CONSUMERS PREFERENCES TOWARDS ON TENDER COCONUT IN COIMBATORE DISTRICT, TAMIL NADU-AN EMPIRICAL STUDY

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Abstract
Coconut is an important tree crop with diverse end-uses, grown in many states of India. About 10 million people depend on coconut farming and its allied activities. Besides, coconut is a perennial source for raw materials to a number of other industries like oil milling, coir and coir based industries. The present study on trends in productivity and trade in coconut is very pertinent, considering the importance of coconut production in terms of its contribution to India's GDP and providing of livelihoods to lakhs of people directly and indirectly. Coconut farmers are reeling under a severe price fall in coconut, copra and coconut oil. This indicates that aggregation of products, marketing of products through a proper network and primary processing need to be taken up by farmers through their collectives. The product should be marketed in such a way that the speciality of coconut is highlighted. A concerned effort from all stakeholders in the development of coconut cultivation is vital for inducing a sustainable progress in this sector. In view of the changed scenario in the coconut sector, it was felt necessary to revise the report on production and marketing of coconut and make fresh appraisal of the changing pattern of coconut production, trade and its ancillary industries. In this connection with these, a study is needed for exhibit many facts relating to coconuts cultivation and marketing in the study areas.

Keywords: Tender Coconuts, Demographic Profile, Non-branded Coconuts Products, Reasons for preferring Tender Coconuts.

1.1. Prelude

Coconut is an important tree crop with diverse end-uses, grown in many states of India. About 10 million people depend on coconut farming and its allied activities. Besides, coconut is a perennial source for raw materials to a number of other industries like oil milling, coir and coir based industries. Much potential exists for shell charcoal, shell powder, coconut milk powder, etc. Onut processing and allied industries provide continuous employment to nearly 8 lakh workers of which 80 percent are women folk.

India being one of the largest producers of coconut in the world, the crop provides livelihood, security and employment opportunities to a major segement of the rural mass of the country. Coconut is mostly cultivated in the coastal regions of the country. The states that have abundant coconut production are Kerela, Lakshadweep, Tamil Nadu, Pondicherry, Karnataka, Goa, AndhraPradesh, Maharashtra, Orissa, West Bengal, Andaman & Nicobar Islands, Assam and Tripura.

In the west coast of India, the palm is an essential component in the homestead system of farming, while there is concentration of coconut plantations in the coastal regions of the country. It is also grown in the requirements of coconut cultivation are met.

According to Food and Agriculture Organisation Statistical Database (FAOSTAT) 2016, Indonesia, Philippines, India, Brazil and Sri Lanka are the five major coconut producing countries in 2014 contributing to 99.66 percent of the world production of coconut, 50986 thousand metric tonnes. India contributes 23.3 Percent of the world production of coconut in 2014.

Traditional are of coconut cultivation in India are the states of Kerela, Tamil Nadu, Karnataka, Pondicherry, Andhra Predesh, Goa, Maharashtra, Orisa, and West Bangal and the Islands of Lakshadweep and Andaman and Nicobar. As per 2014-2015 statistics from Coconut Development Board of Government of India, Four southern States combined account for almost 90 percent of the total production in the country; Tamil Nadu 33.84 percent, Karnataka 25.15 percent, Kerala 23.96 percent, and Andhra Pradesh 7.16 percent. Other states, such as Goa, Maharashtra, Odisha, West Bengal, and those in the northeast (Tripura and Assam) account for the remaining productions. Though Kerala has the largest number of coconut trees, in terms of production per hectare, Tamil Nadu leads all other states. In Tamil Nadu, Coimbatore and Tiruppur regions top the production list in Tamil Nadu

The trade Liberalisation and Globalisation have put pressure on the developing countries to become more and more competitive and sustainable. It has enormous implications of a country like India where 60 per cent of the population is still employed in agriculture. The opening up of the economy, lowering import tariffs, increased market access and free trade agreements have affected many sectors of our agrarian economy.

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The present study on trends in productivity and trade in coconut is very pertinent, considering the importance of coconut production in terms of its contribution to India's GDP and providing of livelihoods to lakhs of people directly and indirectly. In spite of huge investment and increase in the export and import after independence, the cultivation of coconut has not come to the forefront even though we have huge potential. There has been a slight increase in the area, production and productivity of coconut, but the export is lagging behind import in terms of quantity in most of the years since liberalisation. Many states have higher productivity than the all- India average. This study makes an attempt to examine the changes in area, Production, Productivity and trade in coconut since liberalisation, and also to specify the measures to improve productivity in the study area.

1.2. Coconut situation in Tamil Nadu
Coconut cultivation in Tamil Nadu has a history of over 150 years. 100 years old palms can be seen even today in some of the villages. In the early periods, farmers did not consider coconut as a commercial crop. Coconut palms were grown along the periphery of the field crops and the products were utilized mainly for social and religious purposes. The reasons for taking up commercial coconut cultivation over the past 50 years are assured source of income, increased cost of cultivation of traditional field crops, dearth of labour force, changed work culture among the village youth etc. Among the several other reasons, many farmers in Tamil Nadu feel that they were forced to take up coconut farming as their standing crops were affected by the shade of coconut palms from neighbouring farms (*GOI, 2000*). Coconut cultivation was an alternative strategy to earn income from the farms when field crops cannot be raised for want of adequate water for irrigation. Coconut was identified as only crop, which can survive all through the year with a little quantity of water. Commercial coconut plantations are generally free from major pest and disease attack till recently.

1.3. Trend in Area, Production and Productivity
The State recorded an increase in cultivated area under coconut from 0.6 lakh ha during 1950-51 to 3.04 lakh ha during 1999-2000. The average annual growth rate in the area had been around 3.17 per cent. The share of the State in the area under coconut has gone up from 10.54 per cent of the total area under coconuts during 1950-51 to 17.58 per cent during 2000-01. This would mean that the increase in the area under cultivation has been going up at a more rapid rate than it was in many other States including Kerala and the national average.

As for nuts production, Tamil Nadu has gone up from 462 million nuts during 1950-51 to 4324 million nuts during 2001-02 registering an average annual growth rate hovering around 7.18 per cent. The share of Tamil Nadu in the coconut production of the country has gone up from 14.08 per cent during 1950-51 to 25.07 per cent during 2000-01. The increase in production in the State has been far above the national average increase. Similarly, Tamil Nadu has made impressive gains in productivity. The productivity of coconut in the State has gone up from 7,009 nuts per ha during 1950-51 to 10,598 nuts per ha during 1999-00, which is far above the national average of 6892 nuts per ha.

Table-1: Trends in production of coconut in Tamil Nadu during 2017

S. No	Districts	Area (ha)	Production (lakh nuts)	Productivity (Nuts/ ha)
1	Coimbatore	84531	12120	14338
2	Tirupur	56484	3613	6397
3	Thanjavur	35237	4230	12174
4	Dindigul	32069	1608	5015
5	Kanyakumari	23917	2871	12005
6	Vellore	21512	2330	10832
7	Theni	19907	2767	13900
8	Krishnagiri	15781	2846	18035
9	Tirunelveli	15667	1573	10041
10	Salem	14457	618	4275
11	Madurai	11305	1578	13959
12	Namakkal	7793	676	8675
13	Pudukkottai	9200	1266	13761
14	Dharmapuri	5472	354	6470
15	Cuddalore	1881	152	8081
16	Erode	13056	1006	7706
	Total	424121	50747	11965

Source: http://coconutboard.nic.in/cps-tn.htm

The above table indicate that the trends in production of coconut in Tamil Nadu during the year 2017 which is shows that high level of realisation in Krishnagiri District have high productivity nuts for 18035 nuts in a year.

Table 2 : Area, Production & Productivity of Coconut in India

Year	Area ('000ha)	Production (Million nuts)	Productivity
2007-2008	1903.19	14743.56	7747
2008-2009	1894.57	15729.75	8303
2009-2010	1895.20	16918.40	8927
2010-2011	1895.90	16942.92	8937
2011-2012	2070.70	23351.22	11277
2012-2013	2136.67	22680.03	10615
2013-2014	2140.50	21665.19	10122
2014-2015	1975.81	20439.60	10345
2015-2016	2088.47	22167.45	10614
2016-2017	2120.62	23251.37	10752

(Source: Indiastat 2016 (Compiled from Coconut Development Board, Ministry of Agriculture, GO -2016 and Horticulture Division, Dept. of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India.

Opening up of India to global market has increased tremendously the significance of coconut as a cash crop. This is seen clearly over the entire period of the study. Table No.2 below highlights the data on area, production, and yield. When we examine the cultivated are of coconut in India, between 2007-08 and 2016-17, we can see an increase in the area of cultivation.

Statement of the Problem
The agricultural produce sector has been one of the most important components of the Indian economy. Coconut, predominantly a small holder crop, occupies a prime position in the cultural, social and economic lives of millions of people across the world. Even though India is the third largest coconut growing country in the world, its contribution to international market remains insignificant. With regard to the production of coconut, in traditional states in the North East, cultivation undertaken is small, fragmented and non-commercial holdings. Coconut industry, all round efforts made for integrated development of coconut sector in the areas of production, processing and marketing. In spite of the slow growth in coconut cultivation being undertaken on a traditional basis in most of the states and production not suited to market wants. Coconut farmers are reeling under a severe price fall in coconut, copra and coconut oil. This indicates that aggregation of products, marketing of products through a proper network and primary processing need to be taken up by farmers through their collectives. The product should be marketed in such a way that the speciality of coconut is highlighted. A concerned effort from all stakeholders in the development of coconut cultivation is vital for inducing a sustainable progress in this sector. In view of the changed scenario in the coconut sector, it was felt necessary to revise the report on production and marketing of coconut and make fresh appraisal of the changing pattern of coconut production, trade and its ancillary industries. In this connection with these, a study is needed for exhibit many facts relating to coconuts cultivation and marketing in the study areas. Hence, this study.

1.5. Objectives of the Study
1. To examine the trends in area, production, and productivity of coconuts in India
2. To assess the consumer buying behaviour of tender coconuts in Mettupalayam Taluk
3. To find out the problems faced by the vendor and consumer and to offer suitable suggestion

1.6. Analysis and Discussion

Table 1: Consumer classification of the respondents

S. No	Particulars	No of respondents	Percentages
1	Studentship	70	28%
2	Professional/Technical	15	6%
3	Skilled worker	90	36%
4	Unskilled worker	10	4%
5	Agro entrepreneurs	60	24%
6	Non- agro entrepreneurs	5	2%
	Total	250	100

The above table reveals that, the consumer classification of the respondents are Professional/Technical, Skilled worker, unskilled worker, Agro entrepreneurs, Non-agro entrepreneurs. Among the respondents majority (36 percentage) of the respondents comes under skilled worker followed by the students (28 Percentages), Agro entrepreneurs (24 Percentages). Therefore, the analysis concludes that most of them for consumed of tender coconut fall under skilled workers.

Table 2: Place of interview of the respondents

S. No	Particulars	No of respondents	Percentages
1	Public place	105	42%
2	Bus stand/railway station	10	4%
3	Park/temple	15	6%
4	Institute/industries	5	2%
5	Cool drinks shop	85	34%
6	Bus stop	30	12%
	Total	250	100

The above table indicates that. The place of interview of the respondents are Public place, Bus stand/railway station, Park/temple, Institute/industries, Cool drinks shop, Bus stop. Among the respondents majority (42%) of the respondents comes under public place followed by Cool drinks shop (34 Percentage). Therefore, the analysis concludes that most of them for place of interview of tender coconut fall under Public place.

Table 3: Gender of the respondents

S. No	Particulars	No of respondents	Percentages
1	**Gender wise classification**		
	Male	175	70%
	Female	60	24%
	Transgender	15	6%
2.	**Age wise classification**		
	Young	115	46%
	Middle	130	52%
	Old	5	2%
3.	**Education wise classification**		
	Primary School	30	12%
	Middle School	50	20%
	Secondary School	60	24%
	Graduate	85	34%
	Post Graduate	25	10%
4.	**Sources of income**		
	Daily wage earners	45	18%
	Weekly wage earners	35	14%
	Monthly earners/salaried group	105	42%
	Self employed	65	24%
	Dependents	5	2%
5.	**Season prefer for tender coconuts of the respondents**		
	Summer season	170	68%
	Rainy season	5	2%
	All days	75	30%
6.	**Consuming of daily of the respondents**		
	April	20	8%
	May	160	64%
	June	10	4%
	All days	60	24%
7.	**No of the coconut tender consumed per day**		

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	Only one	190	76%
	Only two	35	14%
	More than three	25	10%
8.	**Time of Coconut consumed**		
	Early morning	55	22%
	Morning	100	40%
	Fore-noon	95	38%
	After noon	110	44%
	Evening	140	56%

With regard to the consumer gender of the respondents are male, female, Transgender. Among the respondents majority (70 percentage) of the respondents comes under male followed by the female (24 Percentages) Therefore, the analysis conclude that most of them for of tender coconut fall under male. As far as the above table indicates that .the Age of the respondents are young, middle, old. Among the respondents majority (52 percentage) of the respondents comes under Middle followed by the students (46 Percentages) Therefore, The analysis conducted that most of conclude them for consumed of tender coconut fall under Middle. The Literate of the respondents are Primary School, Middle School, Secondary School, Graduate, and Post Graduate. Among the respondents majority (34 percentage) of the respondents comes under Graduate followed by the Secondary School (22 Percentages), Therefore, the analysis conclude that most of them for consumed of tender coconut fall under Graduate. The sources of income of the respondents are Daily wage earners, Weekly wage earners, Monthly earners/salaried group, Self Employed, Dependents. Among the respondents majority (42 percentage) of the respondents comes under followed Monthly earners/salaried group by the Self Employed (24 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under Monthly earners/salaried. The above table indicates that .the Season prefer for tender coconuts of the respondents are summer season, rainy season, all days. Among the respondents majority (68 percentage) of the respondents comes under followed summer season by the all days (24 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under Summer season. The above table indicates that .the consuming of daily of the respondents are April, may, June, all days. Among the respondents majority (64 percentage) of the respondents comes under followed May by tall days (24 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under May.Tthe respondents consumed per day only one, only two, more than three. Among the respondents majority (76 percentage) of the respondents comes under followed only one by the only two (14 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under only one. The Respondents fore-noon coconut consumed early morning, Morning, Fore-noon. Among the respondents majority (40 percentage) of the respondents comes under morning followed by the early morning (32 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under morning. The respondents After-noon coconut consumed Afternoon, Evening, night. Among the respondents majority (44 percentage) of the respondents comes under after noon followed by the evening (34 Percentages) Therefore, the analysis conclude that most of them for consume of tender coconut fall under fall under after noon.

Reason for Preferring Tender Coconut

S. No.	Particulars	No. of. Respondents
1	Good taste	100
2	Natural drinks	245
3	Pure quality	150
4	Fresh	115
5	Cooling	145
6	Easy availability	50
7	Low price	45
8	To feel fresh	35
9	Abate heat	40
10	To get away from disease	5
11	To get away from poxes	10
12	To get away from jaundice	20
13	To get away from urinary/stones problem	20
14	Recover from diabetes	15
15	Reduce heat from body	140

16	To acquire antibiotic energy	30
17	Increase appetite	90
18	To keep up health	65

The above table indicates that. the respondents tender coconut of good taste, natural drinks, pure quality, fresh, cooling, easy availability, low price, to feel fresh, abate heat, to get away from disease, to get away from poxes, to get away from jaundice, to get away from urinary/problem, recover from diabetes, reduce heat from body, to acquire antibiotic energy, increase appetite, to keep up health.   Among the respondents majority (245 respondents) of the respondents comes under natural drinks followed by the pure quality (150 respondents), Therefore, the analysis conclude that most of them for consumed of tender coconut fall under natural drinks

Other Cool Drinks of Respondents

S. No	Particulars	No of respondents	Percentages
1	Yes	220	88%
2	No	30	12%
	Total	250	100

The above table indicates that. The respondents other cool drinks of respondents consumed Yes, No. Among the respondents majority (88 percentage) of the respondents comes under (Yes) followed by the No (12 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under Yes.

Preference of Cool Drinks of Respondents

S. No	Particulars	No of respondents	Percentages
1	Branded	125	50%
2	Non- Branded	40	16%
3	Fruits and vegetables	85	34%
	Total	250	100

The above table indicates that. The respondents Preference of cool drinks of respondents consumed Branded, Non- Branded, Fruits and vegetables. Among the respondents majority (50 percentage) of the respondents comes under Branded followed by the Fruits and vegetables   (34 Percentages) Therefore, the analysis conclude that most of them for consumed of tender coconut fall under Branded.

S. No	Particulars	No of respondents
1	Pepsi	100
2	Coco cola	95
3	Seven up	115
4	Thumps up	25
5	Slice	110
6	Maaza	100
7	Frooty	0
8	Bruttnaag	0
9	Fanta	5
10	Limca	0
11	Sprite	15
12	Chitra	0
13	Miranda	35

The above table shows that most of the respondents preferred for non-branded coconuts items is Seven up followed Slice is 110 Pepsi is 100 respondents and the least on is Fanta is lowest preference of non-branded drinks during the data collection period.

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Table: Prioritize the cool drinks based on the season

S. No	Particulars	Tender coconut	Branded soft drinks	Non- Branded soft drinks
a.	Trust worthiness	210	10	20
b.	Taste	70	170	55
c.	Organic/natural content	165	35	45
d.	Quality assurance	105	90	60
e.	Coolness	85	125	40
f.	Aesthetic/attraction	30	60	160
g.	Medicine drinks	135	60	55
h.	Health drinks	210	5	35
i.	Quantitative	225	15	10
j.	Accessibility	80	95	75
l.	Easy handling	80	90	80
m.	Availability	80	120	50
n.	Environmental pollution	40	90	120
o.	Low price	75	120	55

Linear Multiple Regression
H_0: There is no significant difference between demographic profile of consumers and reason for preferring towards tender coconut.
H_1: There is significant difference between demographic profile of consumers and reason for preferring towards Tender Coconut.

To understand the effect of independent variables on the dependent variable namely Age and reason for preferring towards tender coconut, Linear Multiple Regression model was employed.

Table: Reason for preferring Tender Coconut

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.540[a]	.205	.047	1.18133	.105	1.824	15	234	.002

ANOVA[a]						
	Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	38.177	15	2.545	1.824	.002[b]
	Residual	326.559	234	1.396		
	Total	364.736	249			

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Coefficients[a]					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	.995	.671		1.482	.140
Good taste	.240	.133	.187	1.799	.073*
Natural drinks	-.067	.113	-.056	-.591	.555
Pure quality	.193	.111	.156	1.741	.083*
Fresh	-.158	.110	-.130	-1.442	.051*
Cooling	.067	.095	.065	.703	.483
Easy availability	.081	.106	.069	.769	.443
Low price	-.108	.129	-.096	-.841	.401
Feel fresh	-.069	.134	-.064	-.514	.008*
Abate heat	.029	.105	.135	1.234	.019*
Get away from disease	.129	.095	.135	1.360	.175
Get away from poxes	.142	.148	.124	.965	.335
Get away from jaundice	-.180	.149	-.162	-1.203	.030*
Get away from urinary/stones problem	.060	.117	.052	.512	.009*
Recover from diabetes	.135	.128	.105	1.054	.293
Reduce heat from body	-.023	.106	-.020	-.221	.026*
a. Dependent Variable: age					

$Y=0.995= (-0.240) x1 + (-.067) x2 + (0.193) x3 + (-0.158) x4 + (0.067) x5 + (0.081) x6 + (-0.108) x7 + (-0.069) x8 + (-0.129) x9 + (0.142) x10 + (-0.180) x11+ (0.060) x12 + (0.135) x13 + -(0.023) x14$

Multiple R= 0.540, F value= 1.824, P-value<0.01, R square= 0.205

The Linear multiple regression model indicates the reasons for preferring the tender coconut by the Respondents and age of the respondents towards preferring tender coconut with reference to Mettupalayam taluk in Coimbatore District, Linear Multiple Regression model was employed. Fourteen independent variables were related to age as dependent variable. In order, to understand the effect of independent variable on the dependent variable namely reason for preferring tender coconut by the Respondents and age of the respondents in tender coconut seller the Linear Multiple Regression model was employed such as good taste, Natural drinks, Pure quality, Fresh, Cooling, Easy availability, low price, feel fresh, Abate fresh, Get way from disease, Get away from poxes, Get away from jaundice, Get away from Urinary stones, Stones problem , Recover from diabetes, and reduce heat from body

As shown in the table above, the model was significant and the r^2 value was 540 percent (i.e.) the effect on the dependent variable has been explained at 54 percent level. The results show that good taste (0.073), Natural drinks (0.055) Pure quality (0.083), Fresh (0.051), Feel fresh (0.008), Abate heat (0.019), Get away from jaundice (0.030), get away from urinary / stones problem (0.009) and Reduce heat from body (0.026) have effected significantly for high realization on consumer towards tender coconuts l i.e. the standardized coefficient value is 0.995 which is greater than the other variables.. Whereas, Cooling (0.483), Easy availability (0.443), Low price (0.401), Get away from disease (0.175), Get away from poxes (0.335) and Recover from diabetes (0.293) did not have any effect on Opinion about interior Mall atmospherics by the consumers. Hence the null hypothesis (H_0) was rejected and alternative hypothesis (H_1) is accepted.

Suggestion
- To arrange financial assistance (seed money) coconut vendors to purchase to tender coconut from the growers.
- To imitate by government for establishment of tender coconut shop at government place (Near college, school, administrative office, hospital).
- To advertise about the tender coconut with regard for benefits.
- There should be uniformity of price to be maintained with in the area.
- It is suggestion for sell other buy products of the coconuts.

Conclusion

The study concluded that, Consumer Satisfaction on Tender Coconut with the References to Mettupalayam Taluk Coimbatore District. With regard to consumer classification, majority of skilled workers and place of interview most of respondent from public place. As for as gender seventy percent of respondent comes under male with age group of middle, besides educational qualifications of respondents are under literate and the source of incomes are under monthly earned salaried respondents. With regards to preference of tender coconut most of the respondents are consumed on season only but certain consumer on taking tender coconut daily. Most of the respondents indicate natural drinks and good for health. Apart from study indicated non branded soft drinks are consumed very meagre. Finally the study reveals to create awareness among the general public with the regard to tender coconut benefit of health.

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