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EVALUATION OF THE PHOSPHORUS STATUS OF SOME COCONUT-GROWING SOILS OF SRI LANKA

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Of the coconut-growing countries of the world Sri Lanka alone appears to have shown significant effect on nut and copra yield to the application of P fertilizers (Wahid *et al.*, 1977). In order to elucidate the reason for this response, a study of the P status of the major coconut-growing regions of Sri Lanka was undertaken.

The distribution of total, organic, various forms of inorganic P, and available P extracted by four chemical methods was determined for 50 soils belonging to 15 soil series. Total P was generally low in most soils ranging from 73 to 290 ppm. The relative abundance of the various forms of P was generally in the order of occluded P > organic P > Fe-P > Al-P > Ca-P with occluded P constituting 35 to 70% of total P. Al-P and Ca-P were highly correlated with Olsen's—, Bray I—, Bray II—and NH_4 OAc pH 4.8 extractable P. Available P by the four methods were positively correlated with % sand and negatively correlated with % silt and % clay.

Phosphorus (%) in the 14th leaf of coconuts from selected sites ranged from 0.07 to 0,12—only the palms in Negombo, Madampe and Katunayake series had values close to the critical phosphorus concentration of 0.12%. Leaf P was positively correlated with all four available forms, Al-P and Ca-P.

References:

1. Wahid, P. A., Kamala Devi, C. B, and Haridasan, M. (1977). The Philippine Journal of Coconut Studies, 2,1: