Review of: "Spatial Analysis of Soil Fertility Using Geostatistical Techniques And Artificial Neural Networks"

Alaa M.M.A. Mahgoub

Potential competing interests: No potential competing interests to declare.

The manuscript is accepted after applying the following recommendations:

1. Page 2 “However, the individual representation of the variables defining soil fertility does not cover the interest and the need to visualize the joint behaviors of soil fertility (…….

Please give references). Update the paragraph to compare between the other references cited, if needed.

1. Page 4, systematic sampling, it is preferred to mention the type with reference, e.g. (Stratified sampling technique (Muller-Dombois and Ellenberg, 1974: pp. 177-209).
2. Page 4, Ten soil variables were analyzed: pH in water (1:2.5) ……please add the method used with references for each of the ten variables analyzed.
3. Page 4, Is Tukey’s test (1977) performed using SPSS software or another statistical software, please mention all software and languages used in the statistical analysis and fuzzy logics and relate to statistical information mentioned and ordination techniques displayed in the whole manuscript (e.g. Page 7, ……., canonical discriminant analysis, reference…….; Page 8, ……normality test, reference…….; Page 14, multivariate statistics,……..).
4. Page 5, Just declare for the reader the advantage of calculating the standardized values of the mean error and root-mean square, please review the manuscript and apply that recommendation throughout similar cases.
5. You have mentioned that:

Page 14, The final model also allowed to visualize the expression of the boundaries defined by the dominant fertility classes in the surface layer of the soils. These boundaries facilitate decision making for soil management and for the development of productive plots.

Page 15, The assessed area is not internally homogeneous, possibly due to the influence of soil.

management and agronomic practices in the area. This variability has to be taken into

account to avoid a differential effect on the crops.

Thence, please relate these results to the types of crops affected, and mention which soil fertility class is the most appropriate for the growing crops monitored to obtain a maximum yield.