

CURRICULUM VITA

Lawrence D. Hepner Jr.

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Certified Professional Soil Scientist

Consulting Soil Scientist and Agronomist specializing in urban, rural and agricultural land uses. Areas of expertise include:

- Detailed Soil Mapping
- Crop Management Plans
- Nutrient Management Plans
- Watershed Management
- Storm Water Management
- Alternate Wastewater Systems including Wetland Treatment Systems
- Rotational Grazing
- Compost
- Effects of large scale solar installations on soil properties

Provide expert testimony on the potential impacts of proposed projects on agricultural production, soils, and land use.

With my wife Diane, manage our 100 acre farm in the Western Catskills of New York where we raise vegetables, hay, livestock, and timber, and operate a bed and breakfast, in balance with nature. We employ regenerative agricultural practices to improve the health of our soils for healthier food for us, our farm animals, and our customers.

WORK EXPERIENCE

1979-2015 – Thirty six year career as a Professor in the Agronomy Environmental Science Department at Delaware Valley College now Delaware Valley University. Teaching courses and doing research in soils, watershed management, sustainability, land use, waste management, field crop production, nutrient management, forage and pasture management. Also served as a Department Head, Associate Dean, Interim Dean for Agriculture & Environmental Science, and General Manager of University Farms.

1976-1979 - Soil Scientist Bucks County Department of Health. Involved in Sewage Facilities Act. Performed field soils reviews for major subdivisions and community systems. Assisted seven sewage enforcement officers with problem and or difficult sites. Gave expert testimony at court hearings and local agency hearings.

CONSULTING EXPERIENCE

1979-Present Serve as a consulting soil scientist and agronomist on over 600 projects. Projects include investigations for on lot sewage, environmental assessment reports, soils investigations for spray irrigation, sludge disposal, industrial waste disposal, soil infiltration and permeability studies. Consulting for farmers on problems relating to agricultural production. Consulting on conservation and nutrient management plans. Consulting on the integration of agriculture and urban development by the utilization of agriculture in association with development. Expert witness testimony in court hearings and before township boards. Clients include land owners, farmers, industries, and governmental agencies.

Recent Projects include:

- Agronomist Buckingham Township Bucks County Pennsylvania – Provide nutrient management and crop management on 115 acres of domestic wastewater spray irrigation fields.
- Provide crop management plans on ten sites in Chester County Pennsylvania for spray and drip irrigation of domestic wastewater
- Provide revegetation management plans for installation of wastewater drip irrigation fields.
- Serving on expert wastewater evaluation panel for Chesapeake Bay Commission.
- Presented expert witness testimony before township boards in Hamilton and Jackson Townships in New Jersey on the potential effect of large scale solar installation on soil properties.
- Presentation on effects of compaction of livestock on soil structure to Cornell Extension personnel as part of a SARE grant to examine pasture compaction

EDUCATION

1974-1976 **PENN STATE UNIVERSITY**
MS Agronomy 1977

1970-1974 **DELAWARE VALLEY COLLEGE**
BS Agronomy 1974

RESEARCH

1981-1983 Research funded by the Department of Environmental Resources to examine septic tank waste application to agricultural soils. (\$50,000)

1983-1985 Research funded by the Pennsylvania Department of Agriculture to examine septic tank waste application to forage crops. (\$30,000)

1985-1987 Research funded by USDA Soil Conservation Service to compare intensive and continuous grazing systems for beef heifers. (\$15,000)

1986-1988 Research funded by the Pennsylvania Department of Agriculture to examine odor control and nitrogen removal from pig manure. (\$35,400)

- 1988-1990 Research funded by the Pennsylvania Department of Agriculture to examine effects of meat packing plant waste when land applied. (\$83,642)
- 1989-1990 Research funded by the Pennsylvania Department of Agriculture on composting in agriculture and the food processing industry in Pennsylvania. (\$34,500)
- 1990-1992 Research funded by the Pennsylvania Energy Office to develop an Urban/Rural Interface plan to integrate agriculture and urban development. (\$25,000)
- 1992-1993 Mulch research project funded by the Pa. DER to evaluate mulch type and rate for construction sites. (\$4,000)
- 1992-1994 Research funded by the Penna. Dept. of Agriculture on agricultural/urban management systems for spray irrigation of municipal wastewater. (\$44,626)
- 1994-1996 Research funded by the Penna. Dept. of Agriculture on swine aeration lagoon systems. (\$17,250)
- 1994-1999 Research funded by the Pennsylvania Department of Environmental Protection for the establishment of Research and Demonstration Center to evaluate six new technologies for on-site waste water disposal. (\$800,000)
- 1995 – 1996 Research funded by the Pennsylvania Department of Agriculture on farm solid waste composting.(\$60,000)
- 1996-1998 Research funded by the Pennsylvania Department of Agriculture on utilization of small grains to extend the grazing season for beef cattle grazing on pastures. (\$36,150)
- 1997-2000 Research funded by the Camden County Municipal Authority on Biosolids utilization as a soil amendment for turf, greenhouse crops, and nursery stock. (\$120,000)
- 1998-2000 Research funded by EPA to study management of spray irrigation systems in Pennsylvania and Delaware. (\$99,700)
- 2000-2005 Research funded by DEP to examine new wastewater technologies for Pennsylvania. (\$500,000)
- 2002-2003 Research funded by NOAA to assess and develop a watershed master plan and educational program for the Urban and Agricultural portions of the Delaware Valley College Watershed. (\$118,000)
- 2006 – Energy Harvest grant to install windmill to run invessel composter. (\$199,000)
- 2007 – Compost infrastructure grant from DEP. (\$105,000)
- 2010 – Growing Greener grant from DEP to address urban and agricultural storm water issues on campus. (\$80,000)

2012-2013 Research funded by the PA Soybean Board to examine nitrogen leaching and uptake using various cover crops and planting time. (\$20,000)

2013-2014 – Mycotoxin Project funded by PA. Dept of Agriculture to determine if mycotoxin levels can be reduced in manured fields.(\$40,000)

ADDITIONAL ACTIVITIES

1991 Provided testimony before the Commonwealth of Pennsylvania Joint Legislative Air and Water Pollution Control and Conservation Committee regarding land application of septage.

1991 Provided soils training at the Soils Wetland Training Session for the Northeastern Regions of the Army Corps of Engineers Staff.

1992 "Sunflowers in the City" Artist: James Furhman, Agronomist: Larry Hepner. Art and Agriculture project funded by the National Endowment for the Arts using sunflowers in the city of Philadelphia.

1993 Provided soils training for the US Environmental Protection Agency Region III.

1993 Water Pollution Control Association of Pennsylvania conference. Invited speaker on Farm Management Plans and Biosolids Application.

1995 Pennsylvania Association of Sewage Enforcement Officers Annual Conference. Invited speaker

1995 Pennsylvania Septage Management Association Annual Conference. Invited speaker.

1996 Pennsylvania Septage Management Association Annual Conference. Invited speaker.

1997 International Liquid Waste Haulers Conference. Invited speaker.

1999 Invited presenter at the NC State University Conference on On-site wastewater.

1999 Invited speaker and panel member for review of trickle irrigation guidelines at the National Onsite Wastewater Recycling Association national meetings in Georgia

1999 Invited speaker at Rutgers continuing education course on alternative wastewater systems.

2000 Invited speaker at Pennsylvania Septage Management Association annual meetings.

2000 Invited speaker at the Allegheny Watershed Network Conference.

2000 Invited speaker Pennsylvania State Association of Township Supervisors annual meeting

2000 Presented a paper at the NSF and Rural Water Association Technology Exposition for Drinking Water and Wastewater Systems at Phoenix, Arizona.

- 2001 Presented a paper at the ASAE Ninth National Symposium on Individual and Small Community Sewage Systems, Fort Worth Texas.
- 2000 Presented a paper at the Third NSF International Symposium and Technology Expo on Small Drinking Water and Wastewater Systems, Washington, DC
- 2001 Presented paper on wastewater reuse at DEP Forum on Watershed Management
- 2002 Presented educational session on the ability of soil to treat wastewater at the Pennsylvania Association of Sewage Enforcement Officers annual meeting
- 2002 Presented paper on experimental on-site wastewater systems under study at Delaware Valley College for Rutgers wastewater training course at Rutgers University
- 2002 Presented talk on soils evaluation for drip irrigation of wastewater at National Onsite Wastewater Recycling Association training course in Virginia.
- 2002 Served on the Wastewater Management Systems Technical Focus Group for the New Jersey Pinelands Commission
- 2002 Invited speaker at the Pennsylvania Septage Management Association Annual meeting.
- 2003 – Corn and Soybean Conference Penn State University. Presentation on using wastewater to grow corn for the movie “Signs”.
- 2003 – PASEO annual conference speaker on ability of soils to renovate wastewater.
- 2003 – Presentation on Drip Irrigation at Drip Forum sponsored by POWRA.
- 2003 – Presentation at Rutgers University on Wastewater R&D Project.
- 2003 – Presentation to Water Bureau at DEP on various DVC projects.
- 2003 – One of the keynote speakers at NC State University Conference on Wastewater.
- 2004 – Presentation on bacterial levels of wastewater systems at a workshop held at Penn State’s Capitol campus.
- 2004 – Presentation on wastewater systems at Pittsburg Civil Engineers Conference sponsored by Heinz Foundation.
- 2004 – Presentation to Bedminister Township Planning Commission on Class I, II, and III agricultural soils
- 2004 – Presentation to Sewage Advisory Committee of DEP.
- 2005 – Presentations to Dept of Environmental Protection on Wastewater Research
- 2006 – Presentation on wastewater technologies at the Pennsylvania Housing Conference in Valley Forge PA
- 2006 – Presentations at the Penna Sewage Enforcement Officers Conference on Biomats in wastewater systems.

- 2006 – Presentation on alternative wastewater research results at Virginia Onsite Wastewater Conference, Richmond.
- 2006 – Presentation on alternative wastewater research results to Penna. Sewage Advisory Committee
- 2007 – Presentation on alternative wastewater research at Michigan State University Wastewater Conference, Lansing Michigan
- 2007 – Presentation on alternative wastewater research at Pennsylvania Housing Conference, Harrisburg, PA
- 2011 - Participated in PA Assoc. of Sewage Enforcement Officers Conference – Round Table Discussion on Nitrogen Loading.
- 2011 - Presenter at the Beginning Farmer Workshop sponsored by Penn State and held at DVC. Presentation on soil productivity. April 16, 2011
- 2012 – Compost workshop presentation at Hanford Mills Museum, New York.
- 2014 – Presentation on Soil Quality and Soil Fertility at Barnett Crop meeting in Lancaster PA
- 2015 – Organized land use tour for the Precarious Alliance Conference at Delaware Valley University
- 2015 – Presented a paper on the critical issues facing humanity and how soil scientists can address them at the Precarious Alliance Conference at Delaware Valley University.
- 2015-2018 – Currently serving on expert wastewater evaluation panel for Chesapeake Bay Commission.
- 2017 – Presentation on use of Web Soil Survey to Nut Growers' conference in New York.
- 2019 - Presentation on effects of compaction of livestock on soil structure to Cornell Extension personnel as part of a SARE grant to examine pasture compaction.

BOARD AFFILIATIONS

Nutrient Management Advisory Board of the State Conservation Commission of Pennsylvania.

Board of Directors Pennsylvania Onsite Wastewater Recycling Association.

Board of Directors Keystone Chapter, Soil and Water Conservation Society of America.

Board of Directors Pennsylvania Association of Professional Soil Scientists.

Member of the Fertilizer Advisory Board of the Pennsylvania Department of Agriculture.

Board of Directors Peace Valley Nature Center

PROFESSIONAL ASSOCIATIONS

Certified Professional Soil Scientist by the American Registry of Certified Professionals in Agronomy, Crops and Soils. Certification # 899

Member Pennsylvania Association of Professional Soil Scientists

Member Pennsylvania Forage and Grassland Council

Member of the American Society of Agronomy and the Soil Science Society of America.

Member of the Soil and Water Conservation Society of America.

AWARDS

1984 - Delaware Valley College outstanding cooperation in the area of Soil and Water Conservation.

1985 - Special farm management award for outstanding leadership in the development of an environmentally sound forage and grassland program. Presented by the Pennsylvania Forage and Grassland Council.

1986 - William Penn Chapter of the Soil Conservation Society of America Honor Award.

1987 - National Honor Award from the Soil Conservation Society of America.

1987 - Keystone Chapter SCSA Outstanding Educator Award.

1990 - Future Farmers of America Agricultural Education Award

1993 - Commonwealth of Pennsylvania Department of Community Affairs award for excellence for innovation in technical assistance to local governments through the Urban-Rural Interface Project to address urban growth management, agriculture and rural preservation issues.

1995 David Levin Chair, Distinguished Faculty Member Award, Delaware Valley College

1997 Recognition Award for assistance in development of the Nutrient Management Regulations by the Pennsylvania State Conservation Commission.

- 1999 – Senate of Pennsylvania. Resolution recognizing the contribution of Delaware Valley College to development of new technologies for on-lot systems and small wastewater flows.
- 2001- Teaching Award of Merit from the National Association of Colleges and Teachers of Agriculture
- 2004 – Bucks County Audubon Society Environmental Action Award 2004. Outstanding Environmental Educator.
- 2010 – Resolution from the Delaware Valley College Board of Trustees for service as Interim Dean for Agriculture and Environmental Science from fall 2008 to Spring 2010.
- 2011- Plant Science Award from the Delaware Valley College Alumni Association
- 2017 – Given Professor Emeritus Status in Agronomy and Environmental Science by Board of Trustees of Delaware Valley University.

Publications

- Urban/Rural Interface Project. L.D, Hepner et al. Delaware Valley College, Doylestown,PA. 1992 Funding Provided by Pennsylvania Energy Office.
- New Wastewater Technologies for Pennsylvania. L. D. Hepner, S. Pachuta.. Delaware Valley College, Doylestown, PA. 2000. Funding provided by PADEP
- Evaluation of Experimental On-Lot System Technologies for Pennsylvania. L.D. Hepner, J.A. Valentine, C. Weber, R. Johnson, T. Christie. On-Site Wastewater Treatment. Proceeding of the Ninth National Symposium on Individual and Small Community Systems. 2001, Fort Worth, Texas.
- Turfgrass Seed and Sod Establishment on Soil Amended with Biosolid Compost. Douglas Linde and Lawrence Hepner. Hort Technology July Sept 2005 15(3)
- Alternative On-Lot Technology Research. Soil Based Treatment Systems. Larry Hepner, Doug Linde, Charles Weber, Diann Smith. Delaware Valley College, Doylestown, PA. 2006. Funding Provided by PADEP
- Reduction of Bacteriologic and Chemical Constituents of Septic Tank Effluent with Depth Using a Drip Dispersal System. L.D.Hepner, D. Linde, C. Weber, and D. Smith, in Eleventh Individual and Small Community Sewage Systems Conference Proceedings, October 2007, American Society of Agricultural and Biological Engineering.