

JOSEPH R. HECKMAN, Ph.D.
Extension Specialist - Soil Fertility

WORK ADDRESS

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EDUCATION:

Ph.D., Soil Science, North Carolina State University, Raleigh, NC, 1989.

Dissertation: Corn and Soybean Tissue Water Content, Nutrient Accumulation, Yield and Growth Pattern Responses to Potassium and Chloride Fertility Differences.

Advisor: Dr. E.J. Kamparth

M.S., Agronomy, University of Maryland, College Park, MD, 1985.

Thesis: Effect of Sewage Sludge on Soybean Heavy Metal Accumulation and Symbiotic Nitrogen Fixation.

Advisor: Dr. J.S. Angle

B.S., Agronomy, The Ohio State University, Columbus, OH, 1978.

PROFESSIONAL EXPERIENCE:

Extension Specialist - Soil Fertility, Rutgers Cooperative Extension, New Brunswick, NJ.

Professor: July 2003 - Present

Associate: July 1996 – July 2003

Assistant: January 1990 – July 1996

Appointment: 70% Extension, 30% Research.

Create and implement statewide Extension/Research program in soil fertility related to field and forage crops, turfgrass and horticultural crops. Conduct and supervise basic and applied field and laboratory research on best management practices for efficient use of fertility inputs and methods of minimizing impacts on the environment. Coordinate, write, and distribute fact sheets and update soil fertility recommendations. Conduct in-service training for agents and assist in implementation of effective educational programs for the industry. Report research findings in peer-reviewed publications.

Sabbatical: January 2000 to March 2000, and January 2001 to March 2001.

Developed teaching materials for Soil Fertility and Comparative Plant Nutrition.

Postdoctoral Plant Physiologist/Agronomist, USDA-ARS, Climate Stress Laboratory, Beltsville, MD.

July 1989 - December 1989.

Conducted research to evaluate the effectiveness of antioxidant compounds for protection of crops from air pollution stress.

Graduate Research Assistant, North Carolina State University, Raleigh, NC. 1985 -1989.

Conducted research on potassium and chloride nutrition of corn and soybean.

Graduate Teaching Assistant, North Carolina State University, Raleigh, NC. 1986.
Prepared and taught weekly laboratories for Introductory Soils.

Graduate Research Assistant, University of Maryland, College Park, MD. 1982 - 1985.
Conducted research to determine the long-term effects of land application of sewage sludge on symbiotic nitrogen fixation and heavy metal accumulation in soybean.

AWARDS AND RECOGNITION:

Integrity in Science Award of the Weston A. Price Foundation. 2006.

Extension - Industry Award of the Northeast Branch of the American Society of Agronomy and Soil Science Society of America. 2003.

American Society for Horticultural Science Extension Materials Award – Newsletter Category. 2002. Award for The Soil Profile Newsletter.

Rutgers Cooperative Extension Team Award for Development of an Integrated Summer Patch Disease Control Program for Golf and Landscape Turf. 1996.

TEACHING/INSTRUCTION OF GRADUATE AND UNDERGRAD STUDENTS:

- | | |
|--------------------------|---|
| Spring 2008 | Rutgers University Nutritional Sciences Preschool. Guest lecture on Composting and Worms. 1 hour. |
| Spring 2008 | Topics in Organic Garden Planning, 274. Guest lecture on Organic Agriculture History. 1 hour. |
| Spring 2008 | Topics in Organic Garden Planning, 274. Guest lecture on The Organic Farm Fresh Food Movement. 1 hour. |
| Fall 2009
(Scheduled) | Fundamentals of Agroecology 11:015:230 Instructor for 3 credit undergrad level course. |
| Fall 2008 | Introduction to Plant Biology. Guest lecture on Soil Nitrogen Testing for Vegetable Crops. 1 hour. |
| Fall 2008 | Soil Fertility 440. Instructor for 3 credit undergrad/graduate level course. |
| Fall 2008 | Principles of Organic Crop Production 221. Instructor for 3 credit undergraduate level course. |
| Summer 2008 | Summer Institute of the School of Environmental and Biological Sciences, EOF Program. Guest lecture: Global Warming Seminar and Soil Management. 1.5 hours. Agriculture History. 1.5 hours. |
| Spring 2008 | Topics in Organic Garden Planning, 274. Guest lecture on Organic Agriculture History. 1.5 hours. |
| Spring 2008 | Geography 450. Guest lecture on Organic Agriculture. 1 hour. |
| Fall 2007 | Soil Fertility 440. Instructor for 3 credit undergrad/graduate level course |
| Fall 2007 | Principles of Organic Crop Production 221. Instructor for 3 credit undergraduate level course. |

- Fall 2007 Introduction to Plant Biology. Guest lecture on Leaves from City Shade Trees Benefit Crops and Soils. 1 hour.
- Spring 2007 Farm to Fork: The State of America's Food System Today. ENVST02 Princeton University. Guest lecture on Organic Agriculture History. 1.5 hours.
- Spring 2007 Topics in Organic Garden Planning, 274. Guest lecture on Organic Agriculture History. 1.5 hours.
- Spring 2007 Organic Crop Science 2240 at Delaware Valley College. Guest lecture on Soil Fertility in Organic Agriculture. 2 hours.
- Spring 2007 Organic Crop Science 2240 at Delaware Valley College. Guest lecture on Organic Agriculture History. 2.5 hours.
- Spring 2007 Animal Science 406. Guest lecture on Nutrient Management and Soil Fertility. 1.5 hours.
- Fall 2006 Soil Fertility 440. Instructor for 3 credit undergrad/graduate level course.
- Fall 2006 Principles of Organic Crop Production 221. Instructor for 3 credit undergraduate level course.
- Spring 2006 Topics in Organic Garden Planning, 274. Guest lecture on Organic Agriculture History. 1.5 hours.
- Spring 2006 Animal Science 406. Guest lecture on Nutrient Management and Soil Fertility. 1.5 hours.
- Fall 2005 Soil Fertility 440. Instructor for 3 credit undergrad/graduate level course.
- Fall 2004 ENV/STS117: The Environment & Human Values. Guest lecture on History of Organic Agriculture at Franklin & Marshall College, Lancaster, PA. 1.5 hours.
- Fall 2004 Soil Fertility 440. Instructor for 3 credit undergrad/graduate level course.
- Fall 2004 Graduate Program in Plant Biology. Guest lecture on International and Historic Roots of Organic Farming. 1 hour.
- Spring 2004 Animal Science 406. Guest lecture on Nutrient Management and Soil Fertility. 1.5 hours.
- Spring 2004 Modern Crop Production 11:776:200. Guest lecture on Soil Fertility for Field and Forage Crops. 2 hours.
- Fall 2003 Soil Fertility 440. Instructor for 3 credit undergrad/graduate level course.
- Fall 2003 Perspectives on Agriculture and the Environment 11:015:101:19. Guest lecture on Soil Basics. 2 hours.
- Summer 2003 Biology 402N: Botany. Guest lecture on Soils and Plant Nutrition at Centenary College, Hackettstown, NJ. 2 hours.
- Spring 2003 Nutrient Management for Agriculture and Environment 496. Instructor for 3 credit undergrad/graduate level course.
- Spring 2003 Animal Science 406. Guest lecture on Nutrient Management and Soil Fertility.

- 1.5 hours.
- Spring 2003 Nutrient Management for Agriculture and Environment 496. Instructor for 3 credit undergrad/graduate level course.
- Fall 2002 Graduate Program in Plant Biology. Guest lecture on Comparative Plant Nutrition. 1 hour.
- Spring 2001 Plant Physiology 382. Guest lectures on Plant Nutrition. 3 hours.
- Spring 2001 Animal Science 406. Guest lecture on Nutrient Management and Soil Fertility. 2 hours.
- Fall 2001 Soil Fertility 452. Instructor for 3 credit undergrad/graduate level course.
- Fall 2000 Principles of Organic Crop Production 221. Guest lectures on Soil Fertility. 2 hours.
- Fall 2000 Soil Fertility 452. Instructor for 3 credit undergrad/graduate level course.
- Spring 1999 Animal Science. Guest lectures on Nutrient Management and Soil Fertility. 2 hours.
- Fall 1998 Principles of Organic Crop Production. Guest lectures on Soil Fertility. 2 hours.
- Spring 1998 Animal Science. Guest lectures on Nutrient Management. 2 hours.
- Spring 1998 Horticultural Topics. Guest lectures on Soil Fertility, Mineral Nutrition, and Crop Production. 4 hours.
- Fall 1997 Organic Crop Production. Guest lectures on Soil Fertility and Soil Test Interpretation. 3 hours.
- Fall 1996 Problems in Plant Biology: Introduction to Plant Biology. Guest lectures on Soils and Plant Nutrition. 2 hours.
- Spring 1996 Soil Improvement and Fertilizers. Taught course for Certification in Horticulture Program at Brooklyn Botanic Garden, NY. Eighteen hours of lecture.
- Spring 1995 George H. Cook Scholar, Carrie L. Smith. Undergraduate thesis title: Effects of Potassium Fertilization on 'Seyval Blanc' and 'Vidal Blanc' Juice and Wine Quality. Co-Advisor with Joseph A. Fiola, Ph.D.
- Fall 1993 Introduction to Turfgrass Management. Guest lectures on Soil Chemistry, Soil Testing and Turfgrass Fertilization. Developed new laboratory experiment to teach Biology of Turfgrass Roots. 3 hours.
- Fall 1992 Introduction to Turfgrass Management. Guest lectures on Soil Chemistry, Soil Testing, and Turfgrass Fertilization. 3 hours.
- Fall 1992 Sustainable Agriculture. Guest lectures on Sustainable Soil Fertility Practices. 1 hour.
- Spring 1992 Graduate Program in Plant Biology. Guest lecture on Manganese Nutrition of Field Crops. 1 hour.

SEMINARS:

- **International/National/Regional Invited Seminars:**

- 2009 Bio-Energy in Soil, Food and Health, A New Perspective on Organic Farming and Food. Mindshift Institute. Forbes Library, Northampton, MA. 50 participants
- 2008 Life Force Explorations in Soil, Food, and Health. Weston A. Price Foundation Wise Traditions Annual Conference. San Francisco, CA. 100 participants
- 2008 Organic Farming in New Jersey. Evening lecture hosted by Community Green http://www.communitygreen.org/About_.html . Historic English Farm, Liberty Corner, NJ. 35 participants.
- 2008 Soil Science and Soil Fertility. Animal Waste Management on Small Livestock Farms. A USEPA/Land Grant University Training Course. New Brunswick, NJ. 60 participants.
- 2008 Soil Fertility and Organic Agriculture. Long Island Agricultural Forum. Riverhead, NY. 60 participants.
- 2007 Bio-Energetic Quality of Soil and Food. Orgonomy Today, Center for Orgonomic Research and Education, Lancashire, UK. 20 participants.
- 2007 Orgonomy and Agriculture: Energetic Quality of Fertile Soil and Fresh Food. Wilhelm Reich in the 21st Century, 2007 International Conference on Orgonomy. Saddleback Mountain and the Wilhelm Reich Museum (Orgonon), Rangely, ME. 120 participants.
- 2007 Soil Fertility in Organic Agriculture. New England Vegetable and Berry Growers' Association. Waltham, MA. 50 participants.
- 2007 A Passion for Fresh Food from Fertile Soil – Observations and Lessons from the History of the Organic Movement. Maryland Organic Food and Farming Association. Annapolis, MD. 100 participants.
- 2006 Organic Agriculture History. Weston A. Price Foundation Wise Traditions Annual Conference. Chantilly, VA. 930 participants
- 2006 Sustainable Agriculture, Concepts and Definition. Panel discussion leader with Ross Welch, Arden Anderson, and Jerry Brunetti. Weston A. Price Foundation Wise Traditions Annual Conference. Chantilly, VA. 100 participants
- 2006 Organic Agriculture History. Northeast Small Farm & Rural Living Expo. Sussex County, Augusta, NJ. 10 participants
- 2006 Soil Fertility Under Organic Management. Northeast Small Farm & Rural Living Expo. Sussex County, Augusta, NJ. 20 participants.
- 2006 Soil Surveys and Current Corn Yield Potentials. Northeast Regional Cooperative Soil Survey Conference. Rutgers EcoComplex. 100 participants.
- 2004 Soil Fertility and Disease Suppression. Northeast Branch of the American Society of Agronomy and Soil Science Society of America. Continuing Education Session for Certified Crop Advisors. Rutgers EcoComplex. 50 participants.
- 2003 An Appreciation of Firman E. Bear's Contributions to Soil Science. Council on History, Philosophy, and Sociology of Soil Science. Soil Science Society of America Meeting, Denver, CO. Invited Seminar.

- 2003 Sir Albert Howard and the Origins of Organic Agriculture. Northeast Organic Farming Association 29th Annual Summer Conference. Hampshire College, Amherst, MA. 15 participants.
- 2003 Soil Nitrate Testing for Vegetable Crops. Northeast Branch of the American Society of Agronomy and Soil Science Society of America. Continuing Education Session for Certified Crop Advisors. Burlington, VT. 35 participants.
- 2002 Sir Albert Howard's 'War in the Soil' and the Origins of Organic Agriculture. Council on History, Philosophy, and Sociology of Soil Science. Soil Science Society of America Meeting, Indianapolis, IN. Invited Seminar.
- 1998 Techniques for Improving the Nitrogen Management of Sweet Corn (Poster Presentation). 10th Anniversary SARE Conference, Austin, TX. 400 participants.
- 1997 Field Assessment of Soil Quality. Northeast SARE Soil Health Training. Rodale Institute, PA. 80 participants.
- 1995 Presidedress Soil Nitrate Testing. USDA-NE67: Coordinating Committee for Soil Testing. Training Session for Certified Crop Advisors. Cornell University, NY. 60 participants.
- 1995 In-Season Nitrogen Availability Testing to Predict Need for Sidedress Nitrogen. NE67: Coordinating Committee for Soil Testing. Training Session for Certified Crop Advisors. University of Maine, ME. 25 participants.
- 1995 Extension of the Presidedress Soil Nitrate Test for Field Corn and Sweet Corn. The Northeast Region Sustainable Agriculture Research and Education Symposium. 80 participants.

Invited University Seminar:

- 1993 Potassium and Chloride Nutrition of Plants: Matching the Nutrient Demand of Crops with the Nutrient Supply from Soils. The University of Vermont - William Raymon Memorial Lecture Series. 15 participants.
- 1993 Chloride Nutrition of Corn. Soil Science and Plant Nutrition Department. University of Western Australia. 15 participants.

• **Invited Professional Society Seminar:**

- 2003 Chemistry in the Garden. American Chemical Society. Princeton University, NJ. 40 participants.
- 1996 Using Chemistry to Solve Soil Fertility Problems. American Chemical Society, Trenton Section, NJ. 8 participants.

• **Invited Industry Education:**

- 2009 Know Your Soil Fertility Residual Nitrogen. Pennsylvania Crops Meeting. Montgomery County, PA. 28 participants.
- 2009 Pumpkin Production Practices that Reduce Input Cost. Mid-Atlantic Pumpkin School. Westhampton, NJ. 30 participants.

- 2009 Know Your Soil Fertility Residual Nitrogen. Pennsylvania Crops Meeting. Lehigh County, PA. 30 participants.
- 2009 Organic Amendments & Soil Testing to Manage Nitrogen for Vegetable Crops. Atlantic Coast Agricultural Convention & Mid-Atlantic Direct Marketing Conference. Atlantic City, NJ. 60 participants.
- 2009 Freedom to Eat Farm Fresh Foods from Fertile Soil: Organic Raw Milk, Vegetables, etc. Atlantic Coast Agricultural Convention & Mid-Atlantic Direct Marketing Conference. Atlantic City, NJ. 40 participants.
- 2008 Soil Testing to Guide Nitrogen Management for Sweet Corn. Great Lakes Expo Fruit & Vegetable Meeting, Grand Rapids, MI. 200 participants.
- 2008 Pumpkin Production Practices That Reduce Input Cost. Great Lakes Expo Fruit & Vegetable Meeting, Grand Rapids, MI. 200 participants.
- 2008 Can Soil Fertility Influence Tomato Flavor? Atlantic Coast Agriculture Meeting. 200 participants.
- 2007 Organic Gardening, Fresh Food from Fertile Soil. Clark Public Library, NJ. 5 participants.
- 2007 Composting and Organic Gardening. The Frelinghuysen Arboretum Haggerty Education Center. Morristown, NJ. 21 participants.
- 2007 Organic Gardening, Fresh Food from Fertile Soil. Montville Twp. Public Library, NJ. 12 participants.
- 2007 Soil Fertility in Organic Agriculture. Integrating Organic Practices into Your Landscape Business. A one day symposium for professional landscapers. Stony Brook-Millstone Watershed Association, Pennington, NJ. 30 participants.
- 2007 A Passion for Fresh Food from Fertile Soil – Raw Milk and the Organic Movement – Parallels in History. Northeast Organic Farming Association of New Jersey. Presented 15 min. powerpoint at start of panel discussion on session, Reasons for Raw Milk, Pennington, NJ. 50 participants.
- 2007 Pumpkin Grown with Leaf Mulch Produces Large Attractive Fruit and Builds Soil Quality. Mid-Atlantic Pumpkin School. Westhampton, NJ. 67 participants.
- 2006 Concerns with Hazardous Materials in Fertilizers. Mid-Atlantic Crop Management School Workshop. Ocean City, MD. Presented twice with an audience of 50 participants each session.
- 2006 Soils and Soil Fertility. The Frelinghuysen Arboretum Haggerty Education Center. Morristown, NJ. 16 participants.
- 2006 Soil Fertility Research with Corn Grown on Northeast USA Soils. Northeast Regional Cooperative Soil Survey Conference. Rutgers EcoComplex, Bordentown, NJ. 40 participants
- 2006 Soil Fertility and Plant Nutrition. Garden State Daylily Growers. Deepcut Gardens, Middletown, NJ. 17 participants.
- 2006 Organic Agriculture History & Philosophy. Seeds of Change Conference. Rutgers University, New Brunswick, NJ. 35 participants.
- 2006 Basics of Sampling, Testing, and Interpreting Results of Soil Tests. Pennsylvania Association of Sustainable Agriculture Conference Workshop. State College, PA. Presented with Doug Beegle and Ann Wolf to an audience of 100 participants. My contribution to the workshop was concerned with Soil Fertility Recommendations for Organic Farming.

- 2005 Correcting Manganese Deficiency on Mid-Atlantic Soils and Crops. Mid-Atlantic Crop Management School Workshop. Ocean City, MD. Presented twice with an audience of 40 participants each session.
- 2005 Tools for Nitrogen Management in Sweet Corn. Empire State Fruit & Vegetable Expo. Syracuse, NY. 200 Participants.
- 2005 Recent Findings from Soil Fertility Research on Pumpkin. Empire State Fruit & Vegetable Expo. Syracuse, NY. 100 Participants.
- 2004 Nutrient Removal by Corn Grain Harvest. Mid-Atlantic Crop Management School Workshop. Ocean City, MD. Presented twice with an audience of 50 participants each session.
- 2004 Soil Amendments for Blueberry. Blueberry ICM School. Jamesburg, NJ. 60 Participants.
- 2004 Soil Nitrate Testing PSNT for Vegetable Crops. Long Island Agricultural Farm, NY. 50 Participants.
- 2004 Pre-sidedress Soil Nitrate Test – Weather Related Considerations. Crop Production Services, Inc. Sussex, NJ. 50 participants.
- 2003 Soil Nitrate Testing for Vegetable Crops. Mid-Atlantic Crop Management School Workshop. Ocean City, MD. Presented twice with an audience of 80 participants each session.
- 2002 Silicon Nutrition for Disease Control on Pumpkin. Mid-Atlantic Pumpkin School. Bridgeport, NJ. 80 participants.
- 2002 Silicon Fertilization of Pumpkin. Mid-Atlantic Fruit and Vegetable Convention. Hershey, PA. 100 participants.
- 1998 Maximum Yield Research Overview - What Does It Take For 250+ Bushels/Acre? Pennsylvania Corn and Soybean Conference. Grantville, PA. 200 participants.
- 1998 Maximum Yield Research Overview - Bt Corn Hybrids. Crop Production Services, Inc. Pittstown, NJ. 60 participants.
- 1998 Technologies for Sweet Corn Nitrogen Management. Pennsylvania Sweet Corn Growers School. Berks County Agricultural Center, PA. 100 participants.
- 1997 Using the Presidedress Soil Nitrate Test for Sweet Corn Nitrogen Fertility Management. Pennsylvania Vegetable Growers Association, Hershey, PA. 50 participants.
- 1996 Effect of Dairy Manure on Dryland Corn Production. Dryland Corn Production Meeting, Linthicum, MD. Agronomic Management Systems, Great Falls, VA. 18 participants.
- 1992 Potassium Fertilizer Placement for Corn and Soybean. AGWAY - College Agronomy Conference, Syracuse, NY. 80 participants.
- 1992 Manganese Responses in New Jersey Field Crops. AGWAY - College Agronomy Conference, Syracuse, NY. 80 participants.

Professional Tour:

- 2006 Organized and lead a professional bus tour in association with the USDA-NRCS for the World Congress of Soil Science meeting in Philadelphia: New Jersey Pine Barrens Soils Ecology Tour. 50

participants. NJN network filmed the science segment that ran on TV on July 14, 2006. This can be viewed on their web site: <http://www.njn.net/newspublicaffairs/science/>

PROFESSIONAL OUTREACH:

- **Continuing Professional Education Center:**

- 1998 Soil Fertility Test Interpretation. Rutgers Professional Golf Turf Management School. 42 participants.
- 1991 Organic Fertilizers for the Home Garden. Sixteenth Annual Home Gardeners School. 75 participants.
- 1991 Soil Acidity and Liming. Landfill Closure Symposium. 30 participants.
- 1991 Soil Fertility and Plant Nutrition. Course: Improving Turfgrass Survival. 50 participants.

- **In-Service Education (Rutgers Cooperative Extension):**

- 2000 Coordinated an in-service training session with Dr. Uta Krogmann for county agricultural agents and Extension specialists to provide an overview of the Guidelines for Land Application of Sewage Sludge for New Jersey Agriculture. 30 participants.
- 1994 Presidedress Soil Nitrate Test. In-Service Training for Integrated Pest Management. 30 participants.
- 1993 Coordinated an in-service training session with Dr. Harry Motto for county agricultural agents and Extension specialists to instruct them in the changes at Rutgers soils laboratory and to provide an update on soil fertility. Overview of Changes in Soil Testing at Rutgers; Soil Test Fertility Ratings; Micronutrient Needs of Soils and Crops in New Jersey; Corn Responses to Chloride in Maximum Yield Research. In-Service Training in Soil Fertility for Extension specialists and agricultural agents. Program Coordinator. 49 participants.
- 1991 Overview of Organic Fertilizers. In-Service Training on Organic Farming for Extension specialists and county agricultural agents. 25 participants.
- 1990 Recent Soil Fertility Research; The Presidedress Soil Nitrate Test. In-Service Training on Soil Management for Extension specialists and county agricultural agents. 20 participants.

- **Integrated Crop Management Training Program:**

- 1999 Soil Fertility and Nutrient Management. NRCS Core-4 Training Program. 30 participants.
- 1995 Plant Nutrition. Field Crop and Vegetable Integrated Crop Management Workshop. 50 participants.
- 1995 Problem Solving with Soils and the PSNT. Integrated Crop Management Workshop. 8 participants.
- 1994 Soil Sampling; Nutrient Deficiencies; Presidedress Soil Nitrate Test. Integrated Crop Management Workshop. 10 participants.
- 1991 Understanding Soil Test Recommendations. Integrated Crop Management Workshop. 6 participants.
- 1991 Crop Nutrient Deficiency Symptoms; The Presidedress Soil Nitrate Test. Training

Program for ICM Scouts. 10 participants.

- **Professional Workshop Presentations:**

- 1993 Corn Responses to Chloride. Mid-Atlantic Soil Test Workshop. Richmond, VA. 15 participants.
- 1992 Chemical Properties of Virgin and Cultivated New Jersey Soil Profiles. Mid-Atlantic Soil Test Workshop. Richmond, VA. 15 participants.
- 1992 Nutrient Management Demonstration: Using the Presidedress Soil Nitrate Test. Penn Jersey Crop Management Field Day. Rutgers University Snyder Research and Extension Farm. Pittstown, NJ. 200 participants.
- 1991 Results of Presidedress Soil Nitrate Test Field Trials in New Jersey. NEC-82: Coordinating Committee for Nitrogen Management in the Northeast. Newark, NJ. 15 participants.
- 1991 Results of the 1990 Soil and Plant Sample Exchange. Mid-Atlantic Soil Test Workshop. Richmond, VA. 15 participants.
- 1991 Soil Fertility Research and Demonstration: Soybean Responses to Chloride, Potassium, and Manganese. Mid-Atlantic Soybean Association. Adelphia, NJ. 35 participants.
- 1991 Correction of Manganese Deficiency in Alfalfa. Mid-Atlantic Soil Test Workshop. Richmond, VA. 15 participants.

- **Statewide Extension Meeting Presentations:**

- 2006 Soils, An Introduction for Children. New Jersey Department of Agriculture – Bring Your Daughters to Work Day. Trenton, NJ. 25 participants
- 2006 Fertilization of Christmas Trees and Understanding Soil Test Reports. New Jersey Christmas Tree Growers' Association 56th Annual Meeting. 100 participants.
- 2006 Choosing a Soil Test Lab. New Jersey Annual Vegetable Meeting. 20 participants.
- 2006 Managing Soil pH and Liming. New Jersey Annual Vegetable Meeting. 20 participants.
- 2006 Alternative Nutrient Sources. New Jersey Annual Vegetable Meeting. 20 participants.
- 2006 Soil Fertility under Organic Management. New Jersey Annual Vegetable Meeting. 30 participants.
- 2004 An Extension Program Concerning Hazardous Materials In Fertilizers. New Jersey Pest Control and Soil Fertility Conference. 40 participants.
- 2005 Beauty of Soil Color and Texture with Lessons in Soil Improvement. New Jersey Flower and Garden Show. 10 Participants.
- 2005 History of Organic Farming. New Jersey Annual Vegetable Meeting. 50 participants.
- 2005 Recent Findings from Soil Fertility Research on Pumpkin. New Jersey Annual Vegetable Meeting. 100 participants.
- 2004 Cook College Soil Science Update. Soil Survey Work Planning Conference. Somerset, NJ. 15 participants.

- 2004 Highlights in Nutrient Management from the 2004 NEB-ASA-SSSA-CCA Program. New Jersey Pest Control and Soil Fertility Conference. 45 participants.
- 2004 Soil Fertility and Turfgrass Disease Suppression. Rutgers Turfgrass Research Field Day. 250 participants.
- 2004 Understanding Your Soil Fertility Test Report. New Jersey Flower and Garden Show. 20 Participants.
- 2003 Manganese Soil Fertility Research Update. New Jersey Pest Control and Soil Fertility Conference. 60 participants.
- 2003 I Have My Soil Test Analysis: What Do I Do Now? New Jersey Turfgrass Association. 100 participants.
- 2003 The History and the Origin of Organic Farming and Gardening. Master Gardener Association of Ocean County. 60 participants.
- 2003 Shade Tree Leaves for Soil Improvement – Experiences with Tomato (and other crops). New Jersey Annual Vegetable Meeting. 60 participants.
- 2003 Plant Nutrient Uptake in Sweet Corn. New Jersey Annual Vegetable Meeting. 100 participants.
- 2003 Diagnosing Disorders of Vegetable Crops. New Jersey Annual Vegetable Meeting. 16 participants.
- 2002 Nutrient Removal by Crop Harvest, an Essential Component of Nutrient Management Planning. New Jersey Pest Control and Soil Fertility Conference. 60 participants.
- 2002 Nutrient Management in Forestry. Rutgers Forestry Symposium. 25 participants.
- 2002 Lime and Fertilizer Management for Rapid Turfgrass Establishment. Rutgers Turfgrass Research Field Day. 300 participants.
- 2002 Lime Requirements for New Jersey Blueberry Producing Soils. New Jersey Annual Vegetable Meeting. 80 participants.
- 2002 Soil Nitrate Testing as a Guide to Nitrogen Management. New Jersey Annual Vegetable Meeting. 50 participants.
- 2002 Demonstration of Soil pH Test Kits. New Jersey Annual Vegetable Meeting. 50 participants.
- 2002 Managing Natural Sources of Nitrogen. Northeast Organic Farming Association of New Jersey Annual Conference. 40 participants.
- 2001 Nutrient Management for Tree Fruit, Field Crops, and Vegetables from the Perspective of Comparative Plant Nutrition. New Jersey Agribusiness Association. 60 participants.
- 2001 Recycling Grass Clippings to Sustain Soil Fertility. Rutgers Turfgrass Research Field Day. 300 participants.
- 2001 Breeding Under-Utilized Perennial Crops. Funk, Molnar, Heckman. Rutgers Turfgrass Research Field Day. 300 participants.
- 2001 Silicon Soil Amendments for Disease Control in Pumpkins. Sustainable Agriculture Research Twilight Meeting. Rutgers Snyder Farm. 40 participants.

- 2001 Soil Nitrate Testing for Vegetable Production. Sustainable Agriculture Research Twilight Meeting. Rutgers Snyder Farm. 40 participants.
- 2000 Silicon Nutrition for Disease Control and Yield Improvement on Pumpkin. New Jersey Pest Control and Soil Fertility Conference. 89 participants.
- 2000 Manganese Needs of Soils and Crops in New Jersey. New Jersey Pest Control and Soil Fertility Conference. 89 participants.
- 2000 Micronutrient Deficiencies and Management. Rutgers Blueberry Diagnostic Clinic. 20 participants.
- 2000 Soil Fertility and Nutrient Management. NRCS "Core-4" Training Program. 30 participants.
- 2000 Soil Nitrate Testing for Organic Vegetable Production. Small Farm Sustainable Agriculture Field Tour. Snyder Research and Extension Farm. 50 participants.
- 2000 Influence of Clipping Recycling, Nitrogen Fertilizer Rate, and Nitrogen Source on Turfgrass Quality in Kentucky Bluegrass. Rutgers Landscape Turf Research Field Day. 150 participants.
- 2000 Characteristics of City Shade Tree Leaves as Mulch. Fruit Twilight Meeting at Cream Ridge. 50 participants.
- 2000 Micronutrients for Blueberry. Rutgers Cranberry/Blueberry Research Station. 20 participants.
- 1999 Nutrient Management for Field Corn. New Jersey Agribusiness Association. 60 participants.
- 1999 Presidedress Soil Nitrate Test for Fall Cabbage. New Jersey Agribusiness Association. 60 participants.
- 1999 Understand Your Soils: Using Testing and Interpretation to Benefit Your Customer and Your Business. New Jersey Turfgrass Expo. 100 participants.
- 1999 Soil and Nutrients for Christmas Trees, New Jersey Christmas Tree Growers' Association Summer Tour and Trade Show. 40 participants.
- 1999 Reading and Understanding Soil Fertility Test Reports. Rutgers Turfgrass Research Field Day. 300 participants.
- 1999 Effect of Phosphorus on Corn. Rutgers Agricultural Research and Extension Center and New Jersey Agribusiness Association Field Day. 100 participants.
- 1999 Sweet Corn Nitrogen Management with the Nitrogen Stalk Test. New Jersey Annual Vegetable Meeting. 120 participants.
- 1999 Cabbage: Getting Ahead with Soil Fertility. New Jersey Annual Vegetable Meeting. 100 participants.
- 1999 Phosphorus Issues in Soil and Understanding Recommendations. New Jersey Annual Vegetable Meeting. 80 participants.
- 1999 Pre-Plant Soil Testing and Liming. Viticulture Field Day at Cream Ridge, NJ.

- 20 participants.
- 1999 Boron Management for Optimal Fruit Set. Viticulture Field Day at Cream Ridge, NJ. 20 participants.
- 1999 Phosphorus Issues in the Environment and Soil Fertility Recommendations for Turfgrass. Eighth Annual Rutgers Turfgrass Symposium. 40 participants.
- 1998 Kentucky Bluegrass Response to Mowing Practices and Nitrogen Fertility Management. New Jersey Turfgrass Expo. 500 participants.
- 1998 Turfgrass Quality Response to Mowing and Nitrogen Fertility Management. New Jersey Agribusiness Annual Meeting. 35 participants.
- 1998 Phosphorous Fertilizer Recommendations for Corn. Field and Forage Crop Twilight Meeting. Rutgers Snyder Farm. 75 participants.
- 1998 Bt and Non-Bt Corn Grown on Manured Soil. Field and Forage Crop Twilight Meeting. Snyder Farm. 75 participants.
- 1998 Phosphorous Management in Corn. Twilight Field Corn Meeting. 103 participants.
- 1998 Liming of Fruit Crops. Rutgers Cream Ridge Strawberry Breeding/Variety Showcase and Twilight Fruit Meeting. 50 participants.
- 1998 Turfgrass Mowing Practice and Nitrogen Fertility Management. Rutgers Turfgrass Research Field Day. 300 participants.
- 1998 Turfgrass Nitrogen Requirement and Mowing Practice. New Jersey Landscape Contractors Association. Foran Hall, Rutgers University. 40 participants.
- 1998 New Technology for Optimizing Nitrogen Management in Sweet Corn. New Jersey Annual Vegetable Meeting. 120 participants.
- 1998 Soil Fertility Test Interpretation: Phosphorus, Potassium, Magnesium and Calcium. New Jersey Annual Vegetable Meeting. 80 participants.
- 1998 Soil Texture Determination. New Jersey Annual Vegetable Meeting. 80 participants.
- 1998 Soil Health Test Kit. New Jersey Annual Vegetable Meeting. 80 participants.
- 1997 Liming Soils for Tree Fruit Production. Cream Ridge Strawberry Breeding Variety Showcase and Twilight Fruit Meeting. 50 participants.
- 1997 Boron Nutrition of Fruit Crops. Cream Ridge Breeding/Variety Showcase and Twilight Fruit Meeting. 50 participants.
- 1997 Effect of Nitrogen Sources, Sulfur, and Lime on the Development of Summer Patch and Yellow Ring Diseases of Kentucky Bluegrass. Rutgers Turfgrass Research Field Day, Golf Course and General Turfgrass Maintenance Sections. 300 participants.
- 1997 Fertilizer and Liming Materials. State Soil Conservation Committee, Conservation Program Personnel Seminar. 7 participants.
- 1997 End-of-Season Evaluation of Nitrogen Fertility Program by Stalk Tissue Test. New Jersey Annual Vegetable Meeting. 100 participants.

- 1997 Double Cropping Fall Cabbage After Early Season Vegetables. New Jersey Annual Vegetable Meeting. 100 participants.
- 1997 Soil Organic Matter Management. New Jersey Annual Vegetable Meeting. 80 participants.
- 1997 Fertilizer and Liming Materials. New Jersey Conservation Program. Personnel Training Seminar. 10 participants.
- 1996 Understanding Changes to the New Jersey Lime Law. New Jersey Agribusiness Annual Meeting. 35 participants.
- 1996 Nutritional Control of Summer Patch of Kentucky Bluegrass Caused by *Magnaporthe poae*. Rutgers Turfgrass Research Field Day, Golf Course and General Turfgrass Maintenance Sections. 300 participants.
- 1996 Impact of Mowing Practices and Fertilizer Sources on Turfgrass Quality. Rutgers Turfgrass Research Field Day, Golf Course and General Turfgrass Maintenance Sections. 250 participants.
- 1996 Soil Preparation. Reeves-Reed Arboretum. 20 participants.
- 1996 Biosolids and Crops. New Jersey Water Environment Association Biosolids Management Conference. 30 participants.
- 1996 Promoting Soybean Nodulation and Nitrogen Fixation. New Jersey Soybean Twilight Meeting and Variety Demonstration. 30 participants.
- 1996 Evaluation of Potassium Sources for the Vineyard. Grape Expectations, a Viticultural and Enological Symposium. 70 participants.
- 1996 Correction of Manganese Deficiency in Soybeans: Results, 1991-1995. New Jersey Soybean Producer Meeting and Checkoff Update. 90 participants.
- 1996 Using the Presidedress Soil Nitrate Test for Sweet Corn Fertility Management. New Jersey Annual Vegetable Meeting. 200 participants.
- 1995 Evaluation of N-Viro Aglime as a Soil Amendment. New Jersey Agribusiness Association Meeting. 50 participants.
- 1995 Results from 1995 Fertilizer Trials. New Jersey Agribusiness Association Meeting. 50 participants.
- 1995 Soil Fertility Management for Organic Field Crop Production. Sponsored by the Northeast Organic Farming Association. 20 participants.
- 1995 Turfgrass Tolerance of Aluminum in Acid Soil. Fourth Annual Rutgers Turfgrass Symposium. 50 participants.
- 1995 Sidedress Nitrogen Rates of Sweet Corn Based on Soil Test. New Jersey Annual Vegetable Meeting. 10 participants.
- 1995 Biostimulants for Peach Tree Establishment. Cream Ridge Twilight Fruit Meeting. 60 participants.
- 1995 Building Better Garden Soil. New Jersey State Chrysanthemum Society. 30 participants.
- 1994 Chemical Composition of Municipal Leaf Waste in New Jersey. New Jersey Agribusiness Association. 50 participants.

- 1994 Determining the Need for Sidedressing Sweet Corn by Soil Testing. New Jersey Agribusiness Association. 50 participants.
- 1994 Impact of Mowing Practices and Fertilizer Sources on Turfgrass Quality. New Jersey Turfgrass Association Expo., Atlantic City, NJ. 200 participants.
- 1994 Influence of Fertilization and Mowing Practices on Landscape Turf. Rutgers Turfgrass Research Field Day. Rutgers Turfgrass Research Center, Hort Farm II. 300 participants.
- 1994 Aluminum Tolerance in Turfgrass. Rutgers Turfgrass Research Field Day. Rutgers Turfgrass Research Center, Hort Farm II. 300 participants.
- 1994 General Soils and Plant Nutrition. New Jersey State Chrysanthemum Society. 40 participants.
- 1994 Presidedress Soil Nitrate Test for Sweet Corn. New Jersey Vegetable Growers Meeting. 100 participants.
- 1994 Kentucky Bluegrass Fertilizer Trials. Turfgrass Equipment, Irrigation and Suppliers Field Day. Rutgers Turfgrass Research Center. 100 participants.
- 1993 Nitrogen Fertilization in Sweet Corn. Joint Meeting of Plant Food Education Society of New Jersey and Pesticide Association of NJ. 50 participants.
- 1993 Evaluation of Coated Urea Fertilizers. Rutgers Turfgrass Research Field Day. Rutgers Adelphia Plant Science Research Center. 30 participants.
- 1993 Soil Fertility Research on Soybean. Soybean Promotion and Research Checkoff Update. New Jersey Soybean Board. 100 participants.
- 1992 Understanding Soils, Fertilizers and Plant Nutrition. Northeast Master Gardener Conference. 60 participants.
- 1992 Soils Testing, Interpreting Results and Recommendations. New Jersey Turfgrass Exposition, Somerset, NJ. 60 participants.
- 1992 Production Agriculture Research and Extension Programs at Rutgers Plant Science Research Station, Adelphia, NJ. Cook College Board of Managers Meeting. 35 participants.
- 1992 Research on Sweet Corn Using the Presidedress Soil Nitrate Test. Field Day for Organic Growers at Rutgers Snyder Research and Extension Farm. 90 participants.
- 1992 Influence of Organic and Synthetic Nitrogen Amendments and pH on Turf Quality and Summer Patch Development. Rutgers Turfgrass Research Field Day. 250 participants.
- 1992 The New Rutgers Soil Testing Lab. Conference on Marketing Organic Produce in New Jersey. Sponsored by Natural Organic Farmers Association of New Jersey. 100 participants.
- 1992 Changes in Chemical Properties of New Jersey Soils as a Result of Lime and Fertilizer Applications. USGS/NJDEPE Workshop on Radium in Groundwater. Trenton, NJ. 30 participants.
- 1992 Response of Cabbage and Radish to an Organic Biostimulant. Annual Vegetable Growers Meeting, Atlantic City, NJ. 50 participants.
- 1992 Soil Fertility Research Update. Plant Food Educational Society of New Jersey. Freehold, New Jersey. 50 participants.

- 1991 Conserving Our Soil Quality: Farmland Management. Farmers and Environmentalists: Working Toward a Common Ground. Cook College, Rutgers University. 80 participants.
- 1991 Effect of Ascorbic Acid on Chlorophyll Content and Growth of Turfgrass. First Annual Rutgers Turfgrass Research Workshop. New Brunswick, NJ. 80 participants.
- 1991 Nutritional Control of Summer Patch. Rutgers Turfgrass Research Field Day. Rutgers University Adelphia Research Center. 250 participants.
- 1990 The Presidedress Soil Nitrogen Test for Corn. Field Crop Day at Rutgers University Adelphia Research Center. 50 participants.
- 1990 Chloride Nutrition of Corn. Field Crop Day at Rutgers University Adelphia Research Center. 50 participants.
- 1990 Evaluation of Nitrogen Form and Chloride for the Control of Summer Patch on Kentucky Bluegrass. Rutgers Turfgrass Research Field Day. Rutgers Turfgrass Research Center. 250 participants.

- **Multi-County Extension Meeting Presentations:**

- 2009 Lime Recommendations for Tree Crops. North Jersey Commercial Fruit Growers Meeting. Clayton, NJ. 35 participants.
- 2006 Zinc Recommendations for Tree Crops. North Jersey Commercial Fruit Growers Meeting. Clayton, NJ. 25 participants.
- 2006 Zinc Recommendations for Tree Crops. South Jersey Commercial Fruit Growers Meeting. Clayton, NJ. 20 participants.
- 2006 Utilizing Leaves in Crop Production with a New Focus on Pumpkin. North Jersey Commercial Vegetable Growers Meeting. Snyder Farm. Pittstown, NJ. 25 participants.
- 2005 Edible Landscaping. Princeton Chapter Weston A. Price Meeting. 9 participants.
- 2005 Fertilizers and Liming Materials for Fruit Crops. South Jersey Commercial Fruit Growers Meeting. Clayton, NJ. 25 participants.
- 2005 Lesson in Soil Fertility for Vegetables from the History of Soil Science. North Jersey Commercial Vegetable Growers Meeting. Snyder Farm. Pittstown, NJ. 25 participants.
- 2004 Nutrient Removal by Crop Harvest, an Essential Component of Nutrient Management Planning. Hunterdon County Crop Master Field Crop Meeting. 20 participants.
- 2003 Physical, Chemical, and Biological Qualities of Soil. Soils Twilight Meeting, Northeast Organic Farming Association. Princeton, NJ. 30 participants.
- 2003 How to Determine Lime Requirement of an Acid Soil. South Jersey Tree Fruit Meeting. Gloucester County Extension Office. Clayton, NJ. 30 participants.
- 2003 Update on Soil Fertility for Tree Fruit. North Jersey Tree Fruit Meeting. Snyder Farm. Pittstown, NJ. 30 participants.
- 2003 How to Determine the Lime Requirement of an Acid Soil. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 34 participants.

- 2003 How to Determine the Lime Requirement of an Acid Soil. Central Jersey Annual Field Crops Meeting. Mount Holly, NJ. 25 participants.
- 2003 Diagnosing Crop Nutrient Deficiencies. South Jersey Soils and Fertility Workshop. 40 participants.
- 2002 Tree Fruit Leaf Analysis. Evening Fruit Meeting. South Jersey Fruit Crops Meeting. 50 participants.
- 2002 Leaf Mulching and Composting in Fruit Orchards. Twilight Fruit Meeting. Summit City Farms and Mt. Pleasant Orchards. 30 participants.
- 2000 Soybean Soil Fertility Management. Soybean Twilight Meeting. 52 participants.
- 1999 Manganese Fertilization of Soybeans. Soybean Twilight Meeting. 50 participants.
- 1999 Soil Fertility Management for Correcting Manganese Deficiency. Soybean Twilight Meeting. 40 participants.
- 1999 Production Techniques for 250 Bushels Per Acre. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1998 Production Techniques for 250 Bushels Per Acre. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1998 Phosphorus Fertilization of Corn. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1998 Phosphorus Fertilization of Corn. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1998 Update on Phosphorus Use for Corn. Burlington and Salem County Field Crops Meeting. 103 participants.
- 1998 Leave the Clippings on Your Side of the Fence for a Greener Lawn. South Jersey Landscape Conference. 140 participants.
- 1998 Liming New Jersey Soils for Fruit Crops. South Jersey Fruit Crops Meeting. 60 participants.
- 1998 Liming New Jersey Soils for Vegetable Crops. North Jersey Vegetable Meeting. 60 participants.
- 1997 Soil Testing Principles, Practices and Contemporary Issues. Rutgers Integrated Pest Management Program in North Jersey. 20 participants.
- 1997 The New Agricultural Limestone Law in New Jersey. South Jersey Field Crops Meeting. Columbus, NJ. 20 participants.
- 1997 The New Agricultural Limestone Law in New Jersey. South Jersey Field Crops Meeting. Woodstown, NJ. 20 participants.
- 1997 Micronutrients. Southern New Jersey Soil Fertility Workshop. 50 participants.
- 1997 Soil Test Interpretation. Southern New Jersey Soil Fertility Workshop. 50 participants.
- 1997 New Agricultural Limestone Labeling Law. Southern New Jersey Soil Fertility Workshop. 50 participants.

- 1997 Nitrogen Management for Sweet Corn and Cabbage. Central Jersey Vegetable Growers Meeting. 40 participants.
- 1997 Soil pH Management. Whole Farm Nutrient Management Workshop, Bridgewater, NJ. 15 participants.
- 1997 Soil pH Management. Whole Farm Nutrient Management Workshop, Columbus, NJ. 15 participants.
- 1997 Soil pH Management. Whole Farm Nutrient Management Workshop, Tranquility, NJ. 15 participants.
- 1997 Soil pH Management. Whole Farm Nutrient Management Workshop, Woodstown, NJ. 15 participants.
- 1997 Powdery Mildew Control on Kentucky Bluegrass with Monopotassium Phosphate. Turf Foliar Fertilization & Fertigation Seminar, Deal Golf & Country Club, NJ. 16 participants.
- 1997 Soil Fertility Management. Soybean Twilight Meeting. 25 participants.
- 1997 Corn Response to Phosphorous Fertilizer. Corn Twilight Meeting. 20 participants.
- 1997 Nitrogen Fertility Management Using the Presidedress Soil Nitrate Test. Early Season Corn, Soybean and Alfalfa Twilight Meeting. 10 participants.
- 1997 Foliar Monopotassium Phosphate on Soybean; Is Co-Application of Manganese and Roundup Effective on Roundup Ready Soybeans; Is Foliar Applied Boron Needed for Maximum Corn Yield; Changes in Phosphorus Management for Corn; PSNT - Beyond Field Corn - A Look at Fall Cabbage. Fields Crops Tour of Adelphia Plant Science Research Center. 6 participants.
- 1997 Soil Fertility Management. Alfalfa Management Twilight Meeting. 12 participants.
- 1996 Update on Field Corn Fertility Research. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1996 Update on Field Corn Fertility Research. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1996 Presidedress Soil Nitrate Testing in a Wet Season. Integrated Pest Management Program. Northwest Jersey Twilight Meeting. 5 participants.
- 1996 Double Cropping Fall Cabbage and the Presidedress Soil Nitrogen Test. New Jersey Vegetable Growers Meeting. 40 participants.
- 1996 Update on Field Corn Fertility Research. North Jersey Field Crop Meeting. 40 participants.
- 1996 Nitrogen Needs of Double Cropped Cabbage. North Jersey Vegetable Meeting. 60 participants.
- 1995 Update on Presidedress Soil Nitrate Test. North Jersey Field Crop Meeting. 40 participants.
- 1995 Presidedress Soil Nitrate Test for Sweet Corn. Northwest Jersey Horticultural Research Twilight Meeting. 40 participants.

- 1995 Determining Need for Sidedress Nitrogen on Sweet Corn by Soil Test (PSNT). North Jersey Vegetable Meeting. 60 participants.
- 1995 Soil pH Management for Field Crops. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1995 Soil pH Management for Field Crops. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1995 Soil Fertility for Intensive Wheat Management. Central Jersey Field Crop Meeting. 2 participants.
- 1995 Crop Response to Manure Application. RCE Crops Meeting held at Russell Smith Farm near Warren Glen, NJ. 60 participants.
- 1995 Soils and the Environment. Sierra Club, Raritan Group. 10 participants.
- 1995 Effect of Manure Application on Corn Production. Rutgers Snyder Research and Extension Farm Twilight Field Crop Meeting. 50 participants.
- 1994 Heavy Metals in the Soil Environment. Grounds Maintenance Conference. Ocean City, NJ. 200 participants.
- 1994 Nitrogen Fertilizer Management in Field Corn. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1994 Nitrogen Fertilizer Management in Field Corn. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1994 Soil Acidity - A View From Australia. South Jersey Field Crop Meeting. Columbus, NJ. 50 participants.
- 1993 Fertilizer Trials on Kentucky Bluegrass. Rutgers Turfgrass Research Field Day. Rutgers Adelphia Plant Science Research Station. 250 participants.
- 1993 Heavy Metals in Agricultural Soils. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1993 Heavy Metals in Agricultural Soils. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1992 Results of Field Trials Using the Presidedress Soil Nitrate Test. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1992 Results of Field Trials Using the Presidedress Soil Nitrate Test. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.
- 1992 Soil-Plant-Animal Relationships and Environmental Quality. Sierra Club, Central Jersey Group. Princeton, NJ. 40 participants.
- 1992 Fertilizing, Liming and Soil Testing for Lawns and Gardens. Lawn and Garden Field Day. Rutgers Snyder Research and Extension Farm. 241 participants.
- 1992 Update on the Presidedress Soil Nitrate Test. Warren County IPM Meeting. 15 participants.
- 1991 Chemical Changes in Soil Profiles from the Long-Term Use of Fertilizers and Lime. Princeton Agricultural Association. Pennington, NJ. 15 participants.

- 1991 Using the Presidedress Soil Nitrate Test for Improved Nitrogen Fertilizer Recommendations. South Jersey Annual Field Crops Meeting. Runnemede, NJ. 30 participants.
- 1991 Using the Presidedress Soil Nitrate Test for Improved Nitrogen Fertilizer Recommendations. Central Jersey Annual Field Crops Meeting. Flemington, NJ. 30 participants.
- 1991 Using the Presidedress Soil Nitrate Test for Improved Nitrogen Fertilizer Recommendations. Central Jersey Annual Field Crops Meeting. Freehold, NJ. 30 participants.

• **Master Gardener County Extension Meeting Presentations:**

- 2008 Soils and Fertilizers. Union County Master Gardener Class. 35 participants
- 2008 Composting. Morris County Master Gardener Class. 45 participants
- 2007 Soils and Fertilizers. Union County Master Gardener Class. 18 participants
- 2007 Soils and Fertilizers. Union County Master Gardener Class. 20 participants
- 2006 Soils and Fertilizers. Union County Master Gardener Class. 16 participants
- 2005 Soils and Fertilizers. Union County Master Gardener Class. 16 participants
- 2004 Soils and Fertilizers. Union County Master Gardener Class. 33 participants.
- 2004 Soils and Fertilizers. Passaic County Master Gardener Class. 20 participants.
- 2004 Soils and Fertilizers. Essex County Master Gardener Class. 18 participants.
- 2003 Soils and Fertilizers. Union County Master Gardener Class. 24 participants.
- 2001 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 2001 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 2000 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 2000 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 1999 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 1999 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 1998 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 1998 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 1999 Soils and Fertilizers. Essex County Master Gardener Class. 50 participants.
- 1997 Soils, Fertilizers and Composting. Middlesex County Master Gardener Class. 40 participants.
- 1997 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 1997 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.

- 1996 Soils, Fertilizers and Composting. Middlesex County Master Gardener Class. 40 participants.
- 1996 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 1996 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 1995 Soils and Fertilizers. Middlesex County Master Gardener Class. 40 participants.
- 1996 Soils and Fertilizers. Passaic County Master Gardener Class. 40 participants.
- 1996 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 1995 Soils and Fertilizers. Middlesex County Master Gardener Class. 40 participants.
- 1995 Soils and Fertilizers. Union County Master Gardener Class. 40 participants.
- 1991 Soils and Fertilizers. Master Gardener Program of Ocean County. 30 participants.
- **County Extension Meeting Presentations:**
- 2006 History of Organic Agriculture. AP Honors Human Geography Class at Hunterdon Central Regional High School in Flemington, NJ. Field Trip to Cook College. 36 participants.
- 1998 Sweet Corn and Field Corn Fertility Studies Using Animal Manures as a Nutrient Source. Salem County Vegetable Meeting. 25 participants.
- 1998 Phosphorus Fertilization of Corn. Burlington County Field Crops Meeting. 40 participants.
- 1997 The New Agricultural Limestone Law in New Jersey. Burlington County Field Crops Meeting. 30 participants.
- 1997 Changes in Limestone Law. Salem Country Vegetable Meeting. 25 participants.
- 1997 Risks and Benefits of Limed-Sludge Applications. Salem Country Vegetable Meeting. 25 participants.
- 1996 Use of the Presidedress Soil Nitrate Test in Sweet Corn. Burlington County Sweet Corn Growers Meeting. 50 participants.
- 1996 Soil Fertility Management for Field Corn. Salem-Cumberland County Field Crop Meeting. 30 participants.
- 1996 Soil pH Management for Field Crops. Burlington County Field Crops Meeting. 60 participants.
- 1995 Managing Sweet Corn Nitrogen Using the Presidedress Soil Nitrate Test. Burlington County Sweet Corn Growers Meeting. 50 participants.
- 1995 Soil pH Management for Field Crops. Salem-Cumberland County Field Crop Meeting. 30 participants.
- 1994 Nutrient Contribution from Manure. Sussex County Manure Management Seminar. 30 participants.
- 1994 Soil Sampling. Sussex County Integrated Crop Management Workshop. 10 participants.

- 1994 Plant Nutrient Deficiencies. Sussex County Integrated Crop Management Workshop. 10 participants.
- 1994 Presidedress Soil Nitrate Test. Sussex County Integrated Crop Management Workshop. 10 participants.
- 1994 Use of Manure and the Presidedress Soil Nitrate Test for Sweet Corn. Burlington County Sweet Corn Growers Meeting. 60 participants.
- 1994 Balancing Soil Nutrients for Maximum Yield. Warren County Field Crops Meeting. Broadway, NJ. 40 participants.
- 1992 Nitrogen Management for Field Corn and Sweet Corn. Sussex County Pesticide Recertification. 30 participants.
- 1993 Correction of Manganese Deficiency in Soybean and Alfalfa. Salem County Alfalfa, Corn, and Soybean Twilight Meeting. Woodstown, NJ. 30 participants.
- 1993 Research on the Presidedress Soil Nitrate Test for Sweet Corn. Burlington County Sweet Corn Growers Meeting. 100 participants.
- 1992 Understanding the Presidedress Soil Nitrate Test. Middlesex County Board of Agriculture. 10 participants.
- 1992 Benefits of No-Till Farming. Middlesex County Farm Stewardship Program. South Brunswick, NJ. 10 participants.
- 1991 Successful Double Cropping Requires Adequate Soil Fertility. Burlington County Soybean Twilight Meeting. Moorestown, NJ. 30 participants.
- 1991 Matching Soil Nutrients to Crop Needs - Special Emphasis on Managing Nitrogen. Sussex County Field Crops Meeting. Newton, NJ. 10 participants.
- 1991 Understanding Soil Tests and Fertilizer Recommendations. Burlington County Soils Management Meeting. Mount Holly, NJ. 20 participants.
- 1990 Soil Fertility for Forage Production. Hunterdon County Forage Meeting. Flemington, NJ. 40 participants.
- 1990 Correction of Manganese Deficiency in Soybean. Burlington County Soybean Twilight Meeting. Moorestown, NJ. 30 participants.
- 1990 Pasture Soil Fertility Management. Burlington County Pasture Management Meeting. Mount Holly, NJ. 20 participants.
- 1990 Testing Soils for pH and Nitrate. Second Annual Statewide Master Gardener Field Day at Cook College. 80 participants.

- **Satellite Conference:**

- 1992 Coordinated and led discussion for Rutgers Cooperative Extension's participation and viewing of a satellite conference on "New Techniques for Nitrogen Testing". 16 participants.

- **Instructional Materials:**

Established Raw Milk Intranet Website:

A literature search is being conducted pertaining to both raw and pasteurized milk for The Rutgers New Jersey Agricultural Experiment Station. The information collected is for educational and research purposes. The literature collected so far has been organized and placed on the NJAES Intranet for ease of sharing information among scientists. The reference materials on the internal website provide a good mix of information with many different perspectives on raw milk. More information is being added as we continue to build this website. The current version enables agents and specialists to read widely from a full-spectrum of information sources to learn more about the raw milk issue and to answer questions. The website is for internal use only by Rutgers University faculty.

Heckman, J.R. 1996. Effect of Nitrate Versus Ammonium Nutrition on Rhizosphere pH of Turfgrass. An instructional slide set with script. 8 slides. Resource Center, Rutgers Cooperative Extension.

Heckman, J.R. 1995. Soil Testing for Home Lawns and Gardens. An instructional slide set, with script, to teach home gardeners how to take a soil sample for a soil fertility test. 24 slides. Resource Center, Rutgers Cooperative Extension.

Heckman, J.R. 1995. Presidedress Soil Nitrate Test. An instructional slide set, with script, demonstrating the use of this new soil tests. 30 slides. Resource Center, Rutgers Cooperative Extension.

Heckman, J.R. 1995. Home Landscaping: Your Ten Steps to Protecting Water Quality. 40" x 60" poster for display at lectures and meetings. Resource Center, Rutgers Cooperative Extension.

Heckman, J.R. 1993. Investigating Soil Plant Relationships with Color Images of Rhizosphere pH. Developed new laboratory exercise for students in Turfgrass Sciences and Soil Fertility.

Heckman, J.R. 1992. Testing Your Soil - A How-To Guide. A 40" x 60" poster for display at lectures and meetings. Resource Center, Rutgers Cooperative Extension.

Heckman, J.R. 1992. Factors Which Affect the Response of Corn and Soybean to Band and Broadcast Potassium Fertilizer. A handout supplement to my presentation at the Agway College Agronomy Conference.

- **Postdoctoral Trainees:**

2001- Dr. Stephanie Hamel. Research Projects: Calibration of Phosphorus Soil Tests for
1999 Turfgrass; Correlation of Lead Extraction by Three Soil Fertility Tests to EPA Method 3050.

1995- Dr. Haibo Liu. Research Project: Turfgrass Tolerance of Aluminum in Acid Soils.
1994

- **Graduate Students:**

2006 Doctoral Thesis Advisor for Mary C. Provance-Bowley, Plant Biology & Pathology Department.

1995 Master's Thesis Advisor for Wendy Hill, Plant Science Department.

1995 Doctoral Committee for Sally Brown, University of Maryland, Agronomy Department.

1994 Doctoral Committee for Richard Shaw, Environmental Sciences Department.

1993 Doctoral Committee for Carmen Enid Martinez, Environmental Sciences Department.

- **Undergraduate Students:**

2008 Advisor/sponsor to Philomena Chu for Cooperative Education Project.

2007 Advisor/sponsor to Kate Hair for Cooperative Education Project.

2004 Technical Advisor to Erin Hitchner for on-farm SARE project demonstration.

2002 Supervisor of Julie Sinistore for Cook College Co-op Education Program.

- 2001 Supervisor of Meghan Van Horn for Cook College Co-op Education Program.
- 2001 Supervisor of Jean Riling for Cook College Co-op Education Program.
- 2000 Supervisor of Cheryl Siracusa for Cook College Co-op Education Program.
- 1999 Supervisor of Margaret Zarzecka for Cook College Co-op Education Program.
- 1998 Supervisor of Scott Franzblau for Cook College Tutorial.
- 1998 Supervisor of David Rotter for Cook College Tutorial.
- 1998 Supervisor of Alison Garvey for Cook College Co-op Education Program.
- 1998 Supervisor of Melisa Allred for Cook College Co-op Education Program.
- 1997 Supervisor of Wayne Anastasia for Cook College Co-op Education Program.
- 1996 Supervisor of Sara Peters for Cook College Co-op Education Program.
- 1995 Three credits - Special Problem Course in Plant Science, Tim O'Brien. Co-Advisor with Dr. T. Sims, University of Delaware.
- 1993 Six credits - Cooperative Education Faculty Sponsor for Joe Clarke.
- 1993 Three credits - Special Problem Course in Plant Science, Wendy Hill.
- 1992 One credit - Special Problem Course in Plant Science, Corrie Platt.

- **High School Students:**

- 2001 Science Project Advisor of Kyle Bevilacqua, Soil Acidity and Tomato Growth, North Jersey Regional Science Fair.
- 1999 Sponsor of Diana Dzissah for the American Chemical Society's Project Seed Program.
- 1996 Science Project Advisor for Michael Bateman, Piscataway, NJ.
- 1994 Sponsor of Yudeca Sanchez for The American Chemical Society's Project Seed Program.
- 1993 Science Fair Project Advisor for T. Franklin from South Plainfield, NJ.

RESEARCH/EXTENSION/SCHOLARSHIP:

PUBLICATIONS:

- **Chapters in Books:**

- Heckman, J.R., R. Weil, and F. Magdoff. 2009. Organic Farming and Food Systems. 41 pages. In C. Francis. (ed.). Ecology of Organic Farming Systems. American Society Agronomy, Madison, WI. (In press).
- Heckman, J.R. and A. Wolf. 2008. Silicon Soil and Plant Analysis. 4 pages. In Sims, J.T. and A. Wolf. (ed.) 3rd edition of Recommended Soil Testing Procedures for the Northeastern United States. (In press).
- Heckman, J.R. 2007. Chlorine. pp. 279-291. In A.T. Barker and D. Pilbeam. (ed.). Handbook of Plant Nutrition. CRC Taylor & Francis, Boca Raton.
- Mulchi, C.L., P.F. Bell, C. Adumu, and J.R. Heckman. 1987. Bioavailability of Heavy Metals in Sludge-Amended Soils Ten Years After Treatment. pp. 235-260. In J.A. Saunders, L. Kosak-Channing, and E.E. Conn (ed.). Recent Advances in Phytochemistry. Vol. 21. Plenum Publishers, New York, New York.

- **Refereed Journal Articles:**

- Wyenandt, A.C., J.R. Heckman, and N.L. Maxwell. 2008. Pumpkin Fruit Size and Quality Improves with Leaf Mulch. HortTechnology. 18:361-364.
- Heckman, J.R. 2007. Sweet Corn Nutrient Uptake and Removal. HortTechnology 17:82-86
- Hamel, S.C. and J.R. Heckman. 2006. Predicting Need for Phosphorus Fertilizer by Soil Testing During Seeding of Cool Season Grasses. HortScience. 41:1690-1697.

- Heckman, J.R. 2006. A History of Organic Farming: Transitions from Sir Albert Howard's War in the Soil to USDA National Organic Program. *Renewable Agriculture and Food Systems*. 21:143-150.
- Heckman, J.R. 2006. A History of Organic Farming. *Wise Traditions*. 7:15-27. (A republication of a previously published peer reviewed journal article in *Renewable Agriculture and Food Systems*. 21:143-150.) New Edition includes two sidebars, not in the original publication: The Law of the Minimum, pp. 17, and The Law of Return pp. 18-19.
- Heckman, J.R., W. Jokela, T. Morris, D. Beegle, T. Sims, F. Coale, S. Herbert, T. Griffin, B. Hoskins, J. Jemison, M. Sullivan, D.K. Bhummla, G. Estes, and W.S. Reid. 2006. Calibration of Soil Test Phosphorus for Corn in the Northeast USA. *Agronomy Journal*. 98: 280-288.
- Singer, J.W., and J.R. Heckman. 2003. Soybean Response to Plant Density and Residual Soil Management System. *Journal Sustainable Agriculture*. Vol. 23, No. 2, pp. 79-90.
- Hamel, S.C., J.R. Heckman, K.L. Shilke-Gartley, and B. Hoskins. 2003. Lead Extraction Using Three Soil Fertility Tests and Environmental Protection Agency Method 3050: Correlations and Conversion Equations. *Communications in Soil Science and Plant Analysis*. Vol. 34, Nos. 19 & 20, pp. 2853-2873.
- Heckman, J.R., S. Johnston, and W. Cowgill. 2003. Pumpkin Yield and Disease Response to Amending Soil with Silicon. *HortScience*. 38(4):552-554.
- Heckman, J.R., B.B. Clarke, and J.A. Murphy. 2003. Optimizing Manganese Fertilization for the Suppression of Take-all Patch Disease on Creeping Bentgrass. *Crop Science*. 43:1395-1398.
- Heckman, J.R., J.T. Sims, D.E. Beegle, F.J. Coale, S.J. Herbert, T.W. Bruulsema, and W.J. Bamka. 2003. Nutrient Removal by Corn Grain Harvest. *Agronomy Journal*. 95:587-591
- Hill, W., J.R. Heckman, B.B. Clarke, and J.A. Murphy. 2003. Summer Patch Disease Severity on Kentucky Bluegrass in Response to Fertilizer Source. *Journal of Plant Nutrition*. 26:1499-1512.
- Heckman, J. R., R. Samulis, and P. Nitzsche. 2002. Sweet Corn Crop Nitrogen Status Evaluation by Stalk Testing. *HortScience*. 37(5):783-786.
- Heckman, J.R. 2002. In-season Soil Nitrate Testing as a Guide to Nitrogen Management for Annual Crops. *HortTechnology*. 12:706-710
- Heckman, J.R., T. Morris, J.T. Sims, J.B. Sieczka, U. Krogmann, P. Nitzsche, and R. Ashley. 2002. Presidedress Soil Nitrate Test is Effective for Fall Cabbage. *HortScience*. 37:113-117.
- Heckman, J.R., G.C. Pavlis, and W.L. Anastasia. 2002. Lime Requirements of New Jersey Blueberry Producing Soils. *HortTechnology*. 12:220-222.
- Hill, W.J., J.R. Heckman, B.B. Clarke, and J.A. Murphy. 2001. Influence of Liming and Nitrogen on the Severity of Summer Patch of Kentucky Bluegrass. *International Turfgrass Society Research Journal*. 9:388-393.
- Krogmann, U., J.R. Heckman, and L.S. Boyles. 2001. Nitrogen Mineralization of Grass Clippings - A Case Study in Fall Cabbage Production. *Compost Science and Utilization*. 9:230-240.

- Willmott, J.D. and J.R. Heckman. 2000. Chrysanthemum Response to Polyaspartic Acid in Peat-Based Media and Mineral Soil. *Journal of Plant Nutrition*. 24:1-5.
- Heckman, J.R., and D. Kluchinski. 2000. Agronomics of Land Application of Municipal Collected Shade Tree Leaves; I. Soil Properties. *Journal of Sustainable Agriculture* 17:33-40.
- Heckman, J.R., and D. Kluchinski. 2000. Agronomics of Land Application of Municipal Collected Shade Tree Leaves; II Soybean and Corn Production. *Journal of Sustainable Agriculture*. 17:41-52.
- Heckman, J.R., H. Liu, W.J. Hill, M. DeMillia, and W.L. Anastasia, 2000. Kentucky Bluegrass Responses to Mowing Practice and Nitrogen Fertility Management. *Journal of Sustainable Agriculture*. 15:25-33.
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 Heckman, J.R., and U. Krogmann. Yard Waste and Trash Don't Mix.
- 1998 Heckman, J.R. Manganese Management.
 Heckman, J.R. Wet Weather and Loss of Soil Nitrogen.
 Heckman, J.R. Attention to Liming Acid Soils Rewards Growers.
- 1997 Heckman, J.R. Boron Needs of Fruit Crops.
 Heckman, J.R. Sidedress Nitrogen for Field Corn.
 Heckman, J.R. Correcting Manganese Deficiency.
 Heckman, J.R. Boron Needs of Field Crops.
 Heckman, J.R. Boron Needs of Vegetable Crops.
- 1996 Heckman, J.R. Earthworms: A Soils Best Friend.
 Heckman, J.R. Manganese Deficient Soybean Fields Need a Second Treatment.
 Heckman, J.R. Wet Weather Causes Loss of Soil Nitrogen.
 Heckman, J.R., and B.A. Majek. Scout Soybean Fields for Manganese Deficiency.
 Heckman, J.R. Interpreting Soil Color
 Heckman, J.R. Protect Alfalfa from Boron Deficiency.
 Heckman, J.R. Appropriate Application of Alternative Liming Materials Depends on Soil Test.
 Heckman, J.R. Satisfactory Topsoil for Landscape Use.
 Heckman, J.R. Preventing Volatilization of Urea Nitrogen.
 Heckman, J.R. Starter Fertilizer Boosts Sweet Corn Performance During Cool Weather.
 Heckman, J.R. Starter, Broadcast, and Sidedress N Fertilizer Decisions.

- Heckman, J.R. Sweet Corn Yield in Relation to Plant Population.
 Heckman, J.R., P. Nitzsche, and W.J. Hlubik. Sidedress Nitrogen Fertilizer Decisions for Sweet Corn.
- 1995 Heckman, J.R. End of Season Evaluation of Corn Crop Nitrogen Fertility Program.
 Heckman, J.R. Successful Double Cropping Requires Adequate Soil Fertility.
 Hlubik, W.T., and J.R. Heckman. The Presidedress Soil Nitrogen Test: A New Method to Help Sweet Corn Growers Determine the Need for Sidedress Nitrogen.
 Heckman, J.R. Check Soybean Fields for Manganese Deficiency.
 Heckman, J.R. Delayed Corn Planting Reduces Grain Yield and Nitrogen Fertilizer Requirement.
 Heckman, J.R. Using a Starter Fertilizer on Corn.
 Heckman, J.R. June is Time for Using the Presidedress Soil Nitrate Test.
- **Other Newsletter Articles:**
- 2007 Heckman, J.R. The Great Cider Debate. American Fruit Grower
http://www.americanfruitgrower.com/bonus_coverage/200707_cider.html
- 2007 Heckman, J.R. Sustainable Nutrient Management for Sweet Corn. Pennsylvania Vegetable Growers News. Vol 30, Number 3. pp 14-16.
- 2003 Heckman, J.R. Website for Heavy Metal Content of Fertilizers. The Jersey Gardener. Fall, 2003. Vol. 2 No. 2.
- 2003 Riling, J., and J.R. Heckman. Earthboxes: Container Gardening for the Not-So-Green Thumb. The Jersey Gardener. Fall, 2003. Vol. 2 No. 2.
- 2002 Heckman, J.R. Sweet Corn Nitrogen Status Evaluation by Stalk Testing. Muck and Mineral Newsletter. Cornell Cooperative Extension. October. p. 8-9.
- 2002 Siracusa, C., M. Van Horn, and J.R. Heckman. Household Clutter as a Weapon in the War Against Weeds. New Jersey Gardener.
- 2002 Heckman, J.R. Lime Rates for Blueberry Soils. The Blueberry Bulletin.
- 1999 Hamel, S., and J.R. Heckman. Yard Waste and Trash Don't Mix. Landscaper. October.
- 1998 Heckman, J.R. Suppression of Powdery Mildew with Monopotassium Phosphate Fertilizer. Clippings. Fall.
- 1997 Shaul, P.O., W.L. Anastasia, and J.R. Heckman. Turfgrass Color Responses to Some Commercial Natural Organic Fertilizers. Clippings. Fall.
- 1996 Heckman, J.R., and D. Kluchinski. Appropriate Application of Alternative Liming Materials. Grain and Forage Producers' Association of New Jersey. Spring/Summer Newsletter.
- 1996 Heckman, J.R. and B. Clarke. Soil Fertility Management Practices to Control Summer Patch Disease. The GreenerSide. 19:1-4.
- 1996 Heckman, J.R. Pocket-size Soil pH Meters. The GreenerSide. 19:4.
- 1994 Sanchez, Y., H. Liu, and J.R. Heckman. 1994. Effect of Aluminum Toxicity on Four Tomato Varieties. New Jersey Vegetable Trial Results.
- 1993 Heckman, J.R., D.J. Prostack, and W.T. Hlubik. Presidedress Soil Nitrate Test for Sweet Corn. New Jersey Vegetable Trial Results. pp. 1-4.

- 1993 Heckman, J.R. Effect of Commercial Organic Biostimulants on Growth and Yield of Cabbage. New Jersey Vegetable Trial Results. pp. 12-15.
- 1992 Heckman, J.R. Correcting Manganese Deficiency Removes Barrier to High Soybean Yields. New Jersey Soybean Board Research Checkoff Summary. pp. 2-3.
- 1992 Heckman, J.R., and D. Kluchinski. Yield of Soybean Cultivars as Influenced by Potassium and Chloride Fertilization. New Jersey Soybean Board Research Checkoff Summary. pp. 4-6.
- 1991 Heckman, J.R. Nitrogen Recommendations for Corn Using the Presidedress Soil Nitrogen Test. Better Dairying. May.
- 1990 Heckman, J.R. Presidedress Nitrogen Soil Test for Corn. The Field Cropper. December.
- 1990 Heckman, J.R. Variation in Mineral Composition of Vegetables. Station Breaks. December.

EurekaAlert! – December 29, 2008

“Americans love pumpkins. The growing popularity of rural fall festivals, grade school farm tours, and "u-pick" pumpkin farms has resulted in an increase in consumer demand for pumpkins throughout the country...Using leaf mulch collected from urban areas may help improve quality and field conditions of u-pick pumpkin operations while providing a cost-effective method to recycle leaves. During 2005 and 2006, researchers Christian Wyenandt, Joseph R. Heckman, and Nancy Maxwell from the Department of Plant Biology and Pathology at the Rutgers New Jersey Agricultural Experiment Station, conducted experiments comparing different production systems on pumpkin yield and fruit quality...”

http://www.eurekaalert.org/pub_releases/2008-12/asfh-awu122608.php

• Newsletter Articles from Interview:

- 2009 Got Raw Milk? Some think you should. Home News Tribune.
<http://www.mycentraljersey.com/article/20090514/OPINION06/905140359/1069/newsfront/Got+raw+milk?+Some+think+you+should>
- 2008 Learning to Feed Ourselves. Philadelphia Inquirer
<http://www.philly.com/philly/restaurants/20447139.html>
- 2008 Heckman, J.R. Dairy Farmers Get ‘Raw’ Deal. The Daily Targum.
- 2008 Heckman, J.R. Rutgers to Host McAfee at Raw Milk Seminar. Lancaster Farmer.
- 2008 Heckman, J.R. Raw milk offers pure food, right from the farm.
<http://www.americanfarm.com/NJF.html>
- 2004 Heckman, J.R. Before You Sidedress. The Grower.
- 2002 Heckman, J.R. Lawn Fertilization. New Jersey Monthly.
- 1998 Heckman, J.R. Catch on to Chloride. Successful Farming.
- 1998 Heckman, J.R. Consider Mid-Season Nitrogen for Corn. Cenex Land 'O Lakes.
- 1996 Heckman, J.R. Seeing Spots? Landscape Management.
- 1996 Heckman, J.R. Disease Fighter. Ag Consultant.

SERVICE:

Professional Service

Nominated for President-Elect Northeast Branch of the CSA Tri-Societies 2009
Elected Chair of Committee on Organic and Sustainable Agriculture 2008-2009

Invited by The Wilhelm Reich Infant Trust of Rangeley, Maine, to serve as part of a gathering of scientists to review some of the scientific contents of the archives of Wilhelm Reich M.D., which only recently have been opened at Harvard University to researchers and scholars. 2008

Co-editor of Rutgers Turfgrass Symposium Proceedings 2007

Associate Editor: 2002-2005. Journal of American Society of Horticulture Science.

Soil Science Society of America, member. 1985 - present

American Society of Agronomy, member. 1982 - present

American Society of Horticulture Science, member. 1992 - present

History of Soil Science Committee, member. 1998 - present

International Turfgrass Society, member. 1995 - present

International Society for Horticulture Science, member. 1999 – present

American Society of Agronomy – Committee on Organic and Sustainable Agriculture 2009
elected Chair

American Society of Agronomy – Committee on Organic and Sustainable Agriculture 2006 - 2008

Soil Science Society of America

- Council on History, Philosophy, and Sociology of Soil Science.
Appointed 1998 - 2000
Reappointed 2001 – 2004
- Chair – 2005 – 2007.
- Vice-Chair - 2004
- Presiding Officer for Oral Presentations - 2003
- Session Chair for Oral Presentations - Transport of Agrichemicals. 1997

The 2006 World Congress of Soil Science – Chair of Soils Tour Committee – New Jersey Pine Barrens Soils Ecology Tour

Pennsylvania Certified Organic 2007-present

Northeast Branch Broad Representative to American Society of Agronomy. 2002 - 2004

Northeast Branch of the American Society of Agronomy.

- Planning Chair for 2004 Meeting to be held in New Jersey.
- Graduate Student Paper Presentation Judge. 1994, 1996, 2000, 2003
- Moderator for Oral Presentations on Soil and Crop Management. 2002
- American Society of Agronomy Membership Committee State Chair. 1996 - 1997
- Session Chair for Oral Presentations on Soils. 1993
- Tour Program Coordinator and Leader. 1991
- Session Chair for Oral Presentations on Forages. 1991

Soil and Plant Analysis Council - Soil and Plant Testing Survey Committee. 1997

USDA NEC-67 Northeast Coordinating Committee on Soil Testing. 1991 - present

- Secretary 1991 - 1992
- Chair 1992 - 1993

Mid-Atlantic Soil Test Working Group, New Jersey Representative. 1990 - present

New Jersey Association of Professional Soil Scientists, member. 1991 - present

- President 2001
- Vice President 2000
- New Jersey State Soil Selection Committee Chairman 1995

Penn/Jersey Regional Program Committee, member. 1991 - present

Special Membership on the Graduate Faculty at the University of Maryland. 1996-1997

New Jersey Agribusiness Association, Board member. 1994 - 1997

Plant Food Educational Society of New Jersey, member. 1990 - 1995

- Board of Directors 1990 - 1994
- Vice President 1991 - 1992
- President 1992 - 1994

Standards Board for the Natural Organic Farmers Association of New Jersey, member. 1991 - 2000

Publication Reviewer

Journal Article Reviewer:

Crop Science- 3 manuscripts

Soil Science - 4 manuscripts

HortScience - 3 manuscripts
Hort Technology - 4 manuscripts
Journal of Production Agriculture - 3 manuscripts
Agronomy Journal - 11 manuscripts
Soil Science Society of America Journal - 2 manuscript
Journal of Environmental Quality - 4 manuscripts
Journal of Plant Nutrition - 2 manuscripts
Australian Journal Soil Research – 1 manuscript
Bioresource Technology – 1 manuscript
Canadian Journal of Plant Pathology - manuscript
International Journal of Phytoremediation – 2 manuscripts
Journal of the Science of Food and Agriculture – 1 manuscript
Renewable Agriculture & Food Systems – 1 manuscript

Grant Proposal Reviewer:

Lake Champlain Research Initiative – 1 proposal
 USDA Soils and Soil Biology Program- 1 proposal
 USDA Small Business Innovation Research Program - 2 proposals
 USDA Water Resources Assessment and Protection Program - 2 proposals
 New Jersey Agricultural Experiment Station - 1 proposal
 Connecticut Agricultural Experiment Station - 1 proposal
 Maryland Center for Agro-Ecology, Inc. – 1 proposal

Miscellaneous Publications Reviewer:

Book chapter in “Managing Crop Nitrogen for Weather”.
 National Raw Milk Use and Safety Fact Sheet
 Rutgers Turfgrass Symposium Proceedings Editor -2007
 Guidelines for Land Application of Sewage Biosolids in the Northeast
 Textbook: Soils and Land Use.
 Peer Review of 2 chapters for the History of Soil Science Book.
 Peer Review of 1 chapter in “Managing Crop Nitrogen for Weather”
 Environmental Science Literature Review on Land Application of Sewage Sludge.
 Northeast Regional Fact Sheet: Phosphorus Index.
 US EPA Brochure on Lead in Soil.
 Literature Review on the Land Application of Sewage Sludge for NJ DEP.
 Standards for Soil Erosion and Sediment Control in New Jersey for New Jersey State
 Soil Conservation Committee.

Video Reviewer:

A Greener Thumb - How to Enhance Your Home Lawn, Landscape and Environment.

Cook College

Faculty Compensation Program 2009
 Appointment and Promotions Committee 2006-2008
 Turfgrass Symposium Committee Chair 2008
 Associate Member of the Faculty of the Graduate School.
 Faculty Director, Vegetable Research Farm.
 Secretary in 2005 for RCRE Department of Extension Specialists.
 NJAES Publications Review Committee.
 NJAES Sludge Task Force.
 NJAES Sustainable Agriculture Working Group.
 NJEAS Biosolids Working Group.
 NJAES Field Crops Working Group.
 NJAES Tree Fruit Working Group.
 NJAES Turfgrass Working Group.
 NJAES Advisory Committee for Land Application of Biosolids.
 Cook College Council.

Cook College Financial Aid Committee. 1997 - 2001
 Cook College Library Committee, Secretary. 1991
 Foran Hall Library Program Review Committee.
 Plant Science Department By-Laws Committee Chair.
 Center for Interdisciplinary Studies in Turfgrass Science.
 - By-Laws Committee Chair; Activities Committee.
 Cook College Representative to the State Soil Conservation Commission.
 Cook College Representative to State Committee for Review and Development of Soil Erosion and Sediment Control Standards.
 Advisory Committee for the Land Application of Biosolids.
 Grievance Committee for Reappointment and Promotion.
 Plant Biology and Pathology Awards Committee. 2003 - 2004.
 Sponsor of Department Seminars
 Rutgers University Seminar Series on Raw Milk – Instrumental in organizing and hosting seminars:
 The Rutgers University New Jersey Agriculture Experiment Station is hosting a seminar series on raw milk. Four speakers have been scheduled and additional speakers may be announced. Any updates about speakers or schedules will be posted on the web:
<http://njaes.rutgers.edu/news/release.asp?n=569>

- Mark McAfee, Organic Pastures Dairy, Raw Milk, Mother Nature's Inconvenient Truth
- David G. Cox, Attorney at Law, Lane, Alton & Horst LLC, Raw Milk Wars, Government's Attempt to Dictate What Foods We Can Consume
- Dr. Mark Gebhart, M.D., Wright State University, Raw Milk, A Microbiology Primer
- Donald W. Schaffner, Ph.D., A Risk Assessor Takes a Look at Raw Milk
 - Sally Fallon, President of Weston A. Price Foundation. Splendor from the Grass: Healthy Children, Healthy Families, Healthy Farms through Grass-Based Agriculture. 2006
- Dr. Douglas Helms. Understanding Soil: A Critical Factor in Southern History. 2004
- Dr. Karl Guillard. Anion Exchange Membranes and Hand-Held Light Meters as Potential Tools for Turfgrass Nitrogen Management. 2003
- Dr. Don Eckert. Base Cation Saturation Ratio Concept of Soil Fertility Management. 2001
- Dr. Elaine Ingham. The Soil and Foliar Food Web. 2001
- Dr. James Strick. Darwinian's Wrestle with the Problem of the Origin of Life. 2000

Search Committee

Soil Test Lab Technician. 1998
 Program Associate on Solid Waste. 1994
 Director of the Soil Testing Lab.
 Environmental Soil Scientist.
 Chair for Extension Specialist in Field and Forage Crops.
 Provide Soil Test Recommendations to Facilities Maintenance and Operations.
 Extension Specialist in Cranberry Physiology and Nutrition.
 Mentoring Committee for County Agents.
 Reading Committee (1 Specialist, 2 Agents).
 Chair, Rutgers Cooperative Extension Annual Conference Committee. 1998
 Rutgers Cooperative Extension Annual Conference Committee. 1997
 Rutgers Cooperative Extension Display at Ag Field Day. 1995 - 1996
 The Environmental Expo '95. Rutgers/Cook College/NJAES Booth.
 Field and Forage Crop Working Group. 1990 - present
 Integrated Crop Management Technical Advisory Committee. 1994 - present
 New Jersey Specialist Association. 1990 – present

- Treasurer 1994
- Secretary 1995

 New Jersey Flower and Garden Show. Rutgers Cooperative Extension Booth. 1991 and 1993
 Fund Raising for 4-H.

Community/Societal Service

New Jersey Turfgrass Association, member. 1992 - present

Who's Who in Science and Engineering. 1991

New Jersey State Horticultural Society, member. 1993 - present

Union of Concerned Scientists, Speakers Bureau. 1995 - 1997

American Farmland Trust, member. 1998 - present

High School Students

2000 Kyle Bevilacqua. Soil Acidity and Tomato Growth, North Jersey Regional Science Fair. Advisor.

1999 Diana Dzissah. American Chemical Society's Project Seed Program. Sponsor.

1996 Michael Bateman. Piscataway, NJ. Science Project Advisor.

1994 Yudeca Sanchez. The American Chemical Society's Project Seed Program. Sponsor.

1993 T. Franklin. South Plainfield, NJ. Science Fair Project Advisor.

Honor Societies

Epsilon Sigma Phi, National Honorary Extension Fraternity. 1996

Sigma Xi, The Scientific Research Society

- Full member, 1990

- Associate member, 1988

Phi Kappa Phi Honor Society. 1987

Gamma Sigma Delta, Agricultural Honorary. 1987

Towers Agricultural Honorary. 1978