



SDI Review Form 1.6

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	MS: 2013_AJEA_3446
Title of the Manuscript:	INFLUENCE OF AGRICULTURAL LIME ON SOIL PROPERTIES AND WHEAT (<i>Triticum aestivum</i> L.) YIELD ON ACIDIC SOILS OF UASIN GISHU COUNTY, KENYA.

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	L 11. there is no need to repeat the affiliation if it is listed for each author L. 15-22. Some of the authors work at the same institution, so one address is enough. The superscript symbols should be different for a different institutional affiliation. L55. 'county' not 'counties' L 64. ferralsols normally have good internal drainage. What is the reason for water stagnation? L72. 'crops' suffices instead of 'crops/yields' L85. 'recommended' suffices instead of 'highly recommended' which suggests normal recommendations are not very important. L87 'toxicities' not 'toxicities' L87. 'availability' not 'ions' L88. it may not be necessary to apply P if liming liberates sufficient P.	Correction done Correction done Correction done Water stagnation is due soil compaction and crusting due to use of machinery. Indicated in the current draft. Corrected Correction done Correction done Correction done The is need to add P since these ferralsols (description of the site)which poor soils and depleted of P



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	L. 104. please give latitude and longitude. Do you have a local name for the soil (soil series name)? Some climatic data might be useful, as well as altitude. L112. please give latitude and longitude. Do you have a local name for the soil (soil series name)? L119. We need more information about the quality of the lime. What is its calcium carbonate equivalent, and what is its fineness (at least how much % passes through 20 mesh sieve). L120. When you say 0.5, 1, 1.5, 2.0 tons of lime, does that mean CCE or is it the total quantity applied? This is not clear to me. Also give the price of lime. L121. What type of P and N fertilizer was used and when/how was it applied? (incorporated or not?). L124. is the sub-plot size 4x4 m? L127. 'auger' not 'augar'. L130. Just drop 'mainly' L134. how was wheat seeded - drill or broadcast then raked or disked in ?	No local name for soil series, but FAO-UNESCO classification is used in Kenya. There is no documented climatic information regarding specific site. Therefore the climatic data for the county has been provided. latitude and longitude provided No local name for soil series Koru lime has 21% CaO. This fine coarsed lime that can pass through 100 mesh sieve 0.5, 1, 1.5, 2.0 tons of lime refers to the quantity. Information provided in the current draft. Correction done Spelling error corrected Correction done
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	L134. Please give chemical names of these herbicide and fungicide products. L136. Urea foliar feed or UAN foliar feed? I wonder if it would not be better to just say 'topdressed' since most N will not be taken up by the leaves but by the roots. L140. soil:water ratio needs to be checked. L140 which dispersion method did you use. Are you confident that all clay was dispersed with the method you used? Some Oxisols may look like sandy loam when just using sodium hexametaphosphate while in reality they are clay soils. L141. Which methods were used to determine C, N. L142. L152. Some journals prefer g kg^{-1} instead of % please check what AJEA prefers. L189. The figures are very difficult to read because the legend takes up so much space and they figures are very small. Please make bigger. Also check superscripts of ha^{-1}. I am not sure color will be reproduced.	Information provided in the current draft Information provided in the current draft Urea foliar feed was used as recommended by the breeders of the varieties. Correction done Method used is indicated in Table as recommended by AJEA. FURF, 1994 also found the same results Method used is indicated in Table as recommended by AJEA. Information provided in the current manuscript. AJEA has no specification
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	L205. At several places in the manuscript you use the annotation mg/kg^{-1} or kg/ha^{-1}. This should be just mg kg^{-1} or kg ha^{-1}. Please correct throughout. L206. Use t ha^{-1}. L207. I notice that available P is lower than before the experiment as reported in table 1, although P fertilizer was added. What was the reason. L216. You cannot say anything about the effect of N and P since all treatments received the same amount. You don't have a 'no fertilizer' control to compare with. So all references to the effect of N and P should be removed from the paper. Figure 4 and others. Need to explain what line in each bar means, and how we can determine whether a treatment is significantly different from another one. L229. Please give the significance of the r in the figures. L268. The scale of the y-axes should be changed to range from 0-4 or so since no values above 4 were observed. Also, the figure titles of figure 7 and 8 should say 'nutrient concentration' and not P- or N-uptake since you don't present the total uptake in kg ha^{-1}	Correction done Correction done The figure provided in the first draft was wrong a correction has been made. Correction done Correction done. Correction done Correction done
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	L278-288. I have a problem with the financial analysis. First I don't understand how the GFB, TCV,NFB and MRR were calculated. This needs to be explained in detail in the Materials and Methods. Then, if I am correct 1 ton of lime cost more than KSH14,000. This is about USD170. Here in the USA lime may typically cost \$30 per ton (including application). It is clear that the market for lime is undeveloped and the price highly inflated in Kenya. Hopefully your research will be used in extension presentations to explain to farmers that liming is very important - it can easily double yields. And hopefully you can work with local industries to make lime more affordable. Your conclusion discourages the use of lime while it would be very beneficial to increase yields and nutrient use efficiency. L333. Your experiment is not able to show N and P response, so limit your discussion to the effect of lime, which is important enough. L338. The statement 'P and N increased grain yield' is not based on this study because the control also received P and N. Please limit your comments to the effects of lime. L340. No statement can be made about combined effect or N, P and lime since you don't have a	Nutrient concentration might be to general and one might not does which nutrients in specific one is talking about. The information is now provided. In Kenya 1 ton of lime cost more than KSH 24,00(factory price). The cost of transport to Uasin Gishu county is KSH 3,500. Correction done Correction done Corrected
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	comparison without N and P. L343. correct spelling error. L347+348. Please consider revising your statements as i suggested above. L352. Only talk about lime in the conclusion. i would say the study calls for a concerted effort to popularize lime and bring down its cost. References Many references are incomplete. Please check.	Correction done Correction done Correction done
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		