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Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2014_AJEA_9107
Title of the Manuscript:	Effect of Phosphorus Fertilizer and Poultry Manure on P Fractions in some Derived Savanna Soils of South Western Nigeria - A greenhouse study
Type of the 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.

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(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)</i>
<u>Compulsory</u> REVISION comments	All the sections of this manuscript need to be amended. The author needs to critically confirm every outlined result as major discrepancies were observed in the report. This affected other sections of the manuscript including conclusion and abstract which depended on the proper interpretation of the results obtained. All the sections in this manuscript need to be critically revised. The interpreted results were not correlating to figures on the tables outlined. Check properly and ensure these discrepancies are resolved so that sections that depended upon the outcome of the results will be resolved as well.	All sections of the manuscript has been critically revised as guided by the reviewer.
<u>Minor</u> REVISION comments	ABSTRACT Line 6 The opening paragraph should	The aim of the study has been included in the abstract and the abstract is now a one paragraph summary of the whole manuscript. The correction on line 21 has been done and one of the sentences in line 21-23 i.e. sentence 2 and 3 has been discarded.



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	reveal the aim of the study. Line 7 This is part of the methodology (Materials and Methods section) and should not form art of the next paragraph. Line 9 I am not comfortable with a 3-paragraph abstract adopted in this manuscript, as abstract, which is the summary of a research, should be contained in a paragraph. INTRODUCTION Line 21: Rephrase “One of the plant nutrients ...these soils is phosphorus. To read “Inherent poor fertility in these soils has been attributed to short supply of phosphorus.” Line 21-23 Sentence 2 & 3 reads the same meaning. One of them should be discarded. Line 26 Should read ...soil makes phosphate, the form by which plants take up P, to be either in the solution...	Line 26 The correction has been done. Line 28 High fixation has been observed to be one of the causes of low availability of P (Warren, 1992). Reference on the effect of fertilization on P fractions in South Western Nigeria soils has been included (Kolawole et al., 2004). Materials and Methods Line 42 The correction has been done. Line 45 The coordinates of the sites were taken using a Geographical Positioning System (GPS) The reference for the soil series classification has been included (Smyth and Montgomery, 1962). RESULTS
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	Line 28 Your opinion of the low availability of P due to slow diffusion and high fixation is conflicting. The low availability of phosphorus is due to its low solubility, conversion to less reactive forms and low diffusion. References need to be provided for some of the researches on the effect of fertilization on P fractions in southwestern Nigeria soils. MATERIALS AND METHODS Line 42 Should read “...were collected from two farmland located...” Line 45 (Table 1) Was the site geo-reference point (Latitude & Longitude) determined from literature or with a device? Is there reference for the soil series classification? You can check Smyth and Montgomery (1962) for soil series classification for Southwestern	Line 99 The correction has been done in accordance with the results presented in table 4. Line 100 The correction has been done. Line 103, 105-106 The correction has been done in accordance with the results presented in the tables. Line 115 The word Largest has been changed to highest and as a result of to resulted from. Line 121 Discussion on the results in section 3.4 has been corrected. Line 123-124 The correction has been done. Line 134 The sentence has been reframed.
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	Nigeria. RESULTS Line 99 The assertion that sole application of SSP contributed more total P than poultry manure was incorrect as the sole application of PM at 5 t ha⁻¹ had higher total P than sole application of 15 Kg P ha⁻¹ SSP. Also, total P in the soil of the sole 10 t ha⁻¹ PM was higher than sole SSP at 30 and 45 Kg P ha⁻¹ (Table 4). Line 100 Rephrase the sentence to read “The combined application of the treatments of 20 t ha⁻¹ poultry	Line 135 and 137 The correction has been done. Line 140 - 146 The sentence has been reframed. Line 147 The sentence has been reframed to state the specific phosphorus fractions that increased as a result of the treatments applied. Line 150-151, 151-152 The correction has been done. Line 155- 157 Effectiveness of poultry manure (an organic manure) was mentioned to further reaffirm earlier observation (Jones et al., 2003). Conclusion The conclusion has been re-written. References The corrections have
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	manure and 30 Kg P ha⁻¹ SSP had the highest total P.” Line 103 The assertion that was incorrect as the sole application of PM at both 5 and 10 t ha⁻¹ rates had lower organic P than any of the sole SSP at 15, 45 and 60 Kg ha⁻¹ rates (Table 4). Line 105-106 The highest Po (organic phosphorus) was in the combined treatment of PM at 10 t ha⁻¹ and SSP at 30 Kg ha⁻¹. This was contrary to the 15 t ha⁻¹ mentioned by the author. The least concentration occluded P was in the combined treatment of 10 t ha⁻¹ and 60 kg ha⁻¹ SSP. This should have been reported rather than the no significant difference between sole PM of 15 t ha⁻¹ and 20 t ha⁻¹ treatments reported by the author. Line 115 Change “largest” to highest. Change “as a result of” to “resulted from”.	been done and additional references added as suggested by another reviewer.
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	Line 121 Results in Section 3.3 should be re-written before comparing with Section 3.4. For instance, total P fraction in the sole SSP at 15 kg ha⁻¹ in the second greenhouse study (361.33 mg kg⁻¹) was higher than that in the first greenhouse study (360.14 mg kg⁻¹). The same applies to the sole 15 t ha⁻¹ PM treatment as well as the combined treatment of 20 t ha⁻¹ PM and 45 kg ha⁻¹ SSP where the second greenhouse studies had higher P concentration than the first. Line 123-124 The assertion that Po (organic P) increased slightly with the sole application of PM was incorrect as sole PM at 10 t ha⁻¹ and 15 t ha⁻¹ treatments in Table 5 had lower Po content than the first greenhouse study in Table 4. Line 134 There was no general trend in the variation of the total P fraction for sole SSP and its combinations, contrary to report by the author. Line 135 Indicate whether the SSP treatment referred	
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	to was sole or combined. Line 136 What was the yardstick for this comparison of organic P? Line 137 The effectiveness of sole PM in increasing P_o over SSP is not acceptable because Table 6 reflected that sole SSP at 15, 30 and 45 kg ha⁻¹ improved P fraction than sole PM at 5 and 10 t ha⁻¹. Line 140 There was no yardstick for the comparison of residual P. The use of “however” was unjustifiable. Line 145 Avoid starting sentences with the adverb “when”. It can be avoided as the sentence can be written as “Sole application of poultry manure accounted for more total P than sole SSP treatments.” Line 146 Remove “however” from the sentence and start with “The highest extractable total ...45 kg P ha⁻¹ of SSP.”	
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	Line 147 The assertion by the author that organic P increased in Table 7 as compared with the first greenhouse study in Table 6 was incorrect. The increase was not general, as sole SSP treatments were lower than in the first greenhouse study. Line 150-151 The statement should read “The combined application of 10 t ha⁻¹ ...also had the highest organic P fraction.” Line 151-152 Contrary to the author’s report, there were increase in both Al-P and Ca-P when compared to the first greenhouse study. Both the sole SSP and sole PM were effective in increasing soil Fe-P as P fractions from the second greenhouse study greatly surpassed the first. Line 155-157 I still could not understand the basis for this comparison of occluded P reduction caused by PM, as all sole PM applications recorded higher P fractions over the first greenhouse study. Avoid the use of “slightly”, as probability values indicate significant or no significant differences.	
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	CONCLUSION The conclusion will only be acceptable after proper correction of the results. This is necessary as some assertion like “application of poultry manure alone effectively increased organic P in Temidire series ...” need to be properly checked. REFERENCES Line 185 Add a space between the period (.) and 2004. Line 198 Add a space between the period (.) and SAS. Line 201 Add a space between the period (.) 2012. Line 208 Add a space between the	
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	period (.) and 2004. Line 210 Add a space between the period (.) and 2004 Line 213 Add a space between the period (.) and 2004 Line 216 Add a space between the period (.) and 2005.	
<u>Optional/General</u> comments	The author can seek the assistance of experts in English Language to help with syntax and grammatical errors.	