

Author Guidelines

Journal Name: International Journal of Tropical Agricultural Research and Extension

Initial Manuscript Assessment for Suitability during Desk Evaluation

- The TARE Journal only considers manuscripts with 10% or less similarity score on Turnitin for publication.
- All manuscripts will be evaluated for the scope and focus of TARE Journal.
- Manuscripts employing inappropriate statistical methodologies will be excluded.
- Only the manuscripts that comply with the standards of the journal will be sent for peer-reviewing process.

Manuscript Preparation

1. General Formatting

- **Font:** Times New Roman, font size 12.
- **Spacing:** Double-spaced throughout, except for tables, which should be single-spaced. Table font size 10
- **Margins:** 1 inch (2.54 cm) on all sides.
- **Page Numbering:** Pages should be numbered consecutively.
- **Line Numbering: Number the lines in the document continuously.**

2. Manuscript Structure

Research Papers should be organized in the following order:

Title Page

- Title of the manuscript
- Names of all authors and their affiliations
- Corresponding author's contact information, including email address

Abstract

- Should not exceed 300 words.
- Summarize the key findings and significance of the research.
- Avoid references and undefined abbreviations.

Keywords

- Provide 4-6 keywords relevant to the research. Please do not repeat the words already in the title.

Introduction

- Provide background information and the rationale for the study.

- Clearly state the research objectives or hypotheses.

Materials and Methods

- Describe the study design, materials used, and methods employed in sufficient detail to allow replication.
- Include information on statistical analyses performed.

Results

- Present the findings of the study clearly and concisely.
- Use tables and figures to support the text where appropriate.

Discussion

- Interpret the results in the context of existing knowledge.
- Discuss the implications of the findings and potential future research directions.

Conclusion

- Summarize the main findings and their significance.
- Provide a clear statement of the main conclusions drawn from the research.

Acknowledgements

- Acknowledge individuals, institutions, or funding sources that contributed to the research but did not meet the criteria for authorship.

Author Contributions

- Specify the contribution of each author to the research and manuscript preparation.

Declaration of Conflict of Interest

- Disclose any potential conflicts of interest.

References

- Follow the [Harvard](#) referencing style.
- Double-space the references.
- Ensure all references cited in the text are listed and vice versa.

Tables and Figures

- Embed tables and figures within the text, close to where they are first cited.
- Use a consistent style for tables and figures throughout the manuscript.

- Tables should be single-spaced.
-

Harvard Referencing Style

In-text Citations

- Use the author-date system.
- Example: (Silva, 2020)

Reference List

Singe-space the reference list.

Provide DOI if available.

List references alphabetically by the author's last name.

Example format for a journal article:

Title Page Template

Title of the Manuscript: Impact of Climate Change on Crop Productivity in Tropical Regions

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ABSTRACT

Provide a concise summary of the research, ensuring it does not exceed 300 words. The abstract should cover the following sections without using subheadings.

Background and Objective: Briefly introduce the context and importance of the research. State the main objective or hypothesis of the study.

Methods: Summarize the key methods and approaches used in the research, including any specific techniques, materials, and statistical analyses.

Results: Highlight the main findings and results of the study. Be specific about what was discovered, observed, or determined.

Conclusion: Summarize the implications and significance of the findings. Indicate any potential applications, future research directions, or impact on the field.

Keywords: Provide 4-6 keywords relevant to the research and can help index the manuscript.

Introduction Guideline

1. Context and Background

Start with a broad context: Introduce the general topic of your research and its importance in the field. Provide background information to help readers understand the significance of the research problem.

Narrow to specific focus: Gradually narrow down to the specific aspect or problem your study addresses. Clearly state the gap in knowledge or the research question your study aims to answer.

2. Research Gap and Problem Statement

Identify the gap: Explain the gap in current knowledge or understanding your research aims to fill.

Define the problem: Clearly articulate the specific research problem or question your study addresses. Explain why it is important to address this problem.

3. Objective or Hypothesis

State the objective: Clearly state the main objective or objectives of your study. If applicable, also mention any hypotheses that you are testing.

Explain the rationale: Briefly explain why these objectives are important and how achieving them will contribute to the field.

4. Key Concepts and Definitions

Define key concepts: Define any key terms or concepts that are essential for understanding your study.

Clarify scope and limitations: Briefly outline the scope of your study and any limitations that might affect the interpretation of your results.

5. Structure of the Paper

Outline the paper: Provide a brief overview of how the paper is structured. Mention the main sections such as Materials and Methods, Results, and Conclusion.

6. Significance of the Study

Highlight the significance: Summarize the potential impact or significance of your study. Explain how your findings could advance knowledge, influence policy, or improve practice in the field.

Example Introduction (Only the structure, authors can expand the contents)

Climate change poses significant challenges to global agriculture, particularly in tropical regions where the impacts on crop productivity are expected to be most severe (Perera et al., 2020; Gamage and Liyanage, 2019). Rising temperatures, changing precipitation patterns, and increased frequency of extreme weather events are projected to profoundly affect agricultural systems, including shifts in cropping patterns and decreased yields (IPCC, 2018).

Despite the critical importance of understanding these impacts, there remains a gap in our knowledge regarding the specific mechanisms through which climate change affects crop productivity in tropical regions. Previous studies have largely focused on temperate areas, and limited research addresses the unique challenges tropical crops face (Silva et al., 2021; Garcia et al., 2022). This study addresses this gap by investigating climate change's direct and indirect effects on the productivity of key crops, such as rice and maize, in (specific region or country).

The research problem addressed in this study is to understand how increased temperatures and altered precipitation patterns will reduce crop yields due to increased water and heat stress. This problem is significant because (explain why addressing this problem is important, e.g., impacts on food security, economic implications).

To achieve this objective, we conducted a comprehensive analysis combining field experiments with climate modelling techniques. Our findings provide new insights into the vulnerability of tropical crops to climate change and will inform strategies for enhancing agricultural resilience in the face of these challenges.

This paper is structured as follows: Section 1 describes the background, section 2 describes the materials and methods used in the study, Section 3 presents the results of our analysis, and Section 4 discusses the implications of our findings for agricultural policy and practice.

Materials and Methods Guideline

1. Overall Structure

Organize logically: Present the methods in a logical order, typically following the sequence in which the experiments or procedures were performed.

Use subheadings: Use subheadings to divide the section into clear, distinct parts. Common subheadings include Experimental Design, Study Area, Sample Collection, Laboratory Procedures, Data Analysis, etc.

2. Experimental Design

Describe the design: Clearly describe the experimental design, including control and treatment groups, randomization, and replication.

Specify variables: Identify independent, dependent, and controlled variables.

3. Materials

List materials: Provide detailed information on the materials used, including the sources and specifications (e.g., chemical reagents, equipment, software).

Include quantities: Mention quantities, concentrations, and volumes where applicable.

4. Study Area (if applicable)

Describe the location: Provide details about the study area, including geographic location, climate, and any relevant environmental conditions.

Include maps or diagrams: If necessary, include maps or diagrams to provide a clear understanding of the study area.

5. Sample Collection

Detail sampling methods: Describe how samples were collected, including the sampling method, frequency, and any specific criteria for sample selection.

Provide timelines: Mention the dates or time period during which the samples were collected.

6. Laboratory Procedures

Describe procedures: Provide detailed descriptions of all laboratory procedures and protocols used. Include information on equipment and settings.

Mention modifications: If standard procedures were modified, clearly describe the modifications and the reasons for them.

7. Data Analysis

Specify statistical methods: Describe the statistical methods and software used for data analysis. Include information on any models or tests performed.

Mention criteria for significance: Specify the criteria for statistical significance (e.g., p-value thresholds).

Detail any transformations: If data transformations were performed, describe the methods and reasons for these transformations.

8. Ethical Considerations (if applicable)

Mention approvals: If the research involved human or animal subjects, mention any ethical approvals obtained from relevant committees or boards.

Describe ethical procedures: Briefly describe the ethical procedures followed to ensure compliance with guidelines.

9. Reproducibility

Ensure clarity: Provide sufficient detail to allow other researchers to replicate the study. Avoid ambiguous terms and ensure all steps are clearly described.

Include supplementary materials: If there are extensive protocols or data sets, consider including them as supplementary materials or providing a link to a repository.

Example for Materials and Methods

Study Area

The study was conducted in all the agroecological zones of Sri Lanka, which are characterized by a tropical monsoon climate with distinct wet and dry seasons. The average annual rainfall ranges from 100 to 2,500 mm, and the temperature varies between 24°C and 32°C.

Experimental Design

To evaluate the performance of twenty *Capsicum chinense* accessions, a randomized complete block design (RCBD) with three replicates was used. Each plot measured 3 m x 3 m and contained 20 plants spaced 50 cm apart.

Sample Collection

Mature fruits were harvested at the peak ripening stage from each accession during the 2022 *Yala* season. A total of ten fruits per plant were collected and pooled to form a composite sample for each plot.

Laboratory Procedures

High-Performance Liquid Chromatography (HPLC) analysed the fruits for capsaicin content. The samples were prepared by homogenizing 5 g of fruit tissue with 20 mL of methanol and filtration through a 0.45 µm filter. The HPLC system (Agilent 1200 Series) was equipped with a C18 column, and the mobile phase consisted of methanol and water (70:30, v/v). The detection was carried out at 280 nm.

Data Analysis

Statistical analyses were performed using SPSS Version 26.0. An analysis of variance (ANOVA) was conducted to assess the differences among accessions. Duncan's Multiple Range Test (DMRT) was used for mean separation at a significance level of $p < 0.05$.

Ethical Considerations

The study was conducted following the ethical standards of the Sri Lankan Agricultural Research Ethics Committee. No human or animal subjects were directly involved in the research.

Following these guidelines ensures that your Materials and Methods section is clear, detailed, and well-organized, allowing other researchers to understand and replicate your study. Adjust the specifics to fit the requirements of the journal you are submitting to.

Results and Discussion Sections

In this section, provide a clear and concise summary of your findings, using tables and figures to support your statements. Report the results of statistical analyses and describe any trends observed. Interpret your findings and relate them to previous research. Discuss the implications of your findings and consider alternative explanations. Summarize your conclusions and suggest future research directions.

1. Organize Results Logically

Start with a summary: Begin with a concise summary of the main findings.

Use subheadings: If your study is complex, organize results into sections or subheadings based on different experiments or research questions.

2. Present Data Clearly

Use tables and figures: Present data using tables and figures with appropriate legends and titles.

Describe data: Provide clear descriptions of the data presented in each table and figure.

3. Report Statistical Analyses

Describe statistical tests: Explain the statistical methods used, including any statistical software.

Present results of analyses: Report the results of statistical analyses, including p-values and confidence intervals as appropriate.

4. Use Text to Summarize Key Findings

Summarize findings: Use text to summarize the key findings from the tables and figures.

Highlight trends: Identify any trends or patterns observed in the data.

5. Provide Context

Compare with literature: Compare your findings with those of other studies cited in the Introduction.

Discuss implications: Briefly discuss the implications of your findings.

6. Interpret the Results

Start with a summary: Begin with a summary of your key findings.

Interpret findings: Interpret your results in the context of the study objectives and hypotheses.

Explain unexpected findings: Discuss any unexpected or contradictory findings.

7. Relate to Previous Studies

Compare with literature: Compare your findings with those of similar studies cited in the Introduction.

Explain differences: Discuss any differences or similarities between your results and previous studies.

8. Discuss the Meaning of the Results

Explain implications: Discuss the implications of your findings for theory, practice, or policy.

Consider limitations: Acknowledge any limitations of the study that may affect the interpretation of the results.

9. Consider Alternative Explanations

Address alternative explanations: Discuss alternative explanations for your findings.

Examine biases: Consider potential biases or confounding factors that may have influenced the results.

10. Draw Conclusions

Summarize conclusions: Summarize the main conclusions drawn from the study.

Recommend future research: Suggest directions for future research based on your findings.

11. Provide a Complete Narrative

Flow and coherence: Ensure the discussion flows logically and is coherent.

Avoid repetition: Avoid repeating information from the Results section unnecessarily.

Figure Guideline

1. Selecting Figures

Choose relevant data: Select data that are essential for understanding your results or illustrating key findings.

Avoid redundancy: Do not duplicate information already presented in tables or the text unless it is necessary for clarity.

2. Creating Figures

Use appropriate software (Optional): Create your figures using software like R, Python (matplotlib, seaborn), GraphPad Prism, or Adobe Illustrator.

Ensure clarity: Figures should be clear, concise, and interpretable.

Label axes: Clearly label the axes with the quantity being measured and its units.

Legend and symbols: Use a legend if multiple datasets or conditions are represented in the figure. Ensure symbols are clearly defined and distinguishable.

Use color effectively: Use color to enhance clarity, but ensure the figure is still readable in black and white. Avoid using red-green combinations, as they can be difficult for color-blind readers.

3. Figure Components

Title: Provide a descriptive title at the top of the figure. Make it concise but informative.

Axes labels: Label the x-axis and y-axis clearly with appropriate units.

Legend (if applicable): If multiple datasets are shown, include a legend to distinguish between them.

Data points and error bars: Clearly show data points and, if applicable, error bars representing standard deviation, standard error, or confidence intervals.

Annotations: Use arrows, lines, or text boxes to highlight specific points of interest.

Figure size: Ensure the figure size is appropriate for readability when printed or viewed online.

4. Numbering and Citation

Number figures: Number figures consecutively in the order they appear in the text (Figure 1, Figure 2, etc.).

Referencing: Refer to figures in the text using "Figure 1", "Figures 2 and 3", etc.

5. Figure Legends

Provide context: Write a legend that explains the figure clearly and concisely.

Interpretation: Interpret the results shown in the figure, if needed, but save detailed interpretation for the Results or Discussion sections.

Methods: If necessary, briefly describe the methods used to generate the data in the figure.

Example Figure

Below is an example of a well-formatted figure legend:

Figure 1: Mean crop yield (kg/ha) of different varieties over three years

This figure shows the mean crop yield (kg/ha) of three different rice varieties (Variety A, Variety B, Variety C) over three years (Year 1, Year 2, Year 3). Error bars represent standard deviation. Variety B consistently showed the highest yield across all three years.

Table Formatting Guideline

1. Designing Tables

Choose relevant data: Ensure that the data presented in the table are essential and add value to the understanding of your research.

Avoid redundancy: Do not present the same data in both tables and figures. Choose the format that best presents the information.

2. Table Structure

Title: Provide a concise and descriptive title above the table. The title should clearly indicate what the table represents.

Columns and rows: Organize data logically in rows and columns. Ensure each column and row has a clear, descriptive heading.

Units: Include units of measurement in the column headers where applicable.

Footnotes: Use footnotes to provide additional information, explanations of abbreviations, or specific details about the data.

3. Formatting

Font and size: Use a consistent font and size throughout the table. Typically, Times New Roman, 12-point font is used.

Spacing: Use double spacing for the table text. If the table is very dense, single spacing can be used for table content, but ensure readability.

Alignment: Align text to the left for row headers and center-align numerical data. Align decimal points for numerical data in columns.

Borders: Use borders to separate columns and rows clearly. Avoid excessive use of gridlines; horizontal lines above and below headers and at the bottom of the table are usually sufficient.

4. Table Numbering and Citation

Number tables: Number tables consecutively in the order they appear in the text (Table 1, Table 2, etc.).

Referencing: Refer to tables in the text using "Table 1", "Tables 2 and 3", etc.

5. Table Footnotes and Annotations

Footnotes: Use superscript letters or numbers to reference footnotes. Footnotes can explain abbreviations, provide additional data details, or note significant statistical findings.

Annotations: Use symbols (e.g., *, **, ***) to denote statistical significance levels, explained in footnotes.

SAMPLE ACKNOWLEDGEMENT:

We acknowledge Dr ABC from the Department of Agricultural Sciences at the University of DEF for his invaluable guidance and support throughout this research. We also thank the technical staff at the GHI for their assistance with the field experiments. We acknowledge JKL (Funding Agency) for the financial support under grant number (Grant Number). We recognize the constructive feedback from our peer reviewers.

Harvard Reference Formatting Guidelines

1. Books

Format: Author(s) Last name, First Initial(s). (Year) *Title of Book*. Edition (if not the first). Place of Publication: Publisher.

Example: Smith, J.A. (2020) *Climate Change and Crop Productivity*. 2nd ed. London: Academic Press.

2. Journal Articles

Format: Author(s) Last name, First Initial(s). (Year) 'Title of Article', *Title of Journal*, Volume(Issue), Page Numbers. DOI (if available).

Example: Garcia, M.B. and Johnson, D.C. (2019) 'Impact of Climate Change on Rice Yields in Tropical Regions', *Agricultural Research Journal*, 45(3), pp. 245-258. DOI: 10.1016/j.agrj.2019.01.002.

3. Book Chapters

Format: Author(s) Last name, First Initial(s). (Year) 'Title of Chapter', in Editor(s) First Initial(s) Last name (ed(s).), *Title of Book*. Edition (if not the first). Place of Publication: Publisher, Page Numbers.

Example: Brown, L.K. (2018) 'Adaptation Strategies for Maize in Arid Regions', in R.S. Gupta (ed.), *Sustainable Agriculture in Dry Areas*. 3rd ed. New York: Springer, pp. 95-120.

4. Conference Papers

Format: Author(s) Last name, First Initial(s). (Year) 'Title of Paper', in Editor(s) First Initial(s) Last name (ed(s).), *Title of Conference Proceedings*. Place and Date of Conference. Place of Publication: Publisher, Page Numbers.

Example: Lee, T.H. (2021) 'Technological Innovations in Precision Agriculture', in J.K. Wilson (ed.), *Proceedings of the International Conference on Agricultural Technology*. Tokyo, Japan, 12-15 May 2021. Tokyo: TechPress, pp. 305-312.

5. Websites

Format: Author(s) Last name, First Initial(s). (Year) 'Title of Webpage', *Name of Website*. Available at: URL (Accessed: Date).

Example: World Health Organization (2023) 'Climate Change and Health', *WHO*. Available at: <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health> (Accessed: 15 April 2024).

6. Reports

Format: Author(s) Last name, First Initial(s). (Year) *Title of Report*. Place of Publication: Publisher.

Example: United Nations Environment Programme (2018) *Emissions Gap Report 2018*. Nairobi: UNEP.

In-Text Citations

Single author: (Gamage, 2020)

Two authors: (Gamage and Jayalath, 2019)

Three or more authors: (Silva et al., 2018)

Direct quotes: (Samarasinghe, 2020, p. 123)

Multiple sources: (Silva, 2020; Gamage and Jayalath, 2019)

Reference List Example

Reference List

Silva, L.K. (2018) 'Adaptation Strategies for Maize in Arid Regions', in R.S. Gupta (ed.), *Sustainable Agriculture in Dry Areas*. 3rd ed. New York: Springer, pp. 95-120.

Gamage, M.B. and Jayalath, D.C. (2019) 'Impact of Climate Change on Rice Yields in Tropical Regions', *Agricultural Research Journal*, 45(3), pp. 245-258. DOI: 10.1016/j.agrj.2019.01.002.

Lee, T.H. (2021) 'Technological Innovations in Precision Agriculture', in J.K. Wilson (ed.), *Proceedings of the International Conference on Agricultural Technology*. Tokyo, Japan, 12-15 May 2021. Tokyo: TechPress, pp. 305-312.

Silva, J.A. (2020) *Climate Change and Crop Productivity*. 2nd ed. London: Academic Press.

United Nations Environment Programme (2018) *Emissions Gap Report 2018*. Nairobi: UNEP.

World Health Organization (2023) 'Climate Change and Health', *WHO*. Available at: <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health> (Accessed: 15 April 2024).