

B-60: Effect of coir dust and inorganic fertilizer on soil properties in a rubber plantation

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Effect of coir dust (12 kg air-dried coir dust/tree/year) and rubber fertilizer mixture (63 g N, 36 g P, 73 g K and 9 g Mg/tree/year) on some physico-chemical and biological properties of soils when applied to the tree court area of about 2 m² was examined over a period of 3 years in a 4 year old rubber plantation in Kalutara District.

Application of coir dust significantly increased the organic C, total N, organic P, ECEC (Effective Cation Exchange Capacity) exchangeable Ca and Mg, soil moisture and earthworm population, while it decreased the bulk density.

Inorganic fertilizer application increased Bray II P levels and Mg levels but did not significantly change the organic C, bulk density and earthworm population. Application of coir dust and inorganic fertilizer together showed a significant positive interaction in organic C, total N, exchangeable Ca and Mg levels.

These results suggest that soil amendment with coir dust significantly improves soil properties and enhances the effect of inorganic fertilizer.

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