112/B

Properties and availability of cinnamon fuel wood in the Matara district

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Energy has become a crucial issue in both domestic and industrial sectors in Sri Lanka. Biomass energy, particularly fuel wood is the most extensively used source of energy and nearly 70% of country's biomass energy requirement is obtained by none forest tree sector. True cinnamon, (*Cinnamomum verum*) offers one of the popular energy options in cinnamon growing areas in Sri Lanka. Although there is a great interest on cinnamon as an export agriculture crop, little attention is paid on fuel wood value of cinnamon. Hence a scientific study was carried out with a field survey (40 growers) to identify the properties and availability of cinnamon fuel wood in Matara District. Results were statistically analyzed and it showed that cinnamon land has a higher potential of supplying good quality fuel wood. Fuel wood yield obtained by 1 ha of cinnamon land is varying with management condition of the land. Under poor, average and good management conditions 1 ha of cinnamon land offers 7.04 m3/year (2.89 t), 16.2304 m3 /year (6.65 t) and 28.16m3/year (11.55 t) of fuel wood yield respectively. The average fuel wood production of 1 ha land in Matara district in year 2003 was 9.06m3 (2.89 t). Income obtained by selling fuel wood was 5% of the total income of cinnamon land. Average wood: bark ratio was 8.14 and that value varies with stem diameter. Number and weight of sticks per cubic meter were 750 and 410 kg respectively. Average length, weight and price of one cinnamon wood stick were 1.5 m, 825 g and Rs.1.00 respectively. Cinnamon fuel wood has a higher calorific value (4900 kcal/kg) and very low ash content of 0.86%. Therefore cinnamon demonstrated a very high potential for use as renewable energy source.

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