

Rolston St. Hilaire

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Professor, Plant and Environmental Sciences, New Mexico State University

Professional Preparation

University of Puerto Rico, Mayagüez, B.S., Horticulture, 1992

University of Puerto Rico, Mayagüez, M.S., Horticulture, 1994

Iowa State University, Ames, Ph.D., Horticulture-Plant Physiology, 1998

Taiwan Agricultural Research Institute, Taipei, Certificate, Vegetables Production, 1986.

Appointments

2017 - Present: Interim Department Head, Extension Plant Sciences, NMSU

2016 - Present: Department Head, Plant and Environmental Sciences, NMSU

2008 - Present: Professor, Plant and Environmental Sciences, NMSU

2007: Visiting Scientist, USDA-ARS, Beltsville, Maryland.

2004 - 2008: Associate Professor, Plant and Environmental Sciences (formerly Agronomy and Horticulture).

1998 - 2004: Assistant Professor, Agronomy and Horticulture, NMSU

Publications (136)

(Journal articles last five years)

Alsmairat, N.G., M. Al-Ajlouni, J. Ayad, Y.A. Othman, and R. St Hilaire. 2018. Composition of soilless substrates affect the physiology and fruit quality of two strawberry (*Fragaria x ananassa* Duch.) cultivars. *J. Plant Nutrition* 41:2356-2364. 10.1080/01904167.2018.1510508.

Gioannini, R., Al-Ajlouni, M., Kile, R., D.M. VanLeeuwen, and R. St Hilaire. 2018. Plant communities for green roofs in arid regions. *Sustainability* doi:10.3390/su10061755.

Willette, S., S. Gill, B. Dungan, T.M. Schaub, J.M. Jarvis, R. St Hilaire, and F.O. Holguin. 2018. Alterations in lipidome and metabolome profiles of *Nannochloropsis salina* in response to reduced culture temperature during sinusoidal temperature and light. *Algal Research* 32:79-92.

St Hilaire, R. 2018. 'JFS-NuMex 3': Mesa Glow® bigtooth maple. *HortScience* 53:734-736.

Cover article.

Frietze, V.D., R. Gioannini, Al-Ajlouni, M.G., D.M. VanLeeuwen, and R. St Hilaire. 2018. Contrasting urban landscapes and reduced irrigation engender water conservation in a desert environment. *Sustainability* doi:10.3390/su10030624.

Othman, Y., C. Steele, and R. St. Hilaire. 2018. Surface reflectance climate data records (CDRs) is a reliable Landsat ETM+ source to study chlorophyll content in pecans. *J. Indian. Soc. Remote Sens.* 46:211-218.

Forrest, L., R. Gioannini, D. M. VanLeeuwen and R. St Hilaire. 2017. Shallow substrates support the growth of contrasting plant types installed in irrigated arid climate green roofs. *J. Environ. Hort.* 35:146-155.

Sherman, J., R. Heerema, R. St Hilaire, and D. VanLeeuwen. 2017. Optimal manganese nutrition increase photosynthesis of immature pecan trees. *HortScience* 52:634-640.

Bsoul, E., R. Giannini, and R. St. Hilaire. 2016. Bigtooth maples from three geographically different regions endure root zone salinity. *J. Environ. Hort.* 34:111-117.

Singh, S., S. Angadi, K. Grover, R. St. Hilaire, and S. Begna. 2016. Effect of growth stage based Irrigation on soil water extraction patterns and water use efficiency of spring safflower cultivars. *Agricultural Water Management* 117:432-439.

Singh, S., S. Angadi, R. St. Hilaire, K. Grover, and D. VanLeeuwen. 2016. Spring safflower performance under growth stage based Irrigation in the Southern High Plains. *Crop Science* 46:1-12

Othman, Y., C. Steele, D. VanLeeuwen, and R. St. Hilaire. 2015. Hyperspectral surface reflectance data detect low moisture status of pecans orchards during flood irrigation. *J. Amer. Soc. Hort. Sci.* 140:449-458.

Sutherin, S., K. Lombard, and R. St. Hilaire. 2015. One group's experience developing and comparing urban water conservation digital outreach resources. *J. Extension* Vol. 53, <http://www.joe.org/joe/2015february/a1.php>

Othman, Y., D. VanLeeuwen, R. Heerema, and R. St. Hilaire. 2014. Midday stem water potential values needed to maintain photosynthesis and leaf gas exchange established for pecans. *J. Amer. Soc. Hort. Sci.* 139:537-546.

Heerema, R.J., D. VanLeeuwen, R. St. Hilaire, V.P. Gutschick, and B. Cook. 2014. Leaf photosynthesis in nitrogen-starved 'Western' pecan is lower on fruiting shoots than non-fruiting shoots during kernel fill. *J. Amer. Soc. Hort. Sci.* 139:267-274.

Al-Ajlouni, M., D.M. VanLeeuwen, and R. St. Hilaire. 2014. Linking urban residential landscape types in a desert environment to landscape water budgets. *HortTechnology* 24:307-312.

Othman, Y., C. Steele, D.M. VanLeeuwen, R. Heerema, S. Bawazir, and R. St. Hilaire. 2014. Remote sensing used to detect moisture status of pecan orchards grown in a desert environment. *Intl. J. Remote Sensing* 35:949-966.

Al-Ajlouni, M., D.M. VanLeeuwen, M.N. Demers, and R. St. Hilaire. 2013. A method to quantitatively classify residential urban landscape in a desert environment. *HortTechnology* 23:474-481. **Selected for press release.**

Sutherin, S., K. Lombard, and R. St. Hilaire. 2013. Southwest Plant Selector: A mobile application for iPhone and iPad. *HortTechnology* 23:602-609.

Bowen-O'Connor, C.A., D.M. VanLeeuwen, T.M. Sterling, G. Bettmann, and R. St. Hilaire. 2013. Variation in violaxanthin and lutein cycle components in two provenances of *Acer grandidentatum* L. exposed to short-term contrasting light. *Acta Physiol. Plant.* 35:541-548

Patents

Bigtooth Maple Tree named 'JFS-NuMex 3' – PP27,930, awarded on April 25, 2017.