

REVIEWER'S REPORT

Manuscript No.: IJAR-53817

Date: 15-09-2025

Title: Evaluation multi-sites de 16 lignées de sésame (*Sesamum indicum* L.) pour le rendement et ses composantes.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality	✓			
Techn. Quality		✓		
Clarity		✓		
Significance	✓			

Reviewer Name: **Tahir Ahmad**

Reviewer's Comment for Publication.

This manuscript presents a well-structured and timely study evaluating the agronomic performance of sixteen sesame genotypes across two distinct sites in Niger. The **Résumé/Abstract (lines 5–22, 32–48)** effectively summarizes the objectives, experimental design, and key findings, highlighting significant site effects and genotype differences in yield and related traits. The introduction (lines 57–94) provides a thorough background on sesame's nutritional, agronomic, and economic importance, along with production statistics and challenges in Niger. The justification for the mutagenesis program and the need for improved, locally adapted varieties is clearly stated and supports the research objectives.

The **Materials and Methods section (lines 96–169)** is detailed and methodologically sound, describing study sites, experimental design, plant material, cultural practices, and statistical analyses. The use of a randomized incomplete block design and combined-site ANOVA with Tukey HSD tests is appropriate for evaluating genotype × environment interactions. Minor improvements are needed for clarity and consistency. For example, some terms need standardization—e.g., “jas” (lines 15, 128–134) could be briefly defined as “jours après semis” on first use for non-French readers. There are small typographical issues such as “Sesamamunindicum” instead of “Sesamum indicum” (lines 22 and 48) and spacing inconsistencies (e.g., “inrural” at line 38). Figures and tables (e.g., Figure 1 at line 103, Table 1 at line 122) are referenced but should include clear captions and units where relevant. While the statistical methods are clearly described, the results and discussion

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sections are not fully included in the provided text; integrating more interpretation of genotype performance, such as agronomic implications of the high-yielding UMS1833 and the low-performing UMS1804 noted in the abstract, would strengthen the conclusions.

Overall, this study is original and significant for sesame improvement in semi-arid regions and provides valuable data on genotype adaptability and yield potential.