

# Coconut, an inevitable crop for North Eastern states

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Coconut cultivation and the expansion of area under coconut has gained momentum with the formation of the Board in non traditional areas like North and North Eastern states. The nursery raising programme and supply of seedlings in these areas initially started with the procurement and supply of seed nuts from South India by the Seed Procurement Unit of the Board. The North Eastern region comprising of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura extends over 2.58 lakhs sq. km. and accounts for about 25% of the country's population. The region is endowed with natural resources like, fertile soil, abundant water availability, geographical diversity and suitability for varied cropping systems to take up farming successfully, especially in horticulture and plantation sector.

Coconut is grown in an area of 32661 ha in the North-Eastern region covering the states of Assam, Tripura, Nagaland, Arunachal Pradesh, Meghalaya, Manipur and Mizoram. This constitutes 17 percent of the total area in the country. The expansion of the crop gained momentum after the formation of Coconut Development Board. The Board has set up its Regional Office and State Centres to cater to the requirements of this region.

Utilization of coconut for religious and social purposes was prevailing in these regions even when coconut utilization was not so prevalent.

Consumption of coconut and coconut products in the various preparations and other social and religious functions are on the increase now. Therefore there is increasing demand for coconut and this increasing demand exposes the vast potential of expanding the crop in the North and North-Eastern region.

## Assam

Assam is traditionally rich in horticultural produce due to its diverse and unique agro-climatic conditions. Horticultural crops occupy 15% of the gross cultivated area. Coconut and arecanut are the high value commercial crops grown here. Coconut is grown in an area

of 19,426 ha. Coconut production in the state has shown an increasing trend in the last two decades. In 1999-2000 the production of coconut was 150.1 million nuts from an area of 20,238 ha., which further increased to about 161 per cent in production and 152 per cent in area as compared to 1985-1986. In 2008-09, there was a marginal increase in area i.e. 21.3 thousand ha., with total production of 154.3 million nuts. However in 2010-11 area under coconut decreased to 19,426 ha with a total production of 1,585.65 lakh nuts and the productivity to 8163 nuts/ha. (Source: Directorate of Economics and Statistics, Guwahati) Coconut is grown in all the twenty seven districts. Among these districts, Nagaon leads in area with 3,343 hectares and a production of 324.11 lakh nuts



*Boundary plantation of coconut around pond at Panipara, Hajo, Assam*



*Mother palm at Panipara, Hajo, Assam*

which alone comes to 20 per cent of the total coconut production of the state. BARPETA and Kamrup districts are next to Nagaon. Coconut plants are mainly grown as rain fed crop without much care or crop management. Average selling price of matured coconut is Rs 30-35 per nut and tender coconut is Rs. 20-25 per nut.

The cultivar grown in Assam is 'Assam Green Tall' named as Kamrupa. The other varieties released under the agro climatic condition of the state for cultivation are Bengal Hazari, Bengal selected WCT and TxD hybrid 'Chandrasankara'.

Coconut cultivation is still a homestead practice in the state in the northern banks of the river Brahmaputra and selected areas in the southern bank in a sporadic manner. The productivity of coconut in Assam is low. Coconut Development Board helps the farmers in scientific cultivation for increasing the area and productivity of coconut in the state. Board in association with the Directorate of

Horticulture, Central Plantation Crop Research Institute, Kahikuchi, Horticultural Research Station, Kahikuchi and different identified NGOs from different districts of Assam facilitates in the distribution of quality planting material in the state. During the current season Board is having around one lakh coconut seedlings at its Demonstration Cum Seed Production Farm at Abhyapuri. In the coming years it is targeted to produce around two lakh fifty thousand seedlings for extending the area in North & Eastern region.

#### **Coconut Research:**

The research on coconut in Assam was first initiated by the Department of Agriculture at Rajabari near Bokakhat now in Golaghat district in the year 1957 with a research project sponsored by the state government. Later the project was shifted to the Regional Fruit Research Station, under the Department of Agriculture at Kahikuchi. The systematic research of coconut started in the year 1973 with the transfer of entire coconut

research network to the Assam Agricultural University, Horticultural Research Station at Kahikuchi under Assam Agricultural University is doing coconut research and has been maintaining a large number of germplasms including exotic as well as local types. The All India Co-ordinated Research Project on Palms was started at Horticultural Research Station, Kahikuchi under AAU in 1985. 'KAMRUPA' originally known as 'Assam Green Tall' is considered as one of the most promising cultivar released by University for this region, a selection from the local germ plasm based on preliminary as well as multilocal yield trials in the farmer's field. At present Horticultural Research Station, Kahikuchi is maintaining more than 1000 palms in the station.

Central Plantation Crops Research Institute, Research Centre, Kahikuchi was established in 1959 as Regional Arecanut Research Station under Central Arecanut Research Station (CARS). Later, the centre was combined with the Central Plantation Crops Research Institute in 1970 with objectives of producing quality planting materials of major plantation crops, screen and develop coconut varieties for the region and standardize agro-techniques for major plantation crops. Around 500 coconut palms are maintained in CPCRI, Kahikuchi.

#### **Tripura**

Agriculture is the back bone of Tripura's economy. The warm and humid climatic condition is

congenial for producing fruits, spices and vegetables. Main horticultural crops are mango, pineapple, orange, litchi, jackfruit, cashew nut, lime, lemon, areca nut and coconut. Rubber and tea plantations are also popular in Tripura. Main agricultural crops grown here are rice, wheat, sugarcane, cotton, jute, mesta, pulses, oilseed, potato and maize.

Tripura is a hilly state in the North Eastern region of India having suitable soil, hot and humid climate suitable for coconut palm. Coconut cultivation was initiated in the state as homestead garden as boundary planting. The coconut plantation in Tripura is comparatively free from diseases. In, 2008-2009, area under coconut was 58,000 ha with production of 11.40 million nuts with productivity of 1966 nuts per ha. Average selling price of matured coconut is Rs 20-30 per nut and tender coconut is Rs 25-30 per nut.

Since 1985-86 Board in association with the Horticulture Department, Government of Tripura is implementing various schemes for the development of the crop. Coconut is mainly grown in Tripura South, Tripura North, Tripura West, Dhalai and Tripura East.

### Manipur

Coconut is growing in some pockets of the state over an area of about 2000 ha under rainfed condition. The people of Manipur consider coconut as an important item in social, religious, cultural and economic use. Huge quantities of coconut are imported from outside the state particularly Assam and Myanmar. Coconut is readily available in Imphal and the rate

varies from Rs. 30 to Rs. 50 per nut. Major coconut growing areas are Jiribam, Imphal East, Chandel, Tamenglong and Ukhrul district bordering upto Myanmar. The estimated production and productivity of the state is 16.47 m. nuts and 5067 per ha/ year.

### Meghalaya

Meghalaya is basically an agricultural state with about 80% of its population depending entirely on agriculture for their livelihood. Nearly 10% of the geographical area of Meghalaya is under cultivation and it comprises of the low lying hilly areas. A substantial portion of the cultivated area is under the traditional shifting cultivation known locally as Jhum cultivation.

Climatic conditions in Meghalaya permit a large variety of horticulture crops, vegetables, flowers, spices and medicinal plants. Food grains (60% of the total crop area) are the most important crop grown in Meghalaya. Other crops grown are potato, ginger, citrus, pineapple, cashew nut, areca nut and black pepper.

The main coconut growing areas are Garo hills, because of its less lower altitude hills concentrating in the East Garo

Hills, West Garo Hills and some areas of South Garo Hills. The total area under coconut in Meghalaya is estimated as 1050 ha with a production 5.21 million nuts and productivity 3,065 nuts per ha. Average selling price of matured coconut is Rs 15/nut and tender coconut is Rs 10/nut.

### Nagaland

The state of Nagaland is basically a horticultural land due to its agro climatic condition, topography and type of soil which is best suited for cultivation of all types of horticultural crops. Main horticultural crops grown here are passion fruit, orange, pineapple, banana, citrus, mandarin, peach, nut fruits, coconut, vegetables, spices, root, tuber crops, mushroom, medicinal plants, aromatic plants, flower etc. and main agricultural



*Coconut plantation at Zikzak Farm, West Garo Hills, Meghalaya*

crops are rice, maize, tobacco, oilseeds, pulses, fibers, potato and sugarcane.

The tropical climate in the foothills and temperate climate in the hilly region with abundant rainfall spread over seven months offers scope for coconut cultivation. In the state, coconut is grown in lower altitude areas i.e. Dimapur, Mokokchung, Mon, Peren and Wokha. The area under the crop is 900 ha and the average selling price of matured coconut is Rs. 25 and tender coconut is Rs. 20/nut.

Coconut Development Board in association with the Horticulture Department; Government of Nagaland and an NGO, All Nagaland Coconut Grower Association, is assisting the farmers in the management of coconut gardens.

### **Arunachal Pradesh**

The humid and hyperthermic climate in foothills of Arunachal Pradesh is suitable for growing coconut. The main coconut growing districts are Changlang, Teju, Papump and Passighat. Besides, these districts, coconut is also grown in certain areas like Mahadevpur, Namsai, Bordumsa Deomali, Roing and Sonpura. The total area under coconut is 800 ha. Average selling price of matured coconut is Rs. 40-45 and tender coconut is Rs. 25-30 per nut.

Under Boards scheme, Arunachal Pradesh has produced about 1,13,500 coconut seedlings from its Regional Coconut Nursery. Coconut seed garden is established in Arunachal Pradesh at Papumpare. In spite of the mountainous landscape, Arunachal

Pradesh is increasing its area under coconut in areas adjoining Assam.

### **Mizoram**

The geo-climatic situation of Mizoram offers excellent scope for growing different horticulture crops including mandarin orange, banana, passion fruit, grape, pineapple, vegetables, spices, plantation crops and medicinal and aromatic plants of high economic value. Major agricultural crops are rice, maize, pulse, black gram, mustard, potato, cotton, sugarcane and sesame.

Mizoram has the lowest plantation of coconut i.e. 280 ha producing 0.64 million nuts with productivity of 2,857 nuts per hectare. Average selling price of matured coconut is Rs. 50-60 and tender coconut is Rs. 40-45/nut

Major coconut growing areas of Mizoram are Aizwal, Lunglai and Kolasib districts adjoining Assam and Tripura are the coconut growing areas.

Board in association with Directorate of Horticulture and an NGO, All Mizoram Farmer's Union, Gen. Hqrs. Aizwal, Treasury Square, Aizwal, Mizoram, Pin-796001 (Contact no-91- 389-2318189/ 2318232 & Email-amfugenhqrs@rediffmail.com) is giving technical assistance and helping farmers for the supply of quality planting materials.

### **Effect of shifting cultivation in north eastern.**

Shifting cultivation in the North Eastern states also known as 'Jhum' cultivation or rotational agro-forestry is being practiced by the traditional tribal societies. Forests

are being depleted for timber or soil and stones. The jhum cultivation leads to decline of productivity by 50% and the farmers are experiencing food shortage of 2 to 6 months every year.

However, efforts to wean farmers away from shifting cultivation have not been very successful. A change in policy is required keeping in mind the changing requirements. A meaningful solution to the problem of jhum has become critical, not only from the point of biodiversity, but also for productive agriculture including proving food crops in the region. The solution to the problem of the shortening of fallow cycle lies in strengthening this already weakened agro-forestry system, through fallow management using appropriate tree species. Subscribing the philosophy 'don't fix it if it isn't broken' happened here also, nothing much has been done till now. As a result vast areas have been depleted already. Now useful trees are being planted by the farmers to sustain the farm land and to ensure food security and income. Farmers in all the seven North Eastern states have taken up coconut as a companion crop along with other horticultural crops and coconut is gaining importance. Coconut Development Board in association with Department of the respective State Horticulture Departments and NGOs are facilitating the supply of quality planting materials in this region and helping the farmers in regaining the lost glory.

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