

REVIEWER'S REPORT

Manuscript No.: JNAVES-043

Title: ENHANCING SOIL FERTILITY THROUGH BIOCHAR APPLICATION: A SUSTAINABLE APPROACH FOR AGRICULTURAL PRODUCTIVITY AND ENVIRONMENTAL PROTECTION.

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-174

Reviewer's Comment for Publication.

The manuscript presents a comprehensive review of biochar as a sustainable soil amendment for improving soil fertility, agricultural productivity, and environmental protection. The topic is timely and highly relevant to sustainable agriculture, climate change mitigation, and soil resource management. The manuscript is logically organized and provides useful information on biochar production, its effects on soil physical, chemical, and biological properties, environmental benefits, agricultural applications, and future research needs. The review is clearly written and accessible to a broad scientific audience.

The manuscript is recommended for publication after the following minor revisions:

1. Strengthen the review methodology by describing the literature search strategy, including databases searched, keywords, publication period, and criteria used for selecting the reviewed studies.
2. Expand the discussion with a more critical evaluation of the literature, including contrasting findings on biochar performance under different soil types, climatic conditions, feedstocks, and application rates.
3. Include additional recent peer-reviewed references (preferably published within the last five years) to improve the scientific currency and depth of the review.
4. Add a summary table or conceptual figure that compares different biochar feedstocks, production conditions, key properties, and their effects on soil fertility and crop productivity.
5. Provide a more detailed discussion of the economic feasibility, large-scale implementation challenges, quality standardization, and policy considerations affecting biochar adoption, particularly for smallholder farming systems.
6. Carefully review the manuscript for consistency in formatting, citation style, scientific terminology, and reference presentation.

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Overall, the manuscript offers a valuable overview of the role of biochar in sustainable agriculture and environmental conservation. Following the suggested minor revisions, it will make a meaningful contribution to the literature and will be suitable for publication.