

## REVIEWER'S REPORT

Manuscript No.: IJAR-53483

Date: August 22 2025

**Title: Phenotypic screening of 32 West African Sorghum Genotypes for Drought Tolerance**

### Recommendation:

Accept as it is .....

**Accept after minor revision**.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

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

Reviewer Name: Dr Lakhdar Guerine

Date:

## Detailed Reviewer's Report

This study evaluated 32 West African sorghum genotypes under drought stress at panicle initiation. Significant variability in agro-physiological and yield traits was observed among genotypes. Drought reduced photosynthesis (−13%), transpiration (−40%), and grain yield (−47%). Genotype V26 combined high yield with low stress sensitivity, emerging as elite. Other tolerant but less productive genotypes may serve as reservoirs for breeding.

### Strengths

- 1) Relevant study addressing climate resilience in sorghum.
- 2) Rigorous methodology with physiological, morphological, and tolerance indices.
- 3) Identification of elite and gene-reservoir genotypes for breeding.

### Weaknesses

- a) Single-site evaluation limits environmental extrapolation.
- b) No genetic or molecular validation of tolerance mechanisms.

# International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

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- c) Discussion could better integrate international comparisons.

### Points to improve

1. Clarity and conciseness ; The manuscript is very detailed; the text should be streamlined to highlight the main findings.
2. International positioning ; Strengthen the discussion by comparing with similar studies in other regions (Asia, US, etc.).
3. Validation ; If possible, recommend or plan multi-location trials for broader applicability.
4. Language ; The English translation must be carefully revised for scientific style, clarity, and grammar.