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| Journal Name: | [**Journal of Experimental Agriculture International**](https://journaljeai.com/index.php/JEAI) |
| Manuscript Number: | **Ms\_JEAI\_139623** |
| Title of the Manuscript: | **Assesment of combining ability analysis in sesame (Sesamum indicum L.)** |
| Type of the Article | **Original Research Article** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (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. A minimum of 3-4 sentences may be required for this part.** | The manuscripts presents a detailed approach to the **Combining ability analysis in sesame, which** helps to identify superior parental lines for hybrid development, improving yield and oil quality. The analysis aids in understanding the **genetic control** of key agronomic traits such as seed yield, oil content, and plant height. This approach also contributes significantly to **enhancing sesame productivity**, crucial for food security and the edible oil industry. | The manuscript on combining ability analysis in sesame is important as it identifies good parents and crosses for breeding. It reveals the type of gene action controlling key traits. This helps in developing high-yielding sesame varieties and sharing useful findings with the scientific community. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes, title of the article: ‘**Assessment of combining ability analysis in sesame’** is completely suitable for this manuscript. | Yes |
| 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. | Yes, the abstract of the article is comprehensive**.** There is no need to add or delete something in this section. | Yes |
| Is the manuscript scientifically, correct? Please write here. | Yes, the manuscript is completely scientifically correct. | YES |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | I think this section needs modification. At least, five more references are needed in this manuscript. Author should incorporate more recent References like, 2024 and 2023. | Yes, I Have added some refrences |
| Is the language/English quality of the article suitable for scholarly communications? | Structure of sentences and grammatical usage are appropriate in every section and I appreciate that the author maintains their standard. | Yes |
| Optional/General comments | I have recognized the efforts the Authors have put into this work and the submitted manuscript is OK for ‘Accept’ after minor improve as pointwise.   1. **Introduction:** I appreciate that the author has provided a thorough literature review and comprehensive background information in this section. Sesame is regarded as one of the earliest domesticated oilseed crops, with archaeological evidence tracing its cultivation back to the ancient Mesopotamian civilization. It is also important to identify suitable parental lines for hybridization is vital in crop improvement, as the performance of the resulting hybrids reflects their potential and genetic superiority. As a reviewer, I find the introduction to be well-structured, informative, and engaging. 2. **Results & Discussion**: This section is exceptionally well-crafted, informative and commendable. In this section the findings of the author revealed that treatments, parents, and their crosses exhibited highly significant differences for most traits, emphasizing the presence of considerable genetic variability within the experimental material. Here, author presents the top-performing GCA parents and SCA crosses for all ten traits evaluated in the current study. Here author also explained that the dominance of GCA for specific traits indicates the involvement of additive gene action, which can be efficiently harnessed through selection for developing superior genotypes. In contrast, significant SCA effects observed for other traits reflect the role of non-additive gene action, which is valuable for hybrid development strategies.   The results offers important guidance for designing effective breeding strategies in sesame by integrating both selection and hybridization methods to enhance genetic improvement.   1. It would be great if the author added an image or schematic diagram, so that the manuscript looks more promising.   Overall, I acknowledge the authors' efforts and believe the submitted manuscript is suitable for acceptance after minor revisions. | Yes, manuscript is ok |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s Feedback** (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)* | No ethical issue |