Review Form 3

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_123848**
Title of the Manuscript:	**Assessment of Heterosis and inbreeding Depression for Yield, and its associated components Traits in rice (Oryza sativa L.)**
Type of the Article	

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	=For grain yield per plant all the three crosses (IRBB 55 × Mahisagar, IRBB 55 × GR-11 and IRBB 55 × TN-1) exhibited significant and positive relative heterosis as well as heterobeltiosis. =Among them the highest mid parent heterosis of 39.67 % and heterobeltiosis of 7.56 % were exhibited by cross IRBB 55 × GR-11. This hybrid showed positive and significant relative heterosis for all the four important characters *viz.,* productive tillers per plant, panicle length, grains per panicle and 100 grain weight. =While, the inbreeding depression was found significant and positive for all the three crosses which is not desirable for grain yield per plant. =Here, all the three crosses exhibited positive heterosis followed by positive inbreeding depression indicated that trait is under influence of non-additive type of gene action and heterosis breeding would be found rewarding for improvement for grain yield per plant.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title of the article is suitable	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract of the article is comprehensive	
Are subsections and structure of the manuscript appropriate?	Subsections and structure of the manuscript are appropriate	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript is scientifically correct	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are sufficient and recent	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	English quality of the article is suitable for scholarly communications	
Optional/General comments	= The present investigation entitled was carried out at Main Rice Research Centre, Navsari Agricultural University, Navsari during *kharif-2023* with an objectives to obtain information on manifestation of heterosis and extent of inbreeding depression involved in the inheritance of various yield attributing characters in rice (*Oryza sativa* L.). = This study comprised three crosses using four diverse lines. The experimental material comprised of five generations each cross of pair parents i.e. P_1, P_2, F_1, F_2 and F_3 of three different crosses were conducted in Compact Family Block Design with three replications during *kharif* 2023. = The results revealed significant positive and negative mid parent and better parent's heterosis in many crosses for different characters studied. The high values for heterotic effects also indicated that the parents used for the study were widely diverse. The significant relative heterosis and/or heterobeltiosis in desired direction were observed for plant height, productive tillers per plant, panicle length, grains per panicle, 100 grain weight, grain yield per plant, kernel length, L: B ratio and amylose content there by heterosis breeding would be more practical approach for higher grain yield in rice.	

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)*	

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