CHAPTER VIII

SUMMARY AND CONCLUSIONS
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A brief summary of the findings derived in the previous Chapters are presented here to draw appropriate conclusions for smooth functioning of a commodity market.

SUMMARY OF THE FINDINGS

Areca nut (or Betelnut) is a commodity having conventional, commercial and economic importance in the Indian context. While the conventional importance is dictated by social sanctification, the commercial importance is derived from the fact that it has contributed Rs 253 Crores (at constant prices) in 1986-87 to the GNP*. The economic importance of the commodity is adjudged by the fact that it has provided employment to 5.35 million people and as much as three fourths of marginal and small farmers and two thirds of large farmers in the study area depend upon arecanut for their income.

India has an area of 2,01,000 hectares under arecanut and produces 2,46,000 MTs. annually. The production of the commodity is concentrated in three states - Karnataka, Assam and Kerala, indicating the location specific nature of the commodity. The three major producing states constitute 90 percent of the area and production. The Karnataka state leads first with about 30 percent of the area and 36 percent of the production followed by Assam with 29 percent of the area and 32 percent of the production in 1988-89. The Kerala state
occupies the third position with 31 percent of the area and 23 percent of the production in 1988-89.

The present study is carried out to understand the functioning of Areca nut Marketing System (AMS) in Karnataka State. The three major arecanut markets - Mangalore, Shimoga and Sirsi - are selected for the study as the three markets account for 73 percent of the total marketed surplus in the state. Each of the markets - Mangalore, Shimoga and Sirsi - is considered as a subsystem of the entire Areca nut Marketing System. The two terminal markets, Bombay and Bangalore, have been selected with a view to studying the relationships between the primary markets - Mangalore, Shimoga and Sirsi - and terminal markets. The cooperative institutions - the Buying Cooperative - CAMPCO, the Selling Cooperatives - SKACMS, MANCOS, and TSS, and three Facilitating Cooperatives, one in each subsystem and three APMCs, have been selected for the study.

The producers of arecanut are selected by the Quota Probability Proportional to Size method with quota fixed at 50 for each subsystem together totalling to 150. The producers were interviewed by a pretested structured questionnaire to assess their marketing behaviour. The Directors and the personnel of the institutions were also contacted to examine the role of the institutions in the Areca nut Marketing System.

The time period of the study is from 1960-89. The primary data were collected for the agricultural year 1988-89. The approach to the study is mainly based on Structure - Conduct - Performance paradigm as envisaged by Bain-Scherer. The study has been carried out with the following objectives.
(1) to study the pace and pattern of supply of and demand for arecanut;
(II) to analyse the marketing behaviour of producers;
(III) to assess the structural change in marketing,
(IV) to elucidate the market conduct of functionaries and
(V) to evaluate the performance of the Arecanut Marketing System.

The following hypotheses have been tested in the study:
(a) structural change has taken place in the Arecanut Marketing System,
(b) market conduct has changed in the Arecanut Marketing System and
(c) consequent to changes in the market structure and conduct, performance of the Arecanut Marketing System has changed in favour of producers.

The compound growth rates of area, production and productivity of arecanut for all India level are found to be 0.69 percent, 1.25 percent and 0.58 percent during the period 1962-88. The growth rates of area, production and productivity for Karnataka are found to be 1.07 percent, 1.45 percent and 0.48 percent respectively. In case of Assam, the area, production and productivity have increased at 0.35 percent, 2.10 percent and 0.11 percent respectively. The Kerala State has registered negative growth rates in all fronts.

The area response analysis has revealed that weather, lagged area, time trend, yield and lagged price have
influenced the area under arecanut. The domestic availability of arecanut for consumption has increased at 0.87 percent per annum during 1962-89. The arecanut is not consumed by all and it is consumed mostly by the people in the age group 15 to 49. The population in this age group is considered as the eligible population for the consumption of arecanut. The eligible population (in the age group 15 to 49 years) is found to be about 400 millions in 1989 in India. The annual rate of increase of the eligible population is about 3 percent per annum. The net addition of the eligible population is about 6.5 million every year which creates an additional estimated demand of 1,428 MTs. annually. The average per capita consumption/availability of arecanut (considering only eligible population) is estimated at 578 grams for the period 1962-89. The pan business which is low investment and high profit oriented, is a post independent phenomenon in India. It is estimated that 1.35 million pan shops exist in the country and demand 1,40,618 MTs. of arecanut annually which accounts for 47 percent of the total supply. The ratio of panwala to eligible population works out to be 1:344 as per 1989 estimated population.

It is found that average per capita annual consumption of arecanut in the study area is 6.15 Kgs. whereas it is 1.46 Kgs. for Mangalore subsystem, 8.98 Kgs. for Shimoga subsystem and 7.01 Kgs. for Srisri subsystem. The overall marketable surplus of arecanut is 97.47 percent of the total production. The average consumption requirement of producers is found to
be 2.53 percent of the total production of which 2.05 percent is required for personal consumption (including consumption by labour) and 0.48 percent for seeds. In the year 1988-89, it is found that marginal farmers have contributed 97.48 percent and small farmers 97.10 percent as marketable surplus, while semi medium farmers have contributed 98.68 percent of the total produce. The medium farmers have contributed 98.25 percent toward marketable surplus. It is estimated that marginal and small farmers have contributed 38.34 percent and 36.97 percent of the total quantity sold in the selected markets indicating marginal and small farmers have contributed 75.31 percent of total arecanut sold in the three markets during 1988-89. Thus, it can be concluded that marginal and small farmers have a major share in the marketed surplus in the AMS. It is observed that the producers of arecanut have staggered the sale of arecanut by selling in small quantities each time. It is found that, on an average, an arecanut producer has sold his produce at many as twenty-two times in a year in Mangalore, 16 times in a year in Shimoga and 10 times in a year in Sirsi subsystem. As many as five marketing channels have been identified, viz., SC, DC, CAs, Is and the BC. The SCs are found to be dominating by handling 40 percent of the total arrivals followed by CAs (25%). The producers have sold through FCs about 20 percent followed by itinerant merchants. It is found that CAs are dominating in the Mangalore and Shimoga subsystems by handling as much as 10 percent and 53 percent of the total estimated marketable surplus, while the selling cooperatives (TSS and TAPCMS) are dominating in Sirsi
subsystem by handling as much as 69 percent of the estimated marketable surplus. The itinerant merchants are predominant in the Shimoga subsystem by handling 30 percent of the estimated marketable surplus. Thus it can be concluded that all the cooperative institutions are playing a seminal role in the three subsystems.

The market structure of the AMS is characterised by the cooperativisation process at three tiers - FCs, SCs and the BC - together with the conglomerating institution - the APMC. It is found that market structure of the AMS is one of oligopolistic and oligopsonistic in nature. The S-B ratios for the Mangalore and Shimoga subsystems are found to be 6:1 and 20:1 respectively. The H indices for sellers and buyers are at 0.1857, 0.1567 for Mangalore subsystem and 0.1980, 0.0823 for Shimoga subsystem suggesting that sellers are relatively more concentrated than buyers and that there is oligopolistic and oligopsonistic tendencies in the markets. The product differentiation at both producers' and buyers' levels is a feature to reckon with. The producers prepare their produce in seven, three and eight varieties in Mangalore, Shimoga and Sirsi subsystems, whereas, at the buyers' level the commodity is further differentiated into 72, 120 and 71 varieties in the three subsystems respectively. At the all India level 2,687 varieties of arecanuts are identified of which 2,247, 424 and 16 are of unboiled, boiled and raw types respectively. Apart from institutional coordination of cooperatives, it is found that the AMS is functionally integrated. The Perestroika and
Glasnost reforms brought about by the producers over the last three decades have resulted in the integration of functions. The APMCs are hastening the process of conglomeration by creating the marketing environment in the three markets. The AMS has undergone a structural change over the years with regard to "form", "base" and "state". There is a shift in "form" from buyers' monopoly as early as in 1950s towards oligopolistic tendency in 1989. The "base" has expanded over the years with the establishment of a network of cooperatives at the three tiers - FCs, SCs and the BC. This has reduced the importance of itinerant merchants in the system. The "state" of marketing has drifted away from one of exploitation towards egalitarianism. The APMCs - conglomerating institutions are engaged in establishing the norms of marketing practices.

The market conduct refers to the behaviour of the interacting elements - sellers, buyers and the institutions in a market situation. The market conduct of these elements have been lucidly described in respect of the Arecanut Marketing System. It is found that all the markets have adopted tender system of sale. The sequence of activities such as recording pre-weighment, display of sample, packing, stacking and post weighment is found to be the same in all the three markets. It is observed that the elements such as sellers, buyers, the CAs, the SCs and the BC have differed in their composition in each subsystem. The APMCs are performing the job of creating marketing environment effectively by evolving norms of marketing practices. The rotation system in respect of
declaration of tender timings to give equal opportunities to all classes of traders to participate in the marketing process in Mangalore market is a classic exposition of the work of the APMC. It is found that over a period of three decades there is a sea change in the functioning of the marketing institutions. There is hastening up of the cooperativisation in all the three subsystems leading to changing scenario in the conduct of market functionaries. There is sprouting of Joint Stock Companies trading in arecanut in the three markets. It is observed that marketing practices and marketing culture have been internalised in the three subsystems. Despite such a healthy environment in the AMS, the case of "P" portrays the weaknesses of the AMS. Such an example suggests strengthening institutional fibre for protecting the interest of the producers. However, the case of "P" need not be generalised.

The performance of the AMS has been assessed using several robust analytical tools. It is found that the PCRs expressed as the ratio of FHP to RP is 50.14 percent for Chaali and 62.18 percent for Choll varieties in Mangalore subsystem. The PCRs for Saraku, Bette and Gorabolu varieties in Shimoga subsystem are worked out to be 80.26 percent, 51.90 percent and 29.14 percent respectively. In case of Sirsi subsystem, the PCRs for Chaali, Rasi and Tatti Bette are estimated at 49.60 percent, 53.48 percent and 47.74 percent respectively. The market arrivals are on the increasing trend resulting in the growth of all the markets. The Mangalore market has grown faster followed by Shimoga and Sirsi. The
market sales are characterised by decline during peak arrival periods. It is noticed that the proportion of market sales during peak seasons has reduced from 75 percent to 60 percent in Mangalore, from 60 percent to 52 percent in Shimoga, while it remained constant in Sirsi at 75 percent of the total annual sales during the study period 1960-89. The market prices of all varieties are found to be on the increasing trend. It is found that Chaali and Choll prices have increased around six times during 1960-89, while that of Saraku, Bette and Gorabolu by sixteen, seven and ten times respectively. The prices of Chaali, Rasi and Tatti Bette have increased by seven, five and six times respectively during the period 1960-89. The market arrivals are highly seasonal in Mangalore, Shimoga and Sirsi. The arrival seasons are found to be January to June in Mangalore, November to March in Shimoga and December to May in Sirsi. The producers have staggered sale of their produce in varying degrees in all markets. The prices of arecanut have increased from 2 percent to 7 percent above the average, while the prices have decreased from 8 percent to 15 percent below the average over all the varieties in all the markets under study during peak and lean seasons. The cyclical variations of market arrivals and sales have not indicated a definite pattern. It is in respect of prices that long duration cycles of 60 to 96 months have been observed before 1972-74 price disaster. After 1974, short duration cycles of 24 to 36 months have been noticed. This phenomenon of reduction in the duration of cycles is true for all the
varieties in the three markets. The irregular variations in arrivals and sales are marked by volatility in the three markets. In respect of prices it is found that the magnitude of irregular variation has increased after 1974 for all varieties. This leads us to the conclusion that higher the prices discovered, higher is the level of uncertainty. The correlation analysis of deautocorrelated or "refined residuals" of price series' indicated that arecanut markets are significantly integrated.

The assessment of performance of the AMS has lead to the impeccable conclusion that the change in market structure in 'form', 'base' and 'state' and change in market conduct have together resultantly improvised the performance of the AMS in favour of producers.

CONCLUSIONS

On the basis of the results of the present study the following conclusions are drawn:

1. The analysis of supply behaviour of producers leads to the conclusion that farmers respond favourably to prices. Production of arecanut should be encouraged by applying package of cultural practices and seedling of high yielding varieties.

2. The enlarging consumption base has a favourable effect on producers. The existing consumption base can be enlarged by advertisements on the advantages of mastication of arecanut. Further, research studies on utility of arecanut and its use may be conducted.
3. The pan business is an economic activity which has potential to generate employment. The expansion of pan business needs institutional support. Health promoting pans need be developed and publicised.

4. The marketing behaviour of producers of arecanut in evolving institutions using multiple channels has helped to optimize their incomes. This deserves to be emulated by producers in the entire AMS and in other commodity systems such as oil seeds, cotton, pulses and paddy.

5. The behaviour of staggering sales by arecanut producers reflects the role of institutions in discovering higher prices for the producers. Hence, there is a need for creation of such institutions in the AMS and in other commodity marketing systems.

6. The Agricultural Produce Market Committees (APMCs) are found to be conglomerating institutions creating infrastructural facilities and competitive environment in addition to the elimination of attendant malpractices in the study area. Such activities should be encouraged in the AMS as well as in other agricultural commodities.

7. Market Information Network (MIN) must be developed effectively to integrate primary, transit and terminal markets. In this context, use of information and communication technologies is stressed in the AMS. Also, there is a need to generate periodical market outlook reports to facilitate decision making.
8. Training and Human Resources Development (HRD) practices for market functionaries, personnel and producers should be assigned importance for smooth functioning of the marketing system. In particular, grading, standardisation and packaging functions should be given priority.

9. Market Interventions followed by the producer organisations to countervail depressing market forces have helped the farmers in getting consistent returns in the study area. This should be encouraged in the AMS and in other commodity systems.

10. The government could encourage establishment of joint stock companies consisting of farmers and sellers in arecanut and in other agricultural commodities.

11. Arecanut processing industries should be encouraged to facilitate Agro-Industrial integration.

12. It is essential to develop interstate markets for arecanut especially in the Northern India. This should be followed by a systematic creation of export in the Asian continent and in all parts of the Euro-American countries.

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