Abstract:

The objective of this study was to investigate the effects of alley cropping on maize production. Maize was grown between alleys of Leucaena leucocephala (Lan.) trees for two successive seasons in Shambat, Sudan. The trees were planted in three inter-row spacings: 2, 3 and 4 metres, and three intra-row spacings: 0.5, 1.5 and 2.5 metres. They were small during the first season, and were pruned 4 times during the second season. Maize was planted between the rows of trees, 15 cm apart. Data on grain yield and yield components of maize were collected.

The results indicated that the performance of maize in both seasons was not significantly (P>0.05) affected by inter-or intra-row spacing of trees or their interaction. However, the grain yield was higher in the first season, when Leucaena trees were small, compared to that of the second season, when Leucaena trees were big, though pruned, and were competing with maize.