

detailed measurements of growth, canopy light distribution, and fruit nutritional quality with rigorous economic and labor analyses. There is particular need to test trellis systems under stress conditions such as heat, salinity, and water deficit, where grafting onto tolerant *Luffa* rootstocks, IoT-based greenhouse or field control, and soilless cultivation are already showing promise in other cucurbits. Integrating these technologies into comprehensive, sensor-informed trellis packages, and co-designing them with farmers for different ecological and market contexts, will be essential to fully exploit the yield and quality potential of *Luffa* as an emerging high-value crop.

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Conflict of Interest Disclosure

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

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