

**B-44: Survey on chemical fertility status of different soil types in Makandura region**

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Makandura region in the North Western Province, includes Puttalam district and parts of Kurunegala and Gampaha districts. Soils present in the region fall into different great soil groups such as Red Yellow Podzolic (RYP), Reddish Brown Earths (RBE), Alluvial, sandy Regosols, Non Calcic Brown, Red Yellow Latosols etc. Consequently, different soil forming factors, cropping patterns, fertilizer and irrigation practices have resulted in a wide variation in soil chemical characteristics across the region.

Soil samples (0-20 cm) were collected from the whole region and analysed for soil reaction (1:2.5 H<sub>2</sub>O), electrical conductivity (1:5 H<sub>2</sub>O), available P(Olsen), exchangeable potassium (NH<sub>4</sub>OAC) and organic C (Walkey & Black).

Results showed that, around 53% of the samples tested had pH 4.0-5.0 and only 7% was below pH 4.0 in the region. Majority of the samples of the region (68%) and of RYP soils (76%) had available phosphorus contents below 5 mg/kg soil. Exchangeable potassium content was below 40 mg/kg for more than 50% of total samples analysed and 30% of RBE and alluvial soils had more than 100 mg exchangeable K/kg. Organic matter content ranged from 0.1-8.0% and 1.0-3.7% in RYP and RBE soils respectively.

Indications of the study are such that, soils are more towards acidic and deficient in available P and exchangeable K. It is apparent that most of the soils in the region are fairly low in organic matter. Consequently, liming, organic manure application and soil test-based fertilizer application, would improve the soil nutrient status and thereby the crop yields in the region.