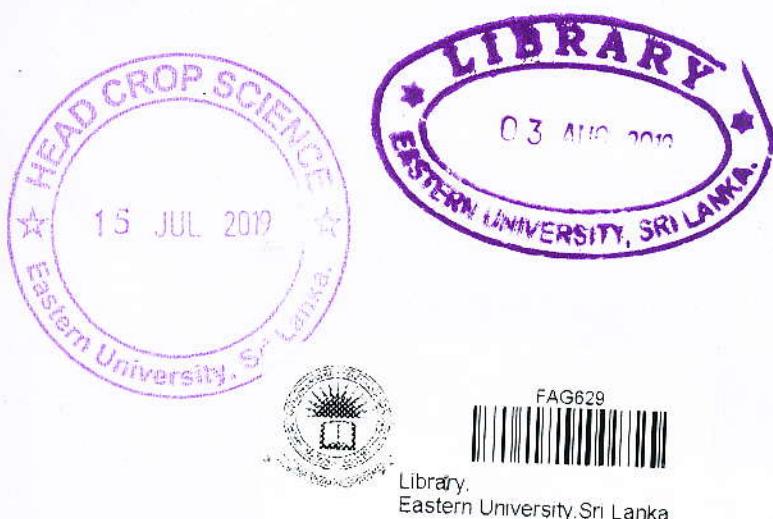


EFFECT OF DIFFERENT ORGANIC FERTILIZERS
WITH
VERMIWASH ON GROWTH AND YIELD OF OKRA
(*Abelmoschus esculentus*) Cv. P – 11.

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ABSTRACT

The experiment was conducted at the Crop Farm of Eastern University, Sri Lanka during the period January to April 2019 to study the effects of organic manures with foliar application of vermiwash on growth and yield of okra (*Abelmoschus esculentus*) plants, with the variety of P-11.

This experiment was laid out in a Completely Randomized Design (CRD) with eight replicates. The treatments were; viz., T1 = Control (Recommended fertilizer), T2 = Poultry manure 10 t/ha with 25% vermiwash, T3 = Poultry manure 10 t/ha with 50% vermiwash, T4 = Poultry manure 10 t/ha with 75% vermiwash, T5 = Poultry manure 10 t/ha with 100% vermiwash, T6 = Cattle manure 10 t/ha with 25% vermiwash, T7 = Cattle manure 10 t/ha with 50% vermiwash, T8 = Cattle manure 10 t/ha with 75% vermiwash, T9 = Cattle manure 10 t/ha with 100% vermiwash with eight replicates. Agronomic practices were carried out as per the recommendation by the Department of Agriculture, Sri Lanka.

The results showed that foliar application of 100% vermiwash with 10 t/ha poultry manure had a significant ($p<0.05$) effect on tested parameters of okra over the control. Poultry manure 10 t/ha with 100% vermiwash increased plant height (29.71%), number of branches/plant (36%), number of leaves/plant (37.03%), length of tap root (32.41%), leaf area (44.52%), leaf area index (25.95%), number of flowers/plant (50%), total dry weight/plant (43.17%), number of pods/plant (42.1%), length of pod (25.06%), girth of pod (23.25%), number of seeds/pod (38.59%), fresh weight of pods/plant (14.20%), dry weight of pods/plant (31.60%), chlorophyll content (13.21%), total yield/plant (33.73%) than the recommended fertilizer.

This result suggests that poultry manure 10 t/ha + vermiwash @ 100% is the potential source of plant nutrients for sustainable crop production. Because poultry manure and vermiwash are inexpensive and environmentally friendly organic sources which are easily available at our surrounding. It can be successfully substitute for chemical fertilizers as an alternative for safe food production.

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