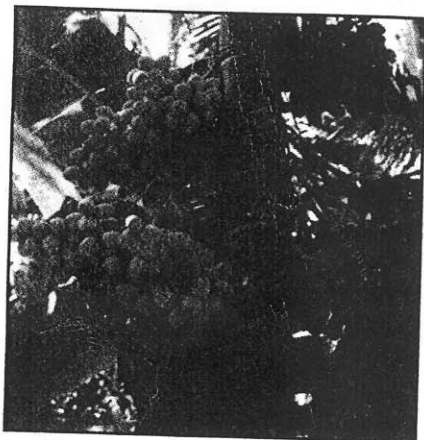


# Economics of Arecanut and Coffee Mixed Cropping System

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Arecanut (*Areca catechu* L.) is a perennial crop grown in the humid tropics of India. The crop has a gestation period of 4-6 years and a long economic life span of 45 years. Hence the flow of costs and returns are spread over a number of years with varying degree of magnitude. In order to minimize the degree of price risks and stabilize the gross farm income, the arecanut farmers are advised to adopt various cropping/farming system models through farm intensification in which, two or more complementary crops, are cultivated in the inter spaces of the main crop. However the degree of farm intensification and choice of the component crops depends on agro-climatic, edaphic, biotic and socio-economic factors. One among those models is the combination of coffee planted in arecanut gardens. This article highlights the economics of arecanut + coffee system as compared to arecanut monocropping.

Arecanut is a monocot with its fibrous root system occupying 0.6 m<sup>2</sup> of the sub soil. A dicot like coffee, which has a tap root system, can therefore exploit the resources fully when

planted with arecanut. Moreover arecanut having no branches permits plenty of light to pass through, thereby making available enough sunlight for the growth of coffee plants. Coffee adds organic matter to the soil through fallen leaves, which enables the improvement of soil health and nutritional status. However care should be taken not to plant coffee near the arecanut basins.

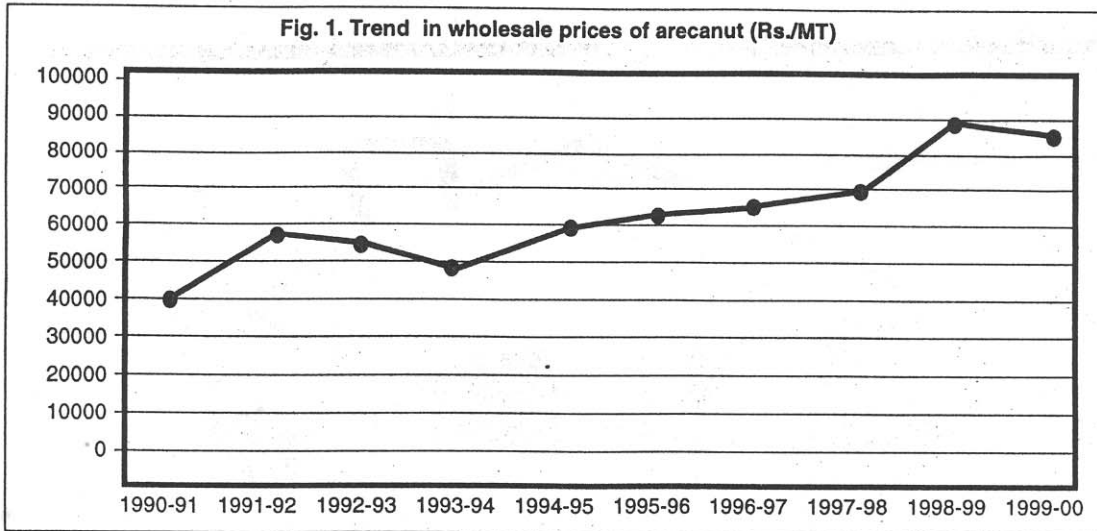
The inter spaces of arecanut planted with 2.7 x 2.7 m can be utilized for planting of coffee (variety Kaveri) and the planting density of arecanut is 1362/ha and for coffee it is 495/ha. In order to realize better yield from arecanut and coffee, both the crops should be supplied with adequate nutrients separately. Under optimum management conditions, coffee is a compatible mixed crop in arecanut gardens which is not only proved in the research stations but also being widely practised by the arecanut farmers of north coastal and south Kanara regions of Karnataka and north Malabar region of Kerala.

The economics of arecanut + coffee mixed cropping as compared to coffee monocropping is given in Table 1.

The total cost for arecanut monocrop under better management conditions

S.No.	Particulars*	Arecanut monocropping	Arecanut coffee +cropping
01	Labour cost	25140	33850
02	Material cost	16760	28050
03	Total cost	41900	61900
04	Yield (kg of chali)/ (kg of dried berries)	3405	3405 (arecanut) 1857 (coffee)
05	Unit Price (Rs./kg)	50	50 for arecanut & 30 for coffee
06	Total return	170250	225960
07	Gross margin	128350	164060
08	Additional return over monocrop		35710

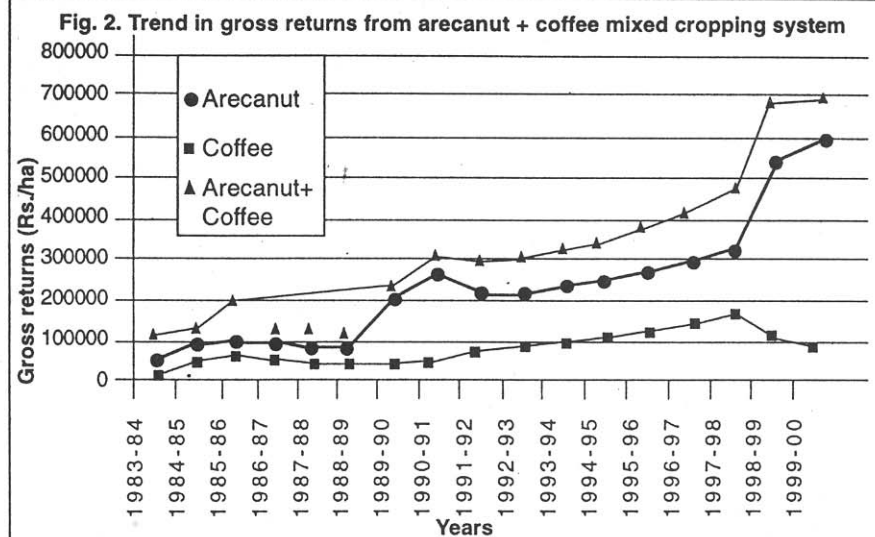
\*Under North Malabar and South Kanara conditions



is Rs. 41900/ha of which about sixty percent is towards the labour. The labour cost in case of arecanut + coffee system is Rs. 61,900/ha. The average yield of arecanut is 3405 kg/ha and that of coffee is 1857 kg/ha. Under normal conditions, the total returns for arecanut monocrop is Rs. 1,70,250/ha while the same for arecanut + coffee system is 2,25,960/ha. The respective gross margin is Rs. 1,28,350/ha for arecanut monocrop and in the case of arecanut + coffee it is Rs. 1,64,060/ha. this means that Rs. 35,710 can be additionally earned per hectare if coffee is grown in arecanut gardens.

**Advantages**

Arecanut, being a perennial crop fixed investments like land are committed to the crop for more than four decades. Under this condition in order to improve the resource efficiency of natural as well as farm resources, it is necessary to cultivate compatible inter/mixed crop in arecanut gardens. The trend in Wholesale Prices



of arecanut indicate that the degree of price fluctuation is fairly high and hence realizing additional income from mixed crops like coffee would be able to sustain the economic stability of arecanut gardens. (Fig.1) cultivating coffee as a mixed crop stabilizes gross farm income and thereby reduces negative impact of price risks of arecanut cultivation (Fig.2).

**Conclusion**

Coffee is a suitable mixed crop for arecanut gardens. Under the present level of market prices, arecanut + coffee mixed cropping system provides an additional net revenue of Rs. 35,710/ha over arecanut mono-cropping. Hence wherever possible farmers are advised to practice this arecanut based cropping system model.

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