

## Intercropping Immature Oil Palm (*Elaeisguineensis*) with Banana, Ginger and Turmeric in Galle District, Sri Lanka

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**Abstract :** Oil palm (*Elaeisguineensis*) is the world's leading vegetable oil-producing plant and is well established as a perennial plantation crop in tropical countries. Oil palm in Sri Lanka has spread over 10,000 hectares in the wet zone of the Island. In immature plantations, land productivity can be increased with some selected intercrops. At the immature stage of the plantations (age up to 3-5 years), there is a large amount of free space available inside the plantations. This study attempts to determine the suitability of different intercrops during the immature phase of the oil palm. A field experiment is being conducted at Thalgaswella estate (WL2a) in Galle district, Sri Lanka. The objectives of the study are to evaluate and recommend a suitable immature oil palm-based intercropping system/s. This experiment was established with randomized complete block design (RCBD) with four treatments, including control in three replicates. Banana, ginger, and turmeric were selected as intercrops. Growth parameters of intercrops (plant height, length, width of D-leaf, and yield of intercrops) and girth, length, and number of leaflets of 17th frond in oil palms were taken at two months intervals. In addition to this, chlorophyll content was also measured in both intercrops and oil palm trees. Soil chemical parameters were measured annually. Results were statistically analyzed with SAS software. Results revealed that intercropped banana, turmeric, and ginger had given yields of 7.61Mt/ha, 4.92Mt/ha, and 4.53Mt/ha, respectively. When comparing these yields with mono-crop, banana, turmeric, and ginger intercrop yields as percentages of 16.9%, 24.6%, and 30.2%, respectively. The results of this study could be used to make appropriate policies to increase the unit land productivity in oil palm plantations in a low country wet zone (WL2a) of Sri Lanka.

**Keywords :** inter-cropping, oil palm, policies, mono-crop, land productivity

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