

**Effect of different rates of Gliricidia green manure on the yield of Arabica Coffee.**

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Coffee is a popular beverage all over the world. In Sri Lanka, Robusta and Arabica coffee are the two important commercial species of coffee, cultivated in wet and intermediate zones. It is cultivated over an area of 15,000 ha in Sri Lanka. Though the potential yield under moderate management condition is over 1500 kg/ha/yr, the present average yield is around 332 kg/ha/yr. The major reason for this is poor soil fertility management due to high cost of inputs such as inorganic fertilizers. The objective of the study is to evaluate the possibilities of using Gliricidia as a source of green manure for Arabica coffee and to find out the most appropriate rate of Gliricidia as a green manure for Arabica coffee. The present investigation was carried out during the period of 2000-2006 at Export Agriculture Research station, Matale (7° 10'N, 80° 7'E 357 MSL) in mid country wet zone (WM<sub>3b</sub>) of Sri Lanka. Three different rates (10, 15 and 20 kg/ plant/ yr.) (wet basis) of Gliricidia green manure and a control with zero rate of Gliricidia were tested. Treatments were applied in 4 splits and treatments were replicated four times in randomized complete block design. Yield data was recorded for consecutive 4 years. Results showed that adding of Gliricidia 20 kg/plant/yr has been given the highest average yield of 4314 kg/ha/yr while Gliricidia 15 kg/plant/yr has given the second highest yield of 4044.8 kg/ha/yr. Annual average yield of 2948 kg/ha was reported with application of Gliricidia 10 kg/plant/yr while annual average yield of 993.2 kg/ha was reported with the control. Significant differences were reported with the control and the Gliricidia treatments. Since there is no significant difference between 15kg and 20kg of Gliricidia it is economical to select 15kg as a suitable rate to maintain the nutrient requirement of Arabica Coffee.

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