

# Effect of cow and poultry manures on fruit yield of Okra (*Abelmoschus esculentus*)



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## ABSTRACT

The experiment was conducted at the Agronomy farm of the Eastern University of Sri Lanka to determine the effects of cow and poultry manures as a basal application on the yield and yield components of okra (*Abelmoschus esculentus*). The preliminary study was done to select the optimal spacing for obtaining high yield of okra in sandy regosol. It was conducted in Complete Randomized Design (CRD) with two treatments (90 × 60 cm and 60×60 cm spacing) and each treatment had three replicates. The green (marketable) fruit yield per hectare in 60×60 cm spacing was significantly higher than that in 90×60 cm spacing (control). Further the experiment was arranged in a Randomized Complete Block Design (RCBD) with seven treatments and each treatment had three replications included inorganic treatments and organic manure treatments by using cow and poultry manures at different combinations (cow and poultry manures at the ratios of 5:0,4:1,3:2,2:3,1:4 and 0:5). The plants responded best and gave higher yield to organic manure treatments. The organic manures with 3:2 of cow and poultry manures ratio (treatment T4) exhibited higher yield and significantly ( $P<0.05$ ) higher yield than that of the control inorganic treatment. The mean green fruit length, number of harvested green fruits per plant, number of seeds per green fruit, fresh and dry weights of green fruits per plant, number of harvested yellow (mature) fruits per plant, number of seeds per yellow fruit, dry weight of yellow fruits, air dry weight and oven dry weight of seeds per yellow fruit increased by 9.86%, 24.45%, 11.9%, 45.12%, 65.33%, 45.86%, 29.22%, 63.24%, 37.6% and 74% in selected treatment (T4) respectively when compared to the control(T1). The total green fruit yields were 13 t/ha in selected treatment (T4) and 8.96 t/ha in control treatment (T1).

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