EVIDENCE SUMMARY

Hydrogen-Enriched Irrigation

This summary sets out the peer-reviewed study on file for hydrogen nanobubble irrigation, described as its authors report it. Figures not stated in the source are not presented.

How HERO Irrigation works

The HERO Irrigation Hydrogen Nano-bubble System connects in-line to an existing irrigation main. Hydrogen is generated on site from water; nothing is added to the water.

PEER-REVIEWED · CHINA

Cherry tomato — two greenhouse trials (Shanghai 2021, Nanjing 2023)

About 40%	About 26–28%
Yield per plant vs surface water, without fertiliser	Yield per plant vs surface water, with fertiliser

Method. Hydrogen nanobubble water at about 1.0 mg/L was applied once, by flood irrigation, the day after planting, with and without fertiliser, against surface-water controls.

Result. Yield per plant was about 40% higher than surface water without fertiliser, and about 26–28% higher with fertiliser. Fruit sugar–acid ratio and lycopene improved.

Limits. The authors note the mechanism requires further investigation. Two trials, one crop.

Source. Li, M., Zhu, G., Liu, Z., Li, L., Wang, S., Liu, Y., Lu, W., Zeng, Y., Cheng, X., Shen, W. (2024). "Hydrogen Fertilization with Hydrogen Nanobubble Water Improves Yield and Quality of Cherry Tomatoes Compared to the Conventional Fertilizers." *Plants*, 13(3):443. https://www.mdpi.com/2223-7747/13/3/443

Reported trial results, not a yield guarantee; outcomes vary with crop, climate and practice. Provided for technical communication and commercial evaluation only.

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