

RESEARCH ARTICLE

Assessment of yield and economics of vegetables as intercropping system in coconut garden for additional returns

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SUMMARY

A field experiment was conducted on assessment of yield and economics of vegetables as intercropping system in coconut garden for additional returns at different villages of Tiptur taluk, Tumkur districts of Karnataka during from 2013 to 2015 to study the influence of intercropping system on coconut yield, economics of coconut based intercropping system with vegetables and the soil fertility status of coconut garden. The experiment consisted of three different intercropping systems viz., coconut sole cropping as farmers practice (T_1), coconut + vegetable cowpea (T_2) and coconut + French bean (T_3) with seven replications at farmers field in a 36 year old coconut garden of Tiptur tall variety planted at 9m x 9m spacing. The average three year results of experiments were recorded. The yield of coconut was found to higher nut yield (9594 nuts/ha/year) under french bean as intercrop in coconut garden followed by cowpea as intercrop in coconut garden (9348 nuts/ha/year) during third year. Whereas lowest nut yield was recorded in coconut sole crop in farmers practice. The highest net annual income Rs. 99,720/ha and B:C 3.22 were recorded in coconut + French bean intercropping system with more additional income and market demand of beans followed by coconut + vegetable cowpea (Net annual income Rs. 84,260/ha and B:C 3.10) with less market demand of vegetable cowpea, where as lowest net annual income Rs. 43,107/ha and B:C 2.34 were recorded in coconut sole cropping with no additional income from the farmers practices. The soil fertility status viz., NPK availability in soil were analyzed before and after the experimental period of three year. Gradually increased N, P and K content of soil in coconut intercropping with beans and cowpea on far with each other, but lowest soil fertility were recorded in coconut as sole cropping system in farmers practices due to high biomass of french bean and cowpea, which fixes atmospheric nitrogen, residue incorporated into soil and suppression of weed growth results in improvement of soil fertility status. Higher net returns and improve the soil fertility by growing the french bean as intercrops in coconut garden is more suitable cropping system to boost economy of farmers.

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