

# Curriculum Vitae

**Amy Fulcher**

Extension Specialist and Professor  
Department of Plant Sciences, University of Tennessee  
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## EDUCATION

### **University of Kentucky, Lexington, KY**

Ph.D. Crop Science

Dissertation: Modeling Water Use in Nursery Crops

Advisor: Robert L. Geneve

### **North Carolina State University, Raleigh, NC**

M.S. Horticultural Science

Thesis: Host Plant Resistance Among *Malus* Taxa to Japanese Beetle, European Red Mite, and Two-Spotted Spider Mite

Advisor: Thomas G. Ranney

### **Western Kentucky University, Bowling Green, KY**

B.S. Agriculture

Emphasis: Horticulture

Minor: Business Administration

Graduated Summa Cum Laude

## PROFESSIONAL EXPERIENCE

### **Professor**

#### **Sustainable Ornamental Plant Production and Landscape Management - University of Tennessee, Department of Plant Sciences**

75% Extension, 25% Research

Knoxville, TN

June 2021 to present

### **Associate Professor**

#### **Sustainable Ornamental Plant Production and Landscape Management - University of Tennessee, Department of Plant Sciences**

75% Extension, 25% Research

Knoxville, TN

June 2016 to June 2021

### **Assistant Professor**

#### **Sustainable Ornamental Plant Production and Landscape Management - University of Tennessee, Department of Plant Sciences**

Knoxville, TN

November 2010 to June 2016

### **Extension Associate for Nursery Crops - University of Kentucky, Department of Horticulture**

Princeton, KY and Lexington, KY  
April 2002 to October 2010

### **Hopkins County Extension Agent for Horticulture - University of Kentucky**

Madisonville, KY

January 1997 to March 2002

## **GRANTSMANSHIP**

### **Funded**

### **National, Regional, and State Level**

#### **Professor**

1. LeBude, A.V., **A. Fulcher**, K. Adesso, J. Altland, N. Bumgarner, L. Chen, H. Gan, G. Kantor, M. Sultan, C. Marble, L. Nackley, M. Palma, L. Ribera, A. Rihn, T. Ruth, S. Schexnayder, M. Velandia, L. Warner, and H. Zhu. 2024-2029. Labor, Efficiency, Automation, and Production: LEAP Nursery Crops Toward Sustainability. U.S. Department of Agriculture - National Institute of Food and Agriculture. Specialty Crops Research Initiative Coordinated Agriculture Project. Award 2024-51181-43291. Proposed and awarded \$9,825,677.
2. Baysal-Gurel, B. 2024-2025. Planning a Solution: A Partnership to Identify Research and Extension Priorities for Vascular Streak Dieback (VSD) in Woody Ornamental Crops. USDA Specialty Crop Research Initiative, Planning Grant. \$50,000.
3. Moon, R., L. Wang, **A. Fulcher**, S. Wang, H. Zhu, C. Baez, and J.-H. Chong. 2024. Exploring the Role of Cellulose Nanofibril as an Efficacy-enhancer for a Foliar Pesticide by Spray Application. P3Nano: Advancing Commercialization of Wood-Based Nanomaterials. USFS P3Nano. \$100,000, selected for funding by reviewers but Congress did not fund this program this year.

#### **Associate Professor**

1. **Fulcher, A.**, A. LeBude, J. Altland, N. Bumgarner, S.C. Marble, L. Nackley, M. Palma, L. Ribera, L. Warner, and H. Zhu. 2020-2021. Addressing the Nursery Crops Labor Crisis: A Model for Streamlining a Labor-Intensive Production System. USDA Specialty Crop Research Initiative, Planning Grant. \$50,000.
2. Adesso, K., J. Oliver, A. LeBude, K. Jensen, W. Klingeman, N. Wiman, F. Baysal-Gurel, A. Witcher, O. Liburd, J.-H. Chong, D. Held, J. Rijal, D. Shapiro-Ilan, **A. Fulcher**, J. Moulton, B. Campbell, A. Acebes-Doria, B. Blaauw, S. Joseph, C. Seavert, L. Nackley, E. Vafaie, C. Palmer, B. Olukolu, and F. Kaplan. 2020-2024. Flatheaded Borer Management in Specialty Tree Crops. USDA Specialty Crop Research Initiative, Coordinated Agriculture Proposal. \$6,058,955.

3. **Fulcher, A.** 2017-2020. Enhancing Tennessee's Competitiveness and Profitability Producing Hydrangea Species. Tennessee Department of Agriculture, Specialty Crop Block grant.
4. **Fulcher, A.** and J. Toman. 2016-2019. Developing the Advanced Tennessee Master Nursery Production Program. Tennessee Department of Agriculture, Specialty Crop Block grant. \$43,500.
5. Zhu, H., **A. Fulcher**, G. Gao, K. Giles, D. Herms, C. Krause, P. Ling, D. Lockwood, G. Niu, E. Ozkan, R. Rosetta, G. Schnabel, A. Shah, L. Zhao and R. Zondag. 2015-2020. Advancement of Pesticide Spray Applications in Specialty Crop Production with Intelligent-Decision Technologies. USDA Specialty Crop Research Initiative. \$3,991,828.
6. Walker, F. and **A. Fulcher**. 2015-2018. Robinson Creek Restoration Project, Franklin County, Tennessee. Tennessee Department of Environment and Conservation. \$55,176.
7. Chappell, M.R., S.K. Braman, J.-H. Chong, J. Derr, W. Dunwell, **A. Fulcher**, F. Hale, F. Hand, W. Klingeman, G. Knox, A. LeBude, C. Marble, J. Neal, N. Ward, S.A. White, J. Williams-Woodward, and A. Windham. 2015-2016. IPM for Shrubs in Southeastern U.S. Nursery Production. USDA-NIFA, Southern Region IPM Center. \$39,532.
8. Clark, C., F. Walker, T. Papanicolaou, L. Lambert, D. Lambert, Hawkins, C. Boyer, and **A. Fulcher**. 2014-2018. Using Hydro-Economic Modeling to Optimally Allocate Water in the Humid Southeastern U.S. USDA NIFA. National Integrated Water Quality Program. \$659,926.

#### **Assistant Professor**

1. LeBude, A., K. Braman, N.W. Gauthier, J. Neal, M. Chappell, **A. Fulcher**, W. Klingeman, J. Derr, G. Knox, C. Adkins, J.-H. Chong, W. Dunwell, S. Frank, F. Hale, S.A. White, J. Williams-Woodward, and A. Windham. 2014-2015. Experiential Nursery IPM Workshop Series to Enhance Grower Adoption and Extension Agent Facilitation. IPM Working Group and Capstone. \$39,982.
2. **Fulcher, A.**, D. Cochran<sup>M</sup>, and B. Leib. 2014. Mitigating Risk from Changing Irrigation Water Resources and Regulations. Southern Risk Management Education Center. \$36,118.
3. **Fulcher, A.** and W. Klingeman. 2013. Understanding the Impact of Systemic and Contact Insecticides on Beneficial Insect Populations: Possible Implications for Scale Problems during Nursery Production. Center for Applied Nursery Research. \$2,000.
4. White, S.A., **A. Fulcher**, J.-H. Chong, A. LeBude, C. Adkins, K. Braman, M. Chappell, J. Derr, W. Dunwell, S. Frank, F. Hale, W. Klingeman, G. Knox, J. Neal, N. Ward, A. Windham, and J. Williams-Woodward. 2013. IPM for Shrubs in Southeastern U.S. Nursery Production (Vol. I), a SNIPM Working Group Effort. Southern Region IPM Center, IPM Enhancement Program. \$29,983.
5. **Fulcher, A.**, D. Fare, M. Halcomb, F. Hale, C. Kimbro, J. Oliver, and A. Windham. 2012-2014. Tennessee Master Nursery Program. Tennessee Department of Agriculture, Specialty Crop Block Grant. \$47,732.

6. Cochran, D.<sup>M</sup>, **A. Fulcher**, F. Hale, and A. Windham. 2012. Mitigating Risk with Systems-based Pest Management for Tennessee Nursery Owners, Producers, and Hispanic Work Force. Southern Risk Management Education Center. \$38,971.
7. **Fulcher, A.** and W. Klingeman. 2011. Evaluation of the Effect of Systemic and Contact Insecticides on Natural Enemy Populations in a Woody Plant Production System: Implications for Enhanced Conservation Biological Control. Center for Applied Nursery Research. \$2,000.
8. **Fulcher, A.**, J. Chong, S. White, A. LeBude, W. Klingeman, M. Chappell, C. Adkins, K. Ivors, J. Neal, F. Hale, A. Windham, J. Williams-Woodward, K. Braman, and W. Dunwell. 2011. Enhancing Nursery Crop Research and Extension with a Multi-State Working Group. IPM Enhancement Grant. Southern Region IPM Center. \$24,232.
9. Stewart, R., G. Bi, R. Brumfield, M. Evans, T. Fernandez, **A. Fulcher**, R. Geneve, D. Kovacic, D. Lindsey, G. Niu, R. Schnelle, and S. Verlinden. 2010-2014. Impact and Social Acceptance of Selected Sustainable Practices in Ornamental Crop Production Systems. USDA Specialty Crops Research Initiative. \$1,548,793.
10. Johnson, D., P. Lucas, T. Coolong, R. Durham, **A. Fulcher**, C. Lee and L. Murdock. 2010-2013. IPM in Kentucky: Integrated Development and Delivery. USDA-NIFA. \$280,934.
11. Zhu, H., H. Ozkan, R. Derksen, M. Reding, C. Ranger, L. Cañas, J. Locke, C. Krause, S. Ernst, R. Zondag, **A. Fulcher**, and R. Rosetta. 2009-2014. Intelligent Spray Systems for Floral and Ornamental Nursery Crops. USDA Specialty Crops Research Initiative. \$1,826,298.
12. Johnson, D., P. Lucas, T. Coolong, **A. Fulcher**, C. Lee, G. Schwab, and L. Murdock. 2009-2010. An Integrated Pest Management Program for Kentucky. USDA CSREES. \$108,169.
13. **Fulcher, A.**, A. LeBude, J. Williams-Woodward, S. White, S. Frank, F. Hale, M. Chappell, W. Dunwell, C. Adkins, K. Ivors, K. Braman, A. Windham, and J. Chong. 2009. Multi-State Crop Profile and Pest Management Strategic Plan for Nursery Crops. IPM Enhancement Grant. Southern Region IPM Center. \$18,744.

#### **Prior to joining the UT Department of Plant Sciences**

1. Madisonville Tree Board, City of Madisonville. 2000. North 41 Urban Curb and Gutter Project. Kentucky Division of Forestry Urban and Community Forestry Grant. \$7,875.

#### **Internally Competitive**

1. **Fulcher, A.** and D. Lockwood and respective working groups. 2021. UT Extension. \$9,904.88. Agent travel support to attend in-service training
2. **Fulcher, A.** 2018. Center for Profitable Agriculture. Agent travel support to attend the 2018 IPPS Annual Conference and Tours. \$12,500.
3. **Fulcher, A.** 2014. UTIA AgResearch Travel Grant. \$1,500. (for postdoc D. Cochran<sup>M</sup>)
4. **Fulcher, A.** 2013. UTIA AgResearch Travel Grant. \$1,500. (for postdoc D. Cochran<sup>M</sup>)
5. **Fulcher, A.** 2012. UTIA AgResearch Travel Grant. \$1,500. (for M.S. student E. Hagen<sup>M</sup>)

#### **Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.** and R. Schnelle. 2009. Use of the Whole-Tree, Mixed-Species Product, Forest Floor, as a Container Substrate for Herbaceous and Woody Crops. UK Department of Horticulture Nursery Landscape Mini-grant. \$3,500.
2. **Fulcher, A.** 2008. Influencing Branch Architecture of Container-Grown Trees and Shrubs. UK Department of Horticulture Nursery Landscape Mini-grant. \$2,500.
3. **Fulcher, A.** and R. Geneve. 2007. Effect of Conventional and Biorational Fungicides on *Rhizoctonia solani* in a Container Nursery Production System. UK Department of Horticulture Nursery Landscape Mini-grant. \$2,500.
4. **Fulcher, A.** 2007. Efficacy of PGRs on Branch Architecture of Container-Grown Trees and Shrubs. UK Department of Horticulture Nursery Landscape Mini-grant. \$2,500.
5. Geneve, R., J. Buxton, **A. Fulcher,** and J. Norikane. 2006. Optimizing Pot-in-Pot Nursery Production for Kentucky Growers. New Crop Opportunities Center. \$45,913.
6. Geneve, R., **A. Fulcher,** and J. Norikane. 2005. Development of a Novel Production System to Enhance the Survival and Growth of Flowering Dogwood, *Cornus florida*, a High Value Crop with Potential for Kentucky Producers. New Crop Opportunities Center. \$25,000.
7. **Fulcher, A.** and R. Geneve. 2005. Characterization of the Impact of Water Deficit on Two Dogwood Species and Their Hybrid as it Relates to the Development of a Use-Based, Sap Flow-Regulated Irrigation System for Pot-in-Pot Production. UK Department of Horticulture Nursery Landscape Mini-grant. \$3,000.
8. Potter, D., B. Miller, **A. Fulcher,** D. Hayden, R. McNiel, K. Haynes, J. Hartman, and C. Redmond. 2005. Sustainable Management of Insect Pests and Diseases of Nursery Grown Maples in Kentucky. New Crop Opportunities Center. \$75,000.
9. **Fulcher, A.** and R. Geneve. 2004. Evaluation of Particle Film Technology as a Mechanism for Stress Reduction and Growth Enhancement of *Cornus florida* in High Light Nursery Production and Landscape Settings. U.K. Horticulture Department Nursery Landscape Mini-grant. \$2,500.
10. **Fulcher, A.,** W. Dunwell, R. McNiel, and D. Hayden. 2004-2008. IPM Nursery Crops Workshop Series. Kentucky Integrated Pest Management. \$48,083.
11. **Fulcher, A.** and J. Hartman. 2003. Evaluation of Black Knot Resistance among *Prunus* Taxa. UK Department of Horticulture Nursery Landscape Mini-grant. \$1,000.
12. **Fulcher, A.,** W. Dunwell, and R. McNiel. 2003. IPM for Nursery Production: Practical Techniques for Nursery Producers. Kentucky Integrated Pest Management. \$7,740.
13. **Fulcher, A.,** W. Dunwell, and R. McNiel. 2002. IPM for Nursery Production Workshop Series. Kentucky Integrated Pest Management. \$4,525.
14. U.K. Nursery and Landscape Program Group. 2002. Best Management Practices Workshop IV. Barnhart Fund for Excellence. \$1,000.
15. **Fulcher, A.** and R. Bessin. 2000. Seeds of Hope, Harvest of Pride Community Garden. Kentucky Integrated Pest Management. \$1,455.
16. **Fulcher, A.** and R. Durham. 1999. Seeds of Hope, Harvest of Pride Community Garden. Kentucky Integrated Pest Management. \$2,409.
17. **Fulcher, A.,** G. Kelley, R. Bessin, and M. Rasnake. 1998. Hopkins County Field Day. Kentucky Integrated Pest Management. \$4,491.

## Contracts

### Professor

1. **Fulcher, A.** 2025-26. Integration of Intelligent Spray Technology into IPM Programs in Specialty Crop Production. ARS Special Cooperative Agreement through Oregon State University. \$32,830
2. **Fulcher, A.** 2024-25. Integration of Intelligent Spray Technology into IPM Programs in Specialty Crop Production. ARS Special Cooperative Agreement through Oregon State University. \$49,977.
3. **Fulcher, A.** 2024-2025. Improving Nursery Irrigation Through Coupled Advances in Substrate Composition and Cyclic Irrigation Scheduling. ARS Special Cooperative Agreement. \$38,591.
4. **Fulcher, A.** 2023-24. Integration of Intelligent Spray Technology into IPM Programs in Specialty Crop Production. ARS Special Cooperative Agreement through Oregon State University. \$39,900.
5. **Fulcher, A.** 2023-2024. Improving Nursery Irrigation Through Coupled Advances in Substrate Composition and Cyclic Irrigation Scheduling. ARS Special Cooperative Agreement. \$42,607.
6. **Fulcher, A.** 2022-2023. Improving Nursery Irrigation Through Coupled Advances in Substrate Composition and Cyclic Irrigation Scheduling. ARS Special Cooperative Agreement. \$43,605.
7. **Fulcher, A.** 2021-2022. Improving Nursery Irrigation Through Coupled Advances in Substrate Composition and Cyclic Irrigation Scheduling. ARS Special Cooperative Agreement. \$45,637.

### Associate Professor

8. **Fulcher, A. And D. Lockwood.** 2019-2023. Using Variable-rate Spray Technology to Enhance Economic and Environmental Sustainability in Nurseries and Apple Orchards. ARS Special Cooperative Agreement. \$100,000.
9. **Fulcher, A.** 2017. Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$1,750.
10. **Fulcher, A.** 2016. Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$2,500.

### Assistant Professor

1. **Fulcher, A.** 2015. Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$2,500.
2. **Fulcher, A.** 2014. Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$3,000.
3. **Fulcher, A.** 2013. Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$3,000.
4. **Fulcher, A.** 2012. Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$2,000.
5. **Fulcher, A.** 2012. Effect of Early Production Application of Plant Growth Regulators and Mechanical Techniques on Branch Architecture and Plant Quality of 'Limelight' Hydrangea. Interregional Research Project No. 4 (IR-4). \$6,000.
6. **Fulcher, A.** 2011 (partial year). Interregional Research Project No. 4 (IR-4). Tennessee Liaison. \$1,000.

7. **Fulcher, A.** 2011. Evaluation of PGR Materials for the Improvement of Hydrangea Branching Patterns. Interregional Research Project No. 4 (IR-4). \$8,000.

#### **Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.** 2010. Efficacy of PGRs and Influence of Propagation Method on Branch Architecture of Container-Grown Shrubs. Interregional Research Project No. 4 (IR-4). \$4,200.
2. **Fulcher, A.** and B. Vaneva. 2008. Efficacy of PGRs on Branch Architecture of Container-Grown Shrubs. Interregional Research Project No. 4 (IR-4). \$4,200.
3. **Fulcher, A.** 2007. Efficacy of PGRs on Branch Architecture of Container-Grown Trees and Shrubs. Interregional Research Project No. 4 (IR-4). \$3,000.

## **Not Funded**

### **Grants and Contracts**

#### **Professor**

1. Moon, R., L. Wang, **A. Fulcher**, S. Wang, H. Zhu, C. Baez, and J.-H. Chong. Exploring the Role of Cellulose Nanofibril as an Efficacy-enhancer for a Foliar Pesticide by Spray Application. P3Nano: Advancing Commercialization of Wood-Based Nanomaterials. USFS P3Nano. Submitted November 2023. Proposed \$100,000.
2. LeBude, A.V., **A. Fulcher**, N. Bumgarner, H. Gan, G. Kantor, C. Marble, M. Mahmud, M. Velandia, L. Warner, H. Zhu, K. Adesso, J. Altland, L. Nackley, J.S. Owen, Jr., M. Palma, L. Ribera, A. Rihn, S. Schexnayder, C. Trejo-Pech. 2023. Labor, Efficiency, Automation, and Production: LEAP Nursery Crops Toward Sustainability. USDA-NIFA Specialty Crops Research Initiative, Coordinated Agriculture Proposal. Submitted May 2023. Proposed \$7.980M.

#### **Associate Professor**

1. **Fulcher, A.** and L. Russo. 2019. Investigating the Effects of Common Container Nursery Production Practices on Pollinator Behavior and Pollen and Nectar Quality of Native and Non-native Flowering Shrubs. Horticulture Research Institute. \$34,039.
2. **Fulcher, A.** 2019. Reducing the Effect of Non-Target Pesticide Applications on Pollinators and Other Beneficial Insects. Horticulture Research Institute. \$34,372.
3. **Fulcher, A.**, et al. 2018. Addressing the Nursery Crops Labor Crisis: A Model for Streamlining a Labor-Intensive Production System. Specialty Crop Research Initiative, Coordinated Agriculture Proposal. Pre-proposal. \$5,000,000.
4. **Fulcher, A.** 2018. Reducing the Effect of Non-Target Pesticide Applications on Pollinators and Other Beneficial Insects. Horticulture Research Institute. \$76,407.
5. Frymier, P., et al. 2018. NRT-INFEWS: Career-Ready Scientist and Engineer Research and Training (CSERT). National Science Foundation (Fulcher: key participant). \$2,999,990.

6. **Fulcher, A.**, et al. 2018. A Model of Nursery Profitability that Aligns Production Inputs with Consumer Preferences: Disrupting Status Quo Production. Specialty Crop Research Initiative. \$3,350,000.
7. Butler, D., B. Ownley, **A. Fulcher**, and S. Utsala. 2017. Non-fumigant Soil and Container Disinfestation for Fruit Propagation Systems. Crop Protection and Pest Management. \$200,000.

#### **Associate Professor**

1. **Fulcher, A.**, B. Ownley, Q. Cypher<sup>M</sup>, and W. Wright. 2015. Container Solarization in Southeastern US Nursery Production as a Novel IPM-based Strategy to Prevent the Spread of Root Rot Organisms. Crop Protection and Pest Management. \$174,999.
2. **Fulcher, A.** 2015. Developing the Advanced Tennessee Master Nursery Production Program Tennessee Department of Agriculture, Specialty Crop Block grant. \$49,687.56.
3. **Fulcher** et al. 2015. Mobile Technology, Computer-Aided Pest Recognition, and Dynamic Predictive Models to Increase Sustainability in Nursery Crop Systems. USDA Specialty Crops Research Initiative. Pre-proposal. \$7,000,000.
4. **Fulcher, A.** and B. Ownley. 2014. Container Solarization in Southeastern US Nursery Production as a Component of Systems-based Pest Management to Prevent Spread of Root Rot Pathogens. Farm Bill 10007. \$142,589.
5. **Fulcher, A.**, B. Ownley, D. Cochran<sup>M</sup>, D. Butler, and C. Barickman. 2014. Integration of Elevated Oxygen Levels in Irrigation Water, Plant Resistance, and Anaerobic Soil Disinfestation for Root Rot Control: Novel, Low-risk Disease Prevention Strategies. Crop Protection and Pest Management. \$250,000.
6. **Fulcher, A.**, D. Cochran<sup>M</sup>, and B. Ownley. 2013. Elevating Dissolved Oxygen Levels in Irrigation Water for Root Rot Control, A Novel Alternative to Fungicides. Pest Management Alternatives Program \$186,417.
7. Wilson, S.E.<sup>M</sup>, **A. Fulcher**, and R. Counce. 2012. Building Research Interest and Developing Global Engagement Research Plan (BRIDGE) program.
8. **Fulcher, A.**, M. Chappell, A. Apon, K. Braman, J.-H. Chong, J. Cothren, B. Dean, J. Derr, W. Dunwell, S. Frank, F. Hale, W. Klingeman, G. Knox, A. LeBude, J. Neal, M. Palma, M. Paret, R. Pargas, N. Ward, S. White, J. Williams-Woodward, and D. Woodard. 2012. Mobile Technology, Sensor Networks, and Improved Predictive Models to Increase Sustainability in Nursery Crop Systems. Specialty Crops Research Initiative Coordinated Agriculture Project. \$9,212,797. Rated High Priority.
9. **Fulcher, A.**, S. Frank, A. LeBude, and W. Klingeman. 2012. Developing a Sustainable Nursery Production System for the Southern US. Southern Region SARE Pre-proposal. \$284,268.
10. Braman, K., J. Buck, M. Chappell, M. Czarnota, W. Florkowski, A. Martinez, P. Raymer, C. Robacker, B. Davis, E. Bauske, P. Smith, W. Klingeman, and **A. Fulcher**. 2011. Overcoming Barriers to Use of Native Plants for Alternative Pest Management. Specialty Crops Research Initiative. \$282,165.

11. **Fulcher, A.**, T. Samples, and W. Wright. 2011. Application of Ready Play Field Magic™ Polymer-coated Sand to Athletic Turf and Container-Grown Crops. Aqua-Smart Global. \$135,950.

## Gifts

Facilitated James Hines, Easy Tree Nursery, in his effort to establish an undergraduate scholarship at UT.

Gifts as an Associate Professor: \$21,219

Gifts as an Assistant Professor: \$17,200

## PUBLICATIONS

### Peer-Refereed and Peer-Reviewed Scientific Publications Published

<sup>M</sup>Student/postdoc/extension assistant mentored by the candidate, <sup>C</sup>Corresponding author

1. Fessler Mathews, L., W. Wright, X. Sun, H. Zhu, and **A. Fulcher**<sup>C</sup>. 2026. Working Title: Exploring target and non-target applications when applying pesticides to trunks with variable-rate spray technology. HortScience, in press.
2. Krauss, C.<sup>M</sup>, E. Eady<sup>M</sup>, W.C. Wright, J.S. Owen, X. Sun, and **A. Fulcher**<sup>C</sup>. 2026. Establishing the zone of interference for substrate moisture sensors in three soilless substrate components. HortTechnology, in press.
3. Alred, B.<sup>M</sup>, J.S. Owen Jr., and **A. Fulcher**<sup>C</sup>. Tap Versus Tamp: Utilizing a New Method for Packing Nursery Substrate when Determining Static and Dynamic Physical Properties. Acta Horticulturae, in press.
4. LeBude, A.V., **A. Fulcher**, J. Altland, M. Velandia, Z. Turner, A. Rihn, L. Warner, D. Hu, N. Bumgarner, C. Marble, and J. Shreckhise. 2026. Current labor challenges and opportunities in nursery crops production. HortTechnology, in press.
5. Shreckhise, J., **A. Fulcher**, J. Altland, and A. LeBude. 2026. Introduction to the Special Topic Session: Understanding labor constraints and opportunities, and the behavioral, economic, engineering, and production influences on automation adoption in the Green Industry. HortTechnology, in press.
6. Rihn, A., **A. Fulcher**, L. Warner, and A. LeBude. 2026. US nursery producers' perceived benefits from adopting select automation and mechanization technologies. HortTechnology, in press.
7. **Fulcher, A.**<sup>C</sup>, A.L. Rihn, M. Velandia, L.A. Warner, A.V. LeBude, J.E. Altland, S. Schexnayder, and J.S. Owen. 2026. Automated Irrigation: Exploring the Paradox of Plateauing Adoption Levels and High Perceived Benefits Amid a Labor Shortage in US Nurseries. HortTechnology in press.
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## Books and Manuals

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## Chapters Co-authored

#### Professor

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### Edited or Co-Edited

#### Assistant Professor

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2. IPM for Select Deciduous Trees in Southeastern US Nursery Production. 2012. **Fulcher, A.** and S. White, eds. Southern Nursery IPM Working Group, Knoxville, TN. pp. 326. (electronic version)  
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## Co-authored

### Assistant Professor

Mizell, R., G. Knox, P. Knight, C. Gilliam, S. Arthers, R. Austin, H. Baldwin, D. Batson, D. Boyd Jr., A. Bolques, K. Braman, C. Coker, Y. Chen, P. Cuevas, M. Cuevas, M. Czarnota, J. DeMott, J. Dobbs, V. Donnan, G. Fain, D. Fare, M. Faver, T. Friday, **A. Fulcher**, J. Funderburk, S. Gmeiner, G. Hackney, A. Hagan, F. Hale, J. Hayes, J. Hendrix, J. Horng, W. Klingeman, M. Gu, M. Halcomb, W. Hudson, R. Humphries, C. Kinard, G. Kirker, S. Ludwig, J. Marshall, F. May, W. McLaurin, P. Miller, T. Mitchell, G. Niu, J. Norcini, J. Oliver, B. Posadas, N. Rechcigl, T. Rinehart, C. Roebecker, P. Schultz, B. Simpson, R. Story, K. Tilt, S. Webb, R. Webb, and K. Whitley. 2011. Woody Ornamental and Landscape Plant Production and Pest Management Innovation Strategic Plan. Southern Region IPM Center, Raleigh, NC. pp. 64.  
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## Abstracts

### International

<sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

### Professor

1. **Fulcher, A.**, A.L. Rihn, M. Velandia, L.A. Warner, A.V. LeBude, J.E. Altland, S. Schexnayder, and J.S. Owen. 2026. Exploring conflicting use levels and perceived benefits of automated irrigation by US nursery operators. ISHS International Symposium on

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2. Brown, F.<sup>M</sup>, E. Eady<sup>M</sup>, W.C. Wright, J.S. Owen Jr., C. Krauss<sup>M</sup>, and **A. Fulcher**. Amending pine bark with fibrous substrate slows infiltration, improves water retention, and reduces leachate. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, Tatura, Australia, page 60.
  3. Alred, B.<sup>M</sup>, J.S. Owen Jr., and **A. Fulcher**. Tap versus tamp: Utilizing a new method for packing nursery substrate when determining static and dynamic physical properties. International Society for Horticultural Science. International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation, Freising, Germany. (Abstract was submitted for selection to present at the symposium; abstracts are not published.)
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15. Cavanaugh, T.<sup>M</sup>, H. Bowers<sup>M</sup>, and **A. Fulcher**. 2012. QuickFacts: Obscure scale. UT Extension Publication W289-N.
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25. Bowers, H.<sup>M</sup> and **A. Fulcher**. 2012. IPM QuickFacts: Phytophthora root rot. UT Extension Publication W289-D.
26. Bowers, H.<sup>M</sup> and **A. Fulcher**. 2012. IPM QuickFacts: White peach scale. UT Extension Publication W289-C.
27. Bowers, H.<sup>M</sup> and **A. Fulcher**. 2012. IPM QuickFacts: Bacterial leaf scorch. UT Extension Publication W289-B.
28. Bowers, H.<sup>M</sup> and **A. Fulcher**. 2012. IPM QuickFacts: Fireblight. UT Extension Publication W289-A.
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### Full Professor

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2. McClanahan, S.<sup>M</sup> and **A. Fulcher**. 2018. Using moisture sensors and pressure switches to monitor and refine irrigation. Turf and Ornamental Field Day Proceedings, University of Tennessee. pp. 51-52.
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5. **Fulcher, A.**, F. Hale, W. Klingeman, and A. Windham. 2014. Mobile app: IPMPro version 2. Turf and Ornamental Field Day Proceedings, University of Tennessee. p. 52.
6. **Fulcher, A.**, W. Klingeman, J. Vargas, F. Hale, and A. Windham. 2014. Recent advances in technology and tools to help manage turf and ornamental plant pests. Turf and Ornamental Field Day Proceedings, University of Tennessee. pp. 47-51.
7. Cochran, D.<sup>M</sup> and **A. Fulcher**. 2014. Plant establishment and degradation of biocontainers. Turf and Ornamental Field Day Proceedings, University of Tennessee. p. 30.
8. **Fulcher, A.**, D.R. Cochran<sup>M</sup>, R. Rosetta, R. Zondag, and H. Zhu. 2014. Laser tag: Intelligent sprayers change the pest management game. Proc. International Plant Propagators' Society. 63:447-451.
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## Articles Published within In-House Publications

<sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

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### Professor

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2. McKim, K.<sup>M</sup>, D. Lockwood, **A. Fulcher**. 2025. Advances in Automated Spray Technology. 26(1):14-16.
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13. **Fulcher, A.**, B.G. Leib, J. McHugh<sup>M</sup>, W.C. Wright, W. Yeary<sup>M</sup>, and Q. Cypher<sup>M</sup>. 2017. Irrigation success stories from the field. Tennessee Green Times. 18(1):20-21.
14. **Fulcher, A.** and W. Klingeman. Summer intern showcase. Tennessee Green Times. 18(3):22-23.
15. **Fulcher, A.**, A.V. LeBude, and J.S. Owen. 2017. Hydrangea primer: PGRs. Nursery Management. October 6, 2017. <http://www.nurserymag.com/article/hydrangea-primer-pgrs/>
16. Owen, J.S., A.V. LeBude, and **A. Fulcher**. 2017. Hydrangea primer: Flowering & bluing. Nursery Management. August 31, 2017. <http://www.nurserymag.com/article/hydrangea-primer-flowering--bluing/>
17. LeBude, A.V., J.S. Owen, and **A. Fulcher**. 2017. Hydrangea primer: Nutrient management. Nursery Management. August 1, 2017. <http://www.nurserymag.com/article/hydrangea-primer-nutrient-management/>
18. **Fulcher, A.**, A.V. LeBude, J.S. Owen, S.A. White, and R.C. Beeson. 2016. Are we learning from the past: The industry must look to the past and present to envision the future of water resources. Nursery Management. 32(6):18, 20-24.
19. **Fulcher, A.**, B.G. Leib, J. McHugh<sup>M</sup>, W.C. Wright, W. Yeary<sup>M</sup>, and Q. Cypher<sup>M</sup>. 2016. Irrigation success stories. Tennessee Green Times, 17(3):21-22.

#### **Assistant Professor**

1. Jones, H.<sup>M</sup> and **A. Fulcher**. 2015. Monitoring irrigation can improve efficiency and your bottom line. Tennessee Green Times. 16(3):10-12.
2. Nambuthiri, S., **A. Fulcher**, R. Geneve, G. Niu, D. Cochran<sup>M</sup>, S. Verlinden, and R. Conneway. 2015. Pick your pot... are container alternatives right for your operation? Tennessee Green Times. 16(2):18-20.
3. Jones, H.<sup>M</sup> and **A. Fulcher**. 2015. Saving water, saving money: Irrigating for increased nursery profitability and efficiency. Tennessee Green Times. 16(2):10-13.
4. Nambuthiri, S., **A. Fulcher**, R. Geneve, G. Niu, D. Cochran<sup>M</sup>, S. Verlinden, and R. Conneway. 2015. Pick your pot: Find out if container alternatives are right for your growing operation. Nursery Management. March 2, 2015.
5. **Fulcher, A.** 2015. Congratulations to the inaugural online class of the Tennessee Master Nursery Producer Program. Tennessee Green Times. 16(1):28.
6. Jones, H.<sup>M</sup> and **A. Fulcher**. 2015. Nursery irrigation: The importance of water availability and irrigation efficiency. Tennessee Green Times. 16(1):17-19.
7. Cochran, D.<sup>M</sup>. **A. Fulcher**, F. Hale, and A. Windham. 2014. An overview of systems-based pest management for nursery production. Tennessee Green Times. 15(4):18-19.
8. **Fulcher, A.** 2014. Researcher needs industry input. Nursery Management. June 26, 2014.
9. **Fulcher, A.**, D. Cochran<sup>M</sup>, R. Rosetta, R. Zondag, and H. Zhu. 2014. Laser-tag pest control! Tennessee Greentimes. 15(1):16-20.
10. **Fulcher, A.**, D. Cochran<sup>M</sup>, R. Rosetta, and R. Zondag. 2014. IPM meets laser tag. Nursery Management. 30(1):20-24.
11. **Fulcher, A.**, A. LeBude, S.A. White, J.-H. Chong, C. Adkins, K. Braman, M. Chappell, J. Derr, W. Dunwell, S. Frank, S. Gill, F. Hale, W. Klingeman, G. Knox, J. Neal, M. Paret, K. Rane,

- N. Ward, J. Williams-Woodward, and A. Windham. 2013. IPM in action. Nursery Management. 29(12):30-33.
12. Klingeman, W. and **A. Fulcher**. Insecticide choice can help...strategies for controlling scale insects and preserving beneficial and natural enemy insects. Tennessee Green Times. 14(2): 8-12.
  13. Knox, G., W. Klingeman, M. Paret, and **A. Fulcher**. 2013. Insect and nematode pests of *Magnolia* species in the southeastern United States. Magnolia. 94:20-38.
  14. **Fulcher, A.**, G. Niu, G. Bi, M. Evans, T. Fernandez, R. Geneve, A. Koeser, S. Nambuthiri, N. Pershey, R. Stewart, S. Verlinden, X. Wang, and R. Brumfield. 2013. Pulp fiction or fact? Can pulp-based biocontainers hold up during nursery production? The South Carolina Nurseryman. May/June pp. 32-33. (Reprint permission requested by South Carolina Nursery and Landscape Association.)
  15. **Fulcher, A.**, G. Niu, G. Bi, M. Evans, T. Fernandez, R. Geneve, A. Koeser, S. Nambuthiri, N. Pershey, R. Stewart, S. Verlinden, X. Wang, and R. Brumfield. 2013. Pulp fiction or fact? Can pulp-based biocontainers hold up during nursery production? Nursery Views. 43(1):18-19. (Reprint permission requested by Kentucky Nursery and Landscape Association.)
  16. Knox, G., M. Paret, **A. Fulcher**, and W. Klingeman. 2013. Diseases and disorders of *Magnolia* species in the southeastern United States. Magnolia. 93:29-41.
  17. **Fulcher, A.**, G. Niu, G. Bi, M. Evans, T. Fernandez, R. Geneve, A. Koeser, S. Nambuthiri, N. Pershey, R. Stewart, S. Verlinden, and X. Wang. 2013. Pulp or plastic? American Nurseryman. February pp. 20-24.
  18. **Fulcher, A.** 2012. Plants in Profile: *Euonymus alatus* Little Moses™. Tennessee Green Times. 13(2):20.
  19. Poston, A., **A. Fulcher**, W. Dunwell, L. Dougherty<sup>M</sup>, and R. Geneve. 2012. Plant growth regulators can improve nursery crop quality. Tennessee Green Times. 13(2):16-17.
  20. Klingeman, W., **A. Fulcher**, S. Frank, K. Ivors, F. Hale and M. Chappell. 2012. New nursery and landscape IPM resources for the southeastern U.S. Green Industry. 13(1):20-21.
  21. Poston, A., **A. Fulcher**, W. Dunwell, L. Dougherty<sup>M</sup>, and R. Geneve. 2011. Fascination<sup>®</sup> increases growth of Rudy Haag burning bush during container production. The South Carolina Nurseryman. November/December. pp. 40-41. (Reprint permission requested by SCNLA.)
  22. White, S.A., **A.F. Fulcher**, A.V. LeBude, W.E. Klingeman, M.R. Chappell, and S. Frank. 2011. Top 10 applied and potential IPM practices for nurseries in the southeastern US. Virginia Nursery and Landscape Association Newsletter. 81(4):43-47. (Reprint permission requested by VNLA.)
  23. **Fulcher, A.**, F. Hale, and M. Halcomb. 2011. On the lookout for Japanese maple scale: a new insect pest in Tennessee's nurseries and landscapes. Tennessee Green Times. 12(8):16-18.
  24. **Fulcher, A.**, W. Klingeman, A. LeBude, S. White, M. Chappell, S. Frank, and J. Neal. 2011. IPM strategies: What are southeastern growers doing to stop pests in their tracks? Tennessee Green Times. 12(8):10-14.

25. LeBude, A.V., **A.F. Fulcher**, S. White, M. Chappell, S. Frank, and J. Neal. 2011. Top 10 practices in the southeast that are – or should be – used in nurseries. *Nursery Notes*. 45(1):31, 33-35.
26. **Fulcher, A.**, W. Klingeman, A. LeBude, S. White, M. Chappell, S. Frank, and J. Neal. 2011. IPM strategies. *Nursery Management*. 27(5):30-32.
27. White, S.A., **A.F. Fulcher**, A.V. LeBude, M. Chappell, and S. Frank. 2011. Top 10 applied and potential IPM practices for nurseries in the Southeast. *SC Nurseryman*. Jan/ Feb:30-32.
28. Southern Nursery IPM Working Group. 2011. Phytophthora and pythium root rot: Managing root rot requires an integrated approach. *Nursery Management Online*. Jan. 28, 2011.

**Prior to joining the UT Department of Plant Sciences**

1. Dunwell, W., D. Ingram, **A. Fulcher**, and C. Grable. 2010. 2009 Program update from the University of Kentucky. *Nursery Views*. 4:18-20.
2. Hallberg, R, **A. Fulcher**, J. Neal, K. Ivors, A. LeBude, and S. Frank. 2010. Integrated pest management: Growers and researchers meet to develop a pest management strategic plan. *NMPro*. 26(1):44-45.
3. **Fulcher, A.** 2009. Fascination® increases growth of Rudy Haag burning bush during container production. *Nursery Views*. 39(20):18-19.
4. Halcomb, M. and **A. Fulcher**. 2005. Sweating nursery stock to break dormancy. *Country Folks Grower Midwest*, March.
5. Halcomb, M., and **A. Fulcher**. Sweating nursery stock to break dormancy. *Southern Standard*, McMinnville, TN, March 12, 2003.
6. **Fulcher, A.**, W. Dunwell, and D. Wolfe. 2003. *Rudbeckia* taxa evaluation. *Nursery Views*. 33(3):18-20.
7. **Fulcher, A.** 2000. Introduction to BMPs. *Nursery Views*. 30(2):8-12.
8. **Fulcher, A.** 1999. The nursery industry and invasive plants. *Nursery Views*. 29(3):24-25.
9. **Fulcher, A.**, T. Ranney, J. Burton, J. Walgenbach, and D. Danehower. 1998. Natural resistance of *Malus* taxa to adult Japanese beetles. *American Nurseryman*. 188(10):56.

**Articles Published in Non-Refereed or Reviewed Journals**

**Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.**, T. Ranney, J. Burton, J. Walgenbach, and D. Danehower. 1998. Role of foliar phenolics in host plant resistance of *Malus* taxa to adult Japanese beetles. *Malus*. 12(2)10-19.

**Research Reports Submitted to Sponsors**

Sponsor	Report	Year
Professor		

<b>Sponsor</b>	<b>Report</b>	<b>Year</b>
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2021
<b>Associate Professor</b>		
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2020
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2019
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2018
Interregional Research Project No. 4 (IR-4)	State Liaison Report	2017
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2017
Interregional Research Project No. 4 (IR-4)	State Liaison Report	2016
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2016
<b>Assistant Professor</b>		
Interregional Research Project No. 4 (IR-4)	State Liaison Report	2015
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2015
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2014
Southern Region IPM Center	Southern Nursery IPM Working Group, oral report at annual advisory board meeting	2014
Interregional Research Project No. 4 (IR-4)	State Liaison Report	2014
Tennessee Department of Agriculture and Master Producer Oversight Committee	Update on Tennessee Master Nursery Producer Program	2013
Tennessee Department of Agriculture	Update on Specialty Crop Block Grant	2013
Southern Region IR-4 Meeting	Tennessee IR-4 Update	2013
Interregional Research Project No. 4 (IR-4)	State Liaison Report	2013
Interregional Research Project No. 4 (IR-4)	State Liaison Report	2012

Sponsor	Report	Year
Interregional Research Project No. 4 (IR-4)	Augeo impact on hydrangea branching	2012
Interregional Research Project No. 4 (IR-4)	Evaluation of PGR materials for the improvement of hydrangea branching patterns	2011
<b>Prior to joining the UT Department of Plant Sciences</b>		
Interregional Research Project No. 4 (IR-4)	Effect of propagation method on efficacy of PGRs applied during production	2010
OHP Inc.	Efficacy of Kontos™ against Japanese maple scale	2010
Interregional Research Project No. 4 (IR-4)	Effect of fertilizer rate and PGR application on Knock Out® rose during production	2010
Interregional Research Project No. 4 (IR-4)	Efficacy of PGRs on branch architecture of container-grown shrubs	2008
Interregional Research Project No. 4 (IR-4)	Efficacy of PGRs on branch architecture of container-grown trees and shrubs	2007

## Invention Disclosures and Patents

1. **Fulcher, A.**, A. LeBude, M. Chappell, S. White, W. Dunwell and J. Williams-Woodward. 2011. Smart phone and tablet application for ornamental plant pest management and culture. Invention Disclosure. UT Research Foundation.

## PRESENTATIONS

### Research Presentations

#### International

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

#### Professor

1. **Fulcher, A.**, A.L. Rihn, M. Velandia, L.A. Warner, A.V. LeBude, J.E. Altland, S. Schexnayder, and J.S. Owen. 2026. Exploring conflicting use levels and perceived benefits of automated irrigation by US nursery operators. ISHS International Symposium on

- Irrigation of Horticultural Crops. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, January 18-23, 2026, Tatura, Australia.
2. Brown, F.<sup>M</sup>, E. Eady<sup>M</sup>, W.C. Wright, J.S. Owen Jr., C. Krauss<sup>M</sup>, and **A. Fulcher**. Amending pine bark with fibrous substrate slows infiltration, improves water retention, and reduces leachate. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, January 18-23, 2026, Tatura, Australia.
  3. Alred, B.<sup>M</sup>, J.S. Owen Jr., and **A. Fulcher**. Tap Versus Tamp: Utilizing a new method for packing nursery substrate when determining static and dynamic physical properties. International Society for Horticultural Science. International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation, September 7-12, 2025, Freising, Germany.
  4. Krauss, C.<sup>M</sup>, J.S. Owen, W.C. Wright, and **A. Fulcher**. Substrate Moisture Sensor Zone of Interference: Expanding Options for Enhanced Moisture Monitoring with Sensors in Close Proximity. International Society for Horticultural Science. International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation, June 11-15, 2023, Quebec City, Quebec, Canada.
  5. Krauss, C.<sup>M</sup>, J.S. Owen, W.C. Wright, B. Alred<sup>M</sup>, and **A. Fulcher**. Characterizing Water Movement and Retention Through the Profile of Two Soilless Substrates. International Society for Horticultural Science. International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation, June 11-15, 2023, Quebec City, Quebec, Canada.
  6. Alred, B.<sup>M</sup>, J.S. Owen, H. Blice, and **A. Fulcher\***. A revised approach to packing soilless substrate cores to aid in achieving consistent, appropriate bulk density. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, January 29-February 2, 2023, Stellenbosch, South Africa.
  7. Fessler, L.<sup>M</sup>, J.S. Owen, W.C. Wright, and **A. Fulcher\***. Leaching fraction-based irrigation schedule, coir-amended pine bark improve Little Lime<sup>®</sup> panicle hydrangea production. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, January 29-February 2, 2023, Stellenbosch, South Africa.
  8. Fessler, L.<sup>M</sup>, W. Wright, G. Pietsch<sup>M</sup>, L. Schneider, H. Zhu, C. Fust, and **A. Fulcher\***. Characterizing spray deposition for control of trunk pests from an experimental airblast sprayer with 5-port nozzle bodies. International Society for Horticultural Science. International Horticultural Congress, August 15-19, Angers, France.
  9. Fessler, L.<sup>M</sup>, G. Pietsch<sup>M</sup>, W. Wright, H. Zhu, X. Sun, and **A. Fulcher\***. Characterizing spray deposition from variable- and constant-rate spray technologies: Implications for future optimization to target trunk and foliar pests. International Society for Horticultural Science. International Horticultural Congress, August 15-19, Angers, France.
  10. Fessler, L.<sup>M\*</sup>, D. Lockwood, W. Wright, G. Pietsch<sup>M</sup>, X. Sun, W. Yeary<sup>M</sup>, H. Zhu, and **A. Fulcher**. Intelligent spray technology controls pests in nursery and orchard systems with reduced pesticide application rates. International Society for Horticultural Science. International Horticultural Congress, August 15-19, Angers, France.

### **Associate Professor**

1. Fessler, L.<sup>M</sup>, W. Pietsch, G.<sup>M</sup>, W. Wright, **A. Fulcher\***, and J. McHugh<sup>M</sup>. Examining the potential to reduce nursery crop fertilizer rates with a leaching fraction-based irrigation schedule. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, June 17-20, 2019, Matera, Italy.
2. Fessler, L.<sup>M</sup>, W. Wright, J. McHugh<sup>M</sup>, Q. Cypher<sup>M</sup>, **A. Fulcher\***, and X. Sun. Developing an automated leaching fraction-based irrigation schedule for nursery crops. International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, June 17-20, 2019, Matera, Italy.
3. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, **A. Fulcher**, and J.E. Altland. Developing precision irrigation scheduling with a physiologically based or a substrate physical properties-based system for nursery production. Proceedings of the International Society for Horticultural Science. International Symposium on Growing Media, Soilless Cultivation, and Compost Utilization in Horticulture, August 20-25, 2017, Portland, OR.
4. **Fulcher, A.\*** Welcome to Chattanooga: Best. Town. Ever! International Plant Propagators' Society Annual Conference, October 29-November 1, 2017, Dallas, TX.
5. **Fulcher, A.\*** Selecting high quality plants. International Society of Arboriculture, Southern Region Chapter, March 22, 2016, Knoxville, TN.

### **Assistant Professor**

1. **Fulcher, A.\***, S.A. White, A.V. LeBude, C.R. Adkins, S.K. Braman, M.R. Chappell, J.-H. Chong, J.F. Derr, W.C. Dunwell, S.D. Frank, F.A. Hale, W.E. Klingeman, G.W. Knox, M.L. Paret, J.C. Neal, N. Ward Gauthier, J.L. Williams-Woodward, and A.S. Windham. 2015. Multiplier effect: How a pest management strategic plan creates a foundation for productivity. International IPM Symposium, March 23-26, 2015, Salt Lake City, UT.
2. **Fulcher, A.\***, S.A. White, A.V. LeBude, C.R. Adkins, S.K. Braman, M.R. Chappell, J.-H. Chong, J.F. Derr, W.C. Dunwell, S.D. Frank, F.A. Hale, W.E. Klingeman, G.W. Knox, M.L. Paret, J.C. Neal, N. Ward Gauthier, J.L. Williams-Woodward, and A.S. Windham. 2015. Synergistic benefits: Increasing working group deliverables and impact. International IPM Symposium, March 23-26, 2015, Salt Lake City, UT.
3. **Fulcher, A.\***, J.-H. Chong, A.V. LeBude, S.A. White, W.E. Klingeman, C.R. Adkins, S.K. Braman, M.R. Chappell, J.F. Derr, W.C. Dunwell, S.D. Frank, F.A. Hale, Stanton Gill, J.C. Neal, Karen Rane, J.L. Williams-Woodward, and A.S. Windham. 2015. Working group innovation fuels development of mobile technology based decision-making tools. International IPM Symposium, March 23-26, 2015, Salt Lake City, UT.
4. **Fulcher, A.\***, D. Cochran<sup>M</sup>, and H. Zhu. 2013. Laser Tag: Intelligent sprayers change the pest management game. International Plant Propagators' Society. November 2-6, 2013, Athens, GA.

### **Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.\*** and R. Geneve. Developing a photosynthesis-based irrigation system for container-grown woody plants. International Horticultural Congress, August 22-27, 2010, Lisbon, Portugal.
2. **Fulcher, A.\*** Integrated pest management-based nursery crop production extension programming. International Horticultural Congress, August 22-27, 2010, Lisbon, Portugal.
3. **Fulcher, A.\***, T. Steele<sup>M</sup>, E. Wilkerson, R.L. Geneve, and R.S. Gates. Using transpiration chambers to detect initial transpiration in cuttings and quantify transpiration in seedlings. GreenSys, June 14-19, 2009, Quebec City, Quebec, Canada.
4. Senn, E.<sup>M\*</sup>, **A. Fulcher**, and R. Geneve. Effect of physical manipulation and plant growth regulator application on branching of oak, linden, and Kentucky coffeetree. International Plant Propagators' Society, September 14-17, 2008, Denver, CO.
5. **Fulcher, A.\*** Effect of branch inducing treatments on growth of tissue culture and cutting produced *Hydrangea quercifolia* 'Alice'. International Plant Propagators' Society, September 14-17, 2008, Denver, CO.
6. Poston, A., **A. Fulcher**, W. Dunwell, and R. Geneve\*. Fascination<sup>®</sup> increases growth of 'Rudy Haag' burning bush during container production. International Plant Propagators' Society, September 14-17, 2008, Denver, CO.

## National, Invited

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

### Professor

1. **Fulcher, A.\*** Reduction of Pesticide Waste in Crops and Implications for Protection of Beneficials. Center of Excellence for Regulatory Science Workshop on Incorporating The Benefits of Precision Application into Risk Assessment and Risk Mitigation of Pesticides, September 18, 2023, Washington, DC.

### Associate Professor

1. **Fulcher, A.\*** Techniques to improve writing and output for research and extension. American Society for Horticultural Science Annual Conference, September 22, 2017, Waikoloa, HI.

### Assistant Professor

1. **Fulcher, A.\*** and D. Cochran<sup>M</sup>. Exploring oxygenation of irrigation water. Annual SCRI meeting of Integrated Management of Zoosporic Pathogens and Irrigation Water Quality for A Sustainable Green Industry, November 14, 2013, Virginia Beach, VA.
2. **Fulcher, A.\*** (part of a panel of speakers) I've earned my degree... What's next? Graduate Student Workshop. American Society for Horticultural Science Annual Conference, July 24, 2013, Palm Desert, CA.
3. **Fulcher, A.\*** From Tractor seat to techie: Why mobile applications are an investment in extension's future. Extension/Industry Breakfast, American Society for Horticultural Science Annual Conference, July 23, 2013, Palm Desert, CA.

## National, Participant

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

### Professor

1. **Fulcher, A.**, K. McKim<sup>M\*</sup>, A.L. Rihn, M. Velandia, L.A. Warner, A.V. LeBude, J.E. Altland, S. Schexnayder, and J.S. Owen. High perceived benefits and low costs, yet low adoption: Exploring nursery use of automated irrigation. Southern Region-American Society for Horticultural Science, January 30, 2026-February 1, 2026, Louisville, KY.
2. McKim, K.<sup>M\*</sup>, W.C. Wright, C. Yurismic, G. Pietsch<sup>M</sup>, E. Eady<sup>M</sup>, X. Sun, H. Zhu, and **A. Fulcher**. 2025. Investigation of laser-guided variable-rate spray technology to achieve thorough trunk applications. American Society for Horticultural Science Annual Conference New Orleans, LA, July 28-Aug 1, 2025.
3. Eady, E.<sup>M</sup>, K. McKim<sup>M\*</sup>, C. Yurismic, G. Pietsch<sup>M</sup>, W.C. Wright, X. Sun, H. Zhu, L. Nackley, and **A. Fulcher**. 2025. How Low Can You Go? Reducing Variable-Rate Spray Technology Default Rates. American Society for Horticultural Science Annual Conference New Orleans, LA, July 28-Aug 1, 2025.
4. Pietsch, G.<sup>M</sup>, K. McKim<sup>M\*</sup>, W. Harrell<sup>M</sup>, J. Johnson<sup>M</sup>, M. Velandia, and **A. Fulcher**. 2025. An Inexpensive fertilizer dispenser can reduce labor costs and over-application, but may offer less dexterity than manual applications. American Society for Horticultural Science Annual Conference New Orleans, LA, July 28-Aug 1, 2025.
5. Harrell, W.<sup>M\*</sup>, K. McKim<sup>M</sup>, A. Rihn, J.S. Owen Jr., and **A. Fulcher**. A Case Study of Nursery Substrate Costs. USDA NC1186 Working Group Annual Meeting, July 9, 2025, McMinnville, TN.
6. **Fulcher, A.\*** Update on Tennessee Nursery Irrigation Research and Extension Program. USDA NC1186 Working Group Annual Meeting, July 9, 2025, McMinnville, TN.
7. **Fulcher, A.\*** Making trunk applications with variable-rate spray technology: Research Update. SCRI Flatheaded Borer Management in Specialty Crops Advisory Board meeting. January 16, 2025, Virtual.
8. **Fulcher, A.\*** Nursery Mechanization and Automation Adoption Levels in Understanding Labor Constraints and Opportunities, and Behavioral, Economic, Engineering, and Production Influences on Automation Adoption in the Green Industry Workshop, American Society for Horticultural Science Annual Conference, September 23-27, 2024, Honolulu, HI.
9. Harrell, W.<sup>M</sup>, A. Rihn, J.S. Owen, and **A. Fulcher**. A Snapshot of Nursery Container Substrate Prices in Tennessee. American Society for Horticultural Science Annual Conference, September 23-27, 2024, Honolulu, HI.
10. McKim, L., L. Whaley, L. Slade, B. Lockwood, C. Fust, H. Zhu, and **A. Fulcher\***. Factors Affecting Spray Coverage on Red Maple Trunks From an Air-Assisted Sprayer. American Society for Horticultural Science Annual Conference, September 23-27, 2024, Honolulu, HI.
11. Whaley, L., L. Slade, J. Martinez, L. Fessler, K. McKim, and **A. Fulcher\***. A New Artificial Target and Pre-Treatment Technique for Visual and Quantitative Assessment of

Pesticide Applications to Tree Trunks for Control of Trunk-Boring Insects. American Society for Horticultural Science Annual Conference, September 23-27, 2024, Honolulu, HI.

12. **Fulcher, A.\*** Update on Tennessee Nursery Irrigation Research and Extension Program. USDA NC1186 Working Group Annual Meeting, May 23, 2024, Rutgers, NJ (Virtual).
13. **Fulcher, A.\*** Using Variable-rate Spray Technology for Trunk Applications: Research Update. SCRI Flatheaded Borer Management in Specialty Crops Advisory Board meeting. January 25, 2024, Virtual.
14. **Fulcher, A.\*** Update on Tennessee Nursery Irrigation Research and Extension Program. USDA NC1186 Working Group Annual Meeting, September 6-7, 2023, Cincinnati, OH.
15. Whaley, L.\*<sup>M</sup>, L. Fessler<sup>M</sup>, J. Fulcher<sup>M</sup>, C. Fust, J. Johnson<sup>M</sup>, G. McAnally<sup>M</sup>, G.M. Pietsch<sup>M</sup>, E. Sapienza<sup>M</sup>, H. Sutt<sup>M</sup>, M. Wright, W.C. Wright, H. Zhu, and **A. Fulcher**. 2023. Reducing off-target pesticide spray and harm to beneficial insects with variable-rate, Intelligent spray technology. American Society for Horticultural Science, July 31-August 4, 2023, Orlando, FL.
16. Cunningham, A.\*<sup>M</sup>, L. Fessler<sup>M</sup>, J. Fulcher<sup>M</sup>, C. Fust, J. Johnson<sup>M</sup>, G. McAnally<sup>M</sup>, G.M. Pietsch<sup>M</sup>, E. Sapienza<sup>M</sup>, H. Sutt<sup>M</sup>, M. Wright, W.C. Wright, H. Zhu, and **A. Fulcher**. 2023. Target and non-target sprays from a crop-sensing, variable-rate intelligent sprayer: Preliminary exploration into trunk applications. American Society for Horticultural Science, July 31-August 4, 2023, Orlando, FL.
17. **Fulcher, A.\*** Flatheaded Borer Control Using Intelligent Spray Technology: Research Update. SCRI Flatheaded Borer Management in Specialty Crops Advisory Board meeting. January 9, 2023, Virtual.
18. **Fulcher, A.**, H. Zhu, A. Clark, L. Fessler, D. Lockwood, G. Pietsch, L. Schneider, and W.C. Wright. A Smart Farming Approach to Insecticide Applications in Nurseries. Joint ESA, ESC, and ESBC Joint Annual Meeting: Entomology as Inspiration: Insects through Art, Science, and Culture, November 13-16, 2022, Vancouver, B.C.
19. Sutt, H.<sup>M\*</sup>, J. Johnson<sup>M</sup>, Z. Hansen, D. Lockwood, L. Fessler<sup>M</sup>, K. Kilpatrick, E. Lopez, H. Zhu, J. Fulcher, G. Pietsch<sup>M</sup>, W.C. Wright, A. McAnally<sup>M</sup>, and **A. Fulcher**. 2022. Increasing sustainability of pest management in apple production by coupling reduced-rate applications with variable-rate spray technology. July 30, 2022- August 3, 2022, Chicago, IL.
20. Fessler, L.<sup>M</sup>, G. Pietsch<sup>M</sup>, W. Wright, D. Lockwood, H. Zhu, and **A. Fulcher\***. 2021. Reducing Spray Drift in Trellised Malus Domestica 'Auvil Fuji' with Variable-Rate Spray Technology. American Society for Horticultural Science Annual Conference, August 5-9, 2021, Denver, CO.
21. Fessler, L.<sup>M</sup>, W. Wright, D. Lockwood, G. Pietsch<sup>M</sup>, K. Kilpatrick, H. Zhu, and **A. Fulcher\***. 2021. Reducing spray volume across developmental stages of apple with variable-rate spray technology. American Society for Horticultural Science Annual Conference, August 5-9, 2021, Denver, CO.
22. Wright, H.E.\* , N. Bumgarner, **A. Fulcher**, J.T. Brosnan, R. Florence, F.A. Hale, Z.R. Hansen, R. Holland Jr., D.W. Lockwood, A. Rihn, T.J. Samples, J. Tsuruda, A.S. Windham, A.L. Wszelaki, and M.M. Velandia. 2021. Insights gained from distance technology during

- COVID-19: Evaluation of the Horticulture Hot Topics Series. American Society for Horticultural Science Annual Conference, August 5-9, 2021, Denver, CO.
23. Fessler, L.<sup>M</sup>, D. Lockwood, G. Pietsch<sup>M</sup>, W. Wright, H. Zhu, and **A. Fulcher\***. 2021. Improving pesticide application efficiency through variable-rate spray applications to 'Auvil Fuji' apple trees trained to a tall spindle trellis system. American Society for Horticultural Science Annual Conference, August 5-9, 2021, Denver, CO.
  24. Witcher, A.\* , K. Adesso, J. Oliver, B. Campbell, **A. Fulcher**, K. Jensen, W. Klingeman, A. LeBude, O. Liburd, L. Nackley, A. Rihn, C. Seavert, N. Wiman, A. Acebes, F. Baysal-Gurel, B. Blaauw, J-H. Chong, D. Held, S. Josph, J. Moulton, C. Palmer, J. Rijal, and E. Vafaie. 2021. Improving flatheaded borer management practices for specialty tree crops - a multidisciplinary approach. American Society for Horticultural Science Annual Conference, August 5-9, 2021, Denver, CO.

### **Associate Professor**

1. **Fulcher, A.\***, D. Lockwood, L. Fessler<sup>M</sup>, W. Wright, H. Zhu, T. Bordeau<sup>M</sup>, L. Nadaud<sup>M</sup>, G. Pietsch<sup>M</sup>, W. Yeary<sup>M</sup>, and L. Nackley. Reduce pesticide volume and off-target loss across a range of apple phenological stages with variable-rate spray technology. American Society for Horticultural Science Annual Conference, August 9-13, 2020, Orlando, FL.
2. Fessler, L.<sup>M</sup>, W. Wright, **A. Fulcher\***, K. Holden, S. McClanahan<sup>M</sup>, and T. Bordeau<sup>M</sup>. Producing *Hydrangea paniculata* with coconut coir substrate amendment and leaching fraction-based irrigation. American Society for Horticultural Science Annual Conference, August 9-13, 2020, Orlando, FL.
3. Fessler, L.<sup>M</sup>, **A. Fulcher\***, D. Lockwood, W. Wright, G. Pietsch<sup>M</sup>, H. Zhu, S. McClanahan<sup>M</sup>, and M. Burnett. Controlling bitter and white rot in 'Golden Delicious' apple trees with laser-guided variable-rate spray technology. American Society for Horticultural Science Annual Conference, August 9-13, 2020, Orlando, FL.
4. **Fulcher, A.\*** and N. Basiri Jahromi\*. Photosynthesis-based irrigation control. In: Using sensors to inform and control irrigation research and management workshop. American Society for Horticultural Science Annual Conference, August 9-13, 2020, Orlando, FL.
5. Fessler, L.<sup>M\*</sup>, **A. Fulcher**, J. Hines, H. Zhu, T. Hines, W. Wright, W. Yeary<sup>M</sup>, X. Sun, and S. McClanahan<sup>M</sup>. A dynamic laser-guided sprayer reduces pesticide use in large pot-in-pot production. American Society for Horticultural Science Annual Conference, July 25, 2019, Las Vegas, NV.
6. **Fulcher, A.**, D.W. Lockwood, W. Wright, L. Fessler<sup>M\*</sup>, W. Yeary<sup>M</sup>, M. Burnett, H. Zhu, X. Sun, G. Pietsch<sup>M</sup> and J. McHugh<sup>M</sup>. Characterizing spray penetration of a novel sprayer into *Malus domestica* 'Golden Delicious' apple trees at a commercial orchard. American Society for Horticultural Science Annual Conference, July 25, 2019, Las Vegas, NV.
7. Cypher, Q.<sup>M</sup>, W. Wright, **A. Fulcher**, L. Fessler<sup>M\*</sup>, J. McHugh<sup>M</sup> and X. Sun. Assessing tipping bucket-based irrigation and leachate sensor performance. American Society for Horticultural Science Annual Conference, July 24, 2019, Las Vegas, NV.

8. Basiri Jahromi, N.<sup>M\*</sup>, **A. Fulcher**, F. Walker, and J.E. Altland. Evaluating the effect of coir amendment rates on plant water status of container-grown woody ornamentals. Soil Science Society of America Annual Meeting, January 6-9, 2019, San Diego, CA.
9. Basiri Jahromi, N.<sup>M\*</sup>, **A. Fulcher**, F. Walker, J. Altland, and W. Wright. Comparison of on-demand and conventional irrigation regimes for 'Silver Dollar' hydrangea grown outdoors in biochar amended pine-bark. American Society for Horticultural Science Annual Conference, July 31-August 3, 2018, Washington, DC.
10. **Fulcher, A.\***, D. Lockwood, W. Wright, H. Zhu, M. Burnett, L. Smith, J. McHugh<sup>M</sup>, and G. Pietsch<sup>M</sup>. Characterizing spray penetration of a novel sprayer into *Malus domestica* 'Golden Delicious' apple trees at a commercial orchard. American Society for Horticultural Science Annual Conference, July 31-August 3, 2018, Washington, DC.
11. **Fulcher, A.\***, J. McHugh<sup>M</sup>, H. Zhu, R. Collier, W. Wright, and W. Yeary<sup>M</sup>. Powdery mildew control and spray application characteristics of a laser-guided sprayer. American Society for Horticultural Science Annual Conference, July 31-August 3, 2018, Washington, DC.
12. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, **A. Fulcher**, J.E. Altland, and N. Eash. Using physiological parameters to monitor plant water status under different irrigation systems. ASA, CSSA, SSSA Annual Meeting, October 22-25, 2017, Tampa, FL.
13. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, **A. Fulcher**, and J. Altland. Photosynthesis, growth, and water use of *Hydrangea paniculata* 'Silver Dollar' produced with different irrigation schedules and biochar substrate amendment. American Society for Horticultural Science Annual Conference, September 19-22, 2017, Waikoloa, HI.
14. **Fulcher, A.\***, J. McHugh<sup>M</sup>, R. Collier, H. Zhu, W. Yeary<sup>M</sup>, W. Wright, S. Xiaocun, F. Collier, and D.W. Lockwood. Evaluating variable-rate, laser-guided sprayer performance and powdery mildew control in *Cornus florida* 'Cherokee Princess'. American Society for Horticultural Science Annual Conference, September 19-22, 2017, Waikoloa, HI.
15. **Fulcher, A.\***, J. McHugh<sup>M</sup>, W. Wright, Q. Cypher<sup>M</sup>, K. Holden, and S. Xiaocun. Irrigating juniper with an automated leaching fraction-based irrigation schedule. American Society for Horticultural Science Annual Conference, September 19-22, 2017, Waikoloa, HI.
16. McHugh, J.<sup>M</sup>, W. Wright, Q. Cypher<sup>M</sup>, **A. Fulcher\***, and I. Hiscock. Evaluation of a tri-daily water use irrigation schedule and cyclic irrigation on plant growth and water use of *Cornus florida* and *Cornus kousa* var. *chinensis* dogwoods. American Society for Horticultural Science Annual Conference, September 19-22, 2017, Waikoloa, HI.
17. Zhu, H.\* , J. Boldt, **A. Fulcher**, Y. Gao, D. Herms, C. Krause, P. Ling, D.W. Lockwood, G. Niu, H.E. Ozkan, J. Pscheidt, R. Rosetta, G. Schnabe, A. Shah, L. Zhao, and R. Zondag. Advancement of laser-guided intelligent pesticide spray control technology in specialty crop production. American Society for Horticultural Science Annual Conference, September 19-22, 2017, Waikoloa, HI.
18. Wright, W., J. McHugh<sup>M</sup>, **A. Fulcher\***, Q. Cypher<sup>M</sup>, and D. Pirtle. Evaluation of substrate moisture based on-demand nursery irrigation scheduling for 'Kwansan' cherry (*Prunus serrulata*). American Society for Horticultural Science Annual Conference, September 19-22, 2017, Waikoloa, HI.

19. Basiri, N.<sup>M\*</sup>, F.R. Walker, **A. Fulcher**, and J. Altland. Effect of biochar and plant-based irrigation scheduling on growth and water use. ASA, CSSA, SSSA Annual Meeting, November 6-9, 2016, Phoenix, AZ.
20. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, **A. Fulcher**, and J.E. Altland. Effect of biochar on nutrient release and retention in container crops. American Society for Horticultural Science Annual Conference, August 8-11, 2016, Atlanta, GA.
21. LeBude, A.V.\* , S.K. Braman, N. Gauthier, J. Neal, M. Chappell, **A. Fulcher**, W. Klingeman, J. Derr, G. Knox, C. Adkins, J.-H. Chong, W. Dunwell, F. Hale, S.A. White, J. Williams-Woodward, and A. Windham. Experiential nursery IPM workshop series to enhance grower practice adoption. American Society for Horticultural Science Annual Conference, August 8-11, 2016, Atlanta, GA.
22. Chappell, M.\* , S.A. White, **A. Fulcher**, A.V. LeBude, G. Knox, W. Klingeman, F. Hale, A. Windham, J.-H. Chong, S.K. Braman, J. Derr, J. Neal, S. Frank, W. Dunwell, M. Paret, N. Gauthier, S.C. Marble, and F. Peduto Hand. eBooks—effectively evaluating impact of eBooks for extension audiences. American Society for Horticultural Science Annual Conference, August 8-11, 2016, Atlanta, GA.
23. **Fulcher, A.\*** , S.A. White, A.V. LeBude, M. Chappell, S.K. Braman, J.-H. Chong, J. Derr, W. Dunwell, F. Hale, W. Klingeman, G. Knox, J. Neal, N. Gauthier, and A. Windham. Working group synergy Part II: Creating extension impact and maximizing faculty benefits. American Society for Horticultural Science Annual Conference, August 8-11, 2016, Atlanta, GA.
24. **Fulcher, A.\*** , A.V. LeBude, S.A. White, M. Chappell, S.C. Marble, J.-H. Chong, W. Dunwell, S. Frank, F. Hale, J. Neal, A. Windham, W. Klingeman, G. Knox, J. Derr, J. Williams-Woodward, C. Adkins, S.K. Braman, A. Dale, Fulya Baysal-Gurel, J. Del Castillo-Munera, F. Peduto Hand, C. Swett, N. Gauthier, and E. Vafaie. Working group synergy Part I: Developing a successful, sustainable working group. American Society for Horticultural Science Annual Conference, August 8-11, 2016, Atlanta, GA.

### **Assistant Professor**

1. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, and **A. Fulcher**. Effect of biochar on water conservation and growth of soilless container grown Green Velvet boxwood and Pinky Winky hardy hydrangea. ASA, CSSA, SSSA Annual Meeting, November 15-19, 2015, Minneapolis, MN.
2. Hagen, E.<sup>M</sup>, W. Wright, **A. Fulcher\***, and X. Sun. Determining sensor orientation and depth within an 11.4 L container to estimate whole container volumetric water content. American Society for Horticultural Science Annual Conference, August 4-7, 2015, New Orleans, LA.
3. **Fulcher, A.\***, S.C. Marble, A. Blalock, M. Halcomb, F. Hale, C. Kimbro, J. Oliver, and A. Windham. 2015. Comparing an asynchronous online extension program and a traditional face-to-face program for delivering master producer content. American Society for Horticultural Science Annual Conference, August 4-7, 2015, New Orleans, LA.

4. Marble, S.C.<sup>M\*</sup>, **A. Fulcher**, and R. Karel. 2015. Developing an asynchronous online extension program for Tennessee nursery producers. American Society for Horticultural Science Annual Conference, August 4-7, 2015, New Orleans, LA.
5. Yeary, W.M.<sup>M</sup> and **A.F. Fulcher\***. 2014. Characterizing spray penetration following insecticide application in dense and sparse oakleaf hydrangea 'Alice'. American Society for Horticultural Science Annual Conference, July 28-31, 2014, Orlando, FL.
6. Cochran, D.R.<sup>M</sup>, **A.F. Fulcher\***, and H. Zhu. 2014. Improving spray quality and disease control with a laser-guided air-assisted sprayer for multi-row nursery production. American Society for Horticultural Science Annual Conference, July 28-31, 2014, Orlando, FL.
7. Yeary, W.<sup>M</sup> and **A.F. Fulcher\***. 2014. In vitro propagation, not plant growth regulators or pruning, increases branch number, canopy density, and visual plant quality in *Clethra alnifolia* 'Hummingbird'. American Society for Horticultural Science Annual Conference, July 28-31, 2014, Orlando, FL.
8. Li, T.\* , G. Bi, G. Niu, S. Nambuthiri, R. Geneve, X. Wang, R.T. Fernandez, **A. Fulcher**, and Y. Sun. Use of biocontainers in pot-in-pot nursery production system. American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
9. Niu, G.\* , Y. Sun, G. Bi, A. Koeser, K. Jacobsen, S. Verlinden, R. Conneway, and **A. Fulcher**. Impact of biopots on landscape plant performance and pot degradation. American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
10. White, S.A.\* , **A.F. Fulcher**, A.V. LeBude, S. Frank, F. Hale, W.E. Klingeman, C. Adkins, K. Braman, M.R. Chappell, J.-H. Chong, J.F. Derr, W.C. Dunwell, G.W. Knox, M.L. Paret, J.C. Neal, N.A. Ward, J. Williams-Woodward and A.S. Windham. Ebooks: A new platform for extension outreach. American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
11. Cochran, D.\*<sup>M</sup> and **A. Fulcher**. Plant growth regulators increase branching of *Hydrangea paniculata* 'Limelight' and 'Jane' (Little Lime™). American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
12. Wilson, S.E.<sup>M</sup>, D. Cochran\*<sup>M</sup>, and **A. Fulcher**. Container-grown lavender affected by oxygenated irrigation water. American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
13. Nambuthiri, S.\* , R. Geneve, and **A. Fulcher**. Comparison of irrigation scheduling based on daily water use or plant water demand of container grown woody plants. American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
14. Wang, X.\* , T. Fernandez, G. Bi, **A. Fulcher**, R. Geneve, G. Niu, S. Verlinden, B. Cregg, M. Ngouajio, T. Kijchavengku, R. Auras, S. Nambuthiri, R. Conneway, and Y. Sun. Plant growth and water use in plastic, fiber, keratin and root pouch containers. American Society for Horticultural Science Annual Conference, July 22-26, 2013, Palm Desert, CA.
15. Wilson, E.<sup>M</sup> and **A. Fulcher\***. Development of an oxygenation system for nursery crop irrigation water. American Society for Horticultural Science Annual Conference, July 31-August 3, 2012, Miami, FL.

16. Hagen, E.<sup>M\*</sup>, S. Nambuthiri, **A. Fulcher**, and R. Geneve. Comparing substrate moisture-based daily water use and on-demand irrigation regimes for oakleaf hydrangea plants grown in two container sizes. American Society for Horticultural Science Annual Conference, July 31-August 3, 2012, Miami, FL.
17. Wang, X.<sup>\*</sup>, R.T. Fernandez, G. Bi, **A. Fulcher**, R. Geneve, G. Niu, S. Verlinden, B. Cregg, M. Ngouajio, T. Kijchavengkul, and R. Auras. Performance of alternative containers and plant growth and water use of *Euonymus fortunei*. American Society for Horticultural Science Annual Conference, July 31-August 3, 2012, Miami, FL.
18. Zhu, H., E. Ozkan, R. Derksen, M. Reding, C. Ranger, L. Cañas, C. Krause, J. Locke, S. Ernst, R. Zondag, **A. Fulcher\***, R. Rosetta, H. Jeon, Y. Chen, J. Gu, H. Liu, Y. Shen, and A. Rios. Development of intelligent spray systems for nursery crop production. American Society for Horticultural Science Annual Conference, July 31-August 3, 2012, Miami, FL.
19. **Fulcher, A.\***, J.-H. Chong, J. Neal, S. White, J. Williams-Woodward, C. Adkins, K. Braman, M. Chappell, J. Derr, W. Dunwell, S. Frank, S. Gill, F. Hale, W. Klingeman, A. LeBude, K. Rane, and A. Windham. Educators' guide to developing an app. American Society for Horticultural Science Annual Conference, August 3, 2012, Miami, FL.
20. **Fulcher, A.\***, J.-H. Chong, J. Derr, S. White, J. Williams-Woodward, C. Adkins, K. Braman, M. Chappell, W. Dunwell, S. Frank, S. Gill, F. Hale, W. Klingeman, A. LeBude, J. Neal, K. Rane, and A. Windham. Educators' guide to testing, launching and promoting an app. American Society for Horticultural Science Annual Conference, August 3, 2012, Miami, FL.
21. **Fulcher, A.\***, C. Adkins, K. Braman, M.R. Chappell, J.-H. Chong, W. Dunwell, S. Frank, F. Hale, K. Ivors, W. Klingeman, A.V. LeBude, J. Neal, S. White, Jean Williams-Woodward, and A. Windham. Multiplier effect of collaborative nursery crops programming on outputs and outcomes. American Society for Horticultural Science Annual Conference, September 27, 2011, Waikoloa, HI.
22. LeBude, A., S. White, S. Frank, J.-H. Chong, M. Chappell, K. Braman, A. Windham, K. Ivors, F. Hale, W. Klingeman, J. Neal, W. Dunwell, J. Williams-Woodward, C. Adkins, and **A. Fulcher\***. Assessing integrated pest management practices of Southeast U.S. nursery operations. American Society for Horticultural Science Annual Conference, September 27, 2011, Waikoloa, HI.
23. **Fulcher, A.\*** and R. Geneve. Rootstock influence on gas exchange among *Cornus*. American Society for Horticultural Science Annual Conference, September 26, 2011, Waikoloa, HI.

#### **Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.\*** and R. Geneve. Ecophysiology and comparative foliar micromorphology of big-bracted *Cornus* selections. American Society for Horticultural Science Annual Conference, July 25-28, 2009, St. Louis, MO.
2. **Fulcher, A.\*** and R. Geneve. A photosynthesis-based irrigation model for woody plants. American Society for Horticultural Science Annual Conference, July 25-28, 2009, St. Louis, MO.

3. **Fulcher, A.\***, R. Geneve, J. Buxton, and R. Gates. The relationship between photosynthetic activity, container moisture and growth in hibiscus. American Society for Horticultural Science Annual Conference, July 21-24, 2008, Orlando, FL.
4. **Fulcher, A.\***, R. Geneve, and J. Norikane. Photosynthetic characterization and water use efficiency of *Hibiscus rosa-sinensis*. American Society for Horticultural Science Annual Conference, July 16-19, 2007, Scottsdale, AZ.
5. Miller-Seagraves, B.L.\* , D.A. Potter, D. Hayden, **A. Fulcher**, and K.F. Haynes. Cultivar resistance of nursery-grown maples to major insect pests, with notes on biology of the maple shoot borer, *Proteoteras aesculana*. Entomological Society of America Annual Conference, December 10-13, 2006, Indianapolis, IN.

## Regional, Participant

### Full Professor

1. \*Cole, K.<sup>M</sup>, K. McKim<sup>M</sup>, W. Wright, and **A. Fulcher**. Leap Forward with Wireless Automated Irrigation Control Systems. Undergraduate Student Research Competition. Southern Region ASHS, January 31, 2026, Louisville, KY.
2. \*McKim, K.<sup>M</sup> High perceived benefits and low costs, yet low adoption: Exploring nursery use of automated irrigation. Southern Region-American Society for Horticultural Science, January 30, 2026-February 1, 2026, Louisville, KY.
3. \*McKim, K.<sup>M</sup>, J. Beeler<sup>M</sup>, and **A. Fulcher**. 2026. Fertileeze...Please! An inexpensive fertilizer dispenser reduced application time and worker strain. Southern Region-American Society for Horticultural Science, January 30, 2026-February 1, 2026, Louisville, KY.

### Associate Professor

1. **Fulcher, A.**, L. Fessler<sup>M</sup>, W. Wright, H. Zhu, G. Pietsch<sup>M</sup>, W. Yeary<sup>M</sup>, T. Bordeaux<sup>M</sup>, and L. Nadaud<sup>M\*</sup>. Improving nursery crop pest management with precision pesticide application technology. Southern Region-American Society for Horticultural Science, January 31, 2020-February 2, 2020, Louisville, KY.
2. Basiri Jahromi, N.<sup>M</sup>, F. Walker\*, **A. Fulcher**, J.E. Altland, and W. Wright. Comparison of on-demand and conventional irrigation regimes for 'Silver Dollar' hydrangea grown outdoors in biochar amended pine-bark. Proc. Southern Nursery Association Research Conference, January 9, 2018, Baltimore, MD.
3. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, **A. Fulcher**, and J.E. Altland. Effect of biochar on nutrient release and retention in container crops. Southern Nursery Association Research Conference, August 1-2, 2016, Athens, GA.

### Assistant Professor

1. Basiri Jahromi, N.<sup>M\*</sup>, **A. Fulcher**, and F. Walker. Effect of biochar on water conservation and growth of soilless container grown 'Green Velvet' boxwood and Pinky Winky<sup>®</sup> hardy hydrangea. Southern Nursery Association Research Conference, July 21-22, 2015, Atlanta, GA.
2. Cypher, Q.<sup>M</sup>, W. Wright, and **A. Fulcher\***. A cost effective tipping bucket assembly for real time container leachate measurements and irrigation management. Southern Nursery Association Research Conference, July 21-22, 2015, Atlanta, GA.

3. **Fulcher, A.\***, D.R. Cochran<sup>M</sup>, R. Rosetta, R. Zondag, and H. Zhu. Laser tag: Intelligent sprayers change the pest management game. Southern Nursery Association Research Conference, August, Atlanta, GA.
4. Yeary, W.<sup>M\*</sup>, **A. Fulcher**, H. Zhu, W. Klingeman, and J. Grant. Spray penetration and natural enemy survival in dense and sparse plant canopies. Southern Nursery Association Research Conference, August 2014, Atlanta, GA.
5. Cochran, D.<sup>M\*</sup> and **A. Fulcher**. Container-grown Knock Out™ rose affected by fertilizer rate and plant growth regulator. Southern Nursery Association Research Conference, August 2014, Atlanta, GA.
6. **Fulcher, A.\*** Tennessee IR-4 update. Southern Region IR-4 Meeting, August 20-21, 2013, Orlando, FL.
7. Yeary, W.<sup>M\*</sup> and **A. Fulcher**. Effect of plant growth regulators and propagation technique on *Clethra alnifolia* 'Hummingbird' and *Rhododendron* 'Roseum Elegans'. Southern Nursery Association Research Conference, August 5-6, 2013, Atlanta, GA.
8. Zhu, H., **A. Fulcher\***, R. Rosetta, E. Ozkan, R. Derksen, M. Reding, C. Ranger, L. Cañas, C. Krause, J. Locke, S. Ernst, R. Zondag, H. Young Jeon, Y. Chen, H. Liu, Y. Shen, and D. Cochran<sup>M</sup>. Sensor-guided Intelligent sprayers: Implications for increased worker safety and reduced pesticide use. Southern Nursery Association Research Conference, August 5-6, 2013, Atlanta, GA.
9. Cochran, D.<sup>M\*</sup> and **A. Fulcher**. Development of a cost-effective automated oxygenated irrigation system. Southern Nursery Association Research Conference, August 5-6, 2013, Atlanta, GA.
10. Nambuthiri, S.\* , R. Geneve, and **A. Fulcher**. Evaluating irrigation scheduling based on daily evapo-transpiration or plant demand of container grown woody plants. Southern Nursery Association Research Conference, August 5-6, 2013, Atlanta, GA.
11. Wilson, S.E.<sup>M\*</sup> and **A. Fulcher**. Development of an elevated dissolved oxygen treatment system. Southern Nursery Association Research Conference, January 18, 2012, Mobile, AL.
12. **Fulcher, A.\***, G. Niu, G. Bi, M. Evans, T. Fernandez, R. Geneve, A. Koeser, S. Nambuthiri, N. Pershey, R. Stewart, S. Verlinden, and X. Wang. Assessing biocontainers and a sustainable irrigation regime for the US nursery industry. Southern Nursery Association Research Conference, January 18, 2012, Mobile, AL.
13. **Fulcher, A.\*** and W. Klingeman. Effect of contact and systemic insecticides used for scale pests on beneficial insects. Southern Nursery Association Research Conference, January 18-19, 2012, Mobile, AL.
14. **Fulcher A.\***, C. Adkins, G. Armel, M. Chappell, J.-H. Chong, S. Frank, F. Hale, K. Ivors, W. Klingeman, A. LeBude, J. Neal, A. Senesac, S. White, J. Williams-Woodward, and A. Windham. Gleanings from a five state pest management strategic plan and crop profile. Southern Nursery Association Research Conference, January 19-20, 2011, Mobile, AL.

**Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.\*** Forest Floor, a sustainable substrate for container tree production. Southern Nursery Association Research Conference, January 21-22, 2010, Mobile, AL.
2. **Fulcher, A.\*** and R. Geneve. *Cornus*, Gas exchange, and drought. Southern Nursery Association Research Conference, February 12-13, 2009, Atlanta, GA.
3. Steele, J.M\*, **A. Fulcher**, R. Gates, and R. Geneve. Developing a transpiration chamber. Southern Nursery Association Research Conference, February 12-13, 2009, Atlanta, GA.
4. **Fulcher, A.\***, J. Buxton, R. Gates, and R. Geneve. The relationship between photosynthetic activity, container moisture and growth in *Hibiscus rosa-sinensis* L. Southern Nursery Association Research Conference, August 6-7, 2008, Atlanta, GA.
5. Poston, A., **A. Fulcher\***, W. Dunwell, and R. Geneve. Fascination® increases growth of 'Rudy Haag' burning bush during container production. Southern Nursery Association Research Conference, August 6-7, 2008, Atlanta, GA.
6. Stolz, S.M\*, J. Beale, L. Dougherty<sup>M</sup>, S. Long, C. Johnstone<sup>M</sup>, **A. Fulcher**, and R. Geneve. Biofungicide and conventional control of *Rhizoctonia solani* in a container production system. Southern Nursery Association Research Conference, August 8-9, 2007, Atlanta, GA.
7. **Fulcher, A.\***, W. Dunwell, and D. Hayden. Taking a stab at sourwood-Pruning techniques to enhance branch development. Southern Nursery Association Research Conference, August 9-10, 2006, Atlanta, GA.
8. **Fulcher A.\***, W. Dunwell, R. McNeil, and D. Hayden. IPM for nursery crops: Reaching nursery crop growers with practical solutions. Southern Nursery Association Research Conference, August 10-11, 2005, Atlanta, GA.
9. **Fulcher, A.\***, W. Dunwell, R. McNeil, D. Wolfe, and L. Murdock. Effect of fertilizer rate on growth of seven tree species in pot-in-pot production. Southern Nursery Association Research Conference, August 11-12, 2004, Atlanta, GA.
10. **Fulcher, A.\***, W. Dunwell, and D. Wolfe. *Rudbeckia* taxa evaluation. Southern Nursery Association Research Conference, July 30-31, 2003, Atlanta, GA.
11. **Fulcher, A.\*** and J. Hartman. Incidence of black knot in Kentucky nurseries. Southern Nursery Association Research Conference, July 30-31, 2003, Atlanta, GA.
12. **Fulcher, A.\***, C. Finneseth, and W. Dunwell. Use of pelletized poultry litter as a container substrate. Southern Nursery Association Research Conference, August 1-2, 2002, Atlanta, GA.
13. **Fulcher, A.\***, K. Keeney, W. Dunwell, and R. Geneve. 2000. Horticulture information preferences among Master Gardeners. Southern Nursery Association Research Conference, August 3-4, 2000, Atlanta, GA.
14. **Fulcher, A.\*** The nursery industry and invasive plants. Southern Nursery Association Research Conference, July 29-30, 1999, Atlanta, GA.
15. **Fulcher, A.\***, T. Ranney, J. Burton, J. Walgenbach, and D. Danehower. The role of endogenous foliar phenolics in host plant resistance among *Malus* taxa to Japanese beetles. Southern Nursery Association Research Conference, August 1-2, 1997, Atlanta, GA.

16. **Fulcher, A.\***, T. Ranney, J. Burton, J. Walgenbach, and E. Maness. Natural resistance to Japanese beetles among *Malus* taxa: Role of endogenous foliar phenolics. Southern Nursery Association Research Conference, August 8-9, 1996, Atlanta, GA.

## State, Invited

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

### Professor

1. **Fulcher, A.\*** 2021. Advances in Irrigation and Pesticide Application Technology for Nursery Crops. Department of Horticulture and Landscape Architecture Seminar, Purdue University, December 2, 2021, West Lafayette, IN (Virtual). State, Participant

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

## State, Participant

### Professor

1. Harrell, W.<sup>M</sup>, K. McKim<sup>M</sup>, A. Rihn, J.S. Owen Jr., and **A. Fulcher**. A Case Study of Nursery Substrate Costs. Department of Plant Sciences Student Poster Competition, April 22, 2024, Knoxville, TN.
2. Whaley, L.<sup>M\*</sup>, L. Slade<sup>M</sup>, K. McKim<sup>M</sup>, L. Fessler<sup>M</sup>, and **A. Fulcher**. A New Artificial Target and Pre-Treatment Technique for Visual and Quantitative Assessment of Pesticide Applications to Tree Trunks for Control of Trunk-boring Insects. Department of Plant Sciences Student Poster Competition, April 22, 2024, Knoxville, TN.
3. Ammons, J.<sup>\*M</sup>, Z. Cutler<sup>\*M</sup>, and M. Shen<sup>\*M</sup>. Pot-in-Pot Extraction Robot 2.0 (PIPER2; nursery container harvester). BSE Senior Design Presentation Day, December 11, 2023, Knoxville, TN. Advised by H. Gan; mentored by **A. Fulcher**.
4. Cowan, R.<sup>\*M</sup>, B. Milsaps<sup>\*M</sup>, D. Player<sup>\*M</sup>, and C. McReynolds<sup>\*M</sup>. Pot-in-Pot Extraction Robot (PIPER; nursery container harvester). BSE Senior Design Presentation Day. May 16, 2023, Knoxville, TN. Advised by H. Gan; mentored by **A. Fulcher**.
5. Cunningham, A.<sup>M\*</sup>, L. Fessler<sup>M</sup>, J. Fulcher<sup>M</sup>, C. Fust, J. Johnson<sup>M</sup>, G. McAnally<sup>M</sup>, G.M. Pietsch<sup>M</sup>, E. Sapienza<sup>M</sup>, H. Sutt<sup>M</sup>, M. Wright<sup>M</sup>, W.C. Wright, H. Zhu, and **A. Fulcher**. Target and non-target sprays from a crop-sensing, variable-rate intelligent sprayer: Preliminary exploration into trunk applications. Exhibition of Undergraduate Research and Creative Achievement (EURECA), April 25, 2023, Knoxville, TN.
6. Whaley, L.<sup>M\*</sup>, L. Fessler<sup>M</sup>, J. Fulcher<sup>M</sup>, C. Fust, J. Johnson<sup>M</sup>, G. McAnally<sup>M</sup>, G.M. Pietsch<sup>M</sup>, E. Sapienza<sup>M</sup>, H. Sutt<sup>M</sup>, M. Wright<sup>M</sup>, W.C. Wright, H. Zhu, and **A. Fulcher**. Reducing off-target pesticide spray and harm to beneficial insects with variable-rate, Intelligent spray technology. Exhibition of Undergraduate Research and Creative Achievement (EURECA), April 25, 2023, Knoxville, TN.
7. Whaley, L.<sup>M\*</sup>, L. Fessler<sup>M</sup>, J. Fulcher<sup>M</sup>, C. Fust, J. Johnson<sup>M</sup>, G. McAnally<sup>M</sup>, G.M. Pietsch<sup>M</sup>, E. Sapienza<sup>M</sup>, H. Sutt<sup>M</sup>, M. Wright<sup>M</sup>, W.C. Wright, H. Zhu, and **A. Fulcher**. 2023. Reducing off-target pesticide spray and harm to beneficial insects with variable-rate, Intelligent spray

technology. Department of Plant Sciences Student Poster Competition, April 24, 2023, Knoxville, TN.

8. Sutt, H.<sup>M\*</sup>, J. Johnson<sup>M</sup>, Z. Hansen, D. Lockwood, L. Fessler<sup>M</sup>, K. Kilpatrick, E. Lopez, H. Zhu, J. Fulcher, G. Pietsch<sup>M</sup>, W.C. Wright, A. McNally<sup>M</sup>, and **A. Fulcher**. 2022. Increasing Sustainability of Pest Management in Apple Production with Reduced-Rate Applications and Variable-rate Spray Technology. Exhibition of Undergraduate Research and Creative Achievement (EURECA), April 25, 2022, Knoxville, TN.

### **Associate Professor**

1. Basiri Jahromi, N.<sup>M\*</sup>, F. Walker, and **A. Fulcher**. Improving water use efficiency in nursery crops. Fifth Annual Watershed Symposium at UT: Careers in Water, September 13, 2016, Knoxville, TN.

### **Assistant Professor**

2. Wilson, S.E.<sup>M\*</sup> Development of an elevated dissolved oxygen irrigation treatment system for nursery crops. Exhibition of Undergraduate Research and Creative Achievement (EURēCA), March 28, 2012, Knoxville, TN.
3. Wilson, S.E.<sup>M\*</sup> Effect of elevated dissolved oxygen on plant growth. Tennessee Louis Stokes Alliance for Minority Participation Research Presentation Day, August 12, 2011, Knoxville, TN.

## **Extension Presentations**

### **Out-of-Country**

Primarily Green Industry Audience

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

### **Professor**

1. **Fulcher, A.** Leaching Fraction and Bluetooth Irrigation Controllers. International Plant Producers Society May 1 and May 6, 2025, Christchurch and Palmerston North, New Zealand (30 participants per location), May 1 and May 6, 2025 repeated 3-4 times per location, 65 participants total.
2. **Fulcher, A.** Distribution Uniformity Demonstrations. International Plant Producers Society May 1 and May 6, 2025, Christchurch and Palmerston North, New Zealand (30 participants per location), May 1 and May 6, 2025 repeated 3-4 times per location, 30 participants per location.
3. **Fulcher, A.** 2023. The Weight of Water: Simple Calculations to Improve Irrigation Efficiency. South Africa Grower Workshop on Nursery Irrigation, Stellenbosch, South Africa, February 2-3, 2023.
4. **Fulcher, A.** 2023. Leaching Fraction Demonstration. South Africa Grower Workshop on Nursery Irrigation, Stellenbosch, South Africa, February 2-3, 2023.

## National

Primarily Green Industry Audience, may include an international audience

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

### Professor

1. Calculating Leaching Fraction. Moneywise Irrigation and Fertilization Strategies for Container Nurseries. McMinnville, TN, July 10, 2025.
2. Current Adoption Levels of Nursery Automation. Labor Challenges and Opportunities in the Nursery Industry: How Behavioral, Economic, Engineering, and Production Influence Automation Adoption in the Green Industry Workshop. Cultivate'25, Columbus, OH, July 14, 2025
3. Introduction to Intelligent, Variable-Rate Spray Technology. Flatheaded Borer Workshop. Cultivate'25, Columbus, OH, July 15, 2025
4. Fulcher, A. Container Irrigation Scheduling Logic, Substrates: Possibilities for VSD Research. Vascular Streak Dieback Workshop, McMinnville, TN, October 1, 2024.
5. **Fulcher, A.\*** Calculations to Improve Nursery Irrigation Efficiency. Western Region US-International Plant Propagators' Society, Annual Conference, Temecula, CA, January 22-26, 2024.
6. **Fulcher, A.\*** Addressing the Nursery Labor Shortage with Automation. August 29, 2023, AmericanHort webinar. *Invited to repeat the presentation I gave in 2022 due to high demand.*
7. **Fulcher, A.\*** Development and Commercialization of the Intelligent Sprayer. AI in Agriculture Conference, April 19, 2023, Orlando, FL.
8. **Fulcher, A.\*** Addressing the Nursery Labor Shortage with Automation and Other Employee Retention Strategies. Cultivate'22, AmericanHort, July 16, 2022, Columbus, OH.
9. LeBude, A.V. and **A. Fulcher\***. Nursery Automation Update & Roundtable Discussion. Nursery Management Conference, September 16, 2021, Arlington, TX.
10. **Fulcher, A.\*** In Deep Water: Making Sense of Nursery Irrigation Technology and Strategies. Cultivate'21, July 11, 2021, Columbus, OH.

*Please note: Invited to speak at Cultivate'20 and Farwest Show in 2020 but both in-person events were cancelled due to COVID-19.*

### Associate Professor

1. **Fulcher, A.\*** Is a One-Size-Fits-All Irrigation System Drowning Your Profits? ProGreen Expo, February 24, 2021, Denver, CO.
2. **Fulcher, A.\*** Spraying for the Future. Summer Retreat - Leadership Forum and Marketplace. Kentucky Nursery and Landscape Association, September 5, 2019, Louisville, KY.
3. **Fulcher, A.\*** IPM for Hydrangeas. Cultivate'18, AmericanHort, July 14, 2018, Columbus, OH.
4. **Fulcher, A.\*** Hydrangea Irrigation and Growth Control. Cultivate'18, AmericanHort, July 14, 2018, Columbus, OH.

5. **Fulcher, A.\*** Using math in Real Life: Squeezing Every Drop Out of Nursery Irrigation. Cultivate'18, AmericanHort, July 15, 2018, Columbus, OH.
6. **Fulcher, A.\*** Is a One-Size-Fits-All Irrigation System is Drowning Your Profits? Production Technology Conference, AmericanHort, October 9-11, 2017, Dallas, TX.
7. **Fulcher, A.\*** Sensing the Future of Spray Technology. Production Technology Conference, AmericanHort, October 9-11, 2017, Dallas, TX.
8. **Fulcher, A.\*** Is a One-Size-Fits-All Irrigation System Drowning Your Profits? Nursery Irrigation Symposium. June 15, 2017, Raleigh, NC.
9. **Fulcher, A.\*** Nursery Irrigation Scheduling Using Leaching Fraction. Center for Applied Nursery Research Annual Open House, January 25, 2017, Duluth, GA.
10. **Fulcher, A.\*** Applied Research and Extension Programming at University of Tennessee. Lancaster Farms Research Day. December 13-14, 2016, Suffolk, VA.
11. **Fulcher, A.\*** Tried and True IPM Techniques that Improve your Nursery's Bottom Line. Virginia Nursery and Landscape Association. November 17, 2016. Webinar.
12. **Fulcher, A.\*** Tips for Establishing a Nursery IPM Working Group. North Central Nursery Crop Working Group. August 30, 2016, Webinar.
13. **Fulcher, A.\*** Redheaded Flea Beetle. Hydrangea Production Workshop, August 4, 2016, Smithfield, NC.
14. **Fulcher, A.\*** Growth Control with PGRs, Pruning and Irrigation. Hydrangea Production Workshop. August 4, 2016, Smithfield, NC.
15. **Fulcher, A.\*** Growth Control with PGRs, Pruning and Irrigation. Hydrangea Production Workshop. August 2, 2016, Virginia Beach, VA.

#### **Assistant Professor**

1. **Fulcher, A.\*** Applied Research and Extension Programming at University of Tennessee. Lancaster Farms Research Day. December 17, 2015, Suffolk, VA.
2. **Fulcher, A.\*** Irrigation Strategies to Improve Plant Production and Conserve Water. It's All About Water and Increasing Your Bottom Line. July 28, 2015, Grand Rapids, MI.
3. **Fulcher, A.\*** IPM Resources to Help Nursery Growers. Cultivate'15, AmericanHort, July 12, 2015, Columbus, OH.
4. **Fulcher, A.\*** Effective Crop Growth Management in the Nursery. Cultivate'15, AmericanHort, July 12, 2015, Columbus, OH.
5. **Fulcher, A.\*** Greenhouse Production Apps and "Smartphone-Ready" Business Tips. Annie's Project Webinar Series. March 13, 2014, Rutgers, NJ. (repeat of March 6, 2014 webinar)
6. **Fulcher, A.\*** Greenhouse Production Apps and "Smartphone-Ready" Business Tips. Annie's Project Webinar Series. March 6, 2014, Rutgers, NJ.
7. **Fulcher, A.\*** Technology and IPMPro Update and Evaluation. Pest Management and Strategic Plan Preparation Meeting and Southern Nursery IPM Working Group Advisory Meeting. February 24-25, 2014, Quincy, FL.
8. **Fulcher, A.\*** Hunger Games: Enemies, Arenas and Fighting to the Death! Center for Applied Nursery Research Annual Open House, January 23, 2014, Duluth, GA.

9. **Fulcher, A.\*** Straight Talk on IPMPro. Southern Nursery Association Trade Show. August 6, 2013, Atlanta, GA.
10. **Fulcher, A.\*** Laser Tag with Intelligent Sprayers. International Plant Propagators' Society. November 2-6, 2013, Athens, GA.
11. **Fulcher, A.\*** IPM meets Laser Tag: Grower-Approved Techniques and Novel Intelligent Sprayers Win Big. NurseryWorks. July 18, 2013, Manhattan, KS.
12. **Fulcher, A.\*** Hagen, E. <sup>M</sup>, S. Nambuthiri, **A. Fulcher**, and R. Geneve. Comparing Substrate Moisture-based Daily Water Use and On-demand Irrigation Regimes for *Hydrangea quercifolia* Grown in Two Container Sizes. International Plant Propagators' Society, Western Region, September 19 - 22, 2012, Ventura, CA. (invited poster presentation)
13. **Fulcher, A.\*** Winning the Hunger Games with Intelligent Sprayers. The KNLA Summer Outing. September 6, 2012, Clermont, KY.
14. **Fulcher, A.\*** Practice Makes Perfect-IPM Strategies and Production Practices for Managing Pests. Nursery Crops IPM Workshop, June 14, 2012, Bedford, KY.
15. **Fulcher, A.\*** and W. Klingeman. Effect of Contact and Systemic Insecticides Used for Scale Pests on Beneficial Insects. Center for Applied Nursery Research Annual Open House, January 27, 2012, Duluth, GA.
16. **Fulcher, A.\*** Nursery/Landscape Espionage: Scouting and Other Covert Operations. WinterGreen, January 26, 2012, Duluth, GA.
17. **Fulcher, A.\*** Nursery to Landscape: Making the Transition. Trees: The Best Vitamin G - The 16<sup>th</sup> Annual Waynesboro Plant Healthcare Workshop, September 8, 2011, Waynesboro, VA.
18. **Fulcher, A.\*** Using Technology to Out-Smart Pests. GA-FL Green Industry Webinar Series, November 8, 2010.

#### **Prior to Joining the UT Department of Plant Sciences**

1. **Fulcher, A.\*** Nursery to Landscape: Making the Transition. Indiana Professional Lawn and Landscape Association Winter Meeting, December 12, 2007, Carmel, IN.
2. **Fulcher, A.\*** IPM for Container Tree Production. Assessment of Pest Management Practices and Priorities for Container Tree Production in USDA Hardiness Zone 6-8, September 27-28, 2004, Biloxi, MS.
3. **Fulcher, A.\*** Fertilizer Rate and Growth of Trees in Pot-in-Pot Production. Assessment of Pest Management Practices and Priorities for Container Tree Production in USDA Hardiness Zone 6-8, September 27-28, 2004, Biloxi, MS.
4. **Fulcher, A.\*** Nursery to Landscape: Making the Transition. Indiana Professional Lawn and Landscape Association Winter Workshop, January 15, 2004, Plainfield, IN.

#### **In-State, Event Organized or Co-Organized by the Candidate**

Primarily Green Industry Audience

\*Presenter. <sup>M</sup>Student/postdoc/extension assistant mentored by the candidate.

#### **Professor**

1. Marble, C.\* , A. LeBude, A. Fulcher, and L. Warner. 2025. Increasing information and adoption of emerging technologies for the nursery industry. UF/IFAS Nursery and Landscape Technology Workshop and Demonstration Day. West Palm Beach, FL. 24 September 2025.
2. Fulcher, A. Variable-Rate Spray Technology. Green Industry Field Day, June 12, 2025, Knoxville, TN.
3. Cole, K.<sup>M</sup> Plug and Play Sensors for Garden Centers, Nurseries and Landscape Contractors. Green Industry Field Day, June 12, 2025, Knoxville, TN.
4. Hoig, I.<sup>M</sup> Stratified Substrates. Green Industry Field Day, June 12, 2025, Knoxville, TN.
5. **Fulcher, A.** Bluetooth Irrigation Controllers. Green Industry Field Day, June 12, 2025, Knoxville, TN.
6. **Fulcher, A.** Nursery Substrates 101. Green Industry Field Day, June 28, 2024, Knoxville, TN.
7. Hoig, I.<sup>M</sup> Monitoring Moisture in a Sand Bed Propagation System with an Affordable, Off-The-Shelf System to Inform Nursery Irrigation Decision-Making. Green Industry Field Day, June 28, 2024, Knoxville, TN.
8. Slade, L.<sup>M</sup> Comparing Spray Stake and Dribble Ring Irrigation Emitters on 30 gallon Containers to Refine Irrigation Scheduling and Optimize Water Use. Green Industry Field Day, June 28, 2024, Knoxville, TN.
9. Whaley, L.<sup>M</sup> Reducing Off-target Pesticide Spray and Harm to Beneficial Insects with Variable-rate, Intelligent Spray Technology. Green Industry Field Day, June 27, 2023, Knoxville, TN.
10. **Fulcher, A.** Examining Amendments to Pine Bark Substrate for Hydrangea Production. Green Industry Field Day, June 27, 2023, Knoxville, TN.
11. Pietsch, G.<sup>M</sup> Comparing Manual Application of Fertilizer Prills with a Mechanized Fertilizer Dispenser. Green Industry Field Day, June 27, 2023, Knoxville, TN.
12. **Fulcher, A.** Monitoring Container Substrate Water Content Demo, UT/TSU Eastern Region Nursery Tour and Agent In-service, October 24, 2023, McMinnville, TN.
13. **Fulcher, A.** Intelligent, Variable-Rate Sprayer Demo, UT/TSU Eastern Region Nursery Tour and Agent In-service, October 24, 2023, McMinnville, TN.
14. **Fulcher, A.** Flatheaded Borer Management and Control. Green Industry Field Day, June 28, 2022, Knoxville, TN, online format.

#### **Associate Professor**

1. Wszelaki, A.\* , M. Velandia\*, D. Lockwood\*, and **A. Fulcher\***. Landscape, Retail and Farmworker Resources for COVID-19. Green Industry Field Day, June 16, 2020, Knoxville, TN, online format.
2. **Fulcher, A.\*** Tips for Safer Landscape and Retail Operations During COVID-19. Green Industry Field Day, June 16, 2020, Knoxville, TN, online format.
3. Cofer, S.\* , **A. Fulcher\***, N. Miller\*, and M. Leffew\*. Garden Center Twilight Q&A: Operating During the COVID-19 Pandemic. Co-organized with Ctr. Profitable Ag., April 23, 2020, online format.
4. **Fulcher, A.\***, L. Fessler\*, W. Wright\*, and G. Pietsch\*. Intelligent Sprayer Prototype Demonstration. Turf and Ornamental Field Day. August 29, 2019, Knoxville, TN.

5. Pietsch, G.<sup>M\*</sup> Oakleaf Hydrangea Cutting Demonstration. Green Industry Field Day, June 25, 2019, Knoxville, TN.
6. Pietsch, G.<sup>M\*</sup> Bluing *Hydrangea macrophylla* Demonstration. Green Industry Field Day, June 25, 2019, Knoxville, TN.
7. Fessler, L.<sup>M\*</sup> and L. Nadaud<sup>M\*</sup>. Water Sensitive Card Demonstration. Green Industry Field Day, June 25, 2019, Knoxville, TN.
8. **Fulcher, A.\*** Success with the Intelligent Sprayer. Green Industry Field Day, June 25, 2019, Knoxville, TN.
9. **Fulcher, A.\*** Sanitizing Footbath as a Systems-based Pest Management Technique. Green Industry Field Day, June 25, 2019, Knoxville, TN.
10. **Fulcher, A.\*** Coolers, Loading Docks and Much More: The Online Tennessee Master Nursery Producer Program. Conference Tour, International Plant Propagator's Society Annual Conference and Tours, October 23, 2018, Belvidere, TN.
11. **Fulcher, A.\*** Advantages and Availability of Laser-Guided Spray Technology. Pre-Conference Tour, International Plant Propagator's Society Annual Conference and Tours, October 21, 2018, McMinnville, TN.
12. **Fulcher, A.\***, N. Basiri\*, and G. Pietsch\*. Hands-on Nursery and Landscape Workshop. Turf and Ornamental Field Day. August 30, 2018, Knoxville, TN.
13. **Fulcher, A.\*** Affordable Soil Moisture Probe Systems for Landscapes, Garden Centers, and Nurseries. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 26, 2018, Knoxville, TN.
14. Basiri Jahromi, N.<sup>M\*</sup> Biochar as a Container Substrate. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 26, 2018, Knoxville, TN.
15. Fessler, L.<sup>M\*</sup> Assessing Spray Characteristics. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 26, 2018, Knoxville, TN.
16. Pietsch, G.<sup>M\*</sup> How Blue: Image Analysis of *Hydrangea macrophylla* Flower Color. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 26, 2018, Knoxville, TN.
17. **Fulcher, A.\*** and B. Klingeman\*. New Integrated Pest Management Resources for Landscape Managers. Turf and Ornamental Field Day. September 7, 2017, Knoxville, TN.
18. **Fulcher, A.\***, B. Klingeman\*, and G. Pietsch\*. Hands-on Landscape Ornamental Workshop. Turf and Ornamental Field Day. September 7, 2017, Knoxville, TN.
19. McHugh, J.<sup>M\*</sup> Update on Intelligent Sprayer Research. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 20, 2017, Knoxville, TN.
20. Pietsch, G.<sup>M\*</sup> Mobile App-based Color Characterization of Hydrangea Flowers. Green Industry Field Day, June 20, 2017, Knoxville, TN.
21. Tharpe, E.<sup>M\*</sup> Controlling *Hydrangea macrophylla* Flower Color. Green Industry Field Day, June 20, 2017, Knoxville, TN.
22. **Fulcher, A.\*** PGR Carryover Effect and Sun and Shade Effects on *H. paniculata* 'Phantom' Flower Timing and Longevity. Green Industry Field Day, June 20, 2017, Knoxville, TN.

23. **Fulcher, A.\*** Landscape BMPs: Planting and Root Remediation to Minimize Pest Pressure. Turf and Ornamental Field Day. September 8, 2016, Franklin, TN.
24. **Fulcher, A.\*** Redheaded Flea Beetle. Hydrangea Production Workshop. July 21, 2016, McMinnville, TN.
25. **Fulcher, A.\*** Effective Crop Growth Management. Hydrangea Production Workshop. July 21, 2016, McMinnville, TN.
26. Basiri Jahromi, N.<sup>M\*</sup> Demonstration of Photosynthesis Measurements. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 14, 2016, Knoxville, TN.
27. **Fulcher, A.\*** Refining Nursery Crops Irrigation. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 14, 2016, Knoxville, TN.
28. **Fulcher, A.\*** Controlling Growth in Hydrangeas. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 14, 2016, Knoxville, TN.
29. McHugh, J.<sup>M\*</sup> Update on Intelligent Sprayer Research. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 14, 2016, Knoxville, TN.
30. Basiri Jahromi, N.<sup>M\*</sup> Physical Properties and Water Holding Characteristics of Biochar in Nursery Substrates. UT Nursery and Landscape Management Research Update. Green Industry Field Day, June 14, 2016, Knoxville, TN.

#### **Assistant Professor**

1. **Fulcher, A.\*** and A. Pulte\*. Hydrangea Boot Camp. Turf and Ornamental Field Day. September 10, 2015, Knoxville, TN.
2. **Fulcher, A.\*** and W. Klingeman\*. Recent Advances in Technology and Tools to Help Manage! Turf and Ornamental Field Day. September 11, 2014, Knoxville, TN.
3. **Fulcher, A.\*** and W. Klingeman\*. Pulp Fiction: Facts and Fiction on Managing Landscape Plants & Pests. Turf and Ornamental Field Day. September 11, 2014, Knoxville, TN.
4. **Fulcher, A.\*** Systems-based Pest Management: Prevention and Solarization Demonstration. Nursery IPM Workshop. June 17-18, 2014, Decherd, TN.
5. **Fulcher, A.\***, W. Klingeman, A. LeBude, and S. White. IPMPro Version 2 Update. Nursery IPM Workshop. June 17-18, 2014, Decherd, TN.
6. **Fulcher, A.\*** Container Irrigation. Systems-based Pest Management Workshop. September 26, 2013, McMinnville, TN.
7. **Fulcher, A.\*** Soil and Substrate, Irrigation, Field Production, and Training Employees. Systems-based Pest Management Workshop. September 26, 2013, McMinnville, TN.
8. **Cochran, D.<sup>M\*</sup>** Welcome and Survey Responses. Systems-based Pest Management Workshop. September 26, 2013, McMinnville, TN.
9. **Fulcher, A.\*** and W. Klingeman\*. New Technology for Managing Pests of Turf and Ornamentals. Turf and Ornamental Field Day. September 12, 2013, Knoxville, TN.
10. **Fulcher, A.\***, D. Cochran<sup>M\*</sup>, W. Yeary<sup>M\*</sup>, and W. Klingeman\*. Pulp Fiction: Facts and Fiction Pertaining to Managing Ornamental Pests. Turf and Ornamental Field Day. September 12, 2013, Knoxville, TN.

11. **Fulcher, A.\*** Reducing Off-Target Pesticide Loss. Tennessee Master Nursery Producer Program. December 4, 2012, McMinnville, TN.
12. **Fulcher, A.\***, E. Hagen<sup>M\*</sup>, T. Samples\*, and W. Yeary<sup>M\*</sup>. What Went Wrong? Turf and Ornamental Field Day. September 13, 2012, Knoxville, TN.
13. **Fulcher, A.\*** and W. Klingeman\*. Mobile App: IPMPro. Turf and Ornamental Field Day. September 13, 2012, Knoxville, TN.
14. **Fulcher, A.\*** and W. Klingeman\*. iBook: IPM for Select Deciduous Trees in Southeastern U.S. Nursery Production. Turf and Ornamental Field Day. September 13, 2012, Knoxville, TN.
15. Yeary, W.<sup>M\*</sup> Effect of Propagation Techniques and Plant Growth Regulator Application during Production on *Magnolia virginiana*, *Clethra alnifolia* and *Rhododendron*. Turf and Ornamental Field Day. September 13, 2012, Knoxville, TN.
16. **Fulcher, A.\*** Sprayer Calibration Demonstration. Airblast Sprayer Workshop: Optimizing Your Sprayer for Better Coverage, Better Pest Control, and Greater Savings. May 4, 2011, McMinnville, TN.
17. **Fulcher, A.\*** Dogwood Irrigation. Container Dogwood Production Workshop. November 18, 2010, McMinnville, TN.

#### **Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.\*** Kentucky Nursery Crop Production. Southern Region Nursery Crop Pest Management Meeting. July 30-31, 2009, Asheville, NC.
2. Zhu, H.\*, R. Zondag\*, A. Clark\*, and **A. Fulcher\***. Evaluating Half-Rate and Full-Rate Treatments for Effective Pest Control. Half-Rate Pesticide Application for Nurseries. July 14, 2009, Elizabethtown, KY.
3. **Fulcher, A.\*** Nitrogen Basics. Nursery Crops IPM Workshop. June 4, 2009, La Grange, KY.
4. **Fulcher, A.\*** Increasing Branch Number on Woody Ornamentals during Production. Kentucky Landscape Industries Winter Conference, January 12, 2009, Louisville, KY.
5. **Fulcher, A.\*** Two Years and Counting: A Horticulturist's Perspective on Granulate Ambrosia Beetle. Nursery Winter Workshop. February 13, 2008, Elizabethtown, KY.
6. Poston, A.\*, **A. Fulcher**, W. Dunwell, and R. Geneve. Use of Plant Growth Regulators in Container-Grown Nursery Stock. Kentucky Landscape Industries Winter Conference. January 2, 2008, Louisville, KY.
7. **Fulcher, A.\*** Scouting Nursery Crops in Kentucky - Tips and Techniques. Scouting Nursery Crops Workshop. May 24, 2006, Goshen, KY.
8. **Fulcher, A.\*** Using Technology to Out-Smart Pests. Putting IPM to Work in the Nursery. May 25, 2005, Burlington, KY.
9. **Fulcher, A.\*** Scouting Nursery Liners for Pests. Nursery Winter Workshop. February 2, 2005, Shelbyville, KY.
10. **Fulcher, A.\*** Invasive Pest Update. IPM: Practical Techniques for Nursery Production. August 3, 2004, Murray, KY.
11. **Fulcher, A.\*** and D. Michael\*. Insect Resistant Plants. Best Management Practices Workshop. February 18, 2004, Princeton, KY.

12. **Fulcher, A.\*** Scouting, Monitoring, and Recordkeeping. Kentucky IPM for Nursery Production Workshop Series. July 10, 2003, Murray, KY.
13. **Fulcher, A.\*** IPM for Nursery Production. Kentucky IPM for Nursery Production Workshop Series. March 6, 2003, Murray, KY.
14. **Fulcher, A.\*** and D. Michael\*. Roots and Soil. Kentucky Best Management Practices Workshop III. February 26, 2002, Louisville, KY and February 27, 2002, Princeton, KY.
15. **Fulcher, A.\*** and D. Michael\*. Understanding the Basics. Kentucky Landscape Industries Winter Conference and Trade Show. January 8-10, 2002, Lexington, KY.
16. **Fulcher, A.\*** and D. Michael\*. Solving Plant Problems. Kentucky Landscape Industries Winter Conference and Trade Show. January 8-10, 2002, Lexington, KY.
17. **Fulcher, A.\*** and D. Michael\*. Why Do My Plants Look This Way? Kentucky Landscape Industries Winter Conference and Trade Show. January 8-10, 2002, Lexington, KY.
18. **Fulcher, A.\*** and D. Michael\*. Are Your Plants in the “Zen Zone”? Kentucky Landscape Industries Winter Conference and Trade Show. January 8-10, 2002, Lexington, KY.
19. **Fulcher, A.\*** and D. Michael\*. In the Real World Nothing is Perfect. Kentucky Landscape Industries Winter Conference and Trade Show. January 8-10, 2002, Lexington, KY.
20. **Fulcher, A.\*** Water Quality. Kentucky Best Management Practices Workshop II. February 20, 2001, Princeton, KY.
21. **Fulcher, A.\*** Container Substrates. Kentucky Best Management Practices Workshop. March 30, 2000, Princeton, KY.
22. **Fulcher, A.\*** Container and Landscape BMPs. Kentucky Best Management Practices Workshop. March 30, 2000, Princeton, KY.

## **In-State, Invited or Guest**

### **Professor**

1. **Fulcher, A.\*** Monitoring Container Substrate Water Content Demo, UT/TSU Eastern Region Nursery Tour and Agent In-service, October 24, 2023, McMinnville, TN.
2. **Fulcher, A.\*** Intelligent, Variable-Rate Sprayer Demo, UT/TSU Eastern Region Nursery Tour and Agent In-service, October 24, 2023, McMinnville, TN.
3. TMNP Program Display. TNGro, September 27-29, 2023, Lebanon, TN. (Guest, not “invited”)
4. Tsuruda et al. A Roundtable Overview of Master Producer and Statewide Programs, Statewide Extension Conference, November 7-10, 2022, Chattanooga, TN. (2 sessions)
5. **Fulcher, A.\*** Diagnosing Plant Problems in the Nursery and Landscape, Green Industry Express, March 10, 2023, Chattanooga, TN.
6. **Fulcher, A.\*** Dead Plants 101: A Diagnostic Presentation, Grounds Management Shortcourse, January 19, 2023, Knoxville, TN.
7. **Fulcher, A.\*** Making the Transition: From Nursery to Landscape, Grounds Management Shortcourse, January 21, 2022, Knoxville, TN.
8. Fessler, L.<sup>M</sup> Intelligent Sprayer Demonstration. Agriculture in the Classroom Summer STEM Workshops, June 22, 2021, Knoxville, TN.

### **Associate Professor**

1. **Fulcher, A.\*** Navigating New Waters: Buying and Selling Patented and Trademarked Plants. Grounds Management ShortCourse, February 26, 2020, Knoxville, TN.
2. **Fulcher, A.\*** Environmental and Labor Challenges and Opportunities Facing the Tennessee Nursery Industry. East Tennessee Nursery Association, September 17, 2019, Elizabethton, TN.
3. **Fulcher, A.\*** Challenges and Opportunities Facing the Tennessee Nursery Industry. Tennessee Association of Pesticide Applicators. July 19, 2019, Gatlinburg, TN.
4. **Fulcher, A.\*** Practical Calculations and Technologies to Refine Water Use. Grounds Management ShortCourse. January 30, 2019, Knoxville, TN.
5. **Fulcher, A.\*** Thrive, Survive, or Nose-Dive: Understanding Plant Adaptability. Green Express Horticulture Short Course. January 4, 2019, Chattanooga, TN.
6. **Fulcher, A.\*** Fire and Ice: Understanding Plant Adaptability. Grounds Management ShortCourse, February 24, 2018, Knoxville, TN.
7. **Fulcher, A.\*** Hydrangeas: How to Keep a Superstar from Becoming a Fallen Star! Grounds Management ShortCourse, February 15, 2017, Knoxville, TN.
8. **Fulcher, A.\*** Hydrangeas – Management for Healthy Production and Avoidance of Pests. Green Express Horticulture Short Course. January 4, 2018, Chattanooga, TN.
9. **Fulcher, A.\*** Using Integrated Pest Management (IPM) in Nursery and Landscape Pest Control? Green Express Horticultural Short Course, January 5, 2017, Chattanooga, TN.
10. **Fulcher, A.\*** Hydrangea Production and Landscape Maintenance. East Tennessee Nursery Association. September 20, 2016, Kingsport, TN.
11. **Fulcher, A.\*** Pick ‘Em Right, Plant ‘Em Right, Treat ‘Em Right. Commercial Horticulture Applicator’s Update Training. February 11, 2016, Murfreesboro, TN.
12. **Fulcher, A.\*** Producing and Selecting High Quality, Pest Resistant Plants for the Landscape: A Buyers Guide. Green Express Horticultural Short Course, January 7, 2016, Chattanooga, TN.
13. **Fulcher, A.\*** From Nursery to Landscape: How Good Production Practices Create Great Landscapes. Grounds Management ShortCourse, January 19, 2016, Knoxville, TN.

### **Assistant Professor**

1. **Fulcher, A.\*** Biodegradable and Other Alternative Containers. East Tennessee Nursery Association. September 15, 2015.
2. **Fulcher, A.\*** Inspecting Nursery Stock for Pests and Problems. Landscape Review. September 3, 2015, Jackson, TN.
3. **Fulcher, A.\*** Plant Growth Regulators on *Hydrangea macrophylla* and *H. paniculata*. Nursery and Landscape Research Update. Tennessee Nursery and Landscape Association Field Day. June 23, 2015, Knoxville, TN.
4. **Cypher, Q.M.\*** Measuring Nursery Container Leachate. Nursery and Landscape Research Update. Tennessee Nursery and Landscape Association Field Day. June 23, 2015, Knoxville, TN.

5. Basiri Jahromi, N.<sup>M\*</sup> Biochar as a Container Substrate for Nursery Production. Nursery and Landscape Research Update. Tennessee Nursery and Landscape Association Field Day. June 23, 2015, Knoxville, TN.
6. **Fulcher, A.\*** Paper or Plastic? Grounds Management Shortcourse. February 3, 2015, Knoxville, TN.
7. **Fulcher, A.\*** Paper or Plastic? Green Express Horticultural Short Course. January 7, 2015, Chattanooga, TN.
8. **Fulcher, A.\*** IPM Practices Made Easy for Nursery and Landscape Professionals. Tennessee Green Industry Expo, October 2, 2014, Nashville, TN.
9. **Fulcher, A.\*** and D. Cochran<sup>M\*</sup>. Nursery and Landscape Research Update. Tennessee Nursery and Landscape Association Field Day, June 24, 2014, Knoxville, TN.
10. **Fulcher, A.\*** Weather and Plants. How Weather Affects Plants and Extension Programs. March 13, 2014, Knoxville, TN.
11. **Fulcher, A.\*** Tree Planting and Post-Planting Care. Celebrating Trees: Right Tree, Right Place. March 6, 2014, Johnson City, TN.
12. **Fulcher, A.\*** Pruning Ornamental Plants. McCurdy Day. February 27, 2014, Jackson, TN.
13. **Fulcher, A.\*** Pruning and PGRs in the Landscape. Grounds Management Shortcourse. February 12, 2014, Knoxville, TN.
14. **Fulcher, A.\*** Using IPM<sup>Pro</sup> (and More) to Manage Pests. Middle Tennessee Landscape Short Course. January 15, 2014, Franklin, TN.
15. **Fulcher, A.\*** Pruning to Maximize Blooms and Insect and Disease Prevention. Green Express Horticultural Short Course. January 9, 2014, Chattanooga, TN.
16. Cochran, D.<sup>M\*</sup>, W. Yeary<sup>M\*</sup>, and **A. Fulcher\***. 2013. Nursery and Landscape Research Update. Tennessee Nursery and Landscape Association Field Day. June 25, 2013, Knoxville, TN.
17. Cochran, D.<sup>M\*</sup> Nursery to Landscape: Making the Transition. Middle Tennessee Landscape Short Course. January 16, 2013, Franklin, TN.
18. Cochran, D.<sup>M\*</sup> IPM Principles for Nurseries and Landscapes. Middle Tennessee Landscape Short Course. January 17, 2013, Franklin, TN.
19. **Fulcher, A.\*** Serving Green-Minded Clientele from Scouting to Intelligent Sprayers. Grounds Management Short Course. January 30, 2013, Knoxville, TN.
20. **Fulcher, A.\*** IPM Principles for Landscapes and Nurseries. Green Express. January 10, 2013, Chattanooga, TN.
21. **Fulcher, A.\*** IPM Principles for Nurseries and Landscapes. Tennessee Green Industry Expo. January 3, 2013, Nashville, TN.
22. **Fulcher, A.\*** Diagnostics Basics: Dead Plants 101. Tennessee Association of Pesticide Applicators. July 19, 2012, Gatlinburg, TN.
23. Hagen, E.<sup>M\*</sup>, A. Menendez<sup>M\*</sup>, W. Yeary<sup>M\*</sup>, and **A. Fulcher\***. Nursery and Landscape Research Update. Tennessee Nursery and Landscape Association Field Day, June 19, 2012, Knoxville, TN.
24. **Fulcher, A.\*** Integrated Pest Management for Nursery Production. Warren Co. Extension Program, March 27, 2012, McMinnville, TN.

25. **Fulcher, A.\*** Integrated Pest Management for Nursery Production. Grundy Co. Extension Program, March 26, 2012, Coalmont, TN.
26. **Fulcher, A.\*** Espionage, Scouting, and Other Covert IPM Operations. TNLA Nursery Shortcourse, February 20, 2012, Pigeon Forge, TN.
27. **Fulcher, A.\*** Plant Detective: A Game of Questions. Grounds Management Shortcourse, February 15, 2012, Knoxville, TN.
28. **Fulcher, A.\*** Dead Plants 101: Clues to Solving Your Plant Problems. January 6, 2012, Chattanooga, TN.
29. **Fulcher, A.\*** Plant CSI: Diagnosing the Pest. Landscape Review, September 13, 2011, Jackson, TN.
30. **Fulcher, A.\*** Plant Growth Regulator and Sophisticated Irrigation Technology Research Preview. Tennessee Green Industry Field Day, June 14, 2011, Knoxville, TN.
31. Wilson, S.E.<sup>M\*</sup> Developing a System to Elevate Dissolved Oxygen Levels in Nursery Irrigation Water. Tennessee Green Industry Field Day, June 14, 2011, Knoxville, TN.
32. **Fulcher, A.\*** Dead Plants 101: Clues to Solving Your Plant Problems. TNLA Nursery Shortcourse, February 14, 2011, Pigeon Forge, TN.
33. **Fulcher, A.\*** Techno-Savvy Horticulture: Tools to Out-Smart Pests and Enhance Plant Health. 39<sup>th</sup> Annual Grounds Management Shortcourse, February 2, 2011, Knoxville, TN. *Keynote Speaker.*
34. **Fulcher, A.\*** A Horticulturist's Perspective on Scale Pests of Woody Plants. Tri-Cities Landscape Seminar, January 21, 2011, Jonesborough, TN.
35. **Fulcher, A.\*** A Horticulturist's Perspective on Scale Pests of Woody Plants Green Express Horticultural Short Course, January 6, 2011, Chattanooga, TN.

**Prior to joining the UT Department of Plant Sciences**

1. **Fulcher, A.\*** A Horticulturist's Perspective on Scale Pests of Woody Plants. KNLA Summer Outing, September 8, 2010, Burlington, KY.
2. **Fulcher, A.\*** Louisville Green™ Fertilizer Trial. KNLA Summer Outing. September 2, 2009, Springfield, KY.
3. **Fulcher, A.\*** IPM for Nursery Crops. UKREC Field Day, July 23, 2009, Princeton, KY.
4. **Fulcher, A.\*** Tales from the Trap: Granulate Ambrosia Beetle. Commercial Arborist, Landscaper, and Nursery Workshop, January 30, 2009, Burlington, KY.
5. **Fulcher, A.\*** What Stephen Covey Didn't Tell You: Common Pitfalls of New Growers and Characteristics of Successful Ones. Commercial Arborist, Landscaper, and Nursery Workshop, January 30, 2009, Burlington, KY.
6. Hartman, J.\* , L. Townsend\* , **A. Fulcher\*** , W. Fountain\* , and T. Priddy\* . Plant Life Beyond the 2007 Freeze – Where We Were and Where We Are Now. KNLA Summer Outing, September 5, 2007, Crestwood, KY.
7. **Fulcher, A.\*** and J. Hartman\* . Polymerase Chain Reaction Techniques for Identifying Black Knot of Cherries and Soybean Cyst Nematode Infection. UKREC Field Day, July 26, 2007, Princeton, KY.
8. **Fulcher, A.\*** An Update on Nursery IPM. Central Kentucky Ornamental and Turf Association Winter Horticulture Conference, February 15, 2007, Lexington, KY.

9. **Fulcher, A.\*** and R. Geneve. Water Relations and Photosynthetic Capacity in Two Dogwood Species and Their Hybrid. Kentucky Landscape Industries Winter Conference, January 2-3, 2007, Louisville, KY.
10. **Fulcher, A.\*** Nursery and Landscape Plant Production. Mason County Farmer-Banker Field Day, June 22, 2006, Mays Lick, KY.
11. Hayden, D.\* and **A. Fulcher\***. 2005 in Review: Trends in Kentucky Production. Kentucky Landscape Industries Winter Trade Show and Educational Conference, January 3-4, 2006, Louisville, KY.
12. **Fulcher, A.\*** Update on Black Knot Resistance Research among Purple-leaved Plums. UK College of Agriculture Field Day, July, 28, 2005, Princeton, KY.
13. **Fulcher, A.\*** Nutrition, Irrigation, and Monitoring; Pest and Weed Management; and Resistance to Black Knot among Purple-leaved Plums. Kentucky Landscape Industries Winter Trade Show and Educational Conference, January 12-14, 2005, Louisville, KY.
14. Hayden, D.\* and **A. Fulcher\***. 2004 in Review: Trends in Kentucky Production. Kentucky Landscape Industries Winter Trade Show and Educational Conference, January 12-14, 2005, Louisville, KY.
15. **Fulcher, A.\*** Pot-in-Pot Nursery Production. Kentucky Farm Bureau State Convention, December 8, 2004, Louisville, KY.
16. **Fulcher, A.\*** Fire and Ice: Understanding Cold Hardiness and Heat Tolerance. Kentucky Landscape Industries Winter Trade Show and Conference, January 6-8, 2004, Louisville, KY.
17. **Fulcher, A.\*** Evaluation of Black Knot Resistance among *Prunus* Taxa. Kentucky Landscape Industries Winter Trade Show and Conference, January 6-8, 2004, Louisville, KY.

## ADDITIONAL SCHOLARLY EXTENSION EFFORTS

### In-Service Trainings and Other Agent Training Events

Descriptive title including dates	Role	Students	Sessions	Duration of each session (hours)
<b>Professor</b>				
Hort, Hops and Crops Field Day My presentations: <ul style="list-style-type: none"> <li>• Smart-Apply Spray</li> <li>• Technology Demonstration of Smart-Apply Spray Technology</li> </ul>	Team	10	1	0.5

<b>Descriptive title including dates</b>	<b>Role</b>	<b>Students</b>	<b>Sessions</b>	<b>Duration of each session (hours)</b>
NRAAT Training (new ANR Extension Agents), August 27, 2025 <ul style="list-style-type: none"> <li>My presentation: "Tennessee Master Nursery Producer (TMNP) program and Advanced TMNP program"</li> </ul>	Guest	50	1	0.08
Moneywise Irrigation and Fertilization Strategies for Container Nurseries, co-coordinated with Jacob Shreckhise, McMinnville, TN, July 10, 2025. <ul style="list-style-type: none"> <li>My demonstration: "Calculating Leaching Fraction"</li> </ul>	Co-Coordinator	23	8	1.0
NRAAT Training (new ANR Extension Agents), August 27, 2025 <ul style="list-style-type: none"> <li>My presentation: "Tennessee Master Nursery Producer (TMNP) program and Advanced TMNP program"</li> </ul>	Guest	50	1	0.08
Horticulture Hot Topics, Co-coordinated the 6-part series. <ul style="list-style-type: none"> <li>My presentation: "Fertilizer Dispensers" in Nursery Labor and Automation Update", August 28, 2025</li> </ul>	Co-Coordinator	25	6	1.0
Nursery Tour with Central Region ANR Agents and NC1186 Participants, July 9, 2025	Co-Coordinator	50	1	3.0

Descriptive title including dates	Role	Students	Sessions	Duration of each session (hours)
<p>Moneywise Irrigation and Fertilization Strategies for Container Nurseries, co-coordinated with Jacob Shreckhise, McMinnville, TN, July 10, 2025.</p> <ul style="list-style-type: none"> <li>• My demonstration: “Calculating Leaching Fraction”</li> </ul>	Co-Coordinator	25	2	0.5
<p>Horticulture Hot Topics, Co-coordinated the original 6-part series and added an additional 2 sessions on “Horticulture Production Recovery following Hurricane Helene Part I and II. My presentation:</p> <ul style="list-style-type: none"> <li>• A Horticulturist’s Approach to Field Diagnostics, April 18, 2024</li> <li>• Understanding Soilless Substrates for Landscape Planters and Nurseries, May 23, 2024</li> </ul>	Co-Coordinator	200	8	1
<p>UT/TSU Eastern Region Nursery Tour and Agent In-service, October 24, 2023. Assisted the lead organizer with possible nurseries to tour, accompanied agents to Tennessee nurseries, and conducted 2 demonstrations:</p> <ul style="list-style-type: none"> <li>• Monitoring Container Substrate Water Content Demo</li> <li>• Intelligent, Variable-Rate Sprayer Demo</li> </ul>	Team, assisted P. Haar	8	1 1	0.5 0.5

Descriptive title including dates	Role	Students	Sessions	Duration of each session (hours)
Horticulture Hot Topics, Co-coordinated the 6-part series. <ul style="list-style-type: none"> <li>• My presentation: Control of Foliar and Trunk-Boring Pests with Intelligent Technology, August 22, 2023</li> </ul>	Co-Coordinator	22	6	1.0
Horticulture Hot Topics, Co-coordinated the original 6-part series and added an additional 2 sessions on "Horticulture Production Recovery following Hurricane Helene Part I and II. <ul style="list-style-type: none"> <li>• My presentation: A Horticulturist's Approach to Field Diagnostics, April 18, 2024</li> <li>• Understanding Soilless Substrates for Landscape Planters and Nurseries, May 23, 2024</li> </ul>	Co-Coordinator	30		1.0
		25		0.5
Multi-State Flatheaded Borer In-Service, March 29-31, 2023 <ul style="list-style-type: none"> <li>• My presentation: Introduction to Intelligent, Variable-rate Spray Technology</li> <li>• My demonstration: Control of Foliar and Trunk-Boring Pests with Intelligent Technology</li> </ul>	Team	35	2	0.5 h
				1.0

<b>Descriptive title including dates</b>	<b>Role</b>	<b>Students</b>	<b>Sessions</b>	<b>Duration of each session (hours)</b>
Horticulture Hot Topics, Co-coordinated the 6-part series. <ul style="list-style-type: none"> <li>• My presentations: Labor Challenges, Trends and Solutions for the Green Industry and Consumer Perspectives and Grower Options for Sustainable Control of Trunk Borers, May 24, 2022</li> </ul>	Co-Coordinator	15	6	1.0
Horticulture Hot Topics, Co-coordinated the 6-part series. <ul style="list-style-type: none"> <li>• My presentation: Those Blooming Hydrangeas! Keeping the Blooms Coming in the Landscape and Nursery, May 25, 2021</li> </ul>	Co-Coordinator	15	6	1.0
<b>Associate Professor</b>				
Horticulture Hot Topics, Co-coordinated the 7-part series. <ul style="list-style-type: none"> <li>• My presentation: TAEP and Master Producer Program Update, July 14, 2020</li> </ul>	Co-Coordinator	15	7	1.0
Horticulture Hot Topics, Co-coordinated the 5-part series <ul style="list-style-type: none"> <li>• My presentation: Advanced TMNP Program Launch, July 24, 2019</li> </ul>	Co-Coordinator	25	1	0.5
Turf and Ornamental Field Day In-Service, August 29, 2019 <ul style="list-style-type: none"> <li>• General Equipment Demo (including Laser-Guided Sprayer Demo)</li> </ul>	Team	525 (agents are a portion of attendees)	1	2.0

<b>Descriptive title including dates</b>	<b>Role</b>	<b>Students</b>	<b>Sessions</b>	<b>Duration of each session (hours)</b>
Hydrangea Production Grower Workshop and Agent In-Service, Montgomery Co., August 7, 2019 <ul style="list-style-type: none"> <li>• Understanding Plant Patents</li> <li>• Growth Control and Irrigation</li> <li>• Hands-on Demonstrations: Bluing and Propagation</li> </ul>	Lead Coordinator	35	3	1
Hydrangea Production Grower Workshop and Agent In-Service – Knox Co., August 1, 2019 <ul style="list-style-type: none"> <li>• Growth Control, Irrigation, Bluing and Fertilization</li> <li>• Understanding Plant Patents</li> <li>• Hands-on Demonstrations: Bluing and Propagation</li> </ul>	Lead Coordinator	35	3	1
International Plant Propagators' Society Annual Conference and Tours In-Service, October 20-24, 2018	Lead Coordinator	207	3	8
Turf and Ornamental Field Day and In-Service, August 30, 2018	Team	550 (agents are a portion of attendees)	1	2
Commercial Turf, Nursery and Landscape Maintenance and Pest Management In-Service, December 12, 2017 <ul style="list-style-type: none"> <li>• Update on Irrigation and Spray Application Technology Research</li> </ul>	Sole Coordinator	15	1	1

Descriptive title including dates	Role	Students	Sessions	Duration of each session (hours)
Turf and Ornamental Field Day and In-Service, September 7, 2017 <ul style="list-style-type: none"> <li>• New Integrated Pest Mgt. Resources for Landscape managers</li> <li>• Hands-on Landscape Ornamental Workshop</li> </ul>	Team	468 (agents are a portion of attendees)	4 1	0.5 2.0
Turf and Ornamental Field Day and In-Service, September 8, 2016 <ul style="list-style-type: none"> <li>• Proper Planting Practices for Trees and Shrubs</li> </ul>	Team	385 (agents are a portion of attendees)	4	0.5
Nursery Irrigation and Watershed Protection In-Service, July 12, 2016 <ul style="list-style-type: none"> <li>• Update on Ag Water Use Issues</li> <li>• Water Quality Trading Initiatives</li> <li>• Scheduling Irrigation to Improve Plant Production and Conserve Water</li> <li>• Update on Irrigation Technology</li> <li>• Measuring Irrigation Efficiency and Other Helpful Calculations</li> <li>• Conduct Irrigation Calculations and View Technology</li> </ul>	Sole Coordinator	15	1	0.75 (each)
<b>Assistant Professor</b>				

<b>Descriptive title including dates</b>	<b>Role</b>	<b>Students</b>	<b>Sessions</b>	<b>Duration of each session (hours)</b>
Turf and Ornamental Field Day and In-Service, September 10, 2015 • Hydrangea Boot Camp	Team	561 (agents are a portion of this number)	4	0.5
Landscape Review, September 3, 2015 • Inspecting Nursery Stock for Pests and Problems	Guest	85	1	1.0
Summer Celebration, July 9, 2015 • Diagnostic Tent	Guest	750 (at my tent)	1	6.5
Sustainable Nursery Irrigation: Controlling Growth and Reducing Risk from Changing Irrigation Water Resources and Regulations Workshop and In-Service, September 25, 2014 • Research Update: Biocontainers	Team	50	1	0.5
Turf and Ornamental Field Day and In-Service, September 11, 2014 • Recent Advances in Technology and Tools to Help Manage! • Pulp Fiction: Facts and Fiction on Managing Landscape Plants & Pests	Team	495 (agents are a portion of this number)	8  1	0.5  2.0

<b>Descriptive title including dates</b>	<b>Role</b>	<b>Students</b>	<b>Sessions</b>	<b>Duration of each session (hours)</b>
Nursery IPM Workshop and In-Service, June 17-18, 2014 <ul style="list-style-type: none"> <li>• IPMPro Version 2 Update</li> <li>• Systems-based Pest Management: Prevention and Solarization Demonstration</li> </ul>	Team	38	1 1	0.25 0.5
Horticulture, Turf and Nursery Production In-Service, March 11, 2014 <ul style="list-style-type: none"> <li>• Pruning for Plant Health and Aesthetics</li> <li>• Walking Assessment</li> </ul>	Team	15	1 1	0.75 2.0
Systems-based Pest Management Workshop and In-Service, September 26, 2013 <ul style="list-style-type: none"> <li>• Soil and Substrate, Irrigation, Field Production, Training Employees</li> <li>• Container Irrigation</li> </ul>	Co-Coordinator	56	1 1	0.25 1.0
Turf and Ornamental Field Day and In-Service, September 12, 2013 <ul style="list-style-type: none"> <li>• New Technology for Managing Pests of Turf and Ornamentals</li> <li>• Pulp Fiction: Facts and Fiction Pertaining to Managing Ornamental Pests</li> </ul>	Team	520 (agents are a portion of the total audience)	8 1	0.5 1.0

<b>Descriptive title including dates</b>	<b>Role</b>	<b>Students</b>	<b>Sessions</b>	<b>Duration of each session (hours)</b>
Turf and Ornamental Field Day and In-Service, September 13, 2012 <ul style="list-style-type: none"> <li>• IPM Tools and Managing Emerging Pests</li> <li>• What's Wrong with This Picture?</li> </ul>	Team	477 (agents are a portion of the total audience)	5  1	1.0  2.0
Central Region In-Service, August 29-30, 2012 <ul style="list-style-type: none"> <li>• Container Production Fertilization</li> <li>• Container Substrates</li> <li>• Emerging Issues: Mobile Technology for Nursery Crops</li> </ul>	Team day 1, sole coordinator day 2	15	1  1 1	0.5  0.5 0.25
Central Region Agent Meeting, August 26, 2011 <ul style="list-style-type: none"> <li>• Meet New Specialist, Amy Fulcher</li> </ul>	Guest	55	1	0.25
Western Region In-Service, July 21, 2011 <ul style="list-style-type: none"> <li>• Diagnostic Basics 101: Clues to Solving Your Plant Problems</li> </ul>	Team	25	1	1.0
Eastern Region In-Service, May 12-13, 2011 <ul style="list-style-type: none"> <li>• Basic Botany</li> <li>• Review A Year in Ornamental Horticulture Production</li> <li>• Commercial Ornamental Horticulture Agent Resources</li> <li>• Container Potting Demonstration</li> </ul>	Team	20	1 1  1  1	0.5 0.5  0.25  0.75

Descriptive title including dates	Role	Students	Sessions	Duration of each session (hours)
Eastern Region Central presentation, December 14, 2010 • Meet New Specialist: Amy Fulcher	Team	8	1	0.25

Descriptive title including dates	Role	Number of students or participants	Sessions	Duration of each session (hours)
<b>Prior to joining UT Department of Plant Sciences</b>				
CES Professional Development Conference, January 10, 2005 • Nursery Resources	Team	35	1	0.5
Horticulture Extension Agent In-Service, November 13, 2003 • IPM for Nursery Production Overview	Team	30	1	1.0

## Conferences and Workshops, Organized or Co-Organized

### Professor

1. NC1186 Water Management and Quality for Ornamental Crop Production and Health Working Group Meeting and Nursery, and Automation Manufacturer Tours, co-coordinated with Jacob Shreckhise and the Central Region ANR Agents, McMinnville, TN, July 8-9, 2025, 40 participants.
2. Moneywise Irrigation and Fertilization Strategies for Container Nurseries, co-coordinated with Jacob Shreckhise, McMinnville, TN, July 10, 2025, 23 participants.
3. Labor Challenges and Opportunities in the Nursery Industry: How Behavioral, Economic, Engineering, and Production Influence Automation Adoption in the Green Industry. Cultivate'25, Columbus, OH, July 14, 2025, 120 participants.
4. Flatheaded Borer Workshop. Cultivate'25, Columbus, OH, July 15, 2025, 10 participants.
5. Understanding Labor Constraints and Opportunities, and Behavioral, Economic, Engineering, and Production Influences on Automation Adoption in the Green Industry. American Society for Horticultural Science Conference Special Interest

- Session (Workshop), co-coordinated, Honolulu, HI, September 24, 2024, 10 participants.
6. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 12, 2025, 65 participants.
  7. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 28, 2024, 60 participants.
  8. The Human Side of AI/Technology Adoption in Tree Crops: Research and Producer Perspectives session and panel discussion. AI in Agriculture Conference, Orlando, FL April 19, 2023, organized with Margarita Velandia (lead).
  9. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 27, 2023, 50 people.
  10. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 28, 2022, 70 participants.

### **Associate Professor**

1. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 29, 2021, 105 participants.
2. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 16, 2020, 100 participants.
3. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, August 30, 2019, 525 participants.
4. Hydrangea Production Workshop, organized, Clarksville, TN, August 7, 2019, 25 participants.
5. Hydrangea Production Workshop, organized, Knoxville, TN, August 1, 2019, 35 participants.
6. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 25, 2019, 65-90 participants.
7. International Plant Propagators' Society Annual Conference and Tours, local site chair, Chattanooga, TN, October 20-24, 2018, 207 participants.
8. Hydrangea Workshop: Get Blooming with the Best and Biggest Blooms. Cultivate'18 Workshop, team, Columbus, OH, July 14, 2018, 40 participants.
9. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, August 30, 2018, 550 participants.
10. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 26, 2018, 65-90 participants.
11. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, September 7, 2017, 468 participants.
12. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 20, 2017, 65-90 participants.
13. Advancing Technology Adoption and Achieving Extension Impact: A Working Group Success Story, American Society for Horticultural Science Workshop, lead coordinator, Atlanta, GA, August 9, 2016, 20 participants.
14. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Franklin, TN, September 8, 2016, 385 participants.

15. Hydrangea Production Workshop, co-organized, Smithfield, NC, August 4, 2016, 35 participants.
16. Hydrangea Production Workshop, co-organized, Virginia Beach, VA, August 2, 2016, 36 participants.
17. Hydrangea Production Workshop, co-organized, McMinnville, TN, July 21, 2016, 35 participants.
18. Green Industry Field Day, led a team of organizers, Knoxville, TN, June 14, 2016, 65 participants.

#### **Assistant Professor**

1. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, September 10, 2015, 561 participants.
2. How a New Working Group Used Synergy to Fuel Economic Impact and Increase Deliverables Mini-Symposium, co-organized, within the International IPM Symposium, Salt Lake City, March 26, 2015, 15 participants.
3. Sustainable Nursery Irrigation: Controlling Growth and Reducing Risk from Changing Irrigation Water Resources and Regulations Workshop, co-organized, McMinnville, TN, September 25, 2014, 50 participants.
4. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, September 11, 2014, 495 participants.
5. Nursery IPM Workshop, co-organized, Decherd, TN, June 17-18, 2014, 36 participants.
6. Department of Labor Update for the Nursery Industry, co-organized with Michael Barry, Smithville, TN, February 3, 2014, 33 participants.
7. Systems-based Pest Management Workshop, co-organized, McMinnville, TN, September 26, 2013, 56 participants.
8. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, September 12, 2013, 520 participants.
9. Tennessee Nursery and Landscape Association Winter Education Conference, co-organized, Pigeon Forge, TN, February 18-19, 2013, 100 participants.
10. Tennessee Master Nursery Producer Program, committee chair, six 4-hour classes, McMinnville, TN, November 11, 2012-December 18, 2012, 45 participants.
11. Turf and Ornamental Field Day, member of a team of organizers led by Dr. Jim Brosnan, Knoxville, TN, September 13, 2012, 477 participants.
12. Airblast Sprayer Calibration Workshop, co-organized, McMinnville, TN, May 4, 2011, 55 participants.
13. Container Dogwood Workshop, co-organized, McMinnville, TN, November 18, 2010, 25 participants.

#### **Prior to Joining the UT Department of Plant Sciences**

1. Airblast Sprayer Calibration Workshop, organizer, July 2008, 100 participants.
2. Kentucky Landscape Industries Winter Conference, committee chair 2010, co-chair, 2008-2009, 250-300+ participants.

3. Kentucky Landscape Industries Winter Conference, Customer Service Track, co-organizer, 2002, 80 participants.
4. Best Management Practices Workshop, co-organizer, 2000-2005, 25-80 participants.
5. Nursery Winter Workshop, co-organizer, 2005-2010, 25-45 participants annually.
6. Nursery Crops Scouting Workshop, organizer, 2003-2010, 25-45 participants annually.

## **Non-Credit, Online Curricula Developed**

### **Associate Professor**

#### **Advanced Tennessee Master Nursery Producer Program, 2019**

22 modules (combination of core and elective modules) each with a 10 question quiz, pre- and post tests, and impact questionnaire

### **Assistant Professor**

#### **Tennessee Master Nursery Producer Program, 2013**

21 modules (all core modules) each with a 10 question quiz, pre- and post tests, and impact questionnaire

## **Modules Developed in Support of Non-Credit Curriculum**

*Each module contains 60 minutes of narrated content and a 10-question quiz.*

### **Associate Professor**

1. Adesso, K., A. Dunnaway, T. Stackhouse<sup>M</sup>, and **A. Fulcher**. 2019. Pollinator and Other Beneficial Insect Protection. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
2. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Intellectual Property. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
3. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Advanced Social Media. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
4. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Social Media Overview. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
5. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Plant Physiology. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
6. Pietsch, G.<sup>M</sup>, T. Stackhouse<sup>M</sup>, and **A. Fulcher**. 2019. Perennial Production. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
7. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Integrated Pest Management for Nurseries. 2019. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
8. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Understanding Green Consumers. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
9. Stackhouse, T.<sup>M</sup> and **A. Fulcher**. 2019. Tennessee Soils 101. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.

10. Marble, S.C., T. Stackhouse<sup>M</sup>, and **A. Fulcher**. 2019. Pot-in-Pot Production. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
11. Hagen, E.<sup>M</sup> and **A. Fulcher**. 2019. Advanced Irrigation and Water Use Management. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
12. Tharpe, E.<sup>M</sup> and **A. Fulcher**. 2019. Hydrangea Production. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
13. McHugh, J.<sup>M</sup> and **A. Fulcher**. 2019. Systems-based Pest Management in the Nursery. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
14. Wilson, M.<sup>M</sup> and **A. Fulcher**. 2019. Lean Flow for Nursery Production. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
15. Manning, D., Wilson, M.<sup>M</sup> and **A. Fulcher**. 2019. QuickBooks. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
16. Hagen, E.<sup>M</sup> and **A. Fulcher**. 2019. Planning Your Nursery's Future. Advanced Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.

#### **Assistant Professor**

1. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Marketing and Economics I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
2. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Marketing and Economics II. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
3. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Marketing and Economics III. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
4. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Irrigation I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
5. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Irrigation II. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
6. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Container Production I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
7. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Container Production II. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
8. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Container Production III. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
9. Marble, S.C.<sup>M</sup>, **A. Fulcher**, and Neil Mattson. 2014. Container Production IV. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
10. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Plant Nutrition and Fertilization I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
11. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Field Production I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
12. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Field Production II. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.

13. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Field Production III. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
14. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Pruning, Staking, and Branch Architecture I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
15. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Propagation I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
16. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Propagation II. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.
17. Marble, S.C.<sup>M</sup> and **A. Fulcher**. 2014. Pest Management I. Tennessee Master Nursery Producer Program. University of Tennessee, Knoxville, TN.

## **Modules Edited in Support of Non-Credit Curriculum**

*Each module contains 60 minutes of narrated content and a 10-question quiz.*

### **Associate Professor**

1. Marble, S.C.<sup>M</sup> 2019. Weed Management. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.
2. Oliver, J., F. Hale, A. Windham, and T. Stackhouse<sup>M</sup>. 2019. Advanced Pesticide Concepts. In: Advanced Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.
3. Hale, F. and T. Stackhouse<sup>M</sup>. 2019. Arthropod ID and Control. In: Advanced Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN. (revised)
4. Windham, A. and T. Stackhouse<sup>M</sup>. 2019. Disease Control. In: Advanced Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN. (revised)
5. Windham, A. and T. Stackhouse<sup>M</sup>. 2019. Disease Identification and Management. In: Advanced Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN. (revised)
6. Oliver, J. and T. Stackhouse<sup>M</sup>. 2019. Shipping Regulations and Quarantines. In: Advanced Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN. (revised)

### **Assistant Professor**

1. Marble, S.C.<sup>M</sup>. 2014. Weed Management. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.
2. Hale, F. 2014. Arthropod ID and Control. In: Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.
3. Windham, A. 2014. Disease Control. In: Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.
4. Windham, A. 2014. Disease Management. In: Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.

5. Oliver, J. 2014. Shipping Regulations and Quarantines. In: Tennessee Master Nursery Producer Program. **Fulcher, A.**, ed. University of Tennessee, Knoxville, TN.

## CREDIT INSTRUCTION

### University Courses, Taught or Served as Teaching Assistant

Course Number	Course Title, Institution	Credit Hours	Semester
<b>Professor</b>			
BSE 402	Biosystems Engineering Design II	5	Fall 23/Spg 24
BSE 400	Senior Design (Mentor)	2	Spring 2023
BSE 400	Senior Design (Mentor)	2	Fall 2022
<b>Associate Professor</b>			
PLSC 504	Seminar	1	Spring 2018
<b>Assistant Professor</b>			
PLSC 504	Seminar	1	Spring 2013
<b>Prior to joining the UT Department of Plant Sciences</b>			
HS 531	Physiology of Landscape Plants, NCSU (TA)	3	Spring 1996
HS 011	Plant Identification, NCSU (TA)	3	Fall 1996 1/2 semester

### University Courses, Guest Lectured

Course Number	Course Title, Institution	Credit Hours	Semester
<b>Professor</b>			
PLSC 311	Management of Landscape Systems	3	Fall 2025
PLSC 457	Weed Management	3	Fall 2023
<b>Associate Professor</b>			
PLSC 333	Plant Physiology and Nutrition, UT – 1 lecture	3	Spring 2021
EPP 630	Advanced Integrated Pest and Pathogen Management, UT – 1 lecture	3	Spring 2019

PLSC 410	Nursery Management and Production, UT – 1 lecture	3	Spring 2017
<b>Assistant Professor</b>			
PLSC 410	Nursery Management and Production, UT – 2 lectures	3	Spring 2015
PLSC 370	Grounds Maintenance, UT	3	Fall 2014
PLSC 410	Nursery Management and Production, UT	3	Spring 2013
<b>Prior to joining the UT Department of Plant Sciences</b>			
PLS 597	Nursery Production and Floriculture, UK	3	Spring 2009
PLS 525	Greenhouse Floral Crop Management, UK	3	Spring 2007
BAE 581	Physics of Plant and Animal Environments, UK	3	Spring 2007
AGR 361	Horticulture and Greenhouse Production Management, Murray State University	3	Spring 2004

## MENTORSHIP

### Postdoctoral Scientists Mentored

#### Associate Professor

Dr. Matthew Wilson, 2017. Dr. Wilson assisted with development of the Advanced Tennessee Master Nursery Producer Program curriculum.

#### Assistant Professor

Dr. Chris Marble, 2013-2014. Dr. Marble assisted with development of the online curriculum for the Tennessee Master Nursery Producer Program.

Dr. Diana Cochran, 2012-2014. Dr. Cochran coordinated intelligent sprayer trials, oxygenation research, and the systems-based pest management educational program and manual, as well as contributed to biocontainer evaluations.

### Graduate Students Mentored

Department	Student and Degree	Role	Dates
Xuan Li	BESS Ph.D. student	Committee Member	-2026

Department	Student and Degree	Role	Dates
PIPER Bonsai Farm Robotics Challenge	Shahriar Ahmed, Ph.D. student, Ling Chen, Ph.D. student, Nathan Michalik, M.S. Advisor	Faculty advisor with Hao Gan (Lead)	2025-2026
Plant Sciences	Carolyn Krauss	Advisor	Jan 22-Jan 23
Forestry, Wildlife, and Fisheries	Ed Yost	Committee Member	2020-2026
BESS	Nastaran Basiri Jahromi, Ph.D. <sup>1,2,3,4</sup>	Co-Advisor	2014-2019
<p><sup>1</sup>Awarded 3<sup>rd</sup> place in the Bryson L. James Student Research Competition (Ph.D. Division) of the Southern Nursery Association Research Conference, 2016, Athens, GA.</p> <p><sup>2</sup>BESS Graduate Student with Professional Promise in Environmental &amp; Soil Science Award, 2017</p> <p><sup>3</sup>UT Chancellor's Extraordinary Professional Promise Award, 2018</p> <p><sup>4</sup>1<sup>st</sup> Place in the oral presentation competition, Soil and Water Management and Conservation division, SSSA, 2019</p>			
Plant Sciences	Whitney Yeary, M.S.	Major Advisor	2011-2014
Plant Sciences	Ethan Hagen, M.S.	Major Advisor	2011-2013

## Undergraduate Projects, Internships, and Scouts Supervised

### Professor

Nursery Crops Summer Interns

Keegan Cole, 2025-2026 “Leap Forward with Wireless Automated Irrigation Control Systems”

Keegan represented the lab and competed in the student research competition at the Southern Region ASHS conference on January 31, 2026.

Walker Harrell, 2023-2024 “A Case Study of Nursery Substrate Costs”

Walker prepared an abstract and a poster in support of her presentation at the Dept. of Plant Sciences Student Poster Competition. April 22, 2024 and presented a poster “A case study of nursery substrate costs” at the USDA NC1186 Working Group Annual Meeting, July 9, 2025, McMinnville, TN.

Ivy Hoig 2024-2025 “Testing Ultra-low Rates from Variable-Rate Spray Technology to Control Dogwood Powdery Mildew”

Lily Slide, 2023-2024 “Monitoring Irrigation and Substrate Moisture in #30 Container-Grown Hornbeam to Inform Grower Irrigation Decisions”

Laura Whaley, 2023-2024

Primary Project “A New Artificial Target and Pre-Treatment Technique for Visual and Quantitative Assessment of Pesticide Applications to Tree Trunks for Control of Trunk-Boring Insects” Laura prepared an abstract and a poster in support of her presentation at the Dept. of Plant Sciences Student Poster Competition. April 22, 2024.

Lily Slide, 2023 “Monitoring Irrigation and Substrate Moisture in #30 Container-Grown Hornbeam to Inform Grower Irrigation Decisions”

Amber Gunter, 2023

Austin Cunningham, 2023

Primary Project “Target and non-target sprays from a crop-sensing, variable-rate intelligent sprayer: Preliminary exploration into trunk applications.” Preparing abstract and poster in support of presentation, and presenting at EURECA and the national ASHS conference.

Laura Whaley, 2023

Primary Project “Reducing off-target pesticide spray and harm to beneficial insects with variable-rate, Intelligent spray technology” Prepared an abstract, powerpoint presentation, and a poster in support of her presentations, and presented at the Dept. of Plant Sciences Student Poster Competition, EURECA, and the national ASHS conference.

Laura earned 1st place in the ASHS undergraduate division (\$300), 3rd place in the UT Dept. of Plant Sciences poster competition, and was a division winner (\$1000) for her presentation at UTK's EURECA competition.

Hannah Sutt, 2022

Jakob Johnson, 2022

Amber Gunter, 2022

Austin Cunningham, 2022

Laura Whaley, 2022

Hannah Sutt, 2021

Jakob Johnson, 2021

Emerson Sapienza, 2021

### **Associate Professor**

Luc Nadaud

Summer Intern

Rising High School Senior-College Freshman

May 2019-August 2020

Primary Project: "Improving nursery crop pest management with precision pesticide application technology" Preparing water sensitive card data in support of presentation, and presenting at Southern Region ASHS conference.

Trystan Bordeau

Extension Intern

Major: Geology and Environmental Studies

May 2019-July 2019

Primary Project: "Initiating Pollinator Stewardship in the Nursery, Landscape and Garden Center" Extension Publication W 855

<https://extension.tennessee.edu/publications/Documents/W855.pdf>

Sterling Mcclanahan

Major: Environmental and Soil Sciences

May 2018-August 2018

Primary Project: "Using moisture sensors and pressure switches to monitor and refine irrigation." Turf and Ornamental Field Day Proceedings, University of Tennessee

Ekene Tharpe

Extension Intern

Major: Plant Science, Concentration: Horticulture

May 2017-July 2017

Primary Project: "Hydrangea Production" 1 hour module and quiz for the Advanced Tennessee Master Nursery Producer Program

**Assistant Professor**

Halee Jones

Major: Plant Sciences

June 2014-May 2015

Project: "Systems-based pest management video series"

[https://www.youtube.com/channel/UCS3SvKF9NeE3\\_b0bpKkieuQ](https://www.youtube.com/channel/UCS3SvKF9NeE3_b0bpKkieuQ)

S. Evan Wilson

PLSC 493, Problems in Plant Sciences

Major: Chemical Engineering

May 2011-May 2013

Project: "Development of Elevated Dissolved Oxygen on Plant Growth"

*Awarded 1<sup>st</sup> place in the Bryson L. James Student Research Competition, B.S. Division, of the Southern Nursery Association Research Conference, January 18, 2012, Mobile, AL.*

Heather Bowers

Undergraduate Internship

Major: Plant Sciences, concentration in Landscape Design and Construction

May 2011-May 2012

Project: "Developing Nursery and Landscape IPM QuickFacts"

**Prior to joining the UT Department of Plant Sciences**

Ian Taylor Cavanaugh

UK Nursery Crops Scout and Nursery Research Assistant

Major: Horticulture, Plant and Soil Science

April-October 2010

Scott Koenig

UK Nursery Crops Scout

Major: Horticulture, Plant and Soil Science

March-July 2009

J. Theo Steele

BAE 450, Special Problems

Major: Biosystems Engineering

May-December 2008

Project: "Developing a Transpiration Chamber"

*Awarded third place in the Bryson L. James Student Research Competition, B.S. Division, Southern Nursery Association Research Conference, February 12-13, 2009, Atlanta, GA.*

E. Michelle Senn  
UK Nursery Crops Scout Internship  
March-July 2008

E. Michelle Senn  
PLS 490, Senior Capstone Project  
March-December 2008  
Project: "Effect of Physical Manipulation and Plant Growth Regulator Application on Branching of Oak, Linden, and Kentucky Coffeetree"

Sarah Stolz  
PLS 395, Special Problems in Plant Science  
January-May 2007  
Project: "Biofungicide and Conventional Control of *Rhizoctonia solani* in a Container Production System"

Leah Dougherty  
UK Nursery Crops Scout  
March-August 2007

Chlodys Johnstone  
Nursery Research Assistant  
May-August 2007

Emily Bruner  
UK Nursery Crops Scout  
March-August 2007

Shauna Switzer  
UK Nursery Crops Scout  
March-September 2006

Derrick Hammons  
UK Nursery Crops Scout  
April-July 2005

## MEDIA AND MULTIMEDIA

### Social Media

#### Associate Professor

1. **Fulcher, A.**, W. Wright, G. Pietsch<sup>M</sup>, and L. Fessler<sup>M</sup>. Facebook Live event. *A New Way to Keep Bugs Away*. August 28, 2019. >1500 views.

## Instructional Videos

### Assistant Professor

“Systems-based Pest Management: Shipping and Receiving” 2014.

Produced by: H. Jones<sup>M</sup> and D. Cochran<sup>M</sup>, **Fulcher, A.**, ed. Videos created in collaboration with F. Hale and A. Windham. Funded by the Southern Risk Management Education Center.

<http://www.youtube.com/watch?v=LovKvW-CKbY>

“Systems-based Pest Management: Pruning Practices” 2014.

Produced by: H. Jones<sup>M</sup> and D. Cochran<sup>M</sup>, **Fulcher, A.**, ed. Videos created in collaboration with F. Hale and A. Windham. Funded by the Southern Risk Management Education Center.

<http://www.youtube.com/watch?v=CHrRPh3Iqlk>

“Systems-based Pest Management: Propagation Practices” 2014.

Produced by: H. Jones<sup>M</sup> and D. Cochran<sup>M</sup>, **Fulcher, A.**, ed. Videos created in collaboration with F. Hale and A. Windham. Funded by the Southern Risk Management Education Center.

<http://www.youtube.com/watch?v=gLvl6rcvGaw>

“Systems-based Pest Management: Irrigation Practices” 2014.

Produced by: H. Jones<sup>M</sup> and D. Cochran<sup>M</sup>, **Fulcher, A.**, ed. Videos created in collaboration with F. Hale and A. Windham. Funded by the Southern Risk Management Education Center.

<http://www.youtube.com/watch?v=X4LlfYJlJvs>

“Systems-based Pest Management: Potting Practices” 2014.

Produced by: H. Jones<sup>M</sup> and D. Cochran<sup>M</sup>, **Fulcher, A.**, ed. Videos created in collaboration with F. Hale and A. Windham. Funded by the Southern Risk Management Education Center.

<http://www.youtube.com/watch?v=s7f5OqBodfk>

### Prior to joining the UT Department of Plant Sciences

“Pot-in-Pot Nursery Production” UK VHO-1512. 2004.

Produced by **A. Fulcher**, videography by D. Stallion. This video is an overview of common pot-in-pot installation methods. The video also discusses cultural practices and includes interviews with pot-in-pot growers and their advice to those embarking on pot-in-pot production. The video was distributed to all 120 Kentucky county Extension offices, is available through the UK video library, and has been distributed to growers throughout Kentucky and other states. Funded by the Kentucky Horticulture Council. More than 80,000 views.

<http://www.youtube.com/watch?v=wNeBurkznlk>

## Newsletters

Kentucky Nursery Update - Ten electronic issues per year, 2002-2010.

## Listservs Curated

1. Nursery Crops University Listserv. Members represent research, extension, USDA, and public gardening communities.
2. UT Nursery Crops Information Listserv. Members represent Tennessee nursery growers.
3. NC1186 Water Management and Quality for Ornamental Crop Production and Health Working Group Listserv. Members of the NC1186 USDA working group represent University research and extension, Horticulture Research Institute, and USDA.

## Other Resources and Creative Activity

### Professor

1. Facilitated James Hines, Easy Tree Nursery, in his effort to establish an undergraduate scholarship at UT.
2. Velandia, M., A.V. LeBude, and A. **Fulcher**. Let's Talk about Labor "Mechanization as a Strategy to Overcome Labor Challenges, Improve Efficiency and Meet Market Needs – Lessons Learned by a North Carolina Nursery Operation that Adopted a Potting Machine." Episode 19. Available on YouTube ([tiny.utk.edu/lwfjH](https://www.youtube.com/watch?v=...)) and Spotify ([tiny.utk.edu/nK6FR](https://open.spotify.com/track/...)).
3. Velandia, M., **Fulcher, A.** and A. Rihn. Let's Talk About Labor "Mechanization as a Strategy to Overcome Labor Challenges." Episode 9. Podcast released December 16, 2024. Available on YouTube ([tiny.utk.edu/lwfjH](https://www.youtube.com/watch?v=...)) and Spotify ([tiny.utk.edu/nK6FR](https://open.spotify.com/track/...)).
4. Velandia, M., **Fulcher, A.** and A. Rihn. Let's Talk About Labor - Labor Challenges and Strategies to Overcome These Challenges – Lessons Learned by a Tennessee Nursery Operation. Episode 8. Podcast released November 25, 2024. Available on YouTube ([tiny.utk.edu/lwfjH](https://www.youtube.com/watch?v=...)) and Spotify ([tiny.utk.edu/nK6FR](https://open.spotify.com/track/...)).

### Assistant Professor

1. **Fulcher, A.** and W. Yeary<sup>M</sup>. 2013. UT-UK IPM Calendar for Shrub Production. University of Tennessee, Knoxville, TN.
2. **Fulcher, A.**, J.-H. Chong, S. White, J. Williams-Woodward, C. Adkins, K. Braman, M. Chappell, J. Derr, W. Dunwell, S. Frank, S. Gill, F. Hale, W. Klingeman, A. LeBude, J. Neal, K. Rane, and A. Windham. 2012-2014. *IPMPro*, Green Industry app.
3. **Fulcher, A.**, J.-H. Chong, S. White, J. Williams-Woodward, C. Adkins, K. Braman, M. Chappell, J. Derr, W. Dunwell, S. Frank, S. Gill, F. Hale, W. Klingeman, A. LeBude, J. Neal, K. Rane, and A. Windham. 2012-2014. *IPMLite*, app covering major pests and plant care practices for gardeners.

### Prior to joining the UT Department of Plant Sciences

1. IPM Calendar for Deciduous Tree Production - 2009, 2008, 2007, 2005, 2004, 2003
2. The UK Nursery Group Pour Thru Extraction Technique Protocol - 2004
3. Nutrient Monitoring-Pour Thru Technique Recordkeeping Form - 2004
4. Pot-in-Pot Nursery Production - 2003

5. Pot-in-Pot Installation Expenses - 2003

## **Candidate's Extension Program or Research Featured Print and Electronic Media**

### **Professor**

1. Channel 8 news coverage of the 2025 Green Industry Field Day featuring nursery automation. Aired June 15, 2025, reached a national audience of 7,900 viewers.  
<https://app.criticalmention.com/cm/report/f77fbe34-7e04-46be-a289-e69bc6352df1>
2. Commercial Horticulture (New Zealand and Australia's national nursery magazine). IPPS Conference 2025. June/July 2025, pages 7-9 and 24.  
<https://www.nursery.net.nz/ebook/CH/CH%202025%20JunJul%20for%20Emag.pdf>
3. Emery, M. and Cronin T. Land, Life, and Science article. Innovations that Serve Tennesseans: Automation to Meet Tennessee's Nursery Industry Labor Needs. March 7, 2025.  
<https://landlifeandscience.tennessee.edu/periodical/spring-2025/innovations-that-serve-tennesseans/>  
features the UT member of the LEAP Nursery Automaton Grant and their projects, 11,490 yearly views, 23,000 printed copies.
4. Addressing the Nursery Labor Shortage: Strategies & Automation Adoption. American Society for Horticultural Science Press Release. January 30, 2025.  
<https://ashs.org/news/692460/Addressing-the-Nursery-Labor-Shortage-Strategies--Automation-Adoption.htm>
5. 2024 Green Industry Field Day Scheduled for June 27th. UTIA News Release. May 24, 2024.

- <https://utianews.tennessee.edu/2024-green-industry-field-day-scheduled-for-june-27/>
6. Grant Seeks to Provide Pathways for Community College Students in STEM Fields. UTIA News Release. June 28, 2024. Featured the STEM program that my lab participated in by hosting SELA intern Ivy Hoig. Ivy went on to work in my lab after the internship concluded.  
<https://utianews.tennessee.edu/grant-seeks-to-provide-pathways-for-community-college-students-in-stem-fields/>
  7. Fields J. January 2024 featured Fulcher et al. 2023. Overcoming the nursery industry labor shortage: A survey of strategies to adapt to a reduced workforce and automation and mechanization technology adoption levels. HortScience. 58(12):1513-1523 in the Nursery and Landscape Insider newsletter, reaching approximately 30,000 readers.
  8. 2023 Virtual Green Industry Day scheduled for June 27th. UTIA News Release. May 25, 2023.  
<https://utianews.tennessee.edu/2023-green-industry-field-day-scheduled-for-june-27/>
  9. Bumgarner, N. R., C. Scott, T. Reeder, **A. Fulcher**, J. T. Brosnan, and J. Stefanski. 2023. Evaluating Your Lawn and Landscape After the Recent Holiday Freeze. UTIA News You Can Use.
  10. 2022-2023 Biosystems Engineering Senior Design Projects, BESSenger, February 2023
  11. Fisher, P. 2023. Workshop in South Africa helps nursery growers conserve irrigation water. FloralDaily.  
<https://www.floraldaily.com/article/9505259/workshop-in-south-africa-helps-nursery-growers-conserve-irrigation-water/>
  12. Fisher, P. 2023. Workshop in South Africa helps nursery growers conserve irrigation water. HortiDaily.  
<https://www.hortidaily.com/article/9505259/workshop-in-south-africa-helps-nursery-growers-conserve-irrigation-water/>
  13. Virtual Green Industry Day scheduled for June 28th. UTIA News Release. June 10, 2022.  
<https://utianews.tennessee.edu/virtual-green-industry-field-day-scheduled-for-june-28/>
  14. Sparks, B. 2022. Live from Cultivate: What e've seen so far. Greenhouse Grower.  
<https://www.greenhousegrower.com/management/live-from-cultivate-what-weve-seen-so-far/>
  15. McClellan, M. 2021. Leap into the future. Researchers share the factors that are most likely to convince growers to adopt automation. Nursery Management. Top Story September 29, 2021.

### **Associate Professor**

1. Virtual Green Industry Day scheduled for June 29th. UTIA News Release. May 20, 2021.  
<https://utianews.tennessee.edu/virtual-green-industry-day-scheduled-for-june-29/>
2. UTIA announces June 2021 field days and educational seminars. UTIA News Release. April 28, 2021.
3. Davis, B.H. Green Industry Day goes virtual. UTIA News Release. June 3, 2020.  
<https://utianews.tennessee.edu/green-industry-day-goes-virtual/>
4. Davis, B.H. Two hydrangea workshops offered in August. July 11, 2019.  
<https://ag.tennessee.edu/news/Pages/NR-2019-07-HydrangeaWorkshops.aspx>

5. Davis, B.H. Green Industry Field Day planned for June 25. May 22, 2019.  
<https://ag.tennessee.edu/news/Pages/NR-2019-05-GreenIndustryFieldDay.aspx>
6. McDaniels, P. Advanced professional development program for nursery producers launches. March 6, 2019.  
<https://extension.tennessee.edu/WebPacket/Pages/NR-2019-03-ATMNP.aspx>
7. McDaniels, P. Intelligent sprayers poised to transform nursery industry. UTIA Press Release. November 19, 2018.  
<https://ag.tennessee.edu/news/Pages/NR-2018-11-intelligentsprayer.aspx>
8. McDaniels, P. Regional universities present workshop on producing excellent hydrangeas. UT Extension News You Can Use. <https://extension.tennessee.edu/WebPacket/Pages/NYCU-2016-05-HydrangeaWorkshop.aspx>

### **Assistant Professor**

1. McClellan, M. Q&A: Amy Fulcher. The professor discusses her session, “Effective crop management in the nursery.” Nursery Management. 31(6):52.
2. McDaniels, P. New study to model effects of southeastern climate change on water usage: Tennessee and Cumberland River Basins Focus of Multi-Institution Project. UTIA News and Announcements. April 9, 2015.  
<https://ag.tennessee.edu/news/Pages/NR-2015-04-WaterForAg.aspx>
3. McDaniels, P. Researchers to study effects of climate change on water usage. Common Ground: Conversations with the Chancellor.
4. McDaniels, P. Pre-register now for September 25 sustainable nursery irrigation workshop. UTIA News Release. September 9, 2014.
5. Associated Press. UT to offer online training for nursery producers. WATE.com. March 28, 2014.
6. McDaniels, P. Tennessee nursery growers can benefit from systems-based pest management. Web Packet, News You Can Use. October 15, 2013.  
<https://extension.tennessee.edu/WebPacket/Pages/WP-2013-10-SBPMtraining.aspx>
7. McDaniels, P. Tennessee hosts regional nursery field event on systems-based pest management. UTIA News Release. October 15, 2013.
8. McClellan, M. Behind the scenes with Matt McClellan: Laser sprayers. Nursery Management Online. July 9, 2013.
9. High-tech horticulture. Greenhouse Management Online. March 17, 2013.
10. Plant and pest app for professionals and home gardeners. 2011-2012 Annual Report: Solutions. The University of Tennessee Institute of Agriculture.
11. Mobile app adds new high-tech tool to the gardener’s toolbox. Everything Knoxville. 6(8):54.
12. Faculty appreciation week college kudos: College of Agricultural Sciences and Natural Resources. Tennessee Today. February 17, 2012.
13. Airblast sprayer workshop: Optimizing your sprayer for better coverage, better pest control, and greater savings. Tennessee Land, Life and Science. 8(2):26. Readership 17,000.  
<https://ag.tennessee.edu/Documents/UTIA%20Publications/Land,%20Life%20and%20Science%20Magazine/magazine.pdf>

### **Prior to joining the UT Department of Plant Sciences**

1. Nielson, A. For tree farms, less is more when it comes to pesticides. UK Agricultural Communications News Release. July 30, 2009.
2. Nielson, A. 2009. Buying and selecting trees and shrubs to replace those lost in the ice storm. UK Agricultural Communications Exclusive.
3. Jackson, M. 2008. Big help for small crops. The Magazine 9(3):17.
4. McLean, T. 2007. Greenhouse-nursery industry heats up. The Magazine 8(1):2-5.
5. Winter workshop focuses on current and potential pests. UK Agricultural Communications News Release. February 15, 2006.
6. Rodda, K. 2006. Coast to coast with Kelli Rodda. Kentucky highlight - featured information from the Kentucky Nursery Update, NMPro.
7. Putting integrated pest management to work in the nursery. UK Agricultural Communications News Release. June 8, 2005.
8. New IPM program aimed at nursery crop producers. UK Agricultural Communications News Release. April 30, 2003.
9. Pot-in-pot field day gives prospective growers look at production system. UK Agricultural Communications News Release. September 17, 2003.

## Video

### Associate Professor

1. Denney, C. AgCast: "Nursery Sprayer" June 4, 2019.  
<https://anchor.fm/utiag/episodes/AgCast-Nursery-Sprayer-e484m7/a-agjace>

### Assistant Professor

1. AgDay TV, Farm Journal Media "Airblast sprayer workshop: Optimizing your sprayer for better coverage, better pest control, and greater savings" October 4, 2011.
2. Denney, C. 2011. "Airblast sprayer workshop" YouTube Video.

### Prior to joining the UT Department of Plant Sciences

1. Growing Kentucky, KETKY "For tree farms, less is more when it comes to pesticides" September 19 and 26, 2009, Lexington, KY.  
KET reaches 3.5 million viewers in eight states.
2. Extension on the Air, KETKY "Putting integrated pest management to work in the nursery" August, 2005. KET reaches 3.5 million viewers in eight states.
3. Home and Farm Show, WBKO "Best management practices workshop", "IPM: Practical techniques for nursery production", and "Getting into the nursery industry" February 9, 11, and 13, 2004, Bowling Green, KY. Program reaches 25 counties and approximately 6000 households.
4. Home and Farm Show, WBKO "Pot-in-pot production", "IPM for nursery production", and "Getting into the nursery industry" March 25, 27, and 29, 2003, Bowling Green, KY. Program reaches 25 counties and approximately 6000 households.

## PROFESSIONAL DEVELOPMENT

### Conference and Professional Meeting/Workshop Participation

#### Professor

- Nursery Automation Tour, Pinneburg and Oldenburg, Germany
- American Society for Horticultural Science. September 2024, Honolulu, HI
- USDA-ARS, nursery, and automation manufacturer tour. July 15-17, 2024, Wooster, Oberlin, and Avon, Ohio.
- Cultivate'24, July 13-14, 2024, Columbus, Ohio.
- NC1186 USDA Working Group. Tour of nurseries and public gardens, September 6, 2023, Cincinnati, OH, USA.
- International Society for Horticultural Science. International Symposium on Growing Media, Compost Utilization and Substrate Analysis for Soilless Cultivation, June 11-15, 2023, Quebec City, Quebec, Canada
- Tour of Berger Peat, June 16, 2023, Saint-Modeste, Quebec, Canada
- International Society for Horticultural Science. Symposium on Irrigation of Horticultural Crops, January 30 to February 1, 2023, Stellenbosch, South Africa

- International Society for Horticultural Science. Irrigation Tour, January 31, 2023, Stellenbosch and Paarl, South Africa
- STRIDE Human Resources training, October 12, 2021 (virtual)
- American Society for Horticultural Science, August 5-9, 2021, Denver, CO (virtual)

#### **Associate Professor**

- Southern Region American Society for Horticultural Science, January 31 to February 2, 2020, Louisville, KY
- American Society for Horticultural Science, August 9-12, 2020, Orlando, FL (virtual)
- CITIA IRB Social & Behavioral Research Basic Training, January 22, 2020, Online
- International Society for Horticultural Science. Symposium on Irrigating Horticultural Crops, June 17-20, 2019, Matera, Italy
- UTIA Promotion and Tenure Workshop, April 29, 2019
- American Society for Horticultural Science, July 31-August 3, 2018, Washington, DC
- American Society for Horticultural Science, September 19-22, 2017, Waikoloa, HI
- International Plant Propagators' Society-North American Southern Region Tours and Conference, October 29-November 1, 2017, Dallas, TX
- International Plant Propagators' Society-North American Southern Region Tours and Conference, October 23-26, 2016, Virginia Beach, VA
- American Society for Horticultural Science, August 8-11, 2016, Atlanta, GA

#### **Assistant Professor**

- UTIA Promotion and Tenure Workshop, May 19, 2015, Knoxville, TN
- IR-4 Food Use Workshop, September 22-23, 2015, Chicago, IL
- American Society for Horticultural Science, August 4-7, 2015, New Orleans, LA
- Southern Nursery Association Research Conference and Trade Show, July 21-22, 2015, Atlanta, GA
- It's All About Water and Increasing Your Bottom Line, July 28, 2015, Grand Rapids, MI
- Cultivate'15, July 12, 2015. Columbus, OH
- IR-4 Food Use Workshop, September 9-10, 2014, Atlanta, GA
- Project Director Training, Southern Risk Management Education Center, August 12-13, 2014, Fayetteville, AR
- Southern Nursery Association Research Conference and Trade Show, July 22-23, 2014, Atlanta, GA
- American Society for Horticultural Science, July 28-31, 2014, Orlando, FL
- Seeley Summit, June 22-24, 2014, Chicago, IL
- UTIA Promotion and Tenure Workshop, May 20, 2014, Knoxville, TN
- International Plant Propagators' Society-North American Southern Region Tours and Conference, November 2-6, 2013, Athens, GA
- IR-4 Food Use Workshop, September 17-18, 2013, Albuquerque, NM
- Southern Nursery Association Research Conference and Trade Show, August 5-6, 2013, Atlanta, GA
- IR-4 Southern Region State Liaison Meeting, August 20-21, 2013, Orlando, FL

- IR-4 Food Use Workshop, September 17-18, 2013, Albuquerque, NM
- American Society for Horticultural Science, Annual Conference, July 22-15, 2013, Palm Desert, CA
- NurseryWorks, July 17, 2013, Manhattan, KS
- UTIA Promotion and Tenure Workshop, June 7, 2013, Knoxville, TN
- Grantsmanship Seminar, October 23, 2012, Knoxville, TN
- IR-4 Food Use Workshop, September 11-12, 2012, St. Louis, MO
- American Society for Horticultural Science, Annual Conference, July 31- August 3, 2012 Miami, FL
- UTIA Promotion and Tenure Workshop, June 1, 2012, Knoxville, TN
- American Society for Horticultural Science, Annual Conference, September 25-28, 2011, Waikoloa, HI
- USDA NIFA Grant Workshop/Live webinar location, August 9, 2011, Knoxville, TN
- USDA Grant Writing Symposium, August 8, 2011, Knoxville, TN
- SUPER Foundations for Departmental Personnel, April 13, 2011, Knoxville, TN
- New Extension Employee Orientation Training, March 3-10, 2011, Knoxville, TN
- Southern Nursery Association Research Conference and Gulf States Trade Show, January 19-20, 2011, Mobile, AL

#### **Prior to joining the UT Department of Plant Sciences**

- International Horticultural Congress, August 22-27, 2010, Lisbon, Spain
- Southern Nursery Association Research Conference and Gulf States Trade Show, January 21-22, 2010, Mobile, AL
- American Society for Horticultural Science, Annual Conference, July 25-28, 2009, St. Louis, MO
- GreenSys, June 14-19, 2009, Quebec City, Quebec, Canada
- Southern Nursery Association Research Conference and Trade Show, February 12-13, 2009, Atlanta, GA
- Southern Nursery Association Research Conference and Trade Show, August 6-8, 2008, Atlanta, GA
- American Society for Horticultural Science, Annual Conference, July 21-24, 2008, Orlando, FL
- USDA Working Group NE 1017, Controlled Environments, June 11-12, 2008, Ithaca, NY
- Southern Nursery Association Research Conference and Trade Show, August 9-11, 2007, Atlanta, GA
- American Society for Horticultural Science, Annual Conference, July 16-19, 2007, Scottsdale, AZ
- Measurement Methods for Plants and Canopies: Water, Light, and Carbon, Pre-Conference Workshop ASA-CSSA-SSSA, November 11, 2006, Indianapolis, IN
- International Plant Propagators' Society, Eastern Region Conference, October 3-7, 2006, Grand Rapids, MI
- Southern Nursery Association Research Conference and Trade Show, August 9-12, 2006, Atlanta, GA
- LI-COR 6400 Introductory Course, February 6-8, 2006, Lincoln, NE
- Trees and Planting: Getting the Roots Right, November 10, 2005, Lisle, IL

- Southern Nursery Association Research Conference and Trade Show, August 10-12, 2005, Atlanta, GA
- Assessment of Pest Management Practices and Priorities for Container Tree Production in USDA Hardiness Zone 6-8, September 27-28, 2004, Biloxi, MS
- Southern Nursery Association Research Conference and Trade Show, August 10-14, 2004, Atlanta, GA
- The Farwest Show, August 26-28, 2004, Portland, OR
- International Plant Propagators' Eastern Region Meeting, August 10-14, 2004, Portland, ME
- Southern Nursery Association Research Conference and Trade Show, July 30-August 2, 2003, Atlanta, GA
- Southern Nursery Association Research Conference and Trade Show, July 31- August 3, 2002, Atlanta, GA
- SERA IEG-27 meeting, June 5-7, 2002, McMinnville, TN

### **Assistant Professor**

- East Tennessee Nursery Association Tour, October 22-24, 2014, Huntsville, AL
- East Tennessee Nursery Association Tour, October 22-24, 2013, Mills River, NC and Anderson, SC
- Nursery and San Diego Botanical Garden Pre-Tour. American Society for Horticultural Science Annual Conference, July 21, 2013, San Diego, CA
- East Tennessee Nursery Association Tour, October 16-18, 2012, Mills River, NC and Spartanburg and Roebuck, SC
- Middle Tennessee Nursery Association Nursery Tour, September 24-25, 2012, McMinnville, TN
- ASHS Annual Conference Nursery and Water Management Tour, Big Island Plant & Foliage, Green Point Nurseries, Akatsuka Orchid Gardens, September 24, 2011, Waikoloa, HI

### **Prior to joining the UT Department of Plant Sciences**

- Simply Flowers, Inc., August 7, 2007, Atlanta, GA
- University of Kentucky Horticulture Club Tour, Oregon Nurseries: Carlton Plants, Monrovia Nursery, Iseli Nursery, Microplant Nurseries Inc., TREECO, A. McGill and Son Nursery, Buchholz and Buchholz Wholesale Nursery, J. Frank Schmidt and Son Nursery, Heritage Seedlings, August 16-19, 2005, Willamette Valley, OR
- Oregon Nursery Tour: A. McGill and Son Nursery, Buchholz and Buchholz Wholesale Nursery, Carlton Plants, Heritage Seedlings, J. Frank Schmidt and Son Nursery, John Holmlund Nursery, Leo Gentry Wholesale Nursery Inc., Microplant Nurseries Inc., Surface Nursery, August 25-28, 2004, Willamette Valley, OR
- Oregon Nursery Tour: Pacific Pot-in-Pot, Baileys Nursery, J. Frank Schmidt and Son Nursery, Carlton Plants, Buchholz and Buchholz Wholesale Nursery, Robinson Nursery, Sester Farms, Hans Nelson and Son Nursery, Heritage Seedlings, November 9-12, 2003, Willamette Valley, OR
- Ohio Nursery Tour: Sunleaf Nursery LLP, Klyn Nurseries, Inc., Willoway Nurseries, Inc., McKenzie Nursery Supply, July 24-26, 2002, Cleveland, OH
- SERA IEG-27 Tour: Botanico, Inc., Stoner Nursery, Swan Mill Nursery, Shadow Nursery, June 5-7, 2002, McMinnville, TN
- Tennessee Nursery Tour: Botanico, Inc., Odom Nursery, Mountain Creek Nursery, April 30, 2002, McMinnville, TN
- University of Kentucky Horticulture Club Nursery and Botanical Garden Tour, May 7-22, 2001, New Zealand
- Cooperative Center for Study in Britain, HORT 475, Great Gardens of Britain, July 9-August 13, 1992, based in London, England
- International Plant Producers Society Tour stops and independent site visits to nurseries, garden centers, and allied suppliers, April 27-May 7, 2025, New Zealand.

## SERVICE AND ASSOCIATION PARTICIPATION

### Service at Department, College, and University Levels

University of Tennessee, Department of Plant Sciences		Years of Service
Member, Award Committee		2024-present
Judge, Departmental Poster Competition		2024
Administrative Staff Search Committee, Chair		2024
Forage Specialist Search Committee Member		2022-23
Webster Pendergrass Award for Outstanding Service, lead the Dept of Plant Sciences successful nomination of Dave Lockwood		2022
Department Head Search Committee		2021-2022
Administrative Staff Search Committee, Chair		2020
Faculty Mentor		2017-present
Ag Day Committee Chair		2011-present 2017-present
Seminar Committee, member Chair		2011-present Spring 2013
Co-Chair		Spring 2017
December Graduation Representative		2014
Search Committee, Consumer and Residential Horticulture Extension Specialist		2014
Horticultural Weed Management Position Advisory Committee		September 2013-14
<b>UT Extension</b>		
<b>Extension Publication Reviewer</b>		
Do You Know How to Wash Your Hands?		2023
Hydrangea Pruning Video		2021
Hemp Disease and Pest Management		2020
Performance and Adoptability Biodegradable Mulch		2020
Late-Season Insect Management Considerations in Tobacco		2018
Getting the Most Out of Your Raised Bed or Potting Mix Test Report		2018
Target Spot and Its Potential Impact on Tennessee Cotton		2016

Regulations for the Sales of Plants and Plant Materials in Tennessee		2016
Plastic Mulch in Fruit and Vegetable Production: Challenges		2016
Home Vegetable Production in TN- Building and Using Raised Beds		2015
Season Extension Practices for the Home Vegetable Garden		2015
Treated Wood on Organic Farms		2013
Interpreting Water Quality Test Results		2012
Good Agricultural Practices (GAP) Certification in Tennessee		2012
Turfgrass Weed Management Fact Sheet Ground Ivy ( <i>Glechoma hederacea</i> )		2011
Turfgrass Weed Management Fact Sheet Weed Control in Centipedegrass ( <i>Eremochloa ophiuroides</i> )		2011
<b>Other Extension Service</b>		
Organized and conducted 3-day tour of Tennessee Green Industry business to contribute to the orientation of 3 new Extension Specialists		2023
Search Committee, Carter Co. Extension Agent		2023
UT Master Producer Program Task Force		2021
Search Committee, Anderson, Co. Extension Agent		2020
Search Committee, Knox Co. Extension Agent		2019
4-H Interview Competition – Provided a judge		2019
Bill and Ann Hicks New Extension Worker Award Selection Committee		2018
Leadership Team, Commercial Horticulture		2014-present
Work Group, Nursery Production Chair		2014-present 2014-present
UT Master Producer Program Oversight Promotion (rack card) Subcommittee		2014-present
UT Master Producer Program Oversight Committee		2013-present
Warren Co. Agent Search Committee		2013
<b>UTIA</b>		
Promotion and Tenure Committee		2025-2028
FCS P&T Committee, out-of-department member request by FCS		2024-2025
Post-Tenure Review		2024-2025

Peer-Review, Alicia Rihn		2023
Non-Tenure Track Promotion Board		2023-24
J.E. Moss Award UTIA Faculty Selection Committee		2019
UTIA Ag Day Committee		2017-present, chair 2022
J.E. Moss Award for UT Faculty Selection Committee		2017
IR-4 Liaison		2011-2017
UT-TSU Collaboration Team		2011
Variety Trial Release Committee, assisted committee		2011
<b>Multi-Institutional</b>		
Tennessee Master Nursery Producer Program Committee, Chair, Coordinator for grant and online course		2011-present
<b>Prior to joining the UT Department of Plant Sciences</b>		
UK Department of Horticulture, Horticulture Research Farm Planning Committee		2007-2010
UK Department of Horticulture, Faculty Search Committee		2006-2007
Kentucky Cooperative Extension Service, Extension Agent Mentor		2002, 1998
Kentucky Cooperative Extension Service, Pennyrile Area Horticulture Contact		1998-2002
Kentucky Cooperative Extension Service, Statewide Master Gardener Conference Planning Committee		2001-2002
Kentucky Cooperative Extension Service, Agent Training and Support Committee		2001

## Service to Other Institutions

### Federal Government

External Reviewer for Promotion	Year
<b>Associate Professor</b>	
Dr. James Altland	2020
Dr. Heping Zhu	2020
<b>Assistant Professor</b>	
Dr. Heping Zhu	2013

### Universities

Internal Publication Reviewer	Years of Service
<b>Associate Professor</b>	
Larson, J. Calico scale control (Univ. Kentucky)	2022
McKim, K., L. Russo, A. Khalil, and V. Sykes. Planting for pollinators in East Tennessee	2022
Witcher, A. and A. Dismukes. Assisted with a concept in an extension publication that they were preparing.	2021
Chappell, M. and J. Campbell. University of Georgia. Understanding Hurricane and Wind Damage to Trees and Shrubs in Nurseries	2018
<b>Assistant Professor</b>	
Owen, J., A. LeBude, M. Chappell and T. Hoskins. Virginia Polytechnic and State University. Advanced Irrigation Management for Container-grown Ornamental Crop Production	2014
DeKoff, J. Tennessee State University. Centennial Park Tree Identification Guide	2014
Boyer, C. and E. Blythe. Kansas State University Extension Publication. Root-promoting products for commercial cutting propagation of nursery crops (Including alternatives to K-IBA).	2013
Chappell, M., K. Braman, J. Williams-Woodward, and G. Knox. University of Georgia. Optimizing plant health and pest management of <i>Lagerstroemia spp.</i> in commercial production and landscape situations in the southeastern U.S.: A review. Journal of Environmental Horticulture.	2012
Seagraves, B., C. Redmond, and D. Potter. UK Department of Entomology. Resistance of maple ( <i>Acer</i> ) species and cultivars to arthropod pests of production nurseries. Internal review prior to submission to Pest Management Science.	2012
Chappell, M., B. Pennisi, G. Wade, and C. Waltz. University of Georgia Extension Publication. Tips for Saving Water in the Landscape.	2011

## Service to Discipline

### Leadership - American Society for Horticultural Science

#### Full

1. Understanding Labor Constraints and Opportunities, and Behavioral, Economic, Engineering, and Production Influences on Automation Adoption in the Green Industry. American Society for Horticultural Science Conference Special Interest Session (Workshop), co-coordinated, Honolulu, HI, September 24, 2024, 10 participants.

### **Associate Professor**

1. Co-coordinator: Advancing Technology Adoption and Achieving Extension Impact: A Working Group Success Story workshop, American Society for Horticultural Science, August 9, 2016, Atlanta, GA

### **Assistant Professor**

1. Co-coordinator and moderator: Impact of utilizing biodegradable containers in ornamental crop production systems workshop, American Society for Horticultural Science, July 29, 2014, Orlando, FL

### **Leadership - Southern Nursery IPM (SNIPM) Working Group**

#### **Assistant Professor**

1. Chair, 2009-2014
2. Organized SNIPM Working Group Meeting, September 24, 2012, Hendersonville, NC
3. Co-organized SNIPM Working Group Meeting, July 25-27, 2011, Clemson, SC
4. Organized SNIPM Working Group Meeting, September 20, 2010, Hendersonville, NC
5. Southern Nursery IPM Working Group, co-organized, July 30-31, 2009, Mills River, NC

### **Journal, Editorial Board Member**

#### **Associate and Assistant Professor**

1. Editorial Board Member international refereed journal *Horticulturae*, 2015-2017

### **Journal, Referee**

#### **Professor**

*Agronomy* (1), *HortTechnology* (1), *Soil Science Society of America Journal* (1), *HortScience* (2)

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#### **Associate Professor**

*Agronomy* (1), *Horticulturae* (1), *HortTechnology* (4), *Water, Air and Soil Pollution* (1-review article)

#### **Assistant Professor**

*ASABE/IA Irrigation Symposium: A Tribute to the Career of Terry Howell, Sr.* (2), *Journal of Environmental Horticulture* (1), *Journal of Plant Growth Regulation* (1), *Horticulturae* (1), *HortScience* (5), *HortTechnology* (4)

### **Peer Review**

### **Assistant Professor**

1. Mobile Weed App – mobile device application, 2013

## **Other Service**

### **Service to Public and Private Organizations or Institutions Using Professional Expertise**

1. Reviewer, Profile Products Hydrangea Production Tech Sheet
2. Reviewer, AmericanHort, Horticulture Research Institute grant proposals, 2014, 2015, 2018, 2020

### **Service to Government Agencies at the Federal, State, and Local Levels**

1. USDA, Working Group NC1186. Water Management and Quality for Ornamental Crop Production and Health, Maintain Listserv, 2011-present
2. USDA, Working Group NC1186. Water Management and Quality for Ornamental Crop Production and Health, Chair, 2013
3. USDA, Working Group NC1186. Water Management and Quality for Ornamental Crop Production and Health, Vice Chair, 2012
4. USDA, Working Group NC1186. Water Management and Quality for Ornamental Crop Production and Health, Secretary, 2011

### **Service to the Nursery and Landscape Industry**

1. Local Site Chair, Planning Committee for the 2018 International Plant Propagators' Society Meeting, Eastern Region U.S. Chattanooga, TN, 2014-2018
2. Co-editor, effort led by Dr. Bill Klingeman, Tennessee Nursery and Landscape Association, Tennessee Green Times, quarterly publication, 2011 to present
3. Co-organizer, Tennessee Nursery and Landscape Association, Winter Education, 2012 (for 2013)
4. Judge, Bryson L. James Student Research Competition: 2010, 2013
5. Organizer or Co-Organizer, Kentucky Nursery and Landscape Association, Kentucky Landscape Industry Winter Education Conference, 2008-2010, 250-300+ attendees
6. International Plant Propagators' Society, chair: Eastern Region Area Meeting, 2007, 100 attendees

### **Service to Community Affairs as a Representative of the University of Tennessee**

1. Metropolitan Nashville Landscape Guidelines and Best Management Practices, reviewed 2013

### **Plant Donations to Extension-sponsored Fundraisers and Events**

Organization	Year
Professor	

Donated 32 3-gallon plants to the East Tennessee Nursery Association plant sale (approximate retail value \$1,500)	2024
Donation/loan to NACAA Local Committee	2018
Donation/loan to UTIA Ag Day Committee	2018
Donation two 3-gallon UT Morgan Oaks to IPPS	2018
Donated eight 1-gallon plants and 32 3-gallon plants to the East Tennessee Nursery Association plant sale (approximate retail value \$1,240)	2017
Partial donation (50% profit share) UT Gardens nine 3-gallons and 13 2-gallon hydrangeas.	2016
<b>Assistant Professor</b>	
Donated 73 1- and 3-gallon plants to the East Tennessee Nursery Association plant sale (approximate retail value \$1,500)	2015
Donated 100 3-gallon plants to the East Tennessee Master Gardener Association (approximate retail value \$3,000)	2013
Donated 50 plants to The UT Arboretum Society Plant Sale (approximate retail value \$750)	2013
Donated 50 3-gallon plants to the East Tennessee Nursery Association plant sale (approximate retail value \$1,000)	2013
Donated 50 plants 2012, UT Gardens plant sale (approximate retail value \$750)	2012
Donated 100 3-gallon plants to the East Tennessee Master Gardener Association (approximate retail value \$3,000)	2012
Donated 50 plants to The UT Arboretum Society Plant Sale (approximate retail value \$750)	2011
Donated 50 plants 2011, UT Gardens plant sale (approximate retail value \$750)	2011

## Membership and Participation in Professional Societies Disciplinary

Organization	Years of Service
American Society of Agricultural and Biological Engineers	2013 to 2024
American Nursery and Landscape Association	2013 to 2014
International Society for Horticultural Science	2012 to present
Tennessee Nursery and Landscape Association	2011 to present

East Tennessee Chapter, Nursery and Landscape Association		2011 to present
Middle Tennessee Nursery and Landscape Association		2011 to present
Southern Chapter, International Society of Arboriculture		2011 to 2016
Southern Nursery Association		2011 to 2015
International Plant Propagators' Society		2008 to present
American Society for Horticultural Science		2007 to present
Judge, Southern Region, Undergraduate Poster Competition (Karl McKim <sup>M</sup> )		2026
International Society of Arboriculture Certified Arborist		2001 to 2016 2001 to 2016
Kentucky Arborist Association		2001 to 2010
Kentucky Association of County Agricultural Agents		1997-2001
National Association of County Agricultural Agents		1997-2001

## Honorary

Organization	Years of Service
Pi Alpha Xi, Honor Society NCSU chapter	1996
Plant Sale Chairperson	1996
Phi Kappa Phi, National Honor Society, WKU	1993
Agriculture Ambassador, WKU	1993
Golden Key National Honor Society, WKU	1993
Alpha Zeta, Agriculture Honor Society, WKU	1992

## AWARDS AND RECOGNITION

Professional Award	Year
<b><u>National and Regional Awards</u></b>	
ASHS Outstanding Factsheet Award for "Irrigation Calculations Part I, II, and III"	2024
American Society of Agricultural and Biological Engineers, AGCO National Student Design Competition, 2nd place. Awarded to the BESS PIPER (pot harvester) Senior Design team that I mentor.	2023

USDA Midwest Region Federal Laboratory Consortium Award in recognition of transferring the intelligent spray technology to commercialization and specialty crop production.	2023
ASHS Outstanding Factsheet Award for “A Green Industry guide to plant patents and other intellectual property rights”	2022
Southern Region-ASHS Blue Ribbon Extension Communication Award for “A Green Industry guide to plant patents and other intellectual property rights”	2021
Southern Region-ASHS Blue Ribbon Extension Communication Award for “Operating a garden center during the COVID-19 pandemic”	2021
Southern Region-ASHS Blue Ribbon Extension Communication Award for “Leaching Fraction: A Tool to Schedule Irrigation for Container-Grown Nursery Crops”	2020
ASHS Outstanding Education Publication Award (1 selected from all disciplines, all journals combined) for “Experiential Nursery Integrated Pest Management Workshop Series to Enhance Grower Practice Adoption”	2018
ASHS Nursery Crops Distinguished Achievement Award	2017
ASHS Extension Division Outstanding Education Materials Award for “Hydrangea Production Series”	2017
NC1186 Working Group was selected as the regional 2017 Multistate Research Project of Excellence Award. I served one year terms as chair, vice chair, and secretary of this group from 2011-14.	2017
ASHS Outstanding Education Materials Award for “Nursery Irrigation: A Guide for Reducing Risk and Improving Production”	2016
ASHS Extension Division Education Materials Award for “IPM for Shrubs in Southeastern US Nursery Production: Volume 1” Awarded to working group. I coauthored 2 chapters.	2015
Southern Region IPM Center, Bright Idea Award (awarded to working group)	2014
<b><u>University or State Level Award</u></b>	
Gamma Sigma Delta, UT Chapter, Team Award	2023
Gamma Sigma Delta, UT Chapter, Extension Award	2023
Tennessee Nursery and Landscape Association Educator of the Year	2016
J.E. Moss Achievement Award	2016
Outstanding New Extension Worker Award	2014
Quest Scholar	2014
Dutch and Marilee Cavender Outstanding Extension Publication Award	2013
TNLA Outstanding Committee Member	2013

Recognized during Faculty Appreciation Week		2012
<b>Prior to joining the UT Department of Plant Sciences</b>		
UK Outstanding Extension Associate Award		2009
Southern Region IPM Center, Future Leader Award		2009
Full scholarship awarded by the Northern Kentucky Urban and Community Forestry Council to attend the National Urban Forestry Conference, Seattle, WA		1999
National Association of County Agricultural Agents Communication Award, National Winner, Direct Mail Piece		1998
National Association of County Agricultural Agents Communication Award, National Finalist, Individual Newsletter		1998
<b>Educational Award</b>		
First Place, Ph.D. Section, The Bryson L. James Student Research Competition, The Southern Nursery Association		2008
Third Place, M.S. Section, The Bryson L. James Student Research Competition, The Southern Nursery Association		1997
<b>Certifications</b>		
International Society of Arboriculture Certified Arborist #KY0376		2001-16