

Review Form 1.7

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_112342
Title of the Manuscript:	Analyses of Climate Variability and Trends in The Oil Palm Belt of Ghana
Type of the Article	Original Research Article

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> 1. The manuscript titled "Analyses of Climate Variability and Trends in The Oil Palm Belt of Ghana" appears to be significant to the scientific community for several reasons: <ul style="list-style-type: none"> ▪ Relevance to Agricultural Productivity: The study focuses on climate trends in the oil palm belt of Ghana, a region crucial for oil palm cultivation. Given the economic and nutritional importance of oil palm, understanding climate trends and their impacts on agricultural productivity is vital. ▪ Contribution to Climate Change Studies: The manuscript adds valuable data to the field of climate science, specifically regarding climate variability and change in Ghana. It provides detailed analyses over 30 years, contributing to the understanding of long-term climate trends and their potential impacts on agriculture and ecosystems. ▪ Resource for Policy and Decision Making: The findings can inform policymakers and stakeholders in agriculture and environmental management. Understanding climate trends is crucial for developing strategies for sustainable agriculture, adapting to climate change, and ensuring food security. ▪ Gap in Literature: The manuscript addresses a lack of extensive studies on climate trends in oil palm-growing areas in Ghana, filling a crucial gap in the literature. This makes it a potentially valuable reference for future research in the region. ▪ Methodological Rigor: The use of various statistical methods to analyze climate data (such as ANOVA, linear regression, Sen's slope, and Mann-Kendall test) adds to the manuscript's scientific rigor, making it a credible source of information for the scientific community. 2. The title of the article seems suitable and appropriately descriptive for several reasons: <ul style="list-style-type: none"> ▪ Clarity of Focus: The title clearly indicates the main subject of the research—climate variability and trends, which is a critical aspect for readers interested in climate studies or agricultural impacts of climate change. ▪ Specificity of Location: By mentioning "The Oil Palm Belt of Ghana," the title specifies the geographical focus of the study. This helps in attracting a targeted readership, particularly those interested in climate impacts in specific regions or on crops like oil palm. ▪ Scope of the Study: The use of the terms "Analyses," "Climate Variability," and "Trends" suggests a comprehensive and methodological approach to understanding climate patterns over time, which is appealing to readers looking for detailed and scientific insights. 3. The abstract of the article seems to provide a concise overview of the study, including its objectives, methods, and key findings. It mentions the increasing trend in rainfall, temperature, and solar radiation in the region and highlights specific trends in various oil palm-growing areas like Mpohor and Juabeng. For a comprehensive abstract, consider the following criteria: <ul style="list-style-type: none"> ▪ Purpose of the Study: Ensure the abstract clearly states the main objectives and the rationale behind the study. It should answer why the study was conducted and what it aimed to achieve. ▪ Methodology: Briefly describe the methods used for data collection and analysis. This gives readers insight into how the study was conducted and the statistical tools used for analysis. ▪ Key Findings: Highlight the most significant results of the study. The abstract mentions trends in rainfall, temperature, and solar radiation, which is good. Ensure these findings are stated clearly and concisely. ▪ Implications/Conclusions: Summarize the broader implications of the findings. If the study's results have significant implications for agriculture, climate change adaptation, or policymaking, these should be briefly stated in the abstract. ▪ Keywords: Include a few relevant keywords that can help researchers find your article in 	

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	<p>database searches.</p> <p>If the abstract currently meets these criteria, it is likely comprehensive. However, if you think any of these elements are not adequately represented, you might suggest improvements. For instance:</p> <ul style="list-style-type: none">▪ If the methodology is not briefly outlined, suggest adding a sentence or two about the methods used.▪ If the key findings are not clear or are too detailed, suggest making them more concise or focusing on the most significant trends.▪ If the implications of the study are not mentioned, consider suggesting a sentence that summarizes the potential impact of the findings. <p>Remember, the abstract is often the first part of the paper that readers engage with, so ensuring it is clear, informative, and reflective of the paper's content is crucial.</p> <p>4. Certainly, providing suggestions for improving the subsections and structure of the manuscript can enhance clarity and impact.</p> <ul style="list-style-type: none">▪ Overall:<ol style="list-style-type: none">1) The study suggests an increase in rainfall, temperature, and solar radiation at most stations in the oil palm belt of Ghana.2) These trends could have significant implications for oil palm cultivation, as rainfall and temperature are key factors affecting oil palm yield.3) Further research is needed to understand the impact of these trends on oil palm production and develop adaptation strategies for farmers.▪ Limitations:<ol style="list-style-type: none">1) The analysis is based on data from only seven locations, which may not be representative of the entire oil palm belt.2) The study only looked at trends over a 30-year period, which may not be sufficient to capture long-term climate changes.3) The manuscript does not discuss the potential causes of the observed trends.▪ Additional notes:<ol style="list-style-type: none">1) The manuscript appears to be well-written and organized.2) The data analysis is sound and the results are presented clearly.3) However, the manuscript would benefit from a discussion of the limitations and potential causes of the observed trends. <p>5. The manuscript presents a detailed and methodologically sound study with clear implications for the agricultural sector in Ghana, specifically for oil palm cultivation. The statistical analyses seem robust, and the conclusions are well-supported by the data. As a reviewer, ensuring that the study's methodology is transparent, the data is interpreted accurately, and the conclusions are fully supported by the results is paramount. It would also be beneficial to suggest including a discussion on potential limitations of the study and future research directions. But for improvement, here are some additional thoughts you might consider incorporating:</p> <ul style="list-style-type: none">▪ Spatial variability: Emphasize the spatial variability in rainfall trends across the oil palm belt. While some locations show significant increases, others don't. This highlights the need for localized solutions and adaptation strategies.▪ Data limitations: If any limitations are mentioned in the manuscript regarding the data (e.g., missing data, short observational period), acknowledge them and discuss their potential impact on the analysis.▪ Future research directions: Briefly mention future research directions that could build upon the findings of this study. This could include looking at specific impacts of changing rainfall on oil palm yield and disease susceptibility or investigating the effectiveness of different adaptation strategies under different rainfall scenarios. <p>6. The manuscript provides a comprehensive range of references, covering foundational theories and recent studies. However, to ensure the study reflects the most current understanding of the topic, consider including additional recent studies or reviews that discuss the latest trends in climate variability and its impact on agriculture, especially in the context of Ghana. This might include recent reports from authoritative bodies or the latest projections from climate models</p>	
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	<p>relevant to the region. The references cover a wide temporal range, with a significant portion (57.89%) coming from before 2015. However, ensuring a good balance of recent literature is important, especially in fields where the state of knowledge is rapidly evolving. So I suggestion just less 20% coming from before 2015.</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>The content visible from the manuscript "Analyses of Climate Variability and Trends in The Oil Palm Belt of Ghana" suggests that the language and English quality are generally suitable for scholarly communication. The text employs technical and academic language appropriate for the subject matter, with clear descriptions of statistical analyses, research methods, and study findings.</p> <p>However, here are some aspects you might want to consider for ensuring the highest quality of scholarly communication:</p> <ol style="list-style-type: none"> 1) Clarity and Precision: Ensure that the language used is clear and precise, avoiding ambiguity. Scientific writing should be direct and convey information effectively. 2) Technical Terminology: Verify that technical terms and concepts are used correctly and consistently throughout the manuscript. 3) Grammar and Syntax: Pay attention to grammar, sentence structure, and punctuation. Scholarly articles should adhere to the highest standards of English grammar to ensure clarity and professionalism. 4) Coherence and Flow: The manuscript should be well-organized, with a logical flow of ideas from one section to the next. Transitions between sentences and paragraphs should smoothly guide the reader through the content. 5) Style and Tone: The writing style should be formal and objective, maintaining a neutral and professional tone appropriate for a scientific audience. 6) Consistency: Check for consistency in the use of terminology, abbreviations, figures, and tables. For instance, units of measurement and statistical notations should be used consistently throughout the manuscript. 	
<p>Optional/General comments</p>	<p>Please give some Figure for explain trend of climate.</p>	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

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