EFFECT OF INTERCROPPING ON THE PERFORMANCE OF SOME SUMMER VEGETABLE CROPS GROWN UNDER DIFFERENT ROW ARRANGEMENTS

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Abstract
This study was conducted in a private farm in Madaba region during 2007 summer growing season. The objectives of this study were to determine the potential and response of some summer vegetable crops to intercropping system and to define the best combinations which yield highest production. Four vegetable crops namely bush bean, okra, lettuce and squash were planted in six combinations. Each combination was planted under four different row arrangements (1:1, 1:2, 2:1, 2:2) in the open field. Okra and lettuce gave higher significant yields when they were planted with bean under all row arrangements, where they gave an average increase in yield of 45% and 66%, respectively, over their sole crops.
Additionally, the yield of okra was affected by the associated crops (bean, lettuce and squash). The least significant yield of okra was obtained when it was intercropped with squash under 1:2 row arrangement (5.5 ton ha^{1}). However, the other row arrangements of okra as it was planted with squash were on the same level of significance when compared to okra sole crop (7.01 ton ha^{1}). On the other hand, bean gave the highest significant yields when it was intercropped with lettuce and squash under all row arrangements. However, when bean was intercropped with okra, significantly highest yield (16.66 ton ha^{1}) was obtained under 2:1 row arrangement as compared to okra yield sole crop (13.63 ton ha^{1}).
For squash, significantly highest yields were obtained when it was intercropped with bean under 2:1 and 2:2 row arrangements as compared with squash yield sole crop. Moreover, in the squash / okra combination, yields under row arrangements of 1:1 and 1:2 were significantly less than squash yield sole crop. However, the other combinations under different row arrangements were intermediate in yields. Regarding the efficiency of intercropping as it was judged by LER, the results showed that almost all the intercropping combinations with their row arrangements tested gave LER values more than one indicating the superiority of intercropping over sole cropping.

Key words: Intercropping, Vegetable Crops, LER

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