

Scope of Arecanut Cultivation in Assam

By

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Prior to partition of the sub-continent of India, North-East region formed the potential source of production of arecanut. With the partition, a major portion of over 2 lakhs acres went to East Pakistan. According to the present set up the North-East regions covering Assam, Tripura, West Bengal, North Bihar, may cover, according to present available information, a total area aggregating to about 35,000 to 38,000 acres. Assam State itself is reputed to have over 25,000 acres under arecanut. But the Director of Agriculture, Assam State, has recently furnished the following figures in regard to acreage and production of arecanut in the State :—

Name of Districts.	Area in acres	Production in tons (Dry nuts)
1 Cachar.	.. 2,800	125
2 Goalpara	.. 6,100	262
3 Kamrup.	.. 19,000	848
4 Darrang.	.. 20,200	902
5 Nowgong.	.. 13,000	580
6 Lakhimpur	.. 7,500	335
7 Mikir and N. C. Hills.	300	13
8 Garo Hills.	.. 1,000	45
9 K. & J. Hills.	.. 15,500	692
10 Sibsagar.	.. 13,500	603
Total.	<u>98,900</u>	<u>4,415</u> tons or 1.2 lakh maunds

From a perusal of the above two sources of information, it can be seen how inaccurate are the

figures in regard to the extent and production of arecanut in the State. The present acreage and production figures cannot, therefore, be accepted as very authentic and the scheme on the survey of area and production which is under implementation may provide many revaluations.

In most parts of the State, the cultivation of arecanut is done in scattered holdings, although areas of compact blocks are seen in some regions. The following are said to be the concentrated areas of production of arecanut in the State :—

Sibsagar District. Teok, Jhanji, Tamulichiga, Lahing, Amguri, Kharikattia, Nakachari, Kahngia, Charigaon, Chowkhat, Dergaon Misarora, Simaluguri, Hansari, etc.

Lakhimpur District. Khowgang, Moran, Joypur, Naharkatiya, Rohmari, Bihia, Dhakua-khana, Dhalpur, Bardalani, Narayanpur.

Goalpara District. Bilasipara, Chapar, Bejni, Bong-aigaon, Abhoyapuri, Kokrajhar, Sapatgram, Gossaigaon, Mankachar, South Salmara, Lakhipur, Dedhoni, Goalpara, Basugaon.

Nowgong District. Scattered all over the District.

- Cachar District.** Silchar, Lakhipur, Sonai, Borkhola, Udarband, Katigora, Bailakandi, Lalabazar, Katlacherra.
- Kamrup District.** Scattered all over the District, particularly the North bank.
- Darrang District.** Scattered all over the District.
- K. & J. Hills.** The southern part of the District adjacent to Sy.het.

The range of area grown by each cultivator varies widely from place to place. In the Upper Assam Valley, it varies from about .13 acre to 1 acre, in the Lower Assam Valley from .25 acre to 1 acre and in the Surma Valley from .06 to 2 acres. The average individual holding in the State may, however, be reckoned at .5 acre. One is definitely struck by the fact that the cultivation of arecanut in Assam though not found in concentrated blocks is found widely scattered, and



practically every holding has few bearing palms. The intensity is of course very high in lower and upper Assam Valleys and Khasia and Jaintia Hills.

The climatic and soil conditions.

Arecanut requires cool moist conditions for its optimum growth. It is very sensitive to stagnations and direct exposure to sun. Well drained soils, with high water table with good shelter belts are ideally suited for arecanut gardens. All these conditions are abundantly available in Assam. The gardens were located in levels of land which were free from inundation of river water. They naturally fall under 'high lands' and it is in such situations, the arecanut gardens are located. This incidentally surrounds the home-steads of farmers.

The climate of the different regions where arecanut is wide-spread shows strong periodicity of wet and dry periods. Local showers start in April and May, and the South-West monsoon is the main rain bearing winds which cover a period of June-September with some break in August. October-December are winter months with occasional drizzles. Summer season is from March to June and characterised with strong winds and scorching sun. The maximum temperature ranges from 71°F to 93°F, and the minimum 77° to 45°F. The high summer temperature mostly prevail in the months of May and June.

The soil characteristics vary considerably in the different tracts depending upon the situations of the land. In the Brahmaputra valley, the soil is all alluvium, sometimes being too sandy. They are fairly rich in Nitrogen and are neutral soils. The agricultural lands of this valley can be sub-divided into 4 types.

- (1) The lands on the immediate neighbourhood of the river which are highly flooded during the rain.
- (2) Low lying belts above the region but subject to water logging.
- (3) Land above the reach of floods.
- (4) Sub-montane tracts.

It is in the last two types that the arecanut gardens prevail mostly.

The Surma valley consists of Sylhet and Cachar Districts. The soils are generally of the heavier types with larger amount of silt deposits. The climatic conditions are in general the same as that of other valleys. The hills also are quite rich and can be developed further. The southern hilly regions known as Khasi and Jaintia hills are generally rocky with steep slopes. There is considerable variations in soil texture ranging from red loam to clayey types. The rainfall is higher in the regions. The average fertility is also high. The other climatic functions are more or less identical to the rest of the regions.

The altitude in the valleys range between 150' to 250' above mean sea level. The main source of water is through rivers and rain, while small wells do exist for domestic and garden purposes. These are not generally used for intensive irrigation. No organised system of irrigation is practised for maintenance of garden and they are all rainfed. The underground water fluctuates very much, depending upon the situation of the land and the season. However, gardens, where betel vines are grown, heavy manuring with farm yard manure is done. The gardens are never irrigated. In a number of places, the gardens suffered from bad drainage.

Prevailing condition and practice

The conditions are so congenial for the development of palms that it may be said that the existing gardens have risen from self-sown seednuts of palms originally planted in the homestead areas. No organised cultivation as such exist and treatments given to catch-crops like betel vines should apply to the arecanut palm as well. The number of palms from holding to holding varies considerably and only few possess over 1,000 palms. The high land valleys abounding in arecanut are often interspersed with low lying areas where the jute is generally raised. Instances are seen, where arecanut palms exist in backyard gardens of homestead in the low lying areas, the growth of palms are quite luxurious and appear to bear heavily. Betel vine cultivation was quite extensive, the arecanut palm serving as the standard. The gardens are generally well protected against wind with clusters of bamboo, jack, mango and coconut which exist in the outer borders and within, various types of citrus, mango, guava, pineapple, banana and betelvine constitute the catch crops. Very few instances were seen, where the growers raised nurseries in proper manner and the selection of nuts

was done in the most casual manner without noting other palms.

The flowering period appears to be quite varying from region to region, as judged from the stage of maturity of bunches in November month. The bunches appear to ripen all simultaneously within about a month's interval. Two distinct flowering seasons exist.

Cultivation and manuring

No cultivation practices are followed. The planting is done in very shallow pits. No manuring is done to the arecanut gardens with very few exceptions.

Yields

No one appears to record the performance of their gardens. Precise position with regard to yields could not be obtained from the growers whose gardens were visited. Some instances of the palms bearing at the fifth year of its growth were seen. Majority of palms were seen with 3 bearing bunches and the number appeared quite dense. The size of nuts appears to vary between gardens and within them, palms existed which did not bear any bunches at all. But all the growers were very particular about arecanut and there was desire to do something better to improve the yields.

Pests and diseases

In view of a very wide gap between S.W. region and N.E. region, one expects wide variations in the prevalence of pests and diseases. But on very careful observation, one is struck with the similarity of conditions that exist between these two regions. Sun scorching appears to prevail quite extensively in old and young plantations while stem-breaking occurred quite scattered in all regions. Exposure in North western portions of the palm appears to be the cause for heavy incidence of sun scorching. Stem bleeding symptoms have been seen in some well maintained gardens round about Rajburi regions. The drainage in such gardens were far from satisfactory. Several infestation of leaf spot disease causing heavy damage to the palms associated with intense yellowing has seen in Sunbhog area. Mites were seen causing yellowing of seedlings in some nurseries. Occurrence of some scale sects in seedlings and young palms were recorded. In a garden belonging to Shri Devaswara Bora, Rajbari, high intensity of attack of the scale insects were seen. The crown had developed rosette symptoms.

Programme of research and development in Assam

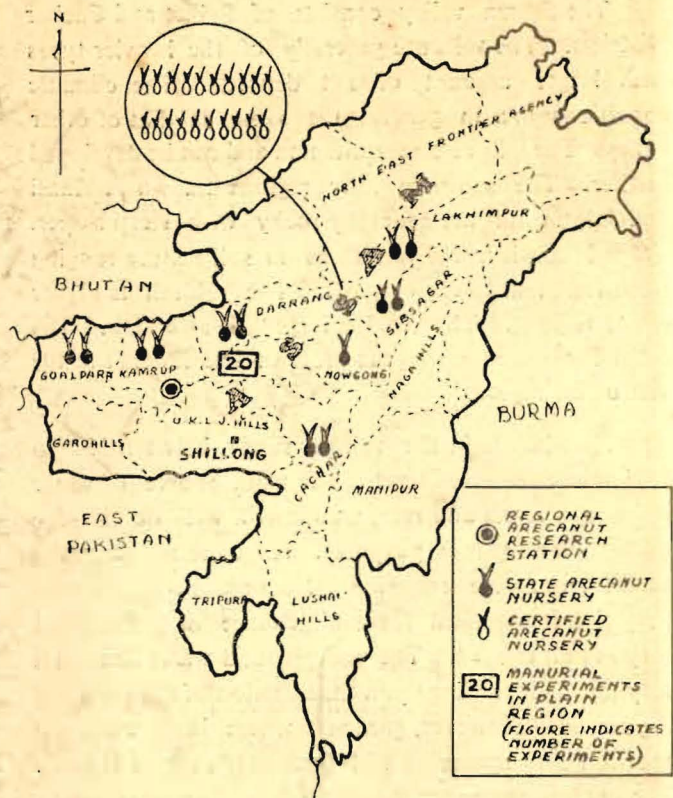
Assam constitutes the third State according to present available record of acreage under and production of arecanut. The cultivation of arecanut is practised by all classes of people; Hindus, Muslims, Tribes etc. The refugees coming round about Nowgong area have developed arecanut cultivation. Gardens in their homesteads are coming up well. This should form an example for planning development in other regions of the State.

The Indian Central Arecanut Committee has established a Regional Arecanut Research Station in Kunikuchi farm near Gauhati which will tackle all regional problems. The Regional Arecanut Research Station must develop suitable techniques of cultivation practice suited for rainfed conditions and homestead gardens. The techniques for raising nurseries, laying out gardens, raising of other cash crops also have to be developed, suited to these conditions.

The development programme also has to be planned to suit the peculiar conditions that prevail in these regions. During the Second Five Year Plan, the State Government of Assam has contemplated the establishment of 12 arecanut nurseries, 2 each in the Districts of Goalpara, Kamrup, Darrang, Lakhimpur, Sibsagar and Cachar with a production target of 12 lakh seedlings. In addition to the foregoing, the Indian Central Arecanut Committee has a programme of establishing 200 certified arecanut nurseries of which 20 certified nurseries with a production target of about 85,000 seedlings will be established in Assam.

With a view to formulate proper manurial schedule, the Indian Central Arecanut Committee propose to conduct 200 experiments in important arecanut tracts in the Indian Union. 20 such experiments will be conducted in select gardens of the plain region of Samaguri in Assam State.

Intensive extension work with regard to scope of adopting intensive cultivation practice has to be undertaken. Proper layout of gardens to make the backyards and homestead areas to look beautiful and at the same time maximising the returns from each palm, has to be done. Adoption of irrigation practice may have limi-



tation but organised way of bringing out drainage channels may have to be demonstrated by the extension agency. The agricultural departments which exist in all these important regions have plant protection organisation who should render technical guidance and the depots should be able to cater to the needs of the growers in regard to supplying sprayers and dusters and insecticides and fungicides. Intensive propaganda is necessary to bring home to the garden owners to mark all uneconomic and sterile palms, and to replace such palms with quality seedlings. This is of supreme importance particularly in view of scattered nature of holdings and their smallness.

By taking recourse to these measures, the production can be enhanced, which is quite vital. Apart from these measures the present method of preserving nuts for domestic consumption appears to cause heavy wastage and in the absence of any accurate survey, exact estimates of this wastage are not available. This aspect is worth looking into. From casual observations made, it is seen that the trends of consumption of arecanut appear to exist in a very high order. Mature or immature nuts are cut and consumed as such.



It is obvious, therefore, that each homestead garden should meet the entire demand of the household and at the same time produce some surplus which could be marketed and cash money raised for meeting the other demands. That implies that each household should try and produce "maga" sundried nuts for this purpose. The processing and curing techniques which are in other regions have got to be standardised for the local conditions of Assam, a problem for the Arecanut Technological Wing of the Indian Central Arecanut Committee to tackle. It is not clear whether Assam is self-sufficient in her requirements of arecanuts, but looking to high rate of consumption per capita, there appears to be assured demand from within the State itself and therefore the arecanut growers of Assam need not be afraid of fluctuations in the price structure of the commodity as the level of the price of arecanut will be in level with the prices of other requirements of theirs, more particularly, when there exists assured protection of restricted imports of foreign nuts.

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