John D. Lea-Cox

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Professional Preparation:

B.Sc.	Univ. of Natal, South Africa	1983	Horticulture	
M.Sc.	Univ. of Natal, South Africa	1989	Horticulture	
Ph.D.	Univ. of Florida, USA	1993	Plant Physiology	**Advisor:** James P. Syvertsen
PostDoc	NASA-Kennedy Space Center	1993-6	Plant Physiology	**Advisor:** Raymond M. Wheeler

Professional Positions:

07/11 –Present	Professor; Department of Plant Science and Landscape Architecture, University of Maryland, College Park.
07/02 – 06/11	Associate Professor; Department of Plant Sciences and Landscape Architecture, University of Maryland, College Park.
08/96 – 06/02	Assistant Professor; Department of Natural Resource Sciences and Landscape Architecture, University of Maryland, College Park.

Summary of Activities at University of Maryland (since 1997)

Research:

- Awarded 38 Competitive Grants and Contracts; 18 Individual Gifts/Financial Contributions to Research, totaling $7,601,014 as PI ($4,927,895 in direct funding)

Extension:

- Established 7 Major Extension/Research Programs
- Co-Established 1 National Multistate Committee (NC1186); Chaired NCERA-101 Multistate (2001)

Publications and Outreach:

- 6 Book Chapters; 36 Refereed Journal Articles; 27 Refereed Conference Papers; >50 Non-Refereed Conference Proceedings; >60 Monographs, Extension and Trade Publications; >45 Other Articles, Reports and Notes; 6 On-line Course Modules; 6 Project Websites, 2 Knowledge Centers;
- 97 Invited Presentations (Regional, National and International Meetings); 87 Additional Contributed Presentations (Regional, National and International Meetings); >125 Industry Presentations and Workshops (State, Regional, National and International).

Teaching: PLSC 432 (Greenhouse Management); PLSC 460 (Capstone); PLSC 461 - 464 (Principles of Substrate, Irrigation, Water and Nutrient Management); PLSC 799, PLSC 899 (Graduate Advising)

Post-Doctoral Advisees: Dr. Jongyun Kim (2011-2013); Dr. John Majsztrik (2012 - 2015);

Past Graduate Advisees: Jason Murray (MS, 2001); Huijun Shang (MS, 2003); Andrew Ristvey (PhD, 2004); Matthew Stevens (MS, 2005); Félix Arguedas (MS, 2009); Lorelly Solano (MS, 2010); John Majsztrik (PhD, 2011); Olyssa Starry (PhD, 2012); Clark de Long (MS, 2012); Whitney Gaches (PhD, 2014); Elizabeth Barton (MS, Spring 2015)

Current Graduate Advisees: Bruk Belayneh (PhD, Fall 2017); Ian Howard (MS, in progress)

Undergraduate Research Advisees: Piyumi Ranaweera (2008); Clark de Long (2010-2011); Kelsey Farrish (2011-12); Liam Monahan (2012-2013); Ruy Chrifield (2012-2013); Ian Reichardt (2013 – 2014); Zachary Beichler (2013 – 2014)); James Zazanis (2013 – 2014); Taylor Boone (2014); Kenneth Hunsley (2014); Ian Howard (2016 – 2017).

High School Interns: Paul Ellis (Summer, Fall 2013)

Awards and Honors:

- ***Porter Henegar Award.*** *For outstanding contributions to ornamental horticultural research. Southern Nursery Association Annual Meeting. Athens, GA. 1st Sept, 2016.*
- ***Northeast Region Mid-Career Award.*** *2013. Epsilon Sigma Phi National Extension Professionals Organization National Conference. October, 2013. Pittsburgh, PA.*
- ***Southern Nursery Association Environmental Award.*** *Southern Nursery Association Annual Meeting. Atlanta, GA. August, 2013.*
- ***University of Maryland Alumni Award – Excellence in Extension.*** *AGNR Chapter – University of Maryland, College Park, MD. 14 April 2010.*
- ***Outstanding Extension Educator.*** *American Society for Horticultural Science National Conference. July, 2009. St. Louis, MO.*
- ***Extension Materials Award (Team): Best Website.*** *American Society for Horticultural Science National Conference. July, 2009. St. Louis, MO*
- ***American Society of Agricultural and Biological Engineers – Blue Ribbon Award (Team):*** *Educational Aids – Innovative Extension Methods, ASABE Int. Conference, June, 2009. Reno, NV.*
- ***Integrated Research and Extension Award of Excellence.*** *College of Agriculture and Natural Resources. University of Maryland, College Park, MD. 7 May, 2009.*
- ***Northeast Region International Service Award.*** *Epsilon Sigma Phi National Extension Honor Society. September, 2008. Indianapolis, IN.*
- ***ADEC Education Programs Award.*** *American Distance Education Consortium Meeting. April, 2002. Columbus, OH.*
- ***WebCT International Exemplary Course Award.*** *June, 2001. Vancouver, BC.*
- ***Northeast Region Distinguished Team Award.*** *Epsilon Sigma Phi National Extension Honor Society. November, 2000. Salt Lake City, UT.*
- ***Gold Award.*** *Distance Education and Instructional Design Category, Educational Project - for Credit. Agricultural Communicators in Education (ACE). July, 2000. Washington, D.C.*
- ***Outstanding Professional Skill Award.*** *Agricultural Communicators in Education (ACE). July, 2000. US Agricultural Communicators Congress, July 2000. Washington, D.C.*
- ***University of Maryland Outstanding Teacher Award*** *- College of Agriculture and Natural Resources. May, 1999. College Park, MD.*

Professional (Off-Campus) Service Activities:

American Society for Horticultural Science

- *Vice-President - Research Division. ASHS Board Member (2011-13)*
- *ASHS Plant Nutrient Management Working Group Member (1996 - Present). Secretary (2008); Vice-Chair (2009); Chair (2010).*
- *ASHS Controlled Environment Sensor Technology Workshop (1996 - Present). Secretary (1996); Vice-Chair (1997); Chair (1998).*
- *ASHS Water Utilization Management Working Group Member (2005 - Present). Secretary (2009); Vice-Chair (2010); Chair (2011).*

  USDA NCERA-101: Controlled Environments Committee.
- *Member (1997 – present). Secretary (1999); Vice-Chair (2000); Chair (2001).*

  USDA NC-1186: Water, Nutrient and Crop Health Management for Nursery Greenhouse Committee
- *co-Founder, Vice-Chair and Secretary (2009)*; Chair (2010); Past-Chair (2011*)*

  Epsilon Sigma Phi – National Extension Professionals Organization (MD Tau Chapter
- *Secretary (2008); Vice-President (2009); President (2010-11); Treasurer (2011 – present)*

  City of College Park, Maryland
- *City Forester (2001-2012); Tree and Landscape Board (1998 to Present). Chair, (2004; 2006 – 2009).*

Selected Peer-Reviewed Publications, Book Chapters and Conference Publications: (Past 7 Years)

1. **Lea-Cox, J.D.,** J.P. Zazanis, C. Miller, A. Novy and M. Shore. 2016. Monitoring Stormwater Runoff and Green Roof Performance with Sensor Networks. Proceedings of Cities Alive: 14th Annual Green Roof and Wall Conference, Washington D.C., November 1-4, 2016.
2. Saavoss, M., J.C. Majsztrik, B.E. Belayneh, **J.D. Lea-Cox** and E. Lichtenberg. 2016. Yield, quality, and profitability of sensor-controlled irrigation: A case study of snapdragon (*Antirrhinum majus* L.) production. Irrigation Science 34:409-420. (DOI:10.1007/s00271-016-0511-y)
3. Zhang, H., P.A. Richardson, B.E. Belayneh, A.G. Ristvey, **J.D. Lea-Cox**, W.E. Copes and C.X. Hong. 2015. Characterization of water quality in stratified nursery recycling irrigation reservoirs. Agric. Water Management. 160:76-83. (DOI:10.1016/j.agwat.2015.06.027)
4. Zhang, H., P.A. Richardson, B.E. Belayneh, A.G. Ristvey, **J.D. Lea-Cox**, W.E. Copes, G.W. Moorman and C.X. Hong. 2015. Comparative Analysis of Water Quality between the Runoff Entrance and Middle of Recycling Irrigation Reservoirs. Water 7:3861-3877. (DOI:10.3390/w7073861).
5. Zhang, H., P.A. Richardson, B.E. Belayneh, A.G. Ristvey, **J.D. Lea-Cox**, W.E. Copes, G.W. Moorman and C.X. Hong. 2016. Recycling irrigation reservoir stratification and implications for crop health and production. J. Amer. Water Resources Assoc. (Accepted).
6. Starry, O., **J.D. Lea-Cox**, J. Kim and M.W. van Iersel. 2014. Photosynthesis and water use by two Sedum species in green roof substrate. *J. Environ. Exp. Bot.* http://dx.doi.org/10.1016/j.envexpbot.2014.05.014
7. Kong, P. and **J. D. Lea-Cox.** 2014. Water Quality Dynamics: Implications for Managing Waterborne Pathogens. Chapter 27. In: Biology, Detection and Management of Plant Pathogens in Irrigation Water. C. H. Hong, G. W. Moorman and W. Wohanka (Eds.). American Phytopathology Society. St. Paul, MN. pp. 333-346.
8. **Lea-Cox, J. D.** and D. S. Ross. 2014. Water Management to Minimize Pathogen Movement in Containerized Production Systems. Chapter 30. In: Biology, Detection and Management of Plant Pathogens in Irrigation Water. C. H. Hong, G. W. Moorman and W. Wohanka (Eds.). American Phytopathology Society. St. Paul, MN. pp. 377-387.
9. Belayneh, B.E., **J. D. Lea-Cox**, and E. Lichtenberg. 2013. Benefits and costs of implementing sensor-controlled irrigation in a commercial pot-in-pot container nursery. HortTechnology 23:760-769
10. Chappell, M., J. Owen, S.A. White and **J. D. Lea-Cox.** 2013. Irrigation Management Practices. *In:* Best Management Practices: Guide for Producing Nursery Crops. T.H. Yeager, T. Bilderback, D. Fare, C. Gilliam, **J. D Lea-Cox**, A. Niemiera, J. Ruter, K. Tilt, S. Warren, T. Whitwell and R. Wright (Eds.) 3rd edition. Southern Nursery Association. Atlanta, GA *http://contents.sna.org/bmpv30.html*
11. **Lea-Cox, J. D.**, W.L. Bauerle, M.W. van Iersel, G.F. Kantor, T.L. Bauerle, E. Lichtenberg, D.M. King and L. Crawford. 2013. Advancing Wireless Sensor Networks for Irrigation Management of Ornamental Crops: An Overview. HortTechnology 23:717-724.
12. Majsztrik, J.C. and **J. D. Lea-Cox**. 2013. Water quality regulations in the Chesapeake Bay: Working to more precisely estimate nutrient loading rates and incentivize best management practices in the nursery and greenhouse industry. HortScience 48: 1097-1102.
13. Majsztrik, J.C., A. G. Ristvey. E. Lichtenberg and **J.D. Lea-Cox**. 2013. 2012 Maryland Horticulture Industry Economic Profile. *Maryland Nursery and Landscape Association,* Brooklandville. MD. 15 Dec, 2013. 40 p. http://issuu.com/marylandnurserylandscapeassn/docs/final_report_-_dec_23_2013
14. van Iersel, M.W., M. Chappell, and **J. D. Lea-Cox.** 2013. Sensors for improved efficiency of irrigation in greenhouse and nursery production. HortTechnology. 23: 735-746.
15. Kim, J., B. E. Belayneh and **J. D. Lea-Cox.** 2012. Estimating daily water use of snapdragon in a hydroponic production system. Proc. Southern Nursery Assoc. Res. Conf. 57: 336-340.

16. Hong, C.X., P. A. Richardson, W. Hao, S. R. Ghimire, P. Kong, G. W. Moorman, **J. D. Lea-Cox** and D. S. Ross. 2012. *Phytophthora aquimorbida* sp. nov. and *Phytophthora* taxon '*aquatilis*' recovered from irrigation reservoirs and a stream in Virginia, USA. Mycologia. 104:1097-1108.
17. Kong, P., **J. D. Lea-Cox** and C. X. Hong. 2012. Effect of electrical conductivity on survival of *Phytophthora alni, P. kernoviae* and *P. ramorum* in a simulated aquatic environment. Plant Pathology 61: 1179-1186
18. Kong, P., **J. D. Lea-Cox**, G. W Moorman and C. X. Hong. 2012. Survival *of Phytophthora alni, P. kernoviae* and *P. ramorum* in a simulated aquatic environment at different levels of pH. FEMS Microbiology Letters 332:54-60.
19. **Lea-Cox, J. D. 2012.** Using Wireless Sensor Networks for Precision Irrigation Scheduling. Chapter 12. In: Problems, Perspectives and Challenges of Agricultural Water Management. *M. Kumar (Ed.)* InTech Press. Rijeka, Croatia. pp. 233-258.
20. Solano, L., A.G. Ristvey, **J.D. Lea-Cox** and S.M. Cohan. 2012. Sequestering zinc from recycled crumb rubber in extensive green roof media. Ecol. Engineering 47: 284-290.
21. Ghimire, S.R., P. A. Richardson, P. Kong, J. Hu, **J. D. Lea-Cox**, D. S. Ross, G. W. Moorman and C. X. Hong. 2011. Distribution and diversity of Phytophthora species in nursery irrigation reservoir adopting water recycling system during winter months. J. Phytopathology 159:713-719
22. **Lea-Cox, J. D**., A. G. Ristvey, D.S. Ross and G. Kantor. 2011. Wireless Sensor Networks to Precisely Monitor Substrate Moisture and Electrical Conductivity Dynamics in a Cut-Flower Greenhouse Operation. Acta Hort. 893:1057-1063**.**
23. **Lea-Cox, J. D.,** F. R. Arguedas-Rodriguez, A. G. Ristvey and D.S. Ross. 2011. Relating Real-time Substrate Matric Potential Measurements to Plant Water Use, for Precision Irrigation. Acta Hort. 891: 201-208.
24. Majsztrik, J.C., A. G. Ristvey and **J. D. Lea-Cox**. 2011. Water and Nutrient Management in the Production of Container-Grown Ornamentals. In: *Hort. Reviews* J. Janick (Ed.). J. Wiley, NJ. 38:253-297.
25. Stevens, M.D., B.L. Black, **J. D. Lea-Cox** and D. Feuz. 2011. Horticultural and Economic Considerations in the Sustainability of Three Cold-Climate Strawberry Productions Systems. HortScience. 46: 445-451.
26. Hong, C. X., M. E. Gallegly, P. A. Richardson, P. Kong, G. W. Moorman, **J. D. Lea-Cox** and D. S. Ross. 2010. Phytophthora hydropathica, a new pathogen identified from irrigation water, Rhododendron catawbiense and Kalmia latifolia. Plant Pathology 59:913-921.
27. **Lea-Cox, J. D.,** C. Zhao, D. S. Ross, T. E. Bilderback, J. R. Harris, S. D. Day, C. X. Hong, T. H. Yeager, R. C. Beeson Jr. ,W. L. Bauerle, A. G. Ristvey, M. Lorscheider, S. Dickinson and J. M. Ruter. 2010. A Nursery and Greenhouse Online Knowledge Center: Learning Opportunities for Sustainable Practice. HortTechnology 20: 509-517.
28. Ghimire, S.R., P. A. Richardson, G. W. Moorman**, J. D. Lea-Cox**, D. S. Ross and C. X. Hong. 2009. An in-situ baiting bioassay for detecting Phytophthora species in irrigation runoff containment basins. Plant Pathology 58:577-583.
29. Kong, P. , G. W. Moorman**, J. D. Lea-Cox**, D. S. Ross, P. A. Richardson and C. X. Hong. 2009. Zoosporic Tolerance to pH Stress and its Implications for Phytophthora Species in Aquatic Ecosystems. J. Appl. Env. Microbiology 75: 4307-4314.
30. Hong, C., **J. D. Lea-Cox**, D. S. Ross, G.W. Moorman, P.A Richardson, S.R. Ghimire and P. Kong. 2009. Containment basin water quality fluctuation and implications for crop health. Irr. Sci. 27:485-496.
31. Stevens, M. D., , B. L. Black, **J. D. Lea-Cox**, A.M. Sadeghi, J. Harman-Fetcho, E. Pfeil, P. Downey, R. Rowland and C.J. Hapeman. 2009. A Comparison of Three Cold-Climate Strawberry Production Systems: Environmental Effects. HortScience. 44: 298-305.
32. **Lea-Cox, J. D.**, A. G. Ristvey, F. R. Arguedas-Rodriguez, D. S. Ross, J. Anhalt and G. Kantor. 2008. A Low-cost Multihop Wireless Sensor Network, Enabling Real-Time Management of Environmental Data for the Greenhouse and Nursery Industry. Acta Hort. 801: 523-529.