

## RAUL I. CABRERA

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### EDUCATION

PhD in Plant Biology, 1994. University of California at Davis  
MS in Plant Physiology, 1992. University of California at Davis  
(BS) Ingeniero Agrónomo en Horticultura, 1986. Univ. Autónoma Agraria "Antonio Narro" (México)

### WORK EXPERIENCE

2015 - present Assoc. Professor and Extension Specialist-Nursery Crops, Rutgers University, Bridgeton, NJ  
2012 - 2015 Associate Professor, Ornamental Horticulture, Texas A&M AgriLife Research, Uvalde, TX  
1999 - 2011 Associate Professor, Woody Horticulture, Texas A&M AgriLife Research, Dallas, TX  
1994 - 1999 Assistant Professor & Extension Specialist. Rutgers University, New Brunswick, NJ  
1988 - 1993 Graduate Research Assistant. Dept. Environmental Horticulture, UC Davis, CA.  
1987 - 1988 Landscape Maintenance Supervisor. Federal IRS Building Complex, Fresno, CA.  
1985 Retail Garden Assistant & Internship in Floriculture Greenhouse, Michoacán, México.  
1984 - 1985 Assistant Manager for Pecan Farm. Rancho "El Carmen", Ramos-Arizpe, México.  
1984 - 1986 Research Assistant. Universidad Autónoma Agraria "Antonio Narro", Saltillo, México.

### RESEARCH ACTIVITIES, INTERESTS & AREAS OF EXPERTISE

Global areas: Integrative plant and crop physiology; plant mineral nutrition; irrigation and fertilization in intensively managed horticultural and high-value crops (nursery, greenhouse, landscape plants and hemp); irrigation water sources & management; plant and crop salinity tolerance.

Specific areas of study: Characterization of nutrient and water uptake and use efficiency in horticultural crops and industrial hemp; hydroponics and fertigation management; irrigation water quality and crop salinity tolerance; alternative irrigation water sources (reclaimed, graywater); greenhouse cut flower production; arboriculture; urban landscape irrigation management; substrates and growing media for container production; controlled-release fertilizers; nitrogen fertilizer use efficiency and pollution.

### CURRENT PROJECTS AND ACTIVITIES

- Optimization of nursery/greenhouse crop fertilization and productivity/quality.
- Use of alternative waters (graywater, reclaimed) for irrigation of nursery- greenhouse crops and urban landscapes.
- Evaluation of cultural practices for industrial hemp (field and greenhouse, including hydroponics).

### PRESENTATIONS, TEACHING & OUTREACH ACTIVITIES

Participates in scientific and technical conferences and symposia, and in outreach teaching and training programs and activities for growers, landscapers and homeowners at the regional, national and international level (14 countries, in 10 by invitation= *Argentina, Belgium, Brazil, Canada, Colombia, Ecuador, Guyana, El Salvador, France, Israel, Italy, México, Netherlands and Spain*). Activities delivered to a wide range of audiences (homeowners, students, growers, scientists, public officials) in both English and Spanish. Has worked in the development of extension outreach and bilingual (English-Spanish) educational materials with local, national & international agencies and organizations.

### EDITORIAL APPOINTMENTS

- \* Editorial Board Member, *Scientia Horticulturae*, 1997 - present
- \* Editor Asociado, *Ecosistemas y Recursos Agropecuarios* (México), 2018 - 2020

- \* Section Editor (Landscape). *Proc. of the Southern Nursery Assn. Research Conference*, 2017- 2020
- \* Associate Scientific Editor, *Revista Colombiana de Ciencias Hortícolas* (Colombia), 2006- 2020
- \* Associate/Consulting Editor (Nursery & Landscape Plants), *HortScience*, 2002-2005
- \* Section Editor (Field Production). *Proc. of the Southern Nursery Assn. Research Conference*, 2004 - 2007
- \* Editorial Board Member, *Revista Chapingo- Serie Horticultura* (México), 1999-2000 and 2008- 2010
- \* Scientific Committee and Editorial Team Member for various international meetings of the International Society for Horticultural Sciences
- \* Member of Panel of Referees, *Ciencia Forestal en México*, 2003- 2010

#### **SELECTED LIST OF SCIENTIFIC AND TECHNICAL PUBLICATIONS**

- Cabrera, R.I. 2021. Irrigation and nutrition management, Chapter 3, p. 224-257. In: J. Faust and J. Dole (eds.) *Cut Flowers and Foliages, Crop Production Book Series*, CABI, Wallingford, UK
- Franco-Hermida, J.J., M.F. Quintero-Castellanos, A. Guzmán, M. Guzmán and R.I. Cabrera. 2020. Validating integrative nutrient diagnostic norms for greenhouse cut-roses. *Scientia Horticulturae*. 264 (2020) 109094 <https://doi.org/10.1016/j.scienta.2019.109094>
- Cabrera, R.I. 2020. Some considerations on the intensive horticultural production of industrial hemp, p. 54-57. *Proceedings of the 65th New Jersey Agricultural Convention and Trade Show*. Atlantic, City, NJ.
- López-Vargas, E.R. Y. González-García, M. Pérez-Álvarez, G. Cadenas-Pliego, S. González-Morales, A. Benavides-Mendoza, R.I. Cabrera and A. Juárez-Maldonado. 2020. Seed priming with carbon nanomaterials modify the germination, growth and antioxidant status of tomato seedlings. *Agronomy* 2020, 10, 639; <https://doi:10.3390/agronomy10050639>
- Cabrera, R.I., E. Petit and B. Moran. 2019. Diagnosing aesthetic and growth disorders in hydrangea plants under commercial nursery production. *Southern Nursery Assn. Research Conference* 63: 29-36
- Cabrera, R.I., J. Altland and G. Niu. 2018. Assessing the potential of nontraditional water sources for landscape irrigation. *HortTechnology* 28(4): 436-444.
- Cabrera, R.I. 2018. Improving fertilizer use efficiency in greenhouse rose crops. *Southern Nursery Assn. Research Conference* 62: 35-39.
- Cabrera, R.I., A.R. Solís-Pérez y W.J. Cuervo-Bejarano. 2017. Tolerancia y manejo de salinidad, pH y alcalinidad en el cultivo de flores, p. 63-73. In: V.J. Flórez R. (ed.), *Consideraciones Sobre Producción, Manejo y Poscosecha de Flores de Corte con Énfasis en Rosa y Clavel*. Editorial Universidad Nacional de Colombia.
- Cabrera, R.I. and A.R. Solis-Perez. 2017. Mineral Nutrition and Fertilization Management (10 p.). In: *Reference Module in Life Sciences (Rose Encyclopedia)*, Elsevier. ISBN: 978-0-12-809633-8. <http://dx.doi.org/10.1016/B978-0-12-809633-8.05087-1>
- Wu, S., Y. Sun, G. Niu, J. Altland, and R.I. Cabrera. 2016. Response of 10 aster species to saline water irrigation. *HortScience* 51(2): 197-201.
- Solís-Pérez, A.R. and R.I. Cabrera. 2014. Evaluating the responses of salt-stressed greenhouse roses to supplemental calcium. *Journal of Environmental Horticulture* 32(3): 155–162.
- Cabrera, R.I., K. Wagner and B. Wherley. 2013. An evaluation of urban landscape water use in Texas. *Texas Water Journal* 4 (2): 14–27.
- Franco Hermida, J.J., M.C. Henao Toro, M. Guzmán and R.I. Cabrera. 2013. Determining nutrient diagnostic norms for greenhouse roses. *HortScience* 48(11): 1403-1410.
- Solís-Pérez, A.R. and R.I. Cabrera. 2012. Characterizing hourly, daily and seasonal ion and water uptake in hydroponically-grown roses. *Acta Horticulturae* 947: 347-354.