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.

Dear author: I have read in its entirety and reviewed the article entitled: Sustainable Agriculture: Aquaponic-Integrated Greenhouse Cultivation of Cantaloupe Melon with Drip Irrigation System.

which does not present in its title the variables of study, by placing the concept of sustainable agriculture should include economic, environmental, and social variables in the text, therefore assuming sustainability of aquaponics, should give us data for validation.

The cultivation of melon in a protected and controlled environment, as is the case with melons, is not integration; it is simply protected agriculture. On the other hand, when we read (an aquaponic system), if it is an integration of aquaculture and agriculture, I consider that the title of the work should indicate: "The evaluation of growth, yield, and quality of Cantaloupe Melon crop with an aquaponic system under greenhouse conditions in Vietnam." It is more accurate than what is reported in the paper.

On the other hand, the body of the article does not specify the aquaculture section; the development of the work only focuses on melon production variables, so it should be clarified in the methodology.

The abstract:

The abstract is the most read section of an article; unfortunately, it is structured in a way that generates expectations that are not supported in the body of the article, because the objective is very different from the title. In general, an abstract is structured according to the following: brief introduction, objective, methodology, results, and conclusion.
I suggest rewriting the abstract of the paper.

In the introduction:
It is too brief, it has no references. An introduction should generally contain:

I suggest the authors answer the following questions and analyze the introduction section:

1. Is it focused on the problem clearly from macro to micro?

2. Is it enjoyable and fruitful to read? Does it condense the letters and is it prolific in ideas?

3. Does it clearly state the reasons for conducting the study?

4. Does it state the premises on which the study is based?

5. Does it clearly define the objectives of the study?

6. Does it state the hypotheses that the study intends to demonstrate?

The objective: An important section is the objective of the work:
"To investigate, develop, and build an organic aquaponics farm model for fish and vegetables in Ben Tre province using IoT technologies." to monitor and manage environmental conditions."

The objective does not coincide with the variables reported, so I suggest it is again adjusted to what they report regarding the variables: growth, yield and quality of the Cantaloupe Melon crop.

Recommendations for the methodology

The methodology is very brief, it is not possible with the information presented to guarantee its replication by other research**ers**

Did you provide all the necessary information about the variables studied and the products used (doses, origin, etc.)?

Did you include all the methods used in the study?

Did you describe them in detail?

Did you correctly cite the methods?

Are the statistical procedures rigorous?

Is the use of data description and statistical treatment consistent?

These are reflection questions that support your work.

Results

Recommendation for the conclusion and for its support.

Is the parallelism between the presentation of results in text and the presentation of data in tables and figures perfect?

Does the order of presentation of the different types of results follow a logical order?

Have you highlighted the star results?

Is it clear in all comparisons which values are compared and which test is used for comparison?

Is the use of descriptive parameters and tests consistent with the sample sizes and type of data distribution?

Do you provide the p value in the text or illustrations when the test is significant?

Can you present the data in a more concise way?

Conclusions

Recommendation for conclusions: Is the original contribution?

Degree of linkage to the objectives.

Degree of integration of the theoretical and application framework.

Discussion raised regarding the results obtained.

Derivation of normative or explanatory processes on reality.

Clarification of the limits of the study and proposals for new studies.

These are questions for reflection and support.

General comments:

The work is undoubtedly of interest to the study site and it is possible that the results are favorable as a case report, unfortunately as a research article it lacks information that would give scientific validity to its results.

Figure 2. is not in English so it is not possible to read it.
and it is very important.
As for the design of the inverandero, it does not explain why they are different, these results distort the results:

There are several options for greenhouse design, and when choosing which one to build, the following factors should be taken into account:

Climatic requirements of the crop.
Climatic characteristics of the area.
Availability of labor and inputs.
Efficiency and functionality criteria.

In relation to the thermal regime to be maintained inside the greenhouse, it can be classified as cold, temperate, or hot. Depending on the covering material used, they can be distinguished as rigid (glass, polycarbonate) or flexible (polyethylene, polyvinyl chloride). As for the supporting structure, wood, metal (steel, aluminum, etc.), concrete, or a combination of these materials can be used.

Another variable is the shape of its structure: hood (single or gabled), curved, parral, or inflatable, etc.

A greenhouse is a structure that allows control of the environmental conditions for the cultivation of plants, protecting them from climatic variations and pests. The construction of a greenhouse requires taking into account several aspects,

such as:

The climatic requirements of the crop, such as optimum temperature, humidity, light, and CO2 for its development and production.
The climatic characteristics of the area, such as solar radiation, wind speed, precipitation, and average and extreme temperatures.
The availability of labor and inputs, such as water, energy, fertilizers, pesticides, and construction materials.
Efficiency and functionality criteria, such as design, orientation, ventilation, irrigation, pest and disease control, and economic profitability.

At the end of the manuscript, what they actually did was a comparison of two study sites with the aforementioned variables.