**Nutrient Exchange by Cinnamon (Cinnamomum zeylanicum Blume) Wood Biochar as Affected by the Methods of Preparation**

In commercial level, most of the growers use high dose of inorganic fertilizers causing soil degradation. More inorganic fertilizers caused problems of nutrient retention and leaching. In Sri Lanka, cinnamon wood is used mostly as a firewood. Present study aims to test the effect of different methods of biochar preparation using cinnamon wood in relation to nutrient exchange properties. Biochar was prepared using different methods as (i) Muffle furnace method 1 hour at 600 celsius , (ii) cone pit method with burning time of 50 minutes and (iii) 70 minutes , (iv)double barrel method with burning time at 70 minutes and (v) 90 minutes . These biochar products were used with sieved subsoil mixed in 1:1 ratio as volume basis as treatments from T2-T6, respectively. Control treatment (T1) was used by only considering the subsoil. Treatment media and the control were filled in to columns with 3 replicates and 1.7 L of water was added to each column for saturation. Water was drained out for 24 hours. At the beginning and the middle of the experiment, 600 ml of nutrient solution (20% Urea, 10% Muriate of Potash and 10% Triple Supper Phosphate) was added into each column and drained out for 24 hours. Then one liter of water was added and drained out for 24 hours. It was done continuously for 2-month period and every 8-day interval samples were taken for the analysis. Initial media of cinnamon wood biochar consist with nutrients. Nitrogen lose from the soil can dramatically be reduced by treating the soil with T5 and T6 among the best in terms of nitrogen retention in the soil. Phosphorus was lost in most treatments; however available phosphorus has in T6 in final media. In addition to the retention of nitrogen, phosphorus and potassium, biochar also contributes P and K to the soil. Cinnamon wood biochar preparation methods affect nutrient retention as soil amendment.