

Other Teaching Related Activities

Nominated Dr. A.J. Busacca for the 1990 CAHE Junior Faculty Award for Excellence in Teaching and Dr. J.B. Harsh for the 2000 CAHE Award for Excellence in Research (Both won the awards.)

Applied and received GER status (B, Tier II) for Soils 201

Developed (in cooperation with Kathi Peck) the new course, Organic Gardening and Farming (Soils 101), 2002

Established (in cooperation with Brad Jaeckel and Kathi Peck) the first organically certified teaching farm (3 acres) and Community Supported Agriculture (CSA) enterprise on the Pullman campus of Washington State University, 2004

Developed (in cooperation with Brad Jaeckel) the new course, Practicum in Organic Agriculture (Soils 480), 2004

Spearheaded the development of the Organic Agricultural Systems major at Washington State University, the first such major in the United States (effective June 2006)

Special Visit by Governor Christine Gregoire concerning my organic agriculture research and teaching program and the benefits of organic agriculture to Washington State, May 2005.

Co-developed the online Soils 101 course (Organic Gardening and Farming) as part of the online Organic Agriculture Certificate in the Distance Degree Program at Washington State University

Successfully nominated Charles Benbrook as an Adjunct Faculty member in the Department of Crop & Soil Sciences

Co-developed and manage the internship program for the Organic Agricultural Systems major Interviewed about the WSU organic agriculture undergraduate program in a feature article, "Creative Ways to Energize Your Career", in the journal *Science* (12 September 2008, pp. 1513-1518).

SERVICE AND PROFESSIONAL ACTIVITIES:

A. Service to the Department of Crop and Soil Sciences

Freshman Student Orientation Committee, 1985-1987

Future Cougar Days Committee, 1984-1987

Undergraduate Student Recruiting Committee, 1983-1987, 1991-1995

Chair, Student Recruitment Display Committee, 1987-1994

Undergraduate Program Committee, 1987-now

Scholarship Committee, 1983-now

Author, ~300 letters of recommendation for students, 1983-now

Sponsor, Russia Summer Student Internship in Agriculture Program, 1990

Department Chair Search Committee, 1986-1987

Faculty Awards for Excellence Committee, 1990

Outstanding Senior Award Committee, 1984-1996

Chair, Annual Christmas Party, 1984-1995

Graduation Committee, 1986-now

Organic Farm Tour Leader for press reporters and visiting scientists, 1988-now

Member of search committee for Soil Physics position, 1997

Member of search committee for Department Chair, 1987

Member of search committee for Weed Scientist position, 2005-2006.

Member of search committee for Soil Biology position, 2007.

Chair of the Career Guidance Committees for Drs. Markus Flury, Anne-Marie Fortuna, Kevin Murphy, Lynne Carpenter-Boggs, and David Brown.

Member of the Career Guidance Committees for Drs. Kim Kidwell, Ian Burke, Jessica Goldberger, Tarah Sullivan, Kefy Desta, Michael Neff, Kevin Murphy, Karen Sanquinet, Dave Brown, Deirdre Griffin, Anna Warner, and Clark Neely.

Chair, Search Committee for Assistant Professor of Soil Quality and Sustainable Soil Management position at WSU-Everett, 2016-2018

B. Service to the College of Agricultural, Human, and Natural Resource Sciences

Career Days Committee, 1985-1995

Community College In-Service Workshop for Ag. Instructors Committee, 1984

Improvement of Instruction Committee, 1988-2003

Long-Range Planning Committee, 1990

Planning Committee for CAHE Branch Campus Workshop, 1987-1988

Tri Cities Curriculum Committee, 1991-1995

Co-Chair, Dean's Task Force "Conserving and Managing Our Natural Resources", 1989-90

Chair, CAHE Awards Committee, 1999-2000

Planning Committee, Honors courses for CAHE, 2002-2003

Promotion and Tenure Committee (Chair, 2006), 2004-2006

Promotion and Tenure Committee, 2015-2017

C. Service to the University

Instructional Media Services Film Review Committee, 1987-1996

Agriculture and Liberal Arts Program Committee, 1986-1988

Environmental Science and Regional Planning Policy Committee, 1988-1991

Sponsor, Graduate Student Summer Grants, 1988-now

Interdisciplinary Land Use Planning Research Unit, 1986-1988

Land Use Committee, 1983-1994

Olympic Weightroom Expansion Planning Committee, 1994-2000

"Alive" Student Orientation Program, 1999-2006

Leadoff speaker for WSU's Innovators Series Fall 2006, Rainier Club, Seattle, WA

Speaker for WSU's Innovators Series Fall 2007, Fairmount Hotel, San Francisco, CA

Speaker for WSU's Innovators Series Fall 2008, Marcus Whitman Hotel, Walla Walla, WA

Provost Search Committee, WSU, 2013-2014

Regents Professor Nominating Committee (Chair 2016-2017), WSU, 2013-2018

D. Service to the Profession

Associate Editor of the *Journal of Natural Resources and Life Sciences Education* (formerly the *Journal of Agronomic Education*), 1986-1992

Journal referee for the following professional journals: *Nature, Science, Nature Communications, Nature Sustainability, Proceedings of the National Academy of Sciences, Soil Science Society of America Journal, Journal of Soil and Water Conservation, Soil Science, American Journal of Alternative Agriculture, Landscape and*

Urban Planning, Agriculture Ecosystems and Environment, Environmental Management, and *Geoderma*, 1983-now

- Ad hoc referee for numerous grant proposals submitted to the following: USDA Competitive Grants, US Environmental Protection Agency, National Science Foundation, The Organic Center, USDA Sustainable Agriculture Research and Extension
- Outside referee for several university scientists coming up for tenure and/or promotion, 1990-now
- Member of California People-to-People Agricultural Delegation to China, 1984
- Member of the Natural Systems Agriculture Advisory Board of The Land Institute, 1997now
- Current or past member of the American Society of Agronomy, Soil Science Society of America, Soil and Water Conservation Society, National Association of College Teachers in America, and American Farmland Trust
- National Academy of Sciences 21st Century Systems Agriculture Committee, 2007-2010 AGree Food Policy Research Committee, 2011-now
- USDA National Program Agricultural System Competitiveness & Sustainability: Cropping Systems Panel, 2013