**Effect of Cinnamon Wood (*Cinnamomum zeylanicum* Blume) Biochar as a Potting media for Cinnamon Seedling**

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**Abstract**

Cinnamon (*Cinnamomum zeylanicum* Blume) cultivating area is increasing in Sri Lanka year by year. As a result, Department of Export Agriculture (DEA) recommended potting mixture is not practiced by nursery owners due to lack of materials availability. Biochar enhance soil physical, chemical and biological properties. Plants can easily access the nutrients with application of biochar. Present experiment was conducted to determine the effect of Cinnamon wood biochar (CWB) as a potting media for cinnamon seedlings. As main factor, CWB was prepared by double barrel method (DBM) and Pit method (PM). The burning time period for both methods were 60 minute and four levels of CWB application rates with sub soil (0%, 2%, 4%, 8% w/w) were taken as sub plot factor in the experiment. Four replicates were arranged in split plot design. Seed germination count was taken until 42 days for the seedlings from ten days after sowing. Plant height and number of leaves were taken as growth parameter and data was taken four times with two weeks interval. After two month for the seedlings, nutrient solution was applied with two weeks interval. As nutrient solution, urea, triple super phosphate and muriate of potash were applied by mixing with water. At the end of the experiment shoot length, tap root length, root dry mass, shoot dry mass, leaf area, pest and disease percentage and soil chemical parameters in potting mixture were measured. Biochar prepared by DBM with the mixing of sub soil and with the addition of nutrients solution gives higher shoot dry mass, root dry mass, tap root length and shoot length than biochar prepared by PM. Among the tested concentrations (0%, 2%, 4%. 8%) biochar mixed with 2% in weight basis is the best among the rates used.

**Keywords**: *cinnamon wood biochar, double barrel method, pit method*