

Cacao and Cardamom — Two Intercrops in Arecanut

The importance of inter-cropping or mixed cropping in the cultivation of a perennial crop like arecanut needs no special emphasis. Arecanut takes about 5 to 8 years to start bearing during which period the growers have to depend upon income from other sources. Therefore, in order to enable the growers to add to their resources during this long pre-bearing period and also in the early periods of poor bearing, it would be wise to think of raising some field crops or other cash crops in the interspaces of arecanut. Besides assuring an income during the initial period, this will also ensure the growers considerable relief against sudden fall in the market prices and poor yields on account of unfavourable weather conditions and incidence of pests and diseases during the periods of normal bearing.

The choice of intercrop to be grown in arecanut depends upon its ability to grow under the shade of arecanut and to withstand the heavy dripping during the monsoon. It will be an additional advantage if the intercrop differ in their feeding zone and nutritional requirements from those of arecanut. Some of the commonly grown intercrops in arecanut are banana, pepper, betelvine, guinea grass, colacassia, elephant-foot-yam etc. Although these crops are grown profitably in arecanut without being detrimental to arecanut, their performance

under the shade of arecanut are not found to be as good as in the case of their planting as pure crop. Therefore, if a crop which requires a permanent shade can get adapted itself to the shade conditions prevailing in arecanut, it will be of much advantage.

(1) **Cacao:** Cacao has been assuming a very important place as an intercrop in arecanut in recent years, particularly on the West coast. The shade provided by the canopy of areca palms has been found to be optimum for the successful cultivation of cacao. Cacao when introduced as an intercrop in the existing areca gardens, the seedlings can be planted in between the palms along alternate rows, thus limiting the number of cacao plants to half the population of areca. In other words, if the spacing of arecanut is 2.7 m. \times 2.7 m., the spacing of cacao will be 2.7 m. \times 5.4 m. However, in the case of fresh plantations planting may be done adopting the quincunx method with a spacing of 4m. \times 4m. for arecanut, the cacao seedlings occupying the centre of the square. Cacao seedlings when they are about 6 to 9 months old are planted in pits measuring 90 cm. cube which are previously filled with compost. Shade has to be provided artificially or by growing a shade crop of banana in the early periods unless planting is done in an existing grown up arecanut garden. Subsequently, however, when the areca seedlings grow up



Cacao as intercrop in areca garden

the shade cast by them will provide enough protection to the cacao. The season of manuring cacao coincides with that of arecanut i.e. during September-October and February-March. About 12kg. each of compost and green leaf and 75 gms. each of N, P & K in the form of fertilisers have to

be given every year from the second year of planting. The organic manures may be applied as a basal dressing during September-October and the inorganics in split doses during September-October and February-March. The irrigation and cultural practices given to arecanut will also meet the require-



Bearing cacao plant in areca garden

ment of cacao. With a view to get good shape and height to the cacao tree, all the fan branches arising from the main stem are to be cut to a height of one metre from the ground. Cacao trees flower during the second year after planting.

(2) **Cardamom:** Arecanut can be grown

in areas from sea level upto an altitude of thousand metres. For elevations of 600 metres and above cardamom could be a very suitable intercrop in arecanut. The major cardamom growing areas in India are between elevations of 600 and 1200 metres in the States of Kerala, Tamil Nadu and

Mysore. In most of these areas arecanut may be seen grown side by side with cardamom. However, very little attempt has been made so far in mixing the cultivation of the two, although here and there stray cases of mixing cardamom with arecanut may be seen. The experience of those who have attempted planting cardamom in arecanut have shown that the former can come up very satisfactorily under the shade of arecanut. It has been possible to obtain a recorded

yield of 400 kg. of cardamom per hectare under the shade of arecanut, from a plantation in the Wynad area of Kerala, as against the country's average yield of 40 kg. or so per hectare. Even the best of the pure plantations of cardamom in the Wynad areas are not reported to yield more than 150 to 200 kg. per hectare. This shows that the conditions prevailing in arecanut gardens are highly congenial for the proper growth and yield of cardamom.



Cardamom as an intercrop in arecanut garden at Chellote Estate in Wynad

Cardamom can be introduced as an intercrop in arecanut when the latter is about 3 or 4 years old and have cast sufficient shade to protect the cardamom plants. Under rainfed conditions cardamom seedlings may be planted at the rate of one in the centre of each group of 4 areca palms. If irrigation is practised alternate rows of interspaces may have to be left out for

irrigation channels. Cardamom can share all the cultural operations given to arecanut. The recommended dose of manures are to be applied and necessary plant protection operations are to be carried out separately. The arecanut growers in higher elevations can increase their income substantially by growing cardamom under the shade of arecanut.



Heavy bearing Cardamom plants in the arecanut garden