

Review Form 1.7

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_109399
Title of the Manuscript:	Utilizing selection indices and discriminant function analysis to enhance seed yield in sesame (Sesamum indicum L.)
Type of the 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. Sesame is a crop with limited research, findings from such studies will contribute to sesame improvement programs. However, the manuscript is written carelessly and requires major modifications in all sections (Abstract, Introduction, Materials and Methods, Results and Discussion). I hope the authors will find the comments important for the sake of their rigorous and significant research conducted, and agree to revise the manuscript in order to present these noteworthy findings in appropriate manner. 2. Title <ul style="list-style-type: none"> • The suggested title below would be more suitable if the authors can agree that the aim of the study was to evaluate selection indices in sesame using discriminant function analysis. • Alternative title: Selection indices and discriminant function analysis for seed yield improvement in sesame (<i>Sesamum indicum</i> L.) 3. Abstract <ul style="list-style-type: none"> • Based on the title, the objective is not clear. • Alternative objective: To construct and evaluate selection indices in advanced sesame lines using the discriminant function technique. • There is no need to use acronyms, except for the names of the treatments. • I did not see the fifteen quantitative traits mentioned in both the Materials and Methods and Results and Discussion sections, except in Table 2. • Overall, the abstract section needs significant modification to align with title, objective, main research findings, and conclusion. 4. Structure of the manuscript: Structurally, the manuscript does not have a problem, but it may need to be edited according to the journal's guidelines. 5. In addition to the above comments, here are the main gaps of this article: <ul style="list-style-type: none"> ❖ Introduction: The second paragraph should elaborate selection in crop improvement, discussing direct and indirect selection, the significance of multiple trait selection and constructing selection indices, seed yield related traits in sesame, the discriminant function technique used for constructing selection indices in sesame or other crops, and the objective of the study. ❖ Materials and methods <ul style="list-style-type: none"> • This manuscript does not provide information on the data that were collected and how the data were collected, which is a fundamental requirement in research. This lacks of detail makes the findings unreliable and the research impossible to reproduce. Therefore, please provide more information on the traits that were assessed and the sampling units that were used. • The authors need to present the mean squares of the ANOVA along with the genetic parameters (PCV, GCV, H², and GAM). • The authors should justify why they only considered four quantitative traits as an independent variable out of 15 when formulating selection indices. The authors should provide evidence that these four traits were the only ones that had a strong and significant correlation with the dependent variable, seed yield. • The authors should describe how they computed the relative efficiency of selection indices and the expected genetic advance of selection indices, as well as the name of any statistical software used. ❖ Results and discussion <ul style="list-style-type: none"> • The results are not well discussed and lack a literature review. 	

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	6. I believe that further reading and additional references are required for the Introduction, Materials and Methods (statistical analysis), and Result and Discussion sections.	
Minor REVISION comments 1. Is language/English quality of the article suitable for scholarly communications?	The soundness of the English language should be checked during the final stage of revision.	
Optional/General comments		

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:

Name:	Sintayehu Gedifew Tiro
Department, University & Country	Ethiopian Institute of Agricultural Research, Ethiopia