COMPARISON BETWEEN HYBRIDS AND INBREDS OF OKRA (*Hibiscus esculanta*) AND BITTER GOURD (*Momodica charantia*) WITH RESPECT TO FERTILIZER RESPONSE IN FRUIT YIELD UNDER DRY ZONE CONDITIONS

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Bitter gourd (*Momodica charantia* L.) and okra (*Hibiscus esculanta*) are widely grown in many districts in Sri Lanka. In recent years, hybrid bitter gourd and okra were given wide publicity because of their high yielding ability. Hybrids are well known for their high plant nutrient demand though insufficient information on fertilizer requirement was available in Sri Lanka. Farmers mainly rely on general recommendations by DOA. Therefore, determination of nutrient requirement of hybrids is of great importance.

Experiment was carried out at CIC farm, at Pelwehera during Yala season 2006 to study the effect of three fertilizer levels (no added fertilizer as control, CIC recommended fertilizer level and 1½ times of CIC recommended fertilizer level) on hybrid (OK077) and inbred okra (Harita) varieties. Similar experiment was conducted with hybrid (Palee) and inbred (MC 43) varieties of bitter gourd, at three fertilizer levels (CIC recommended fertilizer level, 1½ times of CIC recommended fertilizer level and Thailand recommended fertilizer mixture for bitter gourd hybrids). Experimental design was RCB design with three replicates. Results showed that both varieties did not show significant yield increase in CIC recommended fertilizer level though 1½ times of CIC recommended fertilizer level increased the yield significantly

over the control. The yield increase of OK077 was five times more than that of Harita. However, hybrid bitter gourd variety gave higher yield than inbred at all fertilizer levels and was higher at 1½ times of CIC recommended fertilizer level and Thailand recommended fertilizer mixture compared to CIC recommended fertilizer level. Economic analysis revealed that use of 1½ times of CIC recommended fertilizer level was more profitable than the Thailand fertilizer mixture.

Key words: Bitter gourd, Okra, Hybrid, Inbred, CIC fertilizer recommendation, Thailand fertilizer recommendation