

Growth and yield response of papaya to intercropping with vegetable crops in southwestern Nigeria

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Abstract

At Ibadan, southwestern Nigeria, papaya trees were intercropped with okra, watermelon, sweet potato, bush greens, jews' mallow and *Solanum gilo* Raddi. The aim of the experiment was to select crops suitable for intercropping in the alleys of papaya plants in orchards. Sweet potato and *Solanum gilo* Raddi caused marked reduction in the yield of papaya. Land Equivalent Ratio (LER) for papaya intercropped with okra, water-melon, sweet potato, bush greens, jews' mallow and *Solanum gilo* Raddi were 3.86, 3.13, 2.06, 1.86, 1.60 and 1.54, respectively; indicating that all the combinations were more advantageous than the monocrop of papaya. Monetary value of the mixtures, however, indicated that the inclusion of intercrops of sweet potato or *Solanum gilo* Raddi, is disadvantageous.

Although intercropping in papaya orchards is beneficial, it should be limited to the early vegetative and late fruiting phases of papaya when the Leaf Area Index (LAI) of papaya is low. A relay of okra followed by watermelon or bush greens followed by jews' mallow (or sweet potato grown for fodder) is considered suitable for intercropping the alleys of papaya.

Key words bush greens - intercropping - jews'mallow - okra - papaya - southwestern Nigeria - sweet potato - watermelon