



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	MS: 2012 AJEA 2746
Title of the Manuscript:	ROLE OF ZINC IN CROP PRODUCTION- A REVIEW

General guideline for Peer Review process is available in this link:

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

- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	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)
<u>Compulsory</u> REVISION comments	<p>The review on- ROLE OF ZINC IN CROP PRODUCTION has been well written. What is confusing is that in the abstract and also in the text it seems to be restricted to effect of Zn on rice. But even in this context important references like <i>Wissuwa et al 2010</i> seem to be left out. Yet again certain references are made very sparingly to other crops (Section9-9.2). The authors should either change the title of the review and its content in context to rice or discuss the role of Zn in a more holistic manner.</p> <p>Very sparse information has been provided on the role of Zn in plants, which should have been given since it is a review on role of Zn in crop production. No mention is made on role of Zn in membrane structure/Zn finger proteins/oxidative damage/reproductive biology, which are all pertinent for enhanced crop production. Most references cited are old and a large number of recent references some of which are mentioned below (and references therein) find no place in the review making it obsolete. Information of Zn deficiency on crop production and strategies for improved crop production has not been discussed.</p> <p>The authors have discussed at length the Zn deficiency in soils and factors affecting it. However they need to describe the role of Zn in crop production in the lines suggested above for the review to be more relevant to the title.</p> <p>It is suggested that the review be totally rewritten keeping in mind the recent roles of Zn and strategies involved in enhancing crop production after going through the suggested references and references therein.</p> <p>There are also no references cited referring to the work done on Zn by the authors. Probably one or two could be included?</p> <p>Broadley M R, White P J, Hammond J P, Zelko I and Lux A 2007 Zinc in plants; <i>New Phytol</i> 173 : 677–702.</p>	



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	<p>Cakmak, I. 2000. Possible roles of zinc in protecting plant cells from damage by reactive oxygen species. <i>New Phytol.</i>, 146: 185–205.</p> <p>Cakmak, I. 2002. Plant nutrition research: Priorities to meet human needs for food in sustainable ways. <i>Plant Soil.</i>, 247: 3–24.</p> <p>Cakmak I 2008 Enrichment of cereal grains with zinc: agronomic or genetic biofortification?; <i>Plant Soil</i> 302 : 1–17.</p> <p>Cakmak I 2009 Enrichment of fertilizers with zinc: An excellent investment for humanity and crop production in India; <i>J Trace Element Med Biol</i> 23 : 281–289.</p> <p>Kobayashi A, Sakamoto A, Kubo K, Rybka Z, Kanno Y and Takatsuji H 1998 Seven Zn–finger transcription factors are expressed sequentially during the development of anther in petunia; <i>Plant J</i> 13 : 571–576.</p> <p>Pandey N, Pathak G C and Sharma C P 2006 Zinc is critically required for reproductive development of lentil; <i>J Trace Elem Med Biol</i> 20 : 89–96.</p> <p>Rengel Z and Graham R D 1995b Importance of seed Zn content for wheat growth on Zn-deficient soil I. Vegetative growth; <i>Plant Soil</i> 173 : 259–266.</p> <p>Widodo, Broadley M R, Terry R, Frei M, Tanaka J P, Yoshihashi T, Thomson M, Hammond J P, Aprile A, Close T J, Ismail A M and Wissuwa M 2010 Response to zinc deficiency of two rice lines with contrasting tolerance is determined by root growth maintenance and organic acid exudation rates, and not by zinc-transporter activity; <i>New Phytologist</i> 186 : 400–414.</p> <p>Wissuwa M, Ismail M A and Yagahihara S 2006 Effects of Zn deficiency on rice growth and genetic factors contributing to tolerance; <i>Plant Physiol</i> 142 : 731–741.</p>	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		

Note: Anonymous Reviewer