112B

Role of rock phosphates on performance of immature cinnamon

A P Heenkende[1]*, D N Samaraweera[2] and W D L Gunaratne[3]

[1] *Research Station, Dept. of Export Agriculture, Matale*

[2] *Cinnamon Research Station, Dept. of Export Agriculture, Matara*

[3] *Dept. of Export Agriculture, Peradeniya*

Effect of commercially available Eppawela rock phosphate (ERP) and Imported Rock Phosphate (IRP) as a source of P for young Cinnamon (*Cinnamomum verum Pressl.)* was studied under field conditions in Typic Paleudults soil. Experiment consisted with two levels of P_2O_5, 60 and 90 kg/ha/y as ERP and IRP with no P (control). All the treatments consisted with 50 planting points spaced at 1.2m x 0.6m. In addition to P, all the plots received 207 kg N/ha/yr, 135 kg K_2O/ha/y and 20 kg MgO/ha/y as a uniform dose and fertilizer were applied in two split applications. Height of the plant and lateral spread was recorded in 12, 18 and 24 months after planting (MAP). Up to 18 MAP no significant difference was observed among the treatments. Height of the plants with 60 and 90 kg of P_2O_5 as ERP recorded 151.59 cm and 153.76 cm respectively, at 24MAP which are significantly ($P<0.05$) higher than the control (129.77 cm). Application of IRP at the same rates recorded higher plant heights than the control but the values are not significant. Lateral spread of the plant with 60 and 90 kg of P_2O_5 as ERP also recorded significantly higher values, 93.25 cm and 91.68 cm respectively, over the control (80.61cm) but not with the IRP as the same age. Highest leaf P% of 0.10 was found with 90 kg P_2O_5 as ERP followed by 0.097% with 90 kg P_2O_5 as IRP but none of them was significantly different from control (0.090). According to the results Eppwala Rock Phosphate is superior to Imported Rock Phosphate and application of 60 kg P_2O_5 as ERP ha/y is significant for young cinnamon.

* sadrmt@sltnet.lk Tel: 066 2222822