CHAPTER VII

FINDINGS, CONCLUSIONS AND SUGGESTIONS

The coconut palm is essentially a tropical crop and is grown in countries located in the tropical region between latitudes 22° N- 27°S. The distribution of palm extends over most of the island, peninsular and coastal areas and even in some places outside the tropic zone. The main coconut growing areas in the world are located in Asia, Oceania, the West Indies, Central and South America and West and East Africa. In Asia, it is rarely found in the north of India. In India, the palm grows as far north as Lucknow. In Africa, the northern limits are Cape Verde (15° N) on the West Coast and Djibouti (11° 30’N) on the East, while the Southern limits are Mossamedas (15° S) on the West Coast and the Zambesi river (19° S) on the East. In the pacific, the palm is found as far north as the Bonin Islands (26° N) and as far South as the Pitcairn Islands (25° S). In South America the palm is found in Brazil at a latitude of 27° S and in North America in Florida and Bahamas at a latitude of 25° N and in Mexico. It is grown in nearly ninety countries located in the tropical belt of the world.

The coconut palm is the most extensively grown nut in more than 90 countries in the world. It is grown in an area of about 12 million hectares in the world, which account for about 55.569 billion nuts. More than 84 percent of the production is from Asia. The Philippines, Indonesia and India account for more than 76 percent and 72 percent in the area under coconut and the production of nuts respectively. The coconut palm is essentially a crop of small farmers and is, perhaps, the only source of livelihood to millions of farmers in almost all the countries where it is grown. The coconut industry provides livelihood for one million, three million, three million and 10 million people living in Malaysia, Indonesia, Sri Lanka and India respectively. It supports more than 80 million small and marginal farmers in the world. Indonesia, Philippines, India and Sri Lanka are the major players in the global coconut scenario, and in all these
countries the coconut exerts profound influence in the economy. In India, coconut is not only associated with rural economy but is interwoven in cultural heritage.

Among coconut growing countries, Asia and the Pacific regions produce 48.448 million nuts from 10.65 million ha sharing 87.19 percent in production and 90.26 percent in area. India, Indonesia, the Philippines and Sri Lanka are the four major coconut growing countries, which together contribute 77.74 percent of the world's production.

During the period 1990-2005, there has been 5.64 per cent increase in area, 17.41 per cent increase in production but only 11.15 per cent increase in productivity. However, production continued to increase till 1995 and then there was a sharp decline both in production and productivity up to 2000. Declining trend in productivity after 1995 could be attributed to increasing number of old and senile trees. But the year 2000 onwards there was a steep increase both in production and productivity due to the high yield varieties.

Indonesia ranks first in coconut production and area by contributing 14,984 million nuts from 3.81 million ha, sharing 32.31 per cent in area and 26.96 per cent in production. Coconut in Indonesia is grown mainly by small holders and forms a major economic activity of about 2.5 million farm families. In Philippines, coconut is grown in 3.24 million ha, producing 12,600 million nuts, ranking second in area and third in production. A coconut industry support nearly one-third of Philippines' population and it is basically a small holders' crop. The percent share of Philippines in area and production is 27.49 m ha. and 22.68 m. nuts respectively. In India, the area and production of coconut are 1.93 million ha. and 12,600 million nuts respectively. The crop supports 11 million people, mainly living in the coastal tracts in the country. It contributes Rs. 72,000 million to the Gross Domestic Product and Rs.3,620 million to the foreign exchange earnings mainly from export of coir products

The other countries, which contribute significantly to the world production of coconut, are Bangladesh, Papua new Guinea and Myanmar, smaller islands
vz., Vanuatu, Solomon Islands, Samoa, Fiji, Palau and Micronesia. Although these countries have small share in coconut production, the economies of these countries are significantly benefited by coconut.

There is distinct difference in the pattern of distribution of the coconut in the country. Bulk of the coconut production is contributed by the four southern states viz., Kerala, Karnataka, Tamil Nadu and Andhra Pradesh. Other traditional coconuts growing States/Union Territories (UT) in the country are Orissa, Maharashtra, West Bengal, Goa, Lakshadweep and Andaman and Nicobar Islands. The crop now is grown in favorable locations in the Central, North and North-Eastern regions of the country. Of the present area of 1.94 million ha in the country, the contribution of Kerala in area is 0.89 million ha. followed by Karnataka (0.38 million ha.), Tamil Nadu (0.37 million ha.) and Andhra Pradesh (0.1 million ha.) sharing 46.11 per cent, 19.80 per cent, 19 per cent and 5.3 per cent respectively, which together accounts for 90 per cent of the total area under coconut in the country. In the production of coconut, Kerala tops the list with 6326 million nuts with a share of 42.72 per cent followed by Tamil Nadu (32.86 per cent), Karnataka (8.17 per cent) and Andhra Pradesh (6.02 per cent).

The country has recorded a sizeable increase in area, production and productivity during the last one decade. The area increased from 1.51 million ha. to 1.94 million ha. with an increase of 0.43 million ha. and production from 9,700 million nuts to 14,811 million nuts with an increase of 5,111 million nuts. The productivity increased from 6,407 nuts to 9,608 nuts per ha. Thus it could be seen that despite the undulating growth behavior exhibited in production by a few countries, the global scenario presents a healthy trend in expansion in area and increase in production for the last few years.

The Tamil Nadu state recorded an increase in cultivated area under coconut from 66,000 ha. during 1950-51 to 3,04,000 ha. during 1999-2000, working out to a campaign growth rate of 3.17 per cent during the 50 year period. The share of the State in the area, under coconut has gone up from 10.54 per
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cent of the national area during 1950-51 to 17.58 per cent during 2000-2001. 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.

The production of coconut in Tamil Nadu has gone up from 462 million nuts during 1950-51 to 4867.10 million nuts during 2005-2006 registering a 952 per cent of increase during the 55 year period. The share of Tamil Nadu’s production to national coconut production has gone up from 14.08 per cent during 1950-51 to 32.86 per cent during 2005-2006. The increase in production in the State had been far above the national average increase.

Tamil Nadu has also 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 13,133 nuts per ha. during 2005-2006 which is far above the national average of 7,608 nuts per ha.

In spite of the excellent investment opportunities offered by the crop, Tamil Nadu is lagging behind in the field of production of diversified coconut products and coconut based agro industries. Production of coconut products particularly non-conventional coconut products such as coconut milk and powder, coconut cream, coconut gel, vinegar, processed tender nut water, coconut chips etc., are yet to be initiated. As of now, the coconut processing sector in Tamil Nadu is largely represented by coconut oil mills / industries and a few coconut desiccated units and the non-kernel based coconut industries such as coconut fibre and coir units. The other by-products such as timber, leaves, midribbes etc., are malused, although they can be converted into value added products having high export potential.

Marketing is as important as production to any producer. Because it creates value to the product; it pays revenue to the producer; and more than these, it directs the producer as to whether continue or stop production. To a farmer, marketing is something more than production, due to certain inherent
features that neither the production can be controlled/regulated in tune to market changes due to predominance of natural forces affecting production functions nor can marketing be performed in tune to market requirements due to his own internal constraints. Hence farmers remain with chronic problem that they can neither derive the advantages of their production/productivity increase nor the advantages of better marketing. In all the years farmers were deprived of the benefits of increased production in terms of market price and vice versa. Equalization of demand and supply functions in agricultural marketing is far from anybody's guess. Coconut farmers are not exempted from the above phenomenon.

Marketing determines the productivity and profitability. Creating a sound marketing system is essential, as the problems of coconut growers mostly emerge due to the imperfections in the marketing system. Sincere attempts have been made to clear-off the marketing imperfections especially after independence during plan periods. Development of different forms of marketing institutions questions the relevance of the conventional formal marketing structures. Non-institutional agencies still dominate in coconut marketing. If marketing is imbibed with imperfections, coconut farmers should have received low returns. This in turn could have resulted for reduction in coconut production. On the contrary, it is amazing to notice that both the area under coconut cultivation and production of coconut have been increasing year after year. The foregoing issue motivates the researcher to conduct a new research study in the sample area and to find out the trends in coconut production, marketing practices of coconut growers, role of institutional and non-institutional agencies in coconut marketing and perception of the coconut growers about the present market functionaries.

Multistage sampling procedure was adopted for the present study. 51 farmers each from six villages totally 306 farmers were selected for the study by using quota sampling procedure.
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The principal objectives of the present study are to assess the marketing practices of coconut in the study area, to estimate the share of institutional and non-institutional agencies in coconut marketing and to evaluate the perception of coconut growers about the present scenario of coconut marketing.

**Major Findings**

The important findings and conclusions drawn from the analysis done in various chapters are summarised below:

**Marketing of Coconuts: Practices and Problems in the Study Area**

Generally the sample farmers follow two pattern of disposal of their coconut viz., with husk and without husk. A majority of the 272 respondents (88.9 percent) disposed their coconut with husk and rest of the 34 (11.1 percent) of the respondents disposed their coconut without husk. (Table 4.2)

The sample farmers are classified in to four categories according to their mode of disposal of coconut viz., leaser farmer, opportune farmer, mixed practice farmer and debt-bonded farmer. Among the total respondent 152 farmers (49.7 percent) falls under the category of opportune farmer. 68 farmers (22.2 percent) leased out their farms, 54 (17.6 percent) and 32 samples (10.5 percent) followed mixed practice and debt- bonded system. It is notable that under the debt bonded category of farmers there is no big farmers. (Table 4.3)

An attempt has been made to correlate the two variables viz., type of farmers on the basis of mode of disposal and their no. of years of experience in coconut cultivation for the purpose of finding whether there is any significant relationship between the two variables. It is found that there is no significant relationship between these two different variables. (Table 4.4)

Among the total sample farmers 68 farmers (22.2 percent) followed the practice of leasing. It is found that 52.9 percent of the respondents leased out
only because of their migration to town. This migration is may due to their children’s education, health condition etc. Next to this reason 29.4 percent of the respondents leased out for meeting their children’s marriage expense. Rest of the farmers leased out for redemption of old debt (8.8 percent) and owing to their age factor (8.8 percent). (Table 4.5)

Among the sample farmers, 65.4 percent of the respondents follow the practice of wholesale sale of their coconut produce. Of the 65.4 percent of the wholesale practitioners, medium and big farmer constitutes each 74.5 percent and rest of the small farmers occupies 47.1 percent. Next to the wholesale practice, 14.7 percent of the respondents have a practice of selling directly to the consumer. Rest of the 13.4 percent and 6.5 percent of the respondents follow the pattern of mixed practice and retail sale practice respectively. (Table 4.6)

A good majority of the respondents (33.1 percent) has regular trading with traders. Inspite of their membership in Cooperative Marketing Society only 27.4 percent of the respondents have regular trading with the cooperative institution. Next to cooperatives, the respondents accept the commission agents (14 percent) and wholesalers (13.7 percent) as their channel members for trading. 6.2 and 5.2 percent of the respondents preferred industrial user and local marketers as channels for marketing coconut. (Table 4.7)

The farmers are very much satisfied if they get good and fair price for their produces. In the study area nearly 52.9 percent of the respondents responded that they are satisfied over the price offered by the buyer whereas 35.3 percent of the respondents not satisfied with the price. And 11.8 percent of the sample farmers reported that they are neither satisfied nor dissatisfied (Table 4.10).

A good majority of the 196 respondents (64.1 percent) responded that the price offered by the institutional agency is better than the non-institutional agencies. Rest of the 110 respondents (35.9 percent) has favoured their opinion towards non-institutional agencies (Table 4.11).
Though there are various problems with the non-institutional agencies 35.9 percent of the respondents preferred non-institutional agencies for their marketing operations. Among the 110 respondents 36.4 percent of the respondents opined that advance money is given by the non-institutional agencies is the primary reason for preferring them. Farm gate sales and no cumbersome process are the reasons felt equally by the 20.9 percent of the respondents. 16.4 And 5.5 percent of the respondents responded that pre and post services and good price are the criteria for preferring non-institutional agencies (Table 4.12).

26.8 percent of the respondents felt that there is a heavy increase in the cost of marketing. 26.1 percent of the respondents faced the problem of absence of stabilized price for the produces. Owing to lack of poor coconut processing facilities in the study area the farmers may not be in a position to fetch good price for their products (25.5 percent). Though there are two institutional agencies functioning in the sample area it is not in a position to satisfy the needs of the member respondents (4.6 percent). 3.3 percent of the respondents reported that unethical practices are followed by the intermediaries in the coconut marketing. (Table 4.13)

A good majority of 94 respondents (30.7 percent) responded that there should be a provision for organized finance. Next to this suggestion 74 respondents (24.2 percent) felt that the organized marketing institutions should be revitalized. Nearly 53 respondents (17.3 percent) opined that the Government should come forward to establish the integrated coconut processing complexes in the study area. Rest of the 16 percent and 11.8 percent of the respondents opined that there should be price guarantee scheme for coconut and promotion of coconut based cottage and village industrial and small scale units in the study area respectively. (Table 4.14)
Role of Institutional and Non-Institutional Agencies in Coconut Marketing

The mean preference score of big farmers (4.52) is higher than small and medium farmers towards Cooperative Marketing Society. The medium farmers mean preference scores is the lowest (3.93) among the three types of farmers (Table 5.2). The mean score of both variety of coconut tree cultivated (5.80) is higher than grove crop and peripheral crop (Table 5.3). The mean score of alone farming (4.31) is higher than mixed farming (4.18) (Table 5.4). The mean score of inorganic input (4.57) is higher than organic input (4.10) (Table 5.5). The mean scores of both types of coconut tree planted (6.54) is higher than ordinary type of coconut tree (4.06) and hybrid coconut planted (3.68) (Table 5.6). The mean score of wholesale is higher (4.58) than retail (3.40) mixed (3.37) and direct to consumer (4.18) (Table 5.7).

Mean preference scores of 3 types of farmer respondents were calculated for their preference score towards Regulated Market. The mean score of medium farmer respondents (0.5) is higher than small (.02) and big farmer respondents (.02) (Table 5.8). The farmers of peripheral crop growers have given low or nil preference towards Regulated Markets. The same can be seen for grove crop growers and growers of both the varieties (Table 5.9). The mean scores of alone farming and mixed farming are .03 respectively (Table 5.10). The mean scores of both organic and inorganic inputs are .03 respectively (Table 5.11). Mean scores of types of trees planted were calculated for their preference score towards regulated market. It is observed that the mean scores of hybrid coconut trees (.04) is higher than ordinary coconut trees (Table 5.12).

Mean scores of coconut sale practice of the respondent were calculated for their preference score towards Regulated Market. It is found that there is no significant different among the sale groups in the average sale practice (Table 5.13). The mean score of big farmer respondent (8.95) is higher than medium (6.03) and small farmer respondent (4.86) (Table 5.14).
Mean scores of variety of coconut tree were calculated for their preference scores towards traders. The mean scores of both, variety of coconut trees (6.82) is higher than grove (6.65) and peripheral crop (6.46) (Table 5.15). Mean scores of dependency over coconut trees were calculated for their preference score towards traders. It is found that alone farming (7.38) is higher than mixed farming (4.45) (Table 5.16). Mean scores of types of input used were calculated for their preference score towards traders. It is found that the mean score of organic input (7.52) is higher than inorganic input (5.11) (Table 5.17). Mean scores of types of coconut trees planted were calculated for their preference score towards traders. It is found that the mean score of both types of coconut trees planted (7.65) is higher than ordinary coconut trees (7.04) and hybrid (5.87) coconut trees (Table 5.18). Mean scores of sale practice of the respondents were calculated for their preference score towards traders. It is found that the mean score of mixed sale practice (8.46) is higher than wholesale (6.65), direct sales to consumers (5.69) and retail (4.55) (Table 5.19).

Mean scores of 3 types of farmer respondents were calculated for their preference scores towards commission agents. It is observed that the mean score of big farmer respondents (9.35) is higher than medium farmer respondents (6.90) and small farmer respondents (4.69) (Table 5.20). Mean scores of varieties of coconut trees cultivated were calculated for their preference score towards commission agents. It is found that both varieties of coconut tree (9.45) is higher than peripheral variety (6.90) and grove variety (5.94) (Table 5.21). Mean scores of dependency over coconut trees were calculated for their preference score towards commission agents. It is found that the mean score of alone farming (7.04) is higher than mixed farming (6.80) (Table 5.22). Mean scores of types of input used were calculated for their preference score towards commission agent. It is found that the mean score of organic input used is higher (7.87) than the inorganic input used (5.50) (Table 5.23). Mean scores of types of trees planted were calculated for their preference towards commission agents. It is found that the mean scores of both type of coconut trees planted is higher (8.67) than ordinary type of coconut tree (6.97) and hybrid type of coconut tree
Mean scores of three types of farmer respondents were calculated for their preference score towards wholesalers. It is found that the mean score of medium farmer respondents is higher (6.39) than the other two categories. The mean score of small and big farmer respondents are 6.04 and 4.86 respectively (Table 5.26). Mean scores of variety of coconut tree cultivated were calculated for their preference score towards wholesalers. It is found that the mean scores of grove crop is (6.10) higher than peripheral (5.25) and both crops (5.03) (Table 5.27). Mean scores of dependency over coconut trees were calculated for their preference score towards wholesalers. It is found that the mean score of dependency over mixed farming is higher (6.46) than alone farming (5.52) (Table 5.28). Mean scores of type of input used were calculated for their preference score towards wholesalers. It is found that the mean score of inorganic input used is higher (6.43) than organic input used (5.36) (Table 5.29). Mean scores of type of coconut trees planted were calculated for their preference score towards wholesalers. It is found that the mean score of hybrid coconut trees planted is higher (6.23) than ordinary coconut trees (5.62) and both type of coconut trees (4.81) (Table 5.30). Mean scores of sale practice of respondents were calculated for their preference score towards wholesalers. It is found that the mean score of retail sales is higher (6.85) than wholesale sales (5.74), direct sales to consumers (6.09) and mixed sales (5.00) (Table 5.31).

Mean scores of three types of farmer respondents were calculated for their preference score towards local marketers. It is found that the mean score of small farmers respondents is higher than (6.83) medium and big farmer respondents towards local marketers. The big farmer respondents' preference score is the lowest (2.50) among these (Table 5.32). Mean scores of variety of coconut tree planted were calculated for their preference score towards local
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It is found that the mean score of grove variety is higher (6.40) than peripheral variety (5.21) and both varieties (2.37) (Table 5.33). Mean scores of dependency over coconut trees were calculated for their preference score towards local marketers. It is found that the mean score of mixed farming is higher (6.19) than along farming (4.96) (Table 5.34). Mean scores of type of input used i.e., organic or inorganic were calculated for their preference score towards local marketers. It is found that the mean score of inorganic input is higher than (6.30) organic input (4.50) (Table 5.35). Mean scores of type of coconut trees planted were calculated for their preference score towards local marketers. It is found that the mean score of hybrid coconut trees is higher (6.04) than ordinary coconut trees (5.33) and both type of coconut trees planted (2.33) (Table 5.36). Mean scores of sale practice of the respondents were calculated for their preference score towards local marketers. It is found that the mean score of retail sale is higher (8.45) than other sale practice (Table 5.37).

Mean scores of three types of farmer respondents were calculated for their preference towards industrial user. It is found that the mean score of small farmer respondents (6.02) is higher than medium (4.18) and big (3.40) farmer respondents (Table 5.38). Mean scores of variety of coconut tree cultivated were calculated for their preference score towards industrial users. It is found that the mean score of peripheral coconut tree is higher (4.96) than grove crop (4.50) and both variety of coconut tree cultivated (3.80) (Table 5.39). Mean scores of dependency over coconut trees were calculated for their preference score towards industrial users. It is found that the mean scores of mixed farming is higher (5.98) than alone farming (4.02) (Table 5.40). Mean scores of types of input used were calculated for their preference score towards industrial users. It is found that the mean score of inorganic input is higher (5.20) than the organic input (4.13) (Table 5.41). Mean scores of types of coconut trees planted were calculated for their preference score towards industrial users. It is found that the mean score of hybrid coconut trees is higher (5.19) than ordinary (4.37) and both type of coconut trees (3.08) (Table 5.42). Mean scores of sale practice of the respondents were calculated for their preference score towards industrial users.
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It is found that the mean score of mixed sales is higher (6.32) than other sale practice (Table 5.43).

Coconut Growers' Perception about the Present Marketing Functionaries

Most of the respondents (86.9 per cent) are males. 49 percentage of the respondents falls in the category of old age group. In the study area, majority of the farmers (41.20) percent have twelve years of formal education (matriculation). Majority of the coconut growers have medium size of family (69.9 per cent). Further it is found that 58.2 per cent of the coconut farming families belongs to nuclear type family. In the study area 35.3, 35.9 and 28.8 percent of the respondents have up to 15 years, 15-30 years and above 30 years of experience in coconut cultivation respectively. A good majority of the respondents (40.5 percent) have 11-20 years of coconut cultivation. This shows that only after introduction of the hybrid variety most of the farmers interested is cultivating coconut. 25.5 percent of the land is leased out by the original owners. Tenant farming is also practiced by 11.1 percent of the respondents. 52.9 percent of the respondents depend on the open well source and 35.3 percent of the respondents forced to use bore well for their source of water. Since the study area is a highly fertile area and having a good source of irrigation it has a good percentage of wet land facility (65.4). 24.8 percent of the respondents possess garden land. 7.8 and 2 percent of the respondents possess both wet and dry land and wet and garden land respectively. Majority of the respondents (67.3 percent) possess below 5 acres of land. Only a minimum of 10.5 percent of the respondents have above 10 acres of land. Among the farmers a good majority of respondents (74.5 percent) reported that they are belonging to the low category of annual income. 12.4 and 13.1 percent of the farmer respondents coming under the middle and high income category respectively. Coconut occupies a major source of income to the majority of the farmer respondents (90.8 percent). Nearly 34 percent of the farmer's credit requirement is solved by the coconut traders.
Cooperative banks (26.1 percent) and commercial banks (22.2 percent) also provided credit to the certain extent (Table 6.1).

The T-test was applied to find whether there is significant difference between organic input and inorganic input in the average coconut production cost per acre. It is found that there is no significant difference between organic input and inorganic input in the average coconut production cost per acre. Hence $H_0^3$: "There is no significant difference between organic input and inorganic input in the average coconut production value per acre" is accepted (Table 6.2).

The T-test was applied to find whether there is significant difference between single farming group and mixed farming group in the average quantity produced per acre. It is found that there is no significant difference between single farming and mixed farming group in the average quantity produced per acre. Hence $H_0^4$: "There is no significant difference between single crop farming group and mixed crop farming group in the average quantity produce per acre" is accepted (Table 6.3).

Average quantity produced per acre is higher for medium farmer respondents (9350) than small (9320) and big (7910) farmer respondents. One way ANOVA was applied to find whether there is significant difference among the type of farmer groups in the average quantity produced per acre. It is found that there is significant difference among the type of farmer groups in the average quantity produced per acre. Hence $H_0^5$: "There is no significant difference among the type of farmer in the average quantity produced per acre" is rejected (Table 6.4).

The preference score of big farmer respondents towards traders is higher (8.95) when compared to medium (6.03) and small (4.86) farmer respondents. It is found that there is significant difference among the type of farmer groups in the average preference score towards traders. Hence $H_0^6$: "There is no
significant difference among the type of farmer groups in the average preference score towards traders” is rejected (Table 6.5).

43.8 percent of the respondents clearly opined that less labour force is the prime reason for undertaking coconut cultivation. 38.6 and 17 percentage of respondents responded that profitability and perennial are the reasons for the cultivation respectively (Table 6.6).

Majority (43.8 percent) of the respondents cultivated grove variety and 36.6 percent of the respondents cultivated peripheral variety. Rest of the 19.6 percent of farmers opted for both the varieties (Table 6.7).

An attempt was made to find whether there is significant relationship between educational qualification of the respondents and variety of coconut tree cultivated. It is found that there is significance relationship between educational qualification and the variety of coconut tree cultivated. Hence \( H_0: \) “There is no significant relationship between educational qualification of the respondents and variety of coconut tree cultivated” is rejected (Table 6.8).

Most of the respondents (85.6 percent) opined that coconut cultivation is better than other crops. Rest of the 14.4 percent of the respondents has negative opinion about the coconut cultivation. This may be because of their bitter experience with the diseases of coconut trees (Table 6.9).

Majority of the respondents (57.5 percent) are not interested to extend their coconut cultivation area and rest of the 42.5 percent of the respondents opined that they are going to extend their area of coconut cultivation (Table 6.10).

Most of the sample respondents (73.9 percent) depend on alone farming only. This may be because of their agricultural land status. Rest of the 26.1 percent of the respondents follows mixed farming practice (Table 6.11).
Separately there is a moderate demand both for male (64.1 percent) and female labour (41.2 percent). 21.6 and 12.4 percent of the respondents regarded that there is a high demand for male labour and female labour respectively (Table 6.12).

Good majority (61.4 percent) of the respondents interested to reap the benefits only thro coconut. Rest of the 20.9 and 17.6 percent of the respondents interested to avail the benefit through the copra and tender coconut respectively (Table 6.13).

43.8 percent of the respondents cultivated exclusively the grove variety and 36.6 percent of the respondents cultivating exclusively the periphery variety (Table 6.14).

A good majority of the respondents (62.4 percent) adopted organic farming where as rest of the 37.6 percent of the respondents still follows inorganic farming and 61.4 percent of the respondents opined that organic farming is a costly affair (Table 6.15).

Among the total farmers nearly 63.4 percent of the respondents procured sapling from private sources. 32.7 percent of the respondents procured saplings from government sources and rest of the farmers having a practice of using their own seed (Table 6.17).

A good majority (44.4 percent) of the respondents planted hybrid varieties in their cultivable land (Table 6.18).

The mean productivity of grove crop is higher (154.03) than peripheral crop (114.48) (Table 6.20).

The minimum number of trees planted per acre is same for both the varieties i.e., 60. The minimum age of the periphery and grove tree is 9 and 4 years and maximum for the both the variety is 40 years. The mean age of the periphery tree is 22.4767. The mean age of grove tree is 10.7526. The minimum
and maximum years taken to give yield by a periphery and grove tree is 5 and 9 years and 4 and 7 years respectively. The sample farmers in the study area follow uniform pattern of distance between the two trees. The mean annual productivity of the periphery and grove tree is 113 and 151 respectively. So it is found that there is a paired difference among the two trees in the average of productivity per tree (Table 6.21).

The average per acre total sales of grove crop is higher (3803) than both varieties (3477) and peripheral crop (2994) (Table 6.22).

Production enhancement operations such as crop pruning, rope support, inter ploughing, inter cropping gives definite result for the farmers in terms of productivity increase, quality enhancement etc. Among the operations inter ploughing occupies a prominent percentage of 32 followed by rope support to flower bunches 30.1 percent, crop pruning also undertaken by 20.3 percent of the respondents and 3.9 percent undertaken no production enhancement operations. This may be due to less knowledge about production enhancement operations (Table 6.23).

Among the sample farmers 56.3 percent of the respondents is a position to know the technical advice from the experienced farmers. 39.5 percent of the respondents came to know some production expertise thro the Government agricultural department. Traders also play (1.6 percent) a meager role in providing some advice to the farmers (Table 6.24).

Majority (46.4 percent) of the respondents said that they need medium term loans. Only 3.9 percent of the respondents opined that there is no need of credit for their agricultural operations (Table 6.25).

Most of the respondents (78.8 percent) purchased inputs from PACBs (Table 6.26).

Among the total 306 farmer respondents a good majority of the respondents 241 in number (78.8 percent) purchased the required inputs from
nearby Primary Agricultural Cooperative Bank (PACB). Among the total respondents 32 percent of the respondents responded that the price of the input is comparatively less in the cooperative bank. 29 percent of the farmers selected this source because of their easy approachability and availability. Rest of the 26.6 and 12.4 percent of the respondents opined that good quality and no adulteration are the key factors for their purchase in the nearby cooperatives (Table 6.27).

A good majority of the respondents (33.1 percent) has regular trading with traders. Inspite of their membership in Cooperative Marketing Society only 27.4 percent of the respondents has regular trading with the cooperative institution. Next to cooperatives, the respondents accepted the commission agents (14 percent) and wholesalers (13.7 percent) as their channel members for trading. 6.2 and 5.2 percent of the respondents preferred industrial user and local marketers as their business channel (Table 6.28).

Majority of the respondents (52.9) have satisfied the price offered by their marketing channels. 60.4, 53.8, 44.3 and 52.9 percent of the respondents have satisfied the price offered by traders, commission agents, industrial users and cooperatives respectively. None of the respondents has satisfied with the local marketers. Hence \( H_0^2 \) : "There is no significant relationship between marketing channels and price offered by them" is rejected (Table 6.29).

A considerable majority of the respondents (29.8 percent) opined that the good marketing practices are followed by the traders. Next to the traders Cooperative Marketing Society occupies a place in the hearts of the sample farmers (20.1 percent). Commission agents (19.4 percent) and wholesalers (13.4 percent) are also following good marketing practices (Table 6.30).

A good majority of the respondents opined that the wholesalers do justifiable job (27.8 percent). Rest of the sample respondents favoured their opinion towards reasonable grading to the following market functionary's viz.,
traders (19.3 percent), commission agents (17 percent), industrial user (15 percent) and cooperative marketing society (8.5 percent) (Table 6.31).

Majority of the respondents (60.8 percent) opined that Cooperative Marketing Society is functioning as a service oriented institution. 5.2 percent of the respondents favoured for Regulated Market. Rest of the 34 percent of the respondents felt that non-institutional agencies also functioning for the betterment of the respondents (Table 6.32).

21.9 percent of the respondents likely to continue trade with Traders. Industrial users also occupied in the minds of the respondents in a reasonable percentage (19.5 percent). 17 percent and 14.4 percent of the respondents opined that they are going to continue with Commission Agents and Cooperative Marketing Society respectively (Table 6.33).

Majority of the respondents (32.4 percent) felt that Commission Agents are the most problematic person in the market. 16.7 and 16 percent of the respondents opined that wholesalers and local marketers are also make some problems to the coconut growers. Only 9.8 percent of the respondents inferred that cooperative marketing society is also one of the problematic market functionary in the coconut market (Table 6.34).

Majority of the farmers (22.5 percent) opined that trader make such spot payment to the farmers. Next to the trader, it is viewed by the sample respondents that Local Marketers (20.9 percent), Industrial User (17.9 percent), Commission Agents (15.7 percent) make such immediate payment to the farmers. Only 8.2 percent of the respondents gave their consent over the cooperatives in this issue (Table 6.35).

Majority of the short-term financial needs of farmers are met by the non-institutional agencies (92.8 percent). Very meager percentage (7.2) of the respondents has their short-term loans like pledge loan, jewel loan from the institutional agencies (Table 6.36).
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Majority of the farmers (30.3 percent) have their long-term loans from the wholesalers. Industrial user (17 percent), local marketers (16 percent), traders (15.7 percent) also played a considerable role in issuing long-term loans to the respondents (Table 6.37).

In the pre-sales service process non-institutional agencies play (94.3 percent) an appreciable role (Table 6.38).

It is found that 25.5 percent of the respondents favoured their opinion in this regard towards traders. Local marketers also play a considerable percentage (24.2) in providing post sales service to the coconut growers (Table 6.39).

34.7 percent of the respondents opined that commission agents do various malpractices during their marketing operations. 20.2 percent of the respondents opined that traders stood second in doing such malpractices in the market. Only 7.9 percent of the respondents charged the cooperative marketing society in this regard (Table 6.40).

Majority of the respondents (23.8 percent) opined that commission agents are the only nearby source to market their produces. 20.6 and 18.6 percent of the respondents viewed their opinion towards local marketers and wholesalers respectively (Table 6.41).

Majority of the respondents (24.1 percent) felt that Trader follows hassle free trade and followed by Wholesalers (20.6 percent). Rest of the respondents felt that Commission Agents (18.6 percent), Industrial User (15 percent) and Local Marketers (14.3 percent) follow less cumbersome process in their marketing activities. Only 3.8 percent of the respondents opined that cooperatives also follow hassle free trade in their marketing operations (Table 6.42).

Majority of the respondents (24.5 percent) felt that cooperative marketing society provides godown facilities. Wholesalers (19.3 percent), Local Marketers
(17 percent) and Industrial User (12.4 percent) are also kind enough to extend their space for the storage purpose of the farmers (Table 6.43).

Most of the farmers (22.5 percent) felt that wholesalers provide enough market information about the market. Next to the Wholesalers, traders stood second (21.7 percent) in providing relevant market information to the farmers. Local Marketers (19.5 percent), Commission Agents (13.4 percent) and Industrial User (12.7 percent) also play a considerable role in providing market information. Only 8.3 percent of the respondents said that Cooperative Marketing Societies also provide some market information to the respondents (Table 6.44).

Generally high price fluctuations prevail in agricultural marketing. It is the part and parcel of each and every agricultural product. Coconut product also has no exception in high price fluctuation. But wide price fluctuations generally prevail only in non-institutional agencies. Among the non-institutional agencies Commission Agents have high price fluctuation in their marketing operations (33.4 percent). Next to commission agents, the respondents felt that there are high price fluctuations among the Wholesalers (17 percent) and local marketers (17 percent). Only 6.5 percent of the respondents felt that there is high price fluctuation in Cooperative Marketing Society.

Majority of the respondents (31 percent) opined that Commission Agents lack some standardized practice in their marketing operations. Next to commission agents, traders stood second (21.3 percent) in lacking standardized practice. Rest of the sample population opined that Wholesalers (16.7 percent), Local Marketers (12.7 percent) and Industrial User (8.2 percent) lack in practicing standards in their marketing operations. Only 8.8 percent of the respondents opined that Cooperative Marketing Society also lacks standardized practice in their marketing operations (Table 6.46).

Most of the respondents (21.3 percent) opined that value addition services are more in the Industrial User. Commission Agents also took part considerably in value addition activities (19 percent). A good majority of the respondents
(17.5 percent) gave their consent towards traders in this value addition process. Out of 306 samples only 30 samples (9.9 percent) viewed that cooperative marketing society also undertakes value addition activity (Table 6.47).

Majority of the respondents (39.3 percent) said that the cost of sale is high in Cooperative Marketing Society. This is may be because of the institutional agencies like cooperatives and regulated market cannot adopt the practices followed by the non-institutional agencies like free transportation, farm gate pick up etc. 17.3 percent of the respondents opined that there is a high cost of sale while marketing their produces to the Wholesalers. Rest of the respondents opined that there is a high cost of sale among the Commission Agents (14.4 percent) and Traders (14 percent) (Table 6.48).

Majority of the respondents (27.1 percent) availed pledge loans from the Cooperative Marketing Society. It is observed that commission agents played a considerable role (19.9 percent) in issuing pledge loan to the coconut peasant community. It is notable that the Wholesalers (16.4 percent) and Traders (12.4 percent) also have a practice of issuing pledge loans to the farmers (Table 6.49).

Most of the respondents accepted that the non-institutional agencies (93.1 percent) offered the farm gate purchase. Only 6.9 percent of the respondents said that institutional agencies also do this type of arrangements to the coconut farmers (Table 6.50).

A considerable majority of the respondents (23.3 percent) opined that the Traders are the most advantageous market functionary in the market. Next to the trader, it is said that Commission Agents (21.2 percent), Local Marketers (18.5 percent), Industrial User (15.3 percent) and Wholesalers (12.3 percent) are also in a position to give some benefit to the farmers. Only 5.8 percent of the respondents opined that Cooperative Marketing Society is one of the most advantageous market functionaries in the market (Table 6.51).
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Majority of the respondents (23.7 percent) opined that the Traders have high technical knowledge among the market functionaries. 22.2 percent of the samples have an opinion that Commission Agents also possess technical know how about the coconut market. Only 3.6 percent of the respondents favoured towards Cooperative Marketing Society in this regard (Table 6.52).

A good majority of the respondents (26.7 percent) opined that Traders follow somewhat open and free sale proceeds in their marketing operation. 21 percent of the respondents said that Commission Agents also follows this type of open and free marketing operations. Only 5.5 percent of the respondents favoured cooperative marketing society in this regard (Table 6.53).

A good majority of the sample respondents (44.5 percent) opined that the overall service is good among the traders. Next to traders, majority of the respondents (18.3 percent) inferred that Cooperative Marketing Society also performs good service to the peasant community. 14.7 percent of the respondents favoured their opinion in this regard to the Commission Agents. Rest of the 8.5, 7.5 and 6.5 percent of the respondents exercised their right towards Industrial User, Wholesalers and Local Marketers respectively (Table 6.54).

52.9 percent of the respondents responded that they satisfied over the price offered by the buyer whereas 35.3 percent of the respondents were not satisfied with the price. And 11.8 percent of the sample farmers reported that they are neither satisfied nor dissatisfied (Table 6.55).

A good majority of the 196 respondents (64.1 percent) responded that the price offered by the institutional agency is better than the non-institutional agencies. Rest of the 110 respondents (35.9 percent) has favoured their opinion towards non-institutional agencies (Table 6.56).

35.9 percent of the respondents preferred non-institutional agencies for their marketing operations. Among the 110 respondents 36.4 percent of the
respondents opined that advance money given by the non-institutional agencies is the primary reason for preferring them. Farm gate sales and no cumbersome process are the reasons felt equally by the 20.9 percent of the respondents. 16.4 and 5.5 percent of the respondents responded that pre and post market services and good price are the criteria for preferring non-institutional agencies (Table 6.57).

26.8 percent of the respondents felt that there is a heavy increase in the cost of marketing. 26.1 percent of the respondents faced a problem of absence of stabilized price for the produces. Due to lack of poor coconut processing facilities in the study area the farmers may not be in a position to fetch good price for their products (25.5 percent). Though there are two institutional agencies functioning in the sample area. They are not in a position to satisfy the needs of the member respondents (4.6 percent). 3.3 percent of the respondents reported that unethical practices are followed by the intermediaries in the coconut marketing (Table 6.58).

**Conclusion**

The coconut industry is growing in terms of production. However, its share in oil and fats trade has consistently declined in the past four decades. Vast growth opportunities remain for the coconut industry, but the marketing strategy needs a reorientation to suit to emerging trend. Awakening and alertness on diversification of coconut, with a motive to recapture the market have to be provided priority. The best option with vast growth opportunities for product diversification and value addition exists. Despite this vast potential, the industry can flourish only through strategic initiatives and synergy among the organised and unorganised market outlets function. Strategic marketing has to include product diversification, marketing intelligence backed by market research to widen the market base in different coconut growing region. Cooperation from the organisations and upfront approach is needed in partnership mode to address the issues in penetrating the existing markets.
Since the existing marketing networks are dominated and controlled by private marketing functionaries, farmers are deprived of the major chunk of the consumers' price for coconuts. Farmers know each and every disadvantage of sale through the existing channel members. However, they depend on them by compulsion. Non-availability of organised credit for production, marketing and consumption purposes, absence of organised marketing institutions and difficulties in the adoption of off-farm value addition, processing and marketing technologies on coconuts are the major reasons for the 'forced sale' of coconut either through lease practices or on-farm sale of coconuts to marketing intermediaries. They, therefore, demand rejuvenation of organised marketing institutions such as cooperatives and regulated markets and promotion of a network of micro-enterprises of coconut farmers facilitating for collective bargaining and direct marketing of coconuts in places where the organised marketing institutions are defunct.

**Suggestions**

Based on the findings of the study, it is suggested that the following measures may be taken by the Government of Tamil Nadu to safeguard the interest of the coconut growers in the sample area.

- The coconut growers in the sample area are lacking in availing the institutional credit for their regular maintenance of coconut gardens. Some sort of organized finance is the need of the hour. If not the sample coconut farmers always under the clutches of non-institutional agencies.

- Heavy price fluctuation causes unexpected loss in the expected income. To stabilize the price of the coconut and its products the Government should come forward for the implementation of price guarantee scheme.
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- Absence of coconut based processing industries in the study area is one of the reasons for the heavy price fluctuation in the coconut industry. Hence, Government of Tamil Nadu should come and take necessary steps to promote coconut based cottage and village industries and small scale units.

- Among the two institutional agencies in the study area, only one institution namely Pollachi Cooperative Marketing Society Ltd commences with copra procurement in collaboration with the National Cooperative Marketing Federation Ltd (NAFED) that too for a very limited period of time. The Anamalai Regulated Market is another institutional agency in the study area but this institution didn't deal with coconut marketing. Hence, the Government of Tamil Nadu must take essential steps to revitalize the institutional marketing agencies for the betterment of coconut farmers in the study area.

- Since the study area is intense coconut area both the Tamil Nadu and Indian Government may take successful steps for the establishment of integrated coconut processing complexes which will definitely augment the standard of living of coconut growers.

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