

Farmer producers' organizations in Karnataka with respect to neera production in coconut (*Cocos nucifera*)—a case study

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ABSTRACT

The study investigated the success rate of Kalparasa [a fresh, unfermented, nutritious health drink obtained from the inflorescence of coconut (*Cocos nucifera* L)], which emerged as an innovative method to generate income from coconut palms. The company, Kalparasa Coconut and All Spices Producers Company Limited, was established and has benefited a large number of coconut growers in Karnataka, as well as other states like Jharkhand, Odisha, and Assam. In the current financial year, each palm yielded 400–600 liters of Kalparasa, with the participation of 6,800 farmers as shareholders and 19 farmers specifically involved in neera collection. The company has increased its turnover from Rupees 6.18 lakhs in 2021–22 to Rupees 22.69 lakhs in 2022–23.

Key words: Kalparasa, Neera, Tapping, Udupi, Farmers Producers' organizations

Coconut (*Cocos nucifera* L), also known as “Kalpavriksha”, is a tropical plant that thrives well under hot, wet, and humid conditions at a temperature of $27 \pm 5^\circ\text{C}$. In fact, every part of the coconut tree can be utilized, ensuring that nothing goes to waste. Coconut cultivation has been found to be very successful along the Malabar and Coromandel coasts of India. The southern states of India, such as Kerala, Karnataka, and Tamil Nadu, extensively cultivate coconut and reap large amounts of income from it.

The Udupi district of Karnataka, situated between the Arabian Sea to the west and the Western Ghats to the east, is one of the major coconut-growing areas in southern India. Coconut is one of the major crops cultivated in Udupi district, covering 22,226 ha, with a production of 3,026.57 lakh nuts (2021–22). It ranks 8th in area and 6th in production among the coconut-growing districts of the state. The productivity of coconut in the district is 13,617 nuts per hectare.

Even though the farmers of Karnataka had a good number of productive coconut palms, they were unable to reap significant profits from the crop due to various challenges, such as monkey menace, peacocks, and other wild animals. To address this issue and ensure better profits for farmers, Satyanarayan Udupa, District Secretary of a farmers' organization, in association with CPCRI (Central Plantation Crops Research Institute), established a “Neera” (a fresh, unfermented, nutritious health drink obtained from the inflorescence of coconut) production company—Udupi Kalparasa Coconut and All Spices Producers' Company Limited—under the brand

name Kalparasa, in Japthi village of Kundapura taluka in Udupi district, Karnataka.

MATERIALS AND METHODS

The study was undertaken in the Udupi district of Karnataka. Devastated by the reduction in coconut productivity, Shri Satyanarayan Udupa, after discussions with the Horticulture Officer of Karnataka, found a solution to the issue through the production of neera (Kalparasa). It was ensured that the quality of neera would not deteriorate. To achieve this, any produce with a pH below 5.5 is converted into other products such as jaggery (sharkara), honey (madhu), vinegar, chocolate, and ice cream.

Neera production technology was acquired from CPCRI, Kasaragod, in 2019 (Fig. 1), and a total of 68 farmers were trained in hygienic neera tapping. Of these, 48 farmers were from Karnataka, and the rest were from other states such as Jharkhand, Odisha, and Assam. Payments for tappers were made on a per-liter basis, with a wage of ₹400. The tappers were insured under the Kera Suraksha Insurance Scheme of the Coconut Development Board, and a mediclaim coverage of ₹6 lakh was provided.

Shri Satyanarayan Udupa linked 6,800 farmers through 73 coconut farmer societies, and shares were collected from the farmers, with ten directors as assured shareholders. A license for the production and marketing of neera was obtained from the Excise Department of the state in March 2020 for tapping and extraction of neera. In December 2021, permission was also granted for its sale. After obtaining the license, eight trees were selected from each farmer for neera extraction, ensuring that the maximum number of farmers could be involved.

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Fig.1. Coconut sap chillers used by farmers for collection of neera

RESULTS AND DISCUSSION

As per the studies and the current trends, it indicates that 64 farmers have benefited from neera tapping, with an average farmer earning around eighty thousand to one lakh rupees per annum from tapping eight coconut palms. The company provides employment to various tappers from the state as well as from other states such as Jharkhand, Odisha, and Assam.

It has been observed that a tree can produce 400-600 of kalparasa per annum, and the farmers are paid twenty rupees per litre if the company provides all the arrangements. However, if the farmer makes all arrangements, the company pays them seventy rupees per litre.

It is clear that the monthly production of kalparasa and the company's turnover have also increased. During 2023-24, a monthly production of 2200 litres with the

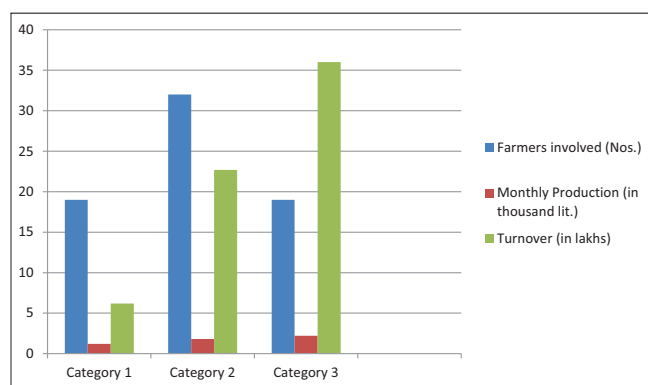


Fig.2. Monthly production and turnover of Udupi Kalparasa Coconut and All Spices Producers' Company Limited

Table 1. Production and turnover of Udupi Kalparasa Coconut and All Spices Producers' Company Limited

Year	No. of farmers involved	Monthly production (lt.)	Turnover (in lakh)
2021-22	19	1,200	6.18
2022-23	32	1,800	22.69
2023-24	19	2,200	36.00

involvement of nineteen farmers and a turnover of thirty-six lakhs is anticipated. In 2022-23, the monthly production of kalparasa from thirty-two farmers was one thousand eight hundred litres, yielding a turnover of twenty-two lakhs sixty-nine thousand and two hundred six rupees. Prior to that, in the financial year 2021-22 (Table 1), the company's turnover was six lakhs eighteen thousand seven hundred and sixty-two rupees with a monthly production of one thousand two hundred litres of kalparasa. It was also found that neera can be converted into several other products such as jaggery, sharkara (crystallized jaggery), honey, vinegar, chocolate, and ice cream.

The present findings indicate that neera can be converted into several products coincide with those of Chinnamma *et al.*, (2019) who also studied various value-added products of coconut. Sudha *et al.* (2019) studied various uses of coconut inflorescence sap and found that products like coconut sugar, jaggery, and honey can be produced from the sap. Yarin *et al.* (2019) reported that a coconut palm produces an average of eighty-six litres and eleven ml of neera, which is close to the range found in the current studies in the Udupi district.

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