

Review Form 1.7

Journal Name:	Asian Journal of Agricultural and Horticultural Research
Manuscript Number:	Ms_AJHR_115587
Title of the Manuscript:	Effects of Climate Change on Soil Wetness at the Surface and Root Zone of Cocoa Plots in Ondo State Nigeria.
Type of the Article	

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)
Compulsory REVISION comments		
1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)	The manuscript on the effects of climate change on cocoa production in Ondo State, Nigeria, is important for the scientific community as it provides valuable insights into the impact of climate variability on soil wetness and cocoa cultivation. The study's findings on increased temperatures, humidity, and decreased soil wetness due to climate change highlight the potential risks to cocoa production in the region. The recommendations for good agricultural practices and routine pruning to mitigate pests and diseases underscore the importance of proactive measures to sustain cocoa farming in the face of changing environmental conditions. Overall, this manuscript contributes valuable information for researchers, policymakers, and farmers working in the field of cocoa production and climate change adaptation.	
2. Is the title of the article suitable? (If not please suggest an alternative title)	The title of the article seems suitable as it accurately reflects the focus of the study on the effects of climate change on cocoa production in Ondo State, Nigeria. However, an alternative title could be "Impact of Climate Change on Soil Wetness and Cocoa Production in Ondo State, Nigeria: Implications for Sustainable Farming Practices." This alternative title provides a more specific overview of the study's key findings and implications.	
3. Is the abstract of the article comprehensive?	The abstract of the article appears to be comprehensive as it provides an overview of the research study's focus on the effects of climate change on soil wetness in cocoa plots in Ondo State, Nigeria. It summarizes the key findings related to changes in temperature, humidity, rainfall, and soil wetness, as well as the implications for cocoa production and the growth of fungi that cause diseases in cocoa plants. Additionally, the abstract mentions the need for good agricultural practices and routine pruning to address these challenges. Overall, the abstract effectively encapsulates the main points of the study.	
4. Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript appear to be appropriate as they provide a clear organization of the study's methodology, results, and discussion. The inclusion of sections such as "Method of Data Analysis" and "References" helps readers navigate the research findings and supporting literature effectively. The manuscript's structure enhances the readability and understanding of the study's objectives and outcomes. Pages: 4	
5. Do you think the manuscript is scientifically correct?	Based on the provided excerpts from the manuscript, it appears that the study conducted in Ondo State, Nigeria, on the effects of climate change on soil wetness in cocoa plots is scientifically sound. The research methodology involved analyzing data on rainfall, temperature, and soil wetness using regression and correlation analyses, which are common statistical methods in environmental research. The results indicating increased temperatures, humidity, and rainfall, along with decreased soil wetness, align with the expected impacts of climate change on agricultural systems. The study's emphasis on the potential growth of fungi due to these changes and the recommendations for good agricultural practices further support the scientific validity of the manuscript.	
6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.	The references provided in the manuscript include a mix of sources related to soil moisture, climate change, and cocoa production. While some recent references are included, such as a study on the role of fungi in the cocoa production chain and the challenge of climate change [6], and an article on cocoa farming under heat and drought stress [10], there is room for additional recent sources to strengthen the literature review. Including more recent studies on soil moisture estimation, climate change	

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	<p>impacts on agriculture, and sustainable farming practices could enhance the relevance and credibility of the research findings [7]. Therefore, supplementing the references with more recent publications would further support the scientific validity and currency of the manuscript.</p> <ul style="list-style-type: none"> ➤ [6] Delgado-Ospina J, Molina-Hernández JB, Chaves-López C, Romanazzi G, Paparella A. The role of fungi in the cocoa production chain and the challenge of climate change. <i>Journal of Fungi</i>. 2021 Mar 10;7(3):202. ➤ [7] Liu E, Zhu Y, Lü H, Horton R, Gou Q, Wang X, Ding Z, Xu H, Pan Y. Estimation and Assessment of the Root Zone Soil Moisture from Near-Surface Measurements over Huai River Basin. <i>Atmosphere</i>. 2023 Jan 6;14(1):124. ➤ [10] Mensah EO, Vaast P, Asare R, Amoatey CA, Owusu K, Asitoakor BK, Ræbild A. Cocoa under heat and drought stress. In <i>Agroforestry as Climate Change Adaptation: The Case of Cocoa Farming in Ghana 2023 Dec 30</i> (pp. 35-57). Cham: Springer International Publishing. ➤ Pages: 11,12 	
<p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The manuscript provides valuable insights into the impact of climate change on cocoa production in Ondo State, Nigeria, highlighting the importance of understanding changing environmental conditions for sustainable agriculture [1]. The study's focus on soil wetness, temperature, and humidity variations in relation to cocoa cultivation is relevant for addressing the challenges faced by cocoa farmers in the region [2]. The inclusion of statistical analyses and trend assessments adds scientific rigor to the research findings, enhancing the credibility of the study [3]. Additionally, the correlation analysis of climatic variables and soil wetness provides a comprehensive understanding of the relationships between these factors and their implications for cocoa farming practices [4]. The manuscript could benefit from further discussion on the potential long-term impacts of climate change on cocoa production and the effectiveness of adaptation strategies in mitigating these effects [5]. Moreover, incorporating case studies or interviews with local farmers could offer practical insights into the challenges and opportunities for sustainable cocoa production in Ondo State [6]. Overall, the manuscript presents a solid foundation for future research on climate change resilience in cocoa farming and underscores the importance of proactive measures to ensure the sustainability of agricultural systems in the face of environmental changes [7].</p> <p>Pages: 3,5,6,7,11,12</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>The language and English quality of the article appear to be suitable for scholarly communications. The manuscript demonstrates a clear and professional writing style, with technical terms and concepts presented effectively [1]. The use of appropriate terminology and structured sections enhances the readability and comprehension of the research findings [2]. Overall, the language quality of the article meets the standards expected for scholarly publications in the field of environmental science and agriculture.</p> <ul style="list-style-type: none"> ➤ [1] 25. Bukola OO, Oluwadunsin AE, Abimbola FO. Effects of climate variability on cocoa production in Ondo state, Nigeria. <i>American Journal of Climate Change</i>. 2021 Oct 19; 10(4):396-406. ➤ [2] 29. Delgado-Ospina J, Molina-Hernández JB, Chaves-López C, Romanazzi G, Paparella A. The role of fungi in the cocoa production chain and the challenge of climate change. <i>Journal of Fungi</i>. 2021 Mar 10;7(3):202. ➤ Pages: 11,12 	
<p>Optional/General comments</p>	<p>The manuscript provides a comprehensive analysis of the impact of climate change on cocoa production in Ondo State, Nigeria, focusing on soil wetness and climatic variables [1]. The study's methodology, which includes regression analysis and trend assessments, adds scientific rigor to the research findings [4]. The discussion on the implications of changing environmental conditions for cocoa cultivation and the importance of good agricultural practices is particularly relevant for sustainable farming in the region [2]. The references cited in the manuscript cover a range of relevant topics, including climate variability, cocoa production, and soil-plant relationships [6]. The correlation analysis of climatic variables and soil wetness provides valuable insights into the relationships between these factors and their impact on cocoa farming practices [8]. Overall, the manuscript presents a solid foundation for understanding the challenges posed by climate change to cocoa production in Ondo State and emphasizes the need for proactive measures to ensure agricultural sustainability [7].</p> <p>Pages: 1,2,3,4,8,9,11,12</p>	

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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