

CURRICULUM VITAE

January 2018

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RESEARCH & TEACHING EXPERIENCE INTERESTS

My research currently focuses on the epidemiology and management of oomycete pathogens of lima bean (*Phaseolus lunatus*), the cornerstone of the vegetable processing industry in Delaware and the mid-Atlantic region (MAR). The major focus of my research is to improve the productivity of lima bean by reducing the negative impact of *Phytophthora spp.* through the development of risk models and resistant cultivars adapted to the MAR. My laboratory currently works on the characterization of races of the pathogen *P. phaseoli*, the causal agent of downy mildew of lima bean, and mating types of *P. capsici*, the causal agent of pod rot. Additionally, we are monitoring the development of mefenoxam resistance in both of these important lima bean pathogens. A new focus of our program is to improve our understanding of the population genetics of *P. phaseoli*. We are also using next-generation sequencing marker assisted breeding to speed the development lima bean cultivars with resistance to these important pathogens.

I currently teach PLSC 303 Introductory Plant Pathology, PLSC 140 People and Plants: Feast or Famine, PLSC 800 Current Concepts in Plant Health. I have also taught PLSC 666 Advanced Plant Pathology or Applied Plant Virology, PLSC 411/611 Diagnostic Plant Pathology, PLSC 416/616 Plant Virology, PLSC 101 Introductory Botany, PLSC 302 Vegetable Science, PLSC 367 Flora of Ecuador and the Galapagos (study abroad). Encompasses 94 classes taught reaching 1,666 students.

EDUCATIONAL BACKGROUND

Ph.D. Michigan State University, 1985 Botany and Plant Pathology

M.S. California State Polytechnic University, Pomona, 1977, Botany.

B.S. California State Polytechnic University, Pomona, 1974, Botany, *cum laude*. Outstanding Student in Botany

PROFESSIONAL EXPERIENCE

2014 Visiting Professor University of Siena, Italy

2014 Visiting Professor Pontifical Catholic University, Quito, Ecuador

2006 to present Professor of Botany and Plant Pathology, Department of Plant and Soil Sciences, University of Delaware, Newark, DE.

1994-2006 Associate Professor of Botany and Plant Pathology. Department of Plant and Soil Sciences, University of Delaware, Newark, DE.

1989-1994 Assistant Professor of Botany and Plant Pathology, Department of Plant and Soil Sciences, University of Delaware, Newark, DE.

- 1985-1989 Research Plant Pathologist, Department of Plant and Soil Sciences, University of Delaware, Research and Education Center. Applied research on production and pathology of vegetable and agronomic crops.
- 1981-1985 Graduate Research Assistant, Department of Botany and Plant Pathology, Michigan State University, Ph.D. student.
- 1978-1980 Teaching Assistant and Associate Instructor, Department of Botany, University of California, Davis. Taught laboratories and discussion sessions for General Botany, Plant Physiology, Plant Anatomy and Electron Microscopy, Ph.D. student.
- 1977-1978 Research Assistant, Los County Arboretum Research Division, Arcadia, CA.
- 1975-1977 Teaching Assistant, Department of Biological Sciences, M.S. student.

HONORS/PROFESSIONAL SERVICE

Fellow of the American Phytopathological Society
 Editorial Board, Italian Journal of Mycology, appointed 2015
 Editorial Board of Mediterranean Journal of Phytopathology, appointed 2016
 Elected Member (2016) of Accademia dei Fisiocritici, Siena, Italy
 Vice President, International Society for Plant Pathology (ISPP), 2013-2018
 Organizing chair for the International Congress of Plant Pathology 2018, Boston, USA
 Treasurer, ISPP, 2008-2013
 President's Volunteer Service Award from USAID Feed the Future Program, 2010
 APS Financial Advisory Committee, 2005-2007
 APS Representative and Councilor to the International Society of Plant Pathology, 2005-2016
 Potomac Division Councilor of APS, 2005-2007
 Member APS Ad Hoc Committee on the Future of International Programs, 2007
 Senior Editor, APS Education Center, 2009-2015
 Senior Editor, *Laboratory Teaching Manual for Introductory Plant Pathology*, APS Press
 Panel Chair for USDA-ARS Office of Science Quality Review, 2007
 Potomac Division Distinguished Service Award, 2006
 Past President, and Vice-President of the Potomac Division, APS. 1992-1994
 Past Associate Editor - *Plant Disease: an International Journal of Applied Plant Pathology*
 Sigma Xi – Science Honor Society, inducted 1977
 Beta Beta Beta – Biology Honor Society, inducted 1976

GRANTS:

Competitive—Research: 59 Total for \$6,038,465
 Competitive—Teaching: 4 Total for \$178,660
 Internal/Non-Competitive: 10 Total for \$123,300

GRADUATE STUDENTS:

Chair—5 Ph.D. & 11 M.S.
 Committee—19.

SELECTED SCHOLARLY PUBLICATIONS

- Santamaira, L. E.G. Ernest, N.F. Gregory and **T.A. Evans**. 2018. Inheritance of Resistance in Lima Bean to *Phytophthora phaseoli* the Causal Agent of Downy Mildew of Lima Bean. HortScience
- Bartz, W.C., W.G. Pill, C. Murphy and **T.A. Evans**. 2017. The effects of pruning and potassium fertilization rate in the greenhouse production of Scotch Bonnet pepper (*Capsicum chinense* Jacquin). Journal of Applied Horticultural Sciences, accepted.
- Bartz, W.C., W.G. Pill and **T.A. Evans**. 2016. The Development of a Greenhouse Substrate using Tropical Components. Journal of Horticultural Sciences and Biotechnology, Doi:10.1080/14620316.2016.1271289.
- Mhora, T.T., E.G. Ernest, R.J. Wisser, **T.A. Evans**, M.E. Patzoldt, N.F. Gregory, S. Polson, and N. M. Donofrio. 2016. Bulk segregant analysis using genotyping-by-sequencing in the accurate prediction of resistance to downy mildew (race F of *Phytophthora phaseoli*) of lima bean in a diversity panel. Phytopathology 106 (10) 1152-1158.
- Kness, A., G. Johnson, K. Everts, **T. Evans**, N. Donofrio and E. Ernest. 2016. Managing pod rot of lima bean caused by *Phytophthora capsici* with fungicides in the mid-Atlantic region. Plant Health Progress. Doi:10.1094/PHP-BR-16-0015
- Perini, C. G. Bonari, C. Barlucci, and **T.A. Evans**. 2016. The Terracota Fungi of Valenti Serini. Solicited as a Feature Article by American Phytopathological Society Doi:10.1094/APSFeature-2016-05.
- Ordoñez, M.E., D. A. Jácome, C. B. Keil, and R. J. Montúfar and **T.A. Evans**. 2016. The First Report of Bud Rot Caused by *Phytophthora palmivora* in Heart of Palm. Plant Disease. 100(6) 1248.
- Evans, T.A.**, E.G. Ernest and N.F. Gregory. 2012. Field and Greenhouse Evaluation of Lima Bean Germplasm for Resistance to *Phytophthora capsici*, the Causal Agent of Lima Bean Pod Rot. Bean Improvement Cooperative V7:70.
- Kunjjeti, S.G., **T.A. Evans**, A.G. Marsh, N.F. Gregory, S. Kunjeti, B.C. Meyers, V.S. Kalavacharla and N. M. Donofrio. 2012. RNA-Seq reveals infection-related global gene changes in *Phytophthora phaseoli*, the causal agent of lima bean downy mildew. Molecular Plant Pathology 13:454-466.
- Pill, W.G., C.M. Collins, N. Gregory and **T.A. Evans**. 2011. Application method and rate of *Trichoderma* species as a biological control against *Pythium aphanidermatum* (Edson) Fitzp. in the production of microgreen table beets (*Beta vulgaris* L.). Scientia Horticulturae 129(4):914-918.
- Ernest, E.G. **T.A. Evans** and R.J. Wisser. 2011. Lima bean breeding and genetic research at the University of Delaware. Bean Improvement Cooperative V6: 21-23.
- Evans, T.A.** and C. Keil. 2009. A survey of scotch bonnet peppers in Jamaica for plant viruses and insect pests. Journal of Environmental Monitoring and Restoration. 6:68-73.
- Soria, S. C. Taboada, R. Vega Gonzales, **T.A. Evans**, V.D. Damsteegt, and S. Kitto. 2009. *In Vitro* and field performance of virus-tested and virus-infected plants in the field in Ecuador. Experimental Agriculture 45:483-497.

Davidson, C.R., **T. A. Evans**, R. P. Mulrooney, N. F. Gregory, R. B. Carroll and N.R. O'Neill. 2007. Lima bean downy mildew epidemics caused by new physiological races of *Phytophthora phaseoli*. Plant Disease 92(5):670-674.

Evans, T. A., L.C Miller, B.L. Vasilas, R.W. Taylor and R.P. Mulrooney. 2007. Management of *Xiphinema americanum* and soybean severe stunt disease in soybean using crop rotation. Plant Disease 91(2):216-219.

Evans, T.A., R.P. Mulrooney, N.F. Gregory, and E. Kee. 2007. Lima bean downy mildew: impact etiology and management strategies for Delaware and the mid-Atlantic U.S. Plant Disease 91(2):128-135 DOI:10.1094/PDIS-91-2-0128.

Pill, W.G., **Evans, T.A.**, M.W. Orzeleski, R.P. Mulrooney, and W.E. Kee. 2005. The 'Maffei 15' lima bean compensates for reduced plant stand. HortScience 40:2024-2025.

Santamaria, L. **T.A. Evans**, R.P. Mulrooney, and R.B. Carroll. 2005. Evaluation of USDA and CIAT lima bean germplasm accessions for resistance to downy mildew, 2004. Biological and Cultural Tests (online) Report 20:V013. The American Phytopathological Society, St. Paul, MN.

Orzeleski, M.W, **T.A. Evans**, N.F. Gregory and W.G. Pill. 2005. Enhanced germination of primed mericarps of parsley (*Petroselinum crispum* Mill. Nyman ex A.W. Hill) limited by *Alternaria alternata proliferatum*. Journal of Horticultural Science and Biotechnology. 80(4):427-432.

Vasilas, B. L. Vasilas, J. Thompson, A. Rizzo, J. Fuhrmann, **T. Evans**, J. Pesek and K. Kunkle. 2004. Ectomycorrhizal mantles as indicators or hydrology for jurisdictional wetland determinations. Wetlands 24(4):784-795.

Birmingham, A.M., E.A. Buzby, D.L. Davies, E.R. Benson, J.L. Glancey, W.G.Pill, **T.A. Evans**, R.P. Mulrooney, and M.W. Olszewski. 2004. A precision planter for large seeds in small plots. HortTechnology 14(4):1-3.

Krishnan P., **T.A. Evans**, K. Ballal, and L.J. Kemble. 2003. Scanning electron microscopy studies of new and worn fan nozzles. Applied Engineering in Agriculture 20(2):133-137.

Ford, R. and **T.A. Evans**. 2003. Tobacco Mosaic Virus ([www.apsnet.org/education/K-12/PlantPathways/Teachers Guide/Activies/TMV/TMV/default](http://www.apsnet.org/education/K-12/PlantPathways/Teachers%20Guide/Activies/TMV/TMV/default)). The Plant Health Instructor 10:1094.

Evans, T.A., C.R. Davidson, J.D. Dominiak, R.P. Mulrooney, and R.B. Carroll. 2002. Two new races of *Phytophthora phaseoli* from lima bean in Delaware. Plant Disease 86:1091.

Davidson, C.R., R.P. Mulrooney, R.B. Carroll and **T.A. Evans**. 2002. First report of *Phytophthora capsici* on lima bean in Delaware. Plant Disease 85:886.

Sedegui, M., R.B. Carroll, A.L. Morehart, **T.A. Evans**, S.H. Kim and R. Lakhdar. 2000. Genetic structure of *Phytophthora infestans* populations in Morocco. Plant Disease 84:173-176.

Evans, T.A. 1999. Soybean Severe Stunt Nepovirus. Pp 88-89. Chapter In Hartman, G. L., Sinclair, J. B., and Rupe, J. C. The Compendium of Soybean Disease, 4th edition, APS Press, St. Paul, MN.

- Mulrooney, R.P., **T.A. Evans** and R.W. Taylor. 1999. Field evaluation of selected soybean cultivars for resistance to soybean severe stunt virus, 1998. *Biological and Cultural Control Tests*. Vol 14: 95. The American Phytopathological Society, St. Paul, MN.
- Elmer W. and **T.A. Evans** 1998. Names of Asparagus Diseases, *Plant Disease Notes*. PhytoPathNews. APS Press, St. Paul, MN.
- Soria, S. L., R. Vega, V.D. Damsteegt, L.L. McDaniels, S.L. Kitto and **T.A. Evans**. 1998. Occurrence and partial characterization of a mechanically transmissible virus in mashua (*Tropaeolum tuberosum*) from Ecuador. *Plant Disease* 82:69-73.
- Kitto, S.L., **T.A. Evans** and R.L. Rojas. 1997. The Ecuador Odyssey. *Chronica Horticulturae* 37(1):17.
- Haynes, J., W.G. Pill and **T.A. Evans**. 1997. Seed treatments improve the germination and seedling emergence of switchgrass (*Panicum virgatum* L.). *HortScience* 32(7):1222-1226.
- Tainter, F. H., G.L. Schumann and **T.A. Evans**. 1995. Development of the plant pathology laser videodisc. *Journal of Natural Resources and Life Sciences Education* 24:48-52.
- Krishnan, P., **T.A. Evans** and W.G. Pill. 1994. Threshing cylinder speed effect on *Amaranthus hypochondriacus* seed germination - A preliminary study. *HortScience* 29:652-654.
- Pill, W.G., P. Krishnan and **T.A. Evans**. 1994. Effect of priming on germination of mechanically threshed seed of *Amaranthus hypochondriacus* seed. *HortScience* 29:655-658.
- Schumann, G.L., **T.A. Evans** and F.H. Tainter. 1993. An Interactive Videodisc Introduction to Plant Pathogens and Plant Disease. American Phytopathological Society, St. Paul, MN. translated into Spanish and French (1998). APS Press, St. Paul, MN.
- Evans, T.A.**, G.L. Schumann and F.H. Tainter. 1993. A Plant Disease Interactive Video Image Glossary. APS Press, St. Paul, MN.
- Pill, W.G., **T.A. Evans** and S.A. Garrison. 1993. Forcing white asparagus in various substrates under cool and warm regimes. *HortScience* 28:996-998.
- Evans, T.A.**, G.L. Schumann and F.H. Tainter. 1992. A Plant Disease Video Image Resource Database. American Phytopathological Society Press, St. Paul, MN, 10,000 records.
- Weldekidan, T., **T.A. Evans**, R.B. Carroll and R.P. Mulrooney. 1992. Etiology of soybean severe stunt disease and some properties of the causal virus. *Plant Disease* 76:747-750.
- DeVries, R.M., **T.A. Evans** and C.T. Stephens. 1992. Effect of asparagus virus infection on asparagus tissue culture propagation and persistence through culture. *Plant Cell, Tissue and Organ Culture* 31:31-35.
- Evans, T.A.**, G.L. Schumann and F.H. Tainter. 1992. A Plant Disease VideoImage Resource. American Phytopathological Society Press, St. Paul, MN, 10,000 images.
- Evans, T.A.** 1991. Occurrence of asparagus virus I and asparagus virus II in Delaware asparagus. *Plant Disease* 75:1075.

Evans, T.A. and R.P. Mulrooney. 1991. First report of watermelon fruit blotch in Delaware. *Plant Disease* 75:1074.

Evans, T.A., R.M. DeVries, T.L. Wacker and C.T. Stephens. 1990. Epidemiology of asparagus viruses in Michigan asparagus. *Acta Horticulturae* 271:285-290.

Evans, T.A., and C.T. Stephens. 1989. First report of asparagus virus I in Michigan asparagus. *Plant Disease* 73:273.

Evans, T.A., and C.T. Stephens. 1989. Increased susceptibility to *Fusarium* crown and root rot in virus-infected asparagus. *Phytopathology* 79:253-258.

Mulrooney, R.P., J.C. Windsor and **T.A. Evans**. 1989. First report of wheat spindle streak virus in Delaware. *Plant Disease* 73:444.

Evans, T.A. and W.G. Pill. 1989. Emergence and seedling growth from osmotically primed or pre-germinated seeds of asparagus (*Asparagus officinalis* L.). *Journal of Horticultural Science* 64:275-282.

Evans, T.A., and C.T. Stephens. 1989. First report of asparagus virus I in Michigan asparagus. *Plant Disease* 73:273.

Evans, T.A., and C.T. Stephens. 1988. Association of asparagus virus II with pollen from infected asparagus (*Asparagus officinalis* L.). *Plant Disease* 72:195-198.

Evans, T.A. and C.T. Stephens. 1986. Effect of irrigation on radish cultivar reactions to common scab. *Biological and Cultural Tests* 1:19.

Evans, T.A., and C.T. Stephens. 1985. The first report in Michigan of the teleomorph of *Stemphylium vesicarium*; the causal agent of purple spot of asparagus. *Plant Disease* 68:1099.

Levick, D.R., **Evans, T.A.**, Stephens, C.T., and M.L. Lacy. 1985. Etiology of radish scab and its control through irrigation. *Phytopathology* 75:568-572.

Evans, T.A. and C.T. Stephens. 1985. Contribution of asparagus viruses to Michigan asparagus decline. *Proceedings 6th International Asparagus Symposium*. 12 pp.

Hartung, A.C., **T.A. Evans** and C.T. Stephens. 1984. Occurrence of asparagus virus II in commercial asparagus in Michigan. *Plant Disease* 69:501-504.

Webster, B.D., R.M. Ross and **T.A. Evans**. 1982. Nectar and the nectary of *Phaseolus vulgaris* L. *J. American Society of HortScience* 107:497-503.

Blakely, L.M., M. Durham, **T.A. Evans** and R.M. Blakely. 1982. Experimental studies on lateral root formation in radish seedling roots. I. General methods, developmental stages and spontaneous formation of laterals. *Bot. Gaz.* 143:341-352.

Blakely, L.M. and **T.A. Evans**. 1979. Cell dynamics studies on the pericycle of radish seedling roots. *Plant Science Letters* 14:79-83.