

Review Form 3

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_123566
Title of the Manuscript:	Assessing the Toxicity of Zinc Oxide Nanoparticles (ZnO-NPs) on Seed Germination and Seedling Development of Maize
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	I think research work is innovative and time demanding because interest on seed priming by using nano materials are increasing day by day in agriculture sector. To increase the productivity of soil, various inorganic fertilizers are widely used but most of them are residual and detrimental effect on soil health which adversely affect the production and also have negative impact on human health.	
Is the title of the article suitable? (If not please suggest an alternative title)	I think title should be modified as "Impact Assessment of Zinc Oxide Nanoparticles (ZnO-NPs) on Seed Germination and Seedling Development of Maize"	
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 rising interest in using zinc oxide nanoparticles (ZnO NPs) in agriculture raises concerns about soil contamination, which could result in phytotoxic effects on germinating seeds and seedlings. The present study was carried out to analyze the responses induced by lower, as well as higher doses of ZnO NPs (0–5120 ppm), in maize, for a period of 7 days incubation study. The results revealed that percent seed germination, shoot, root and seedling length, fresh and dry weight and seed vigour was increased with nano seed priming at lower concentration (80 ppm) as compared to control but decline variably at higher levels (higher than 640-5120 ppm) of zinc in maize. Thus, seed-priming with zinc oxide nanoparticles at low dosages was sufficient to elicit a good response to seedling germination and vigour, while higher doses were associated with a delay in early development metrics and caused toxic effect on the seedlings.	
Are subsections and structure of the manuscript appropriate?	Subsections and structure of the manuscript are Okay, but mechanism research are absent.	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	Why author use too high variation among treatments? i.e. concentration 2.5 and con. 5120 What is the reason behind it? Considering recent research trend, seed priming with nano particle is increasing interest. View of this sense, work is okay and time demanding but mechanism research are fully absent here. Why medium concentration of nano particle perform better compared to too low and high?	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Many references are too old, should be replace by recent one.	
Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Manuscript should be accepted after revision and correction. English quality is okay, need some modification as per comments in the manuscript.	
Optional/General comments		

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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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