

REVIEWER'S REPORT

Manuscript No.: JNAVES-022

Title: Soil Carbon Sequestration and Environmental Sustainability: Opportunities, Challenges, and Future Prospects.

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 Id: JPR-182

Reviewer's Comment for Publication.

The manuscript presents a comprehensive review of soil carbon sequestration and its role in environmental sustainability, climate change mitigation, and agricultural productivity. The topic is highly relevant and timely, given the increasing global focus on sustainable land management and carbon-neutral development strategies. The paper is well structured, logically organized, and written in a clear and accessible manner. The authors successfully discuss the mechanisms of soil carbon sequestration, factors influencing carbon storage, agricultural management practices, environmental benefits, challenges, and future prospects. The inclusion of policy implications and emerging technologies further enhances the practical significance of the review.

A few minor revisions are recommended to strengthen the manuscript. The authors should incorporate more recent studies and updated global data to improve the current relevance of the review. Greater critical discussion of the limitations and regional variability of carbon sequestration potential would enhance the scientific depth of the manuscript. The section on emerging technologies may be expanded with recent advancements in digital soil monitoring and carbon accounting methodologies. Additionally, the reference list should be reviewed for completeness and consistency according to the journal's citation style. Minor language editing and proofreading are also suggested to improve readability.

Overall, the manuscript provides valuable insights into soil carbon management and environmental sustainability. Subject to the above minor revisions, the manuscript is recommended for publication.