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. Universidad Autónoma Agraria "Antonio Narro" (México)

WORK EXPERIENCE

2015 - present	Extension Specialist & Assoc. Professor-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	Extension Specialist & Assistant Professor. Rutgers University, New Brunswick, NJ
1988 - 1993	Graduate Research Assistant. Dept. Environmental Horticulture, UC Davis, CA.
1987 - 1988	Landscape Maintenance Supervisor. ALS at 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.
1980 - 1983	Seasonal Farm/Packing House Worker. Bertuca-Sakai Farms & Packing House. McAllen, TX

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, hemp) and landscape plants/sites; irrigation water sources & management; plant and crop salinity tolerance.

Specific areas of study: Characterization of nutrient and water uptake and use efficiency in flower & 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 and greenhouse crop fertilization, irrigation and productivity/quality.
- Use of alternative waters (graywater, reclaimed) for irrigation of nursery- greenhouse crops and urban landscapes.
- Evaluation of cultural practices for hemp and *Cannabis* (field and greenhouse, includings 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 (16 countries, in 10 by invitation= *Argentina, Belgium, Brazil, Canada, Colombia, Ecuador, El Salvador, France, Guyana, Israel, Italy, Jamaica, México, Netherlands, South Africa 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) and *Horticulturae* (2021-present).
* Editor Ascociado, *Revista Colombiana de Ciencias Hortícolas* (Colombia), 2006-2020; 2023-present

* Editor Asociado, *Ecosistemas y Recursos Agropecuarios* (México), 2018 - 2020
* Section Editor (Field Production and Landscape). *Proceedings of the Southern Nursery Association Research Conference*, 2004 – 2007 and 2017- 2020
* Associate/Consulting Editor (Nursery & Landscape Plants), *HortScience*, 2002-2005
* 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 Horticultultural Sciences
* Member of Panel of Referees, *Ciencia Forestal en México*, 2003- 2010

SELECTED LIST OF SCIENTIFIC AND TECHNICAL PUBLICATIONS

Myers-Morgan, L., M. Sherwood, J.E. Simon, R.I. Cabrera, H.R. Juliani and C.A. Wyenandt. 2025. Protocol for establishing soil-based ginger field propagation nurseries. USDA Project: Food for Progress Jamaica Spices, ACDI/VOCA, Kingston, Jamaica

Cabrera, R.I. 2024. From water use efficiency to water footprint in greenhouse roses. Acta Horticulturae 1409: 249-256. https://doi.org/10.17660/ActaHortic.2024.1409.33

Cabrera, R.I. and J.E. Altland. 2024. Residential graywater as an irrigation source for urban landscape plants. Acta Horticulturae 1409: 183-190. https://doi.org/10.17660/ActaHortic.2024.1409.25

Cabrera, R.I. 2023. Considerations on irrigation management of nursery crops, p. 31-34. Proceedings of 68th New Jersey Annual Vegetable Meeting, NJ Agricultural Experiment Station, Rutgers University

Gohil, H., T.J. Waller and R.I. Cabrera. 2022. Understanding current labor shortage and mechanization in New Jersey nursery crop operations. Journal of Extension 60(4), Article 4. https://doi.org/10.34068/joe.60.04.04

Cabrera, R.I. 2022. Fertilización y su impacto en salinidad, contaminación y la huella hídrica en cultivos de flores. Revista RedAgrícola Colombia S.A.S. No. 17, p. 26-30. October, 2022. Bogotá, Colombia.

Gottlieb, P., R. Brumfield, R.I. Cabrera, D. Farnsworth and L. Marxen. 2022. An online tool for estimating return-on-investment for water recycling at nurseries. HortTechnology 32(1): 47-56.

Cabrera, R.I. 2022. Proper landscape mulching practices - *El buen uso de acolchados en jardinería* (Bilingual article). The New Jersey Landscape Contractor Magazine - Winter 2021-2022. p. 32-35.

Cabrera, R.I. 2021. Irrigation and nutrition management, p. 224-257. *In*: J. Faust and J. Dole (eds.) *Cut Flowers and Foliages*, *Crop Production Book Series*, CABI, Wallingford, UK

Cabrera, R.I. 2021. Optimización del fertirriego en flores de corte, p. 153-159. *In*: G. Fischer, D. Miranda, S. Magnitskiy, H.E. Balaguera-López and Z. Molano (eds.) *Avances de la Horticultura y la Mejora en la Calidad de Vida*. Sociedad Colombiana de Ciencias Hortícolas, Bogotá, DOI: https://doi.org/10.17584/VIIIHorticultura.

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, 109094 https://doi.org/10.1016/j.scienta.2019.109094

Cabrera, R.I. 2020. Alternative water sources for urban irrigation. The New Jersey Landscape Contractor Magazine - Spring 2020. p. 31-33.

Cabrera, R.I., E. Petit and B. Moran. 2019. Diagnosing aesthetic and growth disorders in hydrangea plants under commercial nursery production. Proceedings Southern Nursery Association 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. Proceedings of the Southern Nursery Association 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