

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

Ahmet Can<sup>1</sup>

<sup>1</sup> Bartin University

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The critiques presented for the different papers vary in their focus and depth, but there are common threads that can be synthesized to provide a general critique:

1. All papers seem to present valid arguments supported by experimental data, demonstrating the positive effects of nanoparticles on plant growth under salinity stress. However, in several critiques, there is a call for additional information that could further support the results, such as a deeper exploration of potential mechanisms and a broader range of experimental conditions.

- A recurring suggestion is for the authors to strengthen their arguments by including more robust statistical analyses. This would provide a firmer ground for concluding the effectiveness of nanoparticle treatments.

- Also noted is a need for comparisons with control treatments to isolate the effects of nanoparticles and benchmark against other treatments.

2. The critiques express a desire for better organization within the papers, particularly in the results and discussion sections. Improving the structure, possibly with more distinct headings, can enhance readability and allow for a clearer flow of arguments.

- There is a call for clarification and expansion in the introduction and discussion sections. A more focused introduction and a more thorough discussion that places the findings within the context of existing literature are suggested.

3. The validity and persuasiveness of the arguments would benefit from the inclusion of concrete examples. Quantifying the results and providing visual representations, such as images or graphs, can strengthen the reader's comprehension of the findings.

- The critiques also emphasize the importance of investigating and explaining the mechanisms by which nanoparticles might confer benefits to plants. Without such insight, the arguments remain somewhat speculative.

4. Some critiques suggest that the novelty of the research could be enhanced by comparing findings with existing studies on the topic. By doing so, the authors can better position their work within the broader research landscape.

- Discussing and acknowledging the potential environmental impacts and implications of using nanoparticles in agriculture is also recommended. This is an increasingly important aspect as the field of nanotechnology intersects with sustainable agricultural practices.

5. The critiques uniformly suggest broadening the scope of the research, either by testing different nanoparticle concentrations, exploring long-term effects, or assessing the impact on various plant species.

- They also recommend a more comprehensive understanding of the implications for environmental safety and ecosystem health, considering the fate and transport of applied nanoparticles.

In summary, while the presented papers are commended for their contributions to understanding how nanoparticles might alleviate salt stress in plants, the strength of the arguments could be enhanced by more detailed statistical analyses, a broader experimental range, a better explanation of mechanisms, and consideration of the environmental implications of nanoparticle use.