



Tapping for sweet toddy and coconut sugar deserves encouragement

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The production and marketing of sweet toddy as a health drink has to be permitted in the major coconut growing states of India where restrictions on tapping is presently prevalent.

Processing units for producing canned/bottled sweet toddy shall be promoted in suitable locations and appropriate technology for the same shall be transferred to promising entrepreneurs.

Tapping for sweet toddy and coconut sugar is a viable source of income and employment for the coconut farmers. Although it is encouraged in many coconut-growing countries it is yet to be promoted in India. The only exception is the small pockets in Tamil Nadu where the production of coconut sugar has continued over the years as a traditional rural activity. The production and marketing of coconut sap and sugar could be successfully organized in the major coconut growing states of India for the benefit of the coconut farming community.

The Economics of Tapping for Toddy

Toddy tapping and the sale of sweet toddy offer opportunities to coconut farmers for enhancing on-farm income and employment. In a study on tapping conducted in Kerala in 1998 by Peekay Tree Crops Development Foundation (PTCDF) the gross income recorded for 30 gardens was Rs.269,356 per ha per annum with a net income of Rs.139,661. The details are shown in the Table:

In a case study conducted in 1998 by PTCDF, it was observed that the farmer employed one professional tapper for a unit of 20 trees. For the first 15 days when there was no

toddy yield the worker was paid a daily wage of Rs.150 for preparing the trees. After toddy yield commenced the average yield was around one litre per palm per day or 20 litres from the unit of 20 trees. Following this, the yield increased to around 2-2.5 litres per palm per day or an average of 45 litres from 20 trees. The wages for the tapper after the toddy yield commenced were at the rate of Rs.4 per litre of toddy collected. The average yield of toddy from 20 trees was 1,200 litres for two months and 12,825 litres for 9.5 months, totaling 14,025 litres. The total wages paid to the tapper for one year was Rs.58,350. By selling 14,025 litres of toddy at the rate of Rs. 15 per litre the farmer received a gross income of Rs. 210,375, which left Rs.152,025 as net income or Rs.7,601.25 per tree per annum. As the investment on tapping knife and pots was not much it was not accounted for. The net income from tapping was found to be 19 times higher than that from untapped trees which were in the yield group of 60-75 nuts per palm per annum. The opinion of the farmer was that the toddy yield increases with good management and that not only the number of nuts but the kernel out-turn per nut also increases after a tapping period of two years.

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Size group of gardens (ha)	Average size (ha)	Share of Tapping and other activities on income (%)	Share of coconut on income (%)	Average gross income per holding (Rs.)	Average gross income per ha (Rs.)	Average net income per ha (Rs.)
0.1&below	0.054	83	17	7,945	147,145	136,219
Above 0.1&upto 0.4	0.213	69	31	36,394	171,134	138,600
Above 0.4	2.190	92	8	605,961	276,274	139,757
Total/Average	1.171	91	9	315,488	269,356	139,661

In a field study conducted in the same year the average yield of toddy recorded for 68 palms was 1.99 litres per palm per day. These palms were assigned by the farmers for tapping on rental basis to professional tappers and the rental receipt averaged Rs.56.47 per palm per month. In the surveyed area the practice was to allow tapping for 6-9 months in a year. If one-third of the palms in a garden or 60 palms per ha are allowed to be tapped for 9 months, the average rental receipt at the rate recorded in the study will be around Rs.30,500 over the tapping period. This income from tapping is substantially higher than that obtained from untapped trees. The experience of the farmers covered in the study was that leaving upto one-third of the palms in a garden for tapping will not cause significant reduction in the production of nuts because most of the palms earmarked for tapping are either alternate bearers or poor yielders. They were also of the view that the trees left for tapping at 9 month rotation usually exhibit higher production potential during the post tapping phase.

Unfermented sweet toddy could be promoted as a health drink. Techniques for preventing spontaneous fermentation of fresh sweet toddy are now available. Sri Lanka is now in the forefront by making available canned sweet

toddy in the domestic and external markets. Unfermented sweet toddy has a neutral pH, 16 amino acids with glutamic acid, threonine and aspartic acid forming the major constituents and small amounts of vitamins. In the Ayurvedic medical system fresh coconut sap is considered beneficial to pregnant women and emaciated children. The constituents of fresh sap in g/100 ml are moisture-84.42; ether extractives-0.04; carbohydrates-15.16; protein-0.12 and ash-0.26.

It is possible to assign trees both for tapping and nut production. This is done by tapping only alternate spathes or by tapping only half the length of each spathe and leaving the lower half for nut production. The observations made in India and other countries show that 20-25% of the palms in each garden could be earmarked for tapping without causing significant reduction in the annual production of nuts from such gardens.

Production and Marketing of Coconut Sugar

The production of coconut sugar from unfermented sap is a profitable on-farm activity and is encouraged in many coconut growing countries for local consumption as well as for export marketing. The experience in countries like Philippines, Thailand, Indonesia etc. is that assigning palms for sugar production is much

more profitable to the farmers than allowing to yield nuts. In the Philippines the average income from palms set aside for tapping and sugar production is 7-10 times more than that from palms maintained only for nut production. In Thailand producing sugar has been found to be eight times more profitable than producing coconut or copra. In Indonesia the farmers are encouraged to leave upto 30% of the palms in plantations for sugar production. Tapping and sugar production also augment on-farm employment. While 50-60 palms do not require more than 90-100 man-days for annual maintenance, the same number of palms when utilized for tapping and sugar production will provide full time employment to one tapper and one or two women members of the family.

Consumer preference around the world is changing in favour of natural health foods. Coconut sugar is a health food and, as such, can be targeted to both domestic and global markets. There is growing demand in the developed countries for coconut sugar as an alternative to refined cane sugar. Health conscious people in India may also opt for coconut sugar if quality product becomes available in the market. In countries like Thailand and Indonesia sugar production is a popular household activity where specialized organizations procure



sugar from the producing units and is marketed both in the domestic and export markets in attractive zinc or aluminium containers. The export markets cover West Asia, Australia, New Zealand, U.S. and Europe.

In Thailand coconut gardens maintained exclusively for sugar production are found in the provinces of Samut Prakan, Samut Songkhram and Samut Prakan. In these provinces the average size of gardens is one ha where tapping commences when the palms are five years old. There are special cultivars known for their high production of sap. In such palms the daily yield of sweet toddy is up to four litres and the tapping is generally continued for 10-11 months. These varieties are Tha-le Ba, Suricha, Sai Bua, Theung Bong, Kathi and Khi Kai.

In Indonesia production of coconut sugar is a popular household activity in 26 of the 27 provinces. According to a recent report in the Banyumas district alone there are about 28,773 palm sugar making units employing about 58,500 workers. Although men collect the sap and lend a hand in the molding process, the household women take

care of the processing. About 75% of the total production goes to big cities for local consumption and also for export to Singapore, Malaysia and Middle East.

Apart from solid palm sugar another useful product that could be made out of unfermented sap is treacle or sugar syrup. The syrup is a golden coloured product and the recovery is 16% of the sap used. It is a delicacy and its use is preferred as bread spread in place of fruit jam and a sweetening agent for special breakfast dishes.

Suggestions

The production and marketing of sweet toddy as a health drink has to be permitted in the major coconut growing states of India where restrictions on tapping is presently prevalent. Processing units for producing canned/bottled sweet toddy shall be promoted in suitable locations and appropriate technology for the same shall be transferred to promising entrepreneurs.

When sugar production is organized as a rural activity under the aegis of grower's cooperatives, it could generate additional income

and employment to a sizeable section of the rural community. It is possible to provide training facilities to selected village youth in the different states for palm climbing, tapping and manufacture of sugar. The production and marketing of sugar as a cottage industry in the cooperative sector can ensure direct employment to village youth without gender difference. To facilitate this activity, the state governments shall permit and encourage tapping for sugar production subject to restrictions such as that not more than 25% of the bearing palms in a garden are to be earmarked for tapping and such palms shall have a resting period of not less than three months in a year.

When the production of sugar is organized in the cooperative sector, adequate quality control could be enforced at different stages such as collection of sap, assembling, boiling and conversion in to pellets, cubes, crystalline sugar etc. Apex organizations may undertake procurement of sugar from producing centres and its packaging, and marketing in the domestic and export markets.

Coconut - source of good nutrition

If you have been looking for a refreshing drink that is a healthy alternative to your usual beverage, then look no more! The secret is out; coconut water is an unlikely source of many great health and restorative benefits, not to mention it is low in fat, sugar and carbohydrate content. It is an all around good for you drink and a unique change from the ordinary. Coconut water is an all-natural isotonic beverage, and works great for rehydrating the body and replenishing necessary fluids to the body whenever needed. It raises your metabolism and promotes weight loss, yet it also keeps the body cool and regulates the proper temperature. Coconut water helps control diabetes, treats kidney stones, cleanses the digestive tract, and boosts the immune system aiding in helping the body fight off serious viruses like influenza. Coconut water is comparable to whole milk; however it contains no cholesterol. It is healthier than orange juice, but lower in calories and still biologically pure. It contains less sodium than many sports drinks, and is beneficial in providing wealth of energy. The best kept secret to staying healthy, looking great and feeling it too! So next time you are in need of a thirst quencher, grab a coconut!

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