B-28 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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In the present context of increasing population and limited land resources, it is imperative to increase agricultural production per unit area by suitable agronomic practices. Maintaining optimum plant population and intercropping systems are 2 important approaches for consideration to achieve this goal.

By appropriate planting geometry, the plant population can be kept constant without causing reduction in yield. This could also provide additional space to cultivate an intercrop. Based on these concepts this experiment was designed and carried out at the Eastern University farm, Batticaloa. The effect of planting geometry at constant plant population on the yield of brinjal and intercropped bushsitao was studied. The experiment was carried out between February and June 1993.

The experiment used the Randomised Complete Block Design with 5 treatments and 4 replicates. The treatments included normal (90 cm) and paired row planting of brinjal (60-120-60 cm) as a sole crop; sole crop bushsitao; and single and 2 rows of bushsitao between the paired rows of brinjal. The yield of single row bushsitao planted between the paired rows of brinjal was comparable to that of bushsitao cultivated as a sole crop. The yield of bushsitao was however reduced by 27.2% when it was cultivated in double rows between paired rows of brinjal.

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