Review Form 3

Journal Name:	**Asian Journal of Soil Science and Plant Nutrition**
Manuscript Number:	**Ms_AJSSPN_128984**
Title of the Manuscript:	**Periodical availability of iron in soils under saline water condition**
Type of the Article	**Original Research Article**

PART 1: Comments

	Reviewer's comment	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	The manuscript addresses the critical issue of iron availability in saline soils, a challenge in agricultural productivity, especially under changing environmental conditions. By exploring the use of iron nanoparticles and their efficacy compared to conventional FeSO□, the study contributes to the growing field of nanotechnology in agriculture. The findings have implications for improving nutrient use efficiency and managing salinity-induced micronutrient deficiencies, providing practical solutions for sustainable farming practices.	
Is the title of the article suitable? (If not please suggest an alternative title)	The current title, *"Periodical availability of iron in soils under saline water condition,"* is informative but lacks specificity regarding the study's innovative aspects. A more suitable title might be: *"Impact of Iron Nanoparticles and FeSO□ on Periodical Iron Availability in Saline Soils."* This revision highlights the key variables and methodologies.	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract provides a summary of the study but could benefit from improved clarity and comprehensiveness. Suggestions: • Clearly define the novelty of the study (use of nanoparticles compared to FeSO□). • Quantify results where possible, such as mentioning percentage differences. • Include the broader implications for agricultural practices. For instance, you could rephrase: *"The application of 10 mg Fe/kg soil through FeSO□ achieved the highest DTPA-Fe content (8.48 mg/kg), demonstrating a 55.8% increase compared to the control."* Adding a sentence on potential applications in saline agriculture would enhance its impact.	
Is the manuscript scientifically, correct? Please write here.	The manuscript appears scientifically accurate, with appropriate methodology and statistical analysis. The use of a CRD factorial design and the measurement of DTPA-extractable Fe using standard techniques lend credibility to the findings. However, the discussion could delve deeper into the mechanisms of how Fe nanoparticles mitigate salinity impacts compared to FeSO□.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are adequate and include recent studies, but additional citations to support the role and properties of nanoparticles in general saline soil dynamics could strengthen the paper. Suggested references include: • *Journal of Plant Nutrition* 5, no. 4-7 (1982): 821-840. • *Bioresource technology* 342 (2021): 126000. • *Journal of Hazardous Materials*, *458*, 131861. • *Nanomaterials for Advanced Technologies*. Singapore: Springer Nature Singapore, 2022. 127-140. • *Indian Journal of Economics and Development* 4, no. 1 (2016): 2320-9828.	

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	Ensure consistency in the citation style and avoid redundancy.	
Is the language/English quality of the article suitable for scholarly communications?	The language is generally clear but could be refined for scholarly communication. Specific issues include: • Verb tense inconsistencies (e.g., "was analyzed" vs. "were analyzed"). • Sentence structure simplifications to improve readability. For instance: Original: *"The significantly highest DTPA-Fe content was recorded due to 10.0 mg/kg soil through FeSO□ application."* Revised: *"The application of 10.0 mg Fe/kg soil through FeSO□ resulted in the highest recorded DTPA-Fe content."*	
Optional/General comments		

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)***	

Reviewer Details:

Name:	**Bidai Yasmina**
Department, University & Country	**Oran 1 University, Algeria**