# EFFECT OF PLANTING GEOMETRY WITH THE APPLICATION OF JEEWAMIRTA ON THE GROWTH AND YIELD OF *Abelmoschus esculentus* L. INTERCROPPED WITH *Vigna unguiculata* L.

**T S. ISHANKA JAYASIGHE**



**FACULTY OF AGRICULTURE**

**EASTERN UNIVERSITY**

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# ABSTRACT

Increasing world population demands higher agricultural crop production to fulfill the food requirement. Therefore intercropping is the best way to increase productivity in limited land area with organic inputs. To enhance the positive attitudes towards intercropping and organic farming, this experiment was carried out at the Crop Farm of Eastern University, Sri Lanka during the period of January to April 2019 to study the effect of planting geometry with the application of Jeewamirta on the growth and yield of *Abelmoschus esculentus* L. intercropped with *Vigna unguiculata* L. The experiment was laid out in a Randomized Complete Block Design (RCBD) with four replications. Treatments were okra as a sole crop with the spacing of 90cm×60cm (T1), cowpea as a sole crop with the spacing of 30cm×15cm (T2), okra in 60cm×60cm with one row of cowpea (T3), okra in 90cm×60cm with 2 rows of cowpea (T4) and okra in 120cm×60cm with three rows of cowpea.

This investigation showed that there was a significant ($p<0.05$) effects in planting geometry. Okra with two rows of cowpea (T4) increased plant height, fresh and dry shoot biomass, fresh and dry root biomass, leaf area, days for 50% and 100% flowering, number of fruits per plant, weight per fruit and yields than their monocroppings. Further, Land Equivalent Ratio and Area – Time Equivalent Ratio showed a significant ($p<0.05$) increased in T4. Further, gross return, net profit were significantly ($p<0.05$) increased in T4 compare with the monocropping and in economic point of view okra intercropped with cowpea (T4) gave higher return.

Therefore it could be concluded that okra in 90 cm × 60cm with two rows of cowpea can be recommended for okra cowpea intercropping to enhance the growth and yield.

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