

Checked by: PM

Approved by: MBM

Version: 3 (07-07-2024)

<b>Is the title suitable? (or an alternative title)</b>	The title "Maize Yield Response to Climate Change with DSSAT Model" is generally suitable as it succinctly describes the main focus of the research. However a suggestion is, "Assessing Maize Yield Variability under Climate Change Using DSSAT Model"	
<b>Is the article comprehensive? Do you recommend addition (or deletion) of some content? Please write your response.</b>	Abstract is comprehensive	
<b>Is the structure of the manuscript appropriate?</b>	Subsections and Structure are appropriate	
<b>Are the conclusions regarding the significance of this manuscript scientifically sound? Why do you think so? A minimum of 3-4 sentences are required for this part.</b>	This manuscript demonstrates scientific robustness and technical soundness through its comprehensive use of the CERES-Maize model 4.0 to simulate maize crop yields under varying climatic conditions. The study leverages three years of weather data, ensuring the reliability and representativeness of the results. By examining the effects of elevated temperatures and CO2 levels, the research addresses relevant and current issues in climate change and agriculture. The methodical approach to analyzing the impact on yield, biomass, grain number, and LAI further strengthens the study's validity and provides a detailed understanding of the complex interactions between climate variables and crop productivity.	
<b>Are the references sufficient and recent? If you recommend additional references, please list them in the review form.</b>	References are sufficient	

	<p><b>Revised:</b> Three years of weather data (2004-06) were used to simulate actual yields under rainfed and irrigated conditions.</p> <ul style="list-style-type: none"> <li>• <b>Original:</b> Yield was simulated with elevated temperature (1, 3 and 5oC) and CO2 (440, 550 and 660 ppm) during the growing season. <b>Revised:</b> Yields were simulated under elevated temperatures (1, 3, and 5°C) and CO2 levels (440, 550, and 660 ppm) during the growing season.</li> <li>• <b>Original:</b> As changes in CO2 concentration and temperature likely to occur concomitantly, so growth and development of maize plant at three temperature regimes (1, 3 and 5oC) under double (660 ppm) CO2 concentration to the baseline (330 ppm) was also assessed. <b>Revised:</b> Since changes in CO2 concentration and temperature are likely to occur simultaneously, the growth and development of maize plants were assessed at three temperature regimes (1, 3, and 5°C) under double the baseline CO2 concentration (660 ppm vs. 330 ppm).</li> <li>• <b>Original:</b> Results revealed that the rise in temperature accelerated plant phenology, reducing dry matter accumulation and crop yield by 5 to 60 per cent. <b>Revised:</b> Results revealed that rising temperatures accelerated plant phenology, reducing dry matter accumulation and crop yield by 5 to 60 percent.</li> <li>• <b>Original:</b> Doubled CO2 increased yield at all the temperature rise situation and completely mitigated the yield and biomass reduction due to temperature rise up to 1oC. <b>Revised:</b> Doubling CO2 increased yields across all temperature rise scenarios and completely mitigated yield and biomass reductions due to temperature increases up to 1°C.</li> </ul>	
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	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)
n this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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