Review Form 1.7

Journal Name:	**International Journal of Environment and Climate Change**
Manuscript Number:	**Ms_IJECC_100873**
Title of the Manuscript:	**Correlation, path analysis and genetic divergence of various agro-morphological traits and traits suitable for mechanical harvesting of chickpea (Cicer arietinum L.) germplasm**
Type of the 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:

(https://www.journalijecc.com/index.php/IJECC/editorial-policy)

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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)*
Compulsory REVISION comments **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.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	The manuscript is important for scientific community. A field experiment was conducted at Uttar Pradesh, India, with 540 chickpea germplasm (including 5 checks), during rabi, 2021–2022, Correlation and path coefficient analysis and estimation of genetic divergence were carried out based on mechanical harvesting and other agro-morphological traits. Plant height, growth habit, the height of the initial podding node, and the angle of the primary branch are characteristics that have been researched to help identify lines that are suited for mechanical harvesting. Peduncle length, no. of primary branches, no. of secondary branches, no. of pods per plant, chlorophyll content, leaf area index, chlorophyll fluorescence has shown positive correlation with seed yield per plant. Plant height and height of first podding node were showing positive high indirect effects through no. of secondary branches on seed yield per plant. Cluster 1 was the largest with 399 germplasm and smallest in Cluster 24 to Cluster 37 (1 each). Plant height and height of first podding node were showing maximum mean in cluster 32, whereas seed yield per plant maximum mean was in cluster 14. According to percent contribution of different characters to total divergence obtained, the most significant contributors to the divergence were no. of pods per plant and plant height. Correlation indicated that traits suitable for mechanical harvesting are not directly correlated with seed yield, while path coefficient analysis indicated that they have indirect effects on seed yield through number of primary and secondary branches per plant. The title of the article is suitable. The abstract of the article is comprehensive. Subsections and structure of the manuscript are incomplete. The manuscript is scientifically correct. References are sufficient and recent.	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	The english quality of the article suitable for scholarly communications.	
Optional/General comments	The amount of materials and variables analyzed make the experiment really attractive, but I think it is necessary to go deeper into materials and methods and the presentation of the results. For example: Data were recorded on quantitative characteristics such days to 50% flowering, the length of the peduncle, the number of primary branches, the number of secondary branches, days to maturity, the number of pods per plant, and the number of seeds per pod, 100 seed weight, seed yield per plot, plant height, height of first podding node, chlorophyll content, leaf area index, chlorophyll fluorescence.	

	What method/s and instrument/s were used to measure the variables? Include references. ~~Coorelation~~ Correlation oefficients were calculated as followed by Fisher, (1954) and Al- Jibouri et al., …and genetic divergence analysis by using D2 Statistics Mahalanobis, (1936). The tables are Ok but I think a couple of graphs would help to understand and interpret the results. There are some spelling errors in the text.	

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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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