

REVIEWER'S REPORT

Manuscript No.: IJAR-52393

Date: 19 June 2025

Title: Screening and Application of Effective Agents for Controlling Sweet Potato Soft Rot Disease

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision√.....

Do not accept (*Reasons below*)

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

Reviewer Name: Dr Ahmed M. Saqr

Date: 19 June 2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

This manuscript addresses a critical postharvest disease—sweet potato soft rot—by systematically evaluating both chemical fungicides and plant-derived essential oils for effective control. A notable strength is the comprehensive screening of multiple agents and their combinations, particularly the innovative pairing of fludioxonil with calamus essential oil, which showed promising synergistic effects. The study's integrated approach offers valuable insights for developing more sustainable, green disease management strategies in sweet potato storage and underscores the potential of essential oils as environmentally friendly alternatives to conventional chemicals.

Detailed Reviewer's Report

Thank you for the invitation to review this manuscript. The paper tackles a highly relevant topic, aiming to identify effective, environmentally friendly agents for the control of sweet potato soft rot—a disease of significant economic importance. The integration of both chemical and plant-derived agents is of particular interest and aligns with current trends in sustainable agriculture.

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Overall, the research presents valuable experimental findings; however, the manuscript requires substantial improvement to meet the standards of publication in an international journal. Major issues pertain to clarity and thoroughness in the presentation of methods, results, and scientific discussion. I recommend a major revision addressing the points outlined below, which will improve the study's scientific rigor, clarity, and impact.

Major Comments**1. Abstract****Comment:**

Could the authors revise the abstract for conciseness and clarity? Specifically, please summarize the main findings with quantitative details, clearly state the research objective, and emphasize the novelty of the work.

2. Introduction**Comment:**

The Introduction contains extensive background but mixes historical context, global production data, and disease description in a lengthy narrative. Could the authors condense the background and more sharply focus on the knowledge gap this study addresses? What are the specific scientific questions or hypotheses?

3. Materials and Methods (Sections 2, 3, 4, 5)**Comment:**

The methodology descriptions are scattered and sometimes lack critical detail (e.g., sources of strains, replication, concentrations, data analysis methods). Could the authors systematically detail experimental design, controls, replication, statistical methods, and validation steps for all assays? For example, how were essential oil concentrations standardized, and how was fungal identity confirmed?

4. Results – Data Presentation and Interpretation (Sections 3.2, 4.2, 5.2)**Comment:**

Figures and tables are referenced in the text but are sometimes poorly described or interpreted. Several result sections (e.g., EC50 calculations, essential oil inhibition rates) would benefit from clearer, more visual presentation and more robust statistical interpretation. Can the authors

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reformat results for better readability, and include error bars, p-values, and more explicit comparisons?

5. Images and Figures

Comment:

Many figures (spore, hyphae, treatment effects) are shown with limited description or unclear scale. Could the authors provide higher-resolution images with comprehensive figure legends, clear scale bars, and annotations? Ensure all images directly support the corresponding claims in the text.

6. Discussion

Comment:

While the Discussion recaps findings, it lacks depth in the interpretation of results, comparison with previous studies, and critical evaluation of limitations. Could the authors thoroughly discuss how their findings advance the field, address limitations, and suggest directions for future research (e.g., field validation, mechanism studies)?

7. Conclusion

Comment:

The Conclusion largely repeats previous sections. Could the authors distill this section to highlight the most important findings, practical implications, and next steps, avoiding redundancy?

8. References

Comment:

The reference section includes some formatting inconsistencies and possibly outdated or tangential sources. Please check for completeness, accuracy, and relevance, and follow the journal's reference style exactly.

9. Language, Structure, and Formatting

Comment:

The manuscript requires substantial language editing for clarity, grammar, and academic tone. Sentences are often verbose or imprecise. Would the authors consider careful proofreading, possibly with the help of a professional language editor?

REVIEWER'S REPORT***Minor Comments******1. Abstract***

Several sentences are repeated in both the abstract and introduction. Please avoid redundancy.

2. Figures (e.g., 4.1, 4.2, 5.1, 6.1-6.3)

Some figure numbers and captions do not match text references. Please ensure all figures and captions are clearly labeled and referenced.

3. Table Formatting (Results)

Tables would benefit from standard formatting, including consistent decimal places and explanatory footnotes.

4. Section Headings (e.g., 1.1.3, 1.3.1)

Subsection numbering is sometimes inconsistent. Please use a consistent numbering system throughout.

5. Methods (2.1.2, 3.1.3, 4.1.2)

Please define all abbreviations on first use (e.g., PDA, EC50), and provide catalog numbers for chemicals where appropriate.

6. Statistical Analysis

Statistical methods (SPSS use, significance levels, etc.) need clarification and should be described in the Methods section.

7. Discussion

The paragraph structure in the Discussion is confusing; please use clear topic sentences and logical transitions.

8. Typographical and Grammatical Issues

There are typographical errors throughout (e.g., "Rhizhopus creeping" instead of "Rhizopus stolonifer", inconsistent use of genus/species names). Please correct these.