



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2013_AJEA_3536
Title of the Manuscript:	The effect of macro and micronutrient fertilizers on the growth and yield of rice under calcareous soils

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	1. Except for the plant heights, all data are obtained at harvest. So why keeping 'growth' in title? Title may go as 'Effect of macro- and micro-nutrient fertilizers on yield and yield attributes of rice in a calcareous soil' 2. Authors need to update the MS with recent references. Most of the literatures cited date back year 2000 and before, and the latest one is 2004. 3. The need for balanced fertilizer application is well-documented. In introductory part, authors stressed mostly on global aspects, but are silent on the national/regional problems. The problem need not be reiterated, rather authors should concentrate on the study area, and the consequence of using/not using micronutrients with special reference to Iran. 4. the statistical analysis should be clearly mentioned. Excel is not a statistical software as such, even though it can be used for some basic statistical interpretation. How split-split-plot design was analysed using Excel? 5. Aim of study (line 45) was 'decrease in soil pH'? How this can be aim of a study? Where was vegetative growth studied? Even though pH was measured 5 times, where is pH data? 6. There should have been correlation study on effect of pH on yield and yield attributes. Mean soil pH is OK, but the temporal changes need to be stated. Was there any trend in decrease in pH? Has it got stable after a period? 7. Authors need to analyse more methodically, the decrements of pH under the fertilizers, and the yield increase over control. It appears as just a report and need	1. I am in Agreement . I have changed the title. 2- Ok. I have added some recent and new references in the paper. 3-Ok. I have added some text about the problem of imbalanced fertilizer using in Asia and Iran. 4- I did not write MSTAT-C program in the text. I have added it now. 5- The average of soil pH at 5 stages was measured per plot which is shown in the tables 2 and 3. One of the aims of the present study is obvious in the title (the effect of macro....on calcareous soil). It means that macro and micro nutrient fertilizers might be lowered the unsuitable effects of calcareous soils on rice yield by lowering soil pH. Rice plant should be cultivated under acidic soils at the range of 5.5-6.5 soil pH, not at calcareous soils. That is why, one of the aims of this study is



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	to be upgraded to a scientific article for a wider audience. 8. An economic analysis should be supplemented, as application of micronutrient fertilizer often comes with a cost. Hence, the relative yield increase must compensate the cost incurred in providing the balanced nutrients over the mono-fertilizer application. 9. The discussion part is either poor and absent on many aspects. While authors explained results, they fail to support their findings with appropriate discussion. There is also lack of relevant references, especially the recent literatures. 10. The first sentence of conclusion is a general statement. Even though it was supported by the data in the MS, avoid repeating results in conclusion. Also provide some suggestions on the future aspects or suggest some studies to be taken up in future.	lowering soil pH under this condition. 6. That is right. I did not refer to the correlation of the effect of soil pH with other yield components. 7- I have compared our results with the results of the other researchers (reference nos. 6 and 17 and added their results in the text. 8- The needed Zn and sulphur powder is 30 and 100 kg/ha, respectively. Their cost is only 10 and 20 dollars, respectively. This cost is very cheap compared to increase rice grain about 1000 kg/ha or more. 1000 kg/ha rice grain equals 500 dollars. 9- Some text of discussion is added in the paper, before conclusion. 10- It is ok. I have changed some text in the conclusion and have also written some suggestion at the end of this part.
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Minor REVISION comments	1. What is 'adequate Ca²⁺ available in' (line 103)? 2. Line 113: Give quantitative information. 3. line 111: What is 'this' and 'experimental' soils? 4. table 1: use SI units uniformly. 5. Provide clear information on the NPK and other nutrient doses, and the % of these available in fertilizers used. 6. better to show a field layout of the expt. 7. Line 170-71: where is pH data? What is 'total' mean pH? Table 3 8. Pl keep uniformity in decimal places between tables 1 and 2. Table 2 has the most realistic values, while the ANOVA in table 1 has so many decimal values, which seems irrelevant. 9. Which version of MS Excel was used? 10. Reduce Introduction. Make it more relevant to the current study, rather than a wider relevance to food security and malnutrition etc.. 10. Line 70: What does it mean, ;more than half of arable soils...? 11. Pl. Modify line 99-101. Make this more close to the objective of the study. 12. In materials/meth, detailed account of treatments are necessary. Authors can add a suitable diagram for the expt lay-out. 13. Why plant height was given importance? No scientific explanation is given? Why it was taken twice? Is there any significant difference, and does it carry any significance?	1. The rate of Ca element into the soil for up taking by the plant root. 2. These data has been added in the text. 3- The word of 'this; was deleted and the experimental soil means paddy field soil where rice plant has been cultivated. 4-It has been changed. 5- I have added all of these doses in the text now. 6- It is shown in the text. 7- It has been explained already. At part 2 no.5. In Table 2 and 3, I have deleted word :total" and added mean (average). 8-It has corrected. 9- I have used by MSTAT-C program. 10- Ok. 10- It means that more than 50% of the land soils where can cultivate plants. 11- This sentence should be deleted. 12- One table (Table 1)which shows the counted of the fertilizers has been added in the paper. 13- I wanted know that does micronutrient and sulfur powder affect on plant height or no? I t has been measured at two times (at panicle initiation and seed maturity stages). Because the rootlet of the top root of rice plant can be taken up micronutrients between panicle initiation and seed maturity (filling grain period) more than earlier growth period. We wanted know that does the absorbed micronutrient by rice plant affect on rice plant height or no? That is why, we measured plant height at tow these stages.
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<u>Optional/General</u> comments	Overall, the study adds to our existing knowledge to confirm the beneficial effect of micronutrients addition to rice. However, the article lacks mostly in its scientific presentation of data and the discussion as followed. There are queries pertaining to the statistical analysis, and the use of MS Excel (which version? Not clear) as the statistical software for split-split plot analysis. A thorough English language revision is a must, as the MS contains ambiguous and bad use of sentences/phrases.	
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