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ECONOMIC ANALYSIS OF INVESTMENT EVALUATION OF PERENNIAL CROPS PRODUCTION: A REVIEW

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Abstract

Presently in India (2014-15), coconut is grown in an area about 2933 7,000 hectares and about 22147.6 million tonnes produced with a productivity of 8285 nuts per hectares Though the modern technologies are available for increasing the productivity in the country, it is still managed to a great extent by the same way it was managed earlier. Arecanut is an important commercial crop in India. Arecanut is the seed of the arecanut palm. It plays a prominent rote in the religious, social and cultural functions and economic life of people in India. The economic produce is the fruit called 'betel nut' and is used mainly for masticatory purpose.Presently in India [2014-15], arecanut is grown in about 31,00,000 hectares and about 3,85,000 million tonnes are produced with a productivity of 224.1 kgs per hectare. India is the highest producer of arecanut in the world. Arecanut is grown in the states of India are Andhra pradesh, Assam, Meghalaya, Tripura, Mizoram, Andaman and Nicobar Islands, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, West Bengal and Pondicherry. The total production of arecanut in India is 138,50,000 million tonnes with an area of 51,00,000 hectares with productivity of 124.1 kgs per hectare. In case of area under arecanut in Karnataka ranks first with 13,60,000 hectares, Kerala ranks second with an area of 8,80,000 hectares, Assam ranks third With an area of 7,33000 hectares, Meghalaya ranks fourth with an area of 11.2'000 hectares, West Bengal ranks fifth with an area of 9.3'000 hectares Tamil Nadu ranks sixth with an area of 4.8'000 hectares, Andaman and Nicobar Islands ranks seventh with an area of 4.4'000 hectares, Tripura ranks eight with an area of 3.4,000 hectares, Maharashtra ranks ninth with an area of 2.2,000 hectares, Goa ranks

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tenth with an area of 1.6'000 hectares, Mizoram ranks eleventh with an area of 1.3'000 hectares, Andhra Pradesh ranks twelfth with an area of 0.1'000 hectares and Pondicherry ranks thirteenth with an area of 0.3,000 hectares respectively.

Key words:Coconut, Arecanut, Crops, Investment.

Introduction:

Coconut and arecanut are cultivated in India since ages and they play an important role in the social, economic and cultural activities of the people. Plantation crops occupy nearly four million hectares of cultivated area in India, which forms about 23 percent of the total cropped area. Despite its low proportion to the total cultivated area, its share in GNP is highly conspicuous constituting about 27 percent of the total agricultural production.

India is the third largest producer (28%) of coconut in the world witha production ofabout 23 million nuts from a total area ofaround 1.9 millionhectares Indonesia, the world's top producer of, coconut, accounts 30percent of the world output it is followed by Philippines which has a shareof 26 percent. Coconut is an important food item in the southern part of India and also an important oil crop. Cultivation is mostly carried out insmall holdings of less than two hectares The area of 1 million hectaresunder coconut in India during 1971 has increased to 2.9 million hectaresby the end of2014-15 and during the corresponding period the productionis increased from 6 million nuts to 23 million nuts.

The decomposition analysis shows that the increase in production is mainly due to the increase in area and the effect of yield is very lesscompared to the area effect. There was not much change in area andproduction during the period 1971-80 and thereafter both area andproduction have been rising at a steady pace in most states.

Presently in India(2014-15), coconut is grown in an area about 29,33,7000hectares andabout 22147.6 million tonnes produced with a productivity of 8285 nuts per hectares Though the modern technologiesare available for increasing the productivity in the country, it is still managed to a great extent by the same way it was managed earlier.

Arecanut is an important commercial crop in India. Arecanut is the seed of the arecanut palm. It plays a prominent role in the religious, social and cultural functions and economic life of people in India. The economic produce is the fruit called ‘betel nut’ and is used mainly for masticatory purpose. Presently in India [2014-15], arecanut is grown in about 51,00,000 hectares and about 13,85,000 million tonnes are produced with a productivity of 224.1 kgs per hectare. India is the highest producer of arecanut in the world.

The coconut (Cocosnucifera Linn) is a majestic perennial palm. Itis an important commercial crop of the world and also in India. Thecoconut doesnot appear to have been known to classical writers and, yuleand Burnell were not aware of any creek or Latin mention of it beforecosrnos(545 AD). Attempts to connect the name with ancient Egyptiansetymons are fanciful and Ethiopian palm described by the Theophrastus.Underthe name Kovkioopa or Koilwas certainty the Doum palm (Hyphainethebaica-Mart) Hardly more successful attempt of O.F Cook in connectionwith this advocacy ot American origin for the coconut to connect the worldcoco with several central American language.

Arecanut (Areca catechu Linn.) is one or the main ingredients of Tambala, of chewing of which is a habit farming luxury of the rich and poor alike. Being closely interlinked with the religious and social customs of our country, its use has spread fast. In India, use of Tambala is known from pre-vedic times having been very popular with the tantric cult. It attained universal popularity by about the first century B.C.

Use of Thambula in India, in which arecanut is an ingredient is known from Vedic times, whether arecanut imported or grown in India. Its cultivation in India appears to be well known much earlier to the Christian era. It is mentioned in Rigveda as ‘Devajutha’, or 'Kalpavriksha’, a creeper like grass which has assumed an upright position after attaining strength and is thus facing the skies.

India is the largest producer of arecanut in the world. Itis a traditionalgrowing crop ofthe nation. India ranks first in area of arecanut inthe world. It is estimated that more than 10 million people depend on thiscrop for their livelihood. Cultivation of plantation crops play an importantrole in

the prosperity of a region. The standard of living of people engagedin plantation crops can be judged by the per unit area, productivity andincome. Arecanut is an important plantation crop cultivatedin peninsularand Eastern India. It is believed that India is its centre of origin. Arecanut isone of the most popular plantation crops because of its extensive use bymasses for mastication. It occupies an important place in socio-religiouslife of our people

This article deals with a review of the past studies relating to this review study topic.

Cochrane and Grigg (1946)[1], conducted a study of budgetary behavior of two groups of corn belt. Corners farmers in USA. Their analysis showed that elasticity of expenditure for capital investment and debt payments was considerably greater than elasticity of expenditure for capital investment and debt payments was considerably greater than elasticity of expenditure for family living. They also found that the accumulation of debt is generally used by families with low or falling income to maintain their accustomed level of living than to maintain an accustomed level of farm operation. When income increased, higher income groups tended to increase their level of living than to maintain an accustomed level of farm operation. When income increased, higher income groups tended to increase their level of living expenditure much less than they did their farm operating expenses. Their data also revealed that the increase in family living expenditure was quite regular and relatively slow, where as farm operating expenditure increased quite irregularly but rapidly.

P.P. Madappa (1967)[2], conducted a study of cost of production of coffee in India. Coffee as a plantation and foreign exchange earning crop is well known in India. The need for and the importance of the study of cost of production of coffee cannot be overemphasized. Several cost studies on coffee have been made in India. But these studies are subjected to several limitations. This study attempted to overcome some of the limitations and to fill the gaps. The objectives of the study to review the studies on cost of production of coffee by survey method, covering estates of almost all size groups.

The cost of new planting as available form the report of the plantation inquiry commission (1956), varied from about Rs. 1,000 to Rs. 2,000 per acre for the first year. Yet another recent study it varied from Rs. 2,500 per acre in 1965-66 to Rs. 3,000 in 1969-70. The estimated

replanting cost as shown in the study was Rs. 2,000 per acre for the first year in 1965-66 and Rs. 2,500 in 1969-70.

As per the studies available, cost of production of matured / bearing plants per acre yield between Rs. 400 and Rs. 700 in 1953 In 1958 the estimated cost of production was Rs. 836 per acre. The estimated cost of production was Rs. 1,300 per acre.

The main findings of this study are:
The average coffee area per planter was about 55 acres, with a range from 10 acres to above 200 acres. The average paddy growing area per planter was about 3 acres and coffee growing area was about 15 acres.

Estates of smaller size contained younger plants than the estates of bigger size.
On an average, the net expenditure per acre of paddy was about Rs. 253 and form arrangeRs. 150. The average net income per acre from paddy was about Rs. 90 and from Orange about Rs. 100.

The total cost of production, cultivation cost accounted for about Rs. 500 (55%) cost of preparing the produce for the market for about Rs. 100 (90%) and other costs for about Rs. 300 (30%). Input wise, labour accounted for about 40% of the total cost and material cost for about 20%.

The average per tax profit per acre of coffee production was Rs. 275. However the estates under the size group of 100 to 200 acres incurred a loss of Rs. 11 per acre. On the basis of output input co-efficient under different size-groups of estates, it appeared as though it was more economical to own an estate of the size of their 200 acres and above, between 10 to 25 acres than to own an estate of the size of 100 to 200 acres or 25 to 50 acres.

Wilson and Taylor (1951)[3], conducted a study based on family reports of annual expenditure and income collected during 1946 on 4057 farm families in U.S.A. They found that on average, the amount spent for farm production, family living and savings were related in some way to the

gross cash income. They observed that farm operating expenditure rose more rapidly with income than either family living costs or savings. They opined that funds for savings and investments are the residual after production and family necessities were met. They concluded that families intentionally save or draw on their reserves or go into debt as their annual income fluctuates. They fitted regression equations for the major components, namely farm operating expenses, farm living expenses and savings. Farm operators were observed to divert 48 percent of each additional dollar of income to farm operations, compared with 24 percent to family living and 28 percent to savings.

Goreux (1960)[4], conducted a study find out the influence of income on per capita food consumption. The study was based on data derived from over 2000 households covering a number of countries. A consumption function describing the relationship was expressed in terms of income elasticity. Households, were grouped by income level or total expenditure and average income for such groups were used for fitting the consumption function. He observed that, in cities, the elasticity of total expenditure diminished gradually from about 0.8 in the lower income countries to 0.4 in rate of decline of the income elasticity was more pronounced among farm population (from 0.85 to 00.25) than among non-farm population. He further found that expenditure elasticities on cereal products decreased from 0.70 percent in India to 0.15 percent in high-income countries.

Shastri (1965)[5], attempted to determine the pattern of investment, sources of farm investments and methods of increasing farm investments and methods of increasing farm investment on 108 holdings distributed in 6 villages of Bihar States. He found that the farmers in the large size group of holdings made larger investments in absolute terms but this investment was not proportionate to the size of holdings investments per acre tended to decrease with increase in the size of holdings. In case of small-holdings, he found that construction and repair of farm houses claimed the largest share of the investment of these farms, accounting for 43.2 percent of the total investments. This was followed by investment in land and livestock accounting for 27 and 19 percent respectively.

In case of medium holdings, livestock alone accounted for about two third of the total investment, followed by investments on construction and repair of farm houses and land accounting for 17 and 11 percents respectively.

In case of large holdings, investment on livestock and land together accounted for more than 80 percent of the total investment. On the whole, investment on livestock accounted for 43.6 percent of the total investment followed by investment on land and construction and repair of farmhouse accounting, for 30.6 and 16.7 percent respectively. He reported that past savings and current income were the sources of financing the major portion of investments, accounting to about two third of the total. The contribution of current income was 53.7 and 46.3 percent on medium and small size group of holdings respectively, while it was only 26.5 percent on holdings in large size group. The contribution of sale of assets towards the total investment formed about 29 percent each on small and medium size group holdings and about 26.5 percent on large size group of holdings. The contribution of borrowings towards total investment was 13.2 percent on the large size group of holdings, while it was 6.9 percent on small size group of holdings. No borrowings were made for investment in the medium size group of holdings.

The report on the sample survey of arecanut in Mysore state around 1967 estimated the total acreage under this crop in the state at 40,687 hectares and total production at 61,702 metric tones. It was further estimated that, nearly 12.9 percent of the produce was kept by the cultivator for home consumption and the rest was marketed.

Kahlon (1967)[6], made a study to identity the factors affecting farm family investment pattern in Ludhiana (Punjab) and Hissar (Haryana). They collected data from 180 holdings and categorized these holdings into large, medium and small farmers. They studied the relationship of size of the farm, size of the family, educational level of the head of the household, type of tenancy and others to farm family investment pattern. On an average, they found that of the total investment made by farm family's farm investment comprised 90.80 percent in Ludhiana and 90.06 percent in Hissar and the rest being non-farm and household investment. On the whole, they noted that percentage share of both farm and non-farm investment increased with increase in the size of holdings, while an inverse relationship was found in the case of household investment. However,

the average farm investment per hectare decreased with increase in farm size. The income per hectare from all sources decreased with increase in farm size. The income per hectare from all sources decreased with increase in the farm size. Income from farm accounted for a large share of the total farm family income (89 percent in Ludhiana and 88 percent in Hissar)., the rest being comprised of non-farm income. They found a significant and direct relationship between education and income. They found a significant and direct relationship between education and income. They found a significant and direct relationship between education and income. The proportion of gross income spent in farming was 36.23 percent. On consumer items, it was 35.77 percent and 22.93 percent was spent on farm and family investment in Ludhiana. In Hissar the percentages were 30.02, 40.25 and 30.77 respectively. Average expenditure on the farm seemed to be highly corrected with the educational level of the head of the family in both the districts. Income elasticities of consumer expenditure were 0.2597 for Ludhiana and 0.4098 for Hissar. Most of the investment was in purchase and improvement of land, irrigation structure and farm machinery. They observed that both the farm and family investment expenditure per holding decrease with increase in family size.

Lavanya and Shukla (1968)[7], conducted a study to find out saving in relation to the size of holdings. They found that the size of the farm was the main factor influencing employment, income and savings of the farm population. Savings were indentified as the difference between total income of the household and the total expenditure of the family. They found a striking contrast in the level of savings in various size groups. Savings per family member ranged between Rs. 6.31 for the second (1 to 2.5 acres) group and Rs. 40.44 for the last (10 acres and above) size group.

The report on arecanut Development Programme in Mysore (state) assessed the different arecanut development schemes and their progress. The report touched upon various aspects of arecanut industry in Mysore state like present area, available area initiation and progress of various area development schemes, cultivation practices, employment potential of areca gardens in the coming plan periods and others. The report however, concluded that arecanut cultivation should be curtailed rather than arecanut cultivation should be extended. Further, it recommended that, in tracts where paddy and coconuts could be grown, the cultivation of arecanut should be

discouraged. If further added that the cultivation of arecanut can only be extended in areca where no other crops of good value can be grown. The report opined that the cultivation of arecanut on an increasing scale, no doubt contributed to the personal gain of the farmer, but from the larger point of view of the community and the real good to the economy, its cultivation should be curtailed.

Shah and others (1968)[8], made a study of progressive farmers in north western Uttar Pradesh to analyze some of the essential economic and social features of the farmers in operation.

Information was obtained from a sample of 413 farmers with small, medium and large sized holdings. They found that per farm annual gross agricultural income increased with increase of size of holdings. Non-agricultural income amounted to 6 percent of the gross income Agricultural working expenditure per farm among progressive farmers ranged from Rs. 2,207 in small farms to Rs. 26,591 large farms. About 43 percent of the agricultural expenditure was spent on hired labour alone. They observed that 95 percent of the net capital investment was on irrigation and mechanization. Non-agricultural investment was only 2 percent of the gross expenditure. Small progressive farmers spent 47 percent of their gross expenditure on consumption, while it was 28 percent for large progressive farmers. They observed that only three types of farmers, progressive large in Rudrapur and Bazpur an dless progressive medium in Tarai (UP) had cash balances after reported agricultural working expenditure nad consumption expenditure to cover not only investment but also provide a post investment cash surplus. After excluding the loan outstanding during that year the average of this cash surplus for these types was Rs. 30,307, Rs.8,138 and Rs. 1,008 respectively. They attributed the total lper farm post investment deficit to total per farm of both accumulated savings up to 1967-68 and unreported income and borrowing during the year.

Desai (1969)[9], using the data collected by the Indian institute of Management in the four taluks of Baroda district, Gujarath State, analysed the influence of size of holdings, family size, net household income, extent of commercialization, extent of irrigated area and the current borrowings on the levels of investement. He classified the farms into three size groups, large, medium and small. He further treated two taluks as progressive and the other two as backward.

He found a significant difference in both per farm and per acre investment in durable and working capital in the progressive and backward areas. The co-efficient of correlation between durable capital and operational land was estimated at 0.35 (significant at 10 percent level) for the backward area the correlation co-efficient between durable capital and family size and between non-durable capital and family size were negative and low, but insignificant in both the areas. The correlation co-efficient between durable capital and net house hold income turned out to be high, positive and significant at 1 percent being 0.51 for progressive and 0.70 for backward area. The correlation co-efficient between non-durable capital and operational land was 0.46 (significant at 5 percent) for progressive area as against 0.73 (significant at 1 percent) for the backward area. He also found significant correction between non-durable capital and net income and non-durable capital and borrowings in both the areas.

Rajagopalan and Krishnamurthy (1969)[10].Conducted a study to analyze the saving behavior of selected farms in Coimbatore district. The saving model was formulated and income and saving were specified on the basis of two criteria, namely on per capital and on per acre basis.

The input output ratio was assumed to serve as a proxy variable for investment opportunities. They found that, the rate of savings increased with the size of farms. The saving / income ratios were 0.1027 and 0.1781 for small, medium and large size holdings respectively. They concluded that private savings were determined by the level of income, consumption and investment opportunities.

Shah and Singh (1969)[11], conducted a study in the Tarai region of district Nainital (U.P.) to find the extent of capital formation in Tarai agriculture. It was hypothesized by that capital formation depend upon the level of technology, the size of holdings and the cropping pattern. The farmers were classified into two categories, progressive and less progressive. It was shown that there were significant differences in income and capital investments of the progressive and less progressive farmers in the different size group of holdings. They found as the size group of the farm increased, the investment on irrigation, machinery and equipments also increased.

They opined that capital growth was more pronounced on farms in larger size group of holding coupled with higher level of technology. They fitted a regression equation to find the relationship between capital investments and disposable income, and found a significant and positive relationship for progressive medium and progressive large farmers. For every increase of Rs. 10 in disposable income, the increase in capital investment increased by Rs. 3.75 for medium progressive farmers and by Rs. 2.32 for large progressive formers.

Feng-Yao-Lee (1969)[12], analysied the farm household expenditure on basic living materials in Japan. The date collected from the farm household budget survey covered 1952-62 period. he found that income was much more important than prices in explaining Japanese the least square techniques. He fitted sample and multiple regression equations to estimate demand elasticities.

Garg (1970)[13], conducted a study in Kalujanpur block, Kanpur to estimate income distribution as influenced by the high yielding varieties programme. The results were based on an intensive enquiry of 50 cultivators using high yielding crop varieties. They observed that the additional income per hectare obtained was more than twice the additional expenditure incurred in all the size groups. On an average, they observed that out of the total gross income 39.61 percent was invested on crop production, 5.29 percent on farm assets and the balance of 55.10 percent was either utilized for home consumption or saving in all the size groups Irrigation structure claimed the major share of the investment on larger farms. Small farmers invested on livestock and irrigation structure

Shah and Agarwal (1970)[14] conducted a study in the district of Budwan in the central part of Uttar Pradesh to study the disparities in the levels of income, consumption and investment of progressive farmers in contrast to the less progressive and also between the different size groups in each category. They selected 120 progressive and 9 less progressive farmers. They compared income consumption, agricultural working expenditure, savings and investment levels and patterns by type and size of holdings They found that gross income per farm from all sources increased with the increase in size of holdings The same trend was observed with respect to total working expenditure also. They found negative savings in the case of small and medium farmers of less progressive sub-group Working expenditure per acre increased with decrease in size of

holdings in the less progressive group They indicated that perform capital investment increased with the size of holdings.

Job Elsamma and Mukundan (1984)[15] studied the economics of rubber cultivation by small holders in Kottayam district of Kerala The cost of cultivation till tapping stage for seven years was estimated at Rs 11054 per hectare in terms of 1980-81 prices Project evaluation indicators namely the pay back period, benefit cost ratio, internal rate of return (I.R.R.) and net present value (N.P.V.) for the enterprise in the district were 9.51 for the Year 2004, 24.20% and Rs. 25,957 per hectare respectively.

Subramanyam (1986)[16], studied the cost of cultivation of lime and sweet orange in Andhra Pradesh He worked out the establishment cost (planting as well as maintenance cost up to bearing) and maintenance cost (after bearing). The total cost of establishment of lime and sweet orange were found to be Rs. 4664.08 and Rs. 5454.61 per hectare respectively. The cost of maintenance growing during bearing stage of sweet orange was Rs. 260 per hectare compared to Rs. 70 per hectare in the case of lime.

Jaiswal (1987)[17], in his study on economics of production and marketing of guava in Allahabad district of U.P. found that the establishment cost during first year was Rs. 2955 per hectare During second year and third year it was Rs. 3243 each per hectare. The average cost per annum from 4th to 10th year was Rs. 2500. The net income per hectare per annum from fourth to tenth year was Rs. 6080.

Nighot (1987)[18], studied the economics of Nagpur oranges. He found that per hectare total cost consisting of establishment cost and annual maintenance cost was Rs. 1667. The cost per tree was Rs. 34, grass returns per tree and per hectare was Rs. 86 and Rs. 28599 respectively.

Randev (1987)[19], evaluated the profitablility of almond cultivation in Kannur district of Himachal Pradesh by assuming 30 years life span with 10 years for commercial bearing. The establishment cost of almond orchard during 1984-85 was found to be Rs. 12003 per hectare.

Patil (1987)[20], categorized the total cost into amortization cost and annual maintenance cost. The study in Maharashtra revealed that annual cost of coconut cultivation had an inverse relationship with size of plantations. Net returns were the highest for medium gardens (Rs. 23060 per hectare) followed by small (Rs. 20332) and large gardens (Rs. 16742) per hectare.

Babu (1989)[21], while evaluating the investment in rubber plantations in Dakshina Kannada district of Karnataka divided the initial investment as establishment and maintenance costs. Results of the study revealed that while the payback period for small farmers was about 9 years and 8 months, the same for large farmers was 9 years, 9 months and 3 days. N.P.V. was worked out to be RS. 19,96l,82 per hectare for small farmers and Rs. 18,846, 70 per hectare for large farmers. The B:C ratio was slightly higher among small farmers (1 45) than among the large farmers (1.40). I.R.R. was 25.83 and 24 69 percent respectively for small and large farmers.

Mahabata (1990)[22], Evaluated the investment on cardamom plantation mono cropping and inter-cropping of cardamom plantation with arecanut in Chickmagalur district of Karnataka. Results of the study showed that N.P V. was Rs 21,873,70 per hectares and Rs. 22,467,40 pet hectare for Small and large formers respectively for pure cardamom, while it was Rs. 38,379 per hectare and Rs 47,832,48 per hectare for cardamom with arecanut Plantation B:C ratio was 3.30 and 2.30 for small and large farmers for cardamom mono cropping, while IRR was 69.Sl percent for small and 61.62 percent for large farmers for cardamom mono cropping and 52.24 percent and 55.34 percent for small and large farmers having inter cropping.

Hugar (1991)[23], examined the economic potentiality and viability of guava cultivation under scientific management. The study revealed that the N.P.W. was Rs. 7,38,042 per hectare. The BCR, IRR and payback period were found to be 3,88,57,82 percent and six years respectively.

A feasibility study by Das (1991)[24], showed that most of the annuals biennials and perennials tried under coconut based farming system were compatible with coconut. Evaluation of various types of farming system, models developed at different coconut research stations in India suggested that integration of a number of subsidiary crops and animal components with coconut was comparatively profitable than raising coconut as a monocarp.

Patil (1992)[25], though their investigation at coconut Regional Research Station, Ratnagiri found that there was scope for getting increased return from inter cropping vegetables in coconut garden. On the basis of economic returns obtained per man day per hectare. Dalichos been could be rated as ideal vegetable crop, where as the tomato cultivation provided scope for scheduling better employment opportunity to farm workers.

AshaLamma (1993)[26], reported that the net return from cardamom plantation was highest in low attitude farm Rs. 50,982,94 followed by mid evaluation Rs.44,950,48 and high attitude Rs.40,025,60 in the Sikkim hilly region area.

John (1994)[27], analyzed the economic of production and marketing of cashew in Dakshina Kannada district using the project evaluation technique of NPU, B:C ratio and IRR with an economic period of 40 years. He concluded that investment in cashew was economically viable as revealed by the value of B:C ratio, IRR and NPV.

Sairam (1997)[28], estimated the net return from coconut gardens as Rs.11,OOO per hectare, Rs. 12,1OO per hectare and Rs. 13,600 per hectare respectively for marginal, small and large holdings in Kasaragod district of Kerala. The average net return for the region worked out to be Rs. 11,100 per hectare. The larger farmer realized higher return because of high productivity despite a higher cost of production.

Conclusion:

India annually produces about 23 billion nuts from an area of 209 million hectares, which is distributed in 18 states and 3 union territories. More than 90% of the area under the production of coconut in India is emanated from 4 southern states of, Kerata, Karnataka, Tamit Nadu and Andhra pradesh The crop once considered to be grown on coastal areas has now made inroads into the non-traditional areas of central and North Eastern parts of the country. Coconut contributes more than U.S $ 2400 million to the country's G.D P. Apart from an export earning of U.S. $90 million. It also provides livelihood securities to more than 20 million people in the country. Despite all these advantages, the small and medium farmers in the country who for the

backbone of the coconut economy have often been pushed towards a situation of object economic deterioration which has been aggregated due to various reasons during the recent past. Arecanut is grown in the states of India are Andhra pradesh, Assam, Meghalaya, Tripura, Mizoram, Andaman and Nicobar Islands, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, West Bengal and Pondicherry. The total production of arecanut in India is 1,38,50,000 million tonnes with an area of 51,00,000 hectares with productivity of 224.1 kgs per hectare.

In case of area under arecanut in Karnataka ranks first with 23,60,000 hectares, Kerala ranks second with an area of 9,80,000 hectares, Assam ranks third With an area of 8,33,000 hectares, Meghalaya ranks fourth with an area of 1,42,000 hectares, West Bengal ranks fifth with an area of 1,03,000 hectares Tamil Nadu ranks sixth with an area of 58,000 hectares, Andaman and Nicobar Islands ranks seventh with an area of 54,000 hectares, Tripura ranks eight with an area of 44,000 hectares, Maharashtra ranks ninth with an area of 32,000 hectares, Goa ranks tenth with an area of 16,000 hectares, Mizoram ranks eleventh with an area of 1.3'000 hectares, Andhra Pradesh ranks twelfth with an area of 0.1'000 hectares and Pondicherry ranks thirteenth with an area of 0.3,000 hectares respectively.

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