

Review Form 1.7

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_104071
Title of the Manuscript:	Investigating the Impact of Long-term Zero Tillage and Residue Retention on Soil Nitrogen, Phosphorus, Potassium and Microbial Biomass Phosphorus Levels in an Inceptisol within a Maize-Mustard Cropping System
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> 1- The manuscript appears to be focused on a field experiment evaluating different cropping systems (zero tillage and conventional tillage) with and without residue retention in maize-mustard cropping. The study explores the availability of essential nutrients like mineralizable N, available K, and available P in the soil under different treatments. The findings of the manuscript present new and original insights that haven't been extensively studied before. The study design is robust, and the methods are well-executed, it enhances the credibility of the results. The study meets the criteria mentioned above and adds valuable insights to the existing knowledge, it has a higher chance of being well-received by the scientific community 2- The title of the article is informative and accurately reflects the content of the study. It mentions the key aspects of the research, including the long-term zero tillage and residue retention practices, the specific nutrients being studied (nitrogen, phosphorus, potassium, and microbial biomass phosphorus), and the soil type (Inceptisol) within the context of a maize-mustard cropping system. However, the title could be slightly improved for clarity and conciseness. Here's an alternative title: "Long-term Impact of Zero Tillage and Residue Retention on Soil Nutrients and Microbial Biomass in a Maize-Mustard Cropping System" This alternative title still conveys the core focus of the study, mentioning the long-term impact of zero tillage and residue retention on soil nutrients and microbial biomass. It is more succinct while retaining the essential information about the research topic. 3- While the abstract provides a good overview of the study, it could be enhanced in the following ways to make it even more comprehensive Objectives: Including a clear statement of the objectives or research questions of the study would help readers understand the specific aims of the research Methods: Briefly mentioning the experimental design, sampling methods, and analytical techniques used in the study could provide additional context. Results Details: While the abstract mentions the highest and lowest values of soil nutrients and microbial biomass observed in specific treatments, it could be more informative if it included some numerical values or ranges for these parameters. Implications: Expanding on the potential implications of the results for agricultural practices, soil fertility, and crop productivity would add depth to the abstract. Limitations: Briefly mentioning any limitations of the study would provide a more balanced perspective for readers. By incorporating these elements, the abstract could become more comprehensive and give readers a better understanding of the study's significance and contributions. As for whether the manuscript would be interesting to the scientific community, it depends on the factors mentioned in the previous response, such as relevance, novelty, methodology, and significance of the results. A comprehensive and well-presented abstract can certainly increase the manuscript's appeal to potential readers and researchers in the field. 4- The abstract provides a summary of the research conducted on the impact of long-term zero tillage and residue retention on soil nitrogen, phosphorus, potassium, and microbial biomass phosphorus levels in an Inceptisol within a maize-mustard cropping system. The results of the study indicated that the treatment ZTMZ(+R)-ZTM(+R)-ZTSMB(+R) showed the highest value of mineralizable nitrogen, available potassium in both the soil layers, and available phosphorus in the surface soil layer. The treatment with triple zero tillage and residue retention (ZTMZ(+R)-ZTM(+R)-ZTSMB(+R)) also resulted in the maximum total phosphorus stock and microbial biomass phosphorus (MBP). The study suggests that conservation agriculture practices, such as zero tillage and 	

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	<p>residue retention, significantly increased mineralizable nitrogen, available phosphorus, available potassium, and MBP. The triple zero tillage treatment with residue retention (ZTMZ(+R)-ZTM(+R)-ZTSMB(+R)) proved to be the most effective among the treatments studied.</p> <p>The research highlights the potential of conservation agriculture practices to enhance nutrient availability in the soil, which could lead to more sustainable agricultural practices, particularly in regions where access to mineral fertilizers is limited. The study also emphasizes the importance of soil microorganisms in mediating nutrient availability, specifically phosphorus, to plant roots.</p> <p>The accuracy of the keywords is commendable</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	Consider refining the language to make it more polished.	
<p>Optional/General comments</p>	<p>I acknowledge the validity of the points discussed. Updating the study's methodology would significantly enhance its quality. Please consider expanding the related work section for more depth.</p> <p>I recommend accepting the paper for publication with improvement suggested.</p>	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	

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