

**REVIEWER'S REPORT**

Manuscript No.: IJAR-55541

Title: CYCLES DE SAISONS AGRICOLES ET CHOIX DE VARIETES DE CULTURES DANS LE DEPARTEMENT DE TANOUT (REGION DE ZINDER,

Recommendation:
Accept after minor revision

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

Reviewer Name: Dr Abdul Haseeb Mir

Detailed Reviewer's Report

The manuscript entitled "*Cycles of Agricultural Seasons and Choice of Crop Varieties in the Tanout Department (Zinder Region)*" addresses a highly relevant and timely issue in the context of Sahelian agriculture, climate variability, and rural livelihoods. By focusing on farmers' responses to changing rainfall patterns through varietal choice and crop diversification, the study makes a meaningful contribution to research on climate adaptation and agricultural resilience in semi-arid regions.

From a methodological perspective, the article is well designed and robust. The combination of experimental field trials, quantitative and qualitative surveys, and statistical analysis of long-term rainfall data provides a strong empirical foundation. The use of the Pettitt test to detect rainfall breaks and the Sivakumar method to determine the onset and cessation of the rainy season is appropriate and scientifically sound. In addition, the integration of farmers' perceptions through questionnaires and focus group discussions enriches the analysis by linking climatic data with local knowledge and decision-making processes .

The results are clearly presented and convincingly demonstrate that the cycle of agricultural seasons plays a decisive role in determining farmers' choice of crop varieties. The identification of locally defined seasonal cycles and their correspondence with varietal strategies highlights the adaptive capacity and experiential knowledge of farmers in the Tanout and Tarka areas. The comparative analysis of improved and local millet varieties is particularly valuable, especially the discussion of early-maturing varieties such as CHAKTI, which emerge as crucial options under conditions of shortened or uncertain

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rainy seasons. The inclusion of sorghum cultivation as an alternative adaptive strategy further strengthens the argument by illustrating diversification as an important component of resilience.

The discussion section is well anchored in existing literature and effectively situates the findings within broader debates on climate change adaptation, varietal adoption, and farmer resilience in the Sahel. The article demonstrates good command of relevant regional studies and shows continuity with earlier research conducted in Niger and neighboring countries.

Despite these strengths, the manuscript requires **minor revisions** before publication. The main issue concerns language and style, as certain sections would benefit from careful editing to improve clarity, fluency, and academic expression. Some repetitions and minor grammatical inconsistencies should be corrected. In addition, the presentation of tables and figures could be slightly improved by harmonizing units, labels, and captions to enhance readability. The conclusion, while adequate, could be strengthened by more explicitly highlighting the policy implications of the findings, particularly in relation to seed dissemination, extension services, and climate adaptation strategies.

In conclusion, the article is empirically rich, methodologically sound, and highly relevant to scholars and practitioners working on agriculture and climate change in the Sahel. Subject to the minor revisions outlined above, I **recommend the manuscript for publication after minor revisions**.