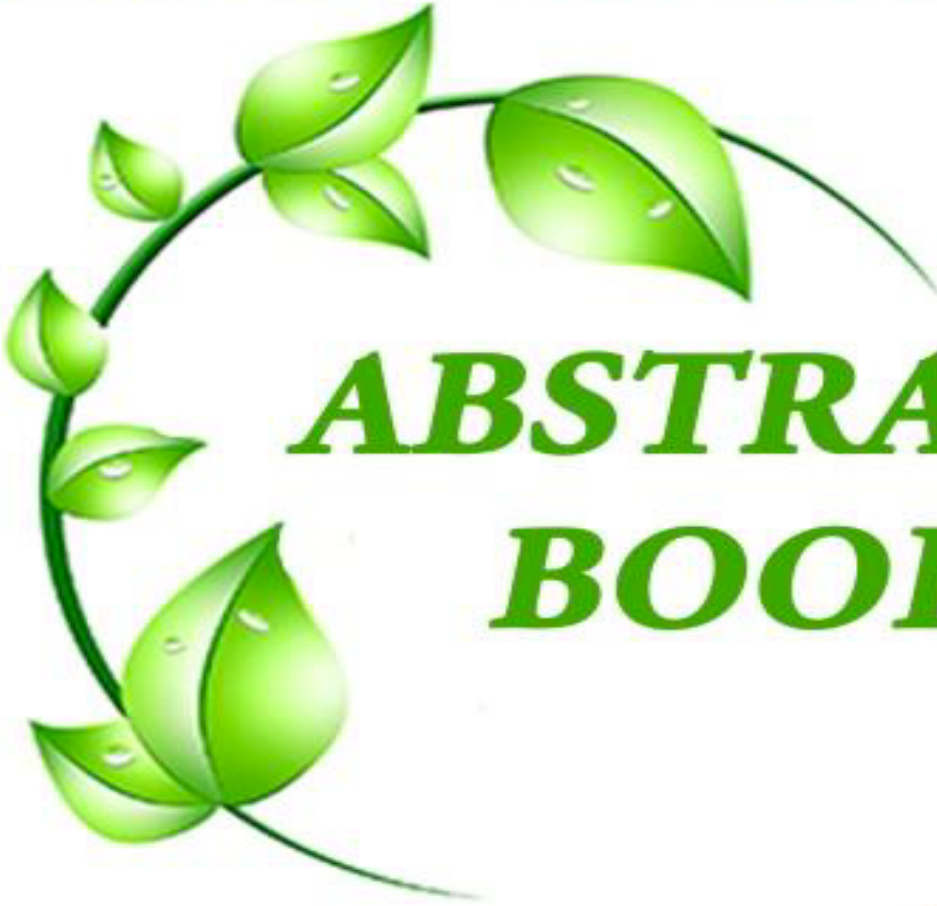




# **ECOLOGY SYMPOSIUM 2017**

**11-13 MAY 2017  
ERCIYES UNIVERSITY  
KAYSERİ / TURKEY**



## ***ABSTRACT BOOK***





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## **Determination of Some Soil Parameters by Geostatistical Techniques in Harran Plain**

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**Introduction:** Harran Plain has a very important agricultural potential. It is very important to know important parameters in the soil in order to be able to maintain this potential and to ensure the continuity of use of the soil. Pre-existing studies on the soils of the plain are not sufficient to represent the general state of the soils. Geostatistical modeling has not been used as well in mapping the contents of plain soil. When these factors are considered, there is a need for a wide range of studies, both of which are included.

**Material and Methods:** A total of 1055 samples were taken from the corner points determined of one and two kilometers of the grid system within the scope of this project. The sample was worked at 0-30 and 30-60 cm for two different depths. For this study, 472 samples taken from 0-30 cm were used. Bioavailable phosphorus (BP), total phosphorus (TP), organic matter (OM), soil reaction (pH) and electrical conductivity (EC) analyzes were performed on the samples and kriging maps were created by geostatistical modeling. In order to be able to create maps we used the results of 16 neighboring points at estimating the content of a soil we have analyzed.

**Results:** When the results of the analysis were examined, the mean values of soil contents were determined as 4.4 mg / kg AP, 775.84 mg / kg TP, OM 1.17, pH 8.3 and EC 0.32. When the results are evaluated, it is found that the TP content of the soil is moderate; It was determined that YP and OM contents were low unlike soil pH, and EC was in quantities not affecting salt. In the maps generated by the results, estimating the TP and OM contents of the geostatistical models was achieved at a high rate, but only at a low rate when estimating the YP, pH and EC contents.

**Discussion:** In general, Harran Plain has a soil having moderate TP, low YP and OM unlike soil pH. This could be attributed over-application of fertilizer P and irrigation. Farmer does not apply any OM to soil that is why OM is low.

**Keywords:** Bioavailable P, Total P, Organic Matter, Soil pH, Electrical Conductivity, Geostatistical Modeling

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