

REVIEWER'S REPORT

Manuscript No.: IJAR-58556

Title: TERRITORIAL CHARACTERIZATION AND PHYTOSANITARY RISK CLASSIFICATION OF CITRUS FRUIT CONSOLIDATION UNITS IN THE RECÃ”NCAVO REGION OF BAHIA, BRAZIL.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after **major revision**

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		Good		
Techn. Quality			Fair	
Clarity			Fair	
Significance			Fair	

Reviewer's ID: **JPR-115**

Detailed Reviewer's Report

Major Comments

1. Novelty should be strengthened

The introduction adequately explains the importance of citrus phytosanitary management, but the manuscript should clearly state:

- What specific research gap exists?
- Why has no previous study characterised consolidation units in this manner?
- What is the unique contribution compared with previous HLB or citrus canker studies?

A dedicated paragraph highlighting the novelty is recommended.

2. Risk classification methodology needs clarification

The manuscript reports that units were classified as low, medium, and high risk, but the scoring system is not sufficiently explained.

Please include:

- criteria used
- weight assigned to each variable
- mathematical formula or scoring matrix
- justification for cutoff values

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- validation of the classification

Without this information, reproducibility is limited.

3. Statistical analysis is insufficient

The manuscript mainly presents percentages.

Consider including:

- Chi-square tests
- Confidence intervals
- Correlation analysis
- PCA or cluster analysis
- Logistic regression (if applicable)

These analyses would substantially strengthen the conclusions.

4. Sample size

Only 15 consolidation units were evaluated.

The authors should discuss:

- limitations due to sample size
- representativeness
- possibility of extending the approach to other citrus-producing regions.

5. Discussion requires more critical interpretation

Many discussion paragraphs repeat the results followed by literature citations.

Instead:

- explain *why* the findings occurred
- compare directly with previous studies
- discuss agreements and contradictions
- emphasize practical implications

6. Figures

There are approximately 30 figures.

Several figures show simple yes/no percentages.

Consider:

- merging related figures

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- presenting some data in tables
- improving readability

This would shorten the manuscript considerably.

7. Drone methodology

The UAV methodology is well described, but additional details are needed:

- Ground Sampling Distance (GSD)
- image overlap
- orthomosaic accuracy
- positional error
- validation of spatial measurements

8. Validation of questionnaire

The questionnaire contains 37 questions.

Please report:

- development procedure
- expert validation
- pilot testing
- reliability assessment (e.g., Cronbach's alpha if applicable)

Minor Comments

Abstract

The abstract is informative but slightly long.

It can be shortened by removing methodological details while emphasizing:

- objectives
- methodology
- principal findings
- significance.

Keywords

Avoid repeating words already present in the title.

Include broader indexing terms such as:

- Biosecurity

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- Citrus packinghouses
- Plant disease surveillance
- GIS
- Precision agriculture

Introduction

The introduction could conclude with explicit hypotheses or research questions.

Materials and Methods

Please provide:

- ethical approval (if required)
- dates of field surveys
- software versions
- GIS coordinate reference system
- justification for 200 m buffer intervals.

Results

Some paragraphs simply describe figures.

Avoid repeating numerical values already visible in the figures.

Instead, emphasize the important trends.

Discussion

Some sections are overly descriptive.

Reduce repetition and strengthen biological interpretation.

Conclusion

The conclusion should include:

- principal findings
- practical implications
- policy recommendations
- future research directions

rather than repeating the discussion.

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Language

Although the English is generally understandable, the manuscript would benefit from professional language editing.

Examples include:

- inconsistent hyphenation
- repetitive sentence structures
- unnecessary passive voice
- long paragraphs.

References

Please verify:

- consistency of journal abbreviations
- DOI formatting
- citation style
- completeness of recent references.

Strengths

- Important topic in phytosanitary surveillance.
- Good integration of GIS, UAV, and field observations.
- Strong practical relevance for agricultural defense.
- Comprehensive field survey.
- Extensive and up-to-date literature review.
- Useful application for citrus disease prevention.

Weaknesses

- Risk assessment methodology needs greater transparency.
- Statistical analyses are limited.
- Excessive number of figures.
- Some repetition throughout the Results and Discussion.
- Novelty should be articulated more clearly.
- Questionnaire validation is not described.

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Overall Evaluation

The manuscript presents valuable research with clear practical implications for citrus phytosanitary management and agricultural biosecurity. The integration of geospatial technologies with operational and phytosanitary assessments is a notable strength. However, important methodological clarifications, stronger statistical analyses, improved presentation of results, and a more critical discussion are necessary before the work is suitable for publication. Therefore, I recommend **Major Revision**.