

REVIEWER'S REPORT

Manuscript No.: IJAR-58050

Title:DIVERSITE DES RHIZOBACTERIES DE LA RHIZOSPHERE DES GENOTYPES D ANACARDIER (Anacardier occidentale L.) TOP 24 DE LA STATION DE RECHERCHE DE LATAHA (CNRA) ET CARACTERISATION DE LEUR POTENTIEL DANS LA PROMOTION DE LA CROISSANCE DES PLANTES (PGPR).

Recommendation:

Accept as it is

Accept after minor revision Yes

Accept after major revision

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

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

Reviewer's ID: JPR- Dr. Himanshu Gaur

Detailed Reviewer's Report

The manuscript entitled “*Diversité des Rhizobactéries de la Rhizosphère des Génotypes d’Anacardier (Anacardium occidentale L.) Top 24 de la Station de Recherche de Lataha (CNRA) et Caractérisation de leur Potentiel dans la Promotion de la Croissance des Plantes (PGPR)*” addresses an important topic in agricultural microbiology and sustainable crop production. The study contributes to understanding the diversity and functional characteristics of rhizobacteria associated with cashew genotypes and their potential application as plant growth-promoting rhizobacteria (PGPR). Given the increasing interest in environmentally friendly agricultural practices and biofertilizer development, the research is both relevant and timely. The abstract clearly outlines the study objectives, methodology, major findings, and practical implications. However, several aspects require improvement to strengthen the scientific quality and impact of the manuscript. First, the introduction should provide a more comprehensive review of previous studies on rhizosphere microbial diversity in cashew plantations and clearly identify the research gap addressed by the study. Second, while the methodology is generally described, additional details regarding sampling design, replication, isolation procedures, quality control measures, and statistical analyses are necessary to ensure reproducibility and scientific rigor. Third, the identification of bacterial isolates relies primarily on morphological and biochemical characterization; therefore, the inclusion of molecular identification techniques such as 16S rRNA gene sequencing would substantially enhance the taxonomic accuracy and scientific value of the study. Fourth, the results section should include more detailed quantitative analyses and statistical comparisons among genotypes to determine whether observed differences in bacterial diversity and PGPR traits are significant. Furthermore, the discussion should compare the findings with previous studies and provide deeper insights into the ecological significance of the observed bacterial communities and their potential role in improving cashew productivity under field conditions. The absence of phosphate-solubilizing and HCN-producing isolates should also be discussed in relation to environmental and soil characteristics. Additionally, the manuscript would benefit from a clearer explanation of the practical implications of the identified strains for biofertilizer development and sustainable cashew cultivation. Minor revisions related to language

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quality, consistency in scientific terminology, formatting of keywords, and citation style are also recommended. Overall, the study presents valuable preliminary findings and has the potential to contribute meaningfully to the fields of agricultural microbiology and sustainable agriculture; however, major revisions are recommended to improve methodological rigor, data analysis, and scientific interpretation before publication.