

B-131 Distribution profile of zinc in rubber growing soils and its status in relation to management practices

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A study was undertaken to assess the distribution profile of zinc in rubber growing soils and its status in relation to management practices. Most of the rubber growing soils have adequate supply of zinc (Zn) for satisfactory performance of rubber trees. The acid extractable Zn which is considered as an indicator of the Zn reserves in the soil showed significant differences between soil types. *Matale* soil series recorded the highest concentration of acid extracted Zn followed by *Parambe* series soils. *Boralu* series soils had the lowest. The total Zn content showed an increase with increase in soil depth. There was a negative correlation between Zn content and soil organic carbon content. This relationship was observed only for *Parambe* ($R^2=0.756$) and *Boralu* ($R^2=0.309$) series soils.

An assessment of the Zn status in relation to management practices of rubber plantations are also discussed. Rice straw and poultry litter application enhanced the soil and leaf Zn contents significantly. Application of rubber factory effluent to rubber lands and different planting practices such as rubber & tea and rubber & cinnamon multi-cropping systems on Zn status of rubber were also investigated. Leaf Zn content of different legume cover species and their effect on soil Zn status were also studied. RRIC 100 series clone showed the highest leaf Zn content of 39.75 ppm compared to PB 86 which had 23.32 ppm.