

DANIEL IVAN LESKOVAR

Title TAMU System Regents Fellow, Professor, Horticultural Sciences - Texas A&M University
Expertise Vegetable Stress Physiology
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[Google Scholar](#) Statistics All: h-index=45; i10 index= 110; Citations: 6733

EDUCATION /TRAINING

Universidad del Comahue, Argentina, Ing. Agr. (B.S.), Horticulture
University of Wageningen, The Netherlands, Graduate Training, 1983
University of California, Davis, MS., Vegetable Crops, 1986
University of Florida, Ph.D., Vegetable Crop Physiology, 1991
University Politécnica de Cartagena (UPCT), Spain, Dr. Honoris Causa, 2026

PROFESSIONAL EXPERIENCE

1991-1996 Assistant Professor, Vegetable Physiology, Texas A&M University
1997-2003 Associate Professor, Vegetable Physiology, Texas A&M University
2004- Professor, Vegetable Physiology, Texas A&M University
2006-2016 Assistant Director- Vegetable and Fruit Improvement Center
2011- Center Director, Texas A&M AgriLife Research, Uvalde
2014- Faculty in Molecular & Environmental Plant Sciences (MEPS), TAMU
2020-2023 Interim Center Director, Texas A&M AgriLife Research, Dallas
2024- Center Director, Texas A&M AgriLife Research, Dallas
2024- Adjunct Faculty Member, Lovely Professional University, Punjab, India
2025 - Texas A&M University System Regents Fellow

SYNERGISTIC ACTIVITIES

Dr. Leskovar's program focuses on the understanding of plant morphological, physiological and biochemical adaptation mechanisms to environmental stresses and the development of sustainable vegetable cropping systems. His program is conducted under two umbrella projects, a main Hatch entitled '*Exploiting genotype by environment interaction to improve yield, quality, and stress tolerance in vegetable crops*' and a second Hatch/Multistate titled '*Environmental and genetic determinants of seed quality and performance*'. His specific research emphasis is on: 1) transplant-grafting technology and physiology to increase plant survival under drought, nitrogen deficit and heat stress, 2) PGRs, bio-stimulants and soil amendments to enhance soil and plant health, 3) root and shoot trait responses to water and nutrient conservation strategies, 4) cultivar, fertility and cover crop management for conventional and organic production, 5) protected cultivation, greenhouse hydroponics and controlled environment horticulture (CEH) systems for tomato, pepper, spinach, lettuce and other leafy greens, and 6) G×E×M - genotype selection for drought and heat tolerance, water and nitrogen use efficiency, disease resistance, yield and nutritional quality.

RESEARCH PROJECTS (2024-2026)

- Vegetable cropping system management in relation to environmental stresses. HATCH 8098.
- Environmental and genetic determinants of seed quality and performance. Multi-State W-5168.
- Enhancing Tomato Production Systems to Increase Resilience Against Climate Change. USDA-AMS
- Is Cadmium a Risk for Texas Vegetable Produce? A First Look for Leafy Greens in the

Wintergarden Region. Texas Department of Agriculture

- Enhancing pepper production, profitability, and seed in the southwest U.S. USDA-AMS
- Mitigating drought stress with plant biostimulants for a sustainable production of onion and watermelon, USDA-AMS-SCMP
- Screening F1 hybrid tomato rootstocks for stress tolerance and adaptability in humid-warm climates. KAUST University, Saudi Arabia
- Environmental and hydroponic strategies to enhance tomato stress tolerance, productivity, and quality in Qatar. QNRF – MME – Food Security Call (Completed 2024)

SELECTED PUBLICATIONS (Leskovar lab: [§]postdoc, *graduate student)

- *Lee C, *Nagila N, Harvey JT, [§]Choi S, and **Leskovar DI** (2025). Humic substances and LED lighting improved tomato transplant growth, with limited carryover effects on fruit yield and quality. *HortScience*, 60(4), 476-486. <https://doi.org/10.21273/HORTSCI18343-24>
- *Nagila, A., Crosby, K. M., & Leskovar, D. I. (2025). Evaluating suitable rootstocks for grafting in organic pepper system. *HortScience*, 60(1), 5-16.
- [§]Dash, P.K., Guo, B. and **Leskovar, D.I.** (2025). Biostimulants alleviate heat stress in organic hydroponic tomato cultivation: a sustainable approach. *HortScience*, 60(3): 344-352. <https://doi.org/10.21273/HORTSCI18039-24>
- [§]Dash, P.K., Guo, B. and **Leskovar, D.I.** (2025). Enhancing hydroponic organic tomato resilience through grafting and bioprotection strategies. *HortScience*, 60(3): 334-343. <https://doi.org/10.21273/HORTSCI17990-24>
- *Lee, C., Harvey, J.T., *Qin, K., V. Joshi, and **D.I. Leskovar**. 2024. Exploring the potential of *Solanum pennellii* and *Solanum peruvianum* as rootstocks for enhancing thermotolerance of tomato plants. *Environmental and Experimental Botany*, Volume 221, May 2024, 105741. <https://doi.org/10.1016/j.envexpbot.2024.105741>
- *Bhattarai, S.; Harvey, J.T.; *Lee, C.; Joshi, V. and D.I. Leskovar. 2024. Assessment of physiological and biochemical thermotolerance traits in tomato genotypes. *Scientia Horticulturae*, Vol 324, 112561. <https://doi.org/10.1016/j.scienta.2023.112561>
- [§]Dash, P.K., Guo, B. and D.I. Leskovar. 2024. Assessing tomato genotypes for organic hydroponic production in stressful environmental conditions. *HortScience*, 59(2):188-200. <https://doi.org/10.21273/HORTSCI17481-23>
- *Lee, C., Harvey, J.T., *Nagila, A., *Qin, K., and D.I. Leskovar. 2023. Thermotolerance of tomato plants grafted onto wild relative rootstocks. *Front. Plant Sci., Sec. Plant Abiotic Stress*. Volume 14 - 2023 <https://doi.org/10.3389/fpls.2023.1252456>
- [§]Dash, P.K., Guo, B. and D.I. Leskovar. 2023. Optimizing hydroponic management practices for organically grown greenhouse tomato under abiotic stress conditions. *HortScience*. 58(10):1129-1138. <https://doi.org/10.21273/HORTSCI17249-23>

PROFESSIONAL LEADERSHIP at the American Society of Horticultural Sciences (ASHS)

- ISHS Seed and Stand Establishment Working Group (Chair-elect 1992-1993, Chair 1993-1994)
- ASHS Outstanding Vegetable Publication Award Selection Committee (1994-1995, 2001-2002)
- ASHS Partnership Development and Sponsorship Committee (Member, 2018-2021)
- ASHS Board Member-at large (2019-2021)
- ASHS Cross-Commodity Publication Award Committee (Member, 2020-2023)
- ASHS Board Executive Committee (2023-2026)
- ASHS President Elect (2023)
- ASHS President (September 2024)
- ASHS Board Chair (September 2025)