



GEORGE F. VANCE

PROFESSOR EMERITUS J.E. Warren Distinguished Professor

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Academic Training

- Ph.D. 1989 Soil Science (Environmental Soil Chemistry) University of Illinois
- M.S. 1985 Soil Science (Soil Chemistry/Pedology) Michigan State University
- B.S. 1981 Crop and Soil Sciences (Soil Science/Chemistry) Michigan State University

Research Activities

Chemistry and Bioavailability of Waste Constituents
Geographical Information Science for Land-Use Planning
Reclamation and Revegetation of Disturbed and Altered Lands
Forest Nutrient Cycling Processes Mediated by Organic Residues
Selenium Chemistry in Mineland, Agriculture, and Military Ecosystems
Acid Deposition Impacts on Soil and Aquatic Organic Matter Chemistry
Sorption of Hazardous Anions and Organics by Modified-Mineral Surfaces
Carbon Sequestration in Groundwater, Agricultural and Forested Ecosystems
Ground and Surface Water Contamination by Inorganic and Organic Constituents
Pesticide and Nitrogen Mobility and Fate in Semi-Arid and Irrigated Environments

Courses Taught

Analytical Methods for Ecosystems Research
Bioremediation
Chemistry of the Soil Environment
Environmental Quality
Forest and Range Soils
Genesis, Morphology and Classification of Soils
Professional Exam Preparation (SSSA Certification)
Reclamation and Restoration Ecology
Soil Biogeochemistry
Soil Organic Chemistry
Soil Science Laboratory

*Professional Awards and Recognition*Current

J.E. WARREN DISTINGUISHED PROFESSOR OF ENERGY AND THE ENVIRONMENT, University of Wyoming, 2000-present

FELLOW - American Association for the Advancement of Science (AAAS), 2009-present

FELLOW - Soil Science Society of America (SSSA), 1999-present

FELLOW - American Society of Agronomy (ASA), 1999-present

Past

- 2010 WILLIAM T. PLASS AWARD – Lifetime Achievement Award, American Society of Mining and Reclamation (ASMR)
- 2004 DISTINGUISHED GRADUATE FACULTY MENTOR AWARD (1ST Recipient) - University of Wyoming Graduate School
- 2001-2002 OUTSTANDING DISSERTATION AWARD - Dr. Youwen You for Physical, Earth and Computational Sciences, University of Wyoming Graduate School
- 1998 RECLAMATION RESEARCHER OF THE YEAR - American Society of Mining and Reclamation
- 1998 JOURNAL ISSUE COVER PAGE - “beta-Cyclodextrin Intercalated Layered Double Hydroxide” Journal of Inclusion Phenomena and Molecular Recognition in Chemistry, Volume 316, 1998
- 1998-1999 OUTSTANDING DISSERTATION AWARD - Dr. Hongting Zhao for Physical, Earth and Computational Sciences, University of Wyoming Graduate School
- 1996-1999 EXCELLENCE IN ADVISING SPECIAL RECOGNITION - Center for Academic Advising, University of Wyoming
- 1996-1997 OUTSTANDING DISSERTATION AWARD - Dr. Shankar Sharmasarkar for Biological Sciences, University of Wyoming Graduate School
- 1991-2009 Biography included in Who's Who in Agriculture Higher Education, Who's Who in Science and Engineering, Who's Who in America, Who's Who in the World, American Men and Women of Science, Men of Achievement, International Who's Who of Professionals
- 1989 GRADUATE MAGNA CUM LAUDE - University of Illinois
- 1987 UNIVERSITY OUTSTANDING TEACHER RECOGNITION - University of Illinois
- 1986-1987 PRESIDENT AND CO-FOUNDER, Agronomy Graduate Student Organization, Univ. of Illinois
- 1984 GRADUATED SUMMA CUM LAUDE - Michigan State University
- 1981 AMERICAN SOCIETY OF AGRONOMY OUTSTANDING SENIOR - Michigan State University
- 1981 SOIL JUDGING CONTEST WINNER - Michigan State University
- 1980-1981 PRESIDENT AND VICE-PRESIDENT, Agronomy Club, Michigan State University
- 1979-1981 NATIONAL HONORS COMMUNITY COLLEGE SCHOLARSHIP - Michigan State University

Honor Societies

Alpha Zeta (College of Agriculture)

Gamma Sigma Delta (College of Agriculture)

Phi Kappa Phi (University Honor Society)

Phi Theta Kappa (National Community College Honor Society)

Sigma Xi (University Research)

Professional Societies (Current and Past)

American Association for the Advancement of Science (AAAS)
 American Chemical Society (ACS) and Geochemistry Division
 American Society of Agronomy (ASA)
 American Society of Mining and Reclamation (ASMR)
 Clay Minerals Society (CMS)
 Ecological Society of America (ESA)
 International Humic Substances Society (IHSS)
 International Soil Science Society (ISSS)
 International Union of Soil Science (IUSS)
 Society for Range Management (SRM)
 Soil and Water Conservation Society (SWCS)
 Soil Science Society of America (SSSA)
 Western Society of Soil Science (WSSS)

PROFESSIONAL POSITIONS, LEADERSHIP AND SERVICE**Current**

PROFESSOR EMERITUS, 2012-; PROFESSOR, 1998-2012; ASSOCIATE PROFESSOR, 1994-1998; ASSISTANT PROFESSOR, 1990-1994; Departments of Ecosystem Sciences and Management, Renewable Resources, and Plant, Soil and Insect Sciences, University of Wyoming
 MEMBER, Wyoming Reclamation Restoration Center (WRRC) Steering Committee, 2012-present
 MEMBER, American Society of Mining and Reclamation (ASMR) Awards Committee, 2007-present
 MEMBER, American Society of Mining and Reclamation (ASMR) Memorial Student Scholarship Awards Committee, 2006-present
 CERTIFIED PROFESSIONAL SOIL SCIENTIST (Registration #03373), American Registry of Certified Professionals in Agriculture, Biology, Earth and Environmental Sciences, 1992

Past

2012-2014 EDITORIAL BOARD, Online ASMR Journal, American Society of Mining and Reclamation
 2010-2011 Expert Member, Wyoming Technical Advisory Team (TAT) for Development of Recommendations for CBM Water in the Powder River Basin, WY, WDEQ
 2008 Panel Member, USDA Soil Processes Program, National Research Initiative Competitive Grants
 2007-2009 EXPERT MEMBER, Future of U.S. Coal, National Commission on Energy Policy, Wash. DC
 2007 ORGANIZER AND PAPER EDITOR, Special Coalbed Methane Session, ASMR 2007 Meeting, Gillette, WY
 2006-2007 MEMBER, Executive Organizing Committee, ASMR 2007 Meeting, Gillette, WY.
 2006 STUDENT PRESENTATION EVALUATOR, Billings Land Reclamation Symposium/ASMR Meeting, Billings MT
 2005-2008 PANEL MEMBER, EPA=s STAR Terrestrial Plants and Soils Fellowship Program
 2005-2006 ASSOCIATE EDITOR - Arid Land Research and Management, International Journal of Native and Agricultural Soil Environments
 2004 MODERATOR, Science of Carbon Sequestration Session, Carbon Sequestration: Science, Policy, and Marketing in Wyoming Conference, Casper, WY
 2003-2006 ADJUNCT PROFESSOR, School of Environment and Natural Resources, University of Wyoming,
 2003-2005 MEMBER, Executive Organizing Committee, ASMR 2005 Meeting, Breckenridge, CO.
 2003-2005 MEMBER, Book Series Committee (S370), Soil Science Society of America (SSSA)
 2002-2009 EDITORIAL BOARD MEMBER, Arid Land Research and Management (ALRM), International Journal of Native and Agricultural Soil Environments
 2002-2006 DIRECTOR, American Society of Agronomy (ASA) Executive Board, Western Branch Representative

- 2002-2006 INTERIM DIRECTOR, Wyoming Reclamation Ecology Center (WREC), University of Wyoming,
2002-2006 ASSOCIATE VICE-CHAIRMAN, Soil Use and Management Division, 18th World Congress of Soil Science Meeting, International Union of Soil Science (IUSS), Philadelphia, PA
- 2002-2006 PANEL MEMBER, EPA=s STAR Aquatic Ecology and Ecosystems Fellowship Program
2002-2004 ASSOCIATE DIRECTOR FOR RESEARCH, College of Agriculture, University of Wyoming
2002-2004 SELECTION COMMITTEE MEMBER, ASA Fellow Awards, American Society of Agronomy
2002 CO-ORGANIZER - WCC-21 Revegetation and Stabilization of Deteriorated and Altered Lands Meeting, Gillette, WY
2002 PROCEEDINGS COORDINATOR - Western Society of Soil Science Meetings (WSSS), Colorado State University, Ft. Collins, CO
- 2001-2009 INVITED MEMBER, Wyoming Carbon Storage/Sequestration Advisory Committee, appointed by governors' Geringer and Freudenthal
- 2001-2003 CO-CHAIRPERSON, General Program Committee & Member, Central Organizing Committee, Billings Reclamation Symposium/ASMR 2003 Meeting, Billings, MT
- 2001-2002 PRESIDENT, American Society of Mining and Reclamation (ASMR)
2001 PRESIDING OFFICER - Forestry and Wildlife Technical Division, American Society for Surface Mining and Reclamation Meeting (ASSMR), Albuquerque, NM
2001 CO-ORGANIZER - Land Restoration Success and Sustainability Symposium, Society for Range Management (SRM), Kona, HI
2001 INVITED MEMBER AND DISCUSSION LEADER - Soil Analytical Parameters for Coalbed Methane Round-table, Sheridan, WY
2000 CONSULTANT/COLLABORATOR (Special Government Employee), Office of Director, Northern Plains Area, USDA Agricultural Research Service (ARS), Ft. Collins, CO
2000 TEAM MEMBER, CSREES Review of Crop & Soil Sciences Department, Michigan State Univ.
2000 PANEL MEMBER, EPA=s 2000 Science to Achieve Results Program, Future Research in Natural Sciences Proposals
2000 CO-ORGANIZER - Special Symposium: Advancing Soil Quality into the 21st Century, Soil and Environmental Quality Division, SSSA National Meeting, Minneapolis, MN
2000 PRESIDING OFFICER, Soils and Overburden Symposium, ASSMR Meeting, Tampa FL
2000 MEMBER - Regional Coordination and Implementation Committee (RCIC), Western Association of Agricultural Experiment Station Directors & Western Extension Directors, Lake Tahoe, NV
2000 MEMBER - Research Implementation Committee (RIC), Western Association of Agricultural Experiment Station Directors, San Diego, CA
- 1999-2000 ASSOCIATE DIRECTOR FOR RESEARCH/ASSISTANT DIRECTOR of the Agricultural Experiment Station, College of Agriculture, University of Wyoming
- 1998-2000 ASSOCIATE EDITOR, Clays and Clay Minerals (CCM) Journal
- 1998-2000 CONSULTANT, Integrated Phytoremediation and Greenbelt Project, Union Pacific Railroad Laramie Tie Plant, Laramie, WY
- 1998-2000 CO-ORGANIZER, Environmental Chemistry at the Clay-Water Interface SSSA Bouyoucos Conference, Honolulu, HI
- 1998-2000 MEMBER, ASSMR Publication Policy and Review Board
- 1998-1999 DIVISION CHAIR, Soils and Environmental Quality (S-11), SSSA
- 1998-1999 CHAIR; 1997-1998, VICE-CHAIR; 1996-1997, SECRETARY; Western Coordinating Committee (WCC-21), Revegetation and Stabilization of Deteriorated and Altered Lands
- 1998-1999 MEMBER, SSSA Program Planning Committee (S711)
1998 PRESIDING OFFICER - Fate of Pesticides and Organic Contaminants Symposium, Soils and Environmental Quality Division, SSSA National Meeting, Baltimore, MD
1998 MODERATOR - Submitted Presentations Section, American Association for the Advancement of Science (AAAS-PD)/WSSS, Logan, UT
- 1997-2012 State Administer - Fundamentals of Soil Science and Professional Practice Examinations, Council of Soil Science Examiners, Soil Science Society of America,
- 1997-2000 CHAIRMAN (1999-2000) – SSSA Training of Soil Scientists Committee
- 1997-1998 PRESIDENT, 1996-1997 VICE-PRESIDENT; 1994-1996, SECRETARY/TREASURER; Western Society of Soil Science

- 1997-1998 MEMBER - Program Development Committee, The Clay Minerals Society
- 1997 PROGRAM ORGANIZER - 1) Utilization of Organic by-Products: Land Application and Crop Production Practices and 2) Soil Quality: Issues, Concerns and Reflections, AAAS-PD/WSSS Meeting, Corvallis, OR
- 1997 PRESIDING OFFICER - Contaminant/Nutrient Mobility in Response to Soil/Water Quality Symposium, Soil and Environmental Quality Division, SSSA National Meeting, Anaheim, CA
- 1996-1998 CHAIR, Western Region, and Member, ASSMR National Executive Committee
- 1996-1997 EXPERT WITNESS, Soil and Overburden Issues in Small Mines of Wyoming
- 1996 UNIVERSITY OF WYOMING REPRESENTATIVE - Idaho National Engineering Laboratory/University (Massachusetts Institute of Technology and Universities of Idaho, Colorado, Utah, Montana, Wyoming and Washington) Research Consortium, Environmental Remediation Working Group, Idaho Falls, ID
- 1996 PRESIDING OFFICER - Soils and Overburden Symposium, ASSMR Meeting, Knoxville, TN
- 1995 CHAIR, Internal UW/CSREES Review Committee, Molecular Biology Department, UW
- 1995 PANEL MEMBER, Strengthening Awards/Equipment/Research Career Enhancement Programs, USDA National Research Initiative Competitive Grants
- 1995 SYMPOSIUM CO-ORGANIZER AND PRESIDING OFFICER, Chemistry and Restoration of Disturbed Lands, Soil and Environmental Quality Division, SSSA National Meeting, St Louis, MO
- 1995 SYMPOSIUM ORGANIZER - Selenium: Mining, Reclamation and Environmental Impacts, ASSMR Meeting, Gillette, WY
- 1995 SYMPOSIUM ORGANIZER - 1) Soil Contaminants: Reactions, Mobility and Reclamation and 2) Forestry Practices and Their Impacts on Soils of Western North America, AAAS-PD/WSSS Meeting, Vancouver, Canada
- 1994-2000 RESEARCH COORDINATOR, EPA Region 7 & 8 Hazardous Substance Research Center, UW
- 1994-1999 CO-CHAIR, Regional Research Committee (W-170), Chemistry and Bioavailability of Waste Constituents in Soils
- 1994-1997 ASSOCIATE EDITOR, Journal of Environmental Quality
- 1994-1997 SHORT-TERM ACTING HEAD, Departments of Plant, Soil and Insect Sciences and Renewable Resources, 1 week during May 1994, February 1995, December 1995 and October 1997
- 1994-1995 CO-CHAIR, 1995 ASSMR National Meeting, Gillette, WY
- 1994 PRESIDING OFFICER - Biosolids II Symposium, Soil and Environmental Quality Division, ASA/SSSA National Meeting, Seattle, WA
- 1993-1996 SOIL SCIENCE SECTION HEAD, Department of Plant, Soil and Insect Sciences, Univ. of Wyoming
- 1993 INVITED SELENIUM EXPERT - Abandoned Coal Mine Lands Meeting, Kemmerer, WY
- 1993 PRESIDING OFFICER - Trace Metals II Symposium, Soil and Environmental Quality Division, ASA/SSSA National Meeting, Cincinnati, OH
- 1993 DEMONSTRATOR - ARK Industries and Rehabilitation Center Grand Opening and Earth Day Celebration, 1993, Backyard Composting Demonstration, ARK Newsletter Vol. 1 No. 3. Laramie, WY
- 1992-1993 MEMBER - Technical Review Committee, Abandoned Coal Mine Land Research Program, Wyoming Department of Environmental Quality & University of Wyoming Office of Research
- 1992 CO-CHAIR, EPA Watershed Manipulation Project Organic Acids Workshop, Univ. of Maine
- 1991-1992 MEMBER - Soil and Water Conservation Society (SWCS) Scholarship Committee, Wyoming Chapter
- 1990-1996 SOIL SCIENCE SPECIALIST, State Selenium Task Force, Wyoming
- 1990-1994 REGIONAL COORDINATOR (Alaska, Montana, Nevada, Utah and Wyoming); 1993-1994, Member, Executive Advisory Committee; 1993-1994, State Chairman; ASA Membership Committee
- 1990-1992 MEMBER - Subcommittee on Composting of Laramie Wastes, City and County Environment Commission, Laramie, WY
- 1988 VISITING SCIENTIST, Institute of Soil Science and Geography, University of Bayreuth, Germany
- 1987-1989 RESEARCH ASSOCIATE, Departments of Agronomy and Forestry, University of Illinois
- 1984-1987 RESEARCH AND TEACHING ASSISTANT, Departments of Agronomy and Forestry, University of Illinois

- 1981-1984 RESEARCH AND TEACHING ASSISTANT, Department of Crop and Soil Sciences, Michigan State University
1981 NATIONAL SPEECH CONTEST CONTESTANT - American Society of Agronomy, Detroit, MI
1980 NATIONAL CROP JUDGING CONTEST CONTESTANT - Universities, Kansas City, Chicago, IL

University and Department Committees and Appointments**Current**

J.E. Warren Distinguished Professor Selection Committee, 2011-present

Past

- 2014 MEMBER - Agricultural Experiment Station Competitive Grants Program
2011-2012 FACULTY ADVISOR – UW Club Tennis Team
2009-2012 MEMBER - Jerry Schuman Graduate Scholarship Committee
2009-2011 FACULTY ADVISOR - Restoration Outreach and Research (ROaR) Club
2008 MEMBER – Civil and Architectural Engineering Faculty Search Committee
2008 MEMBER - REWM Jerry Schuman/Bud Smith Graduate Scholarship Committee
2007-2008 LIAISON – Department Representative on College of Agriculture Leadership Team
2006-2012 CHAIRMAN – ESM Space and Facilities Committee
2006 CHAIRMAN - Department Tenure, Promotion and Reappointment Document Committee
2005-2006 MEMBER - Soil Fertility and Plant Nutrition Faculty Search Committee
2003-2012 STEERING COMMITTEE MEMBER – Undergraduate Earth System Science Committee
2001-2002 CHAIRMAN - Spatial Processes Ecologist Faculty Search Committee
2001-2004 CHAIRMAN (2001) - College of Agriculture Tenure and Promotion Committee
2001-2004 MEMBER – University Academic Planning Committee
2000 MEMBER - Reclamation/Restoration Ecology Faculty Search Committee
2000 MEMBER - REWM Graduate Program Committee
2000 MEMBER - Southeast Wyoming Research and Extension Center Review
1999-2010 MEMBER - School of Environment and Natural Resources Faculty Committee
1999, 2000 MEMBER - Academic and Student Programs Senior Office Associate Search Committee
1999-2003 FACULTY ADVISOR – UW Environment and Natural Resources Student Organization
1999 MEMBER - Agricultural Experiment Station Competitive Grants Program
1999 MEMBER - College of Agriculture Tenure and Promotion Committee
1998 CHAIRMAN – RNEW Department Head Search Committee
1997, 1998 MEMBER – UW Faculty Grants-in-Aid Awards Committee
1997, 1998 MEMBER – UW Presidential Award Committee
1997-1999 MEMBER – UW Student Issues Committee
1997-1998 MEMBER – College Planning Committee
1997 MEMBER – UW Library Selenium Development Committee
1996-2012 COORDINATOR - Soil Science Graduate Program
1996-1998 MEMBER – UW Research Advisory Committee
1996 COORDINATOR – Department Head Review
1995-1997 MEMBER – UW Faculty Workload Policy Committee
1995-1997 MEMBER – UW Committee on Committees, Faculty Senate
1995-1996 MEMBER – UW Faculty Job Description Review Committee
1995-1996 MEMBER – PSIS Productivity Standards Committee
1995 MEMBER & HOST - Vice-President for Research Search Committee
1995 MEMBER - Ecophysicologist Faculty Search Committee

- 1994-1997 CHAIRMAN (1994-1995) & MEMBER - College of Agriculture Dean's Advisory Committee
1994-1996 MEMBER - School of Environment and Natural Resources Faculty Committee
1994-1995 MEMBER AND COORDINATOR - College of Agriculture Faculty Senators
1994 MEMBER – UW Major Equipment Grants Committee
1994 MEMBER - Isotope Geologist Faculty Search Committee
1993-2005 FACULTY MENTOR - Soil Physicist
1993-1995 COORDINATOR - Soil Science Graduate Admissions
1993-1994 CHAIRMAN - Environmental and Natural Resources Initiative Committee
1993-1994 MEMBER - Graduate School Associate Dean Review Committee
1992, 95, 02 MEMBER - Gamma Sigma Delta Membership and Awards Committee
1992-1998 MEMBER – UW Faculty Senate
1992-1996 MEMBER - Soil Testing Advisory Committee
1992-1993 MEMBER – Reclamation Specialist/Plant Physiologist Faculty Search Committee
1992-1993 MEMBER - Soil Physicist Faculty Search Committee
1991-1993 CHAIRMAN (1993) – PSIS Graduate Admissions Committee
1990-2000 LIBRARY LIAISON - Soils Science Section
1990-1994 CHAIRMAN (1994) & SECRETARY (1990-1993) – PSIS Awards Committee
1990-92, 97 CHAIRMAN (1992, 1997) & MEMBER – PSIS Graduate Seminar Committee
1991-1992 MEMBER - Faculty Advisor, Soil Testing Laboratory
1990 FACULTY ADVISOR - Resource Conservation Club (RC²)
1990 MEMBER - Soil Physicist Faculty Search Committee
1987-1988 MEMBER - Paul A. Funk & College of Agriculture Recognition Awards Committee, University of Illinois
1983-1984 MEMBER - Graduate Programs Committee, Michigan State University

Professional Reviews

Department Reviews

- 2000 REVIEW TEAM MEMBER - Crop and Soil Sciences Department, Michigan State University, USDA-CSREES Review
1995 CHAIRMAN - Internal Review Committee, Molecular Biology Department, University of Wyoming, USDA-CSREES Review
1981 STUDENT REVIEWER - Crop and Soil Sciences Department, Michigan State University, USDA-CSREES Review

Faculty and Professional Reviews

- 2008 PROMOTION REVIEW – Full Professor Promotion, Sultan Qaboos University, Oman
2008 PROMOTION REVIEW - Grade + Promotion (e.g., Full Professor rank), Agricultural Research Organization, Israeli Scientific Civil Service
2006 PROMOTION REVIEW - Associate Professional Research Scientist Promotion, Environmental Sciences, University of California, Riverside, CA
2005 PROMOTION REVIEW - Faculty Promotion to Professor Review, Crop and Soil Science, Oregon State University
2005 PROMOTION REVIEW - Faculty Tenure and Promotion Review, Crop, Soil and Environmental Sciences, University of Arkansas
2004 PROMOTION REVIEW - Faculty Tenure and Promotion Review, Plant, Soil and Entomological Sciences, University of Idaho
2004 PROMOTION REVIEW - Faculty Tenure and Promotion Review, School of Natural Resources, University of Missouri

- 2003 AD HOC MEMBER - GS-14 Promotion Review Committee, Environmental Protection Agency
- 2002 PROMOTION REVIEW - Faculty Tenure and Promotion Review, Plant and Soil Sciences Division, West Virginia University
- 2001 PROMOTION REVIEW - Faculty Tenure and Promotion Review, Department of Crop and Soil Environmental Sciences Virginia Polytechnic Institute and State University
- 1996 PROMOTION REVIEW - Faculty Tenure and Promotion Review, Department of Plant Science, University of Connecticut

Book Reviews

- 2010 The National Academies Press, National Research Council, Washington D.C. "Management and Effects of CBM Development and Produced Water in the Western United States"
- 2010 Elsevier/Academic Press, "Managing Agricultural Greenhouse Gases: Coordinated Agricultural Research Through GRACEnet to Address Our Changing Climate"
- 2008 Taylor and Francis, "Interfacial Chemistry of Rocks and Soils"
- 2007 Blackwell Publishing, "Introduction to Environmental Biochemistry"
- 2004 CRC Press, "Soil and Water Chemistry: An Integrated Approach"
- 2002 CRC Press, "An Introduction to Environmental Soil Chemistry"
- 1999 Harcourt Academic Press, "Pollution and Human Health"
- 1996 Blackwell Scientific Publishers, "An Introduction to Environmental Chemistry"
- 1993 Lewis Publishers, "Agronomic Math"
- 1989 CRC Press, "Handbook for Analytical Methods in Environmental Chemistry"
- 1985 Wiley-Intersciences, "Cycles of Soil: Carbon, Nitrogen, Phosphorus, Sulfur, Micronutrients"

Book Chapter Reviews

- 2008 NCEP, "Introduction, Coal Reserves and Resources, Mining Technology and Resource Optimization, Coal Processing Technologies, Health and Safety Issues, Coal Mining Professionals and Workforce Issues" The Future of Coal
- 2005 AGU, "An Inventory of Carbon Storage in Forest Soil and Down Wood of the United States" American Geophysical Union Proceedings
- 2003 Elsevier, "Arsenic and Selenium" Environmental Geochemistry
- 2003 CRC Press, "Soil Minerals", "Chemical Weathering" and "Surface Chemistry and Adsorption Reactions" Soil Chemistry: An Environmental Approach
- 2003 U.S. Geological Survey, "Uptake of Selenium and Other Contaminant Elements into Plants Growing on Phosphate Mine Waste-rock Piles, Southeast Idaho" Phosphoria Formation in Idaho.
- 2000 Soil Science Society of America/American Society for Surface Mining and Reclamation Special Publication, "Reclamation of Surface Coal Mined Lands in Western Canada". Reclamation of Drastically Disturbed Lands, 2nd Edition.
- 1998 Soil Science Society of America Special Publication No. 55, "Innovations in Curricula and Teaching Methods in Graduate Education of Soil Chemists" Future Prospects for Soil Chemistry.
- 1995 Cambridge University Press, "Chemistry and Mineralogy of Molybdenum in Soils" Soil and Plant Molybdenum: Significance to Crops and Livestock.
- 1995 Lewis Publishers, "Shallow Groundwater Chemistry of Peatlands Located in the Western Half of the Hiawatha National Forest" International Symposium on the Ecology and Management of Northern Forested Wetlands.
- 1994 American Society of Agronomy Special Publication no. 58, "Utilization of Sawmill By-Products and Gypsum to Revegetate Sodic Bentonite Mine Spoils" Agricultural Utilization of Urban and Industrial By-Products.

Manuscript Reviews (Several Papers Reviewed for Many of the Journals)

Agronomy Journal
American Journal of Science
American Society for Surface Mining and Reclamation
American Society of Mining and Reclamation
Applied Clay Science
Archiv für Hydrobiologie
Arid Land Research and Management: Journal of Native and Agricultural Soil Environments
Biogeochemistry
Canadian Journal of Forest Research
Canadian Journal of Soil Science
Chemical Industry and Chemical Engineering Quarterly
Chemosphere
Clays and Clay Minerals
Colloids and Surfaces A: Physicochemical and Engineering Aspects
Communications in Soil Science and Plant Analysis
Economic Geology
Environmental Science and Technology
Environmental Technology
European Journal of Medicinal Chemistry
European Journal of Soil Science
Forest Ecology and Management
Fresenius Environmental Bulletin
Geochemistry: Exploration, Environment, Analysis
Geochimica et Cosmochimica Acta
Geoderma
Hydrological Processes
Inorganic Chemistry
International Journal of Integrated Waste Management, Science and Technology
International Range Congress Proceedings
Journal of Agricultural and Food Chemistry
Journal of Asian Earth Sciences
Journal of Environmental Engineering
Journal of Environmental Management
Journal of Environmental Quality
Journal of Hazardous Materials
Journal of Natural Resources and Life Sciences Education
Journal of Plant Nutrition
Journal of Range Management
Journal of Soil and Sediment Contamination
Langmuir
Materials Research Bulletin
Nature
New Phytologist
Restoration Ecology
Soil and Sediment Contamination: An International Journal
Soil Biology and Biochemistry
Soil Science
Soil Science Society of America Journal

The Science of the Total Environment
USDA Agricultural Research Service
U.S. Geological Water Survey
Waste Management Journal
Water Air Soil Pollution
Water Resources Research

Grant Proposal and Award Reviews (Several Projects Reviewed for Many of the Programs)

Abandoned Coal Mine Land Research Grant Program
American Chemical Society - Petroleum Research Fund
American Geophysical Union - Horton Research Grant
American Society of Agronomy Fellow Awards
American Society of Mining and Reclamation Awards
Austrian Science Foundation - FWF Proposals
Binational Agricultural Research and Development Fund - U.S. and Israel
Environmental Protection Agency STAR Awards
EPSCoR Summer Research Fellowships
EPSCoR Academic Research Fellowships
National Institutes for Water Resources Competitive Grants Program
National Science Foundation
National U.S. Geological Survey Competitive Grants Program
New Hampshire Agricultural Experiment Station Proposal
New Mexico Water Resources Research Institute Grant
Northeast U.S. Geological Survey Competitive Grants Program
Thunder Basin Coal Company Grant Proposals
University of Wyoming Faculty Grants-in-Aid Proposals
University of Wyoming Presidential Award Applications
University of Wyoming School of Energy Research Grants
U.S. Civilian Research & Development Foundation w/ Former Soviet Union Cooperative Grants Program
U.S. Department of Agriculture - National Research Initiative Competitive Grants
U.S. Department of Agriculture - Small Business Innovation Research Program
U.S. Department of Agriculture - Strengthening Awards
U.S. Geological Survey
U.S. Geological Water Survey Program
Utah State University Faculty Development Grant
Western Regional Water Resources Research Competitive Grants Program
Wyoming Agricultural Experiment Station Competitive Grants Program
Wyoming McIntyre/Stennis Research Projects
Wyoming Reclamation and Restoration Ecology Center Projects

Communications, Technology and State Publication Reviews

Multistate Research Projects, Western Association of Agricultural Experiment Station Directors
University of Wyoming Agricultural Bulletins
University of Wyoming Agricultural Fact Sheets
University of Wyoming Agricultural Research Journal Articles
U.S. Department of Agriculture - Agricultural Research Service Publications
Wyoming Department of Environmental Quality, Solid and Hazardous Waste Division Guidelines

INSTRUCTION, ADVISING AND TRAINING

Courses Taught (SP = Spring, SU=Summer and F=Fall Semesters)

AECL 4920	Research Apprenticeships (Variable Credit, VC)	Sum 90, 96, F 91, 97, 98, 03
AECL 4930	Internships (VC)	Sum 95, 96, 99, 00, 01, 03
AGRO 101	Introductory Soil Science Laboratory, UI (4)	F 86, SP 87
CSS 470	Soil Classification, MSU (Co-Instructor) (4)	F 81, SP 82
REWM 4210	Land Reclamation Seminar (1)	Sp 03, 04, 06, 08, 09, 10
REWM 5640	Investigations: National Park Restoration	F 06
REWM 5620/RNEW 5985/SOIL 5720	Seminars: GIS and Land Use (1)	F 00
RNEW 4990/5990	Reclamation and Restoration Ecology Special Topics (1)	F 03, 04, 05
RNEW 4990/5990	Ecosystem Restoration Seminar (1)	Sp 11, 12
SOIL 613	Soil Chemistry and Soil Chemistry Laboratory (4)	Sp 90
SOIL 3130	Soils and Environmental Quality (also titled Environmental Quality) (3)	F 93, 94, 95, 96, 97, 98, 99, 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11
SOIL 4120/5120	Genesis, Morphology and Classification of Soils (4)	F 95
SOIL 4130/5130	Chemistry of the Soil Environment (3 or 4)	Sp 91, 92, 93, 95, 96, 97, 98, 99, 01, 02, 04, 05, 06 F 05, 07, 08, 09, 10, 11
SOIL 4135/5135	Chemistry of the Soil Environment Laboratory (2)	Sp 91, 92, 93, 95, 96, 02, 05, F 05
SOIL 4150/5150	Forest and Range Soils (3)	F 01
SOIL 4170/5170	Analytical Methods for Ecosystems Research and Laboratory (4)	F 91
SOIL 4565/5565	Soil Science Research (VC)	Most Semesters
SOIL 4490/5490	Soil Science Research (VC)	Most Semesters
SOIL 4535/5535	Soil Biogeochemistry (3)	F 03, 05, 09
SOIL 4590/5590	Bioremediation (2)	F 99, 00, 01, 04
SOIL 5520	Soil Problems (VC)	Most Semesters
SOIL 5530	Soil Organic Chemistry (3)	F 91, 93, 96
SOIL 5590	Special Topics: GIS and Land Use Management (1)	F 00
SOIL 5590	Special Topics: Forest Soils (1)	F 01
SOIL 5590	Special Topics: Coalbed Methane (1)	Sp 02
SOIL 5590	Special Topics: SSSA Professional Examination (1)	Sp 11, 12
SOIL 5720	Soil Science Seminar/Forum (1)	Sp 92, 03, 06, F 97, 00, 06
SOIL 5900	Practicum in College Teaching (VC)	Sp 95, 05, 06, F 95, 98, 01, 03, 04, 06
SOIL 5960	Thesis Research (VC)	Most Semesters
SOIL 5980	Dissertation Research (VC)	Most Semesters
SOIL SCIENCE	Soils Discussion Group (1)	F 92

Guest Lectures and Tutoring

AGEC 4890	Carbon Sequestration Seminar	Sp 06
ANSC 5890	Animal Science Advanced Seminar	F 99
ART 4790	Visual Art and Ecology	Sum 97, F 99
BOT 5440	Plant Biochemistry	Sp 04
CHEM 3020	Environmental Chemistry	F 01, 02

CSS 201	Soil Fertility, Michigan State University	F 81
CSS 201	Tutor for Soil Fertility, Michigan State University	Sp 82
ENR 4900/5900	ENR Policy Practice and Problems	Sp 01
FOR 665	Forest Soils, University of Illinois	F 88
REWM 4200/5200	Reclamation of Drastically Disturbed Lands	F 98, 03, 04, 05
REWM 4210	Reclamation of Drastically Disturbed Lands Seminar	F 06
REWM 5250	Water Resources Seminar	Sp 01
REWM 5580	Restoration Ecology	F 97, 99, 00, 03, 05 Sp 06
RNEW 5985	Research across Disciplines (RAD) Seminar	F 10
SOIL 412	Fundamentals of Soil Science	F 90
SOIL 3130	Soils and Environmental Quality	F 14
SOIL 4120/5120	Genesis, Morphology and Classification of Soils	F 96, 97, 01, 02
SOIL 4140/5140	Soil Microbiology	F 98
SOIL 5720	Soil Science Graduate Symposium	Sp 10

Educational Programs and Position Developed

- University of Wyoming. Undergraduate Earth System Science with concentration in Soil Science. G.F. Vance - Approved January 2008
- University of Wyoming Graduate School. 2006. Proposal to Establish a Master of Science Plan B in Soil Science. G.F. Vance and S.E. Williams - Approved January 2006
- University Vice Presidents of Academic Affairs and Research. 2005. Proposal to establish an Earth Systems Science undergraduate degree program. G.F. Vance one of 10 committee members - Approved 2005
- University Vice Presidents of Academic Affairs and Research. 2002. Development of a Wyoming Reclamation/Restoration Center with Research, Teaching and Outreach activities. G.F. Vance - Approved November 2002
- University of Wyoming's Dean and Graduate Councils. 2001. Proposal to Establish an Undergraduate Minor and Graduate Certificate in Reclamation and Restoration Ecology. Renewable Resource's Reclamation Ecology subcommittee. G.F. Vance - Approved July 2001
- University of Wyoming Dean's Council. 2001. Proposal to Establish a Masters of Science Option in Soil Science/Water Resources. G.F. Vance - Approved May 2001
- University of Wyoming. March 2001. Proposal for the Establishment of an undergraduate Soil Science Minor. Soil Science Group. G.F. Vance - Approved April 2001
- University of Wyoming. 1999. Establishment of an Environment and Natural Resources (ENR) Student Organization. G.F. Vance Advisor
- University of Wyoming. April 1996. Proposal for the Establishment of a Soil Science Graduate M.S. and Ph.D. Degree Programs. Soil Science Group. G.F. Vance - Approved May 1997
- University of Wyoming. 1992-1994. Proposal for the Establishment of an Agroecology Bachelor of Science, Department of Plant, Soil and Insect Sciences. G.F. Vance Coordinating Committee - Approved 1994
- University of Wyoming. 1992-1993. Proposal for the Establishment of a Soil Physicist Position, Department of Plant, Soil and Insect Sciences. G.F. Vance Coordinator - Approved 1993
- University of Wyoming. 1992. Establishment of an Environmental Research and Development Plan (a.k.a. ENR). G.F. Vance Coordinating Committee Member- Approved 1992
- Wyoming Water Resource Center. 1991. Proposal to Establish a Masters of Science Option in Agronomy/Water Resources. G.F. Vance - Approved June 1991
- University of Wyoming. 1991. Development of a Natural Resources Student Organization, G.F. Vance Advisor
- University of Wyoming. 1990-1993. Development of an Awards Committee, Department of Plant, Soil and Insect Sciences. G.F. Vance Coordinator
- University of Illinois, 1986-1988. Development of an Agronomy Graduate Student Organization, G.F. Vance President and Co-Founder

Advising and Training***Undergraduate Students Advised (including honors and awards)*****General Agriculture**

Daniel Rockne

Agroecology (General program)

Craig Alford, 1995 Soil Science Honor Book Recipient, 1996 Outstanding College of Agriculture Senior, Gamma Sigma Delta Award; 1996 EPSCoR Undergraduate Research Fellowship

Jenera Ecklund

Ronald Hoffman

Shannon Moore

Jason Skalsky

Radona Vore

Agroecology (Soil Science concentration)

Candice Cotton, Dual degree in Agricultural Communications, 2000 Soil Science Honor Book Recipient.

Matthew Hill

Matt Denning

Clayton Greene (Soil Science Minor)

Ryan Miller

Casey Seals (Soil Science Minor)

Frank Stemm

Gregory White (Soil Science Minor)

Jennifer Young, 1996 Soil Science Honor Book Recipient, 1997 Outstanding College of Agriculture Senior, Gamma Sigma Delta Award.

Earth System Sciences

Kristi Mingus – 2012 Soil Science Honor Book Recipient.

Soil Science (B.S. degree and/or Minor)

Shelley Ellis, SBA, 2001 Soil Science Honor Book Recipient.

Chris Johnston

Jennifer Jones

Susan Minear

Reclamation and Restoration Ecology Minor

Christina Louthan

Student Research Apprenticeships

Nathan Roth - Soil Chemistry Research Project A Characterization of Soil and Plant Impacts due to Coalbed Natural Gas Waters @ 2005

- Maialen Gainerain - Soil Chemistry Research Project ASoil Preparation for pH, EC, Bulk Density, Water Soluble and Exchangeable Na, and Delineation of Mycorrhizal Infestations in Plants@ 2005
- Josh Friesen - Agroecology Research Project ACation Exchange Capacity and Base Cations in Soils of the Powder River Basin@ 2003
- Dessa Johnson - EPSCoR Research Fellowship for Undergraduates, Remediation of Creosote Contaminated Soils from the Union Pacific Tie Plant, 1998
- Mary Jo Kimble - Soil Science Research Project AUse of Blue Grama and Thickspike Wheatgrass for the Revegetation of Native Soils and Stockpiled Materials from a Small Gravel Pit Mine@ 1997.
- Jennifer Young - McNair Research Program, Using a Geographic Information System to Determine Land-Use Conversion in Powell, Wyoming, 1997
- Carla Johnson - Paul Stock Research Project, Modeling Salinity and Nutrient Deficiencies on Wyoming Irrigated Lands. 1990-1991

Student Internships

- Brandy Carroll - Coalbed Methane Research Project, Buffalo, Wyoming, 2003
- Greg White - Soil Testing Laboratory, University of Wyoming, 2001
- Jason Skalsky - Panhandle Cooperative and Servatech, 1999, 2000
- Jennifer Young - National Resources Conservation Service, Riverton, Wyoming, 1996
- Matt Denning - Wyoming Governor's Open Spaces Program, Cheyenne, Wyoming, 1996
- Craig Alford - BKS Environmental, Inc., Gillette, Wyoming, 1995

Project/Faculty Advisor

- Lenora Williams - Math Science Initiative Program "Ground Water Contamination by BTEX Compounds and Their Interaction with Humic Substances" 1995.
- Sharen Hall (Elementary Teacher, Pueblo, Colorado) - Science Teacher Research Initiative Program "Transport of Dicamba and Picloram in a Wyoming Pastureland Soil@ 1994.
- Uzoma Aniniba - Minority High School Student Research Apprenticeship Program ACharacterization of Some Chemical and Physical Properties of Forest Soils@ 1994.
- Hector Quiroz - Math Science Initiative Program "Determination of Selectivity Coefficients and Solubility Products using a Calcium-Ion Selective Electrode" 1994.
- Paulette Gadlin (Elementary Teacher, Cheyenne, Wyoming) - Science Teacher Research Initiative Program: 1) AMonitoring Dicamba and Picloram Movement in the Vadose Zone for Groundwater Quality Protection in Wyoming@ and 2) AOrganic Perspectives of Carbon, Nitrogen, Sulphur and Phosphorus Biogeochemistry in a Low Elevation Spruce-Fir Ecosystem@ 1993.
- Edward F. Tanaka - Minority High School Student Research Apprenticeship Program "Sequential Extraction of Selenium in Mine Soils@ 1993.
- Scott Haynes - High School Science Fair Project AThe Effect of Acid Rain on Plants and Soils@ 1992.

Staff Supervision

- Kelli Belden, Director, Soil Testing Laboratory
- James Harbour, Soil Science Section Research Associate
- Tim Brewer, Soil Science Section Research Associate
- Russell Pickering, Soil and Environmental Chemistry Research Associate
- Anna Waitkus-Krzyszowska, Soil and Environmental Chemistry Research Associate

*Graduate Students Trained*M.S. Students

- Leah Birgen, 2013. Analysis of treatment options for CO₂ sequestration water at Rock Springs Uplift. M.S. in Environment Engineering. Co-chair with J. Brant
- Alix Hakala, 2012. Analysis of Manganese Bioavailability in Glyphosate-resistant Soybean (*Glycine max* L.). M.S. in Soil Science/Water Resources. Current Position: Environmental Scientist, Trihydro Corporation, Casper, WY
- Kyle Lilly, 2012. Assessing Isotopic and Chemical Compositional Changes of Coalbed Natural Gas Co-Produced Water When Interacting With Local Soils Over Time. M.S. in Soil Science/Water Resources. Current Position: Reclamation Scientist, Western States Reclamation, Grand Junction, CO
- Xuan He, 2011. Management of Displaced Waters from Geological Carbon Dioxide (CO₂) Sequestration within the Wyoming Rock Springs Uplift. M.S. in Soil Science/Water Resources. Current Position: Graduate Student, Linguistics and Interpretation, Japan
- Chris Johnston, 2007. Soil Chemical and Physical Changes Resulting from Irrigation with Coalbed Natural Gas Co-produced Water: Affect of Soil Amendments and Water Treatments. M.S. in Soil Science/Water Resources. Current Position: Director of the Soil Science Division, Inter-Mountain Labs, Sheridan, WY
- Brent Musslewhite, 2006. Salinity and Sodicity Interactions of Minesoils in Northwestern New Mexico and Northeastern Arizona. M.S. in Soil Science. Current Position: Environmental Specialist, San Juan Coal Company-San Juan Mine, Farmington, NM.
- Matthew Mortenson, 2003. Effects of Interseeding Alfalfa (*Medicago sativa* spp. *falcata*) on Forage Production, Forage Quality and Carbon Sequestration on a Mixed-Grass Rangeland. M.S. in Soil Science. Current Position: Research Technician, High Plains Grasslands Research Station, Cheyenne, WY. Co-Chair with G.E. Schuman
- Beth M. Christensen (Hoobler), 2000. Applications of Land Evaluation Site Assessment and a Geographic Information System in East Park County, Wyoming. M.S. in Soil Science. Current Position: Mapping/Geographic Information System Support Analyst, Wyoming State Engineer's Office, Cheyenne, WY.
- Jennifer A. Young (Hayward), 1999. GIS Evaluation of Suitable Soil and Climatic Parameters for Alternative Crop Production in the Bighorn Basin, Wyoming. M.S. in Soil Science. Current Position: Research Leader and District Conservationist, Natural Resource Conservation Service, Pinedale, WY. Honors: 1999 Outstanding M.S. Graduate Student in the College of Agriculture, Gamma Sigma Delta Award
- Kevin Edinger, 1998. Evaluation of Soil/Spoil Chemistry and Vegetation Response on Reclaimed Bentonite-Mine Lands. M.S. in Soil Science. Current Position: Rangeland Management Specialist, Bureau of Land Management, Butte, MT. Co-Chair with G.E. Schuman
- Patsy Wanek. 1997. A Greenhouse Study of Selenium Uptake by Yellow Sweet Clover and Four-Wing Saltbush. M.S. in Soil Science. Current position: Research Associate, College of Natural Resources, Ohio State University
- Robert F. Weidler. 1996. Edaphic Characteristics of Four Rocky Mountain Forest Soils Under Lodgepole Pine. M.S. in Soil Science. Current position: Public Service Representative, Cheyenne, WY. Co-Chair with L.C. Munn
- Brenda K. Schladweiler. 1995. Relationship Between Soil Selenium Concentrations and Selenium Uptake by Vegetation on Surface Coal Mine Lands in Wyoming. M.S. in Soil Science. Current position: President and Owner, BKS Environmental Associates, Inc., Gillette WY and Ph.D. Candidate, Soil Science. Honors: 1996 American Society for Surface Mining and Reclamation Outstanding Graduate Student Award
- Antje Kaemmerer. 1993. Mineral Nutrient and Microelement Concentrations in Needles and Soils of Conifer Ecosystems. M.S. in Forestry/Soil Chemistry, University of Bayreuth, Germany. Current position: Research Scientist, Soil Physical and Chemical Sciences, University of Munich, Germany

- Carla D. Johnson. 1993. Trace Element Accumulations in Plants Grown on Sludge Amended Soils. M.S. in Soil Science/Water Resources Option. Current position: Supervising Instructional Laboratory Coordinator, Department of Chemistry, University of Wyoming
- Saifur Rahman. 1991. Chemical Characterization and Remote Sensing of Salinity Induced Nutrient Deficiencies in Corn in Eastern Wyoming. M.S. in Soil Science. Current position: Agricultural Chemist, Soil Science Division, Agricultural Research Institute Tarnab, Peshawar (NWFP) Pakistan

Ph.D. Students

- Amitava Chatterjee. 2007. Evaluation of Coniferous Forest Management Practices on Carbon Pools, Soil Biogeochemical Processes, and Economic Profitability. Ph.D. in Soil Science. Current Position: Post Doctoral Research Associate, Washington State University Centre for Precision Agricultural Systems/Columbia, Plateau Conservation Research Center, Pendleton, OR. Honors: 2005 and 2007 Graduate Student Symposium Best Oral Presentation Award.
- Abbey Wick. 2007. Soil Aggregation and Organic Matter Dynamics in Reclaimed Mineland Soils. Ph.D. in Soil Science. Current Position: Post Doctorate Research Scientist, Virginia Tech University. Honors: 2007 American Society of Mining and Reclamation Outstanding Ph.D. Student Award; 2006 Graduate Student Symposium Best Oral Presentation Award; 2005 American Society of Mining and Reclamation Outstanding M.S. and Ph.D. Student Awards and Presentation Award; 2005 Graduate Student Symposium Best Poster Award. Co-Chair with P.D. Stahl
- Lyle King. 2006. Land Application with Saline-Sodic Coalbed Natural Gas Co-Produced Waters in Wyoming's Powder River Basin: Impacts to Soil and Biological Properties. Ph.D. in Soil Science. Current Position: Consultant, Shell Valley Consulting, WY. Honors: 2005 American Society of Mining and Reclamation Outstanding Ph.D. Student Award.
- Dayong Wu. 2006. Bioassessing Lotic Systems using Benthic Insect Communities in Southeast Wyoming. Ph.D. in Entomology/Statistics. Current Position: Postdoctoral Scientist. Honors: 2005 Graduate Student Symposium Best Poster Award. Co-advise with D.E. Legg.
- Brenda K. Schladweiler. 2003. Soil and Plant Responses to Variable Topsoil Replacement Depths at a Coal Mine in Northeastern Wyoming. Ph.D. Soil and Environmental Science. Current position: President and Owner, BKS Environmental Associates, Inc., Gillette WY. Honors: 1996 American Society for Surface Mining and Reclamation Outstanding Graduate Student Award.
- Youwen, You. 2002. Use of Layered Double Hydroxides and Their Derivatives as Adsorbents for Inorganic and Organic Pollutants. Ph.D. in Soil and Environmental Chemistry. Current position: Research Scientist, Department of Veterinary Science, University of Pennsylvania. Honors: 2002 University of Wyoming Outstanding Dissertation Award in Physical, Earth and Computational Sciences.
- Catherine P. Skinner. 2001. Evaluation of Selenium in Terrestrial and Wetland Soils, Plants and Waters at Fort Carson, Colorado. Ph.D. in Soil and Environmental Science. Current position: Research Scientist, Self-employed, Laramie, WY.
- Florence Cassel-Sharmasarkar. 1998. Assessment of Drip Irrigation for Managing Nitrate Contamination and Sugar beet Production in Wyoming. Ph.D. in Soil Science. Current position: Administrative Assistant and Research Scientist, Fresno Center for Irrigation Technology, Fresno CA. Co-Chair with R. Zhang.
- Hongting Zhao, 1998. Sorption of Hazardous Organic Compounds by Modified Mineral Surfaces. Ph.D. in Soil and Environmental Chemistry. Current position: Owner and Research Scientist, E&E Applied Research, LLC, Longmont, CO. Honors: 1998 Outstanding Ph.D. Graduate Student in the College of Agriculture, Gamma Sigma Delta Award and 1998-1999 University of Wyoming Outstanding Dissertation Award in Physical, Earth and Computational Sciences
- Shankar Sharmasarkar. 1996. Soil Selenium Geochemistry in Range and Coal Mine Environments of Wyoming. Ph.D. in Soil and Environmental Chemistry. Current position: Research Scientist, University of California, Merced, CA. Honors: 1996 Outstanding Ph.D. Graduate Student in the College of Agriculture, Gamma Sigma Delta Award and 1996-1997 University of Wyoming Outstanding Dissertation Award in Biological Sciences

- Amr A. Fadlemawla. 1995. Investigating and Modeling the Hydrogeochemical Processes Controlling Selenium Transport in Aquifers Associated with Reclaimed Coal Mines in the Powder River Basin of Wyoming. Ph.D. in Civil Engineering/Soil Chemistry. Current position: Scientist, Environmental Quality Monitoring, Water Research Center, Middle Eastern Environmental Center, Egypt. Co-Chair with K.J. Reddy
- Saifur Rahman. 1994. Mapping Spatial Variability of Forest Soils using ARC/INFO Geographic Information System. Ph.D. in Soil Science. Current position: Agricultural Chemist, Soil Science Division, Agricultural Research Institute Tarnab, Peshawar (NWFP) Pakistan. Co-chair with L.C. Munn

Additional Graduate Student Training

- Josh Malmberg. 2006-2007. Evaluation of Carbon and Nitrogen Sequestration in Managed Rangelands: Influence of Grazing. Current position: Wyoming Department of Environmental Quality, Sheridan, WY
- Steve Wilkins. 2005-2006. Enhancing the Beneficial Use of Coalbed Natural Gas Waters: Irrigation and Land Application. Current position: Natural Resource Conservation Service, CA
- Youquan Jiang. 2003-2006. Subsurface Drip Irrigation Systems: Assessment and Development of Best Management Practices in Wyoming. Current position: Consultant, CA
- Mary Wyman. 2002. Coalbed Methane Impacts in the Powder River Basin: Development of a GIS Database, Wyoming and Montana. Current position: Unknown
- Frank A. Negri. 2001-2002. Affects of Coalbed Methane Discharge Water on the Soils and Plant Community of LX Draw. Current position: ROTC/Unknown
- Craig M. Alford. 1996. Soil, Geology and Vegetation Mapping of Fort Carson, Colorado Springs, Using the Geographic Information System, ArcInfo/ArcView. Current position: Former Ph.D. student
- Mary Aldrich. 1993. Biotransformations of BTEX (Benzene, Toluene, Ethylbenzene, Xylenes) Contaminated Organophillic Clays. Current position: Unknown
- Gordon Sturgeon. 1991. Field Investigation of Plants and Soil/Spoils for the Characterization of Selenium Mobility and Plant Uptake on Coal Mine Sites. Current position: Former Ph.D. Student
- Lowell K. Spackman. 1990. Solid and Solution Selenium Speciation in Relation to Wyoming Coal Mine Reclamation. Current position: Senior Scientist, WDEQ, Cheyenne, WY.

Other Graduate Student Committees

<u>Student</u>	<u>Degree</u>	<u>Degree Date</u>	<u>Specialization</u>
University of Cape Town, South Africa			
Thomas E. Nowicki	Ph.D.	1998	Forestry and Soil Science
University of Wyoming			
Renee Gebault King	Ph.D.	Current	Soil Science
Emily Huth	M.S.	2013	Civil and Environmental Engineering
Leah Birgen	M.S.	2013	Civil and Environmental Engineering
Lisa Cox	M.S.	2012	Soil Science (Water Reclamation)
Cally Driesen	M.S.	2011	Soil Science (Oil/Gas Reclamation)
Shashidhar Belbase	M.S.	2010	Civil and Environmental Engineering
Russ Pickering	M.S.	2009	Environmental Engineering
Sadikshya Rana	Ph.D.	2008	Soil Science (Microbiology)
Paul Fallgren	M.S.	2007	Soil Science
Todd Loubsky	M.S.	2007	Reclamation/Restoration Ecology Certificate
Brian Story	M.S.	2007	Environmental Engineering

Elizabeth Brinck	Ph.D.	2007	Geology/Geophysics
Dave Smith	M.S.	2006	Chemical/Petroleum Engineering
John Bohn	Ph.D.	2006	Chemistry
Lynne Jacobsen	Ph.D.	2006	Chemistry
Jeffery Cooper	M.S.	2005	Geology/Geophysics
Jonathan Anderson	M.S.	2004	Soil Science (Microbiology)
Xinmei Hao	Ph.D.	2004	Soil Science (Physics)
Sara Campbell	M.S.	2003	Agricultural Economics
Jennifer Druyff	M.S.	2002	Environmental Engineering
Daniel Mummey	Ph.D.	2002	Soil Science (Microbiology)
Richard Martoglio	Ph.D.	2002	Chemistry
Aaron Murray	M.S.	2001	Environmental Engineering
Heather Saphore	M.S.	2000	Chemistry
Kevin White	Ph.D.	2000	Chemistry
Craig Vaske	M.S.	1999	Botany
Mindy Sandall	M.S.	1999	Soil Science (Pedology)
Kyra Povirk	M.S.	1999	Rangeland Ecology/Watershed Management
Daniel Tinker	Ph.D.	1999	Botany
Tim Deschaines	Ph.D.	1999	Chemistry
Xuzhang Xue	Ph.D.	1999	Soil Science (Physics)
ShenXiang Gui	Ph.D.	1998	Soil Science (Physics)
Sherry Samson	Ph.D.	1998	Geology/Geophysics
Janet Mefford	M.S.	1997	Civil and Architectural Engineering
Derrick Rodriguez	M.S.	1997	Environmental Engineering
Tony Hock	Ph.D.	1997	Geology/Geophysics
Alexandra Kravchenko	Ph.D.	1997	Soil Science (Physics)
Brian Kennedy	Ph.D.	1997	Chemistry
Annett Sullivan	Ph.D.	1997	Geology/Geophysics
Sujan K. Bhattacharya	Ph.D.	1996	Environmental Engineering
Zhipeng Zhao	Ph.D.	1996	Soil Science (Microbiology)
Janquin Wu	Ph.D.	1996	Soil Science (Physics)
Edward Wehling	Ph.D.	1996	Atmospheric Science
Arnold DeCastro	M.S.	1995	Environmental Engineering
Liyuan Wang	Ph.D.	1994	Soil Science (Chemistry)
Jason Stratton	M.S.	1994	Civil Engineering
Lori Lynn Ertler	M.S.	1994	Civil Engineering
James Carroll	Ph.D.	1994	Chemistry
Jim Palmer	M.S.	1994	Civil Engineering
James E. Dean	M.S.	1993	Soil Science (Pedology)
Marcus Middleton	M.S.	1993	Range Management/Water Resources
Richard Allen	M.S.	1993	Civil Engineering
Hyung Bo Kim	M.S.	1992	Soil Science (Pedology)
Gary Parks	M.S.	1991	Civil Engineering
Robert Schloemer	Ph.D.	1991	Soil Science (Pedology)
James L. Meining	M.S.	1990	Soil Science (Chemistry)

Post-Doctoral Research Scientists

- Dr. Amitava Chatterjee. 2007. From: India Institute of Agricultural & University of Wyoming. Present Position: Assistant Professor, North Dakota State University, Fargo, ND
- Dr. Girisha Ganjgunte. 2003-2006. From: Lincoln University, Canterbury New Zealand. Present position: Assistant Professor, Texas A&M AgriLife Research Center, El Paso, TX
- Dr. Youwen You. 2002. From: Chinese Academy of Sciences at Changchun & University of Wyoming. Present position: Post-Doctoral Fellow, School of Veterinary Medicine, University of Pennsylvania, West Chester, PA
- Dr. Hongting Zhao. 1998. From: Chinese Academy of Sciences at Nanjing & University of Wyoming. Present position: Research Scientist, Sandia National Laboratories, Albuquerque, NM
- Dr. Shankar Sharmasarkar. 1996-1998. From: University of Calcutta & University of Wyoming. Present position: Research Scientist, Sierra Nevada Research Institute and School of Natural Resources, University of California, Merced, CA
- Dr. William F. Jaynes. 1994-1996. From: Ohio State University, Michigan State University & American Colloid Company Present position: Research Associate/Lecturer, Soil Chemistry, Texas Tech University, Lubbock, TX.
- Dr. K'o H. Dai. 1994-1996 (at University of Illinois). From: Duke University. Present position: Research Associate, Environmental Science, Environmental Engineering, Syracuse University, NY
- Dr. Tarik Tawfic. 1993-1994. From: Colorado State University and University of Wyoming. Position: Scientist, Environmental Quality Monitoring, Water Center, Middle Eastern Environmental Egypt
- Dr. In-Gyu Choi. 1992-1993 (at University of Illinois). From: University of Washington. Present position: Research Professor, Forest Research Institute, Dongdaemun-Ku, Seoul, Korea
- Dr. Michael J. Blaylock. 1992-1994. From: University of Maryland. Present position: Director, Research and Development, Edenspace Systems Corporation, Virginia and New Jersey
- Dr. Anna J. Krzyszowska. 1991-1999. From: Polish Academy of Science & University of Washington. Present position: Environmental Senior Analyst, Wyoming Department of Environmental Quality-Land Quality Division, Cheyenne, WY

Host for Visiting Research Scientists and Administrators

- Dr. Peter Komadel, Deputy Director, Head of Department of Hydrosilicates, Chairman of the Scientific Board, Institute of Inorganic Chemistry, Slovak Academy of Sciences, SK-842 36 Bratislava, Slovakia, 2002
- Kun Tian, Soil Science Research Scientist/Lecturer, Southwest Forestry College, Kunming, China, 1998
- Dr. Caroline Preston, Research Scientist, Forestry Canada, Pacific and Yukon Research Center, Canadian Forestry Centre, Victoria BC, 1996
- Dr. Kenneth L. Barker, Vice Provost for Research and Associate Dean for Graduate Studies and Research, Texas Tech University, 1995
- Dr. Larry Erickson, Director, Hazardous Substance Research Center, Kansas State University, 1994, 1995
- Dr. Stephen A. Boyd, Professor of Soil Biochemistry, Michigan State University. NSF EPSCoR ADP Groundwater Research Cluster Visiting Scientist, 1993
- Dr. Mark B. David, Professor of Forest Soils, University of Illinois, EPA Watershed Manipulation Visiting Scientist, 1992
- Dr. Dhanpat Rai, Senior Staff Scientist, Geochemistry Section, Battelle Pacific Northwest Laboratory, AWU-DOE Laboratory Distinguished Lecturer and NSF EPSCoR ADP Groundwater Research Cluster Visiting Scientist, 1992
- Dr. Gary Pierzynski, Professor of Environmental Soil Chemistry and Plant Nutrition, Kansas State University, 1992, 1994
- Dr. Martin Kaupenjohann, Professor of Soil Science, Institute of Soils Science and Geography, University of Bayreuth, Bayreuth, Germany, 1991
- Dr. Frank J. Sikora, Senior Research Chemist, Tennessee Valley Authority, 1990, 1991, 1996

GRANTS, RESEARCH AND EDUCATIONAL SUPPORT

Grants Received

<u>Year</u>	<u>Agency</u>	<u>Funding</u>	<u>Title</u>	<u>Investigators</u>
1987-1990	U.S. EPA	\$343,000	Role of Organic Acids in Affecting Soil Solution and Surface Water Acidification in Response to Watershed Manipulations	M.B. David G.F. Vance F.J. Stevenson
1990	UW Research Office, Agricultural College	\$29,700	Purchase of a Dionex Ion Chromatography System	G.F. Vance
1990-1991	Paul Stock Work Study Project	\$1,200	Modeling Salinity and Nutrient Deficiencies on Wyoming Irrigated Lands	G.F. Vance C.D. Johnson
1991-2004	USDA Hatch	\$60,000	Chemistry and Bioavailability of Waste Constituents in Soils	G.F. Vance
1991-1993	Wyoming Water Research Center - State Grants Program	\$40,759	Monitoring Dicamba and Picloram Movement and Fate in the Vadose Zone for Groundwater Quality Protection in Wyoming	G.F. Vance
1991-1993	U.S. Department of Interior - Office of Surface Mining	\$198,588	Constructed Vertical Flow Aerated Wetlands	J.L. Smith P.J.S. Colberg G.F. Vance
1991-1995	Abandoned Mine Lands Research Program	\$157,980	The Importance of Solid and Solution Selenium Speciation in Mobility and Plant Uptake of Selenium from Wyoming Coal Mine Reclamation	G.F. Vance K.J. Reddy L.K. Spackman
1991-1995	Abandoned Mine Lands Research Program	\$156,658	Abandoned Mine Lands Research Program The Role of Natural Organic Solutes on the Mobility of Selenium in Abandoned Coal Mine Spoil-Groundwater Systems	R.B. See K.J. Reddy G.F. Vance
1991-1995	Abandoned Mine Lands Research Program	\$110,425	Abandoned Mine Lands Research Program. Relationship Between Soil Selenium Concentrations and Selenium Uptake by Vegetation on Surface Coal Mine Lands in Wyoming	G.F. Vance P.K. Carroll R.N. Pasch M.S. Page
1991-1995	USDA - NRI Competitive Grant Program	\$225,000	Organic Perspectives of C, N, S and P Biogeochemistry in a Low Elevation Spruce-Fir Ecosystem	M.B. David G.F. Vance
1992	U.S. EPA EPSCoR	\$50,000	Environmental Research and Development Plan for Wyoming	G.F. Vance Subcommittee Member
1992	UW Equipment Grant	\$50,000	Funding Support for a New X-Ray Diffractometer	J.I. Drever R.C. Surdam G.F. Vance K.J. Reddy
1992	UW Research Office, College of Agriculture	\$40,000	Perchloric Hood	G.F. Vance
1992-1993	USGS Special Project Funds	\$2,450	Selenium and DOC Adsorption on Geological Materials	G.F. Vance

PERSONAL VITA**GEORGE F. VANCE**

<u>Year</u>	<u>Agency</u>	<u>Funding</u>	<u>Title</u>	<u>Investigators</u>
1992-1994	U.S. Geological Survey	\$41,228	Monitoring Dicamba and Picloram Movement and Fate in the Vadose Zone for Groundwater Quality Protection in Wyoming	G.F. Vance
1992-1995	U.S. Geological Survey Merit Grants	\$300,000	The Role of Natural Organic Solutes on the Mobility of Selenium in Coal Mine Spoil-Ground Water Systems	R.B. See D.L. Naftz K.J. Reddy G.F. Vance
1992-1995	NSF EPSCoR II	\$2,926,304	Research Cluster on Groundwater Contamination: Detection, Prediction, Remediation	G.F. Vance one of 8 Co-Investigators
1993-1993	City of Torrington	\$12,000	Assessment of Groundwater Nitrates in the Town of Torrington, WY	D.H. Foster L.O. Pochop G.F. Vance
1994	UW Equipment Funds, AES	\$30,000	Hewlett Packard Gas Chromatography System with Computer Data Capabilities	G.F. Vance
1994	UW Equipment Grant	\$30,000	Enhancing Soil Science Research and Teaching Capabilities with a Silicon Graphics Workstation	G.F. Vance L.C. Munn R. Zhang
1994-1995	Wyoming Coal Companies - Powder River Basin	\$35,000	Selenium in Soils, Plants and Animals at Powder River Basin Coal Company Sites.	D.G. Steward L.E. Vicklund L.K. Spackman J.G. Luther G.F. Vance M.F. Raisbeck
1994-1995	NSF - Research Experience for Undergraduates	\$67,660	The Impact of Urban and Rural Activities on Water Quality in Spearfish, South Dakota	G.F. Vance one of 10 Co-Investigators
1994-1995	EPSCoR-ADP Research Support	\$14,500	Field Verification and Validation of Vadose Zone and Groundwater Contaminant Transport: Modeling	G.F. Vance R. Zhang A.J. Krzyszowska R.D. Allen
1994-1997	U.S. Air Force	\$592,355	Adsorption of Hazardous Organic Compounds by Mineral Surfaces	K. Carron D.A. Buttry G.F. Vance J.I. Drever M. Allen
1995-1997	AES Competitive Grant Program	\$47,189	Best Irrigation Management Practices for Agriculture Productivity and Sustaining Water Quality	R. Zhang G.F. Vance L.J. Held
1996-1997	EPSCoR Academic Fellowship	\$600	Characterization of Disturbed Lands	Craig M. Alford G.F. Vance
1996-1998	Wyoming Water Resources Center	\$87,285	Cost-Effective Use of Drip and Sprinkler Irrigation Practices for Controlling Nitrate and Aldicarb Movement to Groundwater	G.F. Vance S. Sharmasarkar R. Zhang S.D. Miller L.J. Held
1996-1999	U.S. Army and Fish and Wildlife Services	\$50,365	Evaluation of Environmental Selenium Relationships at Fort Carson, Colorado	G.F. Vance

PERSONAL VITA**GEORGE F. VANCE**

<u>Year</u>	<u>Agency</u>	<u>Funding</u>	<u>Title</u>	<u>Investigators</u>
1996-2000	USDA - NRI Competitive Grant Program	\$201,268	Coarse Woody Debris and Soil Organic Matter in Rocky Mountain Coniferous Forests	D.H. Knight G.F. Vance L.C. Munn
1997-1999	Wyoming Dept. of Environmental Quality	\$31,550	Evaluation of Reclamation Methods to Mediate Soil Sodicity and Enhance Vegetation Growth on Reclaimed Bentonite Lands	G.F. Vance K.D. Edinger G.E. Schuman L. King
1997-1999	AES Competitive Grant Program	\$40,000	Assessment of Integrating Management of Irrigation and Cropping Practices for Sustaining Sugarbeet Production and Controlling Nitrate Pollution	G.F. Vance one of 9 Co-Investigators
1997-1999	U.S. DOD EPSCoR	\$585,348	Environmental Remediation and Waste Reduction Research Cluster	G.F. Vance one of 12 Co-Investigators
1997-2000	AES Competitive Grant Program	\$60,000	Wyoming Agricultural and Land-Resource Management: GIS and LESA Applications for Developing New Agricultural Commodities and Land-Uses	G.F. Vance J.D. Hamerlinck L.C. Munn J.A. Young
1998	UW Equipment Grant	\$25,000	Acquisition of a Stable Isotope Facility to Study Terrestrial Processes and Their Interactions with Climate and the Environment	G.F. Vance one of 15 Co-Investigators
1998	U.S. EPA	\$25,000	Expert Review of Draft Risk Assessment for Cement Kiln Dust Used as an Agricultural Soil Amendment Documentation	G.M. Pierzynski G.F. Vance A. Page
1998-1999	EPSCoR Undergraduate Research Fellowship	\$600	Remediation of Creosote-Contaminated Soils from the Union Pacific Tie Plant. University of Wyoming EPSCoR Program	D. Johnson P.D. Stahl G.F. Vance
1998-2002	Pittsburg and Midway Coal Mining Company	\$285,000	Innovative Reclamation Activities for the Ash Creek Mine, Sheridan WY	B.L. Perryman P.D. Stahl G.F. Vance
1998-2002	U.S. DOD EPSCoR	\$933,871	Environmental Remediation and Waste Reduction Research Cluster	G.F. Vance one of 11 Co-Investigators
2000	College of Agriculture	\$2,250	Purchase of a Computer/Server for the ANatural Resources: GIS, Modeling and Imagery Laboratory@	G.F. Vance L.C. Munn R. Zhang
2000	USDA-Agricultural Research Service	\$25,000	Sabbatical Support for Administrative Training and Assistance with the USDA-ARS Northern Plains Area Directors Office, Fort Collins, Colorado	G.F. Vance
2000-2001	USDA - NRI Competitive Grant Program	\$22,710	Enhancing Soils Research Capabilities with a Tecmar-Dohrmann Carbon Analyzer	P.D. Stahl G.F. Vance
2000-2001	Clay Minerals Society	\$2,500	Adsorption of Inorganic and Organic Contaminants by Layered Double Hydroxides (LDHs)	Y.W. You G.F. Vance
2001-2002	U.S. Bureau of Land Management	\$10,000	Coalbed Methane Product Water: Land Application Feasibility Study	G.F. Vance
2001-2002	Department of Agriculture	\$4,000	A Soil Carbon Database for Wyoming.	G.F. Vance

PERSONAL VITA**GEORGE F. VANCE**

<u>Year</u>	<u>Agency</u>	<u>Funding</u>	<u>Title</u>	<u>Investigators</u>
2001-2004	AES Competitive Grant Program	\$65,660	Development of a Decision Support System and Database for Agrochemical Management	R. Zhang J.D. Hamerlinck L.C. Munn G.F. Vance
2002-2004	U.S. DOI and Bureau of Land Management	\$143,500	Evaluation of Effects of Land Application of Coalbed Methane Produced Water on Powder River Basin Soils: Powder River Basin, Wyoming and Montana	G.F. Vance
2002-2005	Abandoned Coal Mine Land Research Program	\$389,032	Influence of Reclamation Management Practices on Carbon Accumulation and Soil Fertility on Coal Mine Lands in Wyoming	P.D. Stahl G.F. Vance L.J. Ingram S.V. Huzurbazar C.J. Bilbrough
2003	NSF - SBIR Phase I	\$100,000	The Use of Halophytic Plants for the Bioremediation of Coal Bed Methane Discharge Waters	J.G. Woiwode G.F. Vance R. Hybner K. Fitzsimmons
2003-2004	Patent Application Fund	\$15,000	Layered Double Hydroxides and Their Use in Removal of Bioagents from Water Systems	S. Jin Y.W. You G.F. Vance
2003-2006	Water Research Program	\$165,159	Subsurface Drip Irrigation Systems: Assessment and Development of Best Management Practices	D.W. Johnson R. Zhang G.F. Vance
2003-2006	Wyoming State Lands - Forestry Division	\$30,000	Carbon Budgets and Sequestration Potential in Ponderosa Pine Forests	G.F. Vance
2004	UW Equipment Grant	\$19,738	A Carbon, Nitrogen, Sulfur Carlo-Erba Elemental Analyzer	G.F. Vance
2004-2006	NASA -Earth System Science Education Grant	\$69,633	Development of an Undergraduate Program in Earth System Science at the University of Wyoming	G.F. Vance one of 12 Co-Investigators
2004-2007	UW Graduate School Women Doctoral Award	\$50,000	Soil Science Ph.D. Support and ENR Plummer Scholarship	G.F. Vance
2005-2007	NSF - SBIR Phase II	\$500,000	The Use of Halophytic Plants for the Bioremediation of Coalbed Methane Discharge Waters	J.G. Woiwode G.F. Vance K. Fitzsimmons
2005-2007	WY Dept. Of Agriculture	\$4,500	Development & Maintenance of the WY Governor=s Carbon Storage Advisory Committee Website	S. Mooney G.F. Vance
2005-2007	Water Research Program	\$120,000	Innovative Technology Development to Maximize Beneficial Use of Produced Water from Coalbed Natural Gas Operations in the PRB, WY	G.F. Vance R.C. Surdam G.K. Ganjgunte
2005-2008	Abandoned Coal Mine Land Research Program	\$220,220	Mechanisms for Stabilization and Accumulation of Organic Carbon in Reclaimed Mine Land Soils	P.D. Stahl G.F. Vance S.V. Huzurbazar
2005-2008	US DOE	\$14,208,100	Big Sky Regional Carbon Sequestration Partnership - Phase II	G.F. Vance one of several members

PERSONAL VITA**GEORGE F. VANCE**

<u>Year</u>	<u>Agency</u>	<u>Funding</u>	<u>Title</u>	<u>Investigators</u>
2006-2008	US DOE	\$179,648	Enhancing the Beneficial Use of Coalbed Natural Gas Waters	G.F. Vance M.A. Urynowicz
2007-2009	USDA-NRI Competitive Grant Program	\$76,000	Sabbatical Research on Use of Zeolite Materials for Agricultural and Environmental Quality Enhancement	G.F. Vance
2008	UW College of Agriculture Experiment Station	\$80,603	UW Agriculture Experimental Work Station. Common Space Renovation & Infrastructure Development: Agriculture C Building 6th Floor.	G.F. Vance one of 8 Co-Investigators
2008-2010	Wyoming Carbon Sequestration Committee	\$28,920	Determination of Soil Carbon Sequestration in Big Sagebrush Rangeland Ecosystems of Wyoming	J.D. Derner G.E. Schuman G.F. Vance
2009-2011	UW Graduate School	\$40,000	Competitive Graduate Student Assistantship. Funding to support a Ph.D. Student.	G.F. Vance
2009-2011	Wyoming Geological Survey	\$100,000	Use of Displaced Saline Waters from Geological Carbon Sequestration near Rock Springs, WY	G.F. Vance
2010-2011	Foundation Coal Company	\$11,896	Long-term Evaluation of the Effect of Sagebrush Seeding rate and Grass Competition (Grass Seeding Rate) on Wyoming Big Sagebrush Density and Canopy Volume	G.E. Schuman L. Vicklund M. Mortenson G.F. Vance
2010-2012	US DOE	\$17,979,452	Site Characterization of the Highest-Priority Geological Formation for CO ₂ Storage in Wyoming	G.F. Vance one of 12 Co-Investigators

Patents

1. Carboxymethyl- β -Cyclodextrin Pillared Layered Double Hydroxides. University of Wyoming. 1997 (disclosure)
2. Layered Double Hydroxides and Their Use in Removal of Biological Agents from Aqueous Systems@ University of Wyoming and Western Research Institute. 2006 (U.S. Patent Pub No. 2006 - 70,952)
3. Charge-Based Water Filtration Systems. University of Wyoming Research Corporation. 2009 (U.S. Patent No. 7,625,492)

Consulting Projects

1. Methods Development for Determining the Percent Humic Materials in Liquid Fertilizer Enhancers. Horizon Ag Products Inc., Modesto, CA. 1986
2. Review of the August, 1989, Carter Mining Company "Selenium Uptake by Vegetation Grown on Caballo Mine Soils TFN 2 1/160". Wyoming Department of Environmental Quality. 1990
3. Evaluation of Wyoming Department of Environmental Quality-Land Quality Division's "Marginal Suitability Level of 0.1 ppm AB-DTPA Extractable Selenium in Overburden, Spoil and Soil". Wyoming Department of Environmental Quality. 1990
4. State Subcommittee on Soil/Plant/Animal Selenium Continuum. Characterization of Soil/Backfill and Plant Se at Active Surface Mines in the Powder River Basin. Wyoming Department of Environmental Quality and Wyoming Mining Association. 1990-1996
5. Evaluation of the Environmental Impact on Soil and Vegetation Disturbances by Helicopters in Areas of Geological Seismic Exploration of Oil. Western Consulting, Denver, CO. 1991
6. Remediation Strategies for Cleanup of Hydrocarbon Contaminated Soils in La Barge, WY. Frontier Environmental Reclamation Corp., Casper, WY. 1991

7. Coal Mine Reclamation and Revegetation as Influenced by Se Backfill, Black Thunder Coal Company, Wright, WY. 1991-1995
8. Wyoming Coal Companies. Soil and Plant Selenium Characterization at Pre-mined and Post-mined Powder River Basin Coal Company Sites, Powder River Basin, WY. 1992-1993
9. Use of N-Viro on Alkaline Agricultural and Forest Soils. N-Viro, Ft. Collins, CO. 1992-1993
10. Development of Selenium Speciation Methodology. Dionex Ion Chromatography Corporation, Sunnyvale, CA. 1992-1994
11. Invited Selenium Expert, Abandoned Coal Mine Lands Meeting, Kemmerer, WY. 1993
12. Wyoming Coal Companies. Selenium in Soils, Plants and Animals at Powder River Basin Coal Company Sites, Powder River Basin, WY. 1994-1995
13. Environmental Contamination by Metals and Oxyanions from Mining and Irrigation Practices, United Nations, 1995-1996
14. Development of a Universal Composting Program for F.E. Warren Air Force Base. F.E. Warren Air Force Base, Cheyenne, WY. 1995-1997
15. Evaluation of Wyoming's Statutes and the Department of Environmental Quality's Interpretation of Disturbed Land Reclamation. Environmental Quality Council for Brown, Drew, Massey and Sullivan Law Firm, Casper, WY. 1996-1997
16. Remediation of an Oil Brine Contaminated Site. Gillette, Wyoming, National Resource Conservation Service. 1997
17. Selenium Investigations at the Agrium/NuWest Phosphorus Mine, Southeast Idaho. TRC Mariah, Laramie, WY. 1997
18. U.S. Environmental Protection Agency. Expert Review of Draft Risk Assessment for Cement Kiln Dust Used as an Agricultural Soil Amendment Documentation. 1998
19. Integrated Phytoremediation/Greenbelt Project. CH2M Hill and Union Pacific Railroad Tie Plant, Laramie, WY. 1998-1999
20. Review of Selenium in Plants, Soils and Aquatic Ecosystems, TRC Mariah, Laramie, WY. 1999
21. Examination Panel Member for Soil Scientist II and III positions, Metropolitan Water Reclamation District of Greater Chicago, Illinois, 1999
22. Environmental Selenium Associated with Phosphate Mining Activities. U.S. Forest Service and Idaho Department of Environmental Quality, 2000
23. Selenium Chemistry in Agriculture. Fields of Knowledge: Infography, 2001
24. Coalbed Methane Product Water: Land Application Feasibility Study. U.S. BLM. 2001-2002
25. Soil Carbon Database for Wyoming. Wyoming Department of Agriculture. 2001-2002
26. Profession Service for EPA. Environmental Protection Agency. 2003
27. Environmental Contamination from Factory Discharge. Frontier Refinery. 2003-2004
28. Coal Mine Baseline Selenium Testimony. West Virginia Department of Environmental Protection. 2004
29. Profession Service for EPA, Environmental Protection Agency. 2005
30. Examination Panel Member for Soil Scientist II position, Metropolitan Water Reclamation District of Greater Chicago, Illinois. 2005
31. Examination Panel Member for Soil Scientist III position, Metropolitan Water Reclamation District of Greater Chicago, Illinois. 2005
32. Profession Service for EPA. Environmental Protection Agency. 2006
33. Selenium Chemistry in Reclaimed Phosphorus Mine Sites in Idaho. O=Kane Consulting Company. 2006

34. Profession Service for EPA. Environmental Protection Agency. 2007
35. Future of Coal: Upstream Issues associated with Environmental Protection, Standards and Practices. National Commission of Energy Policy. 2007-2008.
36. Profession Service for EPA. Environmental Protection Agency. 2008
37. Profession Service for USDA-NRI program. U.S. Department of Agriculture. 2008
38. Coalbed Methane Environmental Regulations. Powder River Basin Resource Council. 2008
39. Expert representation in the Matter of Appeal of WYPDES 0054364 by John Koltiska et al. Sheridan/Cheyenne WY. 2009
40. Strategies, Monitoring and Data Needs for Assessing and Preventing Impacts from CBM Produced Water to Crop and Forage Production in Wyoming. Wyoming Department of Environmental Quality. 2010
41. Knowledge of Environmental Selenium Affected by Phosphorus Mining at the North Maybe Mine, SE Idaho. Huntsman Advanced Materials, LLC v. One Beacon Insurance Co. Zarian Midgley & Johnson, PLLC, Boise ID. 2009-2015
42. Examination Panel Member for Soil Scientist III position, Metropolitan Water Reclamation District of Greater Chicago, Illinois. 2014
43. Evaluation of the Environmental Impacts Related to the September 19, 2012 Okaton, South Dakota Fire. 2014-2015

State Research Projects

1. Chemistry and Bioavailability of Waste Constituents in Soils. Utilizing municipal wastewater sludge for agriculture, public and mining applications in Wyoming. G.F. Vance. 1990-1999.
2. Evanston City Sludge and Effluent Utilization: Heavy Metal Uptake by Several Grass Species. G.F. Vance, R.G. Roper and L. Burrough. 1990-1994.
3. Wyoming Water Research Center. Monitoring Pesticide Movement and Fate in the Vadose Zone of Irrigated and Semi-arid Areas, Wyoming. G.F. Vance. 1991-1995.
4. Wyoming Agricultural Experiment Station. Relationship of Edaphic Factors to the Production Potential of Wyoming Forests for Timber, addended for inclusion of Correlation of Heavy Metals in Soils and Vegetation. L.C. Munn and G.F. Vance. 1991-1996.
5. State Subcommittee on Soil/Plant/Animal Selenium Continuum. Characterization of Soil/Backfill and Plant Se at Active Surface Mines in the Powder River Basin. P.K. Carroll, J. Luther, L.K. Spackman, M. Steward, G.F. Vance and L. Vickland. 1990-1996.
6. USDA Research Program. Coarse Woody Debris and Soil Organic Matter in Rocky Mountain Coniferous Forests. D.H. Knight, G.F. Vance and L.C. Munn. 1996-2000.
7. Wyoming Agricultural Experiment Station. Forest Management Effects on Ecosystem Carbon Dynamics. G.F. Vance, D. Tinker, P.D. Stahl and G. Ganjgunte. 2003-2006.

Regional Research Projects

1. WRCC-21 (WERA21) Revegetation and Stabilization of Deteriorated and Altered Lands. Hatch 1995-present, Secretary 1996-1997, 2008-2009, Vice-Chair 1997-1998, Chair 1998-1999, 2010.
2. W-170 Chemistry and Bioavailability of Waste Constituents in Soils. Hatch 1990-2005, Co-Chair 1994-99.
3. W-45 Forest Ecosystem Processes Affected by Woody Debris. McIntyre\Stennis 1992-1997.
4. W-1128 Reducing Barriers to Adoption of Microirrigation, Hatch/Multistate 2006-2008

PUBLICATIONS - GOOGLE SCHOLAR CITATION INDICES – APRIL 15, 2015

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BOOKS (AUTHORED or EDITED) AND BOOK CHAPTERS *indicates Student or Post-doctoral Scientist

- Vance, G.F. 1985. Low-Molecular-Weight Phenolic Compounds in Hydrosequences and Developmental Sequences of Michigan Spodosols. M.S. Thesis, Michigan State University. 140 pp.
- David, M.B., F.J. Stevenson, S. Brown, G.F. Vance and J. Rissing. 1987. A Role of Organic Acids in Affecting Soil Solution and Surface Water Acidification in Response to Watershed Manipulations@ In: H. Erickson, M. Morrison, J. Malcolm and K. Thorton (eds.) Watershed Manipulation Project. U.S. Environmental Protection Agency, Corvallis, OR. pp. O1-O19.
- Stevenson, F.J. and G.F. Vance. 1989. Chapter 5 A Naturally Occurring Aluminum-Organic Complexes@ In: G. Sposito (ed.) The Environmental Chemistry of Aluminum. CRC Press, Inc., Boca Raton, FL. pp. 117-146 **(Invited)**
- Vance, G.F. 1989. Proton Binding and Aluminum Complexation by Soil Humic and Fulvic Acids. Ph.D. Dissertation, University of Illinois. 216 pp.
- Mokma, D.L., G.F. Vance and C.C. Trettin. 1990. A Evaluation of Chemical Criteria for Spodic and Podzolic B Horizons@ In: J.M. Kimble and R.D. Yeck (eds.) Characterization, Classification and Utilization of Spodosols U.S. Department of Agriculture - Soil Conservation Service, Lincoln, NE. pp. 221-227.
- Pierzynski, G.M., J.T. Sims and G.F. Vance. 1994. Soils and Environmental Quality. Lewis Publishers Inc., Chelsea, MI. 336 pp.
- Drever, J.I. and G.F. Vance. 1994. Chapter 6 A Role of Soil Organic Acids in Mineral Weathering Processes@ In: E.D. Pittman and M.D. Lewan (eds.) Organic Acids in Geological Processes. Springer-Verlag, Berlin, Germany. pp. 138-161 **(Invited)**
- Schuman, G.E. and G.F. Vance (eds.). 1995. Decades Later: A Time for Reassessment. Proceedings of the 12th Annual Meeting of the American Society for Surface Mining and Reclamation. ASSMR, Princeton, WV. 867 pp.
- David, M.B., G.F. Vance and A.J. Krzyszowska*. 1995. Chapter 15 A Carbon Controls on Spodosol Nitrogen, Sulfur and Phosphorus Cycling@ In: J.M. Kelly and W.W. McFee (eds.) Carbon Forms and Functions in Forest Soils. Soil Science Society of America, Madison, WI. pp. 329-353. **(Invited)**
- See, R.B., K.J. Reddy, G.F. Vance, and M.J. Blaylock*. 1995. Geochemical Processes and Effects of Natural Organic Solutes on the Solubility of Selenium in Coal-mine Backfill Samples from the Powder River Basin, WY. Water-Resources Investigation Report 95-4200. U.S. Geological Survey. 55 pp.
- Munn, L.C. and G.F. Vance. 1995-1998. Genesis, Morphology and Classification of Soils. University of Wyoming Course Packet, Department of Renewable Resources, UW, Laramie, WY. @111 pp.
- Vance, G.F., F.J. Stevenson and F.J. Sikora. 1996. Chapter 5 A Environmental Chemistry of Aluminum-Organic Complexes@ In: G. Sposito (ed.) The Environmental Chemistry of Aluminum, 2nd edition. CRC Lewis Publishers, New York, NY. pp. 169-220 **(Invited)**
- Vance, G.F. and G.E. Schuman (eds.). 1996. Special Symposium - Selenium: Mining, Reclamation and Environmental Impacts. Office of Surface Mining, Denver, CO. 184 pp.
- Vance, G.F. 1996. Soil Chemistry Laboratory Notebook. University of Wyoming, 80 pp.
- Vance, G.F., R.B. See and K.J. Reddy. 1998. Chapter 15 A Selenite Sorption by Coal-Mine Backfill Materials in the Presence of Organic Solutes@ In: W.T. Frankenberger, Jr. and R.A. Endberg (eds.) Environmental Chemistry of Selenium. Marcel Dekker, Inc., New York, NY. pp. 259-280 **(Invited)**
- David, M.B., G.F. Vance and J.S. Kahl. 1999. Chapter 7 A Chemistry of Dissolved Organic Carbon at Bear Brook Watershed, Maine: Stream Water Response to (NH₄)₂SO₄ Additions@ In: S.A. Norton and I.J.

- Fernandez (eds.) The Bear Brook Watershed in Maine: A Paired Watershed Experiment - The First Decade (1987-1997). Kluwer Academic Publishers, Norwell, MA. pp. 149-163.
17. Young, J.A.*, B.M. Christensen*, M.S. Schaad*, M. Herdendorf, G.F. Vance, and L.C. Munn. 1999. AA Geographic Information System to Identify Areas for Alternative Crops in Northwestern Wyoming@ In: J. Janick (ed.) Perspectives on New Crops and New Uses. ASHS Press, VA. pp. 175-180 **(Invited)**
 18. Pierzynski, G.M., J.T. Sims and G.F. Vance. 2000. Soils and Environmental Quality, 2nd edition. CRC Publishers Inc., Boca Raton, FL. 459 pp.
 19. Povirk, K.L.* , J.M. Welker and G.F. Vance. 2001. Chapter 8 ACarbon Sequestration and Grazing in Cold-Region Environments: Tundra and Mountain Meadow Ecosystems@ In: R.F. Follett, J.M. Kimble and R. Lal (eds.) Carbon Sequestration Potential of U.S. Grazing Lands. Ann Arbor Press, MI. pp. 189-228 **(Invited)**
 20. Vance, G.F. and G.M. Pierzynski. 2001. Chapter 1 ABioavailability and Fate of Trace Elements in Residual-Amended Soil Studies@ In: I.K. Iskandar and M.B. Kirkham (eds.) Trace Elements in Soils: Bioavailability, Flux, and Transfer. CRC Publishers Inc., Boca Raton, FL. pp. 1-17 **(Invited)**
 21. Vance, G.F. 2002. AAcidic Deposition@ In: Rattan Lal (ed.) Encyclopedia of Soil Science. Marcel Dekker, Inc. New York, NY pp. 5-10 **(Invited)**
 22. Skousen, J.G. and G.F. Vance. 2003. ASurface Water Pollution from Mining Activities@ In: B.A. Stewart and T. Howell (eds.) Encyclopedia of Water Science. Marcel Dekker, Inc. NY pp. 956-960 **(Invited)**
 23. Vance, G.F. and J.G. Skousen. 2003. AGroundwater Pollution from Mining Activities@ In: B.A. Stewart and T. Howell (eds.) Encyclopedia of Water Science. Marcel Dekker, Inc. NY pp. 363-368 **(Invited)**
 24. Vance, G.F. and W.B. Stevens. 2003. Soil Characteristics & Planning for Soil Disturbance. In: N. Lohse (ed.) Sharing Solutions for Successful Plantings in the Northern Great Plains: A Resource Guide. Lake DeSmet Conservation District, Buffalo, WY pp. 12-33 **(Invited)**
 25. Pierzynski, G.M., J.T. Sims and G.F. Vance. 2005. Soils and Environmental Quality, 3rd edition. CRC Publishers Inc., Boca Raton, FL. 569 pp.
 26. Sharma, S.* and G.F. Vance. 2007. Chapter 17 ADissolution Chemistry of Inorganic Selenium in Alkaline Mine Soils@ In: D. Sarkar, R. Datta and R. Hannigan (eds.) Developments in Environmental Science, Volume 5: Concepts and Applications in Environmental Geochemistry. Elsevier Press, Amsterdam, The Netherlands. p. 363-380 **(Invited)**
 27. Schuman, G.E., L.J. Ingram*, P.D. Stahl. J.D. Derner, G.F. Vance and J.A. Morgan. 2009. Chapter 11 "Influence of Management on Soil Organic Carbon Dynamics of Northern Mixed-Grass Rangelands" In: R. Lal (ed.) Soil Carbon Sequestration and the Greenhouse Effect. Soil Science Society of America Special Publ. #57 p. 169-180 **(Invited)**
 28. Karmis, M.E., R.V. Ramani, H.J. Gluskoter, G.H. Luttrell and G.F. Vance. 2009. Meeting Projected Coal Production Demands in the U.S.A. - Upstream Issues, Challenges and Strategies. The Virginia Center for Coal and Energy Research, Virginia Polytechnic Institute and State University. 258 pp. **(Invited)**
 29. Vance, G.F. 2009. Chapter 6 "Environmental Protection, Practices, and Standards" In: M.E. Karmis, R.V. Ramani, H.J. Gluskoter, G.H. Luttrell and G.F. Vance Meeting Projected Coal Production Demands in the U.S.A. - Upstream Issues, Challenges and Strategies. The Virginia Center for Coal and Energy Research, Virginia Polytechnic Institute and State University. pp. 166-208. **(Invited)**
 30. Vance, G.F. and G. Ganjgunte*. 2010. Chapter 14 "Utilization of Coalbed Natural Gas Water: Issues, Implications and Management" pp. 303-336. In: K.J. Reddy (ed.) Coalbed Natural Gas: Energy and Environment. Nova Science Publishers, Inc. New York, NY. 511 pp. **(Invited)**
 31. Chatterjee, A.* and G.F. Vance. 2011. Chapter 1. "Can We Maintain Sustainability within Harvested Stands of Ponderosa Pine Forests?" pp. 1-31. In: F. Columbus (ed.) Pine Forests: Types, Threats, and Management. Nova Science Publishers, Inc. **(Invited)**
 32. Vance, G.F., G.E. Schuman and J.D. Derner. 2011. Rangeland Sequestration Potential Assessment. Big Sky Carbon Sequestration Partnership.
 33. Spangler, L., G.F. Vance, G.E. Schuman and J.D. Derner. 2012. Rangeland sequestration potential assessment. Technical Report FC26-05NT42587, Montana State University. 25 pp.
 34. Skousen, J.G. and G.F. Vance. 2013. Groundwater: Mining Pollution. In: Sven Erik Jørgensen (ed.) Encyclopedia of Environmental Management. Taylor and Francis. Boca Raton, FL **(Invited)**

REFEREED PUBLICATIONS *indicates Student or Post-doctoral Scientist

1. Mokma, D.L., S. Haile-Mariam, C.C. Trettin and G.F. Vance. 1984. Classification of some Michigan Spodosols. Soil Genesis and Classification Research Publication 84-1. Michigan State University, East Lansing, MI. 10 pp.
2. Vance, G.F., S.A. Boyd and D.L. Mokma. 1985. Extraction of phenolic compounds from a Spodosol profile: An evaluation of three extractants. Soil Science 140:412-420.
3. Vance, G.F., D.L. Mokma and S.A. Boyd. 1986. Phenolic compounds in soils of hydrosequences and developmental sequences of Spodosols. Soil Science Society of America Journal 50:992-996.
4. David, M.B., B. Cote and G.F. Vance. 1988. Aluminum in foliage and bark of black alder, eastern cottonwood and white basswood. Forestry Research Publication 88-7. University of Illinois, Urbana, IL. 6 pp.
5. Vance, G.F. and M.B. David. 1988. Effect of acid treatment on the leachate chemistry of a New England Spodosol: Importance of the B horizon on dissolved organic carbon retention. 7th North America Forest Soils Conference, University of British Columbia, Vancouver, Canada. NAFSC Proceedings. 7:63 (Invited)
6. Vance, G.F. and M.B. David. 1989. Effect of acid treatment on the leachate chemistry of a New England Spodosol: Importance of the B horizon on dissolved organic carbon retention. Soil Science Society America Journal 53:1242-1247.
7. David, M.B. and G.F. Vance. 1989. Generation of soil solution acid neutralizing capacity by addition of dissolved inorganic carbon. Environmental Science and Technology 23:1021-1024.
8. David, M.B., G.F. Vance, J.M. Rissing* and F.J. Stevenson. 1989. Organic carbon fractions in extracts of O and B horizons from a New England Spodosol: Effect of acid treatment. Journal of Environmental Quality 18:211-217.
9. Mokma, D.L. and G.F. Vance. 1989. Forest vegetation and origin of some spodic horizons, Michigan. Geoderma 43:311-324.
10. David, M.B., R.D. Fuller, I.J. Fernandez, M.J. Mitchell, L.E. Rustad, G.F. Vance, A.C. Stam and S.C. Nodvin. 1990. Spodosol variability and assessment of response to acidic deposition. Soil Science Society of America Journal 54:541-548.
11. David, M.B. and G.F. Vance. 1990. Critique of "Biological impoverishment in lakes of the Midwestern and Northeastern United States from acid rain". Environmental Science and Technology 24:1106-1107.
12. Vance, G.F. and M.B. David. 1991. Spodosol cation release and buffering of acidic inputs. Soil Science 151:362-368.
13. Fasth, W.J.*, M.B. David and G.F. Vance. 1991. Sulfate retention and cation leaching of forest soils in response to acid additions. Canadian Journal Forest Research 21:32-41.
14. David, M.B., W.J. Fasth* and G.F. Vance. 1991. Forest soil response to acid and salt additions of sulfate: I. Sulfur constituents and net retention. Soil Science 151:136-145.
15. David, M.B., G.F. Vance and W.J. Fasth*. 1991. Forest soil response to acid and salt additions of sulfate: II. Aluminum and base cations. Soil Science 151:208-219.
16. Vance, G.F. and M.B. David. 1991. Forest soil response to acid and salt additions of sulfate: III. Solubilization and composition of dissolved organic carbon. Soil Science 151:297-305.
17. David, M.B. and G.F. Vance. 1991. Chemical character and origin of organic acids in streams and seepage lakes of central Maine. Biogeochemistry 12:17-41.
18. Vance, G.F. and M.B. David. 1991. Chemical characteristics and acidity of soluble organic sub-stances from a northern hardwood forest floor. Geochimica et Cosmochimica Acta 55:3611-3625.
19. David, M.B., G.F. Vance and P. Kortelainen. 1991. Organic acidity in Maine (U.S.A.) streams and in HUMEX Lake Skjervatjern (Norway). HUMUS-utiset, Finnish Humus News 3:189-194.
20. Vance, G.F. and M.B. David. 1992. Adsorption of dissolved organic carbon and sulfate by Spodosol mineral horizons. Soil Science 154:136-144.

21. David, M.B., G.F. Vance and J.S. Kahl. 1992. Chemistry of dissolved organic carbon and organic acids in two streams draining forested watersheds. Water Resources Research 28:389-396.
22. Sharmasarkar, S.*, M. Blaylock*, G.F. Vance and K.J. Reddy. 1992. Selenium adsorption and precipitation processes in controlling groundwater contamination. 5th Annual State Section of the American Water Resources Association Meetings, Laramie, WY. AWRA Proceedings, Wyoming Water Resources Center, Laramie, WY. Vol 92. 3 pp.
23. Fadlemawla, A.A.* , K.J. Reddy and G.F. Vance. 1992. Characterization of selenium in re-claimed coal mine land groundwater systems, Powder River basin, WY. 5th Annual State Section of the American Water Resources Association Meetings, Laramie, WY. AWRA Proceedings, Wyoming Water Resources Center, Laramie, WY. Vol 92. 4 pp.
24. Lavigne, W. and G.F. Vance. 1992. Biocontrol of Weeds: A New Thrust. Wyoming Stockman Farmer and High Plains Journal.
25. Vance, M. and G.F. Vance. 1992. Backyard composting in Wyoming: Simple, small-scale methods. Agricultural Experiment Station Research Publication B-974. University of Wyoming, Laramie, WY. 4 pp.
26. Rahman, S.*, G.F. Vance and L. C. Munn. 1993. Salinity induced effects on the nutrient status of soil, corn leaves and kernels. Communications in Soil Science and Plant Analysis 24: 2251-2269.
27. Schladweiler, B.K.* , G.F. Vance, P.K. Carroll, M.S. Page*, P. Wanek*, D.L. Bonett, R.N. Pasch and S.E. Williams. 1993. Comparison of selenium uptake by vegetation on surface coal mine lands in Wyoming and seasonal variability of uptake. American Society for Surface Mining and Reclamation Annual Meeting, Spokane, WA. ASSMR Proceedings, Princeton, WV Vol. II:828-838.
28. Vance, G.F., M.B. David and A.I. Krzyszowska*. 1993. Organic chemistry of nutrients in a low elevation spruce-fir soil. 8th North American Forest Soils Conference, Gainesville, FL. NAFSC Proceedings, University of Florida, FL 8:66-67.
29. David, M.B., G.F. Vance, A.J. Krzyszowska* and I. Choi*. 1993. Role of soil carbon in the cycling of nitrogen, sulfur and phosphorus in Spodosols. 8th North American Forest Soils Conference, Gainesville, FL. NAFSC Proceedings, University of Florida, FL 8:20-21. **(Invited)**
30. Schladweiler, B.K.* , G.F. Vance, R.N. Pasch, P.K. Carroll, M.S. Page, and D.L. Bonett. 1993. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Planning, Rehabilitation and Treatment of Disturbed Lands, Reclamation Research Unit Publication #9301. Montana State University, pp. 119-130.
31. Carroll, P.K., J.G. Luther, L.K. Spackman, D.G. Steward, G.F. Vance, L.E. Vicklund and M.F. Raisbeck. 1993. Selenium and mining in the Powder River Basin, WY. Planning, Rehabilitation and Treatment of Disturbed Lands, Reclamation Research Unit Publication #9301. Montana State University, pp. 160-175.
32. Gödde, M.* , M.B. David and G.F. Vance. 1993. Einfluß von temperatur und durchfeuchtungs-intervallen auf die C-Freisetzung aus der organischen Auflage nordamerikanischer Waldböden. Mitteilg. Dtsch. Bodenkundl. Gesellsch (German Soil Science Society Communications) 72:527-530.
33. Kaemmerer, A.* and G.F. Vance. 1993. Schwermetallgehalte in bayerischen und nordamerikanischen Koniterenwäldern, ein Vergleich. Mitteilg. Dtsch. Bodenkundl. Gesellsch (German Soil Science Society Communications) 72:731-734.
34. Krzyszowska, A.J.* , R.D. Allen* and G.F. Vance. 1994. Assessment of herbicide fate in a Wyoming rangeland environment: Soil column study. Journal of Environmental Quality 23:1051-1058.
35. Rahman, S.*, G.F. Vance and L. C. Munn. 1994. Use of SPOT satellite digital data for detecting soil salinity and micronutrient deficiencies. Soil Science 158:31-39.
36. Johnson, C.D.* , G.F. Vance and D.E. Legg. 1994. Accumulation of selenium in thickspick wheatgrass and yellow sweet clover grown on sludge amended alkaline mine spoil. Communications in Soil Science and Plant Analysis 25:2117-2132.
37. Krzyszowska, A.J.* and G.F. Vance. 1994. Solid phase extraction and HPLC analysis of dicamba and picloram from soil and water samples. Journal of Agricultural and Food Chemistry 42:1693-1696.
38. Fadlemawla, A.A.* , K.J. Reddy and G.F. Vance. 1994. Geochemical processes affecting the mobility of dissolved selenium in surface coal mine backfill environments. 6th Annual State Section of the American

- Water Resources Association Meetings, Jackson, WY. In: R.A. Marston and V.R. Hasfurther (eds.) Effects of Human-Induced Changes on Hydrologic Systems 94:1003-1009.
39. Sharmasarkar, S.* and G.F. Vance. 1994. Application of partial fractionation and speciation techniques for predicting groundwater contamination by soil selenium movement. 6th Annual State Section of the American Water Resources Association Meetings, Jackson, WY. In: R.A. Marston and V.R. Hasfurther (eds.) Effects of Human-Induced Changes on Hydrologic Systems 94:1055-1063.
 40. Krzyszowska, A.J.*, G.F. Vance and R.D. Allen*. 1994. Assessment of herbicide transport in an irrigated pasture environment, Wyoming, USA. 3rd International Symposium on Environmental Geochemistry, Kraków, Poland. ISEG Proceedings, University of Mining and Metallurgy, 94:208-209.
 41. Steward, D.G., J.G. Luther, P.K. Carroll, L.E. Vicklund, G.F. Vance and L.K. Spackman. 1994. Standard operating procedures for the sampling selenium in Vegetation. Research Publication MP-77. University of Wyoming, Laramie, WY. 6 pp.
 42. Spackman, L.K., G.F. Vance, L.E. Vicklund, P.K. Carroll, D.G. Steward and J.G. Luther. 1994. Standard operating procedures for the sampling and analysis of selenium in soil and over-burden/spoil material. Research Publication MP-82. University of Wyoming, Laramie, WY. 13 pp.
 43. Reddy, K.J., Z. Zhang*, M.J. Blaylock* and G.F. Vance. 1995. A method for detecting selenium speciation in ground water. Environmental Science and Technology 29:1754-1759.
 44. Sharmasarkar, S.* and G.F. Vance. 1995. Fractional partitioning for assessing solid-phase speciation and geochemical transformations of soil selenium. Soil Science 160:43-55.
 45. Sharmasarkar, S.* and G.F. Vance. 1995. Characterization and correlation of soil and plant selenium in some range and coal mine environments of Wyoming. Communications in Soil Science and Plant Analysis 26:2577-2591.
 46. Blaylock, M.J.*, T.A. Tawfic* and G.F. Vance. 1995. Modeling selenite sorption in reclaimed coal mine soil materials. Soil Science 159:43-48.
 47. Zhang, R., S. Rahman*, G.F. Vance and L.C. Munn. 1995. Geostatistical analysis of trace elements in soils and plants. Soil Science 159:383-390.
 48. Zhang, R., A.J. Krzyszowska*, G.F. Vance and R.D. Allen*. 1995. Modeling pesticide transport under field conditions. Hydrology Days Meeting, Ft. Collins, CO. In: L. Ahuja, J. Leppert, K. Rojas and E. Seely (eds.) Computer Applications in Water Management. Great Plain Agricultural Council 154:199-202.
 49. Reddy, K.J., M.J. Blaylock*, G.F. Vance and R.B. See. 1995. Effects of redox potential on the speciation of selenium in ground water and coal-mine backfill materials, Wyoming. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:230-236.
 50. Reddy, K.J., Z. Zhang and G.F. Vance. 1995. Selenite and selenate determination in surface coal mine backfill ground water. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:237-245.
 51. Vance, G.F., A.A. Fadlelmawla*, R.B. See and K.J. Reddy. 1995. Role of natural organic solutes on the sorption of selenium by coal mine backfill-core samples from the Powder River Basin, WY. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:246-257.
 52. Vance, G.F. and R.N. Pasch. 1995. Soil selenium: Laboratory comparisons and soil/backfill variability. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol. I:258-269.
 53. Sharmasarkar, S.*, G.F. Vance, K.J. Reddy, R. Zhang and L.K. Spackman. 1995. Understanding selenium mobility by sorption and extraction processes in surface coal mine spoil. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:284-289.
 54. Sharmasarkar, S.* and G.F. Vance. 1995. Release, retention and amino acid interaction of seleno-methionine in reclaimed coal mine environments. American Society for Surface Mining and Reclamation

- Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:290-299.
55. Schladweiler, B.K.*, G.F. Vance, D.E. Legg and C. Bilen*. 1995. Regression analysis to predict selenium levels at two surface coal mines in the Powder River Basin, WY. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:300-308.
56. Wanek, P.L.*, G.F. Vance and S.E. Williams. 1995. Selenium uptake by four-wing saltbush and yellow-blossom sweet clover as influenced by vesicular-arbuscular mycorrhizae. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:309-316.
57. Vicklund, L.E., G.F. Vance, D.G. Steward, L.K. Spackman and J.G. Luther. 1995. Selenium and mining in the Powder River Basin, WY: Phase I - vegetation analysis. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:317-332.
58. Spackman, L.K., D.G. Steward, L.E. Vicklund, G.F. Vance and J.G. Luther. 1995. Selenium and mining in the Powder River Basin, WY: Phase II - the rooting zone-plant relationship. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:333-353.
59. Raisbeck, M.F., D.G. Steward, L.E. Vicklund, G.F. Vance, L.K. Spackman and J.G. Luther. 1995. Selenium and mining in the Powder River Basin, WY: Phase III - selenium in target organisms in the powder river basin. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol I:354-361.
60. Vance, G.F., S. Sharmasarkar*, K.J. Reddy and L.K. Spackman. 1995. The importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol II:859.
61. Vance, G.F., B.K. Schladweiler, R.N. Pasch and M.S. Page. 1995. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol II:861.
62. See, R.B., G.F. Vance, K.J. Reddy and A.A. Fadlemawla*. 1995. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. American Society for Surface Mining and Reclamation Annual Meetings, Gillette, WY. In: G.E. Schuman and G.F. Vance (eds.) Decades Later: A Time for Reassessment, Princeton, WV. Vol II:866.
63. See, R.B., K.J. Reddy, G.F. Vance, Amr A. Fadlemawla* and M.J. Blaylock*. 1995. Geochemical processes and effects of natural organic solutes on the solubility of selenium in coal-mine backfill samples from the Powder River Basin, WY. Office of Surface Mining Research Publication. Denver, CO. 62 pp.
64. Reddy, K.J. and G.F. Vance. 1995. Selenium Detection Method Found: Research Helps Evaluate Groundwater for Chemical's Presence. Wyoming Hydrogram. Wyoming Water Resources Center.
65. Reddy, K.J. and G.F. Vance. 1995. Detecting Selenium in Groundwater. Water Technology News.
66. Sharmasarkar, S.*, K.J. Reddy and G.F. Vance. 1996. Preliminary quantification of metal selenate solubility in aqueous solutions. In: L.L. Stillings (ed.) Chemical and Biological Controls on Mineral Growth and Dissolution Kinetics. Chemical Geology, Elsevier Science pp. 165-170.
67. Dai, K.H.*, M.B. David and G.F. Vance. 1996. Solid and solution carbon characterization of a spruce-fir Spodosol. Biogeochemistry 35:339-365.
68. Krzyszowska, A.J.*, M.J. Blaylock*, G.F. Vance and M.B. David. 1996. Ion-chromatographic analysis of low-molecular-weight organic acids in Spodosol forest floor solutions. Soil Science Society of America Journal 60:1565-1571.

69. Dai, K.H.* , M.B. David, G.F. Vance, J. McLaughlin* and I.J. Fernandez. 1996. Acidity characteristics of soluble organic substances in a spruce-fir forest floor. Soil Science 161:694-704.
70. Zhao, H.* , W.F. Jaynes* and G.F. Vance. 1996. Sorption of the ionizable organic compound, Dicamba (3,6-dichloro-2-methoxy benzoic acid), by organo-clays. Chemosphere 33:2089-2100.
71. Gödde, M.* , M.B. David, M. Christ*, M. Kaupenjohann and G.F. Vance. 1996. Carbon mobilization from the forest floor under red spruce in the northeastern U.S.A. Soil Biology and Biochemistry 28:1181-1189.
72. Rahman, S.* , L.C. Munn, R. Zhang and G.F. Vance. 1996. Wyoming Rocky Mountain forest soils: Evaluating spatial variability using statistics and geostatistics. Canadian Journal of Soil Science 76:501-507.
73. Jaynes, W.F.* and G.F. Vance. 1996. BETX sorption by organo-clays: Co-sorption enhancement and equivalence of interlayer complexes. Soil Science Society of America Journal 60:1742-1749.
74. Dai, K.H.* , M.B. David, G.F. Vance and A.J. Krzyszowska*. 1996. Characterization of phosphorus in a spruce-fir Spodosol by ³¹P-NMR spectroscopy. Soil Science Society of America Journal 60:1943-1950.
75. Schladweiler, B.K.* and G.F. Vance. 1996. Vegetation changes within native and reclaimed coal mine sites: Environmental factors and seasonal variability. American Society for Surface Mining and Reclamation Annual Meetings, Knoxville, TN. In: W.L. Daniels (ed.) Successes and Failures: Applying Research Results to Insure Reclamation Success, Princeton, WV. Vol I:472-483.
76. Cassel-Sharmasarkar, F.* , R. Zhang and G.F. Vance. 1996. Modeling unsaturated water flow in a three-dimensional soil system under drip irrigation. Hydrology Days Meeting, Ft. Collins, CO. In: H.J. Morel-Seytoux (ed.) American Geophysical Union Hydrology Proceedings. Hydrology Days Publications, Atherton, CA. 17:49-60.
77. Sharmasarkar, S.* , G.F. Vance and F. Cassel-Sharmasarkar*. 1996. Selenite-selenate speciation in mine soils and salt solutions: A comparison of atomic absorption spectroscopy and ion chromatography. American Society for Surface Mining and Reclamation Annual Meetings, Knoxville, TN. In: W.L. Daniels (ed.) Successes and Failures: Applying Research Results to Insure Reclamation Success, Princeton, WV. Vol I:424-429.
78. Vance, G.F. and F.J. Sikora. 1997. Selectivity and solubility analysis using ion selective potentiometry: A soil chemistry experiment. Journal of Natural Resources and Life Sciences Education 26:119-124.
79. Sharmasarkar, S.* and G.F. Vance. 1997. Extraction and distribution of soil organic and inorganic selenium in coal mine environments of Wyoming, U.S.A. International Journal of Environmental Geology 29:17-22.
80. Zhao, H.* and G.F. Vance. 1997. Intercalation of carboxymethyl- β -cyclodextrin into magnesium aluminum layered double hydroxides. Dalton Transactions 97:1961-1965.
81. Rahman, S.* , L.C. Munn, G.F. Vance and C.S. Arneson. 1997. Wyoming Rocky Mountain forest soils: Mapping using an ARC/INFO Geographical Information System. Soil Science Society of America Journal 61:1730-1737.
82. Sharmasarkar, S.* and G.F. Vance. 1997. Kinetics of selenomethionine disappearance from reclaimed coal mine soils of Wyoming. International Journal of Environmental Geology 29:202-208.
83. Sharmasarkar, S.* , F. Cassel-Sharmasarkar*, R. Zhang and G.F. Vance. 1997. Fate of nitrate and aldicarb under irrigation management. What=s New in the Toolbox: Applied Research for Wyoming=s Water Resources. Wyoming Water Resources Center 97:87-91.
84. Zhao, H.* and G.F. Vance. 1998. Molecular inclusion properties of hydrophobic organic compounds by a modified β -cyclodextrin intercalated within a layered double hydroxide. Journal of Inclusion Phenomena and Molecular Recognition in Chemistry 31:305-317.
85. Sharmasarkar, S.* , G.F. Vance and F. Cassel-Sharmasarkar*. 1998. Analysis and speciation of selenium ions in coal mine environments. International Journal of Environmental Geology 34:31-38.
86. Vance, G.F. and F.J. Sikora. 1998. Selectivity and solubility analysis using ion selective potentiometry: A soil chemistry experiment. Journal of Science Education and Technology. Chemical Engineering Education Publisher. Vol 26(2):119-124.

87. Vance, G.F. 1998. An Introduction to Environmental Chemistry, Book Review. Journal of Environmental Quality. 27:466-467.
88. Zhao, H.* and G.F. Vance. 1998. Selectivity and molecular sieving effects of organic compounds by a β -cyclodextrin-pillared layered double hydroxide. Clays and Clay Minerals 46:712-718.
89. Zhao, H.* and G.F. Vance. 1998. Sorption of trichloroethylene by organo-clays in the presence of humic substances. Water Research 32:3710-3716.
90. Johnson, C.D.* and G.F. Vance. 1998. Accumulation of trace elements in plants and soils: Effects of long-term sludge amendments. Agricultural Experiment Station Bulletin B-1062. University of Wyoming, Laramie, WY. 10 pp.
91. Krzyszowska, A.J.*, R.D. Allen*, G.F. Vance, R. Zhang and D.E. Legg. 1999. A field lysimeter study to evaluate herbicide transport in a Wyoming irrigated pasture. Communication in Soil Science and Plant Analysis 30:245-263.
92. Wanek, P.L.*, G.F. Vance and P.D. Stahl. 1999. Selenium uptake by plants: Effects of soil steaming, root addition, and selenium augmentation. Communications in Soil Science and Plant Analysis 30:265-278.
93. Jaynes, W.F.* and G.F. Vance. 1999. Sorption of benzene, toluene, ethylbenzene and xylenes (BTEX) compounds by hectorite clays exchanged with aromatic organic cations. Clays and Clay Minerals 47:358-365.
94. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, R. Zhang, G.F. Vance and S. Miller. 1999. Micro-spatial variability of soil nitrate following nitrogen fertilization and drip irrigation. Water, Air and Soil Pollution 116:605-619.
95. Krzyszowska-Waitkus, A.J.* and G.F. Vance. 1999. Characterization of organic substances in Lodgepole Pine ecosystems. 9th North American Forest Soils Conference, Lake Tahoe, CA, NAFSC Proceedings 9:72.
96. Vance, G.F. and G.M. Pierzynski. 1999. Bioavailability, Fluxes and Transfer of Trace Elements in Soils and Soil Components Special Symposium: Bioavailability and fate of trace elements in long-term, residual-amended soil studies. 5th International Conference on the Biogeochemistry of Trace Elements, Vienna, Austria. ICBTC Proceedings, University of Vienna pp. 116-117. (Invited)
97. Skinner, C.P.* and G.F. Vance. 1999. Effectiveness of wetland-riparian vegetation in remediation of a disturbed seleniferous environment. 16th National American Society for Surface Mining and Reclamation Annual Meeting, Scottsdale, AZ. In: S.A. Bengson and D.M. Bland (eds.) Mining and Reclamation for the Next Millennium. Lexington, KY. Vol 2:736.
98. Vance, G.F. and L.K. Spackman. 1999. Is it topsoil or overburden? Case study of a small mine in Wyoming. 16th National American Society for Surface Mining and Reclamation Annual Meeting, Scottsdale, AZ. In: S.A. Bengson and D.M. Bland (eds.) Mining and Reclamation for the Next Millennium. Lexington, KY. Vol 1:209-224.
99. Edinger, K.D.*, G.E. Schuman and G.F. Vance. 1999. Evaluation of reclaimed abandoned bentonite mine lands. 16th National American Society for Surface Mining and Reclamation Annual Meeting, Scottsdale, AZ. In: S.A. Bengson and D.M. Bland (eds.) Mining and Reclamation for the Next Millennium. Lexington, KY. Vol 1:273-286.
100. Sharmasarkar, S.*, W.F. Jaynes* and G.F. Vance. 2000. BTEX sorption by montmorillonite organo-clays: TMPA, ADAM, HDTMA. Water, Air, and Soil Pollution 119:257-273.
101. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, R. Zhang, G.F. Vance, S.D. Miller and J.M. Reddy. 2000. Modeling nitrate movement in sugarbeet soils under flood and drip irrigation. International Commission of Irrigation and Drainage Journal 49:43-54.
102. David, M.B., G.F. Vance and J.S. Kahl. 2000. Chemistry of dissolved organic carbon at Bear Brook Watershed, Maine: Stream water response to $(\text{NH}_4)_2\text{SO}_4$ additions. Environmental Monitoring and Assessment 55:149-163.
103. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, S.D. Miller, L.J. Held, G.F. Vance and R. Zhang. 2000. Assessment of microirrigation practices for sugarbeet production. Journal of Sustainable Agriculture 17:17-32.

104. Young, J.A.* , G.F. Vance, L.C. Munn, B.M. Christensen* and M.S. Schaad*. 2000. A Geographic Information System (GIS) for identification of potential alternative crops utilizing soil and climatic variables in the Bighorn Basin, Wyoming. American Journal of Alternative Agriculture 15:160-170.
105. Zhao, H., K.L. Nagy, J.S. Waples and G.F. Vance. 2000. Surfactant-templated mesoporous silicate materials as sorbents for organic pollutants in water. Environmental Science and Technology 34:4822-4827.
106. Zhang, R., A.J. Krzyszowska-Waitkus*, G.F. Vance and J. Qi*. 2000. Pesticide transport in field soils. Advances in Environmental Research 4:59-68.
107. Vance, G.F. 2000. Problems associated with selenium leaching from waste shale. 17th National American Society for Surface Mining and Reclamation Annual Meeting, Tampa, FL. In: W.L. Daniels and S.G. Richardson (eds.) A New Era for Land Reclamation, Lexington, KY. Vol 17:71-82.
108. Wright, M.D.* , T.V. Edgar, D.H. Foster, S.K. Bhattacharya*, G.F. Vance and M.R. Junna. 2000. An integrated approach to remediation of petroleum contaminated soils: Surfactant enhanced electrokinetics. Treatment of Organic Contaminated Soils Symposium, AIChE Conference Proceedings. 8 pp.
109. Boyd, S.A., C.T. Johnston, G.F. Vance, J-W Park, T. Pinnavaia and G. Bailey (Organizing Committee). 2000. Bouyoucous Conference Proceedings on Environmental Chemistry at the Clay-Water Interface. Proceedings, Michigan State University, East Lansing, Michigan, 35 pp.
110. Vance, G.F. 2000. Alternative Crops for the Big Horn Basin, WY. Wyoming Agricultural Experiment Station Report, University of Wyoming. 7 pp.
111. Young, J.A.* , B.M. Christensen*, M. Schaad*, G.F. Vance and L.C. Munn. 2000. Geographic information system identifies alternative crop opportunities for Bighorn Basin producers. Reflections 10:27-30 (**Received 1st Place Award For Best Article**)
112. Vance, G.F. and L.K. Spackman. 2000. The topsoil dilemma. In: Striving for Restoration, Fostering Technology and Policy for Reestablishing Ecological Function. Reclamation Research Unit Publication. Montana State University, pp. 135-141.
113. Young, J.A.* , G.F. Vance and R. Zhang. 2000. Climatic patterns in the Bighorn Basin, Wyoming. Agricultural Experiment Station Bulletin B-1089. University of Wyoming, Laramie, WY. 11 pp.
114. You, Y.W.* , G.F. Vance and H. Zhao. 2001. Selenium adsorption on Mg-Al and Zn-Al Layered Double Hydroxides. Applied Clay Science 20:13-25.
115. Cassel-Sharmasarkar, F.* , S. Sharmasarkar*, S.D. Miller, G.F. Vance and R. Zhang. 2001. Assessment of drip and flood irrigation on water and fertilizer use efficiencies for sugarbeets. Agricultural Water Management 46:241-251.
116. You, Y.W.* , H. Zhao and G.F. Vance. 2001. Removal of arsenite from aqueous solutions by anionic clays. Environmental Technology 22: 1447-1457.
117. Cassel-Sharmasarkar, F.* , S. Sharmasarkar*, L.J. Held, S.D. Miller, G.F. Vance and R. Zhang. 2001. Agro-economic analyses of drip irrigation for sugarbeet production. Agronomy Journal 93:517-523.
118. Skinner, C.P.* and G.F. Vance. 2001. Soil-geology selenium relationships in disturbed and native ecosystems. 18th National American Society for Surface Mining and Reclamation Annual Meeting, Albuquerque, NM. In: R. Barnhisel and B. Buchanan (eds.) Land Reclamation - A Different Approach., Lexington, KY. 18:300-316.
119. Skinner, C.P.* and G.F. Vance. 2001. Plant-soil selenium in disturbed and native ecosystems. 18th National American Society for Surface Mining and Reclamation Annual Meeting, Albuquerque, NM. In: R. Barnhisel and B. Buchanan (eds.) Land Reclamation - A Different Approach., Lexington, KY. 19:141-162.
120. Vance, G.F. and K.L. Panter. 2001. Backyard composting: Simple small-scale methods. Agricultural Experiment Station Research Publication B-974R. University of Wyoming, Laramie, WY. 8 pp.
121. Young, J.A.* , G.F. Vance, L.C. Munn, B.M. Christensen* and M.S. Schaad*. 2001. Identification of potential alternative crops using a geographic information system in the Bighorn Basin, WY. Agricultural Experiment Station Bulletin B-1109. University of Wyoming, Laramie, WY. 19 pp.
122. Vance, G.F. 2002. Undergraduate minor and graduate certificate programs in Reclamation and Restoration Ecology. 19th National American Society of Mining and Reclamation Annual Meeting, Lexington, KY. In:

- R. Barnhisel (ed.) Reclamation with a Purpose. American Society of Mining and Reclamation, Lexington, KY. 19:1173-1182.
123. You, Y.W.*, H. Zhao and G.F. Vance. 2002. Adsorption of dicamba (3,6 dichloro-2-methoxy benzoic acid) in aqueous solution by calcined-layered double hydroxides. Applied Clay Science 21:217-226.
124. Sharmasarkar, S. and G.F. Vance. 2002. Selenite-selenate sorption in a surface coal mine environment. Advances in Environmental Research 7:87-97.
125. You, Y.W.*, H. Zhao and G.F. Vance. 2002. Hybrid organic-inorganic derivatives of layered double hydroxides and dodecylbenzenesulfonate: Preparation and adsorption characteristics. Journal of Material Chemistry 12:907-912.
126. Sharmasarkar, S. and G.F. Vance. 2002. Soil and plant selenium at a reclaimed uranium mine. Journal of Environmental Quality 31:1516-1521.
127. You, Y.W.*, H. Zhao and G.F. Vance. 2002. Surfactant-enhanced adsorption of organic compounds by layered double hydroxides. Colloids and Surfaces: Physicochemical and Engineering Aspects 205:161-172.
128. You, Y.W.* and G.F. Vance. 2002. Sodium-Zinc exchange selectivity on Wyoming montmorillonite in different background anion solutions. Pedosphere 12:289-299.
129. Schladweiler, B.K.*, G.F. Vance and R. Haroian. 2002. Influence of variable topsoil replacement depths on soil and plant characteristics at a coal mine in northeastern Wyoming. 19th National American Society of Mining and Reclamation Annual Meeting, Lexington, KY. In: R. Barnhisel (ed.) Reclamation with a Purpose. American Society of Mining and Reclamation, Lexington, KY. 19 CD
130. Meyer, J. and G.F. Vance. 2002. Evaluation of Effects of Soils by Produced Water from Coalbed Methane Operations, Powder River basin, Wyoming and Montana. Eye on Environment: Federal Lands Issue. U.S. DOE National Energy Technology Laboratory. Winter Issue p. 6-7.
131. Hoobler, B.M.*, G.F. Vance, L.C. Munn and J.A. Young*. 2003. Applications of land evaluation/site assessment (LESA) and a geographic information system (GIS) in East Park County, WY. Soil and Water Conservation Journal 58:105-112.
132. You, Y.W., G.F. Vance, D. Sparks, J. Zhuang and Y. Jin. 2003. Sorption of MS2 Bacteriophage to Layered Double Hydroxides: Effects of Reaction Time, pH, and Competing Anions. Journal of Environmental Quality 32:2046-2053.
133. Schladweiler, B.K.*, G.F. Vance and R. Haroian. 2003. Evaluation of topsoil depth effects on various plant parameters within reclaimed areas in northeastern Wyoming. 20th American Society of Mining and Reclamation and the 9th Billings Land Reclamation Symposium, Billings, MT. In: R. Barnhisel (ed.) Working Together for Innovative Reclamation, Lexington, KY. CD pp. 1086-1098.
134. Vance, G.F. 2003. Proposal for the Development of a Western States Land Reclamation Center. 20th American Society of Mining and Reclamation and the 9th Billings Land Reclamation Symposium, Billings, MT. In: R. Barnhisel (ed.) Working Together for Innovative Reclamation, Lexington, KY. CD pp. 1327-1328.
135. Vance, G.F. and W.B. Stevens. 2003. Soil characteristics and planning for soil disturbance. Sharing Solutions for Successful Plantings in the Northern Great Plains: A Resource Guide. Lake DeSmet Conservation District, Buffalo, WY. pp. 12-33. **(Invited)**
136. King, L.A.*, J. Wheaton, G.F. Vance and G.K. Ganjegunte*. 2004. Water issues associated with coalbed methane (natural gas) in the Powder River Basin of Wyoming and Montana. American Society of Mining and Reclamation Publication. Reclamation Matters 2:7-12.
137. Campbell, S.*, S. Mooney, J.P. Hewlett, D.J. Menkhous and G.F. Vance. 2004. Can ranchers slow climate change? Rangelands 26:16-22.
138. Schladweiler, B.K.*, G.F. Vance, D.E. Legg, L.C. Munn and R. Harion. 2004. Influence of variable topsoil replacement depths on soil chemical parameters within a coal mine in northeastern Wyoming. Arid Land Research and Management 18:347-358.

139. Schladweiler, B.K.*, G.F. Vance, D.E. Legg, L.C. Munn and R. Harion. 2004. Topsoil depth effects on reclaimed coal mine and native area vegetation in northeastern Wyoming. Journal of Rangeland Ecology and Management 58:167-176.
140. King, L.A.*, G.F. Vance, G.K. Ganjgunte* and B. Carroll. 2004. Vegetation Responses to Saline-Sodic Coalbed Methane Waters in the Powder River Basin. Living with Coalbed Methane Meeting, Billings, MT. Montana Soil and Water Conservation Society Proceedings. **(Invited)**
141. Ganjgunte, G.K.*, G.F. Vance, L.A. King*. 2004. Impacts of Land Application Disposal of Saline-Sodic Coalbed Methane Water on Soil Physical and Chemical Properties in Wyoming. Living with Coalbed Methane Meeting, Billings, MT. Montana Soil and Water Conservation Society Proceedings.
142. King, L.A.*, G.F. Vance and G.K. Ganjgunte*. 2004. Soil and Vegetation Impacts from Land Application of Saline-Sodic Coalbed Methane Waters. Living with Coalbed Methane Meeting, Billings, MT. Montana Soil and Water Conservation Society Proceedings.
143. Vance, G.F. 2004. Environmental Selenium and Land Disturbance: Soil, Vegetation, Water and Wildlife. 21st American Society of Mining and Reclamation/West Virginia Surface Mine Drainage Task Force Meetings, Morgantown, WV. In: J. Skousen and R. Barnhisel (eds.) Symposium Proceedings, Lexington, KY. CD pp. 1906-1915.
144. Ganjgunte, G.K.*, L.A. King* and G.F. Vance. 2004. Impacts of Land Application Disposal of Saline-Sodic Coalbed Methane Water on Soil Physical and Chemical Properties in Wyoming. 21st American Society of Mining and Reclamation/West Virginia Surface Mine Drainage Task Force Meetings, Morgantown, WV. In: J. Skousen and R. Barnhisel (eds.) Symposium Proceedings, Lexington, KY. CD pp. 720-736.
145. King, L.A.*, G.F. Vance, G.K. Ganjgunte*, and B. Carroll. 2004. Land Application of Coalbed Methane Waters: Water Management Strategies and Impact. 21st American Society of Mining and Reclamation/West Virginia Surface Mine Drainage Task Force Meetings, Morgantown, WV. In: J. Skousen and R. Barnhisel (eds.) Symposium Proceedings, Lexington, KY. CD pp. 1056-1075.
146. Campbell, S.*, S. Mooney, J.P. Hewlett, D.J. Menkhous and G.F. Vance. 2004. Economics of Carbon Sequestration: A Wyoming Ranch Case Study. American Agricultural Economics Association Annual Meeting, Denver, CO. American Economics Society Proceedings CD
147. Vance, G.F., L.A. King* and G.K. Ganjgunte*. 2004. Coalbed methane (natural gas) co-produced water: Management options. Reflections 31-34.
148. Vance, G.F. 2005. A Soil and Water Chemistry: An Integrated Approach, Book Review. Vadose Zone Journal 4:445.
149. Ganjgunte, G.K.*, G.F. Vance and L.A. King*. 2005. Soil chemical changes resulting from irrigation with water co-produced with coalbed natural gas. Journal of Environmental Quality 34:2217-2227.
150. Ganjgunte, G.K.*, G.F. Vance, C.M. Preston, G.E. Schuman, L.J. Ingram, P.D. Stahl, and J.M. Welker. 2005. Organic carbon composition in a northern mixed-grass prairie: Effects of grazing. Soil Science Society of America Journal 69:1746-1756.
151. Ganjgunte, G.K.*, G.F. Vance and L.A. King*. 2005. Tracking salt and sodium build-up due to irrigating with coalbed natural gas product water: Soil solution lysimeter and soil saturation paste extract studies. 22nd National American Society of Mining and Reclamation Symposium Annual Meetings, Breckenridge, CO. In: R. Barnhisel (ed.) Raising Reclamation to New Heights, Lexington, KY CD pp. 378-387.
152. King, L.A.*, G.F. Vance and G.K. Ganjgunte*. 2005. Use of coalbed natural gas (CBNG) waters: Soil and plant responses. 22nd National American Society of Mining and Reclamation Symposium Annual Meetings, Breckenridge, CO. In: R. Barnhisel (ed.) Raising Reclamation to New Heights, Lexington, KY CD pp. 607-622.
153. King, L.A.*, G.F. Vance and G.K. Ganjgunte*. 2005. Saline-sodic water impacts to soils and vegetation. 22nd National American Society of Mining and Reclamation Symposium Annual Meetings, Breckenridge, CO. In: R. Barnhisel (ed.) Raising Reclamation to New Heights, Lexington, KY CD pp. 623-625.
154. Schladweiler, B.K.*, G.F. Vance, D.L. Legg and S. Belden. 2005. Ongoing evaluations of effects from variable topsoil depths at a coal mine in Northeastern Wyoming. 22nd National American Society of

- Mining and Reclamation Symposium Annual Meetings, Breckenridge, CO. In: R. Barnhisel (ed.) Raising Reclamation to New Heights, Lexington, KY CD pp. 1000-1014.
155. King, L.A.* , G.F. Vance and G.K. Ganjegunte*. 2005. Soil and vegetation impacts from land application of saline-sodic coalbed methane waters. University of Wyoming CBM Conference, Laramie, WY. In: J.R. Stine (ed.) Coalbed Natural Gas Research: Research, Monitoring and Applications. Information Circular No. 43. Wyoming State Geological Survey. pp. 124-125.
156. Ganjegunte, G.K.* , G.F. Vance and L.A. King*. 2005. Impacts of CBM water on soil physical and chemical properties. University of Wyoming CBM Conference, Laramie, WY. In: J.R. Stine (ed.) Coalbed Natural Gas Research: Research, Monitoring and Applications. Information Circular No. 43. Wyoming State Geological Survey. pp. 126-127
157. Vance, G.F., G.K. Ganjegunte, J.G. Woiwode, R.M. Hybner and K. Fitzsimmons. 2005. Use of plant and fish waste amendments for bioremediation of coalbed natural gas waters. University of Wyoming CBM Conference, Laramie, WY. In: J.R. Stine (ed.) Coalbed Natural Gas Research: Research, Monitoring and Applications. Information Circular No. 43. Wyoming State Geological Survey. pp. 128-129
158. Schuman, G.E., L.J. Ingram*, P.D. Stahl and G.F. Vance. 2005. Dynamics of long-term carbon sequestration on rangelands in the western U.S.A. 20th International Grasslands Congress Meetings, University College, Dublin, Ireland. XX International Grasslands Congress Proceedings 590 (Invited)
159. Mooney, S., G.F. Vance, J. Derner and G.E. Schuman. 2005. Committee participation furthers carbon sequestration research. Reflections 44-45.
160. Krzyszowska-Waitkus, A.J.* , G.F. Vance and C.M. Preston. 2006. Influence of coarse woody debris on soil organic matter in a Rocky Mountain coniferous forest. Canadian Journal of Soil Science 86:35-46.
161. Ganjegunte, G.K.* and G.F. Vance. 2006. Deviations from empirical sodium adsorption ratio (SAR) and exchangeable sodium percentage (ESP) relationship. Soil Science 171:364-373. Miller, S.L., P.D. Stahl, D. Tinker and G.F. Vance. 2006. Scientists coax carbon into reclaimed mine lands, forests. Ag News 15:9-11.
162. Musslewhite, B.D.* , J.R. Vinson, C.R. Johnston*, T.H. Brown, G.W. Wendt and G.F. Vance. 2006. Weathering characteristics of saline-sodic minesoils in the southwestern United States. 10th Billings Land reclamation Meetings and 23rd National American Society of Mining and Reclamation Symposium, Billings, MT. In: R. Barnhisel (ed.) Reclamation: Supporting Future Generations, Lexington, KY pp. 563-579.
163. King, L.A.* , G.F. Vance and G.K. Ganjegunte*. 2006. Land application of saline-sodic coalbed natural gas (CBNG) co-produced waters: soil and vegetation impacts. 10th Billings Land reclamation Meetings and 23rd National American Society of Mining and Reclamation Symposium, Billings, MT. In: R. Barnhisel (ed.) Reclamation: Supporting Future Generations, Lexington, KY pp. 344-361.
164. Johnston, C.R.* , S. Jin, G.F. Vance and G. Ganjegunte*. 2006. Impacts of coalbed natural gas co-produced water on cropland irrigated soils in the Powder River Basin, Wyoming. 10th Billings Land reclamation Meetings and 23rd National American Society of Mining and Reclamation Symposium, Billings, MT. In: R. Barnhisel (ed.) Reclamation: Supporting Future Generations, Lexington, KY pp. 301-316.
165. Wick, A.F.* , P.D. Stahl, L.J. Ingram*, G.E. Schuman and G.F. Vance. 2006. Aggregate size distribution and stability under a cool season grass community chronosequence on reclaimed coal mine lands in Wyoming. 10th Billings Land reclamation Meetings and 23rd National American Society of Mining and Reclamation Symposium, Billings, MT. In: R. Barnhisel (ed.) Reclamation: Supporting Future Generations, Lexington, KY pp. 806-815.
166. Ganjegunte, G.K.* , G.F. Vance, R.W. Gregory, and R.C. Surdam. 2006. Utilization of zeolite for reducing sodium and salt concentrations in saline-sodic coalbed natural gas waters. In: R.S. Bowman and S.E. Delap (Eds.) Zeolite =06 - 7th International Conference on the Occurrence, Properties, and Utilization of Natural Zeolites, Socorro, NM, 16-21, July, 2006. ICOPUNZ Abstracts pp. 111-112.
167. Vance, G.F., G.K. Ganjegunte*, and M.A. Urynowicz. 2006. Ion exchange reactions of natural zeolites: Adsorption, exchange kinetics, and desorption. In: R.S. Bowman and S.E. Delap (Eds.) Zeolite =06 - 7th International Conference on the Occurrence, Properties, and Utilization of Natural Zeolites, Socorro, NM, 16-21, July, 2006. ICOPUNZ Abstracts pp. 238-239.

168. Shrestha, G.), P.D. Stahl, L.C. Munn, E.G. Pendall, G.F. Vance and R. Zhang. 2006. Soil carbon and microbial biomass carbon after 40 years of grazing exclusion in semiarid sagebrush steppe of Wyoming. Arid Lands Newsletter 58 (<http://ag.arizona.edu/OALS/ALN/aln58/aln58toc.html>)
169. Chatterjee, A.*, G.F. Vance, J. B.H. Armond. 2007. Management of Wyoming Ponderosa Pine to Increase Profitability or Generate Carbon Credits. Wyoming State Forestry Division Bulletin. Cheyenne, WY. 8 pp.
170. Johnston, C.R.*, G.F. Vance and G. Ganjegunte*. 2007. Changes in soil physical and chemical properties of a cropland irrigated with CBNG co-produced waters. 24th National American Society of Mining and Reclamation Symposium, Gillette, WY. In: R. Barnhisel (ed.) 30 Years of SMCRA and Beyond, Lexington, KY pp. 350-372. (**Oral Presentation Award**)
171. Vance, G.F., H. Zhao*, M.A. Urynowicz, G. Ganjegunte* and R.W. Gregory. 2007. Reduction in coalbed methane (CBM) water sodicity using zeolites. 24th National American Society of Mining and Reclamation Symposium, Gillette, WY. In: R. Barnhisel (ed.) 30 Years of SMCRA and Beyond, Lexington, KY pp. 837-844.
172. Zhao, H.*, G.F. Vance, G.K. Ganjegunte*, and M.A. Urynowicz. 2008. Use of zeolites for treating natural gas co-produced waters in Wyoming, USA. Desalinization Journal 228:263-276.
173. Ingram, L.J., P.D. Stahl, G.E. Schuman, J.S. Buyer, G.F. Vance, G.K. Ganjegunte*, J.M. Welker and J.D. Derner. 2008. Grazing impacts on soil carbon and microbial communities in a mixed-grass ecosystem. Soil Science Society of America Journal 72:939-948.
174. Chatterjee, A.* G.F. Vance, E. Pendall, P.D. Stahl, L.J. Ingram and D.B. Tinker. 2008. Timber harvesting alters soil carbon mineralization and microbial community structures in coniferous forests. Soil Biology and Biochemistry 40:1901-1907.
175. Vance, G.F., L.A. King* and G.K. Ganjegunte*. 2008. Soil and plant responses from land application of saline-sodic waters: Implication of management. Special Issue: Environmental impacts and sustainable reuse of degraded water reuse. Journal of Environmental Quality 37:S-139-S148 (Invited Special Issue)
176. Ganjegunte, G.K.* , L.A. King* and G.F. Vance. 2008. Cumulative soil chemistry changes from application of saline-sodic waters. Special Issue: Environmental impacts and sustainable reuse of degraded water reuse. Journal of Environmental Quality 37:S-128-S138 (Invited Special Issue)
177. Johnston, C.R.*, G.F. Vance and G.K. Ganjegunte*. 2008. Irrigation with coalbed natural gas co-produced water. Agricultural Water Management 95:1243-1252.
178. Zhao, H.*, G.F. Vance, M.A. Urynowicz and R.W. Gregory. 2009. Integrated treatment process using a natural Wyoming clinoptilolite for remediating produced waters from coalbed natural gas operations. Applied Clay Science 42:379-385.
179. Musslewhite, B.D.*, T.H. Brown, G.W. Wendt, C.R. Johnston* and G.F. Vance. 2009. Simulated weathering of saline and sodic minesoils from the Four Corners Region, USA. Arid Lands Research and Management 23:67-84.
180. Ganjegunte, G.K.* , A.F. Wick*, P.D. Stahl and G.F. Vance. 2009. Accumulation and composition of total organic carbon in reclaimed coal mine lands. Land Degradation & Development 20:156-175.
181. Musslewhite, B.D.*, J.R. Vinson, T.H. Brown, G.W. Wendt, C.R. Johnston* and G.F. Vance. 2009. Salinity and sodicity interactions of weathered minesoils in the Four Corners Region, USA. Journal of Environmental Quality 38:1266-1273.
182. Chatterjee, A.* G.F. Vance and D.B. Tinker. 2009. Carbon pools of managed and unmanaged stands of ponderosa and lodgepole pine forests in Wyoming. Canadian Journal of Forest Research 39:1893-1900.
183. Chatterjee, A.* L.J. Ingram*, G.F. Vance and P.D. Stahl. 2009. Soil processes and microbial community structures in 45- and 135-year-old lodgepole pine stands. Canadian Journal of Forest Research 39:2263-2271.
184. Chatterjee, A.* S. Mooney and G.F. Vance. 2010. Comparisons of carbon pools and economic profitability for managed ponderosa pine stands in Wyoming. Journal of Forestry Research 21:482-486.
185. David, M.B., J. Tsai*, R.G. Darmody and G.F. Vance. 2010. Long-term changes in a forested Spodosol. Proceeding of the 19th World Congress of Soil Science, Brisbane, Australia. 4 pp.

186. Ganjegunte, G.K.*, G.F. Vance, R.W. Gregory, M.A. Urynowicz and R.C. Surdam. 2011. Improving Saline-Sodic Coalbed Natural Gas Water Quality by Natural Zeolites. Journal of Environmental Quality 40:57-66.
187. Urynowicz, M.A., S. Belbase* and G.F. Vance. 2011. Evaluation of Zeolite-Lined Evaporation Ponds for Management of CBM Produced Waters. UCOWR/NIWR Annual Conference, Planning for Tomorrow's Water: Snowpack, Aquifers, and Reservoirs. Boulder, CO. **(Invited)**
188. Story, B.T.*, M.A. Urynowicz and G.F. Vance. 2012. Field demonstration of polyacrylamide in an unlined irrigation canal. Journal of Irrigation and Drainage Engineering 139:399-404
189. Belbase, S.*, M.A. Urynowicz, G.F. Vance and M.B. Dangi*. 2013. Passive remediation of coalbed natural gas co-produced water using zeolite. Journal of Environmental Management 131:318-324.
190. Johnston, C.R.*, G.F. Vance and G.K. Ganjegunte*. 2013. Soil property changes following irrigation with CBNG water: Water treatments, soil amendments and land suitability. Land Degradation and Management 24:350-362.
191. Derner, J.D., G.E. Schuman, R.F. Follett and G.F. Vance. 2014. Plant and soil consequences of shrub management in a big sagebrush-dominated rangeland ecosystem. Environment and Natural Resources Research doi:10.5539/enrr.v4n1p 12pp.

REFEREED PROCEEDINGS, ABSTRACTS AND OTHER PRIMARY PUBLICATIONS (*indicates Student or Post-doctoral Scientist)

1. Mokma, D.L., G.F. Vance and C.C. Trettin. 1988. Evaluation of chemical criteria for spodic and podzolic B horizons. Spodosol Evaluation. Presented at the 5th International Soil Correlation Conference, University of Maine, Orono, Maine. ISCC Proceedings. 5:22.
2. Vance, G.F., M.B. David and F.J. Stevenson. 1989. Chemistry of dissolved humic substances in stream waters as affected by sorption/desorption reactions in Spodosol B horizons. Presented at the American Chemical Society Meetings, Miami Beach, FL. ACS Geochemistry Newsletter GEOC-0030. **(Invited)**
3. David, M.B., G.F. Vance and P. Kortelainen. 1991. Organic acidity in Maine (U.S.A.) streams and seepage lakes and in HUMEX Lake Skjervatjern (Norway). Presented at the 3rd International Nordic Symposium on Humic Substances Meeting, Turku/Abo, Finland. International Symposium on Humic Substances Programme p. 42.
4. Steward, D.G., L.K. Spackman, G.F. Vance, L.E. Vicklund, P.K. Carroll and J.G. Luther. 1991. Selenium Research at Premining and Postmining Sites in the Powder River Basin. Research Report. Wyoming Mining Association/Wyoming Department of Environmental Quality/University of Wyoming. 23 pp.
5. Vance, G.F., A.D. Blaylock, L.C. Munn, and S.E. Williams. 1991. Soil Science Section Portfolio ASupport Document Justifying the Hiring of a Soil Physicist [Soil Water Specialty]@. College of Agriculture, University of Wyoming. 65 pp.
6. Kaemmerer, A.*, M. Kaupenjohann and G.F. Vance. 1993. Heavy metal contents in Bavarian and North American Conifer Forests - A comparison. Presented at the German Soil Science Meetings, Kiel, Germany. German Soil Science Society Abstracts. 3 pp.
7. Vance, G.F. (Author/Compiler). 1996. Annual review of activities by the Western Research Committee. Chemistry and Bioavailability of Waste Constituents in Soils, University of Wyoming Agricultural Experiment Station. 24 pp.
8. Vance, G.F. 1996. Meet Your Colleague. Agronomy News
9. Spackman, L.K., D.G. Steward, G.F. Vance, L.E. Vicklund, J.G. Luther and M.F. Raisbeck. 1996. Interpretation of Selenium Research for Regulatory Applications. Wyoming Department of Environmental Quality Report, Cheyenne, Wyoming. 43 pp.
10. Zhao, H.* and G.F. Vance. 1997. Inclusion behaviors of nonionic hydrophobic organic compounds towards modified β -cyclodextrin intercalated in a layered double hydroxide. Presented at the American Chemical Society Meetings, San Francisco, CA. ACS Physical Chemistry Newsletter. PHCH-1000.

11. Vance, G.F., C.P. Skinner*, B.K. Schladweiler* and J.A. Young*. 1997. Selenium in the Environment: Soil/Geology, Vegetation and Animal Science Research. U.S. Army, Fort Carson DECAM Research Report, Colorado Springs, Colorado. 45 pp.
12. Vance, G.F. (Author/Compiler). 1997. Annual review of activities by the Western Regional Coordinating Committee. Revegetation and Stabilization of Deteriorated and Altered Lands, University of Wyoming Agricultural Experiment Station. 85 pp.
13. Young, J.A.* , M. Herdendorf, W.L. Berelson, G.F. Vance, J.D. Hamerlinck and L.C. Munn. 1997. Using a geographic information system to determine land-use conversion in Powell, WY. McNair Final Report. University of Wyoming, Laramie, WY. 28 pp.
14. Cassel-Sharmasarkar, F.* , R. Zhang, S. Sharmasarkar*, T. Brewer, G.F. Vance, J.M. Reddy, J.M. Krall, L.J. Held and L.O. Pochop. 1997. Best irrigation management practices for agriculture productivity and sustaining water quality. Research Report, University of Wyoming, Laramie, WY. 20 pp.
15. Young, J.A.* , B.M. Christensen*, M.S. Schaad*, M. Herdendorf, G.F. Vance and L.C. Munn. 1998. Using a geographic information system to identify areas for alternative crops in the bighorn basin, northwestern Wyoming. Presented at the New Crops and New Uses: Biodiversity and Agricultural Sustainability Meeting, Phoenix, AZ. New Crops and New Uses Proceedings, p. 51. (**Received Best Poster Award**)
16. Zhao, H.* and G.F. Vance. 1998. Sorption of organic compounds by the intercalates of beta-cyclodextrin and layered double hydroxide. Presented at the Clay Minerals Society Meeting, Cleveland, OH. Clay Mineral Society Abstracts 35:50.
17. Vance, G.F., W.F. Jaynes* and S. Sharmasarkar*. 1998. Sorption of BETX compounds by smectite clays exchanged with a variety of novel organic cations. Presented at the Clay Minerals Society Meeting, Cleveland, OH. Clay Mineral Society Abstracts 35:51.
18. Vance, G.F., C.P. Skinner*, and B.K. Schladweiler*. 1998. Evaluation of Environment Selenium Relationships at Fort Carson, Colorado. U.S. Army, Fort Carson DECAM Final Report, Colorado Springs, Colorado. 105 pp.
19. Pierzynski, G.M., G.F. Vance and A.L. Page (Committee Co-Chairs). 1998. Peer Review of a Draft Risk Assessment for Cement Kiln Dust Used as an Agricultural Soil Amendment@. EPA Reference DW12938494-01-0. 22 pp.
20. Christensen, B.M.* , J.A. Young*, G.F. Vance and L.C. Munn. 1999. GIS and LESA Applications in the Bighorn Basin, Wyoming, USA. Presented at the Association of American Geographers Meeting, Honolulu, HI. American Geographer Society Abstracts 95:94.
21. Skinner, C.P.* , B.K. Schladweiler* and G.F. Vance. 1999. Environmental selenium relationships: I. Using GIS to highlight potentially seleniferous areas at Fort Carson, Colorado. Presented at the Association of American Geographers Meeting, Honolulu, HI. American Geographer Society Abstracts 95:555.
22. Miller, B., C.P. Skinner* and G.F. Vance. 1999. Environmental selenium relationships: II. Revegetation, remediation and reclamation of seleniferous areas at Fort Carson, Colorado. Presented at the Association of American Geographers Meeting, Honolulu, HI. American Geographer Society Abstracts 95:412.
23. Schladweiler, B.K.* , C.P. Skinner* and G.F. Vance. 1999. Environmental selenium relationships: III. Selenium concentration in wetland and riparian receptors at Fort Carson, Colorado. Presented at the Association of American Geographers Meeting. American Geographer Society Abstracts 95:532.
24. Young, J.A.* , B.M. Christensen*, M.S. Schaad*, G.F. Vance, L.C. Munn and M. Herdendorf. 1999. Using GIS for alternative crop production in northeastern Wyoming, USA. Presented at the Association of American Geographers Meeting, Honolulu, HI. American Geographer Society Abstracts 95:669.
25. Vance, G.F. and G.M. Pierzynski. 1999. Chemistry and Bioavailability of Waste Constituents in Soils. W-170 Committee Proposal. Western Region Executive Director=s Office, Fort Collins, Colorado. 74 pp.
26. Vance, G.F. 1999. Revegetation and Stabilization of Deteriorated and Altered Land. WCC-21 Committee Proposal. Western Region Executive Director=s Office, Fort Collins, Colorado. 25 pp.
27. Vance, G.F. (Author/Compiler). 1999. Annual review of activities by the Western Research Committee. Chemistry and Bioavailability of Waste Constituents in Soils, University of Wyoming Agricultural Experiment Station. 21 pp.

28. Vance, G.F. 1999. Review of the Risk Management Criteria for Metals at BLM Sites Technical Note 390 revised December 1996, TRC Mariah Consulting, 3 pp.
29. Vance, G.F. 2001. Selenium Chemistry in Agriculture. Infography, Fields of Knowledge, Vershire, Vermont. www.infography.com
30. Vance, G.F. (Coauthor). 2001. Wyoming Carbon Sequestration Advisory Committee. Report to the 57th Wyoming Legislature. 37 pp.
31. Zhao, H.*, G.F. Vance, M.A. Urynowicz, G.K. Ganjegunte*, and R.W. Gregory. 2007. An integrated process using Wyoming Zeolite for treating saline-sodic waters produced from coalbed natural gas operations. Presented at the 44th Clay Minerals Society Meeting, Santa Fe, NM. Clay Mineral Society Abstracts 44:174.
32. Karmis, M.E., R.V. Ramani, H.J. Gluskoter, G.H. Luttrell and G.F. Vance. 2009. Summary Brochure and report PDF. Meeting Projected Coal Production Demands in the U.S.A. - Upstream Issues, Challenges and Strategies. The Virginia Center for Coal and Energy Research, Virginia Polytechnic Institute and State University. 16 pp.
33. Vance, G.F. 2010. Vance designated as 2009 American Association for the Advancement of Science Fellow. Agademics, January Issue. p. 5.

NON-REFEREED PROCEEDINGS/ABSTRACTS WITH PRESENTATIONS *indicates Student or Post-doctoral Scientist

1. Vance, G.F., D.L. Mokma and S.A. Boyd. 1983. Organic acids in some Michigan Spodosols. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Washington, DC. Agronomy Abstracts 75:193.
2. Vance, G.F., D.L. Mokma and S.A. Boyd. 1985. Low molecular weight phenolic compounds in hydrosequences and developmental sequences of Michigan Spodosols. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Chicago, IL. Agronomy Abstracts 77:200.
3. David, M.B., G.F. Vance, J. Rissing and F.J. Stevenson. 1987. Importance of organic carbon to forest soil processes. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Atlanta, GA. Agronomy Abstracts 79:254.
4. Vance, G.F. and F.J. Stevenson. 1988. Organic-aluminum complexation: Stability constants and model predictions. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 80:206.
5. Fath, W.J.*, M.B. David, G.F. Vance and M.J. Mitchell. 1988. Effects of acid additions on sulfate retention in forest soils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 80:291.
6. David, M.B., G.F. Vance and F.J. Stevenson. 1988. Organic carbon transport in a forested ecosystem. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 80:292.
7. Vance, G.F., M.B. David, S.E. Finch* and F.J. Stevenson. 1989. Characterization and acid properties of dissolved organic carbon from a Maine Spodosol. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Las Vegas, NV. Agronomy Abstracts 81:208.
8. David, M.B., G.F. Vance, W. Zech, S.E. Finch* and M.R. Donofrio*. 1989. Retention of DOC and sulfate by forest soils from Maine and West Germany. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Las Vegas, NV. Agronomy Abstracts 81:301.
9. Fath, W.J.*, M.B. David, G.F. Vance, M.R. Donofrio* and S.E. Finch*. 1989. Forest Soil response to acid and salt treatments: I. Sulfur constituents and cycling. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Las Vegas, NV. Agronomy Abstracts 81:302.

10. Donofrio, M.R.*, M.B. David and G.F. Vance. 1989. Forest soil response to acid and salt treatments: II. Aluminum and base cations. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Las Vegas, NV. Agronomy Abstracts 81:301.
11. Finch, S.E.*, G.F. Vance and M.B. David. 1989. Forest soil response to acid and salt treatments: III. Solubilization and composition of dissolved organic carbon. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Las Vegas, NV. Agronomy Abstracts 81:302.
12. Vance, G.F. and M.B. David. 1990. Dissolved organic carbon in soils, streams and lakes: Influence of soil adsorption. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, San Antonio, TX. Agronomy Abstracts 82:240.
13. David, M.B., M. Kaupenjohann and G.F. Vance. 1990. Dissolved organic carbon adsorption in Spodosols: Effects of soil handling and microbial carbon. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, San Antonio, TX. Agronomy Abstracts 82:331.
14. Vance, G.F., K.J. Reddy and L.K. Spackman. 1991. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 1st Abandoned Coal Mine Land Research Meetings, Casper, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 4 pp.
15. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1991. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 1st Abandoned Coal Mine Land Research Meetings, Casper, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 4 pp.
16. See, R.B., K.J. Reddy and G.F. Vance. 1991. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 1st Abandoned Coal Mine Land Research Meetings, Casper, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 4 pp.
17. Vance, G.F. 1991. Heavy metal concentrations in soils and plants of an abandoned coal mine land five years after sludge application. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Annual Meeting, Logan, UT. AAAS Proceedings 10:47.
18. Sturgeon, G.M.* and G.F. Vance. 1991. Selenium uptake by plants grown on sludge amended mine spoils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. Agronomy Abstracts 83:53.
19. Vance, G.F. and F.J. Sikora. 1991. Modeling aluminum-humic complexation. Special Symposium on Cation Binding by Humic Substances. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. Agronomy Abstracts 83:254. (**Invited**)
20. Vance, G.F., K.J. Reddy and L.K. Spackman. 1992. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 2nd Abandoned Coal Mine Land Research Meetings, Gillette, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
21. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1992. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 2nd Abandoned Coal Mine Land Research Meetings, Gillette, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
22. See, R.B., K.J. Reddy and G.F. Vance. 1992. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 2nd Abandoned Coal Mine Land Research Meetings, Gillette, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 4 pp.
23. Vance, G.F. and J.K. Wangberg 1992. AGROECOLOGY: An integration of plant, soil and insect sciences curricula. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 84:7.
24. Krzyszowska, A.* and G.F. Vance. 1992. Soil and water analysis of the herbicides - Picloram and Dicamba. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 84:46.

25. Vance, G.F., R.N. Pasch, D.L. Bonett, B.K. Schladweiler*, P.K. Carroll and M.S. Page. 1992. Evaluation of various selenium extraction methods for correlating soil/backfill levels to plant concentrations. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 84:246.
26. Kaemmerer, A.*, M. Kaupenjohann, G.F. Vance, A.T. Kayser* and J.D. Joslin*. 1992. Comparison of micronutrient concentrations of coniferous needles along two depositional gradients in the USA and Germany. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 84:349.
27. Vance, G.F. and M.B. David. 1992. Response of soil and aquatic organic acids to acidification. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 84:354. **(Invited)**
28. Vance, G.F., K.J. Reddy and L.K. Spackman. 1992. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 2nd Abandoned Coal Mine Land Research Meetings, Sheridan, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
29. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1992. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 2nd Abandoned Coal Mine Land Research Meetings, Sheridan, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
30. See, R.B., K.J. Reddy and G.F. Vance. 1992. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 2nd Abandoned Coal Mine Land Research Meetings, Sheridan, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 4 pp.
31. Blaylock, M.J.* and G.F. Vance. 1993. Plant uptake and metabolism of selenium. Workshop: Fundamentals of Selenium Biogeochemistry and Importance to Ecosystem Integrity. Presented at the 6th Billings Reclamation Symposium Meetings, Billings, MT. Billings Reclamation Symposium Proceedings, Land Reclamation Unit, Bozeman, MT. **(Invited)**
32. Blaylock, M.J.* and G.F. Vance. 1993. Relationships between chemical properties of selenium in soil materials to potential plant uptake and mobility. Workshop: Fundamentals of Selenium Biogeochemistry and Importance to Ecosystem Integrity. Presented at the 6th Billings Reclamation Symposium Meetings, Billings, MT. Billings Reclamation Symposium Proceedings, Land Reclamation Unit, Bozeman, MT.
33. Vance, G.F. and M.J. Blaylock*. 1993. Analytical advances for selenium determination in soil and overburden. Selenium Forum. Presented at the 6th Billings Reclamation Symposium Meetings, Billings, MT. Billings Reclamation Symposium Proceedings, Land Reclamation Unit, Bozeman, MT. **(Invited)**
34. Schladweiler, B.K.*, R.N. Pasch, G.F. Vance, P.K. Carroll, M.S. Page, D.L. Bonett and S.E. Williams. 1993. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 6th Billings Reclamation Symposium Meetings, Billings, MT. Billings Reclamation Symposium Proceedings, Land Reclamation Unit, Bozeman, MT.
35. Carroll, P.K., J.G. Luther, M.F. Raisbeck, L.K. Spackman, D.G. Steward, G.F. Vance and L.E. Vicklund. 1993. Selenium and mining in the Powder River Basin, Wyoming. Presented at the 6th Billings Reclamation Symposium Meetings, Billings, MT. Billings Reclamation Symposium Proceedings, Land Reclamation Unit, Bozeman, MT.
36. Allen, R.D.*, A.J. Krzyszowska* and G.F. Vance. 1993. Modeling herbicide fate in a Wyoming rangeland environment. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:25.
37. Orso, W.*, M.J. Blaylock* and G.F. Vance. 1993. Predicting selenium bioavailability with phosphate extractions of soils and mine backfill materials. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:43.
38. See, R.B., A.A. Fadlelmawla*, G.F. Vance and K.J. Reddy. 1993. The influence of natural organic solutes on the adsorption of selenium in coal mine backfill. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:48.

39. Sharmasarkar, S.* and G.F. Vance. 1993. Environmental implications of soil and plant selenium chemistry in range and reclaimed coal mine lands within the Powder River Basin, WY. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:49.
40. Vance, G.F. and C.D. Johnson*. 1993. Trace element concentrations in several grass species grown on sludge amended soils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:51.
41. Fadlelmawla, A.A.* , K.J. Reddy, G.F. Vance and R.B. See. 1993. Potential solid phases controlling the dissolved selenium concentrations in coal mine backfill groundwater systems. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:54.
42. Blaylock, M.J.* , K.J. Reddy, G.F. Vance and R.B. See. 1993. Redox potential effects on selenium speciation in groundwater and coal mine backfill material. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:222.
43. Brewer, T.* , M.J. Blaylock* , T.A. Tawfic* and G.F. Vance. 1993. Selenite adsorption in reclaimed and abandoned coal mine soil materials. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:223.
44. Sharmasarkar, S.* , G.F. Vance, K.J. Reddy and M.J. Blaylock*. 1993. Geochemical immobilization of selenium in surface coal mine land environments. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:235.
45. Tawfic, T.A.* , M.J. Blaylock* and G.F. Vance. 1993. A comparative study of selenite adsorption and solution complexes in reclaimed mine soils using geochemical models. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:237.
46. Krzyszowska, A.J.* , G.F. Vance, P.T. Gadlin* and M.B. David. 1993. Phosphorus status of Spodosols from a spruce-fir ecosystem. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Cincinnati, OH. Agronomy Abstracts 85:337.
47. Gadlin, P.* , A.J. Krzyszowska* and G.F. Vance. 1993. Research activities on pesticide movement in the vadose zone and phosphorus biogeochemistry in a forested ecosystem. Presented at the Science Teacher Research Initiative Meeting. Laramie, WY. STRI Proceedings 12 pp.
48. Sharmasarkar, S.* and G.F. Vance. 1993. Importance of solid selenium speciation for understanding soil water contamination in a reclaimed abandoned mine environment of Wyoming. Presented at the Wyoming State Section American Water Resources Association Annual Meetings, Laramie, WY. AWRA Proceedings. Vol 93. 3 pp.
49. Fadlelmawla, A.A.* , K.J. Reddy, G.F. Vance and R.B. See. 1993. Use of geochemical models to determine potential solid phases controlling selenium concentrations in coal mine backfill ground-water. Presented at the Wyoming State Section American Water Resources Association Annual Meetings, Laramie, WY. AWRA Proceedings. Vol 93. 3 pp.
50. Tanaka, E.F., S. Sharmasarkar* and G.F. Vance. 1993. Sequential extraction of selenium in mine soils. Presented at the Minority High School Student Research Apprenticeship Meeting. Laramie, WY. MHSSRA Abstracts 7 pp.
51. Vance, G.F., K.J. Reddy and L.K. Spackman. 1993. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 3rd Abandoned Coal Mine Land Research Meetings, Kemmerer, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 6 pp.
52. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1993. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 3rd Abandoned Coal Mine Land Research Meetings, Kemmerer, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 6 pp.

53. See, R.B., K.J. Reddy and G.F. Vance. 1993. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 3rd Abandoned Coal Mine Land Research Meetings, Kemmerer, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
54. Sharmasarkar, S.* and G.F. Vance. 1993. Mechanistic role of adsorption and precipitation processes in controlling selenium mobilization in mine soils. Presented at the American Association for the Advancement of Science/Western Soc of Soil Science Meetings, Missoula, MT. AAAS Proceedings 12:43.
55. Vance, G.F., K.J. Reddy and L.K. Spackman. 1993. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 4th Abandoned Coal Mine Land Research Meetings, Laramie, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 6 pp.
56. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1993. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 4th Abandoned Coal Mine Land Research Meetings, Laramie, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 6 pp.
57. See, R.B., K.J. Reddy and G.F. Vance. 1993. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 4th Abandoned Coal Mine Land Research Meetings, Laramie, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
58. Sharmasarkar, S.* and G.F. Vance. 1994. Characterization of amino acid release and mobility of selenomethionine in surface coal mine environments. Presented at the Wyoming State Section of the American Water Resources Association Annual Meetings, Laramie, WY. AWRA Proceedings: Mining Hydrology Section Vol 94:3 pp.
59. Zhang, R., A.J. Krzyszowska*, G.F. Vance and R.D. Allen*. 1994. Modeling pesticide transport in a pastureland soil. Presented at the Wyoming State Section of the American Water Resources Association Annual Meetings, Laramie, WY. AWRA Proceedings: Agricultural Hydrology Section Vol 94. 3 pp.
60. Aniniba, U. and G.F. Vance. 1994. Characterization of some chemical and physical properties of forest soils. Presented at the Minority High School Student Research Apprenticeship Meeting, Laramie, WY. MHSSRA Proceedings 5 pp.
61. Hall, S., G.F. Vance and A.J. Krzyszowska*. 1994. Transport of dicamba and picloram in a Wyoming pastureland soil. Presented at the Science Teacher Research Initiative Meeting, Laramie, WY. STRI Proceedings 11 pp.
62. Quiroz H. and G.F. Vance. 1994. Determination of selectivity coefficients and solubility products using a calcium-ion selective electrode. Presented at the Math Science Initiative Program, Laramie, WY. MSIP Proceedings 7 pp.
63. Vance, G.F., K.J. Reddy and L.K. Spackman. 1994. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 5th Abandoned Coal Mine Land Research Meetings, Laramie, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 6 pp.
64. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1994. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 5th Abandoned Coal Mine Land Research Meetings, Laramie, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 6 pp.
65. See, R.B., K.J. Reddy and G.F. Vance. 1994. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 5th Abandoned Coal Mine Land Research Meetings, Laramie, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 5 pp.
66. Sharmasarkar, S.* and G.F. Vance. 1994. Sequential fractionation and speciation of selenium in soils and mine spoils. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, San Francisco, CA. AAAS Proceedings 13:43.
67. Pierzynski, G.M., J.T. Sims and G.F. Vance. 1994. An environmental science course in an agronomy curriculum. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. Agronomy Abstracts 86:3.

68. Allen, R.D.*, A.J. Krzyszowska* and G.F. Vance. 1994. Investigation of herbicide movement and fate in a Wyoming rangeland soil: Field studies. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:48.
69. Zhang, R., A.J. Krzyszowska*, R.D. Allen* and G.F. Vance. 1994. Modeling pesticide transport in the vadose zone: Field validations. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:237.
70. Sharmasarkar, S.*, G.F. Vance, R. Zhang, K.J. Reddy and L.K. Spackman. 1994. Selenite-selenate mobility in range and mine soils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:259.
71. Vance, G.F. and S. Sharmasarkar*. 1994. Amino acid release from soil/plant mixtures and selenomethionine removal in coal mine soils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:278.
72. David, M.B., G. Shi*, M. Christ, G.F. Vance and A.J. Krzyszowska*. 1994. Carbon and nitrogen processes in a spruce-fir forest. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:384. (Received Excellence Award)
73. Krzyszowska, A.J.*, M.J. Blaylock*, G.F. Vance and M.B. David. 1994. Low-molecular-weight organic acids in Spodosol leachates. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:387.
74. Vance, G.F. and M.J. Blaylock*. 1994. Adsorption of selenite and selenate by gypsum, kaolinite, montmorillonite and coal mine spoil materials. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) 86:407.
75. Vance, G.F., K.J. Reddy and L.K. Spackman. 1994. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 6th Abandoned Coal Mine Land Research Meetings, Gillette, WY. [ACML Proceedings](#), Office of Research, Univ. of Wyoming. 7 pp.
76. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1994. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 6th Abandoned Coal Mine Land Research Meetings, Gillette, WY. [ACML Proceedings](#), Office of Research, Univ. of Wyoming. 7 pp.
77. See, R.B., K.J. Reddy and G.F. Vance. 1994. Role of natural organic solutes on the mobility of selenium in abandoned coal mine spoil-groundwater systems. Presented at the 6th Abandoned Coal Mine Land Research Meetings, Gillette, WY. [ACML Proceedings](#), Office of Research, Univ. of Wyoming. 6 pp.
78. Sharmasarkar, S.* and G.F. Vance. 1994. Characterization of amino acid release and mobility of selenomethionine in surface coal mine environments. Presented at the 7th Annual State Section of the American Water Resources Association Meeting, Laramie, WY. [AWRA Proceedings](#), Wyoming Water Resources Center.
79. Zhang, R., A.J. Krzyszowska*, G.F. Vance and R.D. Allen*. 1994. Modeling pesticide transport in a pastureland soil. Presented at the 7th Annual State Section of the American Water Resources Association Meeting, Laramie, WY. [AWRA Proceedings](#), Wyoming Water Resources Center.
80. Vance, G.F. and K.J. Reddy. 1995. Geochemical processes in soil and subsurface environments: Selenium. Presented at the Interdisciplinary Perspectives in Groundwater Research Meeting, Laramie, WY. [IPGR Proceedings](#) (Invited)
81. Zhao, H.*, W.F. Jaynes*, A.J. Krzyszowska* and G.F. Vance. 1995. Adsorption-desorption of dicamba by organo-clays. Presented at the Interdisciplinary Perspectives in Groundwater Research Meeting, Laramie, WY. [IPGR Proceedings](#)
82. Sharmasarkar, S.*, K.J. Reddy and G.F. Vance. 1995. Equilibrium chemistry of metal selenites. Presented at the Interdisciplinary Perspectives in Groundwater Research Meeting, Laramie, WY. [IPGR Proceedings](#)
83. Krzyszowska, A.J.*, R.D. Allen*, G.F. Vance and R. Zhang. 1995. Pesticide transport in the vadose zone: Field results. Presented at the Interdisciplinary Perspectives in Groundwater Research Meeting, Laramie, WY. [IPGR Proceedings](#)

84. Jaynes, W.F.* and G.F. Vance. 1995. Sorption of aromatic gasoline constituents from water by organo-clays. Presented at the Interdisciplinary Perspectives in Groundwater Research Meeting, Laramie, WY. IPGR Proceedings
85. Sharmasarkar, S.*, G.F. Vance and K.J. Reddy. 1995. Geochemical Modeling for Assessing Aqueous Selenium Speciation. Presented at the Rocky Mountain Groundwater Conference, Denver, CO. In: Science and Policy: Who's Driving Groundwater Management 95:51.
86. Jaynes, W.F.* and G.F. Vance. 1995. Sorption removal of BETX compounds from water by organo-clays. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:44.
87. Krzyszowska, A.J.*, R.D. Allen*, G.F. Vance and R. Zhang. 1995. Monitoring dicamba and picloram movement in the vadose zone for groundwater quality protection. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:47.
88. Sharmasarkar, S.*, K.J. Reddy and G.F. Vance. 1995. Solubility and free energy of some selenate and selenite minerals. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:58.
89. Sharmasarkar, S.* and G.F. Vance. 1995. Dissolved selenium speciation in soils and mine spoil extracts. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:58.
90. Vance, G.F. 1995. Collaborative efforts to evaluate the importance of selenium in the Powder River Basin, WY. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:61.
91. Wu, J.*, R. Zhang, J. Yang* and G.F. Vance. 1995. Estimation of dispersivity and partition coefficient using soil column experiments. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:65.
92. Zhao, H.*, W.F. Jaynes* and G.F. Vance. 1995. Dicamba retention by organo-clays. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, University of British Columbia, Vancouver, Canada. AAAS Proceedings 14:65.
93. Zhang, R. and G.F. Vance. 1995. Transfer function models for reactive solute transport in soils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:198.
94. Sharmasarkar, S.* and G.F. Vance. 1995. A comparison of computer models used for assessing soil selenium speciation. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:226.
95. Krzyszowska, A.J.*, G.F. Vance and M.B. David. 1995. Seasonal changes of low-molecular-weight organic acids in Spodosol leachates. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:311.
96. Dai, K.H.*, M.B. David, G.F. Vance and A.J. Krzyszowska*. 1995. Characterization of phosphorus in a Spruce-Fir forest soil by ³¹P-NMR Spectroscopy. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:313.
97. Vadlamudi, S.*, G.F. Vance, M.B. David and K.H. Dai*. 1995. Characterization of soil carbon in a spruce-fir forest. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:314.
98. Jaynes, W.F.* and G.F. Vance. 1995. Effect of organo-clay type and properties on the sorption of aromatic gasoline constituents and other compounds from water. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:348.

99. Zhao, H.T.*, W.F. Jaynes* and G.F. Vance. 1995. The removal of Dicamba from water by organo-clays. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:352.
100. Vance, G.F. and S. Sharmasarkar*. 1995. Selenium sorption characteristics of surface coal mine soils of Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, St. Louis, MO. Agronomy Abstracts 87:354.
101. Sharmasarkar, S.*, K.J. Reddy and G.F. Vance. 1995. Metal selenite solubility in aqueous phases. Presented at the American Chemical Society Meetings, Los Angeles, CA. ACS Geochemistry Newsletter GEOC-088.
102. Vance, G.F., K.J. Reddy and L.K. Spackman. 1995. Importance of solid and solution selenium speciation in mobility and plant uptake of selenium from Wyoming coal mine reclamation. Presented at the 7th Abandoned Coal Mine Land Research Meetings, Gillette, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 8 pp.
103. Vance, G.F., R.N. Pasch, P.K. Carroll and M.S. Page. 1995. Relationship between soil selenium concentrations and selenium uptake by vegetation on surface coal mine lands in Wyoming. Presented at the 7th Abandoned Coal Mine Land Research Meetings, Gillette, WY. ACML Proceedings, Office of Research, Univ. of Wyoming. 8 pp.
104. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, R. Zhang and G.F. Vance. 1996. Quantification of nitrate movement in irrigated soils. Presented at the 9th Annual Wyoming State Section of the American Water Resources Association Meetings, Laramie, WY. AWRA Proceedings: Agricultural Hydrology Section. Vol 96. 3 pp.
105. Cassel-Sharmasarkar, F.*, R. Zhang, S. Sharmasarkar* and G.F. Vance. 1996. Soil nitrate movement under simulated flood and drip irrigation practices. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, San Jose, CA. AAAS Proceedings 15:37
106. Sharmasarkar, S.*, W.F. Jaynes* and G.F. Vance. 1996. Sorption and partitioning of organic contaminants by cyclic-organo-clays. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, San Jose, CA. AAAS Proceedings 15:53
107. Vance, G.F., S. Sharmasarkar* and W.F. Jaynes*. 1996. Modeling the sorption of BETX by organo-clays. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:207.
108. Weidler, R.F.*, L.C. Munn and G.F. Vance. 1996. Edaphic characteristics of four Rocky Mountain forest soils under lodgepole pine. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:269.
109. Christ, M.J., M.B. David, K.H. Dai*, G.F. Vance, A.J. Krzyszowska* and G. Shi*. 1996. Nutrient ratios and functional groups in dissolved and solid-phase organic matter in a spruce forest soil. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:300.
110. Zhao, H.* and G.F. Vance. 1996. Sorption of trichloroethylene (TCE) by organo-clays in the presence of humic substances. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:339.
111. Cassel-Sharmasarkar, F.*, R. Zhang, G.F. Vance and S. Sharmasarkar*. 1996. Nitrate transport in a 3-dimensional soil system under different irrigation practices. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:340.
112. Krzyszowska, A.J.*, R.D. Allen*, G.F. Vance, R. Zhang and D.E. Legg. 1996. Fate of two herbicides in a Wyoming pasture: Field studies. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:340.
113. Sharmasarkar, S., F.* Cassel-Sharmasarkar*, R. Zhang and G.F. Vance. 1996. Geostatistical analysis of selenium in coal mine environments. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts 88:340.

114. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, R. Zhang and G.F. Vance. 1997. Best irrigation practices for controlling soil nitrate pollution. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Corvallis, OR. AAAS Proceedings 16:44.
115. Sharmasarkar, S.*, F. Cassel-Sharmasarkar*, R. Zhang and G.F. Vance. 1997. Dynamics of a restricted use pesticide (Temik) under microirrigation applications. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Corvallis, OR. AAAS Proceedings 16:63.
116. Zhao, H.* and G.F. Vance. 1997. Synthesis and sorption characteristics of β -cyclodextrin/layered double hydroxide complexes. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Corvallis, OR. AAAS Proceedings 16:68.
117. Sharmasarkar, S.*, F. Cassel-Sharmasarkar*, R. Zhang, G.F. Vance and S. Miller. 1997. Effect of irrigation management on a restricted use pesticide, aldicarb. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:35.
118. Zhao, H.* and G.F. Vance. 1997. Sorption of polynuclear aromatic hydrocarbons by organo-clays from methanol/water mixtures. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:190.
119. Vance, G.F. and H. Zhao*. 1997. Sorption of organic compounds by a layered double hydroxide intercalated with β -cyclodextrin. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:192.
120. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, R. Zhang, G.F. Vance and S. Miller. 1997. Soil nitrate movement under drip and flood irrigation: column studies and computer modeling. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:35.
121. Krzyszowska, A.J.* and G.F. Vance. 1997. Organic compounds in soils and leachates from the forest floor and coarse woody debris of a lodgepole pine ecosystem. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:288.
122. Skinner, C.P.*, L.C. Munn, J.I. Drever and G.F. Vance. 1997. Clay minerals and selenium in a Wyoming playa environment. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:308.
123. Schladweiler, B.K.*, G.F. Vance, D.E. Legg and S. Rexroat. 1997. Hydric soils and their relationship to plant biodiversity within reclaimed stream channels in semi-arid environments. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:315.
124. Wanek, P.L.*, G.F. Vance and P.D. Stahl. 1997. Soil steaming effects on selenium uptake by yellow sweet clover and fourwing saltbush. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:328.
125. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, S. Miller, R. Zhang and G.F. Vance. 1997. Economic analyses of irrigation management for sugarbeet production. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:328.
126. Brewer, T.*, S. Sharmasarkar* and G.F. Vance. 1997. Peroxide degradation of dissolved organic matter in a creosote contaminated soil. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:328.
127. Vance, G.F. and S. Sharmasarkar*. 1997. Soil and plant selenium characterization in a uranium mine site. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:328.
128. Sharmasarkar, S.*, F. Cassel-Sharmasarkar*, S. Miller, R. Zhang and G.F. Vance. 1997. Comparative assessment of different irrigation practices for agroenvironmental management. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Anaheim, CA. Agronomy Abstracts 89:333.

129. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, S. Miller, L. Held, R. Zhang and G.F. Vance. 1998. Efficacy of drip irrigation for managing nitrate contamination and sugarbeet production. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:39.
130. Young, J.A.*, M. Sandall*, L.C. Munn and G.F. Vance. 1998. Using a geographic information system (GIS) to identify areas for alternative crops in the Big Horn Basin, Wyoming. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:44. (Received 2nd Place Award, Earth Science Division, AAAS-PD)
131. Vance, G.F., S. Sharmasarkar* and W.F. Jaynes*. 1998. Sorption of BETX compounds by smectite clays exchanged with a variety of novel organic cations. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:42.
132. Vance, G.F. and H. Zhao*. 1998. Selectivity and molecular sieving effects of organic compounds by an intercalate of beta-cyclodextrin and layered double hydroxide. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:41.
133. Skinner, C.P.* and G.F. Vance. 1998. Assessment of selenium relationships in a semi-arid environment: GIS applications. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:40. (Received Honorable Mention Award, Earth Science Division, AAAS-PD)
134. Krzyszowska-Waitkus, A.J.* and G.F. Vance. 1998. Organic compounds in litter, soil and coarse woody debris of a Rocky Mountain coniferous forest. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:35.
135. Sharmasarkar, S.*, F. Cassel-Sharmasarkar*, R. Zhang, G.F. Vance and S. Miller. 1998. Modeling nitrate movement under microirrigation. Presented at the American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. AAAS Proceedings 17:40.
136. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, S.D. Miller, L.J. Held, G.F. Vance and R. Zhang. 1998. Assessing the efficacy of microirrigation for sugarbeet production. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:34
137. Zhao, H.* and G.F. Vance. 1998. Sorption of BTEX (benzene, toluene, ethylbenzene and xylenes) by soils in the presence of surfactants. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:203.
138. Vance, G.F. 1998. Low-molecular-mass organic acids in environmental samples. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:204 (**Invited**)
139. Krzyszowska-Waitkus, A.J.* and G.F. Vance. 1998. Characterization of organic constituents in Lodgepole Pine litter and coarse woody debris. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:303.
140. Sharmasarkar, S.*, F. Cassel-Sharmasarkar*, S.D. Miller, G.F. Vance and R. Zhang. 1998. Water and contaminant management with low-volume irrigation practices. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:341.
141. Cassel-Sharmasarkar, F.*, S. Sharmasarkar*, S.D. Miller, M.J. Reddy, G.F. Vance, R. Zhang, J.T. Cecil and J. Krall. 1998. Design and in-situ application of microirrigation for sugarbeet production. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:344.
142. Skinner, C.P.* and G.F. Vance. 1998. Use of GIS to evaluate soil and plant selenium in Colorado. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Baltimore, MD. Agronomy Abstracts 90:349.

143. Young, J.A.* , M. Herdendorf, W.L. Berelson, G.F. Vance, J.D. Hamerlinck, and L.C. Munn. 1998. Land-use conversion based on geographic information science: Powell, Wyoming. Presented at the Wyoming Extension Showcase on Technology, Casper, WY. [Casper CES Proceedings](#)
144. Sharmasarkar, S.* , F. Cassel-Sharmasarkar* , S. Miller, J. Cecil, L. Held, K.J. Fornstrom, G.F. Vance and R. Zhang. 1998. Application of low-volume irrigation technologies for managing agrochemical use in Wyoming. Presented at the Wyoming Extension Showcase on Technology, Casper, WY. [Casper CES Proceedings](#)
145. Young, J.A.* , B.M. Christensen* , M.S. Schaad* , G.F. Vance and L.C. Munn. 1999. Modeling alternative crops using GIS in northeastern Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:14.
146. Zhang, R., A.J. Krzyszowska-Waitkus* , G.F. Vance and J. Qi* . 1999. Pesticide transport in field soils. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:179.
147. Zhao, H.* , K.L. Nagy and G.F. Vance. 1999. Immobilization of organic pollutants by surfactant-templated mesoporous materials. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:216.
148. Krzyszowska-Waitkus, A.J.* and G.F. Vance. 1999. Influence of coarse woody debris on soil organic substances in a lodgepole pine forest. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:306.
149. Vance, G.F., L.C. Munn, S. Rahman* and R.F. Weidler* . 1999. Using GIS to improve soil mapping efficiency and stand evaluation in Wyoming Rocky Mountain forests. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:309.
150. Christensen, B.M.* , J.A. Young* , G.F. Vance and L.C. Munn. 1999. Applications of LESA and GIS in the Bighorn Basin, Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:332.
151. Sharmasarkar, S.* and G.F. Vance. 1999. Assessing soil and plant selenium in uranium mining environments. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:344.
152. Skinner, C.P.* , G.F. Vance and B.K. Schladweiler* . 1999. Comparison of wetland plant productivity for phytoremediation of selenium at Fort Carson, Colorado. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:352.
153. Vance, G.F. and D.H. Knight. 1999. Coarse woody debris and soil organic matter in Rocky Mountain coniferous forests. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. [Agronomy Abstracts](#) 91:365.
154. You, Y.W.* , G.F. Vance and H.T. Zhao* . 2000. Removal of Dicamba (3,6 dichloro-2-methoxy benzoic acid) from aqueous solution by layered double hydroxides (LDHs). Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. [Agronomy Abstracts](#) 92:234.
155. Vance, G.F. 2000. Enhancing collaborative Agricultural Research Service and Land-Grant University efforts. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. [Agronomy Abstracts](#) 92:74.
156. You, Y.W.* , G.F. Vance and H.T. Zhao* . 2000. Selenium adsorption on Mg-Al and Zn-Al layered double hydroxides. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. [Agronomy Abstracts](#) 92:233.
157. Skinner, C.P.* and G.F. Vance. 2000. Importance of soil-geology relationships to selenium distribution in the environment. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. [Agronomy Abstracts](#) 92:305.

158. Christensen, B.M.*, G.F. Vance, L.C. Munn and J.A. Hayward*. 2000. Applications of land evaluation site assessment (LESA) techniques and a geographic information system (GIS) in East Park County, WY. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 92:392.
159. Vance, G.F. 2000. Organic chemical indicators of soil quality. Special symposium "Taking Soil Quality into the 21st Century" Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Minneapolis/St. Paul, MN. Agronomy Abstracts 92:407. **(Invited)**
160. Schuman, G.E., G.F. Vance and K.D. Edinger*. 2001. Long-term effectiveness of bentonite mine spoil amendment in aiding revegetation. Presented at the Society for Range Management Meetings, Kailua-Kona, HI. In: Land Restoration Success and Sustainability. Society for Range Management Abstracts 54:114 **(Invited)**
161. Vance, G.F. 2001. Wyoming Reclamation Ecology Center: A new research, education and outreach initiative. Presented at the 18th National American Society for Surface Mining and Reclamation Annual Meeting, Albuquerque, NM. In: R. Barnhisel and B. Buchanan (eds.) Land Reclamation - A Different Approach., Lexington, KY. ASMR Proceedings 18:328
162. Vance, G.F. 2001. GIS applications for agricultural production and land-use planning in northwestern Wyoming. Presented at the Western Society of Soil Science Meetings, Moscow, ID. WSSS Proceedings, University of Idaho, p.11
163. Vance, G.F. and C.P. Skinner*. 2001. GIS applications for predicting areas with seleniferous soils and plants. Presented at the Western Society of Soil Science Meetings, Moscow, ID. WSSS Proceedings, University of Idaho, p.11
164. You, Y.W.*, H. Zhao* and G.F. Vance. 2001. Selenium adsorption-desorption from aqueous solutions containing anionic clays. Presented at the Western Society of Soil Science Meetings, Moscow, ID. WSSS Proceedings, University of Idaho, p.13 (Received Best Poster Award)
165. You, Y.W.*, H. Zhao* and G.F. Vance. 2001. Arsenite removal from aqueous solutions by anionic clays. Presented at the Western Society of Soil Science Meetings, Moscow, ID. WSSS Proceedings, University of Idaho, p.13
166. Vance, G.F. 2002. Potential impacts and alternatives to land application of coalbed methane product water. Presented at the Western Society of Soil Science Meetings, Ft. Collins, CO. WSSS Proceedings, Colorado State University, p.18 **(Invited)**
167. You, Y.W.*, H. Zhao* and G.F. Vance. 2002. Surfactant-enhanced adsorption of organic compounds by layered double hydroxides. Presented at the Clay Minerals Society Meeting, Boulder, CO. Clay Minerals Society Abstracts 39:181.
168. Skinner-Martin, C.P.* and G.F. Vance. 2002. Soil-geology selenium relationships in disturbed and native ecosystems. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD
169. Hoobler, B.M.* and G.F. Vance. 2002. Applications of the land evaluation and site assessment technique and a geographic information system in east Park County, WY. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD
170. Hayward, J.A.* and G.F. Vance. 2002. Modeling alternative crops using GIS in northwestern Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD
171. Vance, G.F. 2002. Wyoming Reclamation Ecology Center: A new research, education and outreach initiative. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD
172. Schladweiler, B.K.*, R. Haroian and G.F. Vance. 2002. Influence of variable topsoil replacement depth on soil and plant characteristics at a coal mine in northeastern Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD

173. Zhao, H.*, Y.W. You* and G.F. Vance. 2002. Hybrid organic-inorganic derivatives of LDHs and dodecylbenzenesulfonate: Preparation and adsorption characteristics. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. [Agronomy Abstracts CD](#)
174. Vance, G.F. 2002. Potential impacts and alternatives to land application of coalbed methane product water. Presented at the Western Society of Soil Science Meeting, Colorado State University. [WSSS Abstracts](#) p. 18.
175. Skinner-Martin, C.P.* and G.F. Vance. 2002. Use of GIS for predicting areas with seleniferous soils and plants. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. [Agronomy Abstracts CD](#)
176. Vance, G.F. 2002. Soil carbon database for Wyoming. Soil Carbon Accounting Systems: I. Carbon Accounting and Monitoring Systems Symposium. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. [Agronomy Abstracts CD](#)
177. You, Y.W.*, H. Zhao* and G.F. Vance. 2002. Characteristics of arsenite adsorption-desorption on layered double hydroxides. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. [Agronomy Abstracts CD](#)
178. You, Y.W.*, H. Zhao* and G.F. Vance. 2002. Surfactant-enhanced adsorption of organic compounds by layered double hydroxides. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Indianapolis, IN. [Agronomy Abstracts CD](#)
179. Qi, J.*, Y.W. You*, G.F. Vance, J. Zhuang* and Y. Jin. 2003. Removal of bacteriophages from aqueous systems by an anionic clay. Presented at the 4th Annual Symposium on Natural Organic Matter in Soils and Water, Ames, IA. [NOM Proceedings](#), University of Iowa, CD
180. Vance, G.F. 2003. Coarse woody debris and soil organic matter in rocky mountain coniferous forests. Presented at the 4th Annual Symposium on Natural Organic Matter in Soils and Water, Ames, IA. [NOM Proceedings](#), University of Iowa, CD
181. Vance, G.F. 2003. Influence of coarse woody debris on soil organic substances in a lodgepole pine forest. Presented at the 4th Annual Symposium on Natural Organic Matter in Soils and Water, Ames, IA. [NOM Proceedings](#), University of Iowa, CD
182. King, L.A. *, G.F. Vance and G. Ganjegunte*. 2003. Soil and vegetation impacts from land application disposal of saline and sodic coalbed methane product water. Presented at the Graduate Student Symposium, University of Wyoming, [Graduate Student Meeting Abstracts](#).
183. Schladweiler, B.K.*, G.F. Vance and R. Haroian. 2003. Evaluation of Topsoil Depth Effects on Various Plant Parameters within Reclaimed Areas in Northeastern Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts CD](#)
184. Skinner-Martin, C.P.* and G.F. Vance. 2003. Soil-Geology Selenium Relationships in Disturbed and Native Ecosystems. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts CD](#)
185. Vance, G.F. 2003. Using GIS to Predict Military Areas with Seleniferous Soils and Plants. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts CD](#)
186. Vance, G.F. 2003. Wyoming Reclamation Ecology Center (WREC): Reclamation and Restoration Ecology (R&RE) Research, Teaching and Outreach. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts CD](#)
187. Krzyszowska-Waitkus, A.J.* and G.F. Vance. 2003. Influence of coarse woody debris on soil organic substances in a lodgepole pine forest. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts CD](#)
188. Ganjegunte, G.K. *, G.F. Vance and L.A. King*. 2003. Effects of saline-sodic water irrigation/land disposal on soil properties. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts CD](#) p. 355

189. Ganjegunte, G.K.*, G.F. Vance, L. Ingram*, P.D. Stahl and G. E. Schuman. 2003. Quantification of carbon pools in soils under different grazing regimes. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts](#) CD p. 399
190. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2003. Soil and vegetation impacts from land application of saline-sodic waters. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts](#) CD p. 154
191. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2003. Vegetation community responses to saline-sodic waters. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Denver, CO. [Agronomy Abstracts](#) CD
192. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2004. Soil and vegetation impacts from land application of saline-sodic coalbed methane waters. Presented at the Montana Soil and Water Conservation Meeting, Billings, MT. [MSWCS Abstracts](#) CD (**Invited**)
193. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2004. Vegetation responses to saline-sodic coalbed methane waters in the Powder River Basin. Presented at the Montana Soil and Water Conservation Meeting, Billings, MT. [MSWCS Abstracts](#) CD
194. Ganjegunte, G.K.*, G.F. Vance and L.A. King*. 2004. Impacts of land application disposal of saline-sodic coalbed methane water on soil physical and chemical properties in Wyoming. Presented at the Montana Soil and Water Conservation Meeting, Billings, MT. [MSWCS Abstracts](#) CD
195. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2004. Soil and vegetation responses to land application of saline-sodic coalbed methane waters. Presented at the Graduate Student Symposium, Laramie, WY. [Graduate Symposium Abstracts](#) University of Wyoming. p.36.
196. Ganjegunte, G.K.*, L.A. King* and G.F. Vance. 2004. Can land application of saline-sodic coalbed methane (CBM) water be a sustainable practice: Effects on soils properties. Presented at the 85th Annual American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. [AAAS Proceedings](#) 23:48.
197. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2004. Soil and vegetation impacts from land application of saline-sodic coalbed methane waters. Presented at the 85th Annual American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. [AAAS Proceedings](#) 23:58.
198. Vance, G.F. 2004. Selenium in the Environment. Presented at the 85th Annual American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. [AAAS Proceedings](#) 23:84.
199. Vance, G.F., J.G. Woiwode, R.M. Hybner, K. Fitzsimmons and G.K. Ganjegunte*. 2004. Use of plants and fish wastes for ameliorating hazards associated with coalbed methane waters. Presented at the 85th Annual American Association for the Advancement of Science/Western Society of Soil Science Meetings, Logan, UT. [AAAS Proceedings](#) 23:84.
200. Ganjegunte, G.K.*, A. Chatterjee*, G.F. Vance, D.B. Tinker, P.D. Stahl, J. Arnold and G.E. Schuman. 2004. Nature and content of soil organic carbon in coniferous forests. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) CD.
201. Ganjegunte, G.K.*, G.F. Vance, C.M. Preston, G.E. Schuman, L.J. Ingram*, P.D. Stahl and J.M. Welker. 2004. Characterization of SOC constituents under different grazing management practices in a northern mixed-grass prairie. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) CD.
202. Ingram, L.J.*, G.E. Schuman, P.D. Stahl, J.M. Welker, G.F. Vance and G.K. Ganjegunte*. 2004. Influence of grazing on microbial activity in a northern mixed-grass prairie ecosystem. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) CD.
203. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2004. Saline-sodic water impacts to soils and vegetation. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. [Agronomy Abstracts](#) CD

204. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2004. Cumulative soil impacts from multiple years of saline-sodic water applications. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. Agronomy Abstracts CD p. 243
205. Schuman, G.E., L.J. Ingram*, P.D. Stahl, G.F. Vance, G.K. Ganjegunte* and J.M. Welker. 2004. Soil C and N dynamics on grazed northern mixed-grass prairie after several years of severe drought. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. Agronomy Abstracts CD.
206. Stahl, P.D., G.E. Schuman, L.J. Ingram*, G.K. Ganjegunte*, G.F. Vance and J.M. Welker. 2004. Influence of grazing treatments on microbial community structure in a northern mixed-grass prairie system. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. Agronomy Abstracts CD
207. Vance, G.F., J.G. Woiwode, R.M. Hybner, K. Fitzsimmons and G.K. Ganjegunte*. 2004. Can plants and fish wastes ameliorate hazards associated with coal bed methane waters? Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Seattle, WA. Agronomy Abstracts CD p. 251.
208. Chatterjee, A.*, G.K. Ganjegunte*, G.F. Vance, D.B. Tinker and P.D. Stahl. 2005. Effect of forest fire and tree harvesting on Ponderosa Pine carbon pools. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 12. (Awarded Best Session presentation)
209. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2005. Soil and plant responses to land application of coal bed natural gas (CBNG) waters. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 31.
210. Sadikshya, R.*, A. Wick*, P.D. Stahl and G.F. Vance. 2005. Recovery of belowground ecosystem components under different plant communities on reclaimed coal mine lands. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 48. (Awarded Best Poster Award)
211. King, L.A.*, G.F. Vance and G.K. Ganjegunte*. 2005. Soil and plant responses to land application of coal bed natural gas (CBNG) waters. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. Agronomy Abstracts CD p. 120
212. Ganjegunte, G.K.*, R.W. Gregory, G.F. Vance and R.C. Surdam. 2005. Innovative technology to reduce sodium concentrations in saline-sodic coalbed natural gas waters: Use of natural zeolites. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. Agronomy Abstracts CD p. 149
213. Ganjegunte, G.K.* and G.F. Vance. 2005. Evaluation of changes in soil chemistry from leaching saline-sodic waters through Powder River Basin soils: A column study approach. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. Agronomy Abstracts CD p. 212
214. Chatterjee, A.*, D.B. Tinker, G.K. Ganjegunte*, G.F. Vance and P.D. Stahl. 2005. Can Ponderosa Pine be managed to enhance carbon sequestration? Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. Agronomy Abstracts CD p. 322
215. Wick, A.F.*, P.D. Stahl, G.F. Vance, G.E. Schuman, L.C. Munn and E. Pendall. 2005. Aggregate size distribution and stability under cool season grass communities of different ages on reclaimed coal mine lands in Wyoming. Presented at the American Society of Agronomy/Soil Science Society of America Annual Meetings, Salt Lake City, UT. Agronomy Abstracts CD p. 355
216. Chatterjee, A.*, D.B. Tinker, G.K. Ganjegunte*, G.F. Vance and P.D. Stahl. 2006. Comparison of different management practices on carbon stocks in a Ponderosa Pine forest, Black Hills, WY. Presented at the 12th Annual Front Range Student Ecology Symposium, Fort Collins, CO. Ecology Symposium Abstracts. p. 12
217. Wick, A.F.*, P.D. Stahl, L. Ingram*, G.E. Schuman and G.F. Vance. 2006. Aggregate size distribution under a cool season grass community chronosequence on reclaimed coal mine lands in Wyoming. Presented at the 12th Annual Front Range Student Ecology Symposium, Fort Collins, CO. Ecology Symposium Abstracts. p. 21

218. Chatterjee, A.*, S. Mooney and G.F. Vance. 2006. Evaluation of carbon budget for different forest management practices of ponderosa pine and lodgepole pine ecosystems in Wyoming. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 16
219. Jiang, Y.*, D.W. Johnson and G.F. Vance. 2006. Subsurface drip irrigation for alfalfa in Wyoming. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 41
220. Johnston, C.R.*, S. Jin, G.F. Vance and G. Ganjegunte*. 2006. Impacts on coalbed natural gas co-produced water on cropland irrigated soils in the Powder River Basin, Wyoming. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 41
221. Wick, A.F.*, P.D. Stahl, L. Ingram*, G.E. Schuman and G.F. Vance. 2006. Soil structural recovery in relation to carbon, nitrogen and light fraction contents in a reclaimed cool season chronosequence in Wyoming. Presented at the Graduate Student Symposium, Laramie, WY. Graduate Student Abstracts University of Wyoming. p. 80.
222. Schuman, G.E., L.J. Ingram*, J.D. Derner, P.D. Stahl and G.F. Vance. 2006. Dynamics of long-term organic carbon storage in northern mixed-grass rangelands. Presented at the National Soil and Water Conservation Society Meeting, Keystone, CO. SWCS Proceedings CD 59.
223. Wick, A.*, P.D. Stahl, L.J. Ingram*, G.E. Schuman and G.F. Vance. 2006. Soil structural recovery in relation to carbon and nitrogen content in a chronosequence of reclaimed sites. Presented at the Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD 102-7.
224. Vance, G.F. 2006. Management of saline-sodic waters from coalbed natural gas production. Presented at the Special Symposium Management and Use of Waters of Altered or Impaired Quality at the Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD 103-5. (Invited)
225. Chatterjee, A.*, S. Mooney, D.B. Tinker, G.F. Vance, J. Arnold, W. Haggenson and P.D. Stahl. 2006. Generating carbon credits under different forest management practices in ponderosa pine ecosystems in Wyoming. Presented at the Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD 128.
226. Chatterjee, A.*, G.F. Vance, E.G. Pendall, D.B. Tinker, P.D. Stahl, and L.J. Ingram*. 2006. The Influence of Forest Management Practices on Soil CO₂ Efflux and Microbial Community Structures of Pine Forests in Wyoming. Presented at the Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD 296-6.
227. Ganjegunte, G.K.*, P.D. Stahl and G.F. Vance. 2006. Carbon Sequestration in Reclaimed Coal Mine Lands of Wyoming. Presented at the Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD 302.
228. Ganjegunte, G.K.*, G.F. Vance, R. Gregory and R. Surdam. 2006. Utilization of Zeolite for Reducing Sodium and Salt Concentrations in Saline-Sodic Coalbed Natural Gas Waters. Presented at the Soil Science Society of America Annual Meetings, Indianapolis, IN. Agronomy Abstracts CD 534.
229. Chatterjee, A.*, G.F. Vance, S. Mooney, D.B. Tinker, J. Arnold, B. Haggenson, and P.D. Stahl. 2007. Evaluation of ponderosa pine management practices based on economic profitability and opportunity of receiving carbon credits. Presented at the Western Society of Soil Science, Boise, ID. AAASPD/WSSS Abstracts p. 46.
230. Chatterjee, A.*, G.F. Vance, E.G. Pendall, D.B. Tinker, P.D. Stahl, and L.J. Ingram*. 2007. Impact of ponderosa pine management on carbon dynamics and soil microbial community. Presented at the Western Society of Soil Science, Boise, ID. AAASPD/WSSS Abstracts p. 46.
231. Chatterjee, A.*, G. F. Vance, S. Mooney, D.B. Tinker, J. Arnold, P.D. Stahl and B. Haggenson. 2007. Evaluation of ponderosa pine management practices based on economic profitability and opportunity of receiving carbon credits. Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. Agronomy Abstracts CD 113-1.
232. Chatterjee, A.*, G.F. Vance, E. Pendall, D.B. Tinker, P.D. Stahl and L. Ingram*. 2007. Carbon dynamics and soil microbial community structure in Wyoming coniferous forests. Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. Agronomy Abstracts CD 314-1.

233. Johnston, C.R.*, G.F. Vance and G. Ganjegunte*. 2007. Irrigation with coalbed natural gas co-produced waters: Changes in soil physical and chemical properties. Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. [Agronomy Abstracts](#) CD 304-6.
234. Schuman, G.E., G.F. Vance, J. Derner, L. Ingram*, P.D. Stahl and A. Chatterjee*. 2007. Long-term effects of grazing and climate conditions on carbon sequestration in agricultural soils. Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. [Agronomy Abstracts](#) CD 98-7.
235. Zhao, H.* and G.F. Vance. 2007. Treatment of coalbed methane produced water using zirconium phosphate to maximize its beneficial use. Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. [Agronomy Abstracts](#) CD 327-2.
236. Zhao, H.*, G.F. Vance, M.A. Urynowicz, R. Gregory and G. Ganjegunte*. 2007. Processes using zeolites for treating waters produced from coalbed natural gas operations. Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. [Agronomy Abstracts](#) CD 307-6.
237. Vance, G.F., H. Zhao*, M.A. Urynowicz, R. Gregory and G. Ganjegunte*. 2007. Use of zeolites for treating natural gas coproduced waters in Wyoming, USA. Special Symposium "Environmental Impact and Sustainability of Degraded Water Reuse." Presented at the Soil Science Society of America Annual Meetings, New Orleans, LA. [Agronomy Abstracts](#) CD 230-19. **(Invited)**
238. Chatterjee, A.*, G.F. Vance, P.D. Stahl, and D.B. Tinker. 2007. Forest management impacts on carbon dynamics and soil microbial abundance within a Ponderosa pine ecosystem, Wyoming. Presented at the University of Wyoming Graduate Student Symposium, Laramie, WY. [Graduate Student Abstracts](#), p. 10 **(Oral Presentation Award)**
239. Vance, G.F. 2008. Land application and treatment of coalbed methane co-produced waters: Soil properties and water management. Presented at the Soil and Water Conservation Service/Colorado Association of Conservation Districts Conference, Estes Park, CO. [SWCS/CACD Proceedings](#) (Invited)
240. Tsai, J.*, M.B. David, R.G. Darmody, and G.F. Vance. 2009. Long-term Changes in a forest soil of Maine, USA. Presented at the Soil Science Society of America Annual Meetings, Pittsburgh, PA. [Agronomy Abstracts](#).
241. Derner, J.D., M. Burgin, G.F. Vance and G.E. Schuman. 2010. Thinning treatments of big sagebrush in western Wyoming: Shrub and grass responses. Presented at the Society for Range Management Meetings, Denver, CO. [SRM Abstracts](#).
242. Hakala, A.C.*, G.F. Vance, A.R. Kniss, J.B. Norton. 2011. Interactions between Manganese and Glyphosate in Glyphosate-resistant Soybeans (*Glycine max* L.). Presented at the [Western Society of Soil Science and Western Society of Crop Science Joint Annual Meetings](#). University of Wyoming, Laramie, WY.
243. Belbase, S.*, M. Urynowicz and G.F. Vance. 2011. Evaluation of the Effectiveness of Zeolite in Mitigating Impacts of Coalbed Natural Gas (CBNG) Co-produced Water on Soil. Presented at the [Western Society of Soil Science and Western Society of Crop Science Joint Annual Meetings](#). University of Wyoming, Laramie, WY.
244. Hakala, A.C.*, G.F. Vance, A.R. Kniss and J.B. Norton. 2011. An evaluation of interactions between manganese and glyphosate in glyphosate-resistant soybean (*Glycine max* L.). Presented at the Soil Science Society of America Annual Meetings, San Antonio, TX. [Agronomy Abstracts](#).
245. Vance, G.F. and X. He*. 2011. Geological sequestration of carbon dioxide: Displaced Waters. Presented at the Soil Science Society of America annual Meetings, San Antonio, TX. [Agronomy Abstracts](#).
246. Derner, J.D., G.F. Vance, G.E. Schuman and R.F. Follett. 2011. Brush management effects on soil carbon sequestration in sagebrush-dominated rangelands. Presented at the Society of Range Management Annual Meeting, Wheat Ridge, CO. [SRM Abstracts](#).
247. Belbase, S.*, M.A. Urynowicz and G.F. Vance. 2011. Evaluation of the Effectiveness of Zeolite in Mitigating Impacts of Coalbed Natural Gas (CBNG) Co-produced Water on Soil. [Western Society of Soil Science and Western Society of Crop Science Joint Annual Meetings](#). University of Wyoming Laramie, Wyoming.

248. Belbase, S.*, M.A. Urynowicz and G.F. Vance. 2011. Evaluation of Zeolite for Remediation of Coalbed Natural Gas Co-Produced Water Impacts. Wyoming Reclamation & Restoration Symposium: Recent Success and Current Challenges. Laramie, Wyoming.
249. Derner, J.D., G.F. Vance, G.E. Schuman and R.F. Follett. 2011. Brush management effects on soil carbon sequestration in sagebrush-dominated rangelands. Presented at the Society of Range Management Annual Meeting, Spokane, WA. SRM Abstracts.
250. Lilly, K.J.* and G.F. Vance. 2012. Coalbed Natural Gas Co-Produced Water Interaction with Soils: Assessing Isotopic and Chemical Compositional Changes. Presented at the Secondary Biogenic Coal Bed Natural Gas International Conference. Laramie, WY

PRESENTATIONS WITHOUT ABSTRACTS/PROCEEDINGS

Radio Interviews

1. Vance, G.F. 1994. Beneficial use of sewage sludge. Broadcasted on University of Wyoming's "Insight" Program. Wyoming Public Radio
2. Vance, G.F. 1999. Selenium impacts to Wyoming: Part I Disturbed Lands. Broadcasted on University of Wyoming's "Insight" Program. Wyoming Public Radio
3. Vance, G.F. 1999. Selenium impacts to Wyoming: Part II Agricultural Ecosystems. Broadcasted on University of Wyoming's "Insight" Program. Wyoming Public Radio
4. Vance, G.F. 2000. Interview with the ASMR President. Broadcasted on University of Wyoming's "Insight" Program. Wyoming Public Radio
5. Vance, G.F. 2006. Carbon Sequestration. Broadcasted on University of Wyoming's "Open Spaces" Program. Wyoming Public Radio

Presentations

1. Vance, G.F. 1980. National American Society of Agronomy speech contest. American Society of Agronomy National Meeting, Detroit, MI. **(Invited)**
2. Vance, G.F. 1984. Low molecular weight phenolic compounds in hydrosequences and developmental sequences of Michigan Spodosols. Department of Crop and Soil Sciences, Michigan State University, East Lansing, MI. **(Invited)**
3. Vance, G.F. 1985. Characterization and classification of Michigan Spodosols. Department of Agronomy, University of Illinois, Urbana, IL. **(Invited)**
4. David, M.B. G.F. Vance and F.J. Stevenson. 1988. Organic acids task group activities. EPA Watershed Manipulation Project Meeting, Orono, MA. **(Invited)**
5. Vance, G.F. 1988. Proton and aluminum complexation of soil humic substances. Department of Agronomy, University of Illinois, Urbana, IL. **(Invited)**
6. David, M.B. and G.F. Vance . 1988. Organic and inorganic carbon chemistry of a New England Spodosol. Department of Forestry, University of Illinois, Urbana, IL. **(Invited)**
7. Vance, G.F. 1989. Environmental aspects of soil organic substances: Characterization, complexation and sorption processes. Department of Plant, Soil and Insect Sciences, University of Wyoming, Laramie, WY. **(Invited)**
8. Vance, G.F. 1989. Environmental aspects of soil organic substances: Characterization, complexation and sorption processes. U.S. Salinity Laboratory, Riverside, CA. **(Invited)**
9. Vance, G.F. and M.B. David. 1989. Nature and properties of dissolved organic carbon in forested ecosystems. Department of Forestry, University of Illinois, Urbana, IL. **(Invited)**

10. David, M.B. and G.F. Vance . 1989. Organic task group progress and plans. EPA Watershed Manipulation Project Meeting, Marine Biological Laboratory, Woods Hole, MA. **(Invited)**
11. Vance, G.F. 1989. Proton binding and aluminum complexation by soil humic and fulvic acids. Department of Agronomy, University of Illinois, Urbana, IL. **(Invited)**
12. Vance, G.F. 1990. Chemical characterization of lakes and streams in central Maine. Department of Plant, Soil and Insect Sciences, University of Wyoming, Laramie, WY. **(Invited)**
13. Vance, G.F. 1990. EPSCoR II Groundwater Cluster: Process and mechanisms subgroup. Presented to State of Wyoming Legislators, Cheyenne, WY. **(Invited)**
14. Vance, G.F. 1991. Young member's perspective and how new members can become involved in the Trisocieties. New Members Orientation. American Society of Agronomy National Meeting, Denver, CO. **(Invited)**
15. Vance G.F. and S.E. Williams . 1991. Composting in Laramie. Earth Day Fair, Laramie, WY. **(Invited)**
16. Vance, G.F. 1991. Current research efforts with municipal sewage sludge. Municipal Wastewater and Sludge Management Seminar for Treatment Plant Operators and Agricultural Extension Service Personnel. Douglas, WY. **(Invited)**
17. Vance, G.F. 1991. Panel discussion on suitability values for minesoil material selection - interim and long-term solutions. Office of Surface Mines/Montana State University Forum, Denver, CO. **(Invited)**
18. Vance, G.F. 1991. Use of municipal sewage sludge in Wyoming. Department of Plant, Soil and Insect Sciences, University of Wyoming, Laramie, WY. **(Invited)**
19. Vance, G.F. 1991. Role of soil and aquatic organic acids in the speciation of aluminum. Department of Plant, Soil And Insect Sciences, University of Wyoming, Laramie, WY. **(Invited)**
20. David, M.B. and G.F. Vance. 1992. Organic acids in various watershed components. EPA Watershed Manipulation Project Workshop on Organic Acids, Orono, MA.
21. David, M.B. and G.F. Vance. 1992. Organics in WMP streams and Maine Lakes. EPA Watershed Manipulation Project Workshop on Organic Acids, Orono, MA.
22. Vance, G.F. 1992. Determination of organic acidity and prediction of organic anions. EPA Watershed Manipulation Project Workshop on Organic Acids, Orono, MA.
23. Vance, G.F. 1992. Aluminum-organic binding and modeling: Overview and needs assessment. EPA Watershed Manipulation Project Workshop on Organic Acids, Orono, MA.
24. Vance, G.F. 1992. Backyard composting. ARK Recycling Center Grand Opening and Earth Day Celebration, Laramie, WY. **(Invited)**
25. Vance, G.F. and J.K. Wangberg . 1992. A new curriculum in Agrobiolgy, Agroecology, Applied Biology, Applied Ecology, Economic Biology, Economic Ecology: An integration of Plant, Soil and Insect Sciences Curricula. Presented at: Campus Resource Fair, UW Union; State FFA Contest, UW` Animal Science/Molecular Biology building; College of Agriculture's Ag Appreciation Day, UW Animal Science/Molecular Biology building; Western Region Teaching Symposium, Fort Collins, CO; Family Weekend Resource Fair, UW Union.
26. Vance, G.F. 1992. Response of soil and aquatic organic acids to acidification. Department of Plant, Soil and Insect Sciences, University of Wyoming, Laramie, WY. **(Invited)**
27. Vance, G.F. 1993. Current research in soil and environmental chemistry. EPSCoR Seminar, University of Wyoming. Laramie, WY. **(Invited)**
28. EPSCoR-ADP. 1993. Groundwater contamination cluster research activities and achievements. Annual NSF EPSCoR Meeting, Rapid City, SD.
29. Vance, G.F. 1994. Wyoming research activities involving hazardous wastes. Great Plains-Rocky Mountain Hazardous Substances Research Center Meeting, Manhattan, KS. **(Invited)**
30. Vance, G.F. 1994. Soil and plant trace element contents in sewage sludge amended studies. W-170 Research Meeting, Las Vegas, NV.
31. Vance, G.F. 1994. Environmental chemistry of selenium: Soil-plant research activities. Department of Agronomy, Pennsylvania State University, University Park, PA. **(Invited)**

32. Munn, L.C. and G.F. Vance . 1994. The poster paper: Is speech obsolete. Department of Plant, Soil and Insect Sciences, University of Wyoming, Laramie, WY.
33. Vance, G.F. 1994. Soil and environmental chemistry research activities at University of Wyoming: Dissolved organic carbon, trace elements, selenium, geographic information systems. Speaker/Workshop Series, Black Hills State University, Spearfish, SD. **(Invited)**
34. Vance, G.F. 1994. Research as Part of the Graduate Learning Experience. New Graduate Student Orientation, Graduate School, University of Wyoming **(Invited)**
35. Vance, G.F. 1995. Land application of municipal solid waste compost: A regional study. W-170 Research Meeting, Las Vegas, NV.
36. David, M.B., G.F. Vance and J.S. Kahl. 1995. Chemistry of dissolved organic carbon at BBWM: Soil and stream water response to acid inputs. Acid Reign Meeting, Europe.
37. Vance, G.F. 1995. Waste utilization: What's in the future. United Members Organization, Laramie, WY. **(Invited)**
38. Vance, G.F. 1996. Environmental remediation activities and University of Wyoming expertise. INEL/URC Working Group, Idaho Falls, ID. **(Invited)**
39. Vance, G.F. 1996. Land application of municipal solid waste compost: A regional study. W-170 Research Meeting, Las Vegas, NV.
40. Vance, G.F. 1996. Selenium in the Environment. Natural Resources and Environmental Science Seminar Series, University of Illinois, Urbana, IL. **(Invited)**
41. Vance, G.F. and B.K. Schladweiler. 1997. Soil and plant selenium relationships. U.S. Army Fort Carson DECAM, Colorado Springs, CO.
42. Vance, G.F. 1997. Composting of yard wastes and biosolids at F.E. Warren Air Force base using the Ag Bag technology. W-170 Research Meeting, Las Vegas, NV.
43. Vance, G.F. 1998. GIS database for characterizing soil and plant selenium relationships. DECAM Presentation. Ft. Carson, CO.
44. Vance, G.F. 1998. Soil and environmental science activities and accomplishments at the University of Wyoming, Department of Renewable Resources. High Plains Grassland Field Days, Cheyenne, WY. **(Invited)**
45. Edgar, T.V., D. Foster, G.F. Vance, M.P. Sharma and S. Ula. 1998. Processes for Remediation of Hydrocarbon Sources of Groundwater Contamination. DOE-EPSCoR Meeting, University of Wyoming, Laramie, WY.
46. Vance, G.F. 1999. Long-term land application of biosolids: Soil and plant trace element composition, and Union Pacific Tie Plant phytoremediation/greenbelt project. W-170 Research Meeting, Charlotte, NC.
47. Vance, G.F. 2000. Role of the Agricultural Experiment Station for enhanced research and outreach activities in the College of Agriculture, Forestry and Consumer Sciences. West Virginia University, Morgantown, WV. **(Invited)**
48. Young, J.A.* , B.M. Christensen*, M.S. Schaad*, M.E. Herdendorf, G.F. Vance and L.C. Munn. 2000. Modeling alternative crops using GIS in northeastern Wyoming. Wide Open Spaces: Conserving Working Landscapes and Wildlife Habitat in Wyoming and the West Conference. University of Wyoming, Laramie, WY.
49. Christensen, B.M.* , G.F. Vance , L.C. Munn and J.A. Hayward*. 2000. Applications of LESA and GIS in east Park County, Wyoming. Wide Open Spaces: Conserving Working Landscapes and Wildlife Habitat in Wyoming and the West Conference. University of Wyoming, Laramie, WY.
50. Zhao, H.* , K.L. Nagy and G.F. Vance. 2000. Applications of clay-based microporous and mesoporous materials for retaining (or sorbing) organic pollutants in water. Pacific Northwest National Laboratory, Richland, WA **(Invited)**
51. You, Y.W.* , G.F. Vance and H.T. Zhao*. 2000. Removal of Dicamba (3,6 dichloro-2-methoxy benzoic acid) from aqueous solution by layered double hydroxides (LDHs). Wyoming EPSCoR Statewide Meeting, University of Wyoming, Laramie, WY **(Invited)**.

52. Vance, G.F. 2001. Proposal for the development of a Wyoming Reclamation Ecology Center. Abandoned Coal Mine Land Steering and Technical Review Committees, Laramie, WY. **(Invited)**
53. Vance, G.F. 2001. Carbon sequestration: Principles. Wyoming Carbon Storage/Sequestration Advisory Committee. Wyoming Department of Agriculture, Cheyenne, WY **(Invited)**.
54. Vance, G.F. 2001. Soil carbon contents in Wyoming. Wyoming Carbon Storage/Sequestration Advisory Committee. Wyoming Department of Agriculture, Casper, WY **(Invited)**.
55. Esposito, D., L. Walsh, J. Fahnestock, J. Welker, J. Morgan, G.E. Schuman, G.F. Vance and P.D. Stahl. 2001. Carbon dioxide flux in mixed-grass prairie: Response to interannual variation in rainfall and grazing history. National Institute for Global Environmental Change, Boulder, CO
56. Vance, G.F. 2002. Soil properties and vegetation changes: potential impacts due to coalbed methane discharge water. Department of Soil and Crop Sciences, Colorado State University, Fort Collins, CO **(Invited)**.
57. Vance, G.F. 2002. Quantification and modeling of soil carbon. Wyoming Governor=s Natural Resource Subcabinet. Cheyenne, WY **(Invited)**.
58. King, L.A.* , G.F. Vance and G.K. Ganjgunte*. 2004. Soil and vegetation impacts from land application of saline-sodic coalbed methane waters. National Petroleum Forum/National Fluid Minerals Conference, Cheyenne, WY **(Invited)**
59. Vance, G.F. 2004. Science of Carbon Sequestration – Forestry. Carbon Sequestration: Science, Policy, and Marketing in Wyoming Conference, Casper, WY. **(Invited)**
60. Vance, G.F. 2005. Innovative Technology Development to Maximize Beneficial Use of Produced Water from Coalbed Natural Gas Operations in the PRB, WY. Wyoming Water Development Commission, Cheyenne, WY.
61. Vance, G.F. 2006. Successful grant writing while avoiding common proposal pitfalls. Research and Extension Center Planning Conference, Laramie, WY. **(Invited)**
62. King, L.A.* , G.F. Vance and G.K. Ganjgunte*. 2006. Soil and plant responses to land application of coal bed natural gas (CBNG) waters. Wyoming BLM 2006 Energy Resource Development Workshop, Cheyenne, WY. **(Invited)**
63. Vance, G.F. 2006. Irrigation with Saline-sodic Waters from CBNG Production. Presented at the Winter Technical Meeting - Coal Bed Natural Gas Production Water: Utilization, limitations and issues Symposium. Soil and Water Conservation Society, Wyoming Chapter and Society for Range Management, Wyoming Section. Sheridan, WY. **(Invited)**
64. King, L.A.* , G.F. Vance and G.K. Ganjgunte*. 2006. Impacts to Soil and Biological Properties from Land Application with CBNG Waters. Winter Technical Meeting - Coal Bed Natural Gas Production Water: Utilization, limitations and issues Symposium. Soil and Water Conservation Society, Wyoming Chapter and Society for Range Management, Wyoming Section. Sheridan, WY. **(Invited)**
65. Vance, G.F., D.B. Tinker and A. Chatterjee*. 2006. Forest management effects on ecosystem carbon dynamics of pine forests in Wyoming. Rocky Mountain Chapter of the Society of American Foresters Meeting, Laramie, WY. **(Invited)**
66. Brown, D., R. Lawrence, P. Miller, J. Fessenden, S. Clegg, R. Bricklemeyer, J. Watts, G.F. Vance, J. Schuman, J. Derner and R. Engel. 2007. Terrestrial Carbon Sequestration. Annual Energy Forum. NETL Big Sky Carbon Sequestration Partnership Meeting. Gallatin, MT.
67. Vance, G.F. 2007. Future of coal mining: Environmental Protection, Practices and Policy. National Commission on Energy Policy Meeting. Washington DC.
68. Vance, G.F. 2007. Future of Coal Mining: Environmental Protection, Practices and Policy. National Commission on Energy Policy Meeting. Denver, CO.
69. Vance, G.F. 2007. Subsurface drip irrigation of alfalfa. W1128 Regional Research Committee on Reducing Barriers to Adoption of Microirrigation. Honolulu, HI.
70. Vance, G.F. 2007. Biogeochemistry of selenium in disturbed environments. Department of Earth and Environmental Sciences, New Mexico Tech. **(Invited)**

71. Vance, G.F., R.C. Surdam and G.K. Ganjgunte*. 2007. Innovative Technology Development to Maximize Beneficial Use of Produced Water from Coalbed Natural Gas Operations in the Powder River Basin, Wyoming. Wyoming Water Development Commission, Cheyenne, WY.
72. Vance, G.F. 2007. Environmental Protection, Standards and Practices. Meeting Projected Coal Production Demands in the U.S.A. Issues, Challenges and Strategies Meeting. Washington DC.
73. Vance, G.F. 2008. CBM waters: Characterization and affects on ecosystem properties. Wyoming Environmental Quality Council, Cheyenne, WY.
74. Vance, G.F. 2008. Environmental Protection, Standards and Practices. Meeting Projected Coal Production Demands in the U.S.A. Issues, Challenges and Strategies Meeting. Denver, CO.
75. Vance, G.F. 2010. Emerging Issues and Opportunities in Soil Science. Soil Science Seminar. Department of Renewable Resources, University of Wyoming. **(Invited)**
76. Vance, G.F. 2010. Coal Production in the USA: Upstream issues, Challenges and Strategies. Department of renewable Resources RAD seminar, University of Wyoming. **(Invited)**
77. Vance, G.F., W. Schafer and G.E. Schuman. 2010. Strategies, Monitoring and Data Needs for Assessing and Preventing Impacts from CBM Produced Water to Crop and Forage Production in Wyoming. Wyoming Coal Bed Methane Meeting, Gillette, WY.
78. He, X.* and G.F. Vance. 2010. Water Management Plan and Economic Analysis. Wyoming Carbon Underground Storage Project Workshop. December 6th. Laramie, WY.
79. He, X.* and G.F. Vance. 2010. Water Management Plan and Economic Analysis. Wyoming Carbon Underground Storage Project Workshop. December 7th. Laramie, WY.