

An Economic Analysis of Coconut Cultivation in Kanniyakumari District

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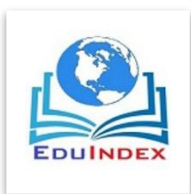
Abstract

This paper is attempted to study the production and problems of Coconut industries in Tamil Nadu. Coconut is an important multipurpose palm grow widely in the humid tropics and is known as kalpavriksha in India which provide nutritious food and refreshing drink, oil for edible and non-edible uses, timber and a variety of simultaneous products for domestic and industrial use. Coconut is the most popular plan grown in about 91 countries of the world and producing nearly 55 million tonnes per year. Coconuts are highly nutritious and rich in fibre vitamins and minerals. Unlike cow's milk, coconut milk is lactose free so can be used as a milk substitute by those with lactose intolerance. Tender Coconut water is undoubtedly the world's safest natural soft drink, according to Ayurveda. Popularly known as ilaneer in south India. Coconut oil is found to be effective and process therapeutic potential for treatment and prevention of oral cancer. Coconut oil is used for hair growth. Coconut oil is accepted by medical practitioner's scientist and experts' world over as the best oil for human health. The present study covers the problems of coconut industries such as natural calamities, pests and diseases etc., in Tamil Nadu and remedial measures to solve these problems and also includes 5 years area, production and productivity, coconut in India, Tamil Nadu and Kanniyakumari District.

Key words: coconut, Productivity, Problems, Remedial measures.

INTRODUCTION

Coconut is an important multipurpose palm grown widely in the humid tropics and is known as "Kalpavriksha" in India. It provides nutritious food and refreshing drink, oil, for edible and non-edible and uses, timber, a variety of miscellaneous products for domestic and industrial use. Coconut is an important source of food. Coconut plantations and processing industries provide income to the farmers and employment to rural population. Coconut is the most popular palm grown in about 91 countries of the world and producing nearly 55 million tonnes per year. Coconuts are used for direct consumption. A major part is converted into copra from which is extracted. With the advancement of science and technology it has been



possible for mankind to produce coconut powder also. Coconut powder used for making ice cream and excellent dishes for domestic purpose.

IMPORTANCE OF COCONUT INDUSTRY IN INDIA

As per opinion of Sri. Radha Mohan Singh, Union Minister of Agriculture and Farmers welfare in India, more than one crore people are depending on coconut crop as their livelihood. India is one of the leading countries in productivity of coconut in the world. Coconut industry in India is producing 13 billion nuts per annum. During 2015- 16 the total coconut cultivating area in India was 2088,47 thousand hectare. The total annual production of coconut in India was 22167. 45 million nuts and the productivity was 10614 nuts per hectare. Further it contributes to the country's GDP at about Rs. 20000 crore. Besides this, India earns foreign exchange worth Rs. 145024.38 lakhs through the export of coconut and coconut products especially oil, coir and coir products.

COCONUTS PRODUCTS

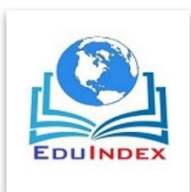
There are different types of coconut products produced the coconut industry in India such as, tender coconut, copra, coconut oil, raw kernel, coconut palm jeggary, coconut palm sugar, coconut shell based products, coconut wood based products, coconut leaves, coconut oil, decsicated coconut, coir fibre coir pith, coconut cream, coconut milk, spray dried coconut milk powder, shell charcoal, shell powder and virgin coconut oil products.

VARIETIES OF COCONUT PLANTS:

Varieties of coconut plants are kalpa raksha, chowghat orange dwarf, kalpa sree, kalpa jyoti, kalpa surya, kalpa sreshta, Chandra sankara, kara sankara, lalpa dhenu, kalpa prathi, kalpa vriksha, Chandra kalpa, kera Chandra, kalpa thau and kalpa haritha.

COCONUT IN MODERN MEDICINE

- Modern medical science is now confirming the use of coconut in treating many diseases. Kills viruses that cause influenza, herpes, measles, hepatitis C, SARS, AIDS, and other illnesses.
- Kills bacteria that cause ulcers, throat infections, urinary tract infections, gum disease and cavities, pneumonia, gonorrhoea and other diseases.
- Kills fungi and yeasts that cause candidacies, ringworm, athlete's foot, thrush, diaper rash, and other infections.
- Boosts energy and endurance, enhancing physical and athletic performance.
- Improves insulin secretion and utilization of blood glucose.
- Relieves stress on pancreas and enzyme systems of the body.
- Helps relieve symptoms and reduce health risks associated with diabetes. Improves calcium and magnesium absorption and supports the development of strong bones and health.
- Functions as a protective antioxidant and helps to protect against osteoporosis.
- Helps protect the body from breast, colon, and other cancers.
- Is heart healthy, improves cholesterol ratio reducing risk of heart disease.



- Protects arteries from injury that causes atherosclerosis and thus protects against heart disease.
- Helps protect against kidney disease and bladder infections and dissolves kidney stones and fights liver disease.
- Promotes loss of excess weight by increasing metabolic rate. Helps prevent obesity and overweight problems.
- Softens skin and helps relieve dryness and flaking.

IMPORTANCE, COMPOSITION AND USES OF COCONUT

1. **Importance of Coconut** : The coconut palm is one of the most beautiful and useful trees in the world, grown in more than 80 countries of the tropical. It supplies food, drink and shelter and also supplies raw material to number of industries intimately connected with domestic as well as economic life. All the parts- of the wonder palm are useful to making in one way or other. On account of this, the palm has been regarded as Kalpavriksh (Tree of heaven).

2. Composition and Uses

The following products of coconut are useful to human being.

a) Coconut Water

It is liquid endosperm of tender coconut and is used as refreshing and agreeable drink and as a useful substitute for saline glucose in intravenous infusion. It increases blood circulation in the kidneys and cause profuse diuresis.

b) The Wet Meat or Kernel

The kernel or endosperm is an important article of food being used in culinary purpose. The milk or cream obtained by squeezing the grated kernel diluted in water is used in many preparations. The fresh kernel includes includes moisture 45% protein, 4%, fat 37%, minerals 4% and carbohydrates 10%.

c) Distegrated Coconut

It is dried out disintegrated coconut meat. It has great demand in confectionary and other good industries.

d) Coconut Flour

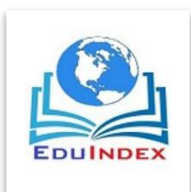
A Partially defatted edible coconut grating is an excellent product and used in bakery and confectionary.

e) Toddy and Toddy Products

A sugar containing juice which is obtained by tapping unopened spandax is known as toddy. From this vinegar, jaggery and sugar are prepared. From fermented toddy, alcohol is prepared.

f) Coconut Oil and Oil Cake

Dried copra gives 60 to 67% oil and 33-40 % oil cake. The coconut oil is in great demand for edible purposes, for soap making, toilet-cleaner preparation. The oil cake is used to feed cattle and poultry.



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g) Coconut Fibre and Coir

It is an important commercial product obtained from the husk of coconut. India contributes about 50% coir to the world production.

h) Miscellaneous Use

The endocarp or shell is used as fuel for making shell. Besides, the stem is used for construction of houses and leaves are used for thatching, fencing and making baskets and broomsticks.

METHODOLOGY

For the present study secondary data was collected through books, publications, Reports and Magazines.

OBJECTIVES

1. To study the problems affecting coconut industry in Tamil Nadu.
2. To study marketing problems of coconut cultivators in Tamil Nadu
3. To find out the remedial measures to solve the problems of coconut Industry.
4. To find out the remedial measures to solving the marketing problems.
5. To give suggestions

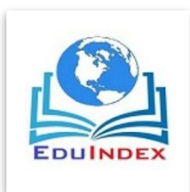
Area, Production and Productivity of Coconut in India

Particular Year	Area ('000 ha)	Production (Million nuts)	Productivity (Nut per ha)
2011-12	2070.70	23351.22	11277
2012-13	2136.67	22680.03	10615
2013-14	2140.50	21665.19	10122
2014-15	1975.81	20439.60	10345
2015-16	2088.47	22167.45	10614
2016-17	2082.11	23904.10	11481
2017-18	2096.72	23798.23	11350

Sources: Secondary Data

During the year 2011-12 production of India is 23351.22 million nuts for 2070.70 hector area, and productivity is 11277 nut per hector. 2012-13 production decreased to 22680.3 million nut for 2136.67 hector area, and productivity is 10615 nut per hector. Then 2014-15 production is 20439.60 million nuts for 2140.50 hector area and productivity is 10122 nut per hector. 2014-15 it will be decreased. During the year 2015 - 16, productivity is slightly increase in remarkable increased in productivity, 11481 nut per hector is observed in 2016-17. During 2017-18, the productivity is decreased when compared to the previous year.

Area, Production and Productivity of Coconut in Tamil Nadu



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Particular Year	Area (ha)	Production (lakh nuts)	Productivity (Nut/ha)
2011-12	410149.00	58942.00	14371
2012-13	419400.00	62009.00	14785
2013-14	424121.00	50747.00	11965
2014-15	428538.00	46680.00	10893
2015-16	427842.00	49890.00	11661
2016-17	435673.00	47064.00	10803
2017-18	436022.00	41765.00	9579

Sources: Secondary Data

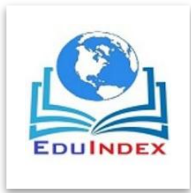
The production of Tamil Nadu during the year 2010-11 is 58942 lakhs nuts for 410149 hector area and productivity is 14371 nuts per hector. It would be increased next year as 62009.00 lakhs nuts for 419400 hector area and productivity is 14785 nut per hector. During the year 2012-13 the production of coconut is decreased in 50747 lakhs nuts for 424121 hector area and productivity is 11965 nut per hector. But next year also decreased is 46680.00 lakhs nuts for 428538 hector area and productivity is 10893 nut per hector. But During the year 2014-15 the production also increased in 49890 lakhs nuts for 427842 hector area, and productivity is 11661 nut per hector. During 2016-17 and 2017-18, the production and productivity is decreased when compared to the previous years.

Area, Production and Productivity of Coconut in Kanniyakumai District

Particular Year	Area (ha)	Production (lakh nuts)	Productivity (Nut/ha)
2011-12	24916.00	4533.00	18193
2012-13	24936.00	1584.00	6352
2013-14	24502.00	4007.00	16354
2014-15	23917.00	2871.00	12004
2015-16	24232.00	5626.00	23213
2016-17	23988.00	2100.00	8754
2017-18	24103.00	2992.00	12413

Sources: Secondary Data

During the year 2010-11 the production is 4533.00 lakhs nuts for 24916 hector area and productivity is 18193 nuts per hector. But next year it will decreased as 1584 lakhs nuts for 24936 hector area and productivity is 6352 nut per hector. Next year it will increase to 4007 lakhs nut for 24502 hector, and productivity is 16354. In 2015-16 it will be increased to 5625 lakhs nuts for 24231 hector area, and productivity is 23213 nuts per hector. In the succeeding years 2016-17 and 2017-18, the production and productivity is decreased when compared to 2015-16.



Problem Focus

Coconut is an important tropical oil seed crop, which gives coconut water, kernel, oil cake for cattle etc. the cost of production and net return obtained per unit would determine the profitability of the crop. The profitability of marketing coconut depends upon the efficient marketing of coconut. Through the production is the initiation of the developmental process, it could bring less gain to the producers depend upon the market conditions to fulfill their hopes and expectations. But forced

PROBLEMS AFFECTING COCONUT INDUSTRY

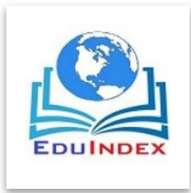
1. Low yield , low returns
2. Increased hecterage of senile Plantations
3. Pests and diseases
4. Natural calamities
5. Indiscriminate cutting of coconut trees
6. Conservation of coconut farm into the production of other profitable crops
7. Decreasing coconut hecterage as result of urbanization and housing development
8. Fragmentations of coconut land
9. Scarcity of skilled labou
10. Low and fluctuating price of coconut products.

REMEDIAL MEASURES TO SOLVE THE PROBLEMS OF COCONUT INDUSTRY

1. Hybrid with large coconut seeds are planted to increase the yield.
2. Soil test (Topography) may be conducted and appropriate fertilizers will be used.
3. Government has to provide appropriate compensation to farmers affected in natural calamities like ockhi cyclone.
4. Government should conduct awareness programmes on the value added products and educate them to prevent indiscriminate cutting of trees.
5. Inter cropping is done to be encouraged such as cocoa, pepper, pineapple, ginger and areca nut.
6. Strengthen the coconut farmers society and avail oldage pension, children free education subsidy, Accident insurance and crop insurance.

PROBLEMS OF COCONUT MARKETING

1. Farmers are unaware of the current market price of coconut. They are unable to understand the methodology involved in fixing the price based on recovery percentage.
2. Farmers do not have proper storage facilities to keep their products until higher price prevail in the market during lean season.



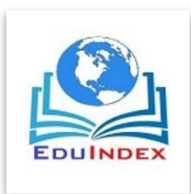
3. Import of palm oil and vegetable oil from abroad heavily.
4. Through coconut is a notified product it is not marketed through regulated market.

REMEDIAL MEASURES TO SOLVE THE MARKETING PROBLEMS

1. Improve the quality of coconut to increase export.
2. Reduction of cost of production by adopting modern methods.
3. Product diversification and by product utilization, may be carried one.
4. Formation of coconut marketing committees in each block consisting of representatives of the Agricultural Development, Coconut Board and growers to discuss about coconut production and marketing problems.
5. To achieve market promotion and consumer awareness, extension programmes should be carried out.
6. Cooperative marketing can be encouraged.
7. Restriction of import of copra and edible oils.
8. Revival of future trading.
9. Integrated multi-cropping to be introduced.
10. Establishment of coconut technological Development Centres in the main coconut grown areas.
11. Establishment of display and sales outlets for the processed Products.

SUGGESTIONS

1. Major efforts should be made to improve productivity in all the countries including the coconut producing states of India.
2. Productivity improvement requires research efforts to develop high yielding varieties/hybrid with large nut size and resistant to major maladies, besides being drought tolerant.
3. Bringing down the cost of production which needs urgent consideration.
4. Steps to reduce dependence on coconut oil as edible oil and intensified efforts towards diversification for developing different products which are more profitable.
5. They should educate their children as it will help to improve their economic conditions and facilities.
6. Marketers should use the facilities provided by Coconut.
7. Development Board, Marketing Societies to improve their living condition.
8. Use of modern techniques will help them work more efficiently and effectively.
9. Cultivators and marketers should be given proper training in Coconut Board.
10. Institutions should provide loans with small interest rate.
11. Forming of small group or associations by marketers to discuss about their wage, working hours, improved methods will be helpful for them.



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COCLUSION

Coconut crop is a major and popular plantation in India with unique features. Coconut industry in India significantly contributes to the growth and development of your nation's economy. Indian coconut products have great demand in both domestic as well as international markets because of their special attributes like quality, price, colour, design, attraction, craftsmanship, fitness etc. Further, the future prospects of coconut and coconut products are very bright in irrespective of the locations where it is grown in the world due to multifarious uses. Coconut is not only a significant in socio-cultural needs of our society but also major source of income for rural people. Therefore, it is concluded from the study that India coconut Industry is an avenue for fruitful earnings and sensible savings and thereby promotes country's economy.

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