YOUNG TENDER COCONUT

By: R. N. Arancon, Jr.

The coconut fruit at seven to eight months maturity possesses the sweetest, and the optimum volume of water inside its cavity. Its flesh at this stage has been described by Sir Francis Drake, perhaps the first English man to taste coconut as "a kind of substance very white, no less good and sweet than almond". To the thirsty, the sweetish and fresh young coconut water would certainly be the best way to quench a thirst on a hot sunny day.

In the, tropics, young tender coconut (YTC) is often served as a gesture of welcome and hospitality to guests in the villages. Growers just pluck the young nuts, usually by climbing the coconut tree, and immediately open one side at the upper part of the nut with a machete and served directly to the guests. To the tourist, it could be a heartwarming welcome and a truly exotic and satisfying drink of the tropical paradise.

While the young tender coconut industry is yet at its infant stage, the industry has good prospects. Statistics reveal that the domestic and export markets for YTC have been increasing. And while the market is not as large as copra and coconut oil, the profit margin is comparatively good especially for the YTC growers and entrepreneurs.

Exports of YTC from APCC member countries to countries such as in Europe, USA, Australia, New Zealand, Japan, Hongkong, Middle East, etc. have been on the rise. Malaysia for example has generated an income of about US$3.6 million in 1996 by exporting YTC mainly to Singapore and Hongkong (Kamaruddin, 1977).

Sri Lanka, Thailand and the Philippines are the other major suppliers while the Pacific countries, like Fiji and Samoa supply Australia and New Zealand.

Export of Young Fresh Coconuts by Major Suppliers from APCC Member Countries 1992-1996

Country		1992	1993	1994	1995	1996
Malaysia	Volume	64,471	47,021	48,337	39,839	31,584
	Value	3,519	3,572	2,976	2,901	3,614
Philippines	Volume	2,674	2,789	2,802	2,556	4,191
	Value	1,503	1,457	1,462	1,364	1,694
Thailand	Volume	3,624	3,624	5,762	6,748	6,473
	Value	1,792	1,789	2,914	2,649	3,066

Source: APCC – Statistical Yearbook

Note: Volume in '000 Nuts
Value in '000 US$

YTC Varieties

The dwarf varieties are most suitable for YTC production because of their short stature. This makes harvesting much easier and the problem of nut breakage during harvesting is minimal. Also, harvesters could easily climb a dwarf coconut palm and could safely bring down a whole YTC bunch from the canopy.

Dwarf coconut varieties are also highly self-pollinating, thus, you could expect uniformity among the palms. Besides being short, they come into fruiting as early as 2 to 2.5 years from field planting. The height increment of dwarf varieties is generally less than 50 cm. per year and they produce small to medium-sized nuts which are very suitable for tourists as they could consume a whole nut at one sitting.

The Coconut Genetic Network (COGENT) of IPGRI/FAO has identified the cultivars currently used for the YTC industry in twelve countries. S. Kamaruddin in 1995 has listed these varieties as shown in Table 2.

Table 2.
Young Tender Coconut Varieties in Asia, Pacific and Caribbean/Latin America
By S. Kamaruddin, 1997

Region	Country	Varieties
South Asia	India	Chowghat Orange Dwarf, Kenthani Dwarf, Ganga-Bondam Dwarf
	Sri Lanka	King Coconut (Rath Thembli), SL Red Dwarf, SL Yellow Dwarf
South east Asia	Vietnam	Xiem, Tam Quan, EO, Ta, Dau
	Thailand	Nam Hon, Thung Khled, Pathiu
	Indonesia	Salak Dwarf, Nias Green Dwarf
	Malaysia	Malayan Yellow Dwarf, Malayan Red Dwarf, Malayan Tall
	Philippines	Aromatic, Laguna
Pacicifc	Samoa	Niu Vai, Malayan Red Dwarf, Samoan Tall, MRD x Rennel Tall
	Vanuatu	Vanuatu Red Dwarf
	Fiji	Malayan Dwarf, Maypan, Panama Tall
Caribbean/Latin America	Jamaica	Malayan Dwarf, Maypan, Panama Tall
	Mexico	Malayan Yellow Dwarf, Malayan Red Dwarf, Pacific Tall, Atlantic Tall

It can be noted from that majority of the varieties are of the dwarf types, as expected, with 2 hybrids and 9 Talls. YTC from the tall varieties are usually harvested from younger trees of medium height and generally sold to street stalls because they have bigger nuts and contain lots of water. The Red Dwarf or the Golden King variety is popular in Sri Lanka while the Malayan Yellow and Green Dwarf are most popular in Malaysia, Fiji, Samoa, Jamaica and Mexico. The Aromatic variety believed to have originated in Thailand is gaining popularity in the Philippines and Malaysia.

YTC Production

A bunch of young tender coconuts could be harvested regularly since the coconut tree flowers and fruits all year round. At least one bunch of YTC could be harvested from a tree per month. One variety has been reported to produce some 33,000 nuts in one year from a one-hectare farm planted with 220 trees. Researchers have also reported that contrary to earlier belief, the regular harvesting of young or immature nuts increases the nut yield per tree by as much as 25%.

In recent years, there has been a growing interest by a number of progressive individual to establish coconut farms near big towns and cities for the young tender coconut market.

In Thailand, for example, one could see a number of commercial farms for YTC production near Bangkok. These farms are owned by smallholders and they are able to supply Bangkok and other cities with their requirements of young tender nuts both for export as well as for local consumption. It is also desirable that farms established for the export of YTC be near international seaports to facilitate shipping in refrigerated vans.

Sweetness of YTC Water

Studies reveal that the water from young tender coconut has high amounts of potassium, sodium and chlorine. The pH of tender nut water varies between 4.8 and 5.3, and it has high amounts of ascorbic acid (Vitamin C) and other vitamins of the B group.

It has also been reported that young tender coconut water besides being a nutritious, natural drink also possesses several medicinal properties, and is considered bacteriologically safer than other water sources. It is claimed to be a beauty aid and could cure pimples and black heads. It is also reported to have a dissolving effect on urinary or kidney stones.

The sweetness of tender nut water is related to the variety as

well as the age of the nuts. A study on the sweetness of YTC water conducted in Malaysia among six varieties revealed the following ranking: Malayan Green Dwarf > Aromatic (Pandan) > Malayan Red Dwarf > Malayan Yellow Dwarf > Malayan Tall > MAWA Hybrid.

Food Products from YTC Kernel

The kernel of young tender coconut, on the other hand, could be eaten fresh or straight from a newly split nut. It is soft and gelatinous and at the same time nutritious and tasty. It is a good source of carbohydrates and other nutrients. Processed young tender coconut kernel could be in the form of sweetened dehydrated or dried "buko", or young tender coconut kernel in syrup. Dried buko chips may be sweetened or unsweetened. They are white chews and sweet with a distinctive young tender coconut flavour. The proximate composition of sweetened dried "buko" is moisture - 4.7%, crude protein – 3.6%, crude fat 17.7% and carbohydrates – 61.6%. These YTC kernel products are ideal for dessert or snack food. Young tender coconut kernel could also be used as a filling for pies. "Buko" pie is popular in the Philippines and is gaining a wider acceptance in recent years.

Egg coconut is another form of product from young tender coconuts where the whole round soft kernel is pulled out from its shell with the water intact in it. This is possible by the use of a thin and flexible knife made from the horn of a water buffalo. A straw is used to drink the water inside the egg coconut and the flesh is eaten afterwards. It was reported that an egg coconut can sell in the supermarkets and restaurants in Malaysia at Rm 3.50 to Rm 5.00 (US$1.40-2.00) per nut depending on the location. The purchase price of one YTC at the palm kernel is Rm 0.25 or US$ 0.10 per nut.

Young tender coconut is also commonly served in hotels and restaurants in its natural form by simply removing part of the tender husk up to the outer shell. To prevent browning of the husk the freshly-cut nut is immersed into a solution of anti-browning agent such as sodium meta-bisulfite at a concentration of about 2000 ppm for 5 to 10 minutes. The husk will remain white for a week or so especially when stored cooled.

Other entrepreneurs serve young tender coconut as a ready-to-drink fresh and cold water with strips of the young tender meat neatly packed in chilled plastics packs. This is common in the Philippines and one of the popular brands is called "Buko Joe" . Still other process young tender coconut water in tetra packs and sold to the local market. In Indonesia and some parts of Malaysia, the young tender nuts are burnt for an hour or so until three quarters of the husk turns black and served when it is lukewarm or already cooled.

By-products from YTC

After drinking the water and eating the kernel of YTC, what is left are the husk and the shell which are still quite immature. It has been proposed that the fibre and the dust from these nuts be used as wall coverings, ropes as well as geotextiles. As they are yet young and tender, these by-products could also be used as fillers for animal feed formulations. When cut into smaller prices, they could be used in the horticulture industry or in the growing of orchids and other potted plants. Because they are fibrous, they could store water for plant use. It has also been proposed that these by-products be used as organic fertilizer or compost for coconuts and other crops.

Commercial Potential of YTC

A report from Malaysia indicated that eight year old palms of the Malayan Dwarf variety can produce 15 bunches per year with an average of 10 nuts per bunch. At 220 palms per hectare, the total YTC production could reach 33,000 nuts. Priced at Rm 0.25 per nut or (US$ 0.10, in 1997), the potential income per hectare per year is Rm 8,250 or US$3,300. If you have 10 hectares for YTC production, your potential gross income would be US$33,000 per year. And it is probable that nut production could still increase as the palms grow older and with optimum farm management. Prices too, could be higher if you are nearer the market or major seaports for export.❐

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