



SDI Review Form 1.6

Journal Name:	<u>Journal of Experimental Agriculture International</u>
Manuscript Number:	Ms_JEAI_34346
Title of the Manuscript:	Zinc and organic fertilization in maize augments enzymatic activities and nutrient bio-availability rendering higher production
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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, corrects the manuscript and highlights that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	At least 2 points are critical: 1) Recognize that correlation between yield and N source is not proof of 'cause and effect'. It is likely that other substances (or microbes) than N or Zn found in the manure account for the higher yields in the mixes. Thus, many of the conclusions concerning the role of these elements are likely invalid, although the data seem valid. It would be ideal if other components present could be identified as in the reference I supplied. It is generally not apparent from the figures when significant differences are present. Adding a table with the statistics with means comparisons would help. 2. Since urea is a source of reduced nitrogen, a basis for it being responsible for increased NRA needs to be explained. It may be true, but needs to be backed up somehow. (Again I offered a reference that may do that.)	Agreed with reviewer point of view, other element could also be responsible for increase in yield like P present in manure; However its quantity is too low to consider. Although urea is a source of reduced N source however after application in soil it convert to first NH_3 then ultimately to NO_3 for plant uptake under oxidised condition which improves nitrate reductase activity in plant
Minor REVISION comments	There are many edits suggested on the returned marked-up manuscript. For example on line 88, kg/H is used for the amount of N and tonnes for manure; Go ahead and show how many kg of N per hectare is being added from each source, Especially not the sticky note questions and comments.	Corrected as suggested. Nitrogen was applied @ 120 kg ha^{-1} as recommended dose for the maize crop in rainfed areas using different combinations of organic (farm yard manure) and fertilizer N (urea) sources. Fertilizer N (FN) was applied

SDI Review Form 1.6

		in two splits, viz., at seed bed preparation and at booting stage. Farm yard manure containing 1.85% N was applied before planting @ 3.3 t ha ⁻¹ for replacing 50% recommended mineral N and 1.82 t ha ⁻¹ for 25% replacement.
<u>Optional/General comments</u>	I'm not sure the NR and SOD activity measures need to be included since they may reflect stress responses that would not be replicated in a different year/environment more than anything else. Listing a desire to prove rather than test a hypothesis is not the way to start.	The activities of enzymes nitrate reductase and superoxide dismutase were measured to observe the effect of Zinc application on SOD as Zinc is an integral part of SOD. Secondly, nitrate reductase activity is affected by nitrogen.