



Challenges of Neera Production in Kerala

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High cost of production and low income from coconut are the major constraints faced by the coconut farmers of Kerala. Profitability of this crop still depends on a single product, coconut oil. One of the novel initiatives being explored to increase the income from coconut tree to the maximum extent is extracting neera, the healthy, nutritionally rich natural juice from coconut inflorescence. Out of the 12 bunches of inflorescence (spadix) produced by a healthy coconut palm in a year, 50% can be utilized for neera production. From one healthy spadix @ 2 liters of neera per day a farmer will get 60 liters of neera per month. If he allows tapping six spadix in a year, he will get 360 liters of neera. If the farmer get minimum farm gate price @ Rs 20/- per liter excluding labour cost, he will get Rs.7200/- per tree. At the same time if he allow the spadix to grow for harvesting coconut, @12 nut per bunch he may get maximum of 72 coconut and @ Rs 10/- per nut the farmer will get an amount of Rs 720/-only from those inflorescences i.e., the income can be increased by ten times by tapping neera. It was with this objective that Coconut Development Board took the initiative to promote neera production, processing and marketing through Coconut Producer Federations and Companies facilitated by the Board. Though Kerala Government had issued approval to Coconut Producers Federations to tap Neera and eleven neera processing units each with capacity to process 4000 liters of neera per eight hour shift was set up with the financial support from the Board, the production and marketing of neera has not flourished at the expected level due to several challenges faced by the industry in the state as explained below:

Lack of skilled workers for neera tapping

Three major constraints in promoting neera production were: 1) Abkari act of Kerala did not permit tapping of neera freely by the farmers. 2) lack of infrastructure for processing and packing and 3) non availability of neera technicians. With the concerted efforts of the Board, the first two constraints only could be overcome in the state. Non-availability of tappers is still remaining as a serious problem. Neera tapping is a laborious process which requires continuous skilled labour. Once started, tapping of an inflorescence lasts up to 30 to 60 days. It is very difficult to get labourers for this risky job in a state like Kerala where lack of skilled workers is a major problem. Besides, labour is very costly in the state where an unskilled labour who works for 8 hours in farm

operations is paid Rs 800/- per day.

Government of Kerala gave permission to tap neera to 486 Coconut Producer Federations (CPFs) facilitated by Coconut Development Board. At the rate of 5000 palms per Federation, 22 lakh palms are available for neera tapping in Kerala. But total number of palms utilized for tapping neera is 3465 only i.e. 0.16% of total palms are only utilized for neera tapping. The main reason for non utilization of palms is due to non-availability of neera technicians. For tapping 22 lakh palms, around 2.2 lakh neera tappers are required. CDB, through Coconut Producers' Federations is organizing training programme for creating neera technicians with financial assistance from the Board. But with the limited resource available, CDB alone cannot train such a huge number of neera technicians. Support of all agencies involved in coconut sector in the state is required to create sufficient skilled neera technicians.

The present wage rate of neera technician depends on the quantity of neera tapped per day. There is great variation in the quantity of neera obtained between cultivars. Naturally, the growing conditions of the palm and its vigor play an important role in neera production. If a neera tapper tap 10 trees per day, and the tree gives 2 liter neera, the tapper will get an amount of Rs.1000/-per day. If the neera yield is one liter per day, the tappers' share will be Rs.500/-per day which is less than the wage paid for unskilled labours in the state. Besides, during the preparation period for tapping, neera is not produced and in the initial periods of neera production, the quantity produced will be less and the labourers share on neera produced will be less. Hence the present wage rate is not attractive and it is suggested that an alternate system of remuneration to neera technicians on a monthly basis in consultation with the CPCs shall be worked out to attract more labourers to this field.

High rate of drop out of neera technicians

All the CPCs that have started neera processing are facing acute shortage of neera technicians. High rate among trained neera technicians (people trained in tapping coconut palms for producing neera) is posing another tough challenge to the neera production sector, which is still in its fledgling stage in the State. According to the CPCs, only around 30% of the total persons trained for tapping neera under different CPCs facilitated by Coconut Development Board are available for the job. The rest have either left the job or turned to other sectors, including construction. The scarcity of trained hands is

also causing huge financial loss to the companies as huge amount was spent on giving training. To tide over the situation, interested people from northern states now working in Kerala, from Jharkhand and Bengal shall be trained and utilized in this sector. In view of the high attrition rate among trained technicians from the state, various CPCs are increasingly deploying neera technicians from outside states, including Lakshadweep, Assam, and Jharkhand. The high rate of desertion among the technicians is not only causing huge financial loss to the companies but also putting the nascent neera producing sector in serious crisis. Many CPCs in the southern districts have already started engaging people from northern states in the sector. Some long-term plans, including large-scale planting of early bearing DxT hybrid coconut trees with dwarf stature with high neera production can solve this problem to a certain extent.

Low Social status of coconut climbers for Neera tapping

Social status of coconut climbers is considered to be very low in the state. This might be the reason, which prevented the members of backward and forward cast from becoming coconut climbers and Neera tappers. Another reason behind it might be that coconut climbing is a traditional job. Even then, there were some coconut climbers from other caste and this might be due to the unemployment problem and high income obtained from coconut climbing. However, they quit palm climbing and Neera tapping whenever they get some other skilled work with high social status. Due to this reason, all the Neera technicians who have undergone training do not stick on to this work. Hence while selecting Neera technicians, utmost care should be taken by the Farmer Producer Organization and other agencies associated with training programme to select only interested persons as far as possible. Those who are in the palm climbing profession shall be selected for the training.

Cumbersome process involved in extraction of raw neera

The tapping process is essentially an art, and the result therefore depend upon the skill of the tapper. The best time to start tapping is prior to the splitting of the inner bract and the emergence of the spikes from the spathe. Sap yield is much lower if the tapping starts after the spadices have burst opened. The technique consists of carefully bruising and rupturing the tender tissues of the floral branch by gently hammering and pounding the spathe. Special care is taken not to reduce the flower buds inside the spathe to a pulp, in which case the spadix becomes useless.

The most effective harvesting cycle is twice a day. More harvests are not profitable in relation to the additional work, and fewer harvesters involve in the risk of breaking the spathe under the excessive weight of the

container, and they may also create other problems such as sap fermentation and drying of cuts. If, for any reason the spadix is not sliced for a period of two days, a type of healing latex exudes from the wound which impedes the sap flow. Two weeks of tapping will then be required to recover normal sap production. Sometimes a closed spadix has to be abandoned. One or two days rest for the harvester may lead to a production loss of 15-20 days. It is therefore important that tapping be performed by a team, whose members can substitute each other in case of sickness, etc. About 3 weeks before the end of tapping, preparation of another spadix may be started. Due to the cumbersome process involved in neera tapping farmers are not attracted towards neera harvesting. Studies should be conducted in this line to simplify this process and develop modern equipments for neera extraction.

Non-availability of middle aged palms with medium height on a compact area

Tall palms yields much more neera than dwarf palms. Though 18 lakh coconut palms are available in the state middle aged healthy palms with medium height suitable for neera tapping is less in the state. It is also very difficult to get those palms in a same location, as it is highly scattered. This is another challenge faced by the neera industry in the state.

High competition from other soft drinks in the market.

Soft drink industry is a highly competitive field in our country. Hence is very difficult to attract the market in this section with out large scale production of this product. Tapping is performed in most coconut growing countries, either for the production of fermented sap as an alcoholic beverage or for the production of palm sugar. In major coconut producing countries, Indonesia, Philippines, and Malaysia tapping of unfermented sap from young inflorescences is carried out mainly for the production of neera sugar. The health benefits of coconut sap sugar has already been established in other coconut growing countries and it is classified as low GI alternative sweetener for diabetics. There is vast scope for development of neera sugar industry also with economic prospects in the global market. Hence our neera industry need to focus on producing neera sugar and other value added products.

In order to tide over the situation, all the CPCs should collectively produce Neera utilizing the existing processing facilities so as to maximize the production. The CPFs extracting neera in adjacent areas should utilize the processing facilities established by the nearby CPCs. Consortium of CPCs should make all efforts for marketing of neera to neighbouring states outside Kerala. Establishment of new processing units may be planned only after the fully utilization of the existing units. ■