EFFECT OF PLANTING GEOMETRY AT CONSTANT PLANT POPULATION ON THE YIELD OF brinjal (*Solanum melongena* L.) AND INTERCROPPED bushsitao (*Vigna unguiculata* L.)

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ABSTRACT

At this present context of increased population with limited land resouses it is imperative to increase agricultural production per unit land area by suitable agronomic practices. Maintaining optimum plant population and intercropping systems are two important factors for consideration to acheive this goal.

By appropriate planting geometry , the plant population can be kept constant without causing reduction in yield. This could also provide additional land area to cultivate an intercrop.

Based on these concepts this experiment was designed and carried out at the Eastern university farm chenkalady Sri Lanka to study the effect of planting geometry at constant plant population on the yield of brinjal (Solanum melongena L.) and intercropped bushsitao (Vigna unguiculata L.) between February and June 1993.

The experiment was done using Randomized Complete Block Design with five treatments and four replecats. The treatments included sole crops of brinjal and bushsitao, normal (90 cm) and paired row planting (60-60-120 cm) of brinjal and single and two row planting of bushsitao inbetween the paired rows of brinjal.

The results indicated that the yield of brinjal was not affected either by planting it on single row spacing of 90 cm or on an paired row system of 60-60-120 cm. The yield of brinjal was also not affected when bushsitao was intercropped as single or double row in between the paired rows.

The yield of single row bushsitao planted in between the paired row brinjal was comparable to that of bushsitao cultivated as a sole crop. The yield of bushsitao was reduced by 27.2 percent when cultivated in double rows between the paired rows of brinjal.

It could be concluded that brinjal can be cultivated in single rows at 90 cm spacing or in paired rows at 60;60;120 cm spacing without reduction in yield. Single row bushsitao in between the paired rows of brinjal is the most productive and profitable system for the sandy regosols of the Eastern region of Sri Lanka.

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