

Response of Clonal Robusta Coffee to Organic and Mineral Fertiliser Application in Lake Victoria Crescent Zone

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ABSTRACT

A long-term study was conducted at KARI on performance of six (6) high yielding recommended Uganda's indigenous robusta coffee (*Coffea canephora* Pierre) clones under four major soil fertility management involving application of coffee husks and crop residues as mulch, cow-dug and N.P.K. 25:5:5 fertiliser were compared against a non-soil amendment.

Soil amendments with coffee husks and cow-dug performed significantly at ($P = 0.05$) better than the rest. The overall (1995-98) mean yields increased from 2,799.5 to 3,063.3 kg/ha, clean coffee for the treatments of coffee husks and cow-dug respectively. Clonal differences in biological yields and bean quality were significant at ($P = 0.05$) with erect type varieties showing superiority over the nganda types. Significant yield reduction to 446.7 kg/ha⁻¹ c.c was observed in control during 5-th cropping cycle due to etiolated plants and shortened productive primaries.

Mulching clonal coffee with husks and cow-dung improved soil-water conservation regime and uptake of nutrients significantly. The study confirmed the earlier reports indicating the superior performance of erecta coffee clones over nganda varieties. The advantages of application of coffee husks and cow-dung in soil amendment revealed their potential substitutes for mineral fertilisers.

Key words: Clones, organic and mineral fertilisers, yields and coffee bean quality.