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**GROUP MARKETING SYSTEM FOR FRUITS AND
VEGETABLES IN KERALA**

By
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THESIS

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2007

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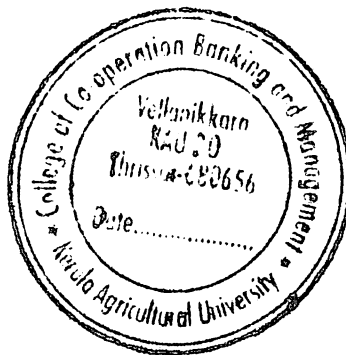
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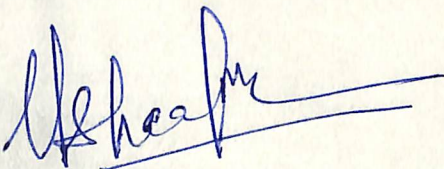
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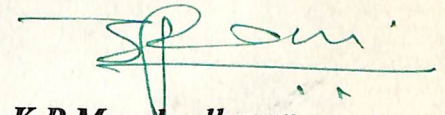
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Introduction

CHAPTER 1

INTRODUCTION

India, with its wide variation in climate and soil, produces a range of horticultural crops, such as fruits, vegetables, ornamental, medicinal and aromatic plants. The importance of horticulture in improving the productivity of land, generating employment, improving economic conditions of farmers and entrepreneurs, enhancing exports and above all providing nutritional security to people, is widely acknowledged. India is the second largest producer of both fruits and vegetables in the world after China. India's share in the world production of fruits and vegetables is 11 and seven per cent respectively. The production of fruits and vegetables in India rose from 87.10 MT in 1990-91 to 169.80 MT in 2004-05 (Horticulture Information Service, 2004).

Area and production of fruits and vegetables in India

The area and production of fruits and vegetables in India showed an increasing trend. Globalization and liberalization have opened up new opportunities and created competitive demand at the global level as well as national level for Indian agriculture, to move from low value self sufficient production system to high value commercial agriculture. It has led to diversification of agriculture, which has ultimately resulted in fast development of the horticulture sector particularly. The table below shows area and production of fruits and vegetables in India for the period from 1990-91 to 1999-00.

Table 1.1. Area under cultivation and production of fruits and vegetables.

Period: 1990-91 to 1999-00

Year	Fruits		Vegetables	
	Area (1000 ha)	Production (MT)	Area (1000 ha)	Production (MT)
1990-91	2870	28.20	4540	53.80
1991-92	2874	28.63	5593	53.53
1992-93	3206	32.96	5045	63.81
1993-94	3184	37.25	4876	65.79
1994-95	3246	38.60	5013	69.49
1995-96	3357	41.50	5335	71.59
1996-97	3580	40.46	5515	75.07
1997-98	3702	43.26	5607	72.68
1998-99	3727	44.04	5866	87.54
1999-00	3797	45.50	5993	90.83
CGR %	3.33	5.25	1.86	5.15

Source: National Horticulture Board, Year Book 2001

It is clear from the table that the area under cultivation and production of fruits and vegetables showed an increasing trend during the period. The area under fruit cultivation increased from 2870 thousand hectares in 1990-91 to 3797 thousand hectares in 1999-00 registering a compound growth rate of 3.33 per cent. The production of fruit increased from 28.20 MT to 45.50 MT during the corresponding period showing a compound growth rate of 5.25 per cent. In the case of vegetables,

the area increased from 4540 thousand hectares in 1990-91 to 5993 thousand hectares in 1999-00, registering a compound growth rate of 1.86 per cent. The production which was 53.80 MT in 1990-91 increased to 90.83 MT in 1999-00, recording a compound growth rate of 5.15 per cent.

Kerala is predominantly a state of horticultural crops. Fruits and vegetables occupied an area of 5.99 lakh ha in the state during 2002-03. Despite its ideal climatic condition for horticultural crops, the fruits and vegetables sector was crippled by low production with only 30 per cent of the state's demand for vegetables being met by domestic production forcing it to depend on neighbouring states for making up the deficit. The following table shows the district-wise area under fruits and vegetables cultivation in Kerala

Table 1.2. District-wise area under fruits and vegetables cultivation in Kerala during 2002-03

(Area in hectares)

District	Fruits (Area)	Vegetables (Area)
Thiruvananthapuram	23,968 (5.72)	28,810 (15.85)
Kollam	29,112 (5.75)	30,836 (17.00)
Pathanamthitta	11,768 (2.81)	13,978 (7.70)
Alappuzha	17,936 (4.28)	60,203 (4.55)
Kottayam	18,394 (4.39)	7,157 (3.9)
Idukki	18,867 (4.50)	15,107 (8.33)
Ernakulam	40,681 (7.32)	9,893 (5.45)
Thrissur	29,556 (7.05)	5,207 (2.87)

District	Fruits (Area)	Vegetables (Area)
Palakkad	36,892 (8.81)	18,538 (10.22)
Malappuram	49,449 (11.80)	15,948 (8.79)
Kozhikode	33,165 (7.9)	8,629 (4.75)
Wayanad	30,916 (7.38)	5,778 (3.18)
Kannur	62,068 (14.82)	7,219 (3.98)
Kasargod	30,902 (7.38)	3,170 (1.74)
State	418,676 (100)	1,81,299 (100)

Source: Farm Guide 2005, Government of Kerala

Note: Figures in bracket indicate percentage to total

In 2002-03, the total area under fruits and vegetables cultivation was 4,18,676 ha and 1,81,299 ha respectively. Kannur district (14.82 per cent) followed by Malappuram district (11.80 per cent) and Palakkad district (8.81 per cent) accounted for the largest area under fruits cultivation. In the case of vegetables, the largest area was accounted by Kollam district (17.00 per cent) followed by Thiruvananthapuram district (15.89 per cent) and Palakkad (10.22 per cent). The area under fruits and vegetables cultivation was the lowest in Pathanamthitta, (2.81 per cent) and Kasargod (1.74 per cent) respectively.

Marketing plays a crucial role in the success of agricultural development programme and improving the socio-economic conditions of farmers. As early as in 1928, the Royal Commission on Agriculture emphasized the need for strengthening agricultural marketing system to safeguard the interest of Indian farmers. In 1976, the National Commission on Agriculture reported many lacunae in the agricultural

marketing system and suggested measures to strengthen it. The report pointed out that 50 per cent of the sale proceeds of agricultural produce reached middlemen and the farmers received only a nominal share of the sale proceeds. The policy measures announced by the Government following the report, like minimum support price, procurement price and the like did not benefit the farmers, and vegetable growers in particular.

The agricultural marketing in India is basically in the clutches of middlemen. The practices of these middlemen are often exploitative and the cultivators are always the worst hit. It is common knowledge that when there is a rise in the price of agricultural commodities the farmers are the least benefited and when there is a fall in prices, they are the worst affected. The cultivation of fruits and vegetables is at the mercy of the middlemen more than other crops because of the highly perishable nature of the produce coupled with the imperfect market structure ruled by unscrupulous intermediaries. An effective and efficient system of agricultural marketing is the need of the hour to protect the farmers from the middlemen. It is sine qua non for stimulating production, assuring remunerative prices to farmers, providing quality commodities to the consumers at reasonable price and for accelerating the pace of economic development.

The horticultural crops differ from other food crops like cereals with respect to certain natural characteristics like moisture content (70-95 per cent as against 10-20 per cent in cereals), texture (soft as against hard texture in cereals) and unit size, etc., which render them, highly perishable, resulting in post-harvest losses. This unique set of features make marketing of horticultural produces quite complex and risky. Because of their high perishability, seasonality and bulkiness, horticultural produces require special care and attention in providing time, form and place utilities which in turn add to the marketing costs. Another important problem in the marketing of

horticultural produces is the prevalence of imperfect market structure for these commodities mainly due to the existence of private traders and other intermediaries in the channels of distribution. These factors have great bearing on the marketing system influencing the ultimate prices realized by the growers. In addition, the marketing of horticultural produces presents peculiar problems. The production centres are often localized and are far remote from the concentrated urban centres of consumption. This calls for quick and efficient methods of transportation as well as proper packing system. In vegetables and fruits marketing the crude and age old methods of picking, packing, transportation and handling leads to colossal waste of valuable produce. The involvement of large number of middlemen resulting in higher marketing cost is mainly responsible for this state of affairs. The cost of marketing depends upon the particular channel adopted by the grower and length of the marketing channel. Higher the marketing costs the lower will be the profit margins and vice versa.

Market efficiency is directly related to the cost involved in moving goods from producer to the consumer and the marketing functions performed by the various market participants. If the cost compared with the services provided is low, the market will be efficient and vice versa. An improvement that reduces the cost of a particular marketing function without reducing consumer's satisfaction indicates an improvement in market efficiency.

According to Kohls and Uhl, marketing efficiency is the ratio of market output (satisfaction) to marketing input (cost of resources). An increase in the ratio represents improved efficiency and a decrease denotes reduced efficiency. A reduction in the cost for the same level of satisfaction or an increase in the satisfaction at a given cost results in improved efficiency. The term marketing efficiency may be broadly defined as the effectiveness or competence with which a market structure performs its designated functions.

For measuring the efficiency of agricultural marketing, two broad approaches adopted in the literature may be distinguished as (a) the analysis of price spreads and marketing margins, and (b) the analysis of the working of the markets, delineating their structure, conduct and performance with a view to exploring the sources of inefficiency in the system.

Structure, conduct, and performance approach

Structure, conduct and performance (SCP) analysis was developed by Bain (1959, 1968), Clodius and Mueller (1961), Slater (1968) and Bateman (1976). SCP analysis holds that the market structure (the environment) determines market conduct (the behaviour of economic agents within the environment) and thereby sets the level of market performance. It is an attempt to compromise between formal structures of economic theory and empirical observations of organizational experience in imperfect markets. It is a standard tool for market analysis.

Market structure is defined as “the characteristics of the organization of a market which seem to influence strategically the nature of competition and pricing within the market” (Brain, 1959). Market structure also refers to the organizational characteristics that determine the relation sellers establish in the market to other actual or potential suppliers of goods including potential new firms that may enter the market. In general, market structure can be studied in terms of the degree of seller and buyer concentration, the degree of product differentiation, the existence of entry and exit barriers, and the power distribution. Clodius and Mueller (1961) observed that the distribution of market information and its adequacy help in sharpening price and quality comparisons in reducing risk. From an institutional viewpoint, market structure also encompasses all formal rules and/or regulations that co-ordinate market exchange. Every trader has to follow these rules, which we are called the rules of the game.

Market conduct refers to the set of competitive strategies that a trader or a group of traders employ to run their business. These strategies include the methods to determine prices and output; their behaviour towards grading, sorting, customer relationships and adoption of innovations; the means by which price and product policies of competing traders are coordinated and adapted to each other; and the extent to which predatory and exclusionary tactics are directed against established rivals or potential entrants. In other words, market conduct focuses on traders' behaviour with respect to various aspects of trading strategies such as buying, selling, transport, storage, information and financial strategy. In line with the literature on institutional economics, these are called the rules that define the play of the game.

Market performance, according to Stern *et al.* (1996), is a multi-dimensional concept. The performance of marketing channels and institutions, therefore, can be assessed by considering a number of dimensions including effectiveness, equity, productivity and profitability. Market performance refers to economic results: product suitability in relation to consumer preferences (effectiveness); rate of profits in relation to marketing costs and margins; price seasonality and price integration between markets (efficiency). In sum, market performance refers to the impact of structure and conduct as measured in terms of variables such as prices, costs and volume of output (Bressler and King, 1979). By analyzing the level of marketing margins and their cost components, it is possible to evaluate the impact of the structure and conduct characteristics on market performance (Bain, 1968).

With a view to develop fruits and vegetables cultivation on a sustainable level and to ensure remunerative prices to farmers, the Kerala Horticultural Development Programme (KHDP) was launched in the state by Government of Kerala with the assistance of European Union in 1993 with a total financial outlay of Rs.131.45 crores. Over a period of seven years, the Programme could increase the production

and productivity of fruits and vegetables through innovative agricultural extension, technology dissemination, participatory credit, wholesale and retail marketing of output and group approach in problem solving. The activities of the KHDP were taken over by Vegetable and Fruit Promotion Council, Keralam (VFPCCK), a company registered under Section 25 of the Indian Companies Act, 1956 on 15th January 2001. One of the revolutionary concepts experimented by KHDP and followed by VFPCCK is group marketing of produce through Swasrya Karshaka Samithies (SKSs). In group marketing, farmers, instead of going to the traditional markets and selling individually to traders, form their own market and get traders to come and buy from this market. Under the VFPCCK strategy, the Swasrya Karshaka Samithi is the focal point for about 10-15 self-help groups to produce and market their output collectively.

Unlike other institutional models, the SKS interacts directly with the farmers. SKS is a testimony of the success of collective strength and farmer-centered development. Participating farmers are extending their activities beyond horticulture to social life, boosting their self confidence and making them better citizens. SKS model is perhaps the only model for agricultural development in India that has achieved so much without giving subsidies and free handouts to farmers. By adopting ideas such as Participatory Technology Development, SKS has helped the farmers to find solutions for agricultural problems through mutual discussion and enquiry rather than institutional research. With innovative credit package, SKS has substantially increased bank credit to farmers while reducing loan defaults. Another area SKS helps the farmers is in improving the risk bearing ability by providing crop insurance facility. The market intervention of VFPCCK through SKSs benefited the farmers through increased social interaction, increased bargaining power, better market information sharing and better prices.

Against this background the objectives of the present study are:

- To analyze the marketing behaviour of commercial fruits and vegetables farmers, and to evaluate the structure, conduct and performance of 'Swasraya Karshaka Samithies' (SKSs) promoted by Vegetable and Fruit Promotion Council, Keralam (VFPCCK).

Scope and practical utility

The findings of the study can be used to motivate the farmers to adopt better market behaviour/practices to improve their return on investment. The study identifies the structural and functional imperfections of the SKSs and suggests measures to improve their competitiveness. The comparative evaluation of various markets/marketing channels will enable the farmers to market their produce through the most efficient market/channel.

Limitations

1. Although adequate precautions had been taken to minimise reporting bias on the part of the respondents, a certain degree of error or bias is likely to prevail.
2. The study was mainly based on the data available in selected SKSs. The absence of commodity-wise quantity and price was felt as a major limitation of the study.
3. Almost 80 per cent of the selected SKS were dealing in banana mainly. The arrival of other vegetables in SKS was very low and the number of farmers who cultivate other selected crops was also low. Hence sample size of farmers for commodities except banana was very small.

4. As the statistical tools used for analysing the structure, conduct and performance of agricultural markets are not yet standardised the quantification of results had certain limitations.

Organisation of the study

The report is organised into six chapters including the introductory chapter. The second chapter attempts a comprehensive review of the available literature. Materials and methods employed in the study which includes study area, study period, sample size, database and statistical tools are presented in the third chapter. The fourth chapter discusses the group marketing system and the organizational profile of Vegetable and Fruit Promotion Council, Keralam (VFPCCK). The results and discussion of the study are presented in the fifth chapter. The final chapter summarizes the findings and conclusion.

Review of Literature

CHAPTER 2

REVIEW OF LITERATURE

In this chapter an attempt has been made to cover the literature relating to the area of agricultural marketing system so as to develop and establish the theoretical framework for the study based on ideas and concepts expressed in various studies. It encompasses literature relating to agricultural marketing system, fruits and vegetables marketing, efficiency of agriculture market, and structure, conduct and performance analysis of agricultural market in particular. The available literature are categorized under the following heads:

- 2.1. Agriculture Marketing System.
- 2.2. Fruits and vegetables Marketing.
- 2.3. Efficiency of Agriculture Market.
- 2.4. Structure, Conduct and Performance analysis.

2.1 Agriculture Marketing System

Engle (1941) in his study defined marketing system as all physical plant and equipment, including transportation facilities, storage and warehouse capacity, and all wholesaling and retailing structures. Functionally all those activities essential to the transfer of goods, physically and otherwise, from primary producers to ultimate consumers are included in marketing. Institutionally, marketing comprises all of the business mechanisms, corporations, partnerships, individual proprietorships and co-operatives operating within the above areas. Primary producers and secondary producers, processors and manufactures are included to the extent they, themselves perform essential marketing functions or own or operate physical properties devoted to such functions.

Thomson (1951) stated that the study of agriculture marketing comprises all the operations and agencies involved in the movement of farm produced foods, raw material and their derivatives such as textiles from the farms to the final consumers and the effect of such operations on farmers, middlemen and consumers.

Subramanyan (1989) in his study viewed agricultural marketing as a middlemen's affair, eating up a greater share of consumer's price and leaving the cultivator with a meagre profit.

Sebastain (1990) defined the marketing system as the channel organizations involved in the physical flow of products from the producer to the final consumers.

Mitter Dorf (1993) remarked that most rural markets have developed over time and may be owned or provided by communal or by co-operative agencies. Investment in infrastructure has to be kept low for low cost marketing. The active participation of users is essential to plan, implement and maintain rural market centres. He also observed that there are many failed cases of rural markets. It was due to the operation of such markets without the active participation of the beneficiaries. It was too expensive and not adequately used by the producers because the proposed users were not convinced of the benefits derived to them.

In a study of the functioning of both successful and not so successful co-operative marketing societies in Tamil Nadu dealing with fruits and vegetables Ganjananan and Subrahmaniyan (1993) observed that not only overhead cost need to be minimised but trading should also be improved by making majority of the cultivators to participate in their activities.

Bhatia (1995) suggested that in a vibrant society, the marketing system has to be dynamic and it is possible only by undertaking continuous search for making it most efficient and effective in order to maximize the welfare of the consumers as well as producers of agricultural products.

Murthy and Reddy (1996) suggested various measures for improving the agricultural marketing system which includes suitable pricing policies, active participation of public procurement agencies, strengthening of co-operatives, scientific grading, credit linked storage, storage facilities at reasonable cost, improved market

intelligence and systematic and continuous estimation of demand for various agricultural products.

Ashok (1996) reported that marketing of vegetables has also been attempted by NDDDB, in the region of Delhi, but unfortunately the concept was not spread beyond this region and marketing of vegetables found to be a highly unorganised system in most parts of the country. Unfortunately the Anand pattern of marketing has not been replicated in any of the other agricultural commodities. Thus in the case of vegetables, devising a proper system of marketing is considered essential.

Jeeja (1996) found that most of the farmers or producers perform one or more marketing functions. They sell their produce either to the pre-harvest contractors in the flowering stage itself or to the commission agents in the district. Some farmers, especially large farmers, transport the produce to nearby market and sell it either to the market agent or to the wholesaler. Some farmers take their produce to the processing units especially when such units exist nearby.

According to Awadhesh (1997) there are a number of reasons which affect not only the profit margin of producers but also increase the burden on consumer's pocket. To cope with such problems, our Government has been for long trying their best, but nothing concrete could be done. Farmers should come forward through their own organisations to help themselves. Cold storage facilities may be made available to farmers on co-operative basis so that they may store their small surplus at reasonable costs. Farmers may have the option of getting their produce out of the store whenever they want to.

Acharya and Agarwal (1998a) indicated that marketing channels are routes through which agricultural products shift from producers to consumers. They further illustrated that marketing channels for fruits and vegetables vary from commodity to commodity and from producer to producer. Some of the marketing channels for fruits and vegetables identified are:

- (i) Producer – consumer
- (ii) Producer – primary wholesaler – retailer– consumer
- (iii) Producer– processor
- (iv) Producer – primary wholesaler – processor
- (v) Producer – primary wholesaler – secondary wholesaler – hawker – consumer
- (vi) Producer – local assembler – primary wholesaler – retailer – consumer

Acharya and Agarwal (1998b) defined agricultural marketing as comprising of all the activities involved in the supply of farm inputs to farmers and movement of agricultural products from the farm to the consumers. They also observed that marketing system includes the assessment of demand for farm inputs and their supply, post-harvest handling of farm products, performance of various activities required in transferring farm products from farm gate to processing industries and to ultimate consumers, assessment of demand for farm products and public policies and programmes related to the pricing, handling and purchase and sale of farm inputs and agricultural products.

Bhat (2001) indicated that timely and accurate market information is the base for efficient marketing system. Taking advantage of the technological and scientific advancements, the state agriculture marketing boards and departments shall take up collection and dissemination of market information on prices, demand, supply movements, etc.

According to Barbora (2001) one possible way of improving agricultural marketing is to bring a meaningful model beneficial for both farmers and industrialists by inviting farmer's participation in equity in agricultural production/processing ventures. This will transform the corporate sector into a co-operative sector. Thus the farmer could retain their land and do the farming in their own land and the co-operative provide them some key inputs and sound marketing support.

2.2 Fruits and vegetables Marketing

Joshi (1968) found that the availability of an increased measure of institutional credit for production and marketing of fruits and vegetables has brought to the producer the freedom to decide when and where to market his produce.

Mahalanobis (1971) opined that there is greater scope for increasing the production of vegetables and fruits. But due to their high perishability, they are usually sold out quickly at lower prices causing heavy loss to farmers and this restricts the farmer from producing more.

Ramasubramanian (1979) who studied the problems of banana marketing found that absence of grading was an important problem. Transportation was reported as the second main problem followed by fluctuating prices and too many middlemen in banana trade. Labour charges, cost of fertilizers, cost of seeds and cost of manure were also some of the other issues related to banana marketing apart from the loss due to the unforeseen climatic conditions.

Subrahmanium and Doss (1979) estimated the cost of cultivation of vegetables in Mallur and Chickballapum taluks of Kolar districts of Karnataka. According to them manure and manuring accounted for nearly 70 to 75 per cent of total cost.

Narain (1980) observed that vegetable marketing is in the hands of wholesalers, commission agents and retailers who represent the successive functionaries in the marketing channel. He also observed that the structure of marketing system in the country itself involves three types of markets through which the agricultural commodities from the producers reach the ultimate consumers. These are primary rural markets, wholesaler's assembly markets and terminal markets.

Thushar (1981) highlighted the importance of processing industries in Indian context. A large quantity of seasonal fruits and vegetables i.e., about 30 per cent deteriorates by the action of micro-organisms. Processing and preservation are, therefore,

very essential to take care of surplus fruits and vegetables. It helps to get food with uniform quality throughout the year and to make the food available in regions where it is not grown.

David (1984) stated that for the development of horticulture sector, an outlet for profitable disposal of the fruits is essential, which will encourage cultivation and processing. He explained this with the example of pineapple canning industries in Kerala. The establishment of these units was to procure pineapple and simultaneous development in pineapple production so as to meet the demand.

In a techno-socio-economic survey conducted by TNAU (Anon, 1986) at Coimbatore district, the price spread of banana produced at Mettupalayam and sold at Coimbatore was worked out. The study revealed that out of the price paid by the consumer at the tail end of distribution channel, 46 per cent went to the producer, 26 per cent to the pre-harvest contractors, 17 per cent to the wholesaler and 11 per cent to the retailers.

Subrahmanyam (1988) found that the cultivators on the basis of area sell produces usually at the time of flowering or sometimes even earlier for a fixed amount without bothering for the yields or future market price. The farmer believes that they are relieved from bearing the risk of damage in transportation and storage and extra expenses related to the transfer of produce from the farm gate to the market. He also analysed the self-marketing practices, which was contrary to the above practice and observed that the orchards of all size groups earned extra return and savings even after meeting all expenses when the farmer takes produce to the market. So he is of the opinion that there are definite advantages to farmers by limiting the number of middlemen. However, the exploitation of farmers on grounds of perishability and risk bearing ability should also be taken into account.

Pandey (1989) viewed that India is gifted with a wide range of fruits and vegetables which contributed a rich source of nutrients supplement to the food resources

of the country and thereby improving overall nutritional standard of the people. The per capita consumption of fruits in India is around 60 gms and vegetable is 75 gms, which is too low compared with the minimum dietary requirements of 85 gms and 200 gms respectively.

Raju and Venkateshan (1989) identified three channels for marketing of banana of which 'producer – pre-harvest contractor' channel was most widely adopted by the farmers (65 per cent). But in the case of direct sale of banana, producers were getting only very low share of the consumer's rupee (45 per cent) which indicated low marketing efficiency.

Vijayarajan (1990) in his study highlighted the role of institutional credit, stressed the need for market financing of farm produce and examined the role played by the agro-based and processing industries in agricultural marketing and market financing. It is suggested that by effecting a vertical integration between the agricultural sector and agro-based and processing industries, problems relating to agricultural marketing can be considerably reduced.

Kamber and Sing (1991) suggested that the cost of processed food can be reduced considerably by proper monitoring of post-harvest operations for which conservation of materials, efficient and judicious use of inputs, bye-product utilization, capacity utilization, etc, are important.

An attempt was made by Raj *et al.* (1991) to study the export perspective of fresh fruits and vegetables in India. The study was based on secondary data collected from various issues of FAO publications and trade year book. India's export of vegetables and fruits as a percentage of total production showed erratic and static behaviour during 1989-90. India's share as a percentage of total export of potato, orange, lemon and banana during the period under review was 0.09 per cent.

According to Nai (1992), the vegetable marketing in India is beset with many bottlenecks. There are large number of middlemen in the marketing chain and malpractices are rampant. Secret methods of sales practiced in some areas create a lot of suspicion in the sellers. In case of any dispute the middlemen favour the buyers rather than sellers. The marketing costs are high and there is no grading and standardization of the product. The main drawback is the lack of market intelligence system, with resultant seasonal glut and depression in prices.

Sandhya (1992) studied the economies of production and marketing of vegetables in Ollukkara block in Thrissur District. It was observed that the wholesaler's margin accounted for 16.45 per cent of the consumer's price of bittergourd and 23.76 per cent of the consumer's price of ashgourd whereas marketing cost incurred by wholesalers accounted for 4.02 per cent and 7.26 per cent of the consumer's price respectively for bittergourd and ashgourd. The producer's net share in consumer's rupee was 59.23 for bittergourd and for ashgourd.

Srivastava (1993) opined that the marketing efficiency could be improved by two ways viz., (i) by increasing the operational efficiency and, (ii) improving pricing efficiency. The former relates to input-output ratio and forms relative cost in the performance of physical marketing functions such as storage, transportation, etc. The latter refers to the situation where the sellers get the value of their produce and consumer receives the value for their money.

Takur *et al.* (1994) observed that vegetable production was highly cost intensive or expensive but at the same time highly remunerative. Among the total variable cost for five vegetables viz., tomato, capsicum, cauliflower, cabbage and peas, labour cost (hired and family labour combined) occupied the lion's share.

According to Raju (1994) horticultural sector has the highest potential for the agricultural development of Kerala. Even the horticultural crops dominate the farming,

due to highly perishable nature and lack of appropriate handling methods, 30 per cent of the production is lost during post-harvest periods.

Ramachandran (1997) studied the marketing channels of okra and tomato in Palakkad. It was found that, the major channel is producer - commission agent - wholesaler - retailer - consumer. In that channel the producer's net share on consumer's rupee was Re.0.60 for okra and Re.0.61 for tomato. The Index of Marketing Efficiency was 1.51 for okra and 1.85 for tomato. The analysis revealed that the marketing efficiency of tomato was higher than okra.

Sreekumar (1999) in his study on the impact of KHDP on resource efficiency in banana found that 28.9 per cent of the beneficiary farmers used field centres for marketing, which benefited them in terms of net price realised after accounting for the marketing cost. The beneficiary farmers could realise net benefit of Rs.42.50/q, when sold through the field centres. The credit and marketing facilities created under KHDP seemed to help the farmers in a big way. However, only 28.9 per cent of the KHDP beneficiary farmers utilised the marketing facilities provided under the project.

Isvarmurthi (2000) observed that the main marketing policy intervention that KHDP has so far made is 'group marketing' wherein farmers instead of going to the traditional markets and selling individually to traders now form their own market and get traders to come and buy from their market. This small change has worked wonders for KHDP farmers.

Balakrishnan (2000) in his study on banana farmers in Thrissur found that, out of the five marketing channels identified in the study area, the most important channel was producer - KHDP market-retailer-commission agent. The next important channel was producer-commission agent-wholesaler-retailer-consumer.

Shalandra and Singh (2001) examined the marketable surplus, marketing cost and marketing margin and producer's share in consumer's rupee under different channels in

marketing wheat in Kanpen District during 1999-2000. The results brought out a positive correlation between the marketable surplus and size of holdings. There was an increase in marketing cost and margins with the increase in length of marketing channel, while producers share in consumer's price decreased with increase in the length of marketing channels.

2.3 Efficiency of Agriculture Market

Sing *et al.* (1973) estimated the producer's share in consumer's price for five vegetables for farmers located in villages at Hyderabad and Secundrabad during August-September 1981 using the method of concurrent margins. The producer's share varied between 29.4 and 44.8 percent. Retailer's margin was higher than the share of farmers. The low share of farmers was due to credit dependence of producers and retailers on commission agents and lack of cold storage facilities, ineffective supervision of weighing, inaction by market committee and absence of grading as well as market information.

Desai (1973) pointed that in the case of virtually all crops, the producer's share in the consumer's price is different not only in various regions but also in different marketing channels at the same location. These variations in the producer's share were also due to differences in both marketing cost and margins of the intermediaries. In the case of alternative marketing channels differences in the producer's share were often due to difference in the marketing functions performed by them.

Elango and Baskaradoss (1973) in their study on price spread found that on an average the farmer receives only about 40 per cent of the price paid for food products by the consumer. They also found that the middlemen enjoy too large a margin of profit, disproportionate to the service rendered.

Shturkar and Deole (1979) estimated the producer's share in the consumer's price of banana, sweet orange, mandarin orange and sour lime in the Marathuda region of

Maharashtra during 1981 –83. For banana, the producer's share varied between 45 and 70 per cent in different markets.

Desai (1979) in his study of dynamics of price spread components concluded that price spreads of agricultural products was influenced by endogenous as well as exogenous factors. The study inferred that in the fixation of price of agricultural products, weightage should be accorded to factors like the size and location of the farm holding, type of products, traders margin and processing cost.

According to Kohls and Uhl (1980) marketing efficiency is the ratio of market output (satisfaction) to market input (cost of resources) and an upsurge in this ratio symbolizes improved efficiency. A drop in the cost of identical level of satisfaction or an augment in the satisfaction at a specified cost gives rise to improved efficiency.

Bhalero and Setal (1980) suggest cost reduction in vegetable cultivation through improved techniques and marketing practices to necessitate a considerable increase in the production and consumption of vegetables. The high cultivation cost and price spread make it difficult for the medium and low-income group of the population to consume vegetables to the desired extent.

Rajagopal (1986) found that the six performance indicators of marketing channels reflecting economic efficiency are (i) producer's share, (ii) marketing cost, (iii) middlemen's margin, (iv) price deviation, (v) peak period seasonal price variability and (vi) lean period seasonal price variability.

Subbarao (1989) reported that for measuring agricultural marketing efficiency two broad approaches may be distinguished (a) the analysis of price spread and marketing margins and (b) the analysis of working of the markets, delineating their structure, conduct and performance with a view to exploring the source of inefficiency in the system. He also indicated that the market structure methodology is an attempt to

learn about efficiency of marketing system by directly comparing with the requirements of a competitive model.

Nagraj *et al.* (1992) observed that the vegetable market is relatively more efficient than the fruit market. The study also reiterated that the supply in vegetable market is relatively less inelastic than the fruits.

Biradar (1996) pointed out that 'price spread' is the price paid by the consumer and the price received by the producer for an equivalent quantity of farm produce. This is also termed as 'marketing margin'. It includes (i) the cost involved in moving the commodity from the point of production to the point of consumption i.e., the cost of performing the various marketing functions and of operating various agencies and (ii) profits of various market functionaries involved in moving the produce from the initial point of production till it reaches the ultimate consumer.

Chahal and Gill (1991) emphasized that price spread is the main parameter in judging marketing efficiency in various channels or in assessing the comparative efficiency of various markets. The market integration refers to the expansion of firms by consolidating additional marketing functions and activities under a single management.

Venkataramana and Gowda (1996) identified price spread as one of the important measures of market efficiency, which indicates the share of the producer in the consumer's rupee. It also indicates the share of various market intermediaries in the consumer's rupee, for the service rendered by them in channeling the commodity from the producer to the consumer.

According to Bhatia (1996) to promote efficient and orderly marketing, the cause of imperfect mobility should be removed and make the producers more market conscious by disseminating market information thereby involving the producer directly in the marketing of his produce.

Devi (1996) reported that the producer's share in consumer's rupee for vegetable and fruit varied between 51 and 57 per cent and 49 and 53 per cent respectively. In the case of vegetables the marketing margin was higher than the cost incurred by the farmers. However, in the case of fruits the marketing cost was higher for intermediaries.

Singh and Dhillon (1996) stated that the produce passes through many intermediaries who perform their own functions so as to provide good quality produce to the consumer. Some are performed at the farm level and others are performed at market level. Efficiency of different functions is considered on the basis of cost incurred/losses/wastages of the produce during different marketing operations.

Marimuthu *et al.* (2001) found that efficient marketing system ensures remunerative or fair prices to the farmers and motivate them to go in for higher investment and production.

2.4 Structure, Conduct and Performance analysis

Evans (1961) who studied the empirical measurement in market structure research opined that bridging the gap between structure and performance is the difficult phase of this area of research. He also opined that it requires familiarity on the part of the researcher and data on the market under study, which were often very difficult to obtain.

Clodius and Mudler (1961) observed that the person who seeks to employ market structure approach in his research must recognize that it could not do every thing, but its chief function is an orientation in research that is useful in suggesting new ways attacking old as well as emerging problems. He also commended that it is better to be vaguely right than precisely wrong, the often-repeated dictum has a special application in the field of market structure research.

Sosmik (1961) gave a theoretical framework for analyzing structure, conduct and performance. Major emphasis in this study was on the elaboration to the term market performance. According to the author the term stands for the outcome of an action in the

market. Market performance would be reflected in the quantity buyer would buy from the seller, market price, and profit of the firm operating in the market.

Folz (1967) observed that the market structure can be statistically described and measured but conduct and performance are not so objectively evaluated. Economic theory inadequately provides precise guidelines. So the analyst makes value judgments based upon unreliable standards.

George and Singh (1970a) reported that market structure refers to those characteristics of an organization of a market, which influences the nature of competition, pricing in the market and affect the conduct of business firms. Conduct refers to the pattern of behaviour, which the firms follow in adapting or adjusting to the market in which they buy or sell. Performance refers to the economic results that flow from the industry as each firm pursues its particular line of conduct.

George and Singh (1970b) found that the market structure is one of the strategic factors influencing the conduct of vegetable trading firms and the overall market performance. Vegetable trade in the wholesale market was highly concentrated in the hands of a few large buyers who set the tone of the market and effectively stalked the entry of new rivals. Since the short-term supply was highly price inelastic in the case of perishable vegetables it appeared a ripe ground for reaping monopoly gains. This resulted in the lower prices to producer-sellers and high profit margin to the intermediaries, which was out of proportion to the relatively greater risk involved in the trade.

Gopalan (1979) who analysed the marketing efficiency opined that efficiency helps to reduce forced sales at unfavorable place in unfavorable time for unfavorable price. It helps increased production, avoids frauds in marketing channels, and improves the power of the farmers. Therefore, marketing efficiency is very much sought for marketing co-operatives functioning at the grass root level.

Harriss (1993) opined that, the structure, conduct and performance analysis is an attempt to compromise between formal structures of economic theory and empirical



observations of organisation's experience in important markets. Market structure consists of characteristics of the organisation of a market, which seem to influence strategically the nature of competition and pricing within the market. Market conduct is the pattern of behaviour, which enterprises follow in adapting or adjusting to the market in which they sell. Market performance represents the economic results of structure and conduct.

Nethaji (1993) defined marketing behaviour as the pattern of decisions to select and sell the produce through various marketing channels.

According to Acharya and Agarwal (1994) the market structure determines the market conduct and performance. The term market conduct refers to the pattern of behaviour of firms, specially in relation to pricing and their practices in adapting and adjusting to the market in which they function and market performance refers to the economic results that flow from the industry as each firm pursues its particular line of conduct.

Pandiraj and Monoharan (1996) studied the marketing behaviour of farmers in six villages of Madurai. They found that 93.33 per cent of the regulated market participant farmers graded their produce before marketing. Thus the grading behaviour was found to be influenced by institutional participation.

Madan *et al.* (1999) observed that the medium size farmers had the advantage of both more family labour and better capacity to make capital expenditure on fertilisers, pesticides and irrigation. Small farmers had the advantage of more family labour relating to the land size but they lacked capital. While the large farmers had a greater capacity to make capital expenditure compared to small and medium farmers they had less family labour in relation to land.

Rargi and Sidhu (2001) observed that for improving marketing efficiency, market structure, conduct and performance need to be reviewed and various institutions involved have to mould their mindset keeping in view the fast changing scenario.

Materials and Methods

CHAPTER 3

MATERIALS AND METHODS

The present study analyses marketing behaviour of commercial fruits and vegetables farmers and structure, conduct, and performance of Swasraya Karshaka Samithies (SKSs) promoted by VFPCK. The parameters which influence marketing behaviour, structure, conduct and performance of the SKSs were examined by using various analytical tools. The methodology of the study is outlined in this chapter.

3.1 Conceptual framework

The various concepts and terms used in the study to analyse the objectives are given below along with their working definitions.

Efficient marketing: Movement of goods from producers to consumers at the lowest possible cost, consistent with the provision of the services desired by the consumer.

Grading: Grading means the sorting of the unlike lots of produce into different lots according to the quality specifications laid down. Each lot has substantially the same characteristics as far as quality is concerned.

Marketing behaviour: Marketing behaviour refers to the pattern of decisions taken by farmers to select and sell the produce through various marketing channels.

Marketing channels: Marketing channels are routes through which agricultural products move from producers to consumers.

Market structure: Market structure refers to those organizational characteristics of a market which influence the nature of competition, pricing and conduct of business firms.

Market conduct: Market conduct refers to the set of competitive strategies that a trader or a group of traders use to run their business.

Market performance: Market performance refers to the economic results that flow from the industry as each firm pursues its particular line of conduct.

Market information: Market information is defined as a communication or reception of knowledge or intelligence. It includes all the facts, estimates, opinions and other information which affect the marketing of goods and services.

Market power: A given firm or group of firms can be said to possess market power, when they individually or in concert are in a position to follow persistently price, product and market policies in a manner different from the conduct of a competitively structured market would impose up on firms facing otherwise similar cost and demand conditions.

Open auction method: In this method, the prospective buyers gather in the yard of the SKS, around the heap of produce, examine it and offer bids loudly. The produce is assigned to the highest bidder.

Packing: Packing means, the wrapping and crating of goods before they are transported.

Price discovery: Price discovery means the discovery of prices by producers, middlemen and consumers based on their evaluation of the supply and the prospects of what the buyers are likely and willing to pay for their quantities at each stage of marketing.

Price spread: Price spread is the difference between the price received by the producer and the price paid by the trader for a given commodity in SKS during the study period.

Storage: Storage is an exercise of human foresight by means of which commodities are protected from deterioration, and surplus supplies in the time of plenty are carried over to the season of scarcity.

Traders bulking point: Is the place where the traders store the produce after collecting the produce from SKS at their own place of operation.

3.2 Sampling procedure

3.2.1. Study area

The study was conducted in Thrissur and Palakkad districts which accounted for the largest volume of business through SKSs and to get a better true representation of the crops selected for the study. Out of the 16 SKSs functioning in Thrissur district and 12 in Palakkad district during the study period, five SKSs each were randomly selected from

both the districts for the study. The five SKSs selected from Thrissur district are Pazhayannur, Pariyaram, Thottipal, Alangad and Panancherry. Kanjirapuzha, Elavenchery, Kottayi, Machanthode and Vyyakurshi are the SKSs selected from Palakkad district.

3.2.2 Study period

The field level investigation was conducted during the month of January and February, 2006.

3.2.3 Selection of respondents

Commercial farmers and traders of fruits and vegetables constituted the population of the study. In the first stage, five SKSs which were functional for a period of at least two years were selected from each district randomly. From the area of operation of each SKS, ten member farmers who marketed their produce through SKS and five farmers who marketed their produce otherwise were selected randomly in the subsequent stage. Similarly, five traders were also randomly selected from each SKS.

3.2.4 Crops selected

Based on the pilot study, nendran, cowpea, bittergourd, amaranthus and ivygod were the crops selected for the study.

3.3 Methodology

3.3.1 Database

The study was mainly based on primary data collected from farmers and traders and the records of the SKSs. The data were collected from the sources through personal interview method by administering separate pre-tested structured schedules to farmers and traders.

3.3.2 Statistical tools used for the study

Bivariate tables and percentages formed the bases of analysis. The other tools and techniques used for the analysis are described below:

3.3.2.1 Ranking

Ranking method was used to analyse the factors which influenced farmers decision to take membership in SKS market, to identify the source of market information and to isolate the reasons for patronising SKS market, reasons for selecting farmgate traders, local market and wholesale market by the farmers. . For ranking, KxN table of observed ranks for each factor was formulated. Here 'N' is the number of objects ranked and 'K' is the number of judges assigning ranks. After preparing the table each rank was given the score from 'seven' to 'one' in the ascending order of the rank. i.e. the rank 'one' will given the score of 'seven' and 'two' will be given the score of 'six' and so on. Scores thus obtaining to each factor was summed. The factors were then ranked on the basis of the sum of scores obtained by each factor. The parameter which secured the maximum score was identified as the most influencing factor and ranked first. The parameter that obtained the minimum score was ranked last among the various factors.

3.3.2.2 Analysis of market structure

Market structure was analysed using Bain's model of classifying the market. Based on the total volume of business controlled by the top four firms, the markets were classified into one of the following four categories:

Kind of oligopsony	Percentage share of business	Category.
Highly concentrated	75-100	I
Moderately concentrated	50-75	II
Slightly concentrated	25-50	III
Atomistically competitive	0-25	IV

3.3.2.3 Measurement of satisfaction

The perception of farmers and traders towards SKS was analysed by asking them to express their agreement or disagreement to the given statement on a five point scale.

The five categories of responses were 'strongly agree', 'agree', 'no opinion', 'disagree' and 'strongly disagree' and the respective scores were '+2', '+1', '0', '-1' and '-2'.

In the next step the total score of each statement was computed by using the following formula:

$$\frac{(f_1 \times 2) + (f_2 \times 1) + (f_3 \times 0) + (f_4 \times -1) + (f_5 \times -2)}{N \times 2} \times 100$$

Where, f_1, f_2, \dots - number of respondents in each category of response and

N = Total number of respondents

The maximum score obtainable is 100 and minimum score is -100. The response obtained was interpreted as follows:

Index Value	Satisfaction level
-100 to -50	- Highly dissatisfied.
-50 to 0	- Dissatisfied.
0 to 50	- Satisfied.
50 to 100	- Highly satisfied

3.3.2.4 Index for finding the scientific marketing practices

The statements selected under the scientific marketing practices followed by farmers were given in the interview schedule and the respondents were asked to express their opinion to the given statement on a five point scale. Five categories of response were 'always', 'frequently', 'occasionally', 'rarely' and 'never' and the respective scores are 4, 3, 2, 1 and 0.

In the next step is to compute the total score of each statement was computed by using the following formula.

$$\frac{(f_1 \times 4) + (f_2 \times 3) + (f_3 \times 2) + (f_4 \times 1) + (f_5 \times 0)}{N \times 4} \times 100$$

where, $f_1, f_2 \dots$:- number of respondents in each category of response and

N = Total number of respondents

The maximum value obtainable is 100 and minimum value is 0.

The scale of response obtained was interpreted as follows:

Index value < 33.33	-	Rarely follows the practice
33.33 to 66.66	-	Occasionally follow the practice
66.66 to 99.99	-	Frequently follow the practice

3.3.2.5 Measurement of market efficiency

Shepherd's formula was used for this purpose.

Shepherd's formula:

$$ME = \frac{V}{T} - 1$$

where, ME	=	Index of market efficiency
V	=	Value of goods sold, it is the price realized by the SKS and Non-SKS farmers.
T	=	Total marketing cost, it is the total marketing cost of the SKS and Non-SKS farmers.

Profile of Vegetable and Fruit Promotion Council, Keralam

CHAPTER 4

PROFILE OF VEGETABLE AND FRUIT PROMOTION COUNCIL, KERALAM

4.1 KHDP - the parent organisation

The Kerala Horticulture Development Programme (KHDP) was formed in the year 1993 with the financial support of the European Union and Government of Kerala. KHDP was one of the successful agriculture development projects in India with a total project outlay of Rs.131.95 crores. Initiated in 1993, the KHDP made a name for itself as a farmer-friendly project that responded to new and emerging challenges in the horticulture field.

4.2 Vegetable and Fruit Promotion Council, Keralam

The KHDP was initially visualized as a six year project that would culminate in the formation of an organization called Kerala Horticulture Development Council. Later it was rechristened as Vegetable and Fruit Promotion Council, Keralam which would carry forward the works initiated by KHDP.

Vegetable and Fruit Promotion Council, Keralam (VFPCCK) is a company registered under Section 25 of Indian Companies Act, 1956. The activities of KHDP were taken over by VFPCCK on 15th January 2001. VFPCCK is a unique organization having farmers, Government and financial institutions as stake holders. The share capital of VFPCCK is held by farmers, Government of Kerala, and financial institutions (Commercial banks and insurance companies) in the ratio of 50:30:20.

For the promotion of horticultural development in the state, the strategy adopted by VFPCCK is the formation of SHGs of farmers. SHGs are the grass-root level institutions for project intervention. 15-20 SHGs are federated to form a field centre known as 'Swasrya Karshaka Vipani' (SKV) to collectively market their produce. As the SKVs develop adequate business and gain enough experience in running the market they

are registered as Swasraya Karshaka Samithi (SKS) under the Charitable Societies Act, 1955. Group marketing followed by SKSs enable the farmers to take full control over the marketing of their produce.

The major features of SKS (Farmer Markets) are:

- Owned and managed by farmers
- Well-trained committee.
- Market information and management support from VFPCCK
- Transparent accounting system and regular auditing
- Better bargaining power
- Reduced length of marketing chain
- Quality produce
- Production Centre oriented system

4.2.1 Mission of VFPCCK

To develop and sustain cohesive self-help groups of farmers, who use participatory approaches and innovative environment friendly practices to produce and market vegetables and fruits leading to prosperity and gain social empowerment.

4.2.2 Objectives

The primary objective of VFPCCK is to improve the livelihood security and thereby enhance and sustain the income of fruits and vegetables farmers of Kerala. The VFPCCK aims to increase and promote the commercial production of vegetables and fruits and their consumption. It also envisages the optimal and sustainable utilization of technology, human and natural resources, and thereby improving the livelihood security of dependent farmers. It ensures a better share and income from production through cost effective and producer oriented marketing.

4.2.3 Activities of VFPCCK

4.2.3.1 Training

One of the key features of VFPCCK is its innovative farmer training strategy. Under this strategy, it is the SHG members who decide what they need to learn or understand. The training modules include new methods to control diseases and new cultivation practices. Most importantly VFPCCK trains Master Farmers who in turn train the fellow farmers. The training also empowers the farmers to face their day to day situations in their personal, social and economic life with confidence. Till 2005-06, VFPCCK had trained 105590 farmers through 6737 training programmes. (*Administrative report of VFPCCK, 2005-06*).

4.2.3.2 Extension

The extension package of KHDP is the key component for the implementation of most of the project activities of VFPCCK. The major activities include SKSs organising farmers into SHGs, promotion of scientific agricultural practices, and supporting Master Farmers for group marketing.

4.2.3.3 Marketing

The break through marketing intervention made by VFPCCK is "group marketing" wherein farmers instead of going to the traditional markets and selling their produce individually to traders, form their own markets and make the traders come and buy from these markets. The main advantages of SKSs are:

- a) Market is located close to the farms
- b) Marketing commission is only five per cent
- c) Traders are able to procure fresh fruit and vegetable than is available in the traditional markets.
- d) Farmers are guaranteed correct weights.
- e) Transparency in transactions; farmer has a cause to the price for which his produce has been sold. He is also a party in the price fixation process.

The five per cent commission charged on the sales value is used to cover the overheads and to give annual bonus to the farmers. The farmers also benefit from low transportation and handling costs, proper grading and weighing and timely payment.

4.2.3.4 Credit

An efficient credit delivery system tailored to farmer's production needs has been developed by VFPCCK in collaboration with commercial banks. Through this system, cultivating farmers, including lease land farmers, have easy access to bank financing.

The main highlights of the credit package are:

- a) Bank credit is accessible to even lease land cultivators.
- b) Credit is disbursed very fast by the bank; farmers have to make fewer visits to the bank.
- c) VFPCCK staff assist in the screening and monitoring process

No collateral securities are insisted upon by the banks for sanctioning loans to the farmers and about 56,000 farmers have availed of loans to the tune of approximately Rs. 14,725 lakh in Kerala till 2005-06. (*Administrative report of VFPCCK, 2005-06*).

4.2.3.5 Insurance

Insurance coverage for banana farmers was another important assistance provided by VFPCCK in collaboration with New India Assurance Company Ltd. The participating banks have also introduced an innovative insurance cover for banana farmers. The novelty of this insurance scheme is that it covers the loss suffered by banana farmers due to pseudostem borer and kokkan disease besides natural calamities. It is for the first time in India that an insurance company has come forward to cover a specific disease or pest attack suffered by a crop. The insurance premium is Rs.2.65 plus service tax of 12 paise per plant for an assured sum up to Rs 30-60 for banana depending up on the age of the crop.

4.2.3.6 Market Information Centre

The Market Information Centre (MIC) of VFPCCK situated at Ernakulam, collects data of prices and quantity arrivals of 36 vegetables and three major fruits from 16 wholesale markets in Kerala, five wholesale markets out of state and six urban retail markets. The processed information is published in mass media for the use of farmers and consumers. Short-term forecasts of prices of fruits and vegetables are also provided to the farmers. Market trend analysis is also made available on a weekly basis to SKS. The market information is disseminated through All India Radio (AIR), SKS and the farmers can also call up the VFPCCK office to know the price of various commodities prevailing in various markets.

4.2.3.7 Fruit processing

Processing is niche area VFPCCK is now focusing on. According to the Rabo Bank, Netherlands, dealing in agri-business only 2.20 per cent of the fruit and vegetable produced in India is processed, while 80 per cent of the production is being processed in U.S. The installed capacity of fruits and vegetables industries in India increased from 11.08 lakh tone in January 2003 to 21.18 lakh tone in January 2006. During the period of KHDP, with the assistance of Government of Kerala (GoK) a modern factory called to 'Nadukkara Agro Processing Company' (NAPC) is located near Muvattupuzha, process pineapple and mango was started. The processing plant is a Public Limited Company in which farmers hold 70 per cent shares and GoK holds the remaining 30 per cent. VFPCCK has also started a Banana fry plant near Pallikkara at Ernakulam.

4.2.3.8 Export

Export is another important operation of VFPCCK. VFPCCK entered the export business only in 2005-06. Dubai, Damam, Riad, and Qatar are the export market of VFPCCK. Major commodities exported are different varieties of banana, mango (procured directly from farmers), pineapple, etc. During the year 2005-06 VFPCCK exported 38 varieties of fruits vegetables aggregating to 450 MT.

4.2.4 Organisational Structure

In organizational structure; structure and management of VFPCCK and SKS is analysed.

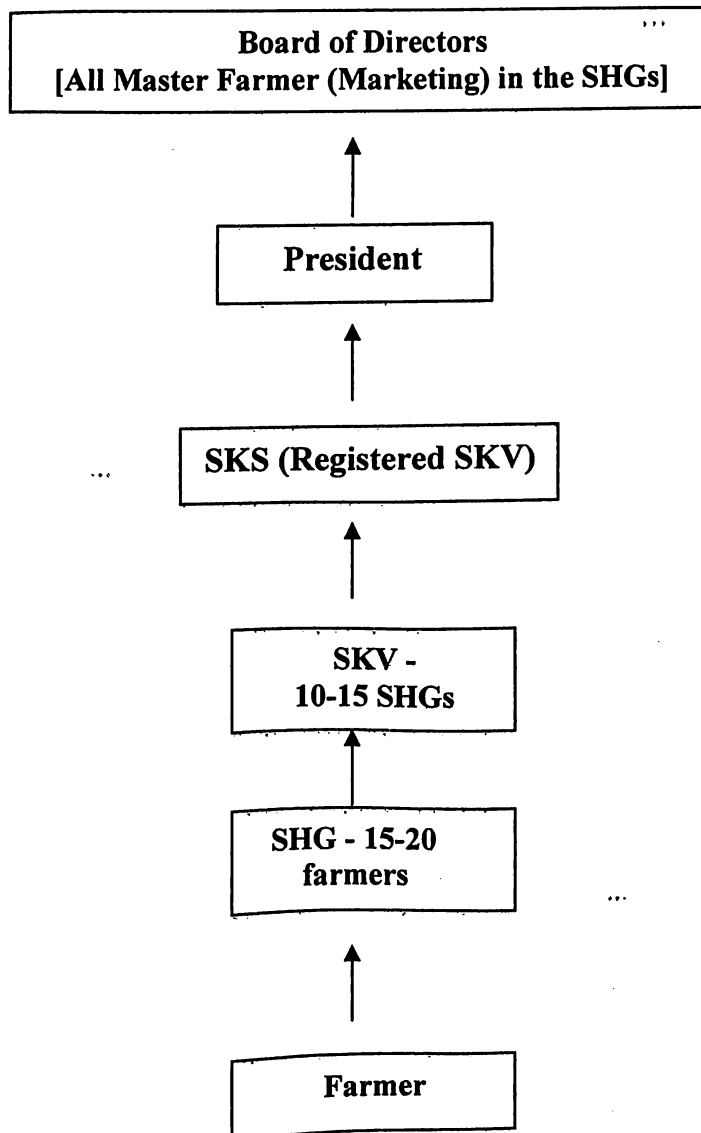


Figure 1. Organisational chart of SKS

4.2.4.1 Swasraya Karshaka Samithy (SKS)

The core concept used by VFPCCK to achieve the development of farmers in each district is the formation of Swasraya Karshaka Samithies (SKSs) through Self Help Groups (SHGs) which is a voluntary association of 15-20 commercial farmers. Each

SHG is managed according to a set of rules and regulations. The grass root level project activities such as awareness creation, dissemination of information, training in new production methods, group marketing, etc, are implemented through the SHGs.

4.2.4.2 Master farmers

Every SHG unanimously elects three Master Farmers (MFs), one each for production, marketing and credit related activities. These Master Farmers are trained by VFPCCK and play an important role in its strategy. They are expected to play leadership roles to guide their group farmers.

'The Master Farmer-Production' is responsible for providing technical information and training to farmers on production related issues such as correct use of seed, fertilizers and other inputs. The 'Master Farmer-Credit' helps the group members to prepare a credit plan and links them with the banks. The 'Master Farmer-Marketing' enables fellow farmers to sell their produce as a group. He also represents the SHG in the SKS (farmers market). The master farmers are normally replaced once in every two years by election.

4.2.4.3 Swaraya Karshaka Vipani (SKV)

A group of 10-15 SHGs form a SKV which was earlier designated as 'sites'. Under the VFPCCK strategy SKVs are the central points for the 10-15 SHGs to market their produce together. When a Swaraya Karshaka Vipani (SKV) is registered under the Charitable Societies Act, it becomes a Swaraya Karshaka Samithy (SKS). In each SKS there is a VFPCCK extension officer called Assistant Manager. This manager plays a facilitating role in organizing SHG meetings and training programmes within the jurisdiction of the SKS.

4.2.4.4 Membership in SKS

The SHG members do not automatically become members of the SKS. They are made members on payment of membership fees and annual fees prescribed by the byelaws of SKS. The membership fee, annual subscription, grant from VFPCCK, grant

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from government and commission collected from farmers constitute the working fund of SKS.

For the first year operation, VFPCCK provides basic furniture, a weighing machine, books of accounts, registers and rent for the premises. SKSs, which fulfill the performance criteria set by VFPCCK are further assisted to acquire land and to erect a permanent building for running the farmers market.

The SKS are permitted to retain five per cent of the sales value as commission which is used to meet the overhead expenses. At the end of the year any surplus remaining after meeting all overheads are returned to members as bonus. Farmers who are not members of the SKS are also allowed to sell their produce through SKS but they are not eligible for the annual bonus. All 'Master Farmers-Marketing' forms the members of the SKS managing committee. Each committee elects a Convenor/President who acts as the connecting link between the market, traders and VFPCCK.

4.2.5 Performance of VFPCCK

VFPCCK had a total of 93,785 active members spread over 203 SKSs in 14 districts as on 31st March 2006. VFPCCK could achieve a business of 270766 MT in quantity and Rs 259.41 crores in value (see Table 4.2), The district-wise sales through SKS for the year 2005-06 is given in Table 4.1.

Table. 1.1. District-wise sales through SKS during 2005-06

District	No. of SKS	Sales	
		Quantity (MT)	Value (Rs. in Lakh)
Alappuzha	10	1200	115
Kozhikkode	9	420	43
Ernakulam	21	10181	892
Kollam	20	5662	667

District	No. of SKS	Sales	
		Quantity (MT)	Value (Rs. in Lakh)
Kottayam	13	6314	525
Malappuram	6	3463	363
Palakkad	45	7564	635
Thrissur	20	7584	766
Thiruvananthapuram	11	6870	593
Pathanamthitta	22	2077	164
Wayanad	19	1692	160
Kannur	14	554	60
Idukki	3	1819	169
Total	203	55399	5152

Source : MIS report of VFPCCK (2005-06)

From the table it is clear that the largest number of SKS was in Palakkad district (45), followed by Pathanamthitta district (22) and Ernakulam district (21). The lowest number was in Idukki district (3). Ernakulam district (Rs 892 lakh), followed by Thrissur district (RS 766 lakh) and Kollam district (Rs 667 lakh) accounted for the largest sales of fruit and vegetable. The highest quantity of sales was accounted by Ernakulam (10181MT) followed by Thrissur (7584 MT) and Palakkad (75623). The lowest sales in terms of value (Rs 43 lakh) and quantity (420 MT) was in Calicut. VFPCCK achieved a sales value of Rs. 5152 lakh and sales quantity of 55399 MT, through its SKSs.

4.2.6 Eligibility criteria for Membership in SKS.

The set of criteria for selecting a farmer is suggested below:

1. He should be a member of an SHG within the jurisdiction of the SKS.
2. He should have attained the age of 18.
3. He must own or possess on lease landed property.

4. He must cultivate fruits and vegetables for income generation.
5. He should give an undertaking to sell his produce through the SKS

4.2.7 Management of VFPCCK

The VFPCCK is managed by a 11 member Board of Directors .Consisting of the Minister for Agriculture (Chairman), Chief Executive Officer, Agricultural Production Commissioner, Finance Secretary, one representative of participating banks on rotation, one representative from National Horticulture Board, four directors elected from member farmers of which one should be a woman and a nominee of European Union.

4.2.8 Performance of VFPCCK

The performance of VFPCCK is analysed in Table 4.2.

Table 4.2. Performance of VFPCCK up to 31st March 2006

No. of districts covered	14
No. of farmer members	93,785
Total number of farmers trained	108590
No. of SHGs	5,351
No. of SKS	203
Total quantity traded (MT)	270,766
Total value traded (Rs.in core)	259.41
Quantity of vegetable processed (in MT)	39.85
Total number of MFs	35,676
Total number of loans disbursed	56,000
Total amount of loan disbursed (Rs.in lakh)	14725
Total number of crop insurance disbursed	13962
Total amount of risk covered (Rs in lakh).	4180
Total amount of premium collected (Rs in lakh)	244
Total quantity of produce exported (in MT)	450

Source: Administrative report of VFPCCK, 2005-06

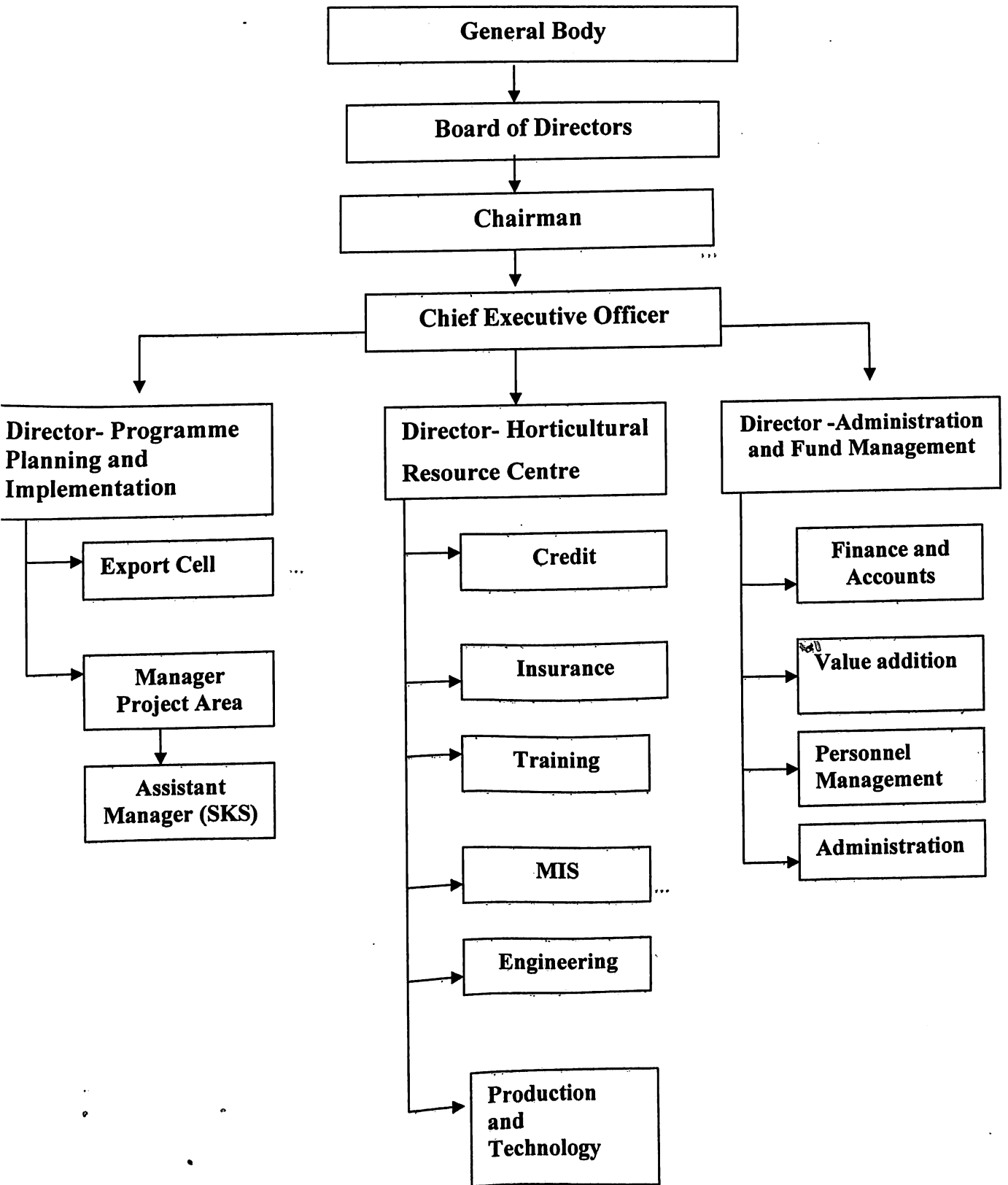


Figure 2. Organisation chart of VFPCCK

Results and Discussion

CHAPTER 5

RESULTS AND DISCUSSION

The marketing behaviour of commercial fruits and vegetables farmers was assessed with the help of responses collected from farmers who sold through Swasraya Karshaka Samithies (SKS) and other markets. Marketing behaviour refers to the pattern of decisions to select and sell the produce through various marketing channels. The analysis helps to understand the factors that influence the selection of marketing channels by the farmers. The structure – conduct – and performance of SKSs were examined on the basis of the data sourced from the official records, reports and farm journals of SKS. The data collected through the primary survey were subjected to statistical analysis and the results are presented in this chapter. Keeping the objectives of the study in view, the results are organized under the following major headings:

- 5.1. Personal profile of the respondents.
- 5.2. Details of crop production practices.
- 5.3. Sources of market information to farmers.
- 5.4. Scientific marketing practices followed by the farmers.
- 5.5. Grading of fruits and vegetables.
- 5.6. Mode of packing of fruits and vegetables.
- 5.7. Place of sale of fruits and vegetables.
- 5.8. Reasons for preference of each market by the farmers.
- 5.9. Mode of transport.
- 5.10. Market risk coverage mechanisms adopted by the farmers.
- 5.11. Problems involved in the marketing of fruits and vegetables.
- 5.12. Training programmes attended by the farmers.
- 5.13. Structure of SKS market.
- 5.14. Conduct of the SKS market.
- 5.15. Performance of SKS market.

5.1 Personal profile of the respondents

In order to figure out the personal profile of the respondents, data collected with regard to selected personal variables such as age, sex, educational qualification, experience in farming, farmer classification, primary and secondary occupation, annual income, share of agricultural income in total income, share of fruits and vegetables income in agricultural income and reasons for taking membership in SKS were analysed and presented below.

5.1.1 Age-wise classification of farmers

Farmers were classified into six age groups and presented in Table 5.1.

Table 5.1. Age-wise classification of SKS and Non-SKS farmers

Sl.No.	Age (years)	No. of farmers	
		SKS	Non-SKS
1	0 – 20	0 (0)	0 (0)
2	21 – 30	4 (4)	2 (4)
3	31 – 40	27 (27)	4 (8)
4	41 – 50	40 (40)	26 (52)
5	51 – 60	27 (27)	14 (28)
6	Above 60	2 (2)	4 (8)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

Among the farmers who sold through SKS, majority (40 per cent) were in the age group of 41-50 years and 27 per cent each were in the age group of 31-40 years and 51-60 years of age. Only two per cent of them were above the age of 60 years. In the case of farmers who sold outside SKS, 52 per cent were in the age group of 41-50 and 28 per cent belonged to the age class of 51-60 years. In both categories of farmers, majority belonged to the age group of 41-50 years. The results clearly indicate that older people are more interested in farming than the younger generation.

5.1.2 Sex-wise classification of farmers

Table 5.2. shows the sex-wise classification of farmers

Table 5.2. Sex-wise classification of SKS and Non-SKS farmers

Sl. No.	Sex	No. of farmers	
		SKS	Non-SKS
1	Male	97 (97)	50 (100)
2	Female	3 (3)	0 (0)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

According to the table vast majority (97 per cent) of the farmers who sold through SKS were men and only 3 per cent were women. All the Non-SKS farmers were males. The results underscore the predominance of men in agriculture.

5.1.3 Educational qualification of farmers

The educational level of the selected farmers is found in Table 5.3.

Table 5.3. Educational qualification of SKS and Non-SKS farmers

Sl. No.	Educational qualification	No. of farmers	
		SKS	Non-SKS
1	Illiterate	2 (2)	12 (24)
2	Primary	47 (47)	30 (60)
3	Secondary	21 (21)	5 (10)
4	Higher Secondary	2 (2)	2 (4)
5	Graduation	27 (27)	1 (2)
6	Post-graduation	1 (1)	9 (0)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

Among the SKS farmers, 47 per cent had only primary education; 27 per cent were graduates and 21 per cent had secondary education. Post-graduates were only one per cent and illiterates were two per cent of the sample. In the case of Non-SKS farmers, 60 per cent had primary education and 24 per cent were illiterate. It may be inferred that SKS farmers are far more educated than Non-SKS farmers. SKSs have been able to attract a number of graduates to their membership.

5.1.4 Experience of farmers in farming

The experience of farmers in farming is examined in Table 5.4.

Table 5.4. Experience of SKS and Non-SKS farmers

Sl. No.	Experience in farming (years)	No. of farmers	
		SKS	Non-SKS
1	Less than 5 years	3 (3)	4 (8)
2	5 – 10 years	22 (22)	6 (12)
3	More than 10 years	75 (75)	40 (80)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table it is obvious that great majority of the farmers, 75 per cent of SKS farmers and 80 per cent Non-SKS farmers, possessed more than 10 years experience in farming. Farmers with less than five years experience in farming accounted for three per cent of SKS farmers and eight per cent of Non-SKS farmers. Another 22 per cent of SKS and 12 per cent of Non-SKS farmers had 5-10 years experience. The results indicate that the selected farmers had vast experience in farming.

5.1.5 Land holdings size of farmers

The farmers were classified into marginal (0 – 2.5 acre), small (2.5 – 5 acre), semi-medium (5 – 10 acre), medium (10 – 25 acre) and large (25 acre and above). The classification of farmers based on land holdings size is explained in Table 5.5.

Table 5.5. Land holdings size of SKS and Non-SKS farmers

Sl. No.	Classification	No. of farmers	
		SKS	Non-SKS
1	Marginal	64 (64)	16 (32)
2	Small	23 (23)	26 (52)
3	Semi-medium	7 (7)	6 (12)
4	Medium	6 (6)	2 (4)
5	Large	0 (0)	0 (0)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The share of marginal farmers and small farmers was 64 per cent and 23 per cent respectively among the SKS farmers. Semi-medium and medium farmers accounted for only 13 per cent of them. In the case of Non-SKS farmers majority (52 per cent) were small farmers and 32 per cent were marginal farmers. Large farmers were absent among both SKS and Non-SKS farmers. The data suggest that marginal and small holdings dominate the agricultural sector in study area.

5.1.6 Distribution of farmers according to their primary occupation

Table 5.6. shows the distribution of farmers according to their primary occupation.

Table 5.6. Distribution of SKS and Non-SKS farmers

Sl. No.	Primary occupation	No. of farmers	
		SKS	Non-SKS
1	Agriculture	75 (75)	38 (76)
2	Business	10 (10)	7 (14)
3	Service	5 (5)	1 (2)
4	Commission agent	5 (5)	1 (2)
5	Daily wage earners	5 (5)	3 (6)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table, it is evident that 75 per cent of the SKS farmers and 76 per cent of Non-SKS farmers had agriculture as their main occupation. Business was the main occupation for 10 per cent of SKS and 12 per cent of the Non-SKS farmers. The remaining 15 per cent of SKS farmers and 10 per cent of Non-SKS farmers were employees or workers. The results disclose that agriculture is the main stay of vast majority of the sample fruits and vegetables cultivators.

5.1.7 Annual income of farmers

The annual income earned by the farmers is shown in Table 5.7.

Table 5.7. Annual income of SKS and Non-SKS farmers

Sl. No.	Annual income (Rs.)	No. of farmers	
		SKS	Non-SKS
1	18,000 – 36,000	9 (9)	2 (4)
2	36,000 – 60,000	25 (25)	14 (28)
3	60,000 – 1,00,000	23 (23)	23 (46)
4	1,00,000 – 2,00,000	27 (27)	9 (18)
5	Above 2,00,000	16 (16)	2 (4)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of SKS farmers, majority (27 per cent) earned income in the range Rs. 100000 – 200000. Another 25 per cent were in the income class of Rs. 36000 – 60000 and 23 per cent in the income class of Rs 60000 – 100000. In the case of Non-SKS farmers, majority of (46 per cent) had annual income in the range of Rs. 60,000 – 100000, 28 per cent were in the income class of 36000 – 60000 and 18 per cent in the category of Rs. 100000 – 200000. The findings indicate that the number of farmers with an annual income of Rs 1,00,000 and above is higher among SKS farmers than Non-SKS farmers. But for a few the selected farmers financially better off.

5.1.8. Share of agricultural income in total income

Table 5.8. shows the percentage share of agricultural income in total income of farmers.

Table 5.8. Share of agricultural income in total income of SKS and Non-SKS farmers

Sl. No.	Share of agricultural income in total income (per cent)	No. of farmers	
		SKS	Non-SKS
1	21 – 40	1 (1)	1 (2)
2	31 – 60	6 (6)	7 (14)
3	61 – 80	28 (28)	4 (8)
4	81 – 100	65 (65)	38 (76)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of 65 per cent of the SKS farmers and 76 per cent of the Non-SKS farmers, agricultural income accounted for 81 - 100 per cent of total income. Agricultural income constituted 61-80 per cent of total income of 28 per cent of SKS farmers and eight per cent of Non-SKS farmers. The share of agriculture income was in the range of 31-60 per cent in the case of six per cent SKS farmers and 14 per cent Non-SKS farmers. It may be inferred that agriculture is the main source of income for a vast majority of the farmers. Farmers who depend on non-farming activities as the main source of income is only a small per cent.

5.1.9 Ratio of income from fruits and vegetables to agricultural income

Table 5.9. depicts the ratio of income from fruits and vegetables to total agricultural income of the farmers.

Table 5.9. Share of fruits and vegetables income in total agricultural income

Sl. No.	Share of fruits and vegetables income in agricultural income (percentage)	No. of farmers	
		SKS	Non-SKS
1	21 – 40	6 (6)	4 (8)
2	41 – 60	5 (5)	11 (22)
3	61 – 80	36 (36)	19 (38)
4	81 – 100	51 (51)	16 (32)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

Income from fruits and vegetables cultivation accounted for 81-100 per cent and 61-80 per cent of the total agricultural income of 51 per cent and 36 per cent of the SKS farmers respectively. However, income from fruits and vegetables cultivation constituted 61-80 per cent of the total agricultural income of majority (38 per cent) and 81-100 per cent of 32 per cent of the Non-SKS farmers. The share of income from fruits and vegetables in the total agricultural income is higher for SKS farmers than Non-SKS farmers. It may be noted that members of SKS are commercial cultivators of fruits and vegetables.

5.1.10 Reason for taking membership in SKS by farmers

To understand the reasons for taking membership in SKS, the farmers were asked to rank a set of seven reasons in the order of importance. Subsequently the frequency of each reason was multiplied by pre-fixed weights. The scores were then summed up to derive the final aggregate rank to judge the relative importance of different reasons. Table 5.10 shows the ranking of various reasons for taking membership in SKS.

Table 5.10. Reasons for taking membership in SKS

Sl. No.	Reason	Aggregate score	Rank
1	Better price for the produce	581	1
2	Regular market for produce	502	2
3	Better measurement and grading practice in the market	462	3
4	Feeling of farmers own organization	413	4
5	Easy accessible to loans and advances	302	5
6	Availability of technical and managerial advice in production and marketing	292	6
7	Timely payment of cash	206	7

'Better price for the produce' followed by 'regular market for the produce', 'better measurement and grading practice in the market', 'feeling of farmers own organisation' were the most important reasons for taking membership in SKS. 'Easy accessibility to loans and advances', 'availability of technical and managerial advice in production and marketing' and 'timely payment of cash' were the other attractions of membership. Some of the farmers reported that they took membership expecting bonus from SKS. Better price for the produce and regular market are the top most priorities of the farmers.

5.2 Crop production practices of farmers

In this part, the production practices followed by SKS and Non-SKS farmers of selected fruits and vegetables (Nendran, Cowpea, Bitter gourd, Amaranthus and Ivy gourd) are analysed.

5.2.1 Ownership pattern of cropped land of the farmers

Farmers cultivated fruits and vegetables on own land, leased land or both owned and leased land. Table 5.11 presents the ownership pattern of landholdings of farmers.

Table 5.11. Ownership pattern of land holdings of farmers

Sl. No.	Ownership of land holdings	No. of farmers	
		SKS	Non-SKS
1	Owned land exclusively	49 (49)	32 (64)
2	Leased land	24 (24)	3 (6)
3	Both owned and leased land	27 (27)	15 (30)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table it is evident that 49 per cent of the SKS farmers and 64 per cent of the Non-SKS farmers cultivated exclusively on own land. Farmers who cultivated on leased land accounted for 24 per cent of SKS farmers and only six per cent of Non-SKS farmers. The remaining 27 per cent and 30 per cent of the SKS farmers and Non-SKS respectively cultivated on both own and leased land. The share of farmers cultivating on leased land is more among the SKS farmers as they are also admitted to the membership of SKS.

5.2.2 Area under fruits and vegetables cultivation

Table 5.12. shows area under fruits and vegetables cultivation

Table 5.12. Area under fruits and vegetables cultivation

Sl. No.	Area (acre)	No. of farmers	
		SKS	Non-SKS
1	0.0 – 1.0	8 (8)	25 (50)
2	1.0 – 2.5	64 (64)	18 (36)
3	2.5 – 5.0	20 (20)	3 (6)
4	Above 5.0	8 (8)	4 (8)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table, it is evident that majority (64 per cent) of the SKS farmers had an area of 1.0 – 2.5 acres, 20 per cent had 2.5 – 5.0 acres and eight per cent had above 5.0 acres of land under fruits and vegetables cultivation. In the case of Non-SKS farmers, majority (50 per cent) had an area of 0.0 – 1.0 acres, 36 per cent had an area of 1.0 – 2.5 acres and 14 per cent had area more than 2.5 acres of land under fruits and vegetables cultivation. It may be inferred that the area under fruits and vegetables cultivation is higher in the case of SKS farmers compared to Non-SKS farmers. SKS has attracted farmers with larger area under fruits and vegetables cultivation to its fold.

5.2.3 Source of irrigation

Fruits and vegetables cultivation is water intensive, and therefore, farmers cannot depend on rain water alone. So irrigation plays as important role in fruits and vegetables cultivation. Table 5.13 presents the source of irrigation of selected farmers.

Table 5.13. Source of irrigation

Sl. No.	Source of irrigation	No. of farmers	
		SKS	Non-SKS
1	Well	11 (11)	9 (18)
2	Pond	24 (24)	8 (16)
3	Canal	38 (38)	17 (34)
4	Tube well	16 (16)	5 (10)
5	River	5 (5)	7 (14)
6	Rain water	4 (4)	4 (8)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of SKS farmers, when 38 per cent depended on canal, 24 per cent on pond and 16 per cent on tube well as the source of irrigation. In the case of Non-SKS farmers, when majority (34 per cent) used canal water, 18 per cent used well and 16 per

cent depended on pond as the source of irrigation. It is clear that majority of the SKS and Non-SKS farmers depend on canal water for irrigation. The farmers depend more on man made sources of water than natural sources for irrigation.

5.2.4 Irrigation practices followed by farmers

Table 5.14. examines irrigation practices followed by farmers.

Table 5.14. Irrigation practices followed by farmers

Sl. No.	Method	No. of farmers	
		SKS	Non-SKS
1	Manual	25 (25)	7 (14)
2	Electric pump	59 (59)	36 (72)
3	Diesel pump	16 (16)	7 (14)
Total ...		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

It is clear from the table that 75 per cent of the SKS farmers used either electric pump (59 per cent) or diesel pump (16 per cent) for irrigation. However, 86 per cent of Non-SKS farmers employed either electric pump (72 per cent) or diesel pump (14 per cent) for irrigation. Electric pump is the most popular irrigation equipment used by the farmers. Farmers who practiced manual watering were comparatively higher among SKS farmers.

5.2.5 Planting materials for the selected crops

5.2.5.1 Source preference of planting materials of the selected crops

Table 5.15. reveals the source preference of planting materials of selected crops of SKS farmers.

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Total ...		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

It is clear from the table that 75 per cent of the SKS farmers used either electric pump (59 per cent) or diesel pump (16 per cent) for irrigation. However, 86 per cent of Non-SKS farmers employed either electric pump (72 per cent) or diesel pump (14 per cent) for irrigation. Electric pump is the most popular irrigation equipment used by the farmers. Farmers who practiced manual watering were comparatively higher among SKS farmers.

5.2.5 Planting materials for the selected crops

5.2.5.1 Source preference of planting materials of the selected crops

Table 5.15. reveals the source preference of planting materials of selected crops of SKS farmers.

Table 5.15. Source preference of planting materials of SKS farmers

Sl. No.	Item Source	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	Own	13 (17)	5 (12.5)	2 (6)	3 (16)	2 (22)
2	Fellow farmer	14 (18)	2 (5)	2 (6)	3 (16)	4 (44)
3	KAU	-	1 (2.5)	1 (3)	0	3 (33)
4	VFPCCK	-	32 (80)	27 (84)	13 (68)	-
5	Traders	49 (64)	0 (0)	-	0 (0)	-
Total		76 (100)	40 (100)	32 (100)	19 (100)	9 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

For nendran, when majority of the farmers (64 per cent) depended on traders, 18 per cent preferred fellow farmers and 17 per cent preferred their own suckers. In the case of cowpea vast majority (80 per cent) depended on VFPCCK, 12.5 per cent used their own seeds and five per cent depended on fellow farmers. It is found that 84 per cent of the farmers depended on VFPCCK for the seeds of bitter gourd. In the case of amaranthus, majority (68 per cent) depended on VFPCCK, 16 per cent depended on fellow farmers and another 16 per cent used their own seeds. Fellow farmers (44 per cent) followed by KAU (33 per cent) and own seeds (22 per cent) constituted the most important sources of seeds of ivygourd. It may be inferred that VFPCCK is the most preferred source of seeds of cowpea, bittergourd and amaranthus. In the case of nendran the most preferred source of sucker is traders. The farmers are depending mostly on traders for suckers as VFPCCK is not distributing suckers.

5.2.5.2 Source preference of planting material of Non-SKS farmers

Table 5.16. Depicts the source preference of planting material of selected crops of Non-SKS farmers.

Table 5.16. Source preference of planting materials of the Non-SKS farmers

Sl. No.	Crops Source	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	Own	10 (29)	5 (33)	4 (24)	4 (40)	4 (57)
2	Fellow farmer	5 (14)	2 (13)	5 (29)	1 (10)	3 (43)
3	KAU	-	1 (7)	-	2 (20)	-
4	VFPCCK	-	3 (20)	5 (29)	1 (10)	-
5	Traders	20 (57)	4 (27)	3 (17)	2 (20)	-
Total		35 (100)	15 (100)	17 (100)	10 (100)	7 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of suckers of nendran, 57 per cent depended on traders, 29 per cent used their own suckers and 14 per cent depended on fellow farmers. As far as cowpea was concerned, 33 per cent used their own seeds, 27 per cent bought from traders and 20 per cent purchased from VFPCCK. In the case of bitter gourd, when 29 per cent each depended on VFPCCK and fellow farmers for the seeds, another 24 per cent used own seeds. In the case of amaranthus, 40 per cent used own seeds and 20 per cent, each depended on traders and KAU. With regard to Ivy gourd, majority (57 per cent) used own vines and the remaining 43 per cent depended on fellow farmers for the vines. Own sources and fellow farmers constituted the main source of seeds for vegetable in the case of Non-SKS farmers. The main source of suckers of nendran is traders. VFPCCK is not much favoured by Non-SKS farmers.

5.2.6 Variety of nendran preferred by farmers

Table 5.17. examines the variety of nendran preferred by farmers

Table 5.17. Variety of nendran preferred by farmers

Sl. No.	Variety	No. of farmers	
		SKS	Non-SKS
1	Local variety	6 (8)	2 (5.7)
2	Mettupalayam	27 (36)	18 (51.4)
3	Kottayam	5 (6)	5 (14.3)
4	Manjeri	15 (20)	5 (14.3)
5	Both Mettupalayam and Kottayam	16 (21)	2 (5.7)
6	Puliyamundan	7 (9)	3 (8.6)
Total		76 (100)	35 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table it is found that majority (36 per cent) of the SKS farmers preferred Mettupalayam, 21 per cent both Mettupalayam and Kottayam and 20 per cent Manjeri variety of nendran. In the case of Non-SKS farmers when 51.4 per cent preferred Mettupalayam, 14.3 percent each preferred Kottayam and Manjeri varieties. The findings reveal that farmers in general prefer Mettupalayam, Kottayam and Manjeri varieties nendran for cultivation. Local variety and Puliyamundan are out of favour with the farmers.

5.2.7 Variety of cowpea preferred by farmers

The main varieties of cowpea cultivated by farmers are Lola, Vyjayanthi, Anamika and local. Lola is a high yielding trailing variety having smooth and extra long pods. Its average yield is 20 MT/ ha. Vyjaynathi is trailing variety with extra long pod and brown seeds. Its potential yield is 12.4 MT/ha. Anamika is another high yielding variety with an yield of 10.62 MT/ha.

Table 5.18 shows the variety of cowpea preferred by farmers.

Table 5.18. Variety of cowpea preferred by farmers

Sl. No.	Variety	No. of farmers	
		SKS	Non-SKS
1	Lola	32 (80)	5 (33.3)
2	Vyjayanthi	0 (0)	4 (26.7)
3	Anamika	0 (0)	1 (6.7)
4	Local	8 (20)	5 (33.3)
Total		40 (100)	15 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

Lola was cultivated by 80 per cent of the SKS farmers and 33.3 per cent of Non-SKS farmers. Local variety was the next important variety cultivated by 20 per cent of SKS farmers and 33.3 per cent of Non-SKS farmers. It is also observed that 26.7 per cent and 6.7 per cent of the Non-SKS farmers cultivated Vyjayanthi and Anamika varieties respectively. When the SKS farmers showed a strong preference to Lola variety Non-SKS farmers preferred Lola, Local and Vyjayanthi varieties.

5.2.8 Variety of bitter gourd preferred by farmers

The main varieties of bittergourd cultivated by farmers are Priya, Preethi and Local. Priya is a green coloured extra long high yielding fruit with white ting. Its average yield is 24.6 MT/ha. Preethi is a white coloured medium long high yielding variety with spins with an average yield of 15 MT/ha. The variety of bitter gourd preferred by farmers is presented in Table 5.19.

Table 5.19. Variety of bittergourd preferred by farmers

Sl. No.	Variety	No. of farmers	
		SKS	Non-SKS
1	Priya	3 (9.4)	0 (0)
2	Preethi	27 (84.3)	5 (29.5)
3	Local	2 (6.3)	12 (70.5)
Total		32 (100)	17 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The table indicates that Preethi was the most preferred variety of bittergourd by 84.3 per cent of the SKS farmers. In the case of Non-SKS farmers, the most preferred variety of bitter gourd was local variety with a share of 70.5 per cent. Preethi was cultivated by 29.5 per cent of the Non-SKS farmers. Local variety was found favour with only of 6.3 per cent of the SKS farmers. When SKS farmers showed a strong preference towards Preethi, Non-SKS farmers mostly preferred local variety. ...

5.2.9. Variety of amaranthus preferred by farmers

The major varieties of Amaranthus cultivated by the farmers are Arun and Kannara Local. Kannara Local is a photo-sensitive, dark, multi- coloured, multi-cut harvest type plant. Arun is a photo insensitive high yielding and multi cut plant. Its average productivity is 20 MT/ha. Table 5.20 reveals the variety of amaranthus preferred by farmers.

Table 5.20. Variety of amaranthus preferred by farmers

Sl. No.	Variety	No. of farmers	
		SKS	Non-SKS
1	Kannara Local	3 (15.75)	6 (60)
2	Arun	13 (68.42)	2 (20)
3	Local	3 (15.78)	2 (20)
Total		19 (100)	10 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The table indicates that, Arun, cultivated by 68.42 per cent, was the most preferred variety by the SKS farmers. Local variety and Kannara Local, cultivated by 15.78 per cent and 15.75 respectively, were the other preferred varieties of the SKS farmers. However, Kannara Local, cultivated by 60 per cent, was the most preferred variety of Non-SKS farmers. Around 20 per cent each of the Non-SKS farmers preferred Arun and local varieties. The most preferred variety was Arun by SKS farmers and Kannara Local by Non-SKS farmers.

5.2.10. Variety of Ivygourd preferred by farmers

The major varieties of Ivygourd cultivated by the farmers are Sulabha and Local. Sulabha is a green coloured high yielding, with oblong size. Table 5.21 examines the variety of ivygourd preferred by farmers.

Table 5.21. Variety of ivy gourd preferred by farmers

Sl. No.	Variety	No. of farmers	
		SKS	Non-SKS
1	Sulabha	3 (33.3)	4 (57)
2	Local	6 (66.7)	3 (43)
Total		9 (100)	7 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

It is obvious from the table that when two-third of SKS farmers preferred local variety, the remaining one-third preferred Sulabha. However, in the case of Non-SKS farmers, Sulabha was preferred by 57 per cent and Local by 43 per cent.

5.2.11 Price of planting materials from different sources

Table 5.22 shows the price charged by different agencies for the planting materials.

Table 5.22. Price of planting material from different sources.

Sl. No.	Price Source	Price (Rs/kg)				
		Nendran*	Cowpea	Bittergourd	Amaranthus	Ivy gourd
1	VFPCCK	-	220	540	340	-
2	KAU	10	600	650	800	10
3	Traders	5-7	400	-	-	-
4	Fellow farmer	5-6	300	600	400	10

Source: Collected from farmers.

*: Price given for one sucker

In the case of nendran, the price charged by KAU was Rs.10/-, by traders was Rs.7/-, and by fellow farmers was Rs 5-6 for one sucker. The price of cowpea for one kilogram was Rs.220 in VFPCCK, Rs.600 in KAU, Rs.400 for traders and Rs.300 for fellow farmers. In the case of bittergourd, the price was Rs.540/kg in VFPCCK, Rs.650/kg in KAU and Rs.600/kg from fellow farmers. For amaranthus VFPCCK charged Rs.340/kg, KAU Rs.800/kg and fellow farmers Rs 100/kg. The price of ivygourd was Rs.10/kg in both KAU and from fellow farmers. KAU was the only institutional agency that supplied all type of planting materials. Fellow farmers were another source that supplied all sorts of planting materials. Out of the four sources of planting materials KAU was the dearest and VFPCCK the cheapest.

5.2.12 Source of Credit to farmers

Timely and adequate credit is very important for agriculture particularly commercial agriculture. Different agencies provide loans and advances to farmers. Table 5.23 shows the source of credit to farmers.

Table 5.23. Source of credit to farmers

Sl. No.	Source of Credit	No. of farmers	
		SKS	Non-SKS
1	Commercial banks linked to SKS	53 (53)	0 (0)
2	Commercial Banks	3 (3)	7 (14)
3	Co-operative Banks	4 (4)	8 (16)
4	Traders	9 (9)	7 (14)
5	Money Lenders	5 (5)	15 (30)
6	Not availed credit	26 (26)	13 (26)
	Total	100 (100)	50 (100)

Source: * Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table, it is clear that 26 per cent each of SKS and Non-SKS farmers had not availed credit for fruits and vegetables cultivation. When 53 per cent of the SKS farmers availed credit from the commercial banks linked to SKS, nine per cent availed

credit from traders and five per cent from money lenders. But in the case of Non- SKS farmers majority (30 per cent) availed credit from money lenders 16 per cent from co-operative banks and 14 per cent each from traders and commercial banks. When vast majority of SKS farmers avail credit from banks particularly commercial banks linked to SKS, majority of Non-SKS farmers depend on money lenders and traders for their credit needs.

It was observed during the study that most of the farmers who had not availed credit from any source mainly for fear of life long indebtedness. The SKS farmers who took credit from commercial banks linked to SKS were granted two per cent interest subsidy for prompt repayment.

5.2.13 Magnitude of credit availed by farmers for vegetable cultivation.

Table 5.24. Magnitude of credit availed by farmers

Sl. No.	Amount of credit (Rs.)	No. of farmers	
		SKS	Non - SKS
1	0 – 10,000	3 (4)	10 (27.03)
2	10,000 – 20,000	6 (8.1)	6 (16.22)
3	20,000 – 30,000	62 (83.8)	7 (18.92)
4	30,000 – 40,000	1 (1.3)	9 (24.32)
5	40,000 – 50,000	2 (2.7)	5 (13.51)
Total		74 (100)	37 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

As much as 74 per cent of the SKS farmers and Non-SKS farmers availed loan for vegetable cultivation. Table 5.24 indicates that 83.80 per cent of the SKS farmers availed credit in the range of Rs. 20,000 - 30,000 and another 8.1 per cent in the range of Rs. 10,000-20,000. In the case of Non-SKS farmers 27.03 per cent availed credit upto Rs. 10,000 and another 24.32 per cent in the range of Rs. 30,000- 40,000. It may be inferred that the percentage of farmers who borrowed higher amount was greater among Non-SKS farmers vis-à-vis SKS farmers.

5.2.14 Cost of credit from different institutions

Table 5.25 shows the cost of credit from different institutions.

Table 5.25. Cost of credit from different institutions

Sl. No.	Institution	Interest rate (percentage)
1	Commercial banks linked to SKS	8 – 8.5
2	Commercial banks	8 – 10
3	Co-operative banks	8 – 9
4	Traders	0
5	Money lenders	24

Source: Compiled from primary data

From the table, it is clear that the traders provided interest free credit on condition that the farmers would sell their entire produce to them. Commercial banks linked to SKS charged 8- 8.5 per cent interest on the loan and the farmers who repaid the loan promptly were given interest subsidy. Money lenders, on the other hand, charged an interest rate of 24 per cent. The interest rate of Commercial banks and Co-operative banks ranged from eight to ten per cent.

Among the formal institutions, the least cost credit was provided by Commercial banks linked to SKS followed by Co-operative banks. The cost of credit was the highest for the money lenders. It may be noted that a considerable number of Non-SKS farmers depend on money lenders for their credit needs.

5.2.15. Harvesting frequency of SKS farmers

Table 5.26 examines the harvesting frequency of SKS farmers.

Table 5.26. Harvesting frequency of SKS farmers

Sl. No.	Frequency	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	Daily	-	5 (12.5)	9 (28.12)	15 (79)	2 (22)
2	Twice in a week	39 (51.32)	9 (22.5)	5 (15.62)	-	2 (22)
3	Thrice in a week	27 (35.5)	26 (65)	18 (56.25)	4 (21)	5 (56)
4	Weekly	10 (13.15)	-	-	-	-
5	Fortnightly	-	-	-	-	-
Total		76 (100)	40 (100)	32 (100)	19 (100)	9 (100)

Source: Collected from farmers

Note: Figures in bracket indicate percentage to total

In the case of nendran, majority of the farmers (51.32 per cent) harvested twice in a week, 35.5 per cent thrice in a week and 10 per cent once in a week. Cowpea was harvested thrice in a week by 65 per cent, twice in a week by 22.5 per cent and daily by 12.5 per cent of the farmers. In the case of bitter gourd, majority (56.25 per cent) harvested three days in a week, 28.12 per cent daily and 15.62 per cent two days in a week. When 79 per cent of the farmers harvested amaranthus daily, the remaining 21 per cent harvested three days in a week. Ivy gourd was harvested three days in a week by 56 per cent and daily or twice in a week by 22 per cent each. Majority of the SKS farmers harvested nendran twice in a week as most of the SKS markets functioned two days in a week. The SKS farmers harvested nendran coinciding with the market days. Cowpea, bitter gourd and ivy gourd were harvested thrice a week by majority of the farmers.

5.2.16 Harvesting frequency of Non-SKS farmers

The harvesting frequency of Non-SKS farmers is given in Table 5.27.

Table 5.27. Harvesting frequency of Non-SKS farmers

Sl. No.	Frequency	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	Daily	-	-	-	1 (10)	-
2	Twice in a week	3 (8.57)	5 (33.4)	8 (47)	2 (20)	5 (71.4)
3	Thrice in a week	2 (5.7)	10 (66.6)	2 (11.76)	7 (70)	2 (28.5)
4	Weekly	30 (85.7)	-	7 (41.17)	-	-
Total		35 (100)	15 (100)	17 (100)	10 (100)	7 (100)

Source: Collected from farmers

Note: Figures in bracket indicate percentage to total

Vast majority (85.7 per cent) of the Non-SKS farmers harvested nendran weekly. Majority of the cow pea (66.6 per cent) and amaranthus (70 per cent), harvested thrice in a week. In the case of bitter gourd and ivy gourd majority of the farmers, 47 per cent and 71.4 per cent respectively, harvested two days in a week. Majority of the Non-SKS farmers harvested nendran weekly to reduce the marketing cost.

5.3 Source of market information to farmers

Market information is an important marketing function which ensures the smooth and efficient operation of the marketing system. Accurate, adequate and timely availability of market information facilitates farmers to take decisions about when and where to market the products. Market information may be broadly defined as a communication or reception of knowledge or intelligence. It includes all facts, estimates, opinions and other information, which affect the marketing of goods and services. The degree of dependence assigned to various sources of market information by the farmers is found in Table 5.28.

Table 5.28. Source of market information to farmers

Sl. No.	Source	SKS farmers		Non-SKS farmers	
		Score	Rank	Score	Rank
1	SKS	300	1	-	-
2	Traders	274	2	142	1
3	VFPCCK journal	192	3	-	-
4	Fellow farmers	168	4	134	2
5	News paper	175	5	99	3
6	Radio	124	6	58	5
7	Television	95	7	36	6
8	Other journals	54	8	59	4

Source: Collected from farmers

According to the table, SKS was the prime source of market information for the SKS farmers followed by the traders, VFPCCK journal, fellow farmers, newspaper, radio, television and other journals. In the case of Non-SKS farmers, traders followed by fellow farmers, newspaper, radio, TV and journals were the main sources of market information. The SKS market is a forum for the farmers and traders to engage in one to one exchange of information about production and price of agricultural commodities. The VFPCCK journal is subscribed by the SKS farmers. The reliability of SKS farmers on SKS traders and VFPCCK journal as the main sources of market information may be due to this background.

5.4 Marketing practices followed by the farmers

Scientific marketing practices would enable the farmers to realize remunerative prices for their produce. For the study, the behaviour of farmers in relation to seven marketing practices was analysed. The practices were viz; consulting experts regarding the demand for the produce before planting the crops (SM₁), selection of seed/planting material for cultivation according to market preference (SM₂), application fertilizers and

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3	VFPCCK journal	192	3	-	-
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5	News paper	175	5	99	3
6	Radio	124	6	58	5
7	Television	95	7	36	6
8	Other journals	... 54	8	59	4

Source: Collected from farmers

According to the table, SKS was the prime source of market information for the SKS farmers followed by the traders, VFPCCK journal, fellow farmers, newspaper, radio, television and other journals. In the case of Non-SKS farmers, traders followed by fellow farmers, newspaper, radio, TV and journals were the main sources of market information. The SKS market is a forum for the farmers and traders to engage in one to one exchange of information about production and price of agricultural commodities. The VFPCCK journal is subscribed by the SKS farmers. The reliability of SKS farmers on SKS traders and VFPCCK journal as the main sources of market information may be due to this background.

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pesticides with minimum chemical residue (SM₃), harvesting the crop only after ensuring market for the product (SM₄), taking the produce to the market for sale after cleaning (SM₅), using packing materials to protect the produce from damage (SM₆), and selling the produce after grading (SM₇). The farmers expressed their opinion on a five-point scale regarding these practices. Table 5.29 summarises the grading practices on the basis of the score.

Table 5.29. Marketing practices followed by the farmers

Sl. No.	Practice	SKS farmers		Non-SKS farmers	
		Score	Grade	Score	Grade
1	SM ₁	44.25	II	8.5	I
2	SM ₂	48	II	34	II
3	SM ₃	58	III	29	II
4	SM ₄	40	II	29	II
5	SM ₅	90	IV	73	III
6	SM ₆	55	III	41.5	II
7	SM ₇	85.5	IV	28.5	II

Source: Collected from farmers

Note: For SKS member farmers – sample size was 100; other farmers, it was 50.

It is clear from Table 5.29 that SKS farmers 'always' followed the practice of taking the produce to the market for sale after cleaning and selling the produce after proper grading. They also 'frequently' followed the practice of applying fertilizers and pesticides with minimum chemical residue and using packing materials to protect the produce from damage. The practice of consulting experts regarding the demand of the produce before planting the crops, selecting seeds/planting materials for cultivation according to market preference and harvesting the crop only after ensuring market for the produce were 'occasionally' followed by them. SKS farmers also reported that they used higher quantity of chemical fertilizers on leased land and minimum quantity on own land.

According to the table the Non-SKS farmers were not following any of the given practices 'always'. They 'frequently' followed the practice of taking produce to the market for sale after cleaning. The practices of selecting the seed/planting material for cultivation according to market preference, applying fertilizers and pesticides with minimum chemical residue, harvesting the crop only after ensuring market for the produce, using packing materials to protect the produce from damage and selling the produce after grading were 'occasionally' pursued by the Non-SKS farmers. The farmers 'rarely' toed the practice of consulting experts regarding the demand for the produce before planting the crops.

The SKS farmers are better placed as far as the scientific marketing practices are concerned. The better marketing behaviour of the SKS farmers may attributed to their association with VFPCCK. The VFPCCK has made it mandatory for the farmers to bring the produce to the market only after proper cleaning.

5.5 Grading of fruits and vegetables in the market

Grading and standardization are marketing functions that facilitate better price realisation. Grading refers to sorting of unlike lots into similar lots based on some standard quality parameters. Each lot will possess substantially the same characteristics as far as quality is concerned. The grading of selected fruits and vegetables in the SKS market and other markets was analysed for the study.

5.5.1 Grading in SKS market

In SKS, based on quality, variety, size and shape, the fruits and vegetables were graded by the farmers. The pattern of grading followed in SKS market is shown in Table 5.30.

Table 5.30. Grading of selected commodities in SKS market

Sl. No.	Crop Grading	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	No grading	6 (7.89)	40 (100)	11 (34.37)	19 (100)	6 (66.6)
2	Two grades	32 (42.1)	-	21 (65.62)	-	3 (33.4)
3	Three grades	30 (39.4)	-	-	-	-
4	Four grades	8 (10.5)	-	-	-	-
Total		76 (100)	40 (100)	32 (100)	19 (100)	9 (100)

Source: Collected from farmers

Note: Figures in bracket indicate percentage to total

It is clear from the table that majority of the farmers (42.1 per cent) graded nendran into two grades, 39.4 per cent into three grades and 10.5 per cent into four grades. Cowpea was sold without any grading. In the case of bittergourd, when majority of the farmers (65.62 per cent) sold the produce in two grades, the remaining 34.37 per cent sold without grading. Amaranthus was also sold without grading by all the farmers. In the case of ivy gourd, majority of the farmers (66.66 per cent) sold without grading and 33.4 per cent of the farmers sold in two grades. In SKS market all the produces except amaranthus and cowpea are graded. When nendran has as many as four grades, other produce are having two grades.

In other markets the grading was done by the traders and the pattern is presented in Table 5.31.

Table 5.31. Grading of selected commodities in Non-SKS markets

Sl. No.	Crop Grading	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivy gourd
1	No Grading	22 (62.86)	15 (100)	12 (70.58)	10 (100)	7 (100)
2	Two grades	9 (25.71)	-	5 (29.42)	-	-
3	Three grades	4 (11.43)	-	-	-	-
Total		35 (100)	15 (100)	17 (100)	10 (100)	7 (100)

Source: Collected from farmers

Note: Figures in bracket indicate percentage to total

It is found from the table that 62.86 per cent of nendran, cent per cent each of cowpea, amaranthus and ivy gourd and 70.58 per cent of bittergourd farmers sold their produce without grading. Only nendran and bittergourd were graded in Non- SKS market.

The high incidence of grading in SKS markets may be taken as the positive impact of VFPCCK's farmer centered business strategies. Non-SKS farmers are not formally sensitised about the importance of grading by any institutional agency like VFPCCK.

5.5.2 Price difference between different grades of nendran

Nendran was graded on the basis of the size, shape and the number of combs. Table 5.32 shows the price difference between different grades of nendran.

Table 5.32. Price difference between different grades of nendran

Sl. No.	Grades Price difference (Rs.)	No. of farmers			
		SKS		Non-SKS	
		I & II	I & III	I & II	I & III
1	0-1	1 (1.42)	-	-	-
2	1-2	20 (28.57)	-	-	-
3	2-3	32 (45.71)	5 (13.15)	-	-
4	3-4	5 (7.14)	7 (18.42)	-	-
5	4-5	10 (14.28)	15 (39.47)	1 (12.5)	-
6	5-6	2 (2.85)	9 (23.68)	-	-
7	6-7	-	2 (5.26)	-	2 (40)
8	7-8	-	-	7 (87.5)	3 (60)
Total		70 (100)	38 (100)	8 (100)	5 (100)

Source: Collected from farmers

Note: Figures in bracket indicate percentage to total

In the SKS market, the price difference between first and second grade was to the extent of Rs.2-3 for 45.71 per cent and Rs.1-2 for 28.57 per cent of the farmers. In the case of 14.28 per cent farmers, the price difference was to the tune of Rs.4-5 between the same grades. Between the first and third grade, majority (39.47 per cent) of the farmers got a price difference of Rs.4-5 and 23.68 per cent experienced a price difference of Rs.5-6. In the Non-SKS markets, majority (87.5 per cent) of the farmers got a price difference of Rs.7-8 and the remaining 12.5 percent a price difference of Rs.4-5 between the first and second grade. Between the first and third grade, when 60 per cent reaped a price difference of Rs.7-8, 40 per cent got a difference of Rs.6-7. The price difference between different grades of nendran was greater in Non-SKS market and the benefit of higher price difference was reaped more by Non-SKS farmers. But for grading the farmers would have realised a lesser price. The realisation of higher prices by better grades has made the farmers more quality conscious.

5.5.3 Price difference between different grades of bittergourd

Table 5.33 shows the price difference between different grades of bitter gourd sold through SKS and Non-SKS markets. In the case of bitter gourd farmers sorted their crops into two grades only.

Table 5.33. Price difference between different grades of bitter gourd

Sl. No.	Grades Price difference (Rs.)	No. of farmers	
		SKS	Non-SKS
		I & II	I & II
1	3 - 4	1 (4.76)	-
2	4 - 5	4 (19.04)	-
3	5 - 6	16 (76.19)	1 (20)
4	6 - 7	-	4 (80)
Total		21 (100)	5 (100)

Source: Collected from farmers

Note: Figures in bracket indicate percentage to total

In the case of SKS farmers, when majority (76.19 per cent) realised a price difference of Rs.5-6, 19.04 per cent got a price difference of Rs.4-5 and 4.76 per cent a price difference of Rs.3-4 between first and second grade. Large majority (80 per cent) of the Non-SKS farmers reaped a price difference of Rs. 6- 7, and the remaining 20 per cent gained a price difference Rs.5-6 between first and second grade. In the case of bittergourd also the benefit of higher price difference accrued more to Non-SKS farmers.

5.6 Packing of fruits and vegetables

Packing is the first function performed in the marketing of agricultural commodities. It is required for nearly all the farm products at every stage of the marketing process. The commodities are packed with the objective of securing the produce from damage and preserving quality during the course of transportation and storage. The mode of packing adopted for selected crops is given in the following tables.

5.6.1 Packing materials used for nendran

Table 5.34. shows the packing material used for nendran by farmers.

Table 5.34.Packing material used for nendran

Sl. No.	Packing material	No. of farmers	
		SKS	Non-SKS
1	Plantain leaves	42 (55.27)	12 (34.25)
2	Plastic sheets	5 (6.57)	0 (0.00)
3	No packing	29 (38.16)	23 (65.75)
Total		76 (100)	35 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

According to the table, 55.27 per cent of the SKS farmers packed Nendran in plantain leaves, 6.57 per cent in plastic sheets and the remaining 38.16 per cent marketed without any packing. In the case of Non-SKS farmers, when majority (65.75 per cent) marketed nendran without any packing, 34.25 per cent adopted packing with plantain leaves. The practice of marketing nendran after packing is more popular among the SKS

farmers than Non-SKS farmers. Majority of the farmers are using plantain leaves for packing as it is the cheapest and natural. As the SKS markets are working during day time proper packing is required to protect the bunches from the scorching sun..

5.6.2 Packing of bittergourd

Table 5.35 shows packing of bittergourd by farmers

Table 5.35. Packing of bittergourd

Sl. No.	Packing	No. of farmers	
		SKS	Non- SKS
1	Gunny bags	2 (6.25)	0
2	Plastic bags	22 (68.75)	17 (100)
3	Bamboo basket	8 (25)	0
Total		32 (100)	17 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

Majority (68.75 per cent) of the SKS farmers used plastic bags, 25 per cent bamboo basket and 6.25 per cent gunny bags for packing bitter gourd. When the packing material is returned to the farmers in SKS it is taken away by the traders in Non-SKS. The most preferred packing material for bittergourd in the case of SKS and Non-SKS farmers is plastic bag. A plastic bag costs around Rs.5/-.

5.6.3 Packing of cowpea, amaranthus and ivy gourd

When cowpea and amaranthus were marketed without packing, ivy gourd was packed in plastic bags by all the farmers.

5.7 Choice of market for sale

Farmers normally do not sell their entire produce in a single market. After weighing various factors like price, distance, marketable surplus, farmers select different markets like SKS market, wholesale market, local market or sales at farm gate.

5.7.1 Patronage of SKS and other markets by SKS members

Table 5.36 shows the patronage of SKS and Non-SKS markets by SKS farmers.

Table 5.36. Patronage of SKS and Non-SKS markets

Sl. No.	Place of sale	No. of Farmers
1	Exclusively through SKS	50
2	SKS and Other Markets	50
	Total	100

Source: Compiled from primary data

It is obvious from the table that only 50 per cent of the SKS farmers sold exclusively through SKS markets. The remaining 50 per cent sold their crops in other markets also. This happens mainly because of the farmers apprehension that if the whole produce is brought to the SKS market it will depress the price of the produce in the market. Some other farmers do not bring the produce to SKS market as the traders buy from their farm gate. Another group of farmers are under an obligation to sell to the traders as they have borrowed from them. More over, the traders mainly prefer SKS for banana, forcing the farmers to depend on other markets to sell their other produces.

5.8 Reasons for preferring other channels by SKS members

Table 5.37 outlines the reasons for preferring other channels by SKS members.

Table 5.37. Reasons for preferring other channels by SKS members

Sl. No.	Reason	No. of Farmers
1	Farm gate collection by traders	20 (40)
2	Better price in other markets	6 (12)
3	Good relationship with other traders	4 (8)
4	Spot payment of price in other markets	4 (8)
5	Second grade produce gets better price in wholesale market	3 (6)
6	Less demand for vegetables in SKS	3 (6)
7	Fall in the price if the whole produce is brought to SKS.	10 (20)
	Total	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The main reason for selling the produce in Non- SKS markets was farm gate collection by the traders. According to the table, 40 per cent of the farmers reported this reason as it saved them of commission, transportation cost and the loading and unloading charges. Another 20 per cent of the farmers reported that they sold a portion of their total produce in other markets due to the fear that if the whole produce reached the SKS, it would depress the price in the market. The farmers' apprehension is found to be valid as the prices are highly sensitive to the demand and supply forces. The third major reason for selling outside SKS was the possibility of getting higher price in Non-SKS markets. Some other farmers sold in other markets as lower grade produces fetched better price in the wholesale market and vegetables were not actively traded in SKS. Healthy relationship built over a long period with traders was a yet another good reason for selling in other markets for about eight per cent of the farmers. Traders used to meet the transportation cost, offer higher price, and even make advance payments to retain long term customers. Another eight per cent of the farmers sold through other markets attracted by spot payment. It was observed that only 10 per cent of the SKS covered by study made spot payment. In the SKS the payment is made only on the market day corresponding in the next week. Quite often the farmers will be in dire need of liquid cash to discharge their debts and honour various commitments. ...

5.8.1 Reasons for patronising SKS market by farmers

In order to find out the reasons for patronising SKS market over other markets, the farmers were given a set of six probable reasons and asked to rank them in the order of importance. Thereafter the frequencies secured by each reason were multiplied by the predetermined weights. The scores were then summed up to arrive at the final score of each reason to decide the final ranking. The reasons are ranked in Table 5. 38.

Table 5.38. Reasons for patronising SKS market by farmers

Sl. No.	Reason	Total score	Rank
1	Marketing charges are less	437	1
2	Nearness to the farm	388	2
3	Regularity of the market	376	3
4	Better price	231	4
5	Timely payment	202	5
6	Credit facility	106	6

Source: Compiled from primary data

From the ranking given in Table 5.38, it is obvious that comparatively lower commission charged by the SKS is the most important attraction of SKS market. Nearness of the market to the farm and regularity of the market are the next two important reasons for preferring SKS market. Better price, timely payment and credit facility from the organization are the other important reasons in favour of SKS market.

5.8.2 Reasons for selecting traders by farmers

Farmers selected farm gate traders, local markets or wholesale market for sales other than SKS market. Table 5.39 explains the reasons for selecting traders at farm gate.

Table 5.39. Reasons for selecting traders at farm gate

Sl. No.	Reason	Total score	Rank
1	Nearness to the farm	316	1
2	No commission	273	2
3	Spot payment	245	3
4	Higher price	233	4
5	Credit facility	106	5
6	Regularity of the market	94	6

Source: Compiled from primary data

Farm gate collections followed by absence of commission and spot payment were the three main reasons for favouring farm gate traders. Higher price was the fourth important reason for choosing farm gate traders. Credit facility and regularity of market were the least important reasons for the choice of farm gate traders.

5.8.3 *Reasons for selecting local market by the farmers*

Table 5.40 outlines the reasons for selecting local market by the farmers.

Table 5.40. Reasons for selecting the local market by the farmers

Sl. No.	Reason	Total score	Rank
1	Higher price	246	1
2	Spot payment	202	2
3	Lower commission	196	3
4	Nearness to the farm	188	4
5	Regularity of the market	131	5
6	Credit from the traders	55	6

Source: Compiled from primary data

From the rankings given in the table, it is clear that higher price, spot payment and lower market charges were the most important factors that motivated farmers to favour local market. Nearness to market was also an important reason for preferring local market. Regarding regularity of the market and credit facility, the local market looked less attractive.

5.8.4 *Reasons for selecting wholesale market by farmers*

Table 5.41 shows the reasons for selecting the wholesale market by farmers.

Table 5.41. Reasons for selecting the wholesale market by farmers

Sl. No.	Reasons	Total score	Rank
1	Regularity of the market	91	1
2	Credit facility	89	2
3	Higher price	87	3
4	Spot payment	76	4
5	Lesser market charges	34	5
6	Nearness to farm	29	6

Source: Compiled from primary data

Regularity of market, credit facility extended by traders, higher price and spot payment were the main attractiveness of wholesale market going by the ranking given in Table 5.41. Distance from the market and higher market charges appeared to be the disadvantages of wholesale market. It is observed that unlike other markets, the wholesale market will be working on all days except Sunday and for the whole day. The farmers have no difficulty to sell their entire output even if the quality is poor in the wholesale market.

5.9 Means of transport used by farmers

Transportation or the physical movement of output from the producer to the end consumer is one of the most important marketing functions as most of the commodities are not consumed where they are produced. The means of transport used by the farmers to bring the produce to SKS market and other markets are analysed in Table 5.42.

Table 5.42. Means of transport used by the farmers

Sl. No.	Means of transport	No. of farmers	
		SKS	Non-SKS
1	Head load	6	22 (44)
2	Tailed auto-rickshaw	54	12 (24)
3	Bicycle	2	0 (0)
4	Moped	3	0 (0)
5	Tailed jeep	19	5 (10)
6	Bus	0	6 (12)
7	Tempo	12	5 (10)
8	Tractor	4	0 (0)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The SKS market being close to the farm, majority (54 per cent) of the farmers used tailed auto-rickshaw for transportation, followed by tailed jeep (19 per cent), tempo (12 per cent), head load (5 per cent), tractor (4 per cent) and moped (3 per cent). Head load (44 per cent) and tailed auto-rickshaw (24 per cent) were the most important means of transport employed by Non-SKS farmers as majority of them sold their produce at farm gate itself. However, 12 per cent and 10 per cent of the farmers who sold in the wholesale market transported their produce by bus and tailed jeep respectively.

5.10 Market risk coverage mechanism of the farmers

Risk is inherent in all marketing transactions. The common risks associated with marketing are physical risk, price risk and institutional risk. The intermediaries involved in marketing activities are seized by the gravity of these risks and they continually try to minimize the effects of these risks. The type of risks faced and the coping mechanism adopted by farmers have been analysed. The risks faced by the farmers in SKS market are given in Table 5.43.

Table 5.43. Type of risks faced by farmers

Sl. No.	Risks	No. of Farmers	
		SKS	Non-SKS
1	Unsold produce	0(0)	6 (12)
2	Physical damage	0(0)	3 (6)
3	Price fluctuation	80(80)	50 (100)
4	Default in payment	0(0)	18 (36)
5	No risk	20(20)	0 (0)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table it is clear that 80 per cent of the SKS farmers were exposed to risk and the only risk they faced was due to price fluctuations. Around 20 per cent of the farmers did not perceive any risk in the market. All the Non-SKS farmers perceived risk due to price fluctuations. Another 36 per cent faced the risk of default in payment, 12 per cent the risk of unsold produce and six per cent faced the problem of physical damage in the market.

It may be inferred that price fluctuation is the only one risk perceived by SKS farmers, while the Non-SKS farmers faced the risk of unsold produce, physical damage, and default in payment besides price fluctuation. The low risk perception of the SKS farmers is a testimony of the effective intervention of VFPCCK in the market.

5.10.2 Management of price risk by farmers

Management of price risk refers to how the farmers dispose of their produce if they fail to realise the expected price. Table 5.44 explores the various strategies adopted by farmers in case of depressed price.

Table 5.44 Management of price risk by farmers

Sl. No.	Strategy	No. of farmers	
		SKS	Non-SKS
1	Sale to wholesale market	12 (12)	5 (10)
2	Sale to same trader	51 (51)	20 (40)
3	Sale to processing unit	4 (4)	2 (4)
4	Sale to SKS market	35 (35)	0 (0)
5	Sale to other traders	0 (0)	23 (46)
Total		100	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of SKS farmers, majority (51 per cent) used to sell to the same trader even at a lower price, and 35 per cent used to sell to SKS itself. The produce that is sold to the SKS will be taken the nearest SKS market or sold to the traders with whom the SKS has good relationship. In such cases the transportation cost has to borne by the SKS farmers and the price realised will be divided among the farmers. Such a situation arises only when there is large unsold stock and the price quoted by the traders is very low compared to other markets. Another 12 per cent used to sell in the wholesale market and 4 per cent to processors. In the case of Non-SKS farmers, majority (46 per cent) sold to other traders in the same market, 40 per cent to the same trader, 10 per cent in wholesale market and four per cent to processing units. It may be inferred that in SKS market most of the farmers sold the produce to the same trader. When Non-SKS farmers sell to other traders when the price fell short of the expected price.

5.10.3 Terms of sale in SKS market and Non-SKS market

Terms of sale mean whether the sales are made for cash or credit. The terms of sales in SKS and Non-SKS markets are presented in Table 5.45.

Table 5.45. Terms of sale in SKS and Non-SKS markets

Sl. No.	Terms of sales	No. of Farmers	
		SKS	Non-SKS
1	Cash sales	10 (10)	15 (30)
2	Credit Sales	90 (90)	35 (70)
Total		100 (100)	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

It is obvious from the table that vast majority (90 per cent) of the farmers sold on credit in the SKS market and only 10 per cent sold for cash. Similarly 70 per cent of the Non-SKS farmers sold on credit and only 30 per cent sold for cash in other markets. It was learnt that most of the traders were acting as intermediaries between farmers and the retailers/processors. Hence, the traders could make payment only after getting the amount from their clients. The farmers of Kottayi SKS are paid spot cash to compete with a near by private trader who purchased vegetables for spot cash.

5.10.4 Time lag in getting payment

The time lag in getting payment of credit sales is exhibited in Table 5.46

Table 5.46. Time lag in getting payment of credit sales ...

Sl. No.	Time lag	No. of Farmers	
		SKS	Non-SKS
1	One week	81 (90)	9 (25.71)
2	Two week	9 (10)	18 (51.44)
3	More than two week	0 (0)	8 (22.85)
Total		90 (100)	35 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of SKS, vast majority (90 per cent) of the farmers received payment within one week and 10 per cent in two weeks. On the other hand, majority of the Non-SKS farmers (51.44 per cent) received payment in two weeks, 25.71 per cent in one week and, 22.85 per cent after two weeks. When the payment period extended beyond two weeks in the Non-SKS markets, 90 per cent of the SKS farmers received payment within a week. It should also be noted that the SKS farmers have no counter party risk because of the intermediation of SKS.

5.11 Problems of marketing fruits and vegetables

The perception of farmers about the marketing problems of fruits and vegetables is presented in Table 5.47.

Table 5.47. Problems of fruits and vegetables marketing

Sl. No.	Problem	No. of farmers	
		SKS	Non-SKS
1	High transportation cost	0 (0)	14 (28)
2	Lack of storage facilities	64 (64)	17 (34)
3	Heavy loss during transportation	0 (0)	4 (8)
4	Poor quality of the produce	14 (14)	20 (40)
5	Non-availability of processing facilities	75 (75)	42 (84)
6	Lack of market intelligence	19 (19)	25 (50)
7	Loading and unloading difficulties.	0 (0)	10 (20)

Source: Compiled from primary data
 Note: Figures in bracket indicate percentage to total

A perusal of the table reveals that the most serious problems perceived by SKS farmers were non-availability of processing facilities (75 per cent) and lack of storage facilities (64 per cent). Lack of market intelligence (19 per cent) and poor quality of the produce (14 per cent) were the least serious problems perceived by the farmers. In the

case of Non-SKS farmers, 84 per cent reported non-availability of processing facilities, 50 per cent pointed out lack of market intelligence, 40 per cent brought out poor quality of the produce, 34 per cent identified the lack of storage facilities, and 28 per cent stated high transportation cost and 20 per cent pointed out loading and unloading as the major problems.

The results indicate that lack of adequate processing and storage facilities were the most serious problems faced by the commercial fruits and vegetables farmers. Creation of adequate processing capacities will ensure remunerative prices to the farmers particularly during peak season.

5.12 Training programmes attended by farmers

Through regular training programmes the VFPCK updates the technical and management skills of the farmers. Table 5.48 gives the details about the training programmes attended by the farmers.

Table 5.48. Training programmes attended by farmers

Sl. No.	Training programmes	No. of farmers	
		SKS	Non-SKS
1	Crop production methods	99 (99)	10 (20)
2	Fertilizer application	98 (98)	7 (14)
3	Pesticides application	93 (93)	5 (10)
4	Better harvesting practices	70 (70)	2 (4)
5	Marketing practices	56 (56)	0 (0)
6	Agri- Export-Zone	38 (38)	2 (4)
7	Crop insurance and credit	47(47)	0 (0)
8	Grading and Packaging	10(10)	0 (0)

Source: Compiled from primary data
 Note: Figures in bracket indicate percentage to total

The table reveals that 99 per cent of the SKS farmers attended training on crop production methods, 98 per cent on fertilizer application and 93 per cent training on pesticide application. Training on better harvesting practices, marketing practices and crop insurance and credit were attended by 70 per cent, 56 per cent and 47 per cent respectively. Training on grading and packaging was attended by 10 per cent of the farmers. In the case of Non-SKS farmers, 20 per cent attended training on crop production methods, 14 per cent on fertilizer application and 10 per cent on pesticide application. It appears that none of the Non-SKS farmers attended training on marketing practices, crop insurance and credit and grading and packaging.

The results clearly indicate that the SKS farmers are better trained than Non-SKS farmers. The SKS officials encourage the farmers to go for more and more training programmes. The VFPCCK training programmes are more comprehensive in the sense that they give weightage to both technical and managerial skills of the farmers

5.12.1 Additional training needs of SKS members

Table 5.49 examines the additional training needs of the farmers.

Table 5.49. Additional training needs of the farmers

Sl. No.	Training needs	No. of farmers
1	Innovative production techniques	44 (44)
2	Prevention of pests and diseases	5 (5)
3	Production of fruits and vegetables ideal for each region's agro-climatic conditions.	20 (20)
4	Export of fruits and vegetables	6 (6)
5	Climatic forecasting	11 (11)
6	Organic farming	7 (7)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage

From the table, it is evident that 44 per cent of the farmers needed training on innovative production techniques and 20 per cent needed training on fruits and vegetables

cultivation ideal for each region's agro- climatic conditions. Farmers also evinced interest in training on climatic forecasting (11 per cent), organic farming (7 per cent) and export of fruits and vegetables (6 per cent).

5.13 Structure of SKS market

Market structure refers to the characteristics of a market, which seem to influence strategically the nature of competition and pricing within the market.

5.13.1 Distribution of Intermediaries

SKS is a market owned and managed by farmers. The member farmers collectively market (group marketing) their produce directly to the traders. The traders include wholesalers, retailers and consumers. Table 5.50 shows classification of the sample traders in SKS

Table 5.50. Classification of sample traders in SKS

Sl. No.	Type of intermediary	No. of traders
1	Wholesaler	23 (56)
2	Retailer	8 (16)
3	Local trader	4 (8)
4	Exporter	1 (2)
5	Processor	6 (12)
6	Wholesaler-cum- processor	3 (6)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

It is clear from the table that 56 per cent of the sample were wholesalers. Retailers and processors accounted for 16 per cent and 12 per cent respectively of the sample. The share of local traders and wholesaler-cum-processor was eight percent and six per cent respectively in the total.

5.13.2 Trader's experience in fruits and vegetables business

Table 5.51. exhibits the experience of the sample traders in fruits and vegetables business.

Table 5.51. Traders experience in fruits and vegetables business

Sl. No.	Experience	No. of traders
1	0 – 1 year	3 (6)
2	1 – 2 years	2 (4)
3	2 – 3 years	3 (6)
4	3 – 5 years	12 (24)
5	Above 5 years	30 (60)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

When majority (60 per cent) of the sample traders claimed more than 5 years experience, another 24 per cent had of 3-5 years experience in the field. The remaining 16 per cent had less than three years experience. It may be inferred that the SKSs have been able to attract experienced traders to their market.

5.13.3 Traders experience in purchasing from SKS

The experience of selected traders in buying from SKS is the subject matter of

Table 5.52.

Table 5.52. Traders experience in purchasing from SKS

Sl. No.	Experience	No. of traders
1	0 – 1 year	8 (16)
2	1 – 2 years	9 (18)
3	2 – 3 years	7 (14)
4	3 – 5 years	17 (34)
5	Above 5 years	9 (18)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

It is observed that majority (34 per cent) were transacting business with SKS for 3-5 years. The percent of traders dealing in SKS for more than five years was 18 per cent and 1-3 years were 32 per cent. Another 16 per cent had less than one year experience in doing business with SKS. Though vast majority of the traders had more than five years experience in fruits and vegetables trade, only 18 per cent had more than five years experience in dealing with SKS. This is for the reason that the SKS markets have become a reality only during the past few years.

5.13.4 Rules of admitting farmers to SKS market

The bye-laws of each SKS prescribe certain qualification for membership. The general qualification required by the farmers to become 'A class' members in SKS are outlined below:

1. The farmer should be a member of the SHG's promoted by VFPCCK
2. The farmer should pay a membership fee of Rs.100 or more and pay an annual fee of Rs. 25 or more.
3. The farmer should sell weighing 1000 kg or valued Rs. 5000 to SKS in a month.
4. He should undertake to sell the entire produce through SKS
5. The farmer pay a commission of five per cent on sales value
6. The farmer should have attained the age of 18 years.
7. The farmer should have cultivation near to the SHG.
8. The farmers should cultivate fruits and vegetables commercially
9. The farmer should be prepared to work for the SHG
10. The farmers should have fruits and vegetables cultivation on a minimum of 35 cents of owned land. If it is leased he / she should cultivate 300 no. of plantain in a year or 25 cents of vegetables in three seasons or 50 cents of vegetables in two seasons.
11. The farmer should not be a person having criminal background and should not be insolvent.

Membership in an organization is given subject to its byelaws. In the case of SKS also the rules of membership have been formed with the objective of protecting the ethos of the organisation and promoting the genuine interests of the farmers.

According to the bye-laws of the SKS only a farmer who is a member of an SHG promoted by the SKS will be given membership. There are two types of membership in SKS: 'A class' and 'Associate membership'. Associate membership is given to those farmers who are not members of the SHGs. Associate members do not have any voting right and are not eligible for the annual bonus declared by the SKS.

5.13.5.1 Removal of members from SKS

A member can be expelled from SKS if he/she acts against the best interest of the SKS. A farmer can also voluntarily withdraw membership in the SKS one year after the date of joining.

With respect to the membership of farmers in the SHG and SKS, certain observations were made. As per the byelaw of the SKS a farmer member must have his/her cultivable land within the jurisdiction of the SHG. This provision has made several willing farmers to stay away from SKS as they have their agricultural land outside the area of operation of the SKS. The SKS officials feel that it is difficult for them to supervise the activities of a farmer who is alone and away from the SHG. As per the existing bye laws of the SKS, the farmers should have to sell the entire farm produce through SKS. But some farmers are selling part of their produce in other markets or to local traders. According to them, if they sell the entire produce in the SKS, it will result in a fall in the price at SKS due to over supply.

5.13.6 Admission of traders in SKS

The rules for admission of traders in SKS are set by the management committee of each SKS and are the follows:

1. An upfront payment of Rs.500 for taking part in the bidding
2. If the trade is on credit, the trader has to tender either a post dated cheque or a promissory note as security to the SKS.

Out of the ten SKS selected for the study only in Kottayi SKS, spot payment was mandatory for trading as the SKS faced stiff competition from an adjacent private trader.

In all other SKSs either spot payment or payment on or before corresponding market day next week was followed.

The traders' opinion about the rules for admission in SKS is summarised in Table 5.53.

Table 5.53 Traders' opinion about the rules for admission

Sl. No.	Opinion	No. of farmers
1	Hard	8 (16)
2	Easy	42 (84)
Total		50 (100)

Source: Compiled from primary data
Note: Figures in bracket indicate percentage to total

According to the table, the rules were found simple by vast majority (84 per cent) of the traders and difficult by 16 percent of the traders. From the discussions with the traders it was understood that they have genuine difficulties to make spot payment as they were not selling directly to consumers but to retailers on credit.

5.13.7 Buyer and seller concentrations in SKS market

The concentration of market power is an important concept in determining the nature of competition and consequently the market conduct and performance. The extent of concentration refers to the control of an individual firm or a group of firms over the buying and selling of the produce in a market.

5.13.8 Number of buyers and sellers in the SKS market

An efficient market is a market that is characterised by large number of buyers and sellers. If the number of participants is large, no single participant will be in a position to unduly influence the market. Table 5.54 presents the number of buyers and sellers in SKS market in different months and seasons. The various concepts used for the analysis are explained below.

1. Average number of market days (in a month) - Total number of market days -in a year /12
2. Average number of farmers (in a market day) -Total number of farmers in the month/Total number of market days in the month
3. Average number of traders (in a market day) -Total number of traders in the month/Total number of market days in the month
4. Farmers/traders=It is the ratio of farmers and traders in a market day-Regarding the farmers, higher the ratio the less efficient will be the market and lower the ratio the more efficient will be the market.
5. Average Volume (quantity) of trade (in a market day) -Total volume of trade in- the month/Total number of market days in the month
6. Average value of trade (in a market day) -Total value of trade in the month/Total- number of market days in the month

In Kerala, the fruits and vegetables cultivation coincides with three seasons, viz; *virippu* (from April to July), *Mundakan* (from August to November) and *Punja* (from December to March).

Table 5.54. Number of traders and farmers in the SKS markets (2004-05)

Months/ Seasons	Avg. no. of market days	Avg. no. of farmers in a market day	Avg. no. of traders in a market day	Farmers Traders	Avg. volume (kg) of trade per market day	Avg. value(Rs) of trade per market day	Avg.Price of the produce in SKS market[7/6]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2004 April	7	38	12	3.16	3157.16	31023.89	9.83
May	7	43	13	3.30	3096.00	40681.25	13.14
June	12	60	15	4.00	4182.92	49070.15	11.73
July	13	76	21	3.61	6445.30	78726.18	12.21
<i>Virippu</i>	8	54	16	3.36	4220.35	49875.00	11.82

Months/ Seasons	Avg. no. of market days	Avg. no. of farmers in a market day	Avg. no. of traders in a market day (4)	Farmers Traders (5)	Avg. volume (kg) of trade per market day (6)	Avg. value(Rs) of trade per market day (7)	Avg.Price of the produce in SKS market[7/6] (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
August	16	97	22	4.40	8875.35	116655.20	13.14
September	14	116	25	4.64	8675.88	163780.86	18.88
October	13	91	19	4.78	7890.04	80279.99	10.17
November	13	76	18	4.20	6911.99	62114.32	8.99
Mundakan	14	95	21	4.52	8088.32	105707.60	13.07
December	12	67	16	4.18	5692.39	46410.93	8.15
2005 January	10	53	17	3.11	5825.75	42436.37	7.28
February	9	43	17	2.52	7879.52	45530.61	5.78
March	8	40	11	3.63	4107.00	30211.22	7.36
Punja.	10	51	15	3.40	5876.17	41147.28	7.02

Source: Compiled from the books of accounts of SKS's

According to the table the farmers received highest price during the *Mundakan* season (Rs.13.07) compared to *Viripu* season (Rs.11.82) and *Punja* season (Rs.7.02). The quantity traded was also the highest was in *Mundakan* season (8088.32 Kg) compared to *Punja* (5876.17 Kg) and *Virippu* (4220.35 Kg).

When the monthly average price is considered, the highest price was recorded in September (Rs.18.88) and the lowest in February (Rs.5.78.). The quantity traded was the highest in September and lowest in March.

During *Virippu* season, the price was the highest in May (Rs.13.14) and lowest in April (Rs.9.83). In the *Mundakan* season the highest price was recorded in September (Rs.18.88) and the lowest in November (Rs.8.99). The variation between the highest and lowest price was observed in the *Mundakan* season. The price ruled lower in all the months during the *Punja* season. The highest price was recorded in December (Rs.8.15) and lowest in February (Rs.5.78).

It is common knowledge that price of fruits and vegetables particularly banana will be ruling high during the Onam season. During Onam season though the supply is comparatively higher, the higher seasonal demand will be fully absorbing the additional supply and pushing up the price of fruits and vegetables. During the *Punjya* season the prices fall substantially due to heightened arrival of fruits and vegetables from Tamil Nadu.

The participation of the farmers and traders in SKS was higher in *Mundakan* season (95 farmers and 16 traders) compared to *Virippu* (54 farmers and 16 traders) and *Punja* (51 farmers and 15 traders).

The farmer to trader ratio was also higher in *Mundakan* season (4.52) and lowest in *Virippu* season (3.36). The ratio was 3.40 in *Punja* season. The ratio was the highest in October (4.78) and lowest in February (2.52). The higher the ratio implies that the SKS cannot be called an efficient market. This is mainly due to the lesser number of traders participating in the SKS trade. The number of traders has not gone beyond 25 even in the peak months. The SKSs should devise innovative strategies to attract more traders in their markets proportionate to the number of farmers.

The results also do not support the postulate that lower the farmer -trader ratio higher the price realised by farmers. The farmers were getting higher price even when the ratio was very high and lower price when the ratio was very low.

5.13.9 Classification of SKS market

To analyse the structure of SKS market, Bain's framework of classifying the market was adopted. Markets are generally classified on the basis of the number of buyers and sellers in the markets. According to Bain Agricultural markets generally comes under the category of oligopsony markets. An oligopsony market is one in which the number of buyers is small and the number of sellers is large. In this case the buyers will be having an advantage over the sellers. They can play off one supplier against another, thus lowering their costs. They can also dictate terms with suppliers, in respect of delivery schedules, quality, and crop varieties. They pass off much of the risks of overproduction, natural loss, and variations in cyclical demand to the producers. The classification of oligopsony markets by Bain is given in Table 5.55.

Table.5.55.Classification of oligopsony market.

Category	Kind of oligopsony	Percentage share of business
I	Highly concentrated	75-100
II	Moderately concentrated	50-75
III	Slightly concentrated	25-50
IV	Atomistically competitive	0-25

Table 5.56 shows the classification of SKS markets based on volume of business of top four traders.

Table 5.56. Classification of markets based on volume of business transacted by top four traders

Year 2004-05

Sl. No.	SKS market	Total volume of business (Rs. lakh)	Total volume of business of top four traders (Rs. Lakh)	Share of top four traders to total volume of business (percentage)	Kind of market
Thrissur District					
1	Pazhayannur	64.00	29.82	46.60	III
2	Pariyaram	121.00	52.73	43.58	III
3	Tottipal	52.13	26.56	50.95	II
4	Alangad	41.98	17.28	41.16	III
5	Panancherry	57.30	26.11	45.57	III
	Average	67.28	30.53	45.57	III
Palakkad District					
			55.93	47.00	III
1	Kanjirappuzha	119.00	26.92	65.40	II
2	Elevenchery	41.17	10.50	46.00	III
3	Kottayi	22.84	37.99	40.52	III
4	Machanthode	93.76	52.60	54.25	II
5	Vyyakurshi	97.13	36.78	50.63	II
	Average	74.78	33.64	48.10	III
	Average of both districts	71.03			

Source: Ledger of Swasrya Karsaka Samithies (SKSs)

From the above table, it can be discerned that the SKS markets behaved like 'slightly concentrated oligopsony' as the four top traders accounted for 48.10 per cent of the total volume of business in the market. It indicates fair degree of competition in the market. When the markets in Thrissur and Palakkad are compared, the degree of concentration was slightly higher in Palakkad (50.63 per cent) than Thrissur (45.57 per cent). In Thrissur district the degree of concentration was highest in Thottipal (50.95 per cent) and lowest in Alangad (41.16 per cent). On the other hand in Palakkad district the degree of concentration was highest in Elevenchery (65.40 per cent) and lowest in Machanthode (40.52 per cent). Out of the five sample markets in Thrissur district four were 'slightly concentrated' oligopsonies and one was 'moderately concentrated' oligopsony. However, in Palakkad three of the sample markets were 'slightly concentrated' oligopsonies two were 'moderately concentrated' oligopsony. It is to be noted that none of the sample markets was a 'highly concentrated oligopsony' or 'atomistically competitive oligopsony'.

The share of each of the top four traders in the total business of the SKS is shown in Table 5.57.

Table 5.57. Volume of business of top four traders in SKSs

Year: 2004-05

SKS Markets	Volume of business			
	1 st	2 nd	3 rd	4 th
Thrissur		8.63 (13.48)	6.67 (10.42)	0.8 (3.50)
Pazhayannur	9.66 (15.09)	10.16 (8.39)	8.32 (6.80)	7.25 (6.00)
Pariyaram	26.98 (22.29)	10.50 (20.14)	1.64 (3.14)	1.02 (1.95)
Tottipal	13.77 (26.41)	4.31 (10.26)	4.04 (9.60)	3.68 (8.70)
Alangad	5.23 (12.45)	4.97 (8.67)	2.88 (5.02)	2.34 (4.08)
Panancherry	8.08 (14.1)			
Palakkad		14.00 (11.76)	13.56 (11.39)	13.16 (11.04)
Kanjirapuzha	15.00 (12.60)	7.14 (17.34)	6.17 (14.98)	5.37 (13.04)
Elevenchery	8.23 (20.00)	2.95 (12.91)	2.1 (9.19)	0.8 (3.50)
Kottayi	4.15 (18.16)	10.27 (10.95)	7.41 (7.9)	7.01 (7.47)
Machanthode	13.29 (14.17)	5.42 (5.58)	3.33 (3.42)	3.14 (3.23)
Vyyakurshi	11.71 (12.05)			

Source: Traders ledger in SKSs

Note: Figures in bracket indicate percentage to total value of trade in each SKS

In Thottipal top two traders were controlling as high as 46.55 per cent of the total business in the market. The other two top traders had a share of only 5.09 per cent. In Pariyaram a single trader commended 22.29 per cent of the total business in the market. According to the table only in Kanjirapuzha there was an even distribution of business among the four top traders.

5.13.10 Market power concentration of SKS market

Market power concentration refers to the concentration of the top four traders to the total value of trade. If the value of trade made by the top four traders in the total trade is low, it denotes that there is not much market power concentration, but if it is high, then it means that the market is heavily concentrated on the top four traders. The market power concentration of the selected SKS markets is analysed in Table 5.58.

Table 5.58. Market power concentration of SKS markets.

Year: (2004-05)

Sl. No.	SKS Markets	Percentage of four traders to total no. of traders (a)	Percentage of top four traders total value of transaction to total value of transactions of whole traders (b)	b/a
Thrissur District				
		46.60 (64.00)		1.16
1	Pazhayannur	40.00 (10)	43.58 (121.00)	3.48
2	Pariyaram	12.5 (32)	50.95 (52.13)	3.31
3	Tottipal	15.38 (26)	41.16 (41.98)	2.47
4	Alangad	16.60 (25)	45.57 (57.30)	1.36
5	Panancherry	33.33 (12)		
Palakkad District				
		44.45 (9)	47.00 (119.00)	1.05
1	Kanjirapuzha	16.67 (24)	65.40 (41.17)	3.92
2	Elevenchery	11.77 (34)	10.50 (22.84)	0.89
3	Kottayi	25.00 (16)	40.52 (93.76)	1.62
4	Machanthode	50.00 (8)	54.25 (97.13)	1.08
5	Vyyakurshi			

Source: Traders ledger in SKSs

Note: In column (a) figures in bracket indicate total number of traders and in column (b) figures in brackets indicate total value of trade in lakh

The table indicates that in markets like Elevenchery (3.92), Pariyaram (3.48) and Thottipal (3.31), the market power was highly concentrated in top four traders. However the market power was least concentrated in top four traders in markets like Kottayi (0.89), Kanjirapuzha (1.05), Viyyakurishi (1.08) and Pazhayannur (1.16). The ratio of market power concentration was lower in markets where the percentage of top four traders to total number of traders was close to the percentage business of top four traders to total business in the markets.

5.13.11 Degree of product differentiation

The degree of product differentiation examines the extent to which the traders differentiate, distinguish or express their specific preference among competing products of various farmers. Factors such as product quality, packing and seller's promotional strategies are the common differentiating attributes. If the products are homogeneous, the price variations in the market will be minimum. When products are heterogeneous, traders tend to offer different prices for the produce. Everyone will be competing to prove that his product is superior to others.

5.13.11.1 Product quality of the SKS markets

With respect to the selected crops, the different grades sold by the farmers were shown in Table 5.30 and Table 5.31. According to the mentioned tables, the majority of the farmers (42.1 per cent) in SKS graded nendran into two grades and the remaining 39.4 per cent into three grades. Cowpea was sold without any grading by all the farmers. In the case of bittergourd, 65.62 per cent of the farmers sold the crop in two grades. Amaranthus was sold by farmers without grading. Ivygourd was sold in two grades. The availability of a variety of grades of fruits and vegetables in SKS meets the product differentiation need of the traders.

5.13.12 Reasons for purchasing from SKS

Table 5.59 examines the reasons for purchasing from SKS by traders.

Table 5.59. Reasons for purchasing from SKS

Sl. No.	Reason	No. of respondents
1	Superior quality produce	17 (34)
2	Low price	5 (10)
3	Low transaction cost	11 (22)
4	Availability of large quantity	5 (10)
5	For making a full load	3 (6)
6	Wide variety of produce	4 (8)
7	Established relationship with farmers	2 (4)
8	Credit	3 (6)
Total		50 (100)

Source: Compiled from primary data
Note: Figures in bracket indicate percentage to total

According to 34 per cent of the traders, availability of superior quantity produce was the main consideration for buying from SKS. Low transaction cost was the chief attraction for purchasing from SKS for 22 per cent of the traders. Low price and availability of large quantity were the reasons for purchasing from SKS in the case of 10 per cent each of the traders. It is to be noted that in the SKSs there are no loading charges and entry fees unlike other markets

5.13.13 Mode of packing in SKS market

From Table 5.34, it is clear that 61.85 per cent of the SKS farmers used plantain leaves (52.26 per cent) and plastic sheets (47.74) for packing nendran. Table 5.35 indicated the mode of packing used for bittergourd. All the farmers sold bittergourd with packing, majority of them using gunny bags. In the case of cowpea and amaranthus all the farmers marketed without any packing. In the case of ivygourd, plastic bag was the

packing material used by all the farmers. It was observed during the study that packing was an important attraction for the traders to buy from SKS. Proper packing preserved the physical form and quality of the produce till it reached the end market.

5.13.14 Preference of traders for a specific grade

Table 5.60 indicates the preference of traders for specific grades.

Table 5.60 Preference for a specific grade of a particular crop

Sl. No.	Preference	No. of respondents
1	Yes	27 (54)
2	No	23 (46)
	Total	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

As per the Table, 54 per cent of the traders expressed preference for specific grades and 46 per cent showed no preference for a specific grade of a particular crop. It indicates that majority of the traders are quality conscious.

5.13.15 Preference for produce from a particular farmer or location

Table 5.61 shows the preference of traders for the produce from a particular farmer or location.

Table 5.61. Preference for the produce from a particular farmer or location

Sl. No.	Preference	No. of traders
1	Yes	20 (40)
2	No	30 (60)
	Total	50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total



The table reveals that majority of the traders (60 per cent) showed no preference towards the produce of a particular farmer or location. But 40 per cent of the farmers did show preference for the commodities of a particular farmer or location. During the study it was observed that in special cases the traders expressed interest in produces of a particular area. This is mainly due to the special agro- climatic conditions of those areas which contributed some special features from that area.

5.13.16 Promotional methods followed by SKS

An analysis of the promotional strategies adopted by SKS revealed that all of the sample SKSs promoted their market by projecting large quantity of arrivals, superior quality of commodities, freshness and wide variety of produces.

The above analysis reveals that in SKS, there was definite product differentiation with regard to the selected. The product differentiation was made in terms of variety, shape, quality and size...

5.13.17 Flow of market information

A well organized market information system facilitates the buyers and sellers to interact with one another in arriving at the prices and striking deals. The market information helps the farmers in taking informed decisions. A farmer is required to decide when, where, and how the produce should be disposed off. Market information is also required by traders to plan the purchase, storage, and sale of goods.

5.13.18 Source of market information for SKS

The main source of market information for SKS was the Market Information Centre (MIC) of the VFPCCK. According to table 5.28 the prime source of information for farmers was SKS followed by traders, VFPCCK journal, fellow farmer, newspaper, radio and television. MIC of VFPCCK collects information regarding the prices of each crop in important markets in Kerala and Tamil Nadu. MIC also provides information about the market arrivals and weekly price trends of important crops. The information is communicated to each SKS over telephone and through radio. Out of the 10 SKS studied, only the Panancherry SKS used to publish on a notice board the daily price of fruits and

vegetables at the Thrissur Market. In the case of Panachery market, the President took special interest in collecting the price data from Thrissur market directly and publish them on the notice board. In all other SKSs, the market information was disseminated by word of mouth. It may be inferred that the MIC is helping the SKS farmers to strike better deals with the traders.

5.13.19 Source of market information for traders

Information regarding the market helps to reduce the various market risks. Information about price, quantity, and quality of the produce are the information, which are most important for traders.

5.13.20 Traders prior knowledge about farmers in SKS

Table 5.62 analyses the traders' prior knowledge about the farmers in SKS.

Table 5.62. Traders' prior knowledge of the farmers in SKS

Sl. No.	Knowledge about farmers	No. of traders
1	Yes	21 (42)
2	No	29 (58)
Total		50 (100)

Source: Compiled from primary data.

Note: Figures in brackets indicate percentage to total

Majority of the traders (58 per cent) did not have prior knowledge of the farmers who came to SKS. But 42 per cent of the traders knew the farmers who came to SKS. Prior knowledge of the traders about the farmers is likely to influence the price discovery mechanism in the market. However, it is observed that very few farmers actually present in the market at the time of auctioning. In the absence of the farmer the price is finalised by the auctioner.

5.13.21 Reference market of traders in fixing the price at SKS

Table 5.63 examines the markets traders use as reference point in fixing the price at SKS.

Table 5.63. Reference market of traders in fixing the price at SKS

Sl. No.	Reference market	No. of traders
1	District wholesale market	29 (58)
2	Traders' own market.	19 (38)
3	Other SKSs	2 (4)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From Table 5.63, it is clear that majority of the traders (58 per cent) quoted the price based on the price prevailing in the district wholesale market. Around 38 per cent of the traders reported that they were guided by the price prevailing in their own market. Only two per cent of traders depended on prices prevailing in other SKSs as the reference price.

5.13.22 Degree of integration in SKS market

Market integration refers to the expansion of firms by consolidating additional marketing functions under a single management. Mainly there are two types of market integration viz; horizontal and vertical. Horizontal integration means the co-operation among the SKSs. It has been observed that the SKSs are working as isolated units. Vertical integration means additional marketing functions undertaken by SKS like processing. If the SKSs were integrated vertically and horizontally it will improve their efficiency and help farmers to realise better price. It has been observed that there is much correlation between the prices determined in various SKSs. This may be due to the

exchange of market information between SKSs and dissemination of market information by the central MIC.

5.14 Conduct of the SKS market

Market conduct refers to the set of competitive strategies that a trader or a group of traders use to run their business. It includes (i) market sharing and price setting policies, (ii) policies aimed at coercing rivals and (iii) policies towards setting the quality of products. In other words, market conduct refers to various aspects of trading strategies viz., buying, selling, transport, storage, information, negotiation and risk bearing by traders.

5.14.1. Traders behaviour towards buying from SKS market

The traders' behaviour is analyzed in terms of the competitive strategies adopted by them during the purchase of the produce. The price discovery mechanism followed in SKS is open auction in which produce is given to the highest bidder. In order to outperform other traders and get the deal in his favour traders adopted certain strategies which are examined in Table 5.64.

Table 5.64. Competitive strategies adopted by the traders

Sl. No.	Strategies	Traders
1	Wait till the close of the market	21 (42)
2	Participate in more markets	16 (32)
3	Bidding at lower denominations	11 (22)
4	Using relationships with farmers	2 (4)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in brackets indicate percentage to total

Majority of the traders (42 per cent) waited till the close of the market, when normally the prices cool down so that they can buy at lower price. Traders opined that at the opening of the market, the price normally would be ruling high which would soften

gradually. Another 32 per cent of the traders followed the strategy of trading in more number of markets so that they can buy from the market where the price is low. Around 22 per cent reported that they would bid at lower denominations so that the price would not go up very fast. A few traders (four per cent) used their relationships with farmers for getting produce at lower price.

5.14.3 Payment of price by the traders

Table 5.65 shows the payment of price by traders.

Table 5.65. Payment of price by traders

Sl. No.	Duration	No. of traders
1	Spot	5 (10)
2	One week	26 (52)
3	Two weeks	9 (16)
4	Three weeks	4 (8)
5	Four weeks	5 (10)
6	Above one month	1 (2)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The table shows that spot payment was made by 10 per cent of traders. When majority (52 per cent) of the traders made the payment within one week, 16 per cent made payment within two weeks. Payment was made in three weeks by eight percent and in four weeks by 10 per cent of the traders. Only in exceptional case the payment extended beyond one month.

The traders in general made the payment within a week from the transaction day. Very rarely the payments took more than one month. If the traders are allowed credit for more than one week it is likely to become irrecoverable. Some of the SKSs are burdened with huge amounts due from some defaulting traders. It is to be noted that the traders are under no obligation to purchase from a particular SKS.

5.14.4 Major end markets of traders

The major markets where the traders finally sold the produce are presented in Table 5.66.

Table 5.66. Major end markets of traders.

Sl. No.	Market	No. of respondents
1	Thrissur	15 (30)
2	Palakkad	8 (16)
3	Chengannur	6 (12)
4	Ernakulam	4 (4)
5	Mannarkad	3 (6)
6	Chalakkudy	5 (10)
7	Kozhikode	4 (8)
8	Kottayam	9 (18)
9	Aluva	8 (16)
10	Thamarassery	4 (8)
11	Gujarat	1 (2)
10	Adimali	2 (4)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The major end markets of the selected traders were Thrissur (30 per cent), Kottayam (18 per cent), Palakkad (16 per cent), Aluva (16 per cent), Chengannur (12 per cent) and Chalakkudy (10 per cent). Other less important end markets were Kozhikode, Thamarassery, Mannarkad, Adimali and Ernakulam. One trader from Pariyaram SKS was found to export fruits and vegetables to Gujarat. It may be observed that the traders are buying from SKS to feed the end markets situated far and wide from the SKSs.

5.14.6 Coverage of market by traders

The distribution of traders according to the number of markets covered by them is found in table 5.67.

Table 5.67. Coverage of markets by traders

Sl. No.	No. of market covered	No. of traders
1	One market	11 (22)
2	Two markets	25 (50)
3	Three markets	14 (28)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

When majority (50 per cent) of the traders served two markets, 28 per cent covered three markets and 22 per cent operated only in one market. It is clear that vast majority of the traders are operating in more than one market. The quantity they buy from SKS and price they offer are considerably influenced by their position in the markets they operate.

5.14.7 Distance travelled by traders

The distance travelled by the traders from the SKS to their main market is explained in Table 5.68.

Table 5.68. Distance traveled by the traders to their main market.

Sl. No.	Distance (Km)	No. of traders
1	0 – 20	8 (16)
2	20 – 50	9 (18)
3	50 – 100	17 (34)
4	100 – 200	7 (14)
5	200 and above	9 (18)
Total		50 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

The table indicates that majority (34 per cent) of the traders travelled a distance of 50-100 km and 18 per cent each a distance above 200 km and 20-50 km from SKS to

their main market. In the case of another 16 per cent of the traders their main market situated at a distance of 0-20 km from the SKS. All the traders were using motor vehicle (trailer, jeep or tempo) for transportation. It is to be noted that almost two-third of the traders reached the SKS travelling more than 50 Km from their main market. Since the traders had to travel long distance and come with a vehicle, they are quite often forced to purchase something from the market.

5.14.8 Disposal of stock by traders

Fruits and vegetables being highly perishable, the traders used to dispose the entire produce the same day. In the case of nendran, the traders need not dispose of the stock in a haste.

5.14.9 Risk management by traders

The traders who deal in highly perishable commodities like fruits and vegetables are exposed to two types of risks, the first being physical damage and the second being volatility in prices. It is found that the price of fruits and vegetables vary widely even within a trading day. With a view to minimize the risk of physical damage, the traders take utmost care in loading and unloading. Some traders even employ their own labourers for the work. In order to manage price risk, some traders enter into forward contract with their retailers and purchase from SKS according to the price and quantity agreed with their customers.

5.15 Performance of SKS market

Performance of a market depends on the economic results that flow from the market. The results include the effectiveness and efficiency of the services provided by the market.

5.15.1 Efficiency of SKS marketing system

SKS is a farmer owned marketing system. An efficient marketing system helps the farmers to market their produce at lower marketing cost and realise better price. The marketing

efficiency of SKS is evaluated in comparison with other marketing channels. Market efficiency is measured by means of Shepherd's formula. The variables for calculation of the formula include value of goods sold and total marketing costs. For the study purpose, the value sold is defined as the value of the produce realised by SKS and Non-SKS farmers. The total marketing cost is the total marketing cost incurred by the SKS and Non-SKS farmers.

Tables 5.69 and 5.70 show the price received by the farmers for the selected crops in SKS and Non-SKS markets.

Table 5.69. Price received by farmers in SKS market.

Year: 2004-05

Sl.No	Price Range (Rs/kg)	No. of farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	5-6	-	-	-	4 (21)	-
2	6-7	-	2 (5)	2 (2.5)	8 (42.1)	-
3	7-8	8 (10.52)	4 (8)	2 (2.5)	5 (26.31)	2 (10.52)
4	8-9	12 (15.78)	6 (12)	4 (12.5)	2 (10.52)	3 (33.34)
5	9-10	10 (13.15)	18 (45)	19 (59.37)	-	4 (44.44)
6	10-11	25 (32.89)	5 (12.75)	2 (6.26)	-	-
7	11-12	18 (23.68)	4 (7.5)	3 (9.3)	-	-
8	12-13	3 (3.9)	2 (5)	-	-	-
Total		76 (100)	40 (100)	32 (100)	19 (100)	9 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

From the table it is clear that majority of the farmers got price of Rs.10-11 for nendran, Rs.9-10 for cowpea, Rs.9-10 for bittergourd, Rs.6-7 for amaranthus and Rs.9-10 for ivygourd.

Table 5.71. Price received by farmers in Non-SKS markets

Year: 2004-05

Sl. No.	Price (Rs/kg)	farmers				
		Nendran	Cowpea	Bittergourd	Amaranthus	Ivygourd
1	6-7	-	-	-	4 (40)	1 (14.28)
2	7-8	-	-	-	6 (60)	5 (71.47)
3	8-9	4 (11.42)	1 (6.6)	1 (5.88)	-	1 (14.88)
4	9-10	6 (17.14)	6 (40)	1 (5.88)	-	-
5	10-11	19 (54.28)	8 (53.34)	6 (35.29)	-	-
6	11-12	4 (11.42)	-	9 (52.94)	-	-
7	12-13	2 (6.25)	-	-	-	-
Total		35 (100)	15 (100)	17 (100)	10 (100)	7 (100)

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

According to the table majority of the farmers received a price of Rs.10-11 for nendran and cowpea, Rs.11-12 for bittergourd and Rs.7-8 for amaranthus and ivygourd.

The weighted average price is considered as the value of goods sold by SKS and Non-SKS farmers for the calculation it is presented in Table 5.72.

Table 5.71. Price received by farmers in SKS and Non-SKS markets

Sl. No.	Crops	Price per Kg	
		SKS market(Rs)	Non-SKS(Rs)
1	Nendran	10.05	10.31
2	Cowpea	9.71	9.96
3	Bittergourd	9.31	10.85
4	Amaranthus	6.76	7.10
5	Ivygourd	8.72	7.50

Source: Compiled from table 5.74 and 5.75

The analysis of price received by the farmers in SKS and Non-SKS markets indicated that the farmers realised a better price for all crops except ivygourd in Non-SKS market. It may be noted that the control group of farmers (Non-SKS farmers) was selected from the area of operation of the SKS themselves. The traders' functioning with in the area of operation of SKS were offering higher price to the Non-SKS members to attract them since the SKS markets started functioning. The higher the price realised by the Non-SKS farmers may be due to the higher price offered by the local traders to counter the competition from SKS.

Marketing cost incurred by the farmers is another variable analysed in the study. The marketing costs incurred by SKS farmers included: (a) Five per cent of sales value as commission (b) transportation charges from farm gate to SKS, (c) labour charges, and (d) packing charges. In the case of other markets, (mainly district wholesale market) the major marketing costs were:

- | | | |
|------------------------|---|------------------------------|
| 1. Market entry charge | : | Rs.60/load for tempo |
| | : | Rs.15/load for auto-rickshaw |
| 2. Commission | : | 8 per cent |
| 3. Loading/unloading | : | Rs.1.50/nendran/sack |

Table 5.72 examines the marketing costs of selected crops

Table 5.72. Marketing costs of selected crops in SKS and other markets

Year:2004-05

Range of Marketing cost (Rs/kg.)	Nendran		Cowpea		Bittergourd		Amaranthus		Ivygourd	
	SKS	Non-SKS	SKS	Non-SKS	SKS	Non-SKS	SKS	Non-SKS	SKS	Non-SKS
0-0.25	4(5.26)	15(42.85)	-	-	-	10(58.8)	19(100)	-	-	-
0.25-0.50	8(10.5)	8(22.85)	30(75)	8(53.4)	1(3.125)	1(5.88)	-	-	2(22.2)	-
0.50-0.75	29(38.15)	5(14.28)	10(75)	7(46.6)	15(46.87)	3(17.64)	-	2(20)	7(77.8)	3(42.8)
0.75-1.00	35(46.65)	3(8.5)	-	-	16(50)	-	-	8(80)	-	4(57.1)
2.75-3.00	-	-				3(17.63)				
3.75-4.00	-	4(11.4)								
Total	76	35	40	15	32	17	19	10	9	7

Source: Compiled from primary data

Note: Figures in bracket indicate percentage to total

In the case of nendran, majority of the farmers incurred a cost of Rs.0.75-1.00 in SKS and Rs.0-0.25 in Non-SKS markets. But for cowpea, the marketing cost was Rs.0.25-0.50 for majority of farmers in SKS and Non-SKS markets. In the case of bittergourd, majority of the farmers incurred a cost of Rs.0.75-1.00 in SKS and Rs.0-0.25 in Non-SKS markets. The marketing cost was Rs.0-0.25 for amaranthus in SKS and Rs.0.75-1.00 for majority in Non-SKS market. For the majority of ivygourd farmers, the marketing cost was Rs.0.50-0.75 in SKS and 0.75-1.00 in Non-SKS markets. The weighted average marketing cost per Kg is depicted in Table 5.73

Table 5.73. Weighted average marketing cost of SKS and Non-SKS markets

Sl. No.	Crops	SKS(Rs)	Non-SKS(Rs)
1	Nendran	0.69	0.74
2	Cowpea	0.43	0.50
3	Bittergourd	0.74	0.71
4	Amaranthus	0.13	0.82
5	Ivygourd	0.57	0.77

From the table it is clear that only in the case of bittergourd the marketing cost was higher in SKS vis-à-vis Non-SKS markets. It was seen from the table that the marketing cost is more for the farmers who sold the produce through Non-SKS markets. During the study it was observed that many traders were collecting the produce from the farm gate. This was done with the ulterior motive of defeating the SKS system. If it was not the case all the Non-SKS farmers have to sell the produce in other markets incurring additional marketing cost. This is an indirect benefit Non-SKS farmers got with the advent of SKS. Since amaranthus fetched a higher price in the district wholesale market, Non-SKS farmers sold it there despite higher marketing cost. The price of bitter gourd is highly sensitive to the quality of spines. If it is transported the spines are likely to get

damaged. Hence the traders used to procure from the farm gate itself saving the Non-SKS farmers the marketing cost.

5.15.2 Marketing efficiency index

If the market efficiency of one market is higher than another market it is to be more efficient than other market. Market Efficiency Index of the two markets are shown in Table 5.74

Table 5.74. Market Efficiency Index of selected crops in SKS and Non-SKS market

Sl. No.	Crops	Market Efficiency Index	
		SKS	Non-SKS
1	Nendran	13.56	12.93
2	Cowpea	21.58	18.92
3	Bittergourd	11.58	14.28
4	Amaranthus	51.00	7.65
5	Ivygourd	14.29	8.74

From the above table, it can be seen that the SKS market is more efficient than other markets but for bittergourd. In the case of bitter guard in order to keep sell majority of the farmers sold the produce at the farm gate itself. The amaranthus farmers were mainly in the Kottayi SKS market and they were residing very near to the SKS rendering their marketing cost very low showing a higher market efficiency index.

5.15.2 Effectiveness of SKS marketing system

The effectiveness of the SKS marketing system was measured in terms of the satisfaction of farmers and traders with SKS.

The satisfaction was measured in terms of 18 parameters in case of farmers and 12 parameters in case of traders on a five point scale. The satisfaction level was finally divided into the following zones based on the index scores as follows:

Table 5.75. Satisfaction zone

Sl.No	Index Score	Zone
1	50 to 100	Highly Satisfied
2	0 to 50	Satisfied
3	-50 to 0	Dissatisfied
4	-100 to -50	Highly Dissatisfied

The satisfaction indices of farmers and traders are explained in Table.5.76 and 5.77 respectively.

Table 5.76. Farmers' satisfaction with SKS

Sl. No.	Variable	Index	Zone
1	SKS provides regular market for the farmers	96	IV
2	I am satisfied with the rules and regulations followed in SKS	96	IV
3	SKS market location is convenient to me	85	IV
4	The trading days and timing of trading are convenient to me	82.5	IV
5	SKS weights and measures are accurate	96	IV
6	The marketing costs are less in SKS compared to other markets	86.5	IV
7	The price discovery mechanism is more efficient in SKS compared to other markets	80.5	IV
8	SKS provides timely payment of sales proceeds to the farmers	83	IV

Sl. No.	Variable	Index	Zone
9	SKS provides regular market intelligence to manage market risk	22	III
10	SKS provides good quality seeds to farmers	69	IV
11	Input delivery system is more efficient in SKS than in other systems	77.5	IV
12	SKS method of credit delivery is efficient	77.5	IV
13	SKS method of crop insurance is efficient	58	IV
14	SKS provides advice on best cultivation practices	69.5	IV
15	SKS follows grading system that ensures better price to farmers	75.5	IV
16	After joining SKS, farmers crop production and productivity have gone up	82.5	IV
17	SKS promotes organic farming	28.5	III
18	I like to continue with SK	93	IV
	Composite Index	75.47	IV

Source: Compiled from primary data

It is clear from the table that the farmers expressed 'excellent' satisfaction with 16 out of the 18 variables. The farmers were 'satisfied' with the provision of regular market intelligence to manage market risk and with the promotion of organic farming. The none of farmers recorded any of the variables in the 'dissatisfied' or 'highly dissatisfied' zone. The composite satisfaction index was in the 'highly satisfied' zone with a value of 75.47. The results indicate that the SKS system is perceived to be an efficient system by the member farmers.

Table 5.77. Traders' satisfaction with SKS

Sl. No.	Variable	Index	Zone
1	Entry to SKS market is easy	99	IV
2	You are regularly purchasing from SKS	76	IV
3	Market place is conveniently located	90	IV
4	Trading days are convenient	79	IV
5	The grading system is good in SKS	58	IV
6	Good quality produce are available in SKS	63	IV
7	Enough quantity of produce are available from SKS	81	IV
8	Wide variety of produce come to SKS	73	IV
9	SKS officials are co-operative	86	IV
10	The produces for sales are systematically exhibited	71	IV
11	The price discovery mechanism is efficient in SKS	44	III
12	The system of marketing is efficient in SKS	54	IV
	Composite Index	72.8	IV

Source: Compiled from primary data

Out of the 12 given variables the traders rated 11 of them in the 'highly satisfied' zone. The traders were only 'satisfied' with the price discovery mechanism followed in SKS. The composite index (72.80) revealed that the traders were 'highly satisfied' with the SKS.

Conclusion

VFPCCK, through group marketing, has brought about a paradigm shift in fruits and vegetables cultivation and marketing in Kerala. The marketing behaviour of farmers has undergone tremendous changes owing to the integrated approach of VFPCCK. The

farmers are assured of regular market, better price, better weights and measures, standard grading of the produces, concessional and timely credit, crop insurance facility, quality planting materials, need based training and timely market information by VFPCCK. The availability of a package of services through a farmer owned institutional mechanism has attracted even landless farmers to undertake commercial fruits and vegetables cultivation on leased land. The SKSs, being able to attract traders to their markets and dictate terms with the traders, have been able to liberate the farmers from the exploitive practices of middlemen to a great extent and restore the self esteem of the farmers. The absence of storage facility attached to SKS is a major problem faced by farmers

The market for fruits and vegetables is highly seasonal and particularly during *Punja* season the price fall substantially in the market. The farmers, especially the nendran farmers realise the best price during Onam season as the demand outstrips the supply during the season. The SKS markets exhibited conditions of 'slightly concentrated oligopsony'. But the SKS in Palakkad as a whole showed characteristics of 'moderately concentrated oligopsony' raising some concerns of concentration of market power in a few traders .The SKS farmers empowered by latest market information provided by VFPCCK and collected by themselves are in a better position to negotiate with the traders about the price today, thanks to VFPCCK.

Summary of Findings and Conclusion

CHAPTER - 6

SUMMARY OF FINDINGS AND CONCLUSION

Kerala is one of India's most densely populated states with high human development indicators like high adult literacy and life expectancy, and low infant mortality. The state has predominance of very small farm holdings of less than 0.2 hectares (*Striving for Sustainable Agriculture Development, K.H.D.P. 2001*). Fruits and vegetables cultivation occupied an area of 17.4 lakh ha in the state during 2003-04. Despite its ideal climatic condition for horticultural crops, the fruits and vegetables sector was crippled by low production with only 30 per cent of the state's demand for vegetable being met by domestic production forcing it to depend on neighbouring states for making up the deficit. Particularly in Kerala the vegetable and fruit cultivation is largely confined to lease land tilled by landless farmers. As their leases are oral, the farmers are locked out of the formal extension system or institutional credit. Low profitability due to high cost of labour, transport, plant protection, and absence of organised marketing system makes farming less attractive.

The share of fruits and vegetables in the average Kerala diet is far below both recommended intake and national consumption levels. Given this the back ground, Government of Kerala with the support of European Union intermediated in the marketing system of fruits and vegetables and made remarkable change in the economic state of fruits and vegetables farmers.

The policy intervention made by K.H.D.P., the parent organisation of VFPCCK is through 'group marketing' where by farmers form their own market and get traders come and buy. The process of 'group marketing' is run by the farmers organizations known as Swasrya Karshaka Samithy (SKS). Now these SKSs have become the multi-utility, multi-purpose farmers organisations delivering services like, innovative production practices, credit, crop insurance, input service and marketing of output. It was in this context that the present study was undertaken with the following objectives.

1. To analyse the marketing behaviour of commercial fruits and vegetables farmers; and
2. To evaluate the structure, conduct and performance of "Swasraya Karshaka Samithies" (SKSs) promoted by Vegetable and Fruit Promotion Council, Keralam.

The study was conducted in Thrissur and Palakkad districts as they accounted for the largest volume of business through SKSs. Commercial farmers and traders of fruits and vegetables constituted the population of the study. For the study five SKSs were selected from each district randomly. From the area of operation of each SKS, ten member farmers who market their produce through SKS and five farmers who marketed their produce otherwise were selected randomly to constitute the sample of farmers. Similarly five traders, selected randomly from each SKS, constituted the sample of traders. Data were collected from the sources through personal interview method by administering pre-tested structured schedules. The data thus obtained were analysed by using bivariate tables, percentages and ranking.

Summary of findings

6.1 Socio-economic profile of the farmers

1. Classification of farmers based on their age revealed that majority of the SKS farmers (40 per cent) and Non-SKS farmers (52 per cent) were in the age group of 41-50. The results clearly indicate that older people are more interested in farming than the younger generation.
2. Classification of farmers based on their sex reveals that 97 per cent of the SKS farmers and all the Non-SKS farmers were males. The results underscore the predominance of men in agriculture.
3. The educational level of selected farmers disclose that majority of SKS farmers (98 per cent) and Non-SKS farmers (76 per cent) had literate. The results indicate that SKS farmers are far more educated than Non-SKS farmers.

4. Experience of farmers in farming revealed that majority of the SKS (75 per cent) and Non-SKS farmers (80 per cent) possessed more than 10 years experience in farming. The results imply that the selected farmers had vast experience in farming.
5. The land holding size of farmers showed that majority (64 per cent) of the SKS farmers were marginal and majority (52 per cent) of the Non-SKS farmers possessed small land holdings. The data suggest that marginal and small holdings dominate the agricultural sector in the study area.
6. The distribution of farmers according to their primary occupation disclosed that agriculture is the main stay of vast majority of the sample fruits and vegetables cultivators.
7. The annual income of farmers indicate that majority (27 per cent) of SKS farmers earned income in the range, Rs.1,00,000 - 2,00,000 and Non-SKS farmers (46 per cent) in the range of Rs.60,000 - 1,00,000. The findings indicate that the number of farmers with an annual income of Rs.1,00,000 and above is higher among SKS farmers than Non-SKS farmers.
8. The share of agricultural income in total income of farmers showed that in the case majority of the SKS farmers (65 per cent) and Non-SKS farmers (76 per cent) agricultural income accounted for 81-100 per cent of total income.
9. Income from fruits and vegetables cultivation accounted for 81-100 per cent of the total income of majority (31 per cent) of SKS farmers and 61-80 per cent of majority (35 per cent) of Non-SKS farmers. The share of income from fruits and vegetables in the total agricultural income is higher for SKS farmers than Non-SKS farmers.

6.2 Reason for taking membership in SKS

'Better price for the produce' followed by 'regular market for the produce', 'better measurement and grading practice in the market' and 'feelings of farmers own organisation' were the most important reasons for taking membership in SKS.

6.3 Crop production practice of farmers

1. It is evident from the analysis that 49 per cent of the SKS farmers and 64 per cent of Non-SKS farmers cultivated exclusively on own land. Farmers cultivating on leased land is more among the SKS farmers.
2. The area under fruit and cultivation showed that majority (64 per cent) of the SKS farmers had an area of 1.0-2.5 acres and majority (50 per cent) of Non-SKS farmers had an area of 0.0-1.0 acres. The area under fruits and vegetables cultivation is higher for SKS farmers compared to Non-SKS farmers. SKSs have been able to attract farmers with larger area under fruits and vegetables cultivation to its fold.
3. Canal water was the main source irrigation for 38 per cent of SKS farmers and 34 per cent of the Non-SKS farmers. The farmers depend more on man made sources of water than natural sources for irrigation.
4. The irrigation practices followed by farmers showed that 75 per cent of the SKS farmers and 86 per cent of Non-SKS farmers used either electric pump or diesel pump for irrigation. Farmers who practiced manual watering were comparatively higher among SKS farmers.
5. The source preference of planting materials of SKS farmers showed that majority (64 per cent) depended on traders for nendran. In the case of cowpea (80 per cent), bitter gourd (84 per cent) and amaranthus (68 per cent) majority depended on VFPCCK. Fellow farmers (44 per cent) constituted the most important source of seeds of ivy gourd.
6. The source preference of planting materials of Non-SKS farmers showed that traders constituted the most important source for suckers of nendran for 57 per cent of farmers. Own seeds were the main source for cowpea (33 per cent) and amaranthus (40 per cent). In the case of bitter gourd 29 per cent each depended on VFPCCK and fellow farmers for the seeds.

7. Mettupalayam variety of nendran was the major variety preferred by majority of SKS (36 per cent) and Non-SKS (51.4 per cent) farmers.
8. Lola was the preferred variety of cowpea for 80 per cent of SKS and 33.3 per cent of Non-SKS farmers. When SKS farmers showed a strong preference for Lola variety, the preference of Non-SKS was fractured over Lola local and Vyjayanthi.
9. In the case of bitter gourd, when SKS farmers (84.3 per cent) showed a strong preference towards Preethi variety, Non-SKS farmers (70.5 per cent) mostly preferred Local variety.
10. In the case of amaranthus the most preferred variety was Arun by SKS farmers (68.42 per cent) and Kannara Local by Non-SKS farmers (60 per cent).
11. Local variety of Ivy gourd was preferred by majority (66.7 per cent) of SKS farmers and Sulabha variety was preferred by majority (57 per cent) of Non-SKS farmers.
12. The four sources of planting material were VFPCCK, KAU, Traders and Fellow farmer. Out of them, KAU was the dearest and VFPCCK the cheapest, for the farmers.
13. It was observed that majority (53 per cent) of SKS farmers availed credit from commercial banks linked to SKS, and majority (30 per cent) of Non-SKS farmers from money lenders.
14. The analysis of magnitude of credit availed by farmers for vegetable cultivation indicated that 83.80 per cent of the SKS farmers availed credit in the range of Rs.20,000-30,000 and majority (27.03 per cent) of Non-SKS farmers availed credit up to Rs.10,000. The percentage of farmers who borrowed higher amount was larger among Non-SKS farmers vis-à-vis SKS farmers.
15. The interest cost of commercial banks and co-operative banks ranged from eight to 10 per cent. Among the formal institutions, the least cost credit was provided by commercial banks linked to SKS followed by co-operative banks. The cost of credit

was the highest for the money lenders. It may be noted that a considerable number of Non-SKS farmers depended on money lenders for their credit needs.

16. The harvesting frequency of SKS farmers showed that majority (51.32 per cent) of the farmers harvested nendran thrice in a week coinciding with the market days while cowpea, bitter gourd and ivy gourd were harvested thrice a week by majority of the farmers. In the case of amaranthus majority (79 per cent) harvested daily.
17. In the case of Non-SKS farmers, majority (85.7 per cent) harvested nendran weekly to reduce the marketing cost. Majority of cowpea (66.6 per cent) and amaranthus (70 per cent) farmers harvested thrice in a week. In the case of bitter gourd and ivy gourd majority of the farmers, 47 per cent and 71.4 per cent respectively, harvested two times in a week.

6.5 Marketing practices followed by the farmers

SKS farmers 'always' followed the practice of taking the produce to the market for sale after cleaning and grading. The Non-SKS farmers were not following any of the given practices always. The SKS farmers were enlightened with regard to scientific marketing practices. The better marketing behaviour of SKS farmers may attributed to their association with VFPCCK. The VFPCCK has made it mandatory to bring the produce to the market only after proper cleaning.

6.6 Grading of fruits and vegetables in the market

1. Fruits and vegetables are graded according to quality, variety, size and shape of the produce. It was found that:
 - (i) When majority (42.1 per cent) of the SKS farmers sorted nendran into two grades, majority (62.85 per cent) of Non-SKS farmers sold nendran without grading.
 - (ii) Cowpea and amaranthus were sold without grading by both SKS and Non-SKS farmers.

(iii) When 65.82 per cent of the SKS farmers sold bitter gourd in two grades, Non-SKS farmers sold bitter gourd without grading.

(iv) All the Non-SKS and 66.7 per cent of the SKS farmers sold ivy gourd without any grading.

2. The price difference between grade I and grade II of nendran was to the extent of Rs.2-3 for 45.71 per cent of the SKS farmers. It was to the extent of Rs.7-8 for 87.5 per cent for Non-SKS farmers. The price difference between grade I and III was to the extent of Rs.4-5 for 39.47 per cent SKS farmers and to the extent of Rs.7-8 for 60 per cent of Non-SKS farmers.
3. The price difference between grade I and II of bitter gourd was to the extent of Rs.5-6 for 76.19 per cent of SKS farmers. It was to the extent of Rs.6-7 for 80 per cent of non-SKS farmers.

6.7 Packing of fruits and vegetables

1. When majority (55.26 per cent) of SKS farmers used plantain leaves for packing nendran, majority (65.75 per cent) of Non-SKS farmers sold without packing.
2. The most preferred packing material for bitter gourd in the case of SKS and Non-SKS farmers was plastic bag.
3. Cowpea, amaranthus and ivy gourd were packed in plastic bag by all SKS and Non-SKS farmers.

6.8 Choice of market for sale

1. It is learned that 50 per cent of the SKS farmers sold exclusively through SKS and the remaining 50 per cent sold through various channels.
2. The main reason for selling the produce in Non-SKS market was farmgate collection by the traders. This saved the farmers of commission, transportation cost and loading and unloading charges.

3. The comparatively lower commission charged by the SKS was the chief important attraction of SKS market. Nearness of the market to the farm and regularity of the market were the next two important reasons for preferring SKS market.
4. Farm gate collection followed by absence of commission and spot payment were the main reasons for favouring farm gate traders.
5. Higher price, spot payment and lower market charges were the most important factors that motivated farmers to favour local market.
6. Regularity of the market, credit facility extended by traders, higher price and spot payment were the main attractions of wholesale market.

6.9 Means of transport used by farmers

SKS farmers mainly used tailed auto-rikshaw for transportation. Non-SKS farmers mainly transported by head load.

6.10 Market risk coverage mechanism of farmers

1. Price fluctuation was the only one risk perceived by SKS farmers, while the Non-SKS farmers perceived the risk of unsold produce, physical damage and default in payment, besides price fluctuation.
2. In order to cover the market risk majority (51 per cent) of SKS farmers sold the produce to the same trader, when Non-SKS farmers (46 per cent) sold to other traders.
3. Vast majority (90 per cent) of the farmers sold on credit in SKS market. Similarly 70 per cent of the Non-SKS farmers sold on credit and only 30 per cent sold for cash in other markets.
4. In the case of SKS, vast majority (90 per cent) of the farmers received payment within one week and 10 per cent within two weeks. On the other hand, majority

(51.44 per cent) of Non-SKS farmers received payment in two weeks. The SKS farmers had no counter party risk because of SKS intermediation.

6.11 Problems of marketing fruits and vegetables

1. The most serious problems perceived by SKS farmers were non-availability of processing facilities (75 per cent) and lack of storage facilities (64 per cent). In the case of Non-SKS farmers, 84 per cent reported non-existence of processing facilities, and 50 per cent pointed out lack of market intelligence. The lack of adequate processing and storage facilities were the most serious problems faced by the commercial fruits and vegetables farmers.

6.12 Training programmes attended by farmers

1. SKS farmers were better trained than Non-SKS farmers. The SKS officials encouraged the farmers to go for more and more training programmes. The VFPCCK training programmes were more comprehensive in the sense that they give weightage to both technical and managerial skills of the farmers.
2. Training with special focus innovative production technique was needed by 44 per cent of the farmers and another 20 per cent needed training on production of fruits and vegetables ideal for each region's agro-climatic conditions.

6.13 Structure of SKS market

1. The majority (56 per cent) of the sample traders were the wholesalers.
2. SKSs were able to attract experienced traders to their market as majority (60 per cent) possessed more than five years trading experience.
3. Majority (34 per cent) of the traders were transacting business with SKS for 3-5 years.
4. The rules formulated by SKS were found simple by vast majority (84 per cent) of the traders and difficult by only 16 per cent of the traders.

5. The season-wise analysis of price revealed that the farmers got better price during *Mundakan* season (Rs.13.07) compared to *Viripu* season and *Punja* season and the quantity traded was also highest in *Mundakan* season.
6. The highest monthly average price was recorded in September (Rs.18.88). The quantity traded was the highest in September and lowest in March.
7. It is common knowledge that the price of fruits and vegetables particularly nendran will be ruling high during the Onam season. During the Onam season though supply will be comparatively higher, the higher seasonal demand will be fully absorbing the additional supply and pushing up the price of fruits and vegetables.
8. The participation of farmers and traders in SKS was higher during the *Mundakan* season and the farmer to trader ratio was also highest in *Mundakan* season (4.52) and lowest in *Virippu* season (3.36).
9. Following to Bain's classification of Oligopsony market, the SKS markets behaved like 'slightly concentrated Oligopsony' as the top four traders accounted for 48.10 per cent of the total volume of business in the market. When the markets in Thrissur and Palakkad were compared, the degree of concentration was slightly higher in Palakkad (50.63 per cent) than Thrissur (45.57 per cent).
10. Out of the 10 SKSs selected, in Thottipal top two traders controlled as high as 46.55 per cent of the total business and in Pariyaram a single trader commanded 22.29 per cent of the total business in the market. Only in Kanjirapuzha SKS there was an even distribution of business among the four top traders.
11. The market power concentration analysis indicated that in markets like Elevenchery (3.92), Pariyaram (3.48) and Thottipal (3.31), the market power was highly concentrated in top four traders. However, the market power was less concentrated in markets like Kottayi (0.89), Kanjirapuzha (1.05), Vijayakurrishi (1.08) and Pazhayannur (1.16).

12. The availability of a variety of grades of fruits and vegetables in SKS met the product differentiation needs of traders.
13. Availability of superior quality produce was the main reason for buying from SKS according to majority (39 per cent) of the traders. Low transaction was the major reason for 22 per cent of the traders.
14. The majority of the traders in SKS were quality conscious as 34 per cent of them expressed preference for specific grades.
15. All the sample SKSs promoted their market by projecting larger quantity of arrivals, superior quality of commodities, freshness and wide variety of produces.
16. The main source of market information for SKS was the Market Information Centre (MIC) of the VFPCCK.
17. Majority (58 per cent) of the traders had no prior knowledge of the farmers who came to SKS. But, 42 per cent of the traders claimed prior knowledge of farmers.
18. District wholesale market was the reference market for majority (58 per cent) of the traders.
19. Integration of SKS markets vertically and horizontal will improve their efficiency and help farmers to realize better price.

6.14 Conduct of SKS market

1. The competitive strategies adopted by traders revealed that majority (42 per cent) adopted the strategy of wait till the close of market, as the prices cooled down towards the fag end of the market. Another 32 per cent of the traders followed the strategy of trading in more number of markets so that they can buy from the market where the price is low.
2. Spot payment was made only by 10 per cent of the traders. Majority (52 per cent) of the traders made the payment within one week.

3. The major end markets of the selected traders were Thrissur (30 per cent), Kottayam (18 per cent), Palakkad (16 per cent) and Aluva (16 per cent).
4. Vast majority (78 per cent) of the traders were operating in more than one market.
5. Majority (34 per cent) of the traders travelled a distance of 50-100 km from SKS to their main market.
6. In order to manage the price risk the traders entered into forward contract with their retailers and purchased from SKSs according to the price and quantity agreed with their customers.

6.15 Performance of SKS market

1. The price (Rs. per kg) received by farmers in SKS and Non-SKS markets for the selected crops were as follows:

Crops	Price (kg)	
	SKS	Non-SKS
Nendran	10.05	10.31
Cowpea	9.71	9.96
Bittergourd	9.31	10.85
Amaranthus	6.71	7.10
Ivy gourd	8.71	7.50

The Non-SKS farmers realized better price for all crops except ivy gourd. The higher price realised by the Non-SKS farmers may be due to the higher price offered by the local traders to counter the competition from SKS.

2. The marketing cost for SKS and Non-SKS farmers per kg of selected crops was:

Crops	Marketing cost (Rs/kg)	
	SKS	Non-SKS
Nendran	0.69	0.74
Cowpea	0.69	0.50
Bittergourd	0.74	0.71
Amaranthus	0.13	0.81
Ivy gourd	0.57	0.77

The marketing cost is higher in Non-SKS market for all the crops, but for bitter gourd.

3. The marketing efficiency index indicated that the SKS market was more efficient than Non-SKS market for most of the selected crops.
4. The composite satisfaction index of farmers was in the 'highly satisfied' zone with a value of 75.47.
5. The composite satisfaction index of traders was in the 'highly satisfied' zone with a value of 72.80.

Conclusion

Kerala, a densely populated state has been facing acute shortage of fruits and vegetables since long due to socio-economic reasons and the unique land utilization pattern in Kerala. Vegetable cultivation in Kerala was disjointed without the essential linkage between production and market. Poor on-farm practices and post-harvest handling and poor infrastructure in terms of transportation, storage, processing and market coupled with the extreme difficulty in collection from numerous small holding rendered traditional vegetable cultivation a losing proposition for the farmers. In order to tap the potential for raising vegetables in Kerala taking advantage of the diverse agro-

climatic conditions and progressive attitude of the farmers and to address the problems faced by traditional vegetable cultivators. The Vegetable and Fruit Promotion Council, Kerala (formerly KHDP) was promoted with the assistance of European Union in 1993. Thirteen years since its inception the VFPCCK has been able to bring in substantial change in the market related behaviour of its members farmers. The VFPCCK has also been able to revolutionise the market practices by promoting farmer owned markets in villages. The farmers are assured of regular market, fair price, better weights and measures, standardized grading, concessional and timely credit, crop specific insurance, quality planting materials, need based training and timely marketing information by the VFPCCK. The 'Group Marketing' system followed by the VFPCCK is a paradigm shift in marketing as the traders are made to come to the farmers market instead of the farmers going after the traders. Infact the VFPCCK has been able to liberate the farmers from the unfair trade practices of the unscrupulous middle men and to a great extent restore the self esteem of the cultivators of soil.

Analysis of the structure, conduct and performance of SKS markets disclosed that the market for fruits and vegetables particularly for banana is seasonal and farmers realized better price during Onam season. The SKS markets exhibited conditions of 'slightly concentrated oligopsony'. The SKS markets followed the practice of open competitive bidding or auction by traders for price discovery. The price determination process is thus made transparent and efficient. The marketing cost for farmers was lower in SKS markets than other markets. SKS markets are playing the role of price setters and as a result local private traders are forced to offer the same price or higher price to the farmers.

Farmers as well as traders are satisfied with the functioning of the SKS. Farmers are saved the trouble of taking their produce to distant markets incurring a number of marketing costs and assuming several risks, Traders are assured of quality produce at fair price in large quantities. The SKS markets have enabled considerable number of poor landless farmers to take up fruits and vegetables commercially by extending membership to them. Through an integrated approach to farmers VFPCCK has been able to empower the farmers socially and economically. However, VFPCCK has to take steps to establish

storage facilities and processing facilities to save the farmers from distress sales and to reap the benefits of value addition. VFPCCK has to strengthen its export operations with added thrust on organic farming to take advantage of the growing demand for organic products in the international market. The efficiency of SKS markets can be increased substantially if the farmer-trader ratio can be improved further.

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Appendices

APPENDIX - I

STUDY OF MARKETING BEHAVIOUR OF FARMERS

INTERVIEW SCHEDULE FOR SWASRYA KARSHAKA SAMITHIS (SKS)

MEMBER FARMERS

I. PERSONAL DETAILS

1. Name of the respondent :

2. Age (years): Upto 20 21-30 31-40 41-50

51-60 61 and above

3. Sex : Male Female

4. Educational qualification : Illiterate Primary

Secondary Pre-Degree

Degree Post-graduate

5. Domicile: Ward: Block: Village:
Panchayath: District:

6. Krishibhavan :

7. Experience in farming:
 Less than 5 years 5 to 10 years More than 10 years

8. Family particulars

Sl. No.	Name	Relationship with respondent	Age	Sex	Education	Primary occupation	Secondary occupation	Monthly income (Rs.)		Total (Rs.)
								Primary	Secondary	
Total										

9. Farmer classification: Marginal (0-2.5) acre / Small (2.5 - 5) acre / Semi medium (5-10) acre / Medium (10-25) acre / Large (25 acre and above)

Marginal Small Semi-medium Medium Large

10. Membership in SKS:

- (a) Name of SKS : _____
- (b) Address of SKS : _____
- (c) No. of years as a member in SKS : 0 - 2 / 2 - 4 / 4 - 6 / 6 and above
- (d) Distance to the SKS (in km) : 0 - 2 / 2 - 4 / 4 - 6 / 6 and above

11. Reason for taking membership in SKS (Rank them according to importance from 1 to 8):

- (1) Better price for the produce
- (2) Regular market for the produce
- (3) Availability of technical and managerial advise in production and marketing
- (4) Better measurement and grading practices in marketing
- (5) Timely payment of cash
- (6) Feeling of our own organization
- (7) Getting loans and advances
- (8) Any other (specify)

II. CROP PRODUCTION DETAILS

- 1.(a) Cropping pattern : Single crop Mixed crop

(b) Details of land holding and cropping pattern

2004-05

Sl. No.	Crops	No. of plants		Area under cultivation (in acre)		
		Variety 1	Variety 2	Owned	Leased	Total
1	Nendran					
2	Cowpea					
3	Bittergourd					
4	Amaranthus					
5	Ivygourd					

2. (a) Source of irrigation: Well Pond Canal
 Tube well Others (specify)

(b) Irrigation method: By hand By electric pump
 By diesel pump Any other (specify)

(c) Source of seed/planting material:

Sl. No.	Crops	Source of planting material*
1	Nendran	
2	Cowpea	
3	Bittergourd	
4	Amaranthus	
5	Ivygourd	

* 1. Own; 2. Fellow farmer; 3. Krishibhavan; 4. KAU; 5. VFPCK;
 6. National Seed Corporation; (7) Others (specify)

3. Details of credit

(2004-05)

Sl. No.	Source	Crop	Period/term	Amount (Rs.)	Interest (Rs.)	Outstanding amount (Rs.)	Over due amount (Rs.)

4. Do you get Interest subsidy for loans : Yes / No
 If 'Yes' percentage of subsidy received :

5. Production details:

Sl. No.	Crops	Season	Total yield	Home consumption	Crop loss	Sales through SKS		
						Marketed quantity	Price	Total
1	Nendran							
2	Cowpea							
3	Bittergourd							
4	Amaranthus							
5	Ivygourd							

11. Do you depend various sources for market news : Yes / No

12. If 'Yes', Degree of dependence on various sources of market news for fruits and vegetables by farmers (please '√' your opinion)

Sl. No.	Sources	Specify programme/article	Degree of Dependence				
			Strongly Depending	Depending	No opinion	Not depending	Not at all
1	Newspaper						
2	Radio						
3	SKS						
4	Television						
5	SKS journals						
6	Traders						
7	Fellow farmer						
8	Other journals (specify)						

III. MARKETING

1. *Scientific marketing practices done by the farmer* (Please '√' opinion)

(a) Consult experts regarding the demand of produce before planting the crops:

Always Frequently Occasionally Rarely Never

(b) Select the seed/planting material for cultivation according to market preference:

Always Frequently Occasionally Rarely Never

(c) Apply fertilisers and pesticides which have minimum chemical residue:

Always Frequently Occasionally Rarely Never

(d) Harvest the crop only after ensuring market for the product:

Always Frequently Occasionally Rarely Never

(e) Take the produce to the market for sale after cleaning:

Always Frequently Occasionally Rarely Never

(f) Use packing materials to protect the product from damage:

Always Frequently Occasionally Rarely Never

(g) Sell the produce after grading:

Always Frequently Occasionally Rarely Never

2. Prices of crops realised through SKS:

Crops	Season (specify the months)	Average price (per kg.) in 2003-04	Average price (per kg.) in 2004-05
1. Nendran			
2. Cow pea			
3. Bittergourd			
4. Amaranthus			
4. Ivygourd			

3(a) Grading in SKS:

Sl. No.	Crops	Grades	Bases of grading	Price difference among the grades
1	Nendran			
2	Cowpea			
3	Bittergourd			
4	Amaranthus			
5	Ivygourd			

(b) Percentage of each grades sold through SKS market

Sl. No.	Crops	Grades			
		1	2	3	4
1	Nendran				
2	Cowpea				
3	Bittergourd				
4	Amaranthus				
5	Ivygourd				

(c) Percentage of each grade sold through other channels

Crops	Grades			
	1	2	3	4
1. Nendran				
2. Cowpea				
3. Bittergourd				
4. Amaranthus				
5. Ivygourd				

4. Mode of packing

Sl. No.	Crops	Packing material used				Any other (specify)
		Gunny bags	Bamboo baskets	Plantain leaves	Palm leaves	
1	Nendran					
2	Cowpea					
3	Bittergourd					
4	Amaranthus					
5	Ivygourd					

5. Marketing channels and reason for preference and non-preference (Rank them)

Sl. No.	Crops	Channels*		Reason for preference **	Reason for non-preference ***	Price discovery mechanism
		Name	Qty.			
1	Nendran					
2	Cowpea					
3	Bittergourd					
4	Amaranthus					
5	Ivygourd					

- * Channel 1 : Producer - SKS - Traders
 Channel 2 : Producer - Pre-contractors - Traders
 Channel 3 : Producer - Local Market - Consumers
 Channel 4 : Producer - Commission agents - Traders
 Channel 5 : Producer - Consumer
 Channel 6 : Any other (specify)

- ** Reason for preference (Rank them from 'a' to 'g' according to importance)
 (a) Near to the farm
 (b) Credit from the traders
 (c) Immediate payment
 (d) Higher price
 (e) Marketing charges are less
 (f) Regularity of market
 (g) Any other (specify)

- *** Reason for non-preferences (Rank them from 'a' to 'f' according to importance)
 (a) Low price
 (b) Crop loss/wastage is more
 (c) High marketing charges
 (d) Lack of regular market
 (e) Cannot able to sold complete produce
 (f) Any other (specify)

6. Mode of Transport usually used :

Bicycle / Bike / Moped / Auto-rickshaw / Bus/Tempo/Headload/any other (specify)

7. Market risk coverage mechanism

(a) Type of marketing risk faced:

Unsold produce Spoilage Default in payment
 Low price Any others (specify)

(b) If the price of the produce offered by the buyer is too low what will you do?

Sale to the whole sale market Sale to the same trader
 Sale to processing unit Any other(specify)

8. Is there credit sale in SKS: Yes No

9. If 'Yes' how long you have to wait to realise the money?

1-5 days 5-10 days 10-15 days 15 days and above

10. Do you keep records of cost and revenue? Yes No

If 'Yes' what all records?

11. Marketing costs

(2004-05)

Sl. No.	Costs	Amount (Rs/kg)	Total cost (Rs)
1	Packing materials		
2	Transportation		
3	Loading and unloading		
4	Market entry charges		
5	Commissions		
6	Any other (specify)		
Total cost			

IV(a) Details regarding training programmes attended :

Sl. No.	Training programmes attended (✓)	Agency which gave	Period
1	Crop production methods		
2	Fertilizer applications		
3	Pesticides application		
4	Harvesting practices		
5	Marketing practices		
6	Agri-Export Zones (AEZ)		
7	Crop insurance and credit		
8	Grading packages		
9	Any other (specify)		

(b) Are you satisfied with the training programme : Yes / No

(c) If 'Yes' what all benefits you gained from the training?

(d) If 'No', what are the inadequacies of the training programmes?

(e) What are the additional trainings you need?

V(a). Problems involved in the marketing of fruits and vegetables:

Sl. No.	Problems	Rank the statements according to importance
1	High transportation cost	
2	Lack of storage facilities	
3	Heavy loss during transportation	
4	Poor quality of the produce	
5	Non-availability of processing facilities	
6	Lack of market information	
7	Loading and unloading	
8	Any other (specify)	

(b) Problems in price discovery mechanism

Sl. No.	Problems	Rank the statement according to importance
1	Grouping of traders in SKS	
2	Lack of co-ordination among farmers	
3	Less number of traders due to low volume of business	
4	Any other (specify)	

VI. Satisfaction towards SKS.

(Please '√' your opinion [SA – Strongly Agree; A – Agree; NO – No Opinion; DA – Disagree; SDA – Strongly Disagree])

(1) SKS provides a regular market for the farmers
 SA A NO DA SDA

(2) I am are satisfied with the rules and regulations followed by SKS for marketing:
 SA A NO DA SDA

(3) SKS's market location is convenient to me.
 SA A NO DA SDA

(4) SKS working days and time of trading are convenient to me.
 SA A NO DA SDA

(5) SKS's weights and measures are accurate
 SA A NO DA SDA

(6) The marketing costs are less in SKS compared to other markets.
 SA A NO DA SDA

(7) The price discovery mechanism is more efficient in SKS compared to other market
 SA A NO DA SDA

(8) SKS ensures timely payment of the sale proceeds to the farmers.

SA A NO DA SDA

(9) SKS provides regular marketing intelligence to manage market risk

SA A NO DA SDA

(10) SKS helps in providing good quality seeds to farmers.

SA A NO DA SDA

(11) Input supply system is more efficient in SKS than in other systems.

SA A NO DA SDA

(12) SKS method of credit delivery mechanism is efficient

SA A NO DA SDA

(13) SKS method of crop insurance facility is efficient.

SA A NO DA SDA

(14) SKS provides advice on best cultivation practices

SA A NO DA SDA

(15) SKS follows a grading system that ensures better price to farmers

SA A NO DA SDA

(16) After joining SKS farmers crop production and productivity have gone up.

SA A NO DA SDA

(17) SKS promotes organic farming

SA A NO DA SDA

(18) I like to continue with SKS.

SA A NO DA SDA

APPENDIX – II

STUDY OF MARKETING BEHAVIOUR OF FARMERS

INTERVIEW SCHEDULE FOR NON-SKS FARMERS

I. PERSONAL DETAILS

1. Name of the respondent :
2. Age (years): Upto 20 21-30 31-40 41-50
 51-60 61 and above
3. Sex : Male Female
4. Educational qualification : Illiterate Primary Secondary
 Degree Post-graduate
5. Domicile: Ward: _____ Block: _____ Village: _____
Panchayath: _____ District: _____
6. Krishibhavan :
7. Experience in farming:
 Less than 5 years 5 to 10 years More than 10 years

8. Family particulars

Sl. No.	Name	Relationship with respondent	Age	Sex	Education	Primary occupation	Secondary occupation	Monthly income (Rs.)		Total (Rs.)
								Primary	Secondary	
Total										

9. Farmer classification: Marginal (0-2.5) acres/ Small (2.5 - 5) acres/ Semi medium (5-10) acres/ Medium (10-25) acres/ Large (25 acres and above)
 Marginal Small Semi-medium Medium Large

10. Do you know about SKS Market? Yes / No

11. If 'Yes' why you are not marketing through SKS?

- (a) Far from your place (e) Low price in the market
- (b) Market entry is difficult (f) Required to spend more time in the market
- (c) Not sufficient production (g) Any other (specify)
- (d) High marketing cost

12. Where are you marketing your produce:

- (a) Local market (b) Wholesale market
- (c) Pre-contractors (d) Any other (specify)

13. Reason for preferring that channel (Rank according to preference from 1 to 8):

- (1) Better price for the produce
- (2) Regular market for the produce
- (3) Spot payment of price
- (4) Near to the farmyard
- (5) Marketing cost is less
- (6) Relationship with the buyer
- (7) Getting loans and advances
- (8) Any other (specify)

14. Distance of the market from your place:

0-2 km / 2-5 km / 5-10 km

10 km and above

II. CROP PRODUCTION DETAILS

1. (a) Details of land holdings (in acres)

2004-05

Sl. No.	Crops	No. of plants		Area under cultivation (in acre)		
		Variety 1	Variety 2	Owned	Leased	Total
1	Nendran					
2	Cowpea					
3	Bittergourd					
4	Amaranthus					
5	Ivygourd					

(b) Cropping pattern : Single crop Mixed crop

2. (a) Source of irrigation: Well Pond Canal

Tube well Others (specify)

(b) Irrigation method: By hand By electric pump

By diesel pump Any other (specify)

(c) Source of seed/planting material:

Sl. No.	Crops	Source of planting material*
1	Nendran	
2	Cowpea	
3	Bittergourd	
4	Amarathus	
5	Ivygourd	

* 1. Own; 2. Fellow farmer; 3. Krishibhavan; 4. KAU; 5. VFPCK;
6. National Seed Corporation; (7) Others (specify)

3. Details of credit

Sl. No.	Source	Crop	Year	Amount (Rs.)	Interest (Rs.)	Outstanding amount (Rs.)	Over due amount (Rs.)

4. Do you get Interest subsidy from banks
If 'Yes' percentage of subsidy received.

: Yes / No

5. Production details:

Sl. No.	Crops	Season	Total yield	Home consumption	Crop loss	Sales		
						Marketed quantity	Price	Value
1	Nendran							
2	Cowpea							
3	Bittergourd							
4	Amaranthus							
5	Ivygourd							

6. Harvesting Frequency of the crops

Sl. No.	Crops	Harvesting frequency (weekly, biweekly, monthly, fortnightly, daily, any other (specify))
1	Nendran	
2	Cowpea	
3	Bittergourd	
4	Amarathus	
5	Ivygourd	

7. From which all sources you meet labour requirements:

Hired labour Family labour Others (specify)

8. Have you insured your crops : Yes No

If yes, details:

Sl. No.	Crops	Insurance agency	Sum assured	Premium	Crop loss		Compensation received	Net amount
					Reason	Value		
1	Nendran							
2	Cowpea							
3	Bittergourd							
4	Amarathus							
5	Ivygourd							

9. Cost of cultivation

(2004-05)

Sl. No.	Crop	Rent Paid	Labour	Seeds		Interest paid	Insurance premium	Fertilizers		Amount (Rs.)	Pesticides		Amount (Rs.)	Other prodn. costs	Total
				Price	Qty			Price	Qty.						
1	Nendran														
2	Cowpea														
3	Bittergourd														
4	Amaranthus														
5	Ivygourd														

10. Do you depend on various sources for market news : Yes / No

11. If 'Yes', Degree of dependence on various sources (please '√' your opinion)

Sl. No.	Sources	Specify programme/article	Degree of Dependence				
			Strongly Depending	Depending	No opinion	Not depending	Not at all
1	Newspaper						
2	Radio						
3	Television						
4	Traders						
5	Fellow farmer						
6	Journals (specify)						

III. MARKETING

1. *Scientific marketing practices done by the farmer* (Please '√' opinion)

(a) Consult experts regarding the demand of produce before planting the crops:

Always Frequently Occasionally Rarely Never

(b) Select the seed/planting material for cultivation according to market preference:

Always Frequently Occasionally Rarely Never

(c) Apply fertilisers and pesticides which have minimum chemical residue:

Always Frequently Occasionally Rarely Never

(d) Harvest the crop only after ensuring market for the product:

Always Frequently Occasionally Rarely Never

(e) Take the produce to the market for sale after cleaning:

Always Frequently Occasionally Rarely Never

(f) Use packing materials to protect the product from damage:

Always Frequently Occasionally Rarely Never

(g) Sell the produce after grading:

Always Frequently Occasionally Rarely Never

2. Prices of crops realized through various channels used

Crops	Season (specify the months)	Average price (per kg.) in 2003-04	Average price (per kg.) in 2004-05
1. Nendran			
2. Cow pea			
3. Bittergourd			
4. Amaranthus			
4. Ivygourd			

(a) Grading of crops

Sl. No.	Crops	Grades	Bases of grading	Price difference among the grades
1	Nendran			
2	Cowpea			
3	Bittergourd			
4	Amaranthus			
5	Ivygourd			

(b) Percentage of each grades sold through the market various channels

Sl. No.	Crops	Grades			
		1	2	3	4
1	Nendran				
2	Cowpea				
3	Bittergourd				
4	Amaranthus				
5	Ivygourd				

3. Mode of packing:

Sl. No.	Crops	Packing material used				Any other (specify)
		Gunny bags	Bamboo baskets	Plantain leaves	Palm leaves	
1	Nendran					
2	Cowpea					
3	Bittergourd					
4	Amaranthus					
5	Ivygourd					

4. Marketing channels and reason for preference and non-preference (Rank them)

Sl. No.	Crops	Channels*		Reason for preference **	Reason for non-preference ***	Price discovery mechanism
		Name	% of quantity marketed			
1	Nendran					
2	Cowpea					
3	Bittergourd					
4	Amarathus					
5	Ivygourd					

- * Channel 1 : Producer - Pre-contractors - Traders
 Channel 2 : Producer - Local Market - Consumers
 Channel 3 : Producer - Commission agents - Traders
 Channel 4 : Producer - Consumer
 Channel 5 : Any other (specify)

- ** Reason for preference (Rank them from 'a' to 'g' according to importance)
 (a) Near to the farm
 (b) Credit from the traders
 (c) Immediate payment
 (d) Higher price
 (e) Marketing charges are less
 (f) Regularity of market
 (g) Any other (specify)

- *** Reason for non-preferences (Rank them from 'a' to 'f' according to importance)
 (a) Low price
 (b) Crop loss/wastage is more
 (c) High marketing charges
 (d) Lack of regular market
 (e) Cannot able to sold complete produce
 (f) Any other (specify)

5. Mode of Transport usually used : Bicycle / Bike / Moped / Auto-rickshaw / Bus / Tempo / Head load / any other (specify)

6. Market risk coverage mechanism:
 (a) Type of marketing risk faced by farmers:

- Unsold produce Spoilage Default in payment
 Low price Counter part risk Any others (specify)

(b) If the price of the produce offered by the buyer is too low, what will you do?

Sale to the whole sale market Sale to the same trader

Sale to processing unit Any other(specify)

7. Whether credit sale is in the market : Yes No

8. If yes how long you have to wait to realise the money?

1-5 days 5-10 days 10-15 days 15 days and above

9. Do you keep records of cost and revenue? Yes No
If yes what all accounts?

10. Marketing costs

(2004-05)

Sl. No.	Costs	Amount (Rs/kg)	Total cost (Rs)
1	Packing materials		
2	Transportation		
3	Loading and unloading		
4	Market entry charges		
5	Commissions		
6	Any other (specify)		
Total cost			

11. Details regarding training programmes attended :

Sl. No.	Training programmes attended (✓)	Agency which gave	Period
1	Crop production methods		
2	Fertilizer applications		
3	Pesticides application		
4	Harvesting practices		
5	Marketing practices		
6	Agri-Export Zones (AEZ)		
7	Crop insurance and credit		
8	Grading packages		
9	Any other (specify)		

12. Are you satisfied with the training programme : Yes / No

13. If 'Yes' what all benefits you gained from the training?

14. If 'No', what are the inadequacies of the training programmes?

15. What are the additional trainings you needed?

16. Problems involved in the marketing of fruits and vegetables:

Sl. No.	Problems	Rank the problems according to importance
1	Lack of storage facilities	
2	Poor quality of the produce	
3	Non-availability of processing facilities	
4	Lack of market information	
5	High marketing cost	
6	Any other (specify)	

17. Problems in price discovery mechanism

Sl. No.	Problems	Rank the problem according to importance
1	Traders have a major role in fixing the price	
2	Lack of co-ordination among farmers	
3	Any other (specify)	

18. Satisfaction level towards the Market:.

(1) The market provides market intelligence to manage market risk

Yes

No

(2) The market provides input supply system for farmers

Yes

No

(3) The market provides credit facility to farmers

Yes

No

(4) The market provides crop insurance facility to farmers

Yes

No

(Please '✓' your opinion: [SA – Strongly Agree; A – Agree; NO – No Opinion; DA – Disagree; SDA – Strongly Disagree])

(5) The market provides a regular market for the farmers

SA A NO DA SDA

(6) I am satisfied with the rules and regulations followed in the market:

SA A NO DA SDA

(7) I feel that it is the best channel for selling my produce.

SA A NO DA SDA

(8) The marketing costs are very less in the market.

SA A NO DA SDA

(9) The price discovery mechanism is very efficient.

SA A NO DA SDA

(10) The days and time of trading is convenient to me.

SA A NO DA SDA

(11) Market location is convenient to me.

SA A NO DA SDA

(12) The weight and measurement are accurate

SA A NO DA SDA

(13) The market follows a grading process that ensures fair price to farmers

SA A NO DA SDA

(14) I like to continue with the market.

SA A NO DA SDA

APPENDIX - III

TO EVALUATE THE STRUCTURE - CONDUCT AND PERFORMANCE OF SWASRYA KARSHAKA SAMITHIS (SKSs) MARKET

Survey Schedule to Traders

1. Name and Address of the trader :
2. Nature of business : Wholesaler / Local trader / Retailer /
Exporter / Processor / Any other (specify)
3. How long are you in the business : 0 - 1 year / 1 - 2 years / 2 - 3 years /
3 - 5 years / 5 years and above
4. How long are you purchasing from SKS :
5. How did you come to know about the SKS market : From other Traders / From VFPCCK
News paper / SKS / Any other (specify)
6. Are you purchasing from markets other than SKS? : Yes / No.
7. If 'Yes' from where else? :
8. Do you buy from other SKS? : Yes / No
9. If 'yes', specify them :
10. What are the commodities/crops you are buying from SKS. :
11. What are the reasons for purchasing from SKS? : Quality of produce / Availability of
large quantity / Less purchasing cost /
Low price / Any other (specify)
12. What are the conditions to be satisfied for trading in the SKS. Specify:
 - 1.
 - 2.
 - 3.
13. Do you find any of the conditions restrictive to participate in the market. : Yes / No
14. If 'yes' what are the restrictive conditions?

15. Your perception about the price in SKS : Higher than Market price / Lower than Market price / Any other (specify)
16. If the price ruling is higher than the market price, do you purchase? : Yes / No
If 'yes' what are the reasons.
17. How do you fix the price of the produce at SKS? : Bidding with other traders / SKS fixes the price / Traders came to a consensus about the price / Any other (specify)
18. What is your reference price to quote the price (based on which market) :
19. What do you do to bring down the price of the crops/commodities, to your expected price :
20. What is the normal margin at which you quote the price (in percentage to selling price): :
21. Do the traders form any guild / union depress the market? : Yes / No
22. In order to get competitive advantage over other traders, what all strategies do you adopt? : Increase purchase price / utilisation of previous relationships with SKS / Relaxation in quality terms / Any other (specify)
23. What is the grading system followed by SKS?
1.
2.
3. :
24. Do you know about the farmers before coming to the market? : Yes / No
If 'yes', what all details? : Quality of produce / quantity of produce / Any other (specify)
25. Do you have any preference for a specific grade of a particular crop. : Yes / No
If so, reason.

26. Do you have a preference towards the produce of any farmer or from a particular location?

: Yes / No

If 'yes', specify reasons.

27. What is your bidding strategy

: To purchase a particular weight of quantity / purchase for a particular amount / purchase as cheaply as possible / any other (specify)

28. When do you pay the cash for the purchase

: Spot payment / 1 week / 2 weeks / 3 weeks / 1 month or above

29. Market operations of 2004-05

Sl. No.	Purchase items	Quantity	Value (Rs)
1			
2			
3			
4			
5			

30. Selling operations of the traders:

(2004-05)

Sl. No.	Name of Market	Type of buyer	Percentage of sales
1			
2			
3			
4			
5			

31. Trading cost of the traders in SKS market.

(2004-05)

Sl. No.	Items	Cost (Rs.)	Compared to other market		
			Increased (✓)	Decreased (✓)	No change (✓)
1	Transportation				
2	Grading				
3	Storage				
4	Packaging				
5	Labour cost				
6	Market charges				
7	Any other (specify)				

32. What are the various risks involved in buying from SKS :

33. What is extent of damage for buying from SKS (value) :

34. What are the measures taken to minimise loss. :

35. Satisfaction towards SKS market.

(Please '✓' your opinion [SA – Strongly Agree; A – Agree; NO – No Opinion; DA – Disagree; SDA – Strongly Disagree])

1. Entry to the market is easy.

SA A NO DA SDA

2. You are regularly purchasing from the SKS.

SA A NO DA SDA

3. Market place is conveniently located.

SA A NO DA SDA

4. Trading days are convenient.

SA A NO DA SDA

5. The grading system is good in SKS.

SA A NO DA SDA

6. Good quality produces are available from SKS.

SA A NO DA SDA

7. Enough quantity is available from SKS.

SA A NO DA SDA

8. Large variety of produces came to the SKS

SA A NO DA SDA

9. The SKS officials are co-operative.

SA A NO DA SDA

10. The commodities or crops for sale are systematically exhibited.

SA A NO DA SDA

11. The price discovery mechanism is efficient in SKS.

SA A NO DA SDA

12. The system of marketing is efficient in SKS.

SA A NO DA SDA

36. What are the major drawbacks of SKS in your opinion?

37. What are the suggestions to make the system more efficient?



APPENDIX - IV

**STRUCTURE - CONDUCT AND PERFORMANCE OF
'SWASRYA KARSHAKA SAMITHIS' (SKS)**

Survey Schedule for SKS

I

1. Name of SKS :
2. Address :
3. Area of operation :
4. Date of registration :
5. Date of commencement of trading :
6. Organizational structure:

(i) General body (Number of members):

Year	New members added (Nos.)	Total No. of Members	No. of members in the beginning of the SKS
<i>Beginning year</i>			
2000-01			
2001-02			
2002-03			
2003-04			
2004-05			

(ii) Composition of Managing Committee of SKS:

Sl. No.	Name of office	Name of incumbent	Age	Educational Qualification	Mode of selection	Term of office	Duties/ Responsibilities

(iii) (a) Details of other committees :

(b) No. of members :

(c) Purpose/Functions :

7. Operation of SKS for the last 5 years:

Sl. No.	Performance Indicators	Year				
		2000	2001	2002	2003	2004
1	Number of members					
2	Share capital					
3	Assets of SKS					
	i) Physical					
	ii) Financial					
4	No. of SHG's					
5	Total value of sales of agricultural produce					
6	Total quantity of sales					
7	Outstanding amount by traders					
8	Profits of SKS					
9	Amount outstanding to farmers					
10	Total value of inputs sold					
11	Bonus given to members					
12	Commission received by SKS					
13	Management cost:					
	i) Manpower expenses					
	ii) Establishment expenses					

8. Details of Training Programmes conducted by SKS.

Sl. No.	Year	Type	Duration	Resource Person/ Institution	Number of participants attended	Topics covered
1	2000-01					
2	2001-02					
3	2002-03					
4	2003-04					
5	2004-05					

9. How many trading days in a week? :

10. How many trading hours in a day? :

11. Major fruits and vegetables traded in the SKS:

12. Market participation by farmers and traders:

Sl. No.	Period	No. of markets	No. of farmers	No. of traders	Volume of trade	Value of trade
1	April 2004					
2	May 2004					
3	June 2004...					
4	July 2004					
5	August 2004					
6	September 2004					

7	October 2004					
8	November 2004					
9	December 2004					
10	January 2005					
11	February 2005					
12	March 2005					

13. Details regarding the market operation of farmers and traders in 2004-05
(only top five is required)

Sl. No.	Farmers	Quantity traded	Value traded	Traders	Quantity traded	Value traded
1						
2						
3						
4				...		
5						

14. Rules of market operation in SKS.

Sl. No.	Rules of the game	Farmers	Costs (Rs)	Traders	Costs (Rs)
1	Condition for entry				
2	Terms of Trade ...				
3	Price discovery mechanism				
4	Payment of price				
5	Commission payable				
6	Condition for exit				

15. To whom the produce are sold (Tick appropriate)

Sl. No.	Type of traders	% of each group to total
1	Consumers	
2	Wholesalers	
3	Local traders	
4	Exporters	
5	Processors	
6	Any other (specify)	

16. How is the price fixed in SKS.

Market price/ Negotiated price / any others (specify)

17. Which market rice is used as the reference price?

18. Who or what are the sources of market information:

SKS officials / Radio / News paper / Fellow farmers / Any other (specify)

19. The manner in which market intelligence is disseminated to farmers:

Word of mouth / General body / Radio / Notice Board / News bulletin / Telephone / Any other (specify)

20. If the price offered by traders is low compared to other markets what course of action is taken by SKS.

Sale to other market / Sale to the same market / Any other (specify)

21. Who negotiates with the traders to fix the price of the produce?

Individual farmer / SKS officials / Any other (specify)

22. Whether the SKS official or members have any prior knowledge about the buyers before selling the produce? Yes / No.

(a) If 'Yes', what all details SKS knows.

What quantity they need / their negotiating price / why they purchase / any other (specify)

23. What is the price discovery mechanism in SKS :

24. When does the negotiation start with the traders:

After seeing the produce / Before the actual showing of the produce / Before harvesting / Any other (specify)

25. When will the farmers receive the price of the produce:

Before the sale of the produce / Immediately after the sale / One week or more after the sale / Any other (specify)

26. Whether SKS conducted any meetings of the traders:

Yes / No.

(a) If 'Yes'. give details and the number of such meetings.

27. What are the grades into producers are categorized in the SKS?

28. What are the measures adopted by SKS to improve the quality of the produce:

Washing and cleaning / Packaging / Grading / Any other (specify)

29. What are the factors influencing the grading system of SKS:

Variety / Shape of the produce / Size of the produce / Any other (specify)

30. Whether SKS has any storage facility? Yes / No.

31. If 'Yes', (a) Type of storage facility :
(b) Cost per day :

32. What are the promotion strategies adopted by SKS to attract the traders?

Price advantage / Large quantity of produce / Better quality of produce / Fixing floor price to produce / Any other (specify)

33. Transportations cost to farmers compared to other market:

Very high / High / Medium / Less / Very less

34. What all innovative mechanisms adopted by SKS in the sale of the produce:

Sl. No.	Variables of innovation	Methods
1	Harvesting	
2	Grading	
3	Weights and Measures	
4	Price discovery mechanisms	
5	Transportation	
6	Risk management	
7	Market information	
8	Marketing cost	

APPENDIX - V

LIST OF SKS COVERED UNDER STUDY

THRISSUR

1. Panancherry, Panancherry, Thrissur
2. Pazhayannur SKS, Pazhayannur, Thrissur
3. Alangad SKS, Alangad, Thrissur
4. Thottipal SKS, Thottipal, Thrissur
5. Pariyaram SKS, Pariyaram, Thrissur

PALAKKAD

1. Kottayi SKS, Kottayi, Palakkad
2. Kanjirapuzha SKS, Kanjirapuzha, Mannarkad, Palakkad
3. Elancherry SKS, Vandithavalam, Palakkad
4. Machanthode SKS, Machanthode, Mannarkad, Palakkad
5. Vyyakurshi SKS, Vyyakurshi, Palakkad

**GROUP MARKETING SYSTEM FOR FRUITS AND
VEGETABLES IN KERALA**

By
BIBIN MOHAN

ABSTRACT OF THE THESIS

Submitted in partial fulfilment of the requirement of the degree of
MASTER OF SCIENCE IN CO-OPERATION & BANKING
(Rural Marketing Management)
Faculty of Agriculture

DEPARTMENT OF RURAL MARKETING MANAGEMENT
College of Co-operation, Banking & Management
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2007

ABSTRACT

The study entitled "Group marketing system for Fruits and vegetables in Kerala" was undertaken with the following objectives:

To analyse the marketing behaviour of commercial fruits and vegetables farmers and to evaluate the structure, conduct and performance of Swasraya Karshaka Samithies (SKSs) promoted by Vegetable and Fruit Promotion Council, Keralam (VFPCCK).

The study was conducted in Thrissur and Palakkad districts which accounted for the largest volume of business through SKSs. Commercial farmers and traders of fruits and vegetables constituted the population of the study. For the study, five SKSs were selected from each district randomly. From the area of operation of each SKS, ten member farmers who marketed their produce through SKS and five farmers who marketed their produce otherwise were selected randomly to constitute the sample of farmers. Similarly five traders selected from each SKS constituted the sample of traders. Data were collected from the sources through personal interview method by administering separate pre-tested structured schedules to farmers and traders. The data thus obtained were analysed by using bivariate tables, percentages, satisfaction indices, and ranking.

Analysis of the socio-economic profile of the farmers revealed that older generation are more interested in farming than younger generation. The analysis also brought out the predominance of men in agriculture, and they possessed vast experience in farming. The results indicate that marginal and small holdings dominate the agricultural sector in the study area.

Analysis of the annual income of the farmers showed that the number of farmers with an annual income of Rs.1,00,000 and above was higher among SKS farmers than Non-SKS farmers. The share of income from fruits and vegetables in the total agricultural income was higher for SKS farmers.

'Better price for the produce' followed by regular market for the produce, 'better measurement and grading practices in the market', 'feeling of farmers own organisation' were the most important reasons for farmers to take membership in SKS.

Regarding the ownership pattern of cropped land of the farmers, the share of farmers cultivating on leased land was more among the SKS farmers than Non-SKS farmers. The SKS also attracted farmers with larger area under fruits and vegetables cultivation to its fold. The selected farmers depended more on man made sources of water than natural sources for irrigation and the majority of the farmers used either electric pump or diesel pump for irrigation.

Majority of the SKS farmers preferred VFPCCK as the main source of seeds for cowpea, bittergourd and amaranthus. In the case of nendran the most preferred source of suckers was traders. When the Non-SKS farmers preferred own sources and fellow farmers for the purpose. The main source of suckers of nendran was traders.

Analysis of the different varieties of crops preferred by farmers revealed that in the case of nendran farmers in general preferred Mettupalayam, Kottayam and Manjeri varieties. In the case of cowpea Lola was the most preferred of SKS farmers and Non-SKS farmers preferred Lola, Local and Vyjayanthi varieties. Regarding bittergourd when SKS farmers showed a strong preference towards Preethi, Non-SKS farmers mostly preferred Local variety. Arun was the most preferred variety of amaranthus SKS farmers and Kannara Local by Non-SKS farmers. In the case of ivy gourd majority of SKS farmers preferred Sulabha variety while Non-SKS farmers preferred Local variety.

The main sources of planting material for farmers were VFPCCK, KAU, traders and fellow farmers. KAU was the only institutional agency which supplied all types of planting materials. Out of the four sources of planting materials, KAU was the dearest and VFPCCK the cheapest. Majority of the SKS farmers availed credit from commercial banks linked to SKS when majority of the Non-SKS farmers preferred money lenders and traders for their credit needs.

The SKS farmers harvested nendran coinciding with the SKS market days. Cowpea, bittergourd and ivy gourd were harvested thrice a week by majority of the SKS farmers. Vast majority of Non-SKS farmers harvested nendran weekly. Majority of the Non-SKS farmers harvested cowpea and amaranthus thrice in a week. In the case of bitter gourd and ivy gourd majority harvested two days in a week.

SKS was the prime source of market information, to SKS farmers while traders constituted the main source of information to Non-SKS farmers. The SKS farmers were better placed with regard to scientific marketing practices. All the produces except amaranthus and cowpea were graded and sold in SKS. Only nendran and bitter gourd were graded in Non-SKS market.

Majority of the SKS farmers used plantation leaves for packing nendran. Plastic bags were used for packing other crops. Majority of the farmers in Non-SKS markets marketed nendran without packing.

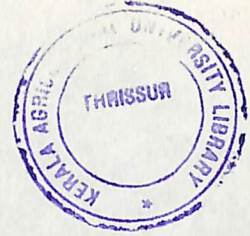
The main reason for selling the produce outside the SKS market was farm gate collection by the traders. The important means of transportation for SKS farmers was tailed autorikshaw and head load for majority of Non-SKS farmers.

Price fluctuation was the only one risk perceived by SKS farmers, while the Non-SKS farmers perceived the risk of unsold produce, physical damage, and default in payment besides price fluctuation. In order to manage the price risk a majority of the SKS farmers sold the produce to the same trader even at a lower price when Non-SKS market sold to other traders.

Regarding the realization of credit sales, 90 per cent of the SKS farmers received payment within a week while majority of the Non-SKS farmers received payment within two weeks.

Lack of adequate processing and storage facilities were reported as the most serious problems faced by the commercial fruits and vegetables farmers. The SKS farmers were found better trained than Non-SKS farmers.

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While analyzing the structure of SKS market, it was found that majority of the sample traders were wholesalers. Majority of them had more than five years experience in fruits and vegetables trade. Majority of them had more than five years experience with the SKS. Regarding the admission in SKS, vast majority of the traders found the rules simple.

Seasonality analysis of the market for the selected crops disclosed that the farmers especially nendran farmers realized the best price during Onam season as demand outstripped the supply during the season. The SKS market exhibited conditions of 'slightly concentrated oligopsony'. Market power concentration analysis showed that in Elevenchery, Pariyaram and Thottipal the market power was highly concentrated in top four traders compared to other SKSs.. However the market power was less concentrated in top four traders in markets like Kottayi, Kanjirapuzha, Viyyakurishi and Pazhayannur.

Conduct of the SKS market revealed that majority of the traders waited till the close of the market to buy the produce at a lower price as the price used to cool down towards the end of the market. The purchased produce were fed by the traders to the end markets situated far and wide from the SKS. Majority of the traders operated in more than one market. Regarding the management of price risk the traders signed forward contracts with their retailers and regulated their purchase from SKS according to the price and quantity contracted with their customers.

The Marketing Efficiency Index for all the selected crops except bittergourd was the highest in SKS market compared to other markets as the marketing cost was the lowest in the SKS market. The farmers were 'highly satisfied' and the traders were 'highly satisfied' with the working of the SKS market.

The VFPCCK, through its group based production and marketing approach has been able to give a fillip to the vegetable and fruit cultivation in Kerala. The Swasraya Karshaka Samithies (SKSs) promoted VFPCCK have enabled the farmers to enhance their production and productivity through scientific cultivation practices. The SKS market owned and operated by the farmers have enabled the farmers to realise better price for their produce by setting up best trade practices and price discovering mechanism.