Conflict of Interest Disclosure

The authors affirm that this research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

Reference

Ahmad H., and Li J., 2021, Impact of water deficit on the development and senescence of tomato roots grown under various soil textures of Shaanxi, China, BMC Plant Biology, 21(1): 241.
https://doi.org/10.1186/s12870-021-03018-1

Alomari-Mheidat M., Corell M., Castro-Valdecantos P., Andreu L., Moriana A., and Martín-Palomo M.J., 2023, Effect of water stress and rehydration on the cluster and fruit quality of greenhouse tomatoes, Agronomy, 13(2): 563.
https://doi.org/10.3390/agronomy13020563

Alomari-Mheidat M., Corell M., Martín-Palomo M.J., Castro-Valdecantos P., Medina-Zurita N., de Sosa L.L., and Moriana A., 2024, Moderate water stress impact on yield components of greenhouse tomatoes in relation to plant water status, Plants, 13(1): 128.
https://doi.org/10.3390/plants13010128

Alshami A.K., El-Shafei A., Al-Omran A.M., Alghamdi A.G., Louki I., and Alkhasha A., 2023, Responses of tomato crop and water productivity to deficit irrigation strategies and salinity stress in greenhouse, Agronomy, 13(12): 3016.
https://doi.org/10.3390/agronomy13123016

Amankwaa-Yeboah P., Aruna Akoriko F., Amponsah W., Yeboah S., Brempong M.B., and Keteku A.K., 2023, Combining deficit irrigation and nutrient amendment enhances the water productivity of tomato (*Solanum lycopersicum* L.) in the tropics, Frontiers in Sustainable Food Systems, 7: 1199386.
https://doi.org/10.3389/fsufs.2023.1199386

Ariss A., Ennejjai I., Lamjid A., Mabrouki J., Kharmoum N., and Ziti S., 2024, IoT-enabled smart greenhouse for robotic enhancement of tomato production: Leveraging 5G and edge computing for advanced data-driven automation, precision irrigation, and scalable zoning principles, International Journal of Interactive Mobile Technologies, 18(21): 88-116.
https://doi.org/10.3991/ijim.v18i21.50829

Bai C., Zuo J., Watkins C., Wang Q., Liang H., Zheng Y., Liu M.-C., and Ji Y., 2022, Sugar accumulation and fruit quality of tomatoes under water deficit irrigation, Postharvest Biology and Technology, 195: 112112.
https://doi.org/10.1016/j.postharvbio.2022.112112

Bogale A., Nagle M., Latif S., Aguila M., and Müller J., 2016, Regulated deficit irrigation and partial root-zone drying irrigation impact bioactive compounds and antioxidant activity in two select tomato cultivars, Scientia Horticulturae, 213: 115-124.
https://doi.org/10.1016/j.scienta.2016.10.029

Burato A., Fusco G.M., Pentangelo A., Nicastro R., Modugno A.F., Di Covella F.S., Ronga D., Carillo P., Campi P., and Parisi M., 2024, Regulated deficit irrigation to boost processing tomato sustainability and fruit quality, Sustainability, 16(9): 3798.
https://doi.org/10.3390/su16093798

Chand J., Hewa G., Hassanli A., and Myers B., 2020, Evaluation of deficit irrigation and water quality on production and water productivity of tomato in greenhouse, Agriculture, 10(7): 297.
https://doi.org/10.3390/agriculture10070297

Chen D., Li H., Wang X., Li S., Jiang X., Dai A., Yu H., Zhang Y., and Liu Y., 2025, Effects of water and nitrogen coupling on the plant growth and quality of greenhouse tomatoes at the first flowering and fruiting stages, International Journal of Agricultural and Biological Engineering, 18(1): 181-190.
https://doi.org/10.25165/j.ijabe.20241706.8781

Chen M., Zhu X., Liu X., Wu C., Yu C., Hu G., Chen L., Chen R., Bouzayen M., Zouine M., and Hao Y., 2021, Knockout of auxin response factor SlARF4 improves tomato resistance to water deficit, International Journal of Molecular Sciences, 22(7): 3347.
https://doi.org/10.3390/ijms22073347

Colimba-Limaico J.E., Zubelzu-Minguez S., and Rodríguez-Sinobas L., 2022, Optimal irrigation scheduling for greenhouse tomato crop (*Solanum lycopersicum* L.) in Ecuador, Agronomy, 12(5): 1020.
https://doi.org/10.3390/agronomy12051020

Coyago-Cruz E., Corell M., Moriana A., Hernanz D., Stinco C.M., Mapelli-Brahm P., and Meléndez-Martínez A.J., 2022, Effect of regulated deficit irrigation on commercial quality parameters, carotenoids, phenolics and sugars of the black cherry tomato (*Solanum lycopersicum* L.) 'Sunchocola', Journal of Food Composition and Analysis, 105: 104220.
https://doi.org/10.1016/j.jfca.2021.104220

Cui J., Shao G., Lu J., Keabetswe L., and Hoogenboom G., 2019, Yield, quality and drought sensitivity of tomato to water deficit during different growth stages, Scientia Agricola, 77: e20180390.
https://doi.org/10.1590/1678-992x-2018-0390

Dirlik I., Uğurlar F., and Kaya C., 2025, Sensor-guided smart irrigation for tomato production: Comparing low and optimum soil moisture in greenhouse environments, Food and Energy Security, 14(2): e70082.
https://doi.org/10.1002/fes3.70082

Fanourakis D., Makraki T., Spyrou G.P., Karavidas I., Tsaniklidis G., and Ntatsi G., 2025, Environmental drivers of fruit quality and shelf life in greenhouse vegetables: Species-specific insights, Agronomy, 16(1): 48.