

**LIMING EFFECT ON SELECTED SOIL PROPERTIES IN CINNAMON
(*Cinnamomum zeylanicum* Blume) GROWING SOILS**

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An aerobic incubation study was conducted to determine liming effect on some soil properties in three cinnamon growing soils in Matara District. Soil samples were collected from Matara, Kamburupitiya and Weligama, representing high medium and low yielding classes based on average yield classes in cinnamon. Two factor experiment of yield classes (high, medium and low) and dolomite doses (D₀- no dolomite, D₁- 250 kg/ha, D₂- 500 kg/ha, D₃- 750 kg/ha) were tested as an incubation study in Complete Randomized Design, with three replicates. Sampling was done three times at 4 weeks intervals. Electrical Conductivity (EC), available P, exchangeable K, total N, available S and soil respiration were determined at each sampling. At first and second samplings, the highest EC (0.12 dS/m) was reported in the medium yielding site. When considering dolomite levels, the highest EC value (0.12 dS/m) was observed in the dolomite level D₃. The soil respiration increased rapidly by 16.7%, 40.1% and 83.4% in high, medium and low yielding sites, respectively. With respect to adding dolomite, soil respiration has increased in all dolomite levels by 2.8%, 5.3%, 9.2% and 5.8%, respectively. Exchangeable K and soil P have increased in high, medium and low yielding sites at first and second samplings. With respect to dolomite levels, Exchangeable K has increased in all dolomite dosages by 2.49%, 7.07%, 10.78% and 36.78%, respectively. Available S has decreased in all yield levels and dolomite dosages. Results conclude that liming causes some favourable and unfavourable effects on some properties of cinnamon growing soils.

Keywords: Dolomite, Liming effect, Soil incubation, Soil properties