

Developing a Town Based Soil Database to Assess the Sensitive Zones in Nutrient Management

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Abstract : For this study, a town based soil database created in Gümüşçay District of Biga Town, Çanakkale, Turkey. Crop and livestock production are major activities in the district. Nutrient management is mainly based on commercial fertilizer application ignoring the livestock manure. Within the boundaries of district, 122 soil sampling points determined over the satellite image. Soil samples collected from the determined points with the help of handheld Global Positioning System. Labeled samples were sent to a commercial laboratory to determine 11 soil parameters including salinity, pH, lime, organic matter, nitrogen, phosphorus, potassium, iron, manganese, copper and zinc. Based on the test results soil maps for mentioned parameters were developed using remote sensing, GIS, and geostatistical analysis. In this study we developed a GIS database that will be used for soil nutrient management. Methods were explained and soil maps and their interpretations were summarized in the study.

Keywords : geostatistics, GIS, nutrient management, soil mapping

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