

The Multi Dimensional significance of Coconut cultivation in India.

by Mr. Madan .M.S ^[a] & Dr. R.N. Kadam ^[b]

There is inadequate attention towards the value addition and diversification pro coconut, coconut merchandise and it's by products in India. A cooking processing sector also dedicates more attention in this direction. India has almost a third major coconut mounting nation in all over the world. However it contributes to global market stays irrelevant. It progressing has practically lingered confined pro copra creation oil extraction manufacture of dry coconut and coir products in multi dimensional views. Despite sluggish augmentation in coconut business all around attempts made pro incorporated expansion of coconut segment in a region of manufacture, progressing along with marketing behind organization of the constitutional body, a coconut expansion panel by a government of India during 1981 have considerable, Pro the period of previous couple decades a coconut farm yield has obtained a plenty research and expansion alertness in the nation as significant. The outcome of those concert attempts have well indicated at terms of increase in region, production and efficiency of coconut in the nation. Between the oilseed tree trees, coconut tree barely requires some weight on its advance efficient importance. An economic significance of this tree crop is apparent as of the fact that it has developed in over 90 nations across a globe. There have merely a couple of noticeable diversities of coconut; the dwarf and the tall. Consequently of cross pollination in a tails, the broad variety of differences transpires surrounded by an equal variety. Coconut formulated agriculture methods upholds the farm variety as well as strengthens a biological foundation of coconut cultivation. Hence, the study has framed a couple of objectives; to evaluate the coconut growing state in India under the area, production and productivity and to study the importance, composition and utilizes of coconut cultivation in multi dimensional aspects. This paper carried secondary data that has been gathered from the published articles, books, literatures and reports on the subject. Thus, the passage revises the production and productivity of coconut in India along with historical background as well as optimal significance of coconut cultivation.

Keywords: *diversification, coconut, traditional, kalpvriksh, ecological, significance, multi dimensional*

^[a] Mr. Madan .M.S Ph.D Research Scholar, Department of Studies and Research in Economics Kuvempu University, Jnana Sahyadri, Shankaraghatta – 577 451, Karnataka E-Mail: madan.madanms@gmail.com Mobile: +91 9980634221	^[b] Dr. R.N. Kadam Associate Professor, Department of Studies and Research in Economics Kuvempu University, Jnana Sahyadri, Shankaraghatta – 577 451, Karnataka E-Mail: ravinkadam123@yahoo.com Mobile: +91 9480024629
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1. Introduction:

The coconut cultivation is the most utilizable as well as eco-friendly nurturing in the earth. Each division of this tree is functional pro human existence pro many purposes. Hence, this tree has delightfully labeled ‘kalpavriksha’ as a tree of paradise. Copra attained in ventilation, that core of coconut has the wealthiest source of vegetable oil holding 65 to 70 percent oil. Although coconut has one of an aged crop cultivated in India, currently wraps around 1.5 million hectares in the nation. Originate crosswise a lot of subtropical and tropic region; the coconut has recognized pro its huge adaptability as observed in several commercial, domestic and industrial utilizes of that’s dissimilar divisions. Coconuts have element of an everyday diet of several citizens. That’s endosperm has at first in its nuclear chapter balanced within the coconut water. Because of expansion maintains, cellular covers of endosperm put down beside a walls of coconut, becoming an edible coconut soft tissue. When desiccated, a coconut soft tissue is called copra. A milk and oil derived from that has normally utilized into frying as well as cooking; coconut oil has in addition widely utilized into cosmetics and soaps under several dimensions. Liquid coconut water has utilized pro stimulating drink also can be practiced to make alcohol. A leaves and husks could be applied as material to create a variety of products pro providing and embellishing significantly, even it has a religious and cultural collision in several societies. Fortunately, India sets around third into a production of coconut in a universe.

A coconut crust has the raw object pro a coir industry. That is moreover utilized as a household fuel as well as a fuel into copra kilns. Coconut oil arrives in edible set, is utilized as hair oil, cooking, massage and manufacturing usage. That has conquered by saturated fats as well as strong proportion of lauric acidic. India reports pro a 18 percentage of whole coconut production in a universe. Coconut progressing multi inserts worth and the number of products

like desiccated coconut, coconut crust products, coconut oil, coir fibre, virgin coconut oil mattresses, pith, coconut milk, desiccated coconut, coconut cream, spray dried coconut milk powder, crust charcoal, crust powder, have obtained. In India a demand pro coconut oil augments 15 to 20 percentages at the celebration time. Coconut oil pro cooked purposes are now being claimed to be second top cooked oil in the world, later than Olive oil. Coconut crust charcoal has mainly utilized as industrial and domestic fuel. Several basics of book were product diversification into coconut, spices and herbs, scope pro merchandise diversification, prospect of coconut oil, agricultural systems in coconut, multiplicities of coconut, organic farming of coconut, organization and preservation of organic coconut farms, invention of organic spices, medicinal as well as perfumed plants together with coconut, crop enhancement, technology and dispensation of dried coconut, green manuring in coconut garden organic recycling in coconut, incorporated agricultural in coconut grasping pro productivity enhancement, soil wetness maintenance in coconut garden, post harvest machinery, coconut dispensation sector in the nation. Coconut plays a significant function in economic, cultural and social activities with millions of citizens in the country. India has a chief creator of coconut in the universe. Coconut supplies edible oil, food, health drink and industrial oil, this crop intensely manipulates a socioeconomic protection of millions of agricultural families. However this cultivation has huge advantages pro agriculturist, researchers, professionals, entrepreneurs, etc.

Historical background:

An idiom coconut dates earlier to a 16th century. That obtains from Portuguese and Spanish sound coco; it means ‘a grin’ and ‘a monkey face’ correspondingly, while there has a slight similarity to a human face or monkey head since of a three tiny indents on the bushy coating of the fruit. ‘Cocos nucifera’ has a technical word pro the coconut tree or coconut tree. Subtropics and tropics are normal habitats of this plant. The coconut is a plant which constructively grows on beaches, it flourishes on sandy soils. But the fruit favors sunny along with rainy climate, it cannot defy low warmth. Pro propitious expansion coconuts too need the region of high dampness.

Generally, this coconut has the drupe and not a nut, as numerous people would believe. The drupe consists three coatings: an exocarp, mesocarp (which stands for a husk of the fruit) and endocarp. A mesocarp contains coir-a seed yarn, utilized into several spheres, pro examples;

to make ropes, brushes, fishnets etc. A crust contains one sole seed. A source of the coconut plant has vague. A lot of researchers recommend Malaysia for the likeliest position; additional think about a north-west of South America. This fruit has extended universal habitually with a help of seafarers. A coconut fruit has basically beam and water resistant; that could stay itself floating on outer surface of water. Presently, that has developed in several nations all over the earth. The foremost countries are India, Indonesia, Sri Lanka, Philippines and Maldives.

This coconut trees attribute at Indian writing's reverses above 2,000 years. This coconut has featured into premature Sanskrit writings as of a 4th century BC. Trees are as well often revealed in premature Tamil literature dating as of amongst a 1st century AD to 4th century AD. The Coconuts attribute in Hindu classic narratives the Puranas, Ramayana and Mahabharata. That appears to have been approved fairly tardy into northern India might have turn into recognizable by a nut extended following has utilized in a coastal south. In India, Kerala state leading the production pursued from the supplementary southern states of Tamil Nadu, Karnataka and Andhra Pradesh. This coconut runs a multi dimensional significant position in Indian features and ritual. Pro it looks like a human head by three marks on its shell like eyes and mouth and fibre similar to hair. That has recognized as the fruit of the gods or sriphala as well as wounding the tree has abhorred.

Coconut growing state in India:

Coconut tree has being the little ground holder's farm crop developed into 1.89 million hectare region in a steamy strap of the nation enlarging as of Karnataka, Kerala, Andhra Pradesh, Tamil Nadu in south, Maharashtra, Gujarat in west, West Bengal and Orissa in a east, Tripura and Assam in the North Eastern section of India and is the signifies of livelihood pro millions of citizens occupying in a customary and non-customary coconut mounting states and union territories. Island of Nicobar, Andaman along with Lakshadweep has other customary coconut regions. While a coconut crop has a national receipt because of nationwide demand pro non-edible, edible or spiritual purpose, which has triggered eager interest among citizens of yet the non-customary states to aim little sprouts in their house stead gardens.

Table: 01. Coconut growing state in India from 2007 to 2010 under the Area and Production

States	2007-08		2008-09		2009-10	
	Area (In '000 Hectare)	Production (In '000 MT)	Area (In '000 Hectare)	Production (In '000 MT)	Area (In '000 Hectare)	Production (In '000 MT)
Kerala	818.8	3882	818.8	3882.3	788.0	3992.0
Karnataka	405.0	1126	405.0	1125.9	419.0	1497.0
Tamil Nadu	383.4	3419	383.4	3419.3	390.0	3692.0
Andhra Pradesh	101.3	770	101.3	770.3	104.0	667.0
Maharashtra	21.0	121	21.0	120.5	21.0	120.0
West Bengal	28.6	245	28.6	245.4	28.6	245.0
Orissa	51.0	190	51.0	189.8	51.0	190.0
Assam	19.0	94	19.0	93.6	18.8	101.0
Goa	25.5	88	25.5	87.8	25.6	88.0
Gujarat	16.4	95	16.4	95.2	16.0	108.0
Andaman and Nicobar Islands	21.600	55	21.600	55.471	-	-
Lakshadweep	2.700	36	2.700	36.476	2.7	40.0
Meghalaya	-	-	-	-	-	-
Puducherry	2.200	18	2.200	18.307	2.1	20.0
Tripura	5.800	8	5.800	7.846	5.8	8.0
Mizoram	-	-	-	-	-	-
Nagaland	0.900	0	0.900	0.138	0.9	0.3
India	1903.2	10148	1903.2	10148.3	1873.5	10768.3

Source: Advisor, Horticulture Division, Ministry of Agriculture, Govt. of India (2007 - 2010)

Table: 01 Shows the facts and figures of coconut growing state in India from 2007 to 2010 under the area and production under '000 hectare and '000 MT. Hence the main socio-economic characteristic of this farm crop is that it has mainly planted in marginal and small asset along with average resource to poor farm ecology having less saleable surplus. This has been accounted that the countrywide standard efficiency of coconut in India is awfully low, as about 40 nuts per tree per year. A short efficiency of coconut crop in the nation has been on report of

numerous causes, as lack of implementation in technical farming performs to improve efficiency, which assists in bringing down the cost of construction. In most of the small coconut assets, a water and soil nutrients are limiting feature in crop construction. The unique environment of Indian coconut division has the rain fed feature of crop cultivation joined with practicing survival agricultural which frequently leads to low stage returns as of the holding.

A southernmost state Kerala situated beside the West coast has a chief coconut growing state. Apart from Kerala and a little small states along with union territories, coconut has not grown closely however limited to merely friendly girdles secretarial to an inconsequential bit of the whole arable farming region. Karnataka, Kerala, Andhra Pradesh and Tamil Nadu are consequently the four main coconut producing state, sharing 90.8 percent of the whole region, while the involvement of additional states / union territories has merely 9.2 percent. Customary regions of coconut cultivation are the states of Tamil Nadu (26.56 percentage), Kerala (45.22 percentage), Karnataka (10.85 percentage), Andhra Pradesh (8.93 percentage) and as well Orissa, Goa, Maharashtra, West Bengal, Pondicherry and the islands of Nicobar, Andaman and Lakshadweep.

Table: 02. Area, Production and Productivity of Coconut Cultivation in India

Year	Area ('000 ha)	Production (Million nuts)	Productivity (Nuts per ha)
2001-2002	1932.3	12962.9	6709
2002-2003	1921.8	12535.0	6523
2003-2004	1933.7	12178.2	6298
2004-2005	1935.0	12832.9	6632
2005-2006	1946.8	14811.1	7608
2006-2007	1936.8	15840.4	8179
2007-2008	1903.19	14743.56	7747
2008-2009	1894.57	15729.75	8303
2009-2010	1895.20	10824.30	5711
2010-2011	1895.90	10840.00	5718
2011-2012	1895.90	14006.50	6869
Source: Advisor, Horticulture Division, Ministry of Agriculture, Govt. of India.			

The table: 02 disclose the states of area, production and productivity of coconut cultivation in India throughout 2001 to 2012 agriculture year. Also the table: 03 reveal the all Indian final estimates of area along with production of coconut cultivation under ('000 hectares), production ('000 metric ton)*, and productivity (nuts / ha).

Table: 03. All Indian Final Estimates of area and production of Coconut Cultivation

Agricultural Year 2011-12			
States /Union Territories	AREA ('000 Hectares)	Production ('000 metric ton)*	Productivity (Nuts / ha)
Andaman and Nicobar Islands	21.80	72.30	3317
Andhra Pradesh	142.00	1270.00	8944
Assam	18.80	101.00	5372
Chhattisgarh	0.80	6.30	7875
Goa	25.70	88.70	3451
Gujarat	20.90	217.90	10426
Karnataka	506.80	3770.00	7439
Kerala	766.00	3973.00	5188
Lakshadweep	2.70	40.00	14815
Maharashtra	21.00	120.00	5714
Nagaland	0.90	0.30	333
Orissa	53.90	258.00	4787
Puducherry	2.10	20.00	9524
Tamil Nadu	420.70	3692.00	8776
Tripura	5.90	8.60	1458
West Bengal	29.10	367.50	12629
All India	2039.10	14006.50	6869
Source: Advisor, Horticulture Division, Ministry of Agriculture, Govt. of India 2011-12			

2. Objectives:

The main and specific objectives of the present study are:

- To evaluate the coconut growing state in India under the area, production and productivity.
- To study the importance, composition and utilizes of coconut in multi dimensional aspects.

3. Methodology:

The Methodology is very essential to prepare an article. Here, quantitative methods has utilized in the present paper. This paper has carried **Secondary** data; the secondary data has been gathered from the published sources such as various articles, books, periodicals, literatures, projects and reports on the subject. Pro the purpose of gathering the latest information on the topic E-sources also consulted.

4. Discussion

Importance, composition and utilizes of Coconut in multi dimensional aspects:

In the coconut cultivation, coconut tree has one of a most utilizable and beautiful trees in the universe, grown in over 80 nations of a stifling. It supplies drink, food and shelter even supplies raw material to numerous industry warmly associated with household as well economic existence. The tree has viewed as Kalpvriksh as discussed previously. A remaining composition and utilizes of coconut products are as follows.

- **Coconut Water:** It has liquid endosperm of tender. This is utilized as agreeable and stimulating drink also as an utilizable alternate pro saline glucose in intravenous combination. It boosts bold movement in the cause profuse and kidneys dieresis.
- **The Kernel / Wet Meat:** The endosperm or kernel is a vital element of food creature utilized in culinary function. A cream or milk obtained by grasping the arranged kernel thinned in water is sued in several arrangements. The fresh kernel contains protein, moisture, fat, carbohydrates and minerals.
- **Desiccated Coconut:** this is dehydrated crumbled coconut meat. It has immense demand in good industries and other confectionaries.

- **Coconut Flour:** This partially defatted edible coconut grating is an excellent product and utilized in bakery and confectionary.
- **Toddy and Toddy Products:** The sugar holding juice which has acquired through tapping unopened spandex has recognized as toddy. Since this sugar and vinegar jiggery has prepared. As of fermented toddy alcohol has prepared.
- **Coconut Oil and Oil Cake:** Dehydrated copra gives 60 to 67 percentages of oil as well as 33 to 40 percentage oil cake. This oil has a huge demand pro cooked purposes also pro soap creation toilet preparation. This oil cake has utilized to nourish poultry and cattle.
- **Coir and Coconut Fiber:** This has a significant commercial product obtained as of a husk of coconut. India involves around 50 percentage of coir manufactures. The world coir manufacture is around 0.282 million tones.
- **Miscellaneous Utilizes:** The crust or endocarp has utilized pro fuel to produce crust charcoal and active carbon etc. Fancy utensil could be arranged from crust. As well, stem is utilized pro manufacture of residences and leaves are utilized pro thatching, fencing as well as making baskets and broomsticks. A beautification of foots is astringent also has utilized for gargle and mouth wash.

Optimal significance of coconut cultivation:

The optimal significance of coconut cultivation in India has many, but the paintable features; being a commercial product coconut increases the net and national income under both direct and indirect ways. Basically the coconut has a main product for several sweets, spices as well as lubricates, also it has not restricted on particular months or season pro the production. It doesn't need high concentrated pesticides and maximum amount of fertility pro the production. Coconut may mainly cultivate in almost every lands including in sea sand, rewardingly this produces more than two products in multi stages. It has essential in hotel industries pro cooking purposes, especially pro south Indian dishes. It also treated as an essential priest / holy product pro the celebration of several festivals and functions. Even coconut supplies the raw materials of croft and creative eco-friendly industries. Hence it directly and indirectly supports as well as promotes the organic farming culture.

5. Issues and Findings:

The optimal issues as well as general findings are as follows.

- Under the coconut growing state in India from 2007 to 2010 as accordingly area and production, the 2009-10 period occupied the significant rank accordingly the Area (In '000 Hectare) in 1873.5 and Production (In '000 MT) in 10768.3.
- In the core of all commercial crop coconut cultivation has a leading role in India by providing coconut water, kernel / wet meat, desiccated, flour, toddy and toddy products, oil as well as oil cake, coir and coconut fiber, miscellaneous and many more useful consumable goods and materials.

6. Suggestions:

On the scrutiny of our above study, the following suggestions are as follows.

- The farmers have to organize by making an association or agricultural communities towards improve their skills and techniques in coconut cultivation up to the international level as well as to avoid the farming difficulties in coconut production.
- There has to be conduct some researches and experiments to avoid the technical and non-technical problems in coconut cultivation to avoid the formers suicide in India.

7. Conclusion:

In India most of the coconut growers are small and marginal farmers in dry land agriculture. A part of this, numbers of sustained farmers also seen pro coconut cultivation. The income derived from most of the coconut holdings is inadequate to sustain the development facilities. Accordingly the formal records, significantly the organized efforts to development coconut as the profitable crop began in 1940s. An enquiry payment setup by the Government of India during 1943 suggested the establishment of a constitutional body at central level. An Indian Central Coconut Committee has created in February 1945 under the Indian Coconut Committee Act 1944 through the objectives to support technical, horticultural and economically feasible expansion of coconut industry through: (1) Implementation of superior methods in coconut farming to progress the production. (2) Enhancement in marketing of coconut and coconut products in a country as well as out of the country pro a concept of progress multi dimensional coconut cultivation in national level. Thus the India has a vital position pro coconut cultivation in universal manner under the traditional along with multi dimensional significance.

8. References

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