

Review of: "Synthesis, Characterization and Ameliorative Effect of Iron Oxide Nanoparticles on Saline-Stressed *Zea Mays*"

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Potential competing interests: No potential competing interests to declare.

The manuscript discussing the plant-based synthesis of iron oxide nanoparticles and its impact on plant salt tolerance in *Zea mays* has certain significance. Although the work is good, the structure of the manuscript can be improved, which will make the work more understandable. There are some issues worth noting:

- Authors need to make the abstract stronger and more fluent and indicate by discussing simply the methods used for synthesis and characterization of FeO NPs. Also, mention the concs. of NPs and salts used in the experiment.
- Please write the keywords in alphabetical order with semicolon separations.
- Please arrange the introduction chapter by first discussing nanotechnology, then the salinity impact of different crops, especially on maize; onward, describe the role of plant-based nanoparticles in mitigating stresses. In the last paragraph of the introduction, provide your objectives by mentioning the novelty of your research.
- Use references in the whole research paper that are mostly after 2020.
- Please be consistent when citing articles; somewhere in the paper, the symbol "&" is used between two authors, and somewhere "and" is used.
- Please ensure the details of the characterization of nanoparticles you have used.
- In the Method and Materials chapter, provide the citations of each protocol; no need for so much discussion.
- The genotype of maize you used for experimentation is not clear, whether salt tolerant or salt sensitive; mention it. Secondly, the designs used by the authors are so complex.
- Please correctly cite articles. The format isn't consistent throughout the manuscript.
- Please rewrite the captions of all figures. Please indicate what A, B, C, D, and E treatments represent. Also, mention the name of the test used to find out significant differences.
- Please separate the discussion and result chapters to make the article more clear and authentic.
- Please improve the conclusion section.