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Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2014_AJEA_14807
Title of the Manuscript:	Spatial Characterization of Cone Index and some Nutrients in a Sandy Loam Soil (Eutric Leptosol) Using the Multivariate Analysis
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.

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



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PART 1: 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	The submitted manuscript attempts to perform many complex statistical analyses. However, a lack of clarity of the statistical analysis and the linkage among analysis create a series problem to follow the manuscript. If the authors can give a framework for their analysis in the methodology it would create a better understanding of the analysis. There are no research questions addressed in this manuscript. No hypothesis was tested. Therefore, the manuscript needs to add a few research questions and the results/analysis should be organized accordingly. The authors loose the consistency of the manuscript. For example, only acronyms should be used after the first full phrase is introduced. The space between words is a serious problem throughout. There are some punctuation issues as well. Figure 10 is a duplication of Ref. 20 [Lomeling, David. "Correlating the spatial distribution of some macro-and micro nutrients with Cone Index in a sandy loam soil (Eutric Leptosol)." <i>International Journal of AgriScience</i> 4.2 (2014): 89-101.]	As research questions, the paper argues that the PCA using 2 or 3 principal components may adequately describe the variance of given variables between a data set. However, it inadequately describes any underlying inter-linkages (antagonism/synergism) between them and so the use of HCA and GMM. Application of the three tools gives us a better understanding of these underlying inter-relationships. Furthermore, the objective of the paper was not to test any hypothesis with regards to how best any analytical tool would be preferable to the other. Hypothesis testing was only possible for GMM using the KS-test and not for PCA and HCA. Fig. 10 cited in the original <i>AgriScience</i> journal was partly used in this work to describe how PCA, GMM and HCA would be used in combination with geo-statistical tools to characterize spatial variations of soil nutrients. Fig. 10 has been removed from manuscript.
<u>Minor</u> REVISION comments	I have made numerous minor edits throughout the manuscript using sticky notes.	All necessary corrections and changes done



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<u>Optional/General</u> comments	I strongly suggest that the authors to follow the guidelines of the journal and also to make sure that there are no compatibility issues in MS office (I believe that the space issue is due to incompatibility with MS Office).	Suggestions well taken care of. Thanks
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