



**SDI Review Form 1.6**

Journal Name:	<a href="#">Annual Research &amp; Review in Biology</a>
Manuscript Number:	Ms_ARRB_48692
Title of the Manuscript:	Simulating the impact of climate change on growth and yield of maize using CERES-Maize model under temperate Kashmir
Type of the Article	Original Research Article

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

**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)
<b><u>Compulsory</u></b> REVISION comments	<b>Please provide complete names and definitions of the soil parameters included in Table 2.</b>	
<b><u>Minor</u></b> REVISION comments	<b>Suggestion:</b> The simulation of maize growth processes by means of Ceres Maize model DSSAT 4.5 takes into consideration only the influence of increasing or decreasing maximum / minimum air –temperatures, CO <sub>2</sub> levels and rainfall amounts under specified conditions of solar radiation, whereas it would also prove inspiring to consider the role of (lower) atmospheric pressure on cell gas exchanges, as the area under study (Shalimar Shrinagar in Kashmir – India) is located at an altitude of 1,587 m above MSL and, therefore, plant growth impairments may also be possible because of altitudinal effects.	
<b><u>Optional/General</u></b> comments	This paper enquires on how maize growth phases and yields could be influenced by different changing climatic conditions related to the A1B scenario of 2011-2090 climate change in a Kashmir locality. By means of a dedicated software - CERES-Maize model DSSAT 4.5, the authors have minutely analyzed how varying maximum or minimum air-temperatures, rainfall amounts and CO <sub>2</sub> levels may actually influence the various vegetative phases of maize and produce alterations of some critical development thresholds (maturity, grain weight), seriously impeding crop productivity in a basically agriculture-dependent region. Starting from some previously-tested simulations, which have adequately been discussed upon, the authors use a wide variety of macro and micro – environmental parameters (soil, weather etc.), as well as specific agro-climatic requirements of maize to calculate the potential outcome (in terms of onset days, length and deviation of specific plant growth phases) in nine different environmental setting types (E1-E9). The results they obtained are consistent and very important, each argument being well accounted for and expressively given in adequate graph representations. The whole design and structure of the study reflects scientific maturity and a keen attention to details. The findings are nonetheless highly valuable and of great practical importance. In conclusion, the study was carefully planned, conducted and carried out, adding new coordinates to the stream literature in the domain.	



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**PART 2:**

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

**Reviewer Details:**

Name:	<b><i>Ionac Nicoleta</i></b>
Department, University & Country	<b><i>University of Bucharest, Romania</i></b>