Resources from AFE's Grow Pro Webinar: Reducing Pesticides in Surface & Subsurface Irrigation Water

July 12th, 2022 at 1PM (EST) with Dr. Tom Fernandez, Michigan State University

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https://www.canr.msu.edu/people/dr_tom_fernandez?roleURL=dr_tom_fernandez – Articles by Dr. Fernandez. Read abstracts for a fee or for free, request a copy, and save.

Open Access Research Articles, Extension Articles, and Shared Articles:

- Clean WateR3 - https://www.cleanwater3.org/ - Water conservation, remediation, and recycling. Features "Ask an Expert" link to ask questions to experts in different areas. Includes electronic tools, training webinars and events, and a newsletter.

- National Library of Medicine PubChem - https://pubchem.ncbi.nlm.nih.gov/ - Technical search website for chemical characteristics including pesticides, plant growth regulators, and antibiotics used in plant production.

Open Access Research Publications:

- Knuth, M.J., B.K. Behe, P.T. Huddleston, C.R. Hall, R.T. Fernandez, H. Khachatryan. 2020. Water conserving message influences purchasing decision of consumers. *Water* https://doi.org/10.3390/w12123487

- Poudyal, S., J.S. Owen, Jr., R.T. Fernandez and B. Cregg. 2020. Sensitivity of Hydrangea paniculata plants to residual herbicides in recycled irrigation varies with plant growth stage. *Water* Special Issue: *Irrigation and Water Resources Management of Landscape Plants* 12, https://doi.org/10.3390/w12051402

- Abdi, D.E. and R.T. Fernandez. 2019. Reducing water and pesticide movement in nursery production. *HortTechnology;* https://doi.org/10.21273/HORTTECH04298-19

- Fernandez, R.T., N.A. Pershey, J.A. Andresen and B.M. Cregg. 2019. Water conserving irrigation practices, plant growth, seasonal crop coefficients, and nutrition of container-grown woody ornamentals. *Water* Special Issue: *Irrigation and Water* Resources Management of Landscape Plants 11, 2070; https://doi.org/10.3390/w11102070

- Knight, J., D.E. Abdi, D.L. Ingram and R.T. Fernandez. 2019. Water footprint analysis of container-grown plants in a model research nursery as affected by irrigation and fertilization treatments. *Water*, *11*(12), 2436; https://doi.org/10.3390/w11122436

- Knuth, M., B. Behe, C. Hall, P. Huddleston and R. Fernandez. 2019. Sit back or dig in: The role of activity level in landscape market segmentation. HortScience 54:1818-1823; https://doi.org/10.21273/HORTSCI14158-19

- Poudyal, S., R.T. Fernandez, J.O. Owen and B.M. Cregg. 2019. Dose-dependent phytotoxicity of pesticides in simulated nursery runoff on landscape nursery plants. *Water* 11, 2354; https://doi.org/10.3390/w11112354

- White, S.A., J.S. Owen, J.C. Majsztrik, L.R. Oki, P.R. Fisher, C.R. Hall, J.D. Lea-Cox and R.T. Fernandez. 2019. Greenhouse and nursery water management characterization and research priorities. *Water* 11, 2338; https://doi.org/10.3390/w11112338

- Behe, B.K., M. Knuth, C.R. Hall, P.T. Huddleston, and R.T. Fernandez. 2018. Consumer involvement with and expertise in water conservation and plants affect landscape plant purchases, importance, and enjoyment. *HortScience* 53:1164-1171; https://doi.org/10.21273/HORTSCI13119-18

- Knuth, M., B.K. Behe, C.R. Hall, P. Huddleston and R.T. Fernandez. 2018. Consumer perceptions of landscape plant production water sources and uses in the landscape during perceived and real drought. *HortTechnol*ogy 28:85-93; https://doi.org/10.21273/HORTTECH03893-17

- Knuth, M., B.K. Behe, C.R. Hall, P. Huddleston and R.T. Fernandez. 2018. Consumer perceptions, attitudes, and purchase behavior with landscape plants during real and perceived drought periods. *HortScience* 53:49-54; https://doi.org/10.21273/HORTSCI12482-17

- Majsztrik, J.C., R.T. Fernandez, P.R. Fisher, D.R. Hitchcock, J. Lea-Cox, J.S. Owen, Jr., L.R. Oki and S.A. White. 2017. Water use and treatment in containerized specialty crop production: A review. *Water Air and Soil Pollution* 2017:228:151; https://doi.org/10.1007/s11270-017-3272-1

- Pershey, N.A., R.T. Fernandez, B.M. Cregg and J.A. Andresen. 2015. Irrigating based on daily water use reduces nursery effluent volume and nutrient load without reducing growth of four conifers. *HortScience* 50:1553-1561; https://doi.org/10.21273/HORTSCI.50.10.1553

- Wang, W., R.T. Fernandez, B.M. Cregg, R. Auras, A. Fulcher, D.R. Cochran, G. Niu, Y. Sun, G. Bi, S. Nambuthiri, R.L.Geneve. 2015. Multi-state evaluation of plant growth and water use in plastic and alternative nursery containers. *HortTechnology* 25:42-49; https://doi.org/10.21273/HORTTECH.25.1.42

- Ingram, D.L. and R.T. Fernandez. 2012. Life Cycle Assessment: A tool for determining the environment impact of horticultural crop production. HortTechnology 22:275-279 (Feature Article) https://doi.org/10.21273/HORTTECH.22.3.275

- Warsaw, A.L., R.T. Fernandez, B.M. Cregg and J.A. Andresen. 2009. Water conservation, growth, and water use efficiency of container-grown woody ornamentals irrigated based on daily water use. HortScience 44:1308-1318. https://doi.org/10.21273/HORTSCI.44.5.1308

- Warsaw, A.L., R.T. Fernandez, B.M. Cregg and J.A. Andresen. 2009. Container-grown ornamental plant growth and water runoff volume and nutrient content under four irrigation treatments. HortScience 44:1573-1580. https://doi.org/10.21273/HORTSCI.44.6.1573

- Briggs, J.A., T. Whitwell, R.T. Fernandez and M.B. Riley. 2002. Formulation effects on isoxaben and trifluralin in runoff water from container plant nurseries. Weed Sci. 50:536-541. https://doi.org/10.1614/0043-1745(2002)050[0536:FEOIAT]2.0.CO;2

Extension Publications:

- Fernandez, R.T. 2018. Water Alkalinity and pH: What They Mean in Regards to Water Quality. MSU Nursery and Christmas Tree Production Newsletter, April 12, 2018. http://msue.anr.msu.edu/news/water_alkalinity_and_ph_what_they_mean_in_regards_to_water_qualit

- Fulcher, A. and R.T. Fernandez. 2013. Sustainable nursery irrigation management: Part 1. Water use in nursery production. Univ. TN CES W278, https://utextension.tennessee.edu/publications/Documents/W278.pd

- Fulcher, A. and R.T. Fernandez. 2013. Sustainable nursery irrigation management: Part 2. Strategies to increase efficiency. Univ. TN CES W 279, https://utextension.tennessee.edu/publications/Documents/W279.pd

- Fulcher, A. and R.T. Fernandez. 2013. Sustainable nursery irrigation management: Part 3. Strategies to manage nursery runoff. Univ. TN CES W280, https://utextension.tennessee.edu/publications/Documents/W280.pdf

- Fernandez, R.T. and T.A. Dudek. 2012. Conducting a water application uniformity evaluation for a micro irrigation system in the nursery. MSUE Factsheet 6-28. http://msue.anr.msu.edu/uploads/files/6-28FactSheet_WaterApplicationTOM.pdf

- Dudek, T.A. and R.T. Fernandez. 2012. Conducting a water application uniformity evaluation for an overhead sprinkler irrigation system in the nursery. MSUE Factsheet 6-4. http://msue.anr.msu.edu/uploads/235/67987/resources/6-4FactSheetTemplateOverhead_Sprinkler.pdf

Other Information of Interest From Dr. Fernandez's Lab:

- Quino, J., J.M. Maja, J. Robbins, J. Owen, M. Chappell, J.N. Camargo and R.T. Fernandez. 2022.The relationship between drone speed and the number of flights in RFID tag reading for plant inventory. *Drones*. https://doi.org/10.3390/drones6010002

- Quino, J., J.M. Maja, J. Robbins, R.T. Fernandez, J. Owen, M. Chappell. 2021. RFID and drones: The next generation of plant inventory. *AgriEngineering* 3:168-181. https://doi.org/10.3390/agriengineering3020011

- Fernandez, R.T., R. Betz and T.A. Dudek. 2014. Estimating the wholesale cost of nursery production. Spreadsheets for 100, 50 or 25 trackable items (enterprises) and an example spreadsheet:

- https://www.researchgate.net/profile/Rodney-Fernandez/publication/260187226_Cost_of_Production_Nursery_100_Ver_Feb_11_2014_Blank/links/0046352ff91d3565be000000/Cost-of-Production-Nursery-100-Ver-Feb-11-2014-Blank

- https://www.researchgate.net/profile/Rodney-Fernandez/publication/260187224_Cost_of_Production_Nursery_50_Ver_Feb_11_2014_Blank/links/0deec52ff917c043f7000000/Cost-of-Production-Nursery-50-Ver-Feb-11-2014-Blank

- https://www.researchgate.net/profile/Rodney-Fernandez/publication/260186968_Cost_of_Production_Nursery_25_Ver_Feb_11_2014_blank/links/02e7e52ff90dfdfcb1000000/Cost-of-Production-Nursery-25-Ver-Feb-11-2014-blank

- https://www.researchgate.net/profile/Rodney-Fernandez/publication/260187217_Determining_Cost_of_Production_for_Wholesale_Nurseries_25_Ver_Feb_11_2014_Example/links/0f31752ff8ef575066000000/Determining-Cost-of-Production-for-Wholesale-Nurseries-25-Ver-Feb-11-2014-Example

- Ingram, D.L. and R.T. Fernandez. 2011. Life cycle assessment: Implications for the green industry. University of Kentucky CES Circular HO-90 http://www.ca.uky.edu/agc/pubs/asc/asc184/asc184.pdf