Arecanut Plantation in North East India

B. K. SARMA

Ramie Research Station, Sorbhog, Assam

The arecanut growing belt of North East India is mainly comprised of Assam, Meghalaya, Nagaland, Tripura and North Bengal. Arecanut is an important cash crop of the region, the contribution of this region being about 22 per cent of the total production of the country. The crop occupies 26,000 ha. with a production of 26,200 tonnes upto 1966-67 in Assam (1). Recent statistics of area and production of the crop is not available. Paulose (1972) stated that the area under arecanut is 167.5 thousand ha. with a production of 141,000 tonnes in India (6).

The agro-climatic condition prevailing in the region is ideally suited for the crop. Situated in the eastern most part of the country, the entire belt is completely land and hill bound. The State of Assam is divided into two valleys, viz. the Brahmmaputra and the Surama valley. The areca growing districts in the Brahmmaputra valley are Goalpara, Kamrup, Darrang, Sibsagar, Mikir Hills and Lakhimpur. Cachar and North Cachar Hills are areca growing tracts of Surama valley. The newly formed state Meghalaya is another important areca tract where arecanut is cultivated in the hill slopes of border areas upto an altitude of 3500 feet. Nagaland, a hill state has limited area and production where the plantation is confined to Dimapur Sub-division and foot hill areas. In North Bengal arecanut is mainly grown in the districts of Jalpaiguri and Cooch Behar. Paul (1960) reported that these two districts of Sub-Himalayan West Bengal contribute more than 73% of the total acreage of the state (5). Almost all the districts of the belt are rainfed with maximum rainfall being concentrated during the months from May to August.

In the entire belt the crop is, to a large extent, grown in the house vicinity or in the back garden where other crops are also grown. Arecanut is cultivated in this region on a wide variety of soils. The soil of the Brahmmaputra and Surama valleys is lateritic soil of new alluvium and that of hill states is lateritic with admixture of gravel and reddish clay. There are two distinct seasons of harvest; one from April to July known as 'sali' and the other from November to January known as 'ahu'. The 'sali' season is confined to the plain districts and the 'ahu' season to the hill districts and Surama valley. No distinct varieties are grown in this region. The size of the nuts is generally oblong shape to big round and the great bulk of the arecanut produce in the region are free from astringency. Nambiar (1949) has reported that in the Sub-Himalayan West Bengal and Assam the flowering season is definitely late and lasts from June to September and consequently, the harvesting season is between May and June (4).

Cowdung with paddy straw is generally applied as manure. Except in large scale plantations, application of artificial manure and irrigation are not in vogue. The gardens get sufficient rainfall during summer months and the moisture retaining capacity of the soil is also found to be sufficiently high.

Arecanut is grown in the region both as pure and mixed crop. However, majority of the gardens are of mixed plantation. In the plain districts, arecanut is cultivated mixed with pineapple, betelvine, ginger, turmeric, banana, black pepper and coconut. In the hill districts the intercrops are citrus, jack, bay leaf, pineapple and banana. Banana is the main intercrop in the plains while in the hills citrus is found to be more. In most of the old gardens systematic cultivation with regular spacing is not generally found. This is because of the fact that the seedlings from the fallen nuts inside the gardens are allowed to grow haphazardly and as a result the regularity of spacing gets lost. But the newly established gardens are more systematic and the spacing of 9 × 9 feet is generally being maintained.

The general practice is to harvest ripe nuts, but a small proportion of tender nuts is also harvested for immediate consumption. The consumption within the region is heavy and the production is not sufficient to meet the local demand. Two different types of processed nuts are available in the region, viz. fermented and cured nuts. No processing of tender nuts is ordinarily done. In Assam, raw nuts are converted into fermented nuts locally known as 'Bura tamul' by two ways: (1) by keeping buried underground completely unexposed to air for a period, ranging from 2 to 10 months and (2) by keeping submerged in water. The time taken by the second method is shorter than the first method. Another advantage of the second method is that the fermented nuts are less susceptible to fungal and bacterial attack. But the large scale processing of fermented nuts by water curing is not possible. Raw nuts are cured for chali (dried nuts) by splitting the ripe nuts into two (or the whole nuts) and then sun drying it. The grower, however, faces great difficulty in sun drying of the nuts as rain also starts by that time and as a result the nuts get spoiled by fungus attack 'Bura tamul' is very popular in Assam Consumption in this form in Assam is more than 50 per cent of the total production. According to Govindarajan (1968) this type of processed nut (Bura tamul) is unhygenic and there is significant loss due to microbial action (2). However, there is still a good market for 'Bura tamul' in Assam. Only about 10 per cent of the crop is converted into 'gota' or 'kata' supari (Lakshmanachar and Shamanna, 1965).

Problems and progress

The important diseases in this region causing damage to arecanut palms are 'Koleroga' or fruit rot, bud rot *(Phytopthora arecae)*, band disease, stem bleeding *(Thielaviopsis paradoxa)*, 'Anabe' *(Ganoderma lucidum)* and crown rot. Koleroga is prevalent in Mikir Hills district. Band disease is more pronounced in Meghalaya and Kamrup. Heavy casualities of areca palm due to breaking of stems during windy days are found in almost all areas. 'Anabe' prevalent in plains is not so serious. Bud rot is causing serious damage to the arecanut industry in Cachar, Darrang and Nowgong districts. Stem bleeding is also found in all tracts but the incidence is not so alarming. Crown rot, a new disease, is causing serious apprehension in heavy rainfall tracts of Meghalaya. Control of diseases is a vital problem to be tackled with, particularly in the interiormost areas and sub-mountaneous terrains of hill districts. Investigation is in progress at the Central Plantation Crops Research Institute, Kahikuchi Sub-station to find out the cause and to control the crown rot of arecanut. A survey is also being undertaken by this Sub-station to estimate the crop losses due to diseases in the region. Irrigation during dry spell which occur some times is another problem in the hilly areas because of the peculiar topography.

The factors responsible for the limited production of arecanut in this region may be summerised as under:

i) lack of regular underplanting and indiscriminate planting of other trees in arecanut gardens;

ii) perennial growth of bamboo clumps all round the gardens and other miscellaneous trees which compete with the main crop for nutrients;

iii) inadequate manuring;

iv) shallow planting of seedlings and lack of adequate intercultivation.

Increase in crop production can be achieved by paying more attention for improving the overall efficiency of the plantations through the adoption of improved agronomic and plant protection practices.

Literature cited

1. Anonymous (1969). Arecanut and Spices Bull. 1 (1).
2. Govindarajan, V. S. (1968) Technological Research in Arecanut. *Ind. Farming 18 (4)*
3. Lakshmanachar, M. S. and Shamanna, K. (1965) Study of fluctuations in price of Arecanut in assembling markets of India. Areca J. 16 (1).
4. Nambiar, K. K. (1949) Survey of Arecanut crop in Indian Union.
5. Paul, S. C. (1960) on Arecanut Seedling Raising at the Sub-Himalayan West Bengal. *Areca J.* 10 (4)
6. Paulose, T. T. (1972) Arecanut and Spices. National Symposium on Plantation Crops, Trivandrum.