

Review of: "Sustainable Agriculture: Aquaponics-Integrated Greenhouse Cultivation of Cantaloupe with Drip Irrigation System"

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Potential competing interests: No potential competing interests to declare.

General Comments:

The article **"Sustainable Agriculture: Aquaponics-Integrated Greenhouse Cultivation of Cantaloupe with Drip Irrigation System"** provides valuable insights into an innovative and sustainable cantaloupe farming strategy designed for climate resilience. The integration of aquaponics, greenhouse technology, and drip irrigation forms a holistic model, promising substantial economic and environmental benefits. However, the discussion of the results could benefit from enhancements, including the highlighting of key findings, comparisons with pertinent studies, and a stronger emphasis on the study's significance within the broader agricultural context. The inclusion of citations supporting the drawn conclusions is crucial to bolster the scientific validity of the work. The call to explore alternative preventive measures in specific climates is well-suited, reflecting a forward-looking perspective that harmonizes seamlessly with the article's overall tone. Furthermore, incorporating statistical analyses, such as ANOVA, in relevant sections would provide a more comprehensive and robust evaluation of the presented data.

Specific Comments:

Abstract:

The abstract is commendable for its brevity and informativeness. To enhance comprehensiveness, consider incorporating insights into the primary findings of the study.

Introduction:

The introduction adeptly sets the stage by offering an overview of agricultural membrane technology and highlighting the benefits of greenhouse farming for cantaloupe. However, a noticeable lack of citations throughout diverse sections, including the "Introduction" and "Materials and Methods," diminishes the article's academic rigor. Adding relevant citations will significantly strengthen its credibility.

Methods:

While specifics about the location, timing, and dosage of the sample are appreciated, this section can be enhanced by providing additional details on the selection of cantaloupe varieties and the underlying theories guiding their choice.

Including appropriate citations to support the methods employed in the study will further reinforce the scientific foundation.

Results and Discussion:

The section on diseases, such as powdery mildew and root rot, is both extensive and informative. Consider augmenting this information by including preventive measures or strategies, thereby enhancing the practical utility of the content. Additionally, the results lack a statistical analysis. Integrating the ANOVA test and mean comparison test would provide a robust quantitative foundation for the conclusions drawn. Comparative data with other melon growth models from diverse regions should be integrated to provide readers with a broader contextual understanding.