Marketable fruit yield of okra (*Abelmoschus esculentus L.*) as influenced by dried albizia leaf mould and banana peel with reduced level of NP chemical fertilizers

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ABSTRACT

The experiment was conducted at the Agronomy farm of Eastern University, Sri Lanka to determine the marketable fruit yield of okra (*Abelmoschus esculentus* L.) as influenced by dried *Albizia* leaf mould (10 t/ha) and banana peel (0.1-0.5 t/ha) with reduced level of NP chemical fertilizers. The experiments were laid in a Randomized Complete Block Design (RCBD) with seven treatments.

The result revealed that the combination of leaf mould (10 t/ha) and 0.1 t/ha banana peel with 50% NP basal chemical fertilizer (T6) exhibited higher yield than chemical fertilizer alone (T2). Plant growth parameters (leaf area, leaf length, fresh weight and dry weight of leaves) had significantly differences ($P<0.05$) among treatments. And also there was no any significant differences ($P>0.05$) in fruit number among treatments. Fruit length was high in sole organic treatment, T4 (leaf mould 10 t/ha with banana peel 0.1 t/ha). Fruit diameter, fresh weight and dry weight of fruit had the significant differences ($P<0.05$) among treatments. Fruit diameter, fresh weight and dry weight of fruit per plant increased by 5.62%, 8.47%, 3.12% in selected treatment (T6) respectively when compared to the control (T2).

The marketable fruit yield per m^2 was 654.71g in selected treatment (T6) and 603.61g in the control treatment (T2). The mean okra yield and yield components increased in leaf mould and banana peel optimal level (0.1 t/ha) combined with inorganic fertilizers. The combined use of inorganic fertilizer and leaf mould with banana peel increased yield compared to the application of organic alone (T3 and T4) and therefore recommended for increase marketable fruit yield of okra. From this study, it was

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