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
**Evaluation of Some Chemical Extraction Methods Used as Indices of Soil
Nitrogen Availability in Polatlı State Farm Soils in Ankara Province**

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Abstract: In pursuit of evaluating the suitability of methods for determining the ability of soils to supply available nitrogen under different soil conditions, two biological aerobic and anaerobic incubation procedures and six chemical extraction methods were applied to 31 samples of soil collected from the Central Anatolian area. The selected area for the study represents the criteria of arid and semi-arid regions. Statistically significant correlation coefficients were found between the biological methods and the five chemical methods that were evaluated out of the six. Only the alkaline KMnO_4 method did not give a significant correlation coefficient. The results of the phosphate-borate buffer method gave the highest correlation with the results of the biological methods. Although the method of hot 2 M KCl had a good correlation with biological methods, the r values obtained by this method were lower than those that obtained by the phosphate-borate buffer method. When the six chemical extraction methods were compared with each other, it was seen that the highest correlations were established between the acid KMnO_4 method and each of the total hydrolyzable ammonium and total hydrolyzable nitrogen methods. However, the lowest relations were found between the results obtained by the alkaline KMnO_4 method and the other chemical extraction methods. It was concluded that phosphate-borate buffer and acid KMnO_4 methods were the most suitable for Central Anatolian soils and other similar soil types. The total hydrolyzable $\text{NH}_4\text{-N}$ value gave a high correlation with the biological method.

Key Words: Potentially available nitrogen, aerobic and anaerobic incubation, chemical extraction, arid and semi-arid regions, mineralization.

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