Multivariate analysis of data of forest soil by using "Face Chart"

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The data of the soil profile survey is difficult for non-experts to understand what the soil is like. Therefore, the purpose of this study was to make the soil survey results visually easy to understand by performing a multivariate analysis (principal component analysis, cluster analysis (Ward method)) on the soil data and showing it on a face chart which would be easy for the layman to understand. We did soil profile surveys at the Woods for Field Practice Owned by Sagano H.S. (a mixed forest) located in the Satoyama woods area in Kyoto city. We analyzed these results. We used "R" to analyze. As a result, we could visualize the main data of soil profiles by using these face charts. The soil is so complex that we have to consider multicollinearity in future.

Keywords: Forest, Soil profile, Face chart, Multivariate analysis, Multicollinearity