CHAPTER I

INTRODUCTION

1.1 Introduction

This study concerns itself with assessing and understanding the functioning of the Horticultural Producers’ Cooperative Marketing and Processing Society Ltd. or HOPCOMS, in the context of Karnataka State, more particularly in the six districts of Bangalore Urban, Bangalore Rural, Chikkaballapura, Kolar, Ramanagara, and Tumkur. The study has a marketing focus, with HOPCOMS as a supply chain of fruits and vegetables, procured at fair prices from the farmers directly, and then cold-stored, processed and packaged before sale to the individual households or large institutions / organizations at a reasonable price and quality of products. The study discusses what the producers (farmers) and the consumers (primarily households and individuals) think of the activities, usefulness, and effectiveness of the functioning of the HOPCOMS in the study area.

This chapter, on the other hand, concerns itself with introducing a carefully conceived background for the study, the problem of the study with its specific objectives, research questions, hypotheses to be tested, scope and limitations of the study, and the organization of the thesis. There is a brief on both the study area and the research methodology adopted in order to place the problem of the study in a spatial context as well as a temporal frame.

1.2 Background of the Study

‘A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically controlled enterprise’ (Anbumani, 2007). They are business entities where people work together to solve common problems, seize exciting opportunities and provide themselves with goods and services. A cooperative is managed on the basis that customers of a business are also the owners of the business. Each customer is entitled to become a member of the cooperative society, thereby receiving the benefit of success via a dividend payout.
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The beginning of this great movement is dated back to 1844, when a group of men known as the ‘Rochdale Pioneers’ began trade in grocery produces in England, based on a ‘new’ principle of fair prices for reliable quality goods. These organizations are better recognized worldwide, for their non-profit character and root level social functioning on voluntary basis. Voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training and information, cooperation among cooperatives and concern for community are the principles of cooperatives. Self-help, self-responsibility, democracy, equality, equity and solidarity are the values of cooperative organizations. In the tradition of its founders, the movement also follows such ethical values as honesty, openness, social responsibility and caring for others (Anbumani, 2007). Needless to say, it is a social movement and its growth will unanimously result in the wholesome growth of the society.

1.3 Cooperatives in India

Cooperative movement in India has celebrated its centenary year of service recently. Indian cooperatives are unique as they were initiated and supported by the government. Elsewhere, it had always been organized only by volunteer members with least or no government intervention. In India, it was introduced in 1904, as the planners of the country firmly believed that it could serve national development and also serve as a shield in protecting the vulnerable sections of the population, especially the farmers from certain social evils like agricultural backwardness, poverty and rural indebtedness. Though they were initially organized only as the credit institutions, Indian cooperatives today, tirelessly serve in endless areas of services. They serve in credit and non-credit areas. They deliver credits for agricultural as well as non-agricultural purposes. They operate their businesses in numerous non-credit phases, too. They work for milk producers, agricultural producers, weavers, consumers, fishermen, coir makers, employees, students of universities and colleges, and for many others.

1.4 Horticulture in India and Karnataka

Horticultural development was not a priority in India, until recent years. In the period 1948-80, the main focus of the country was on cereals. Much planned efforts were not made for horticultural development, except for some technical support and
development efforts for specific commodities like spices, coconut and potato. During 1980-92, there was consolidation of institutional support and a planned process for the development of horticulture. It was in the post-1993 period that a focused attention was given to horticulture development through an enhancement of plan allocation and knowledge-based technology. Despite the fact that the decade was called a “golden revolution” in horticultural production, the productivity of horticultural crops has increased only marginally from 7.5 tonnes per ha in 1991-92 to 8.4 tonnes per ha in 2004-05 (NHB, 2005; Mittal, 2007: 2). Then, the National Horticulture Mission was launched in 2005-06 by the Government of India, with a mandate to promote integrated development in horticulture, to help in coordinating, stimulating and sustaining the production and processing of fruits and vegetables and to establish a sound infrastructure in the field of production, processing and marketing with a focus on post-harvest management to reduce losses.

In 2005, the total area under fruits and vegetables was 11.72 million ha and the aggregate production stood at 150.73 million tonnes (NHB, 2005). As a result of this huge spurt in horticulture produce, India has become the second largest producer of fruits and vegetables in the world, next only to China. The annual area and production growth under fruits and vegetables in the period 1991-2005 in India was 2.6 per cent and 3.6 per cent, respectively. This growth is quite significant compared to the decline in area under cereals and cereal production, which is growing at the rate of 1.4 per cent per annum only in the last one-and-a-half decades. The share of fruits and vegetables in the total value of agricultural exports has increased over the years from 9.5 per cent in 1980-81 to 16.5 per cent in 2002-03. But India is still lagging behind in actual exports of these produce. For example, India produces 65 per cent and 11 per cent of world’s mango and banana, respectively, ranking first in the production of both the crops. Yet India’s exports of the two crops are nearly negligible of the total agricultural exports from India.

The Indian horticulture sector is facing severe constraints such as low crop productivity, limited irrigation facilities and underdeveloped infrastructure support like cold storages, markets, roads, and transportation facilities. There are heavy post-harvest and handling losses, resulting in low productivity per unit area and high cost of production. However, on the other hand, India’s long growing-season, diverse soil and climatic conditions comprising several agro-ecological regions provide ample
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opportunity to grow a variety of horticultural crops in one or the other part of the country throughout the year. Thus, efforts are needed in the direction to capitalize on our strengths and remove constraints to meet the goal of a formidable horticultural growth in India. The foreign trade policy in 2004-09 emphasized the need to boost agricultural exports, growth and promotion of exports of horticultural products. Horticulture contributes nearly 28 per cent of GDP in agriculture and 54 per cent of export share in agriculture.

In the world production of fruits, India is the biggest producer of banana and mango. India is the second largest producer of lime. China is the other biggest producer of these produce in the world. European countries are the leaders in grapes production with India ranking 16th in the world. Brazil leads in the production of orange and papaya and Thailand in pineapple.

India and China are the world leaders in the major vegetables production also. For brinjal, cabbage, cauliflower, onion and pumpkins, China is the biggest producer followed by India. India ranks first for green peas. In spite of potato being the number one among the vegetable production in the country, India ranks third in the world production. For tomato, India ranks 6th in world production.

1.5 A Historical Account of HOPCOMS and Other Organizations

1.5.1 Mysore Horticultural Society (MHS)

When I took charge of the Horticulture Department in 1951, I first realized William New’s idea of “To educate the natives” and the Krumbiegel’s idea “To involve the elites of Bangalore”, I thought over their ideas. It occurred to me that when the East India Company could make use of Lalbagh to develop the Great Britain, why should we not make use of Lalbagh to develop every family in every village in the state? For me, the Lalbagh stands for everything in the past, present and future development of horticulture.

It is popularly known as MHS and was established in the year 1912 by an European Superintendent of Government Gardens, G.H. Krumbiegel. He started the Society with the main intention of involving elite horticulturists of Bangalore city in particular and district in general. The main functions of the MHS have been:
1. To popularize horticulture among the people through horticultural shows;
2. To educate the people through its Journals;
3. To impart education through audio-visual aids; and
4. To provide a platform for coming together of the enthusiastic horticulturists.

Ever since the establishment of the Society with the close co-operation of the Department of Horticulture, it has been rendering yeoman service for the development of horticulture. Its varied activities not only lend encouragement and assistance to those who are engaged in horticultural pursuits but also serves to keep alive and promote horticultural taste and horticultural knowledge among the people. The Society has a large membership and to the members it supplies genuine plants and seeds of fruits, vegetables, flowers and other horticultural crops and also renders assistance to procure special indents of seeds, and plants from abroad. It also provides other facilities such as technical help in the matter of cultivation of these crops, in the treatment of pests and diseases.

The two horticulture shows conducted by the MHS annually, one in January (the Republic Day Show) and the other in August (the Independence Day Show), are unique in India in many ways and they serve to educate and inspire people to higher horticultural conceptions. These shows and the garden competitions, both flowers and vegetables, conducted every year find a keen contest and bring about the display of garden art in its most exquisite forms. The abundance of scintillating home gardens for which Bangalore is so famous is to a great extent due to the encouragement given by the Society. Even though much commendable work is being done, it should be admitted that the activities of the Society do not embrace all the spheres of work that is expected of such an institution and its benefits are being enjoyed mostly by the people of Bangalore and the vicinity.

It is a matter of gratification that horticulture, which had hither to received scant attention, is at last coming to occupy the place it deserved in the national planning.

The Five-Year Plans lay a great stress on the uplift of the standard of horticulture and the schemes envisaged therein contain, among others, establishment of a number of research stations in different parts of the country and starting of
training centres to train the technical personnel in large numbers, the successful implementation of which will surely go a long way in improving the health and economic conditions of the country. In these changed conditions, it is earnestly hoped that the Mysore Horticultural Society (MHS) would derive new strength and be able to function much more vigorously.

Bangalore city and the horticulture enthusiasts of the district and the MHS do not however reflect either the views, opinions and aspirations of the middle class people or general horticulturalists and rural people, whose welfare is the motto of any charitable society.

The Mysore Horticultural Society, located at Lalbagh in Bangalore, was founded by G. H. Krumbiegal, the then Director of Horticulture. But virtually, it was a rebirth of a society called the Mysore Agricultural-Horticultural Society, Bangalore, which was founded in 1836 by William Munro. The Agricultural-Horticultural Society, Bangalore was one of the three branches of the Agricultural-Horticultural Society of India. The Bangalore branch consisted of members of whom the majority was the officers of the Mysore Commission, officers of the British forces, clergymen and only few were native persons. Immediately after its establishment in January 1936, the Society requested Sir Mark Cubbon, the Chief Commissioner of the then Mysore state, to handover the vast and well-designed garden at Bangalore to the Society for conducting activities and experiments on agricultural-horticultural crops on a rent-free basis. This garden later became popular as Lalbagh, Mark Cubbon, recommended this to the Governor General of India to consider the request of the Society and permit to handover the garden to the Society on free-of-rent basis for better maintenance.

The two reports, one from William Munro and another from Dr. Smith, who served successively as secretaries of the Mysore Agricultural-Horticultural Society, functioning at a garden in Bangalore city, during the years from 1836 to 1842, reveal that the Society was very active and instrumental in the development of agricultural and horticultural crops. The transactions of the Agricultural-Horticultural Society of India further reveal that specimen of hops grown at Bangalore garden presented by Smith, Secretary of the Mysore Horticultural Society, prove to be highly interesting.
specimen of hops, perhaps the first ever produced in the country. It was full of aroma and bright colour and excited much attention.

The Mysore Agricultural-Horticultural Society could not carry on its activities for long time due to paucity of funds and lack of subscription from the native people. It was further crippled owing to the frequent transfers of European officers, majority of whom were members of the said Society. Thus, the activities of the Society came to a standstill in 1842. This state of the Society prompted the Chief Commissioner of Mysore state, Sir Mark Cubbon, who reverted the garden to the Government. Thereafter nothing is known about the two organizations – the Garden and the Society, which were inseparable for some years from 1836 to 1842. The Garden which was managed by the Mysore Agricultural-Horticultural Society till 1842 was declared as the Government Botanical Garden by Cubbon in the year 1856 and thereafter called as ‘Lalbagh’. It was improved on scientific lines under the supervision of the European Botanist William New, who served as the curator earlier and later as the Superintendent of Government Botanical Gardens (The Lalbagh) from 1858 to 1874. He restarted the Mysore Agricultural-Horticultural Society in the year 1867 and he himself served as its secretary.

The regime of William New as the Superintendent of the Government Botanical Garden and Society of Mysore Agricultural-Horticultural Society ended in 1873. Thereafter, no information was available on the Society. John Cameron was appointed as the Superintendent of the Lalbagh Gardens in 1874. The annual reports of the Cameron period were arranged chronologically and published as the ‘Cameron Report’ by the Government. On the perusal of the reports, it was found that the Society was not mentioned anywhere but the half-yearly horticulture shows continued to be held at Lalbagh, incessantly.

The report revealed that the Government of Mysore State has made budget provision for holding the horticultural shows. It meant that the Government of Mysore had taken over the responsibility of conducting the horticultural shows after the Society became defunct probably from 1874. After retirement of John Cameron in 1907, G.H. Krumbiegal was appointed as the Superintendent of Government Gardens in the year 1908. It was Krumbiegal, who thought of forming an Association of Horticulturists. He wanted to involve the elite citizens and horticultural enthusiasts of
Bangalore city. He founded the Society informally during the year 1908. Though the Society started functioning from 1908, but it did not have Government recognition. Meanwhile, the State Department of Agriculture having been established in 1890, there was no necessity of conducting agricultural activities by the Society. Hence, Krumbiegal named the Society as the **Mysore Horticultural Society** and got it registered with the Registrar of Societies under the Societies Registration Act of India 1904, which provides for conducting scientific, literary and charitable activities.

### 1.5.2 Role of NGOs in the Development of Horticulture

The development scenario as far as horticulture is concerned in the State owed much to the role played by the NGOs, because NGOs such as the Mysore Horticultural Society (MHS), Bangalore Grapes Growers’ Society (BGGS), Bangalore Nursery Men Cooperative Society (BNCS), and Horticultural Producers’ Cooperative Marketing Society (HOPCOMS) were playing a role which was supplementary to the Government’s. A stage has now come that the Government looks to more NGOs to take up development work so that people could be made to participate in development. There is a need now for NGOs to forge links with the systems outside their realms of work and to become a part of the policy making process. At the same time, the NGOs have to establish local bases for resource mobilization and for raising funds.

To understand the role of NGOs in the changing scenario of horticultural development, one must know that the NGOs have effectively played the role of watchdogs as they were functioning in the state since 1836 in spite of the fact that there was limited subscription and involvement from the native horticulturists for the stability of these NGOs. Often, the NGOs had become defunct due to financial instability, but were revived when the situation and the prevailing conditions warranted. During the last century, the Europeans made enormous contribution to the development of horticulture by establishing the NGOs, for example, the Agricultural-Horticultural Society in 1836, which became defunct in 1842 but was revived again in 1868.

This was what William Munro in 1836 and William New in 1868 did for establishing the Agricultural-Horticultural Society. Always, there was a need for the NGOs to have access to official machinery at all levels to be able to achieve some
good measure of success. This was seen when the Agricultural-Horticultural Society of Bangalore requested Sir Mark Cubbon, the Chief Commissioner of Mysore State, for free grant of the vast gardens (Lalbagh) at Bangalore to the Society. The garden was maintained in better conditions by the Society as long as private subscription was forthcoming. For proper development of horticulture in the state since the early decades of the present century, however, the state depended on the Government of the day.

1.5.3 Horticulture Extension Service by NGOs

The Horticulture Department and the Mysore Horticultural Society have their headquarters at the capital and their branches at the districts and taluks at the state level. The Director of Horticulture, who was also the ex-officio chairman of the Mysore Horticultural Society, arranged for extension activities. In his dual capacity, the extension service was pushed through quickly.

At the district and taluk levels, the District Horticulture Officer (now Deputy Director) who was also the ex-officio secretary of the branches of the Society arranged for horticulture extension work through the taluk Horticultural Officer, the village level workers and the field assistants of the KSDH.

1.6 Extension Services in the Pre-Independence Era

Horticulture and its pace of development during the pre-independence years was slow conservation and meeting the needs of elite well-to-do and royal people. The development of horticulture during the period was therefore limited to the development of the State Botanical Garden (Lalbagh), the public gardens (gardens around the official buildings in Bangalore, Mysore and Brindavan Gardens at the KRS), the parks (Cubbon Park in Bangalore and Cubbon Park at Mysore), the State Farms (Fruits orchard at Maddur), the experimental farms at Anekal in Bangalore and the Sewage Farm in Mysore) and the Hill Stations (Nandi Hills and K. R. Hills).

1.7 Extension Service in the Post-Independence Era

After independence of India, in 1947, and after, the merger of the Mysore State to the Indian Union in 1948, horticulture and its development was phenomenal. Its development was by leaps and bounds. Fortunately, a man of farsightedness, who had real concern for the rural masses and who had obtained highest qualifications of
Ph. D. in Horticulture at Harvard University assumed charge of the Superintendent of Government Gardens, and became chairman of the MHS in 1951. He visualized the horticultural development by the Department of Government Gardens in coordination with the NGOs such as the MHS, BNCS and HOPCOMS.

1.8 Four Limbs of the Department of Horticulture

The first limb of “H” is designated as the KSDH and the remaining three limbs of are designated for the three NGOs: the Mysore Horticultural Society (MHS), the Bangalore Nursery Man Cooperative Society (BNCS), and Horticultural Produces Cooperative Marketing Society (HOPCOMS). The MHS has already been discussed in detail, in the foregoing pages. The first two limbs were already existing. The remaining two limbs, the BNCS and the HOPCOMS, were established in 1958.

1.8.1 Department of Horticulture (KSDH): The KSDH is the foremost of all the Government departments as it was started as far back as 1856, with the Director of Government Gardens as the honorary head and the superintendent as the executive head. In the year 1914, all the hill stations in the state were transferred to the control of the Department and, subsequently in the year 1926, all important gardens in the Bangalore city and Mysore city were transferred to the control of Department of Government Gardens. During the year 1928, the post of the Director of Horticulture was created in the addition to the post of Superintendent. Over the years, the activities of the Department were expanded, particularly after Reorganization of the State in 1956. In 1960, the Department of Government Gardens was elevated and named as the KSDH. During the year 1963, various schemes and programmers pertaining to fruits, vegetables, spices, cashew, pepper, cardamom, cocoa, and other plantation crops were transferred to the Department of Horticulture for implementation.

1.8.2 Bangalore Grapes Growers’ Society (BGGS): The Horticulture Producers’ Co-operative Marketing and Processing Society Ltd. (HOPCOMS) was founded in 1959 under the name of ‘Grapes Growers Marketing and Processing Society (GGMPS), under the guidance of the then Director of the Department of Horticulture under the Indian Cooperative Societies Act 1904.

1.8.3 Bangalore Nursery Men Cooperative Society (BNCS): All the nursery trade in Bangalore had grown up along with Lalbagh since 1856. The nursery and nursery
trade enjoyed the pride of place, space, spread over on either side of the Lalbagh. There was no question of the Horticultural Show without the participation of these nursery men. Thus, Siddapura with its hundreds of nurseries has become the ‘Little Holland of Bangalore’. It became popular as the BNCS (Bangalore Nursery Men Cooperative Society).

1.8.4 Horticultural Producers’ Cooperative Marketing Society (HOPCOMS):
Horticultural products like fruits, vegetables, and flowers are perishable articles and unless they are disposed off immediately after harvest, they perish. Once harvested, they become a liable headache to the farmers, and a situation would arise where the farmers get frustrated to the extent that they feel that ‘Something is better than nothing’. Under such a situation, the farmer is forced to undersell and incur heavy losses. The plight of the farmers in such a situation was ‘agonizing me and I being the head of the concerned Department, I felt it was my duty to offer some sort of relief to the desperate farmers. I started the Growers’ Cooperative Society for marketing of fruits and vegetables. Now, it is popularity known as the HOPCOMS, which is one of the three NGOs functioning at Lalbagh’.

It has branches in the district headquarters of Mysore, Mangalore, Hassan, Tumkur, Kolar, and Mandya, and now all the districts working on HOPCOMS and as many as 300 sales outlets in the Bangalore city alone. It deals with all the horticultural produce except the planting materials. It takes care of the interest of the growers as well as consumers, and of late, it has entered the export of the horticultural produce to the other countries also. It is purely a growers’ organization having growers as members and the Department Officer is the Managing Director of the Governing Council.

These four limbs, which have been and are instrumental for the sound development of horticulture in the state, the role played by the NGOs in conjunction with the State Department of Horticulture has become exemplary and officers of the other states are copying this concept of Four “Limb Approach”. Essentially, the four limb approach applies to all works and functions in the Horticulture Department for over 23 years, spanning from 1950 to 1973.
1.9 HOPCOMS of Karnataka in Action

The Horticultural Producers’ Co-operative Marketing and Processing Society Ltd. or HOPCOMS was established with the principal objective of establishing a proper system for the marketing of fruits and vegetables; one that benefits both the farming community and the consumers. Prior to the establishment of HOPCOMS, no proper system was existed in Karnataka for the marketing of horticultural produce. Farmers were in the clutches of the middlemen and the system benefited neither the farmers nor the consumers. The history of the establishment of HOPCOMS has an interesting background. First, the Bangalore Grape Growers’ Marketing and Processing Co-operative Society was established in 1959, under the guidance of the then M.H. Marigowda Director of the Department of Horticulture. The main objective of the society was to encourage grape cultivation by providing necessary inputs, technical know-how and marketing facilities to grape farmers. It had jurisdiction over Bangalore, Kolar, Mysore, Tumkur, Mandya and Mangalore districts. Since grape was a seasonal fruit, the society started handling all fruits and vegetables from 1965. Due to this change in operations, the name of the society was changed into Horticultural Producers Co-operative Marketing and Processing Society Ltd (Plate 1.1).

Plate 1.1: HOPCOMS: Its Logo and Basics (Horticulture)
The objectives of the HOPCOMS as they stand today are:

- To ensure *remunerative prices to producers* of horticultural produce;
- To *free both consumers and producers from the clutches of middlemen and intermediaries*;
- To ensure *quality supply of fruits and vegetables at reasonable prices to consumers*;
- To expand *marketing and cold storage facilities progressively for the benefit of farmers*; and
- To promote *development of horticulture on scientific lines by providing necessary inputs and technical advice*.

HOPCOMS is managed by a Board of Directors, comprising of 15 Directors. Of these, 11 are elected from among grower members and 4 are the government nominees. The additional director of the State Horticulture Department is the Managing Director of HOPCOMS. The Society has 15,000 growers as members and a paid share capital of Rs. 25.85 million.

The Department of Horticulture has a number of schemes to help improve horticultural production and marketing in the State. (http://www.nitpu2.kar.nic.in). Horticultural produce is classified as four elements: fruits and vegetables; spices; flowers; and cash crops. HOPCOMS works only with fruits and vegetables. There are other activities of the Department of Horticulture for the promotion of other horticultural produce. The HOPCOMS specializes in marketing of fruits and vegetables making their growers as its members. The Society is presently handling 90-100 tonnes of fruits and vegetables daily. The farmers bring their produce directly to the Society and to the procurement centres. As soon as the produce is brought by the farmers, it is graded, weighed and cash payment is made immediately. To avoid losses during transportation and to save time of the farmers, the Society has opened 10 procurement centres in the growing areas. The produce of that area is either collected from the members’ fields or the growers bring their produce directly to the procurement centres. The material so procured is transported to central godowns from where it is supplied to HOPCOMS retail outlets and to the various institutions.
The HOPCOMS of Karnataka has served so well the producers and consumers that they have been recognized for their services and have also won several international and national medals, notably, the Gold Medal award in the year 1990-91 by the Institute of Marketing and Management, New Delhi for marketing agricultural produce, Gold Medal for Excellence award in the year 1994-95 by Visvesvaraya Industrial Trade Centre, a more similar Gold Medal for Excellence award in the year 1996-97 by the Indian Council for Small and Medium Exporters, New Delhi, the Bharath Vikas Award in the year 1996-97 by the International Business Council, and the Productivity Award in the year 2006-07 by the Productivity Council of India.

The HOPCOMS so far has opened 324 retail outlets in its area of operation. Bangalore, being the major consuming area, has got 285 retail outlets accounting for 88% of total outlets which provide fresh supplies to the consumers in the city. For the opening of retail outlets, the sites have been provided by the respective corporations/municipalities/development authorities on lease basis at nominal charges. The retail outlets are being managed by the salesmen who are the employees of HOPCOMS. As incentives, they are allowed to absorb driage and damage to the extent of 3.7 per cent of the value besides wages. Every day, the salesmen remit the sales proceeds of the previous day and collect the materials required for the day’s sales next day morning. The supplies to retail outlets are being made through the 19 own and 40 hired vehicles. Mobile sales of fruits and vegetables are also being arranged through society’s vehicles at the place where HOPCOMS does not have its retail outlets.

The society has set up a processing unit for preparing fresh fruit juices out of fruits like Bangalore blue grapes, mango, and oranges at selected places. It is selling the same to the general public at a reasonable price of Rs. 5 per 200 ml bottles through its retail outlets and through dispensers located at important places.

The most important benefit to farmers is that HOPCOMS purchases the produce directly from the farmers. This eliminates the middleman, and the commission payment to the agent. Consequently, a remunerative price is paid to the farmers, usually 10-15 per cent higher than the open market prices. Further, during periods when there is excess supply of certain produce in the market, the open market price drops. HOPCOMS, however, assures a minimum support price for the produce at the time of distress sales. Another major benefit is that cash is paid to farmers on
the day of the transaction; there is no delay in payments (Plate 1.2). The discussion with private commission agents revealed that they extend advances to the buyer-merchants and to the seller-merchants. This system of extending credit is prevalent in the private businesses. HOPCOMS does all its transactions in cash, thereby eliminating the need for such credit.

HOPCOMS has weigh-bridges at each procurement centre and hence the farmers are assured of correct weighment. HOPCOMS also has infrastructural facilities like the cold storage to reduce losses due to wastage of perishable fruits and vegetables and godowns to store the produce. The procurement centres are located where the farmers can keep their products and sell directly to consumers. This facility is provided for sale of watermelons, for example.

As farmers come to procurement centres to sell their produce, HOPCOMS also provides agricultural inputs such as manures, fertilizers, plant protection chemicals, garden implements and seeds at its fruits and vegetables procurement centres at subsidized rates in order to help the farmer-members. They also sell plastic crates to transport the produce at subsidized rates. And as farmers travel long distances with large quantities of produce, HOPCOMS has provided lodging and boarding facilities. Farmers have found this very useful and have taken advantage of these facilities.

Plate 1.2: HOPCOMS and benefits to farmers
For consumers, HOPCOMS assures good quality produce, both to the individual as well as bulk consumers like the hostels, hospitals, and public sector units (PSUs) at competitive prices. Moreover, vegetables and fruits are available at reasonable rates, which are normally less than the prevailing market rates. They also avail the following benefits, namely, correct weighment, quality fruits and vegetables at reasonable prices, retail outlets in extensions, mobile sales, supplies to marriages and other functions, capital supplies to institutions, organizations, hostels, hospitals and others, seasonal fruit drinks at reasonable prices, and conducting seasonal fruit fairs at discount prices (Plate 1.3).

The Agricultural Produce Marketing Committee (APMC) plays a major role in setting market trends and prices. These are established by the Department of Agricultural Marketing. The price at which HOPCOMS buys the produce from the farmers is based on the rates and prices released by this Department. The Department collects the maximum, minimum and model prices for the various commodities sold in the APMC markets the previous day and the same is released to the markets the next day, published in the newspapers. Based on the rates released by the Department, HOPCOMS fixes the procurement and sale price for the goods. These prices form the basis of the price offered by HOPCOMS in the indents issued to its members.

Plate 1.3: HOPCOMS and benefits to Consumers
The prices of horticultural produce vary from day to day and from hour to hour in private markets. HOPCOMS determines the price based on the previous day’s prices in APMC yards, and adds an additional half a rupee to a kg. This is the price quoted on the indent given to members. The indents carry the price and the quantity that HOPCOMS would buy on a particular day from the farmer members. Thus, it offers a *price certainty* to the farmers, even if the quantity it picks up from the farmer is not too high.

The major investment that HOPCOMS has made so far is in the infrastructure created for the marketing and processing of horticultural produce. These include: procurement centres, retail outlets, processing centres, cold storage centres, and staff vehicles.

The society has at present *not borrowed any money* for improvement or increase of its infrastructure. The reason given was that the society was building its reserves to utilize it for increasing its infrastructure like increasing its retail outlets, and vans. HOPCOMS has two major uses of its funds: (a) the investment in retail outlets, and (b) infrastructure in terms of procurement centres. Another major use of funds is the daily purchase of fruits and vegetables. The daily operating expenses of the company are around Rs. 1.0 million (US $ 20,833). The society handles around Rs. 2.0 million (US $ 41,666) on cash on every single day, including all other operating expenses like the transport costs.

The society manufactures fresh fruit beverages at its processing unit in the city. The monthly production is around 4,000 bottles during off-season and 10,000 bottles during peak season. Currently, the beverage is sold at its retail outlets in Bangalore apart from strategic points in the city such as the railways stations, bus stands, Janata Bazaar and other government retail outlets. The Society plans to install mixies at certain locations where its 318 retail outlets dealing fruits and vegetables already exist. Right now it sells a fresh fruit juices in the evening using seasonal fruits and these are priced reasonably per glass of about 200ml.

There is a concerted effort on the part of the Society to manufacture jams, fruits pulp and sauces with the sun scorched fruits and vegetables like mangoes and tomatoes which cannot be sold to customers. Plans are underway to strengthen the beverage segment by investing in a bigger processing unit for which land is being
identified. Under the Government of India National Horticulture Mission grant of Rs. 200 million, the Society has asked for funds to set-up the processing unit and a cold chain facility.

The primary objective of HOPCOMS is also to procure fruits and vegetables from the farmers in the districts of Karnataka and give the growers instant cash payment. These are sold through its 324 retail outlets in the State and the farmer is paid 75 per cent of the prevailing cost of the produce. HOPCOMS supplies fruits and vegetables in bulk to industrial canteens, government hospitals, student hostels, clubs, marriage halls, and important Agri- inputs like fertilizers and manures to farmers.

In a study of HOPCOMS employees, Naik (2013: 250) concludes that:

- Operations management at HOPCOMS is more challenging in view of the poor infrastructure, inefficient and counter-productive procedures and market imperfection that initiate the horticultural sector of the economy;

- The current organizational structure of HOPCOMS consisting of line and support functions is proving to be inadequate. To meet the needs of an expanding and high value markets, HOPCOMS is finding that these structures are no longer efficient;

- However, there is a lot of scope for improving the operational efficiency of HOPCOMS, and if improvements are effected, the beneficiaries would be the producers of horticultural products. Also the HOPCOMS has adequate infrastructure to meet this obligation (Naik, 2013: 255);

- There is a large potential demand for horticultural produces not only in Karnataka state but also in other states and that the efficient operations in HOPCOMS could make an important impact on the rural economy by enhancing incomes of small and marginal farmers. HOPCOMS, operation on the cooperative focuses on the crucial role of cooperatives such as HOPCOMS in rejuvenating the horticultural economy.

Some of the suggestions that emerge from Naik’s study (2013: 256) are:

- Cold storage facilities available with HOPCOMS are not adequate. There is need to augment the storage facilities;
• There is a need to develop an efficient transport system for quick procurement and distribution of produce, and of course a computerized system can be used for this purpose;

• Storage facilities on a scientific basis with facilities for grading and accurate weighing and packaging have to be created; and

• There is need to provide cold storage facilities to bulk buyers.

1.10 Problem of Study

Horticulture sector encompasses a wide range of crops, for example, fruits, vegetables, toot and tuber crops, ornamental crops, medicinal and aromatic crops, spices and plantation crops. India, with its wide variability of climate and soil, is highly favourable for growing a large number of horticultural crops. It is the fastest growing sector within agriculture. It contributes to poverty alleviation, nutritional security and have ample scope for farmers to increase their income and helpful in sustaining a large number of agro-based industries, which generate huge employment opportunities. Presently, horticulture contributes 28 per cent of the agricultural GDP. The national goal of achieving 4.0 per cent growth in agriculture can be achieved through major contributions from horticultural growth and development.

Karnataka occupies a prominent place in the Horticulture map of the country. Horticultural crops occupy an area of 1.73 (14.62% National total) million ha with a production 13.03 (8.66% of National total) million tonnes. Although the area comprises only 14.44 per cent of the net cultivated area in the State, the total income generated from the horticulture sector accounts for over 40 per cent of the total income derived from the combined agriculture sector. This accounts for 17 per cent of the GDP of the State. Horticulture provides excellent opportunities in raising the income of the farmers even in the drier tracts. A significant shift towards horticulture is evident in the State with an increase in area and production.

Horticulture provides higher unit productivity and offers great scope for value addition and this sector is taking inroads throughout the length and breadth of the State. Karnataka, having the highest acreage under dry farming in the country, next only to Rajasthan, has a great potential to grow high value but less water demanding
HORTICULTURAL CROPS. IT IS ALSO A PROGRESSIVE STATE IN THE FIELD OF MODERN HORTICULTURE IN THE COUNTRY. THE DIVERSE AGRO-ECOLOGICAL CONDITIONS PREVAILING IN KARNATAKA HAS MADE IT POSSIBLE TO GROW DIFFERENT TYPES OF HORTICULTURAL CROPS SUCH AS FRUITS, VEGETABLES, FLOWERS, SPICES, PLANTATION CROPS, ROOT AND TUBER CROPS, MEDICINAL AND AROMATIC CROPS.


1.11 Objectives of the Study

The objectives of the present study are:

1. To examine the origin, growth, and development of the Horticultural Producers’ Cooperative Marketing and Processing Society Ltd. (HOPCOMS) in Karnataka over the period in the study area.

2. To examine and assess the facilities available for procurement, storage, processing, and marketing (distribution) of fruits and vegetables at the HOPCOMS in Bangalore Urban and Bangalore Rural districts,

3. To identify and assess the issues and problems faced by the HOPCOMS, producers and consumers in the study area.

4. To know the advantages and benefits that HOPCOMS offered to the producers and consumers in the study area.

5. To suggest suitable remedial measures to HOPCOMS for yet more better performance to benefits farmers as well as consumers.

1.12 Research Questions

The following research questions are answered in the study with empirical data from the farmers (producers) and the consumers (public, people), analyzed using appropriate statistical techniques:

- Are fruits and vegetables, and even their cropping patterns, production and yields, profitable for the producers (farmers) in the study area and are they viable commercial option and that they would continue with the crops they grow and the HOPCOMS they sell to?

- How satisfied are the producers with the HOPCOMS, the organization and their procurement and pricing policies and practices in providing the producers the advantages of fair prices and purchase of fruits and vegetables from them?

- Do HOPCOMS present sufficient and attractive variations in the ranges of products, prices, outlets and locations that the consumers feel satisfied in making purchases of fruits and vegetables of their choice in the retail outlets of HOPCOMS in the study area?
• Are HOPCOMS outlets of greater benefits and advantages than other sources of supply of fruits and vegetables that the customers are pleased to patronize them, for some compelling reasons such as quality, grading, freshness, prices, and shopkeeper (employees’) behaviour?

1.13 Hypotheses for Testing

For testing, using the interviewed, data from the producers and consumers, the following simple and testable hypotheses are formulated:

• HOPCOMS offer invariably **better and fair prices** for the fruits and vegetables (of the producers) procured at their procurement centres than other marketing agencies.

• HOPCOMS offer invariably **fresh and quality fruits and vegetables at reasonable prices** to the consumers compared to any similar supply chain or marketing agencies.

• Services rendered by the HOPCOMS to both the producers and consumers are more satisfying and worthwhile than similar services rendered by other agencies.

1.14 The Study Area: Karnataka and Select Districts

Karnataka state is located between 11° 31’ N and 18° 48’ N latitudes and 74° 12’ and 78° 40’ E and 78° 40’ E longitudes, and lies in the West-Central part of the Peninsular India. Its length from north to south is 700 km, and breadth from east to west is 400 km. Karnataka State covers an area of 191,791 km², occupying 7.75 per cent of the total geographical area of the country. As per the 2011 Census, the population of the state is 61.13 million. It is the eighth largest state by the population, comprising of 30 districts. Kannada is the most widely spoken and official language of the State. Karnataka has been the first state in the country to set-up a separate Department for Horticulture, in the year 1965.

Karnataka is the fourth largest producer of horticultural crops in India. The geographical area of Karnataka is 19.05 million ha, of which an area of 12.14 million ha comes under the cultivatable area, constituting 63.76 per cent of the geographical area for the year 2013-2014. Out of the total cultivable area, 1.92 million ha are
covered under horticulture, as per the ‘Horticultural Crops Statistics of Karnataka State at A Glance 2013-14.

Horticulture in the state accounts for 15.83 per cent of the total cultivable area out of the 1.92 million ha. Of the total horticultural crop area, 0.86 million ha (44.51 per cent) come under plantation crops; 0.45 million ha (23.18 per cent) under vegetables; 0.38 million ha (20.15 per cent) under fruits; 0.20 million ha (10.41 per cent) under spices and 0.03 million ha (1.75 per cent) under commercial flowers, including the area under medicinal and aromatic plants.

Accordingly, the total horticultural production in the state during the year 2013-2014 figured at 16.25 million tonnes. Going into the detail, production figures stood at 6.62 million tonnes (40.76 per cent) with respect to fruit crops and 8.25 million tonnes (50.75 per cent) in the case of vegetables crops: 0.66 million tonnes (4.03 per cent) w.r.t. Spice crops: 0.48 million tonnes (2.98 per cent) w.r.t. Granden/plantation crops and 0.24 million tonnes (1.48 per cent) w.r.t. crops coming under commercial Flowers including Medical and Aromatic Plants.

The area under horticultural crops is 24.19 million ha and production of 276.74 million tonnes under horticultural crops in India. Karnataka has occupied the 2nd place in respect of the total area with 1.92 million ha contributing 7.9 per cent of area to the total area and 9th place in respect of total production with 18.62 million tonnes, contributing 6.73 per cent of the production at all India.

Karnataka has occupied 3rd place in regard to fruit crops with an area of 0.38 million ha and a production of 6.24 million tonnes, 8th place regarding vegetable crops with 0.466 million ha of area and 9.1 million tonnes of production. With regard to commercial flowers, the state has stood at 2nd place with 0.03 million ha of area and 0.204 million tonnes of production whereas 2nd place in regard to garden/plantation crops with 0.732 million ha of area and 1.78 million tonnes of production.

This is a clear indication that the state of Karnataka is in the forefront of horticulture. The Agricultural operational holdings in Karnataka is 7.83 million and the area operated is 12.16 million hectare according to Agricultural Census 2010-2011. The Gross State Domestic Product (GSDP) of the Karnataka during 2013-2014 at factor cost at current prices is Rs.6,14,607 crores and in Agriculture sector it is
estimated at Rs.87,716 crores, the share of Agriculture towards GSDP being 14.27%. The contribution of Horticulture sector towards GSDP is 5.74%. The share of Horticulture in Agriculture sector is 40.25%.

1.15 A Brief Profile of the Districts

Bangalore Urban district includes the entire urban area of Bangalore city. As per 2011 Census, the city had a population of 9.6 million, of which male population was 5.023 million (52.3 per cent) and female population 4.6 million (46.7 per cent). In 2001 Census, the city had a population of 6.54 million. Bangalore district population constituted 15.75 per cent of total Karnataka population. In 2001, this was 12.37 per cent of Karnataka state. There was an increase of 46.79 per cent in the population by 2011 compared to the population in 2001. In the Census of 2001, Bangalore district recorded an increase of 35.09 per cent to its population compared to 1991. The density of Bangalore district for 2011 was 4,381 people per km\(^2\). In 2001, the density was at 2,985 people per km\(^2\). Bangalore district administers 2,196 km\(^2\) of area. Out of the total population of 2011, 8.75 million constituting 91.14 per cent live in urban area of Bangalore district. Sex ratio in urban Bangalore district is 920. In Bangalore district, it was 943 in 2011. Child population (0-6 years) in the urban region was 952,044 and this is 10.75 per cent of the total urban population. Literacy rate in Bangalore district is 88.61 per cent of which males have registered a whopping 91.66 per cent and females 85.27 per cent. In actual number, 6.9 million people are literates with 3.73 million males and 3.18 million females are literates.

In 2011, 9.06 per cent of the population of Bangalore district lived in rural areas and the number was 0.89 million. In rural areas of Bangalore district, sex ratio is 877 females per 1000 males. The child sex ratio is 953 girls per 1000 boys. Child population in the age of 0-6 years is 100,793. The child population comprises 1.12 per cent of total rural population of Bangalore district. Literacy rate in rural areas of Bangalore district is 78.21 per cent. Gender wise, male and female literacy stood at 84.54 per cent and 70.92 per cent, respectively.

In 2011, Bangalore Rural district had a population of 990,923, of which males were 509,172 and females were 481,751. In 2001, the rural district had a population of 850,968, of which males were 437,489 and the remaining 413,479 were females. There was an increase of 16.45 per cent in the population compared to population in
In the previous census of 2001, the district recorded an increase of 18.60 per cent to its population in 1991. With regard to sex ratio in Bangalore Rural, it stood at 946 per 1,000 males compared to 2001 Census figure of 945. The child sex ratio was 950 girls per 1,000 boys compared to 939 girls per 1,000 boys of 2001.

There were a total of 107,062 children under the age of 0-6 years against 107,301 in 2001. The child sex ratio in 2011 was 950 compared to 939 in 2001. In 2011, out of the total Bangalore Rural district population for 2011, 268,744 people constituting 27.12 per cent lived in urban areas of the district. Sex ratio in urban areas of Bangalore Rural district was 950 in 2011. Similarly, child sex ratio in the district was 956 in 2011. Child population (0-6 years) in the urban area was 29,657, of which males and females were 15,161 (51.1 per cent) and 14,496 (48.9 per cent), respectively. This child population figure for the rural district was about 11.0 per cent. Literacy rate in the district is 75.75 per cent. In actual number, 204,117 people are literates in the urban areas of Bangalore Rural.

In 2011, 72.88 per cent of the population of Bangalore Rural district lived in rural areas. The total was 722,179, of which males and females were 371,369 (51.4 per cent) and 350,810 (48.6 per cent), respectively. In rural areas of Bangalore Rural district, sex ratio is 945 females per 1,000 males. The child sex ratio on the other hand is 947 girls per 1,000 boys. Child population in the age 0-6 years is 77,405. The child population comprises 10.72 per cent of the total rural population of Bangalore Rural district. Literacy rate in rural areas of Bangalore Rural district was 67.11 per cent in 2011. In total, 484,632 people were literates, of which males and females were 275,457 (56.84 per cent) and 209,175 (48.16 per cent), respectively.

In 2011, Kolar had a population of 1.54 million, of which males and females were 0.77 million (50.53 per cent) and 0.76 million (49.47 per cent), respectively. In 2001, the district had a population of 1.4 million, of which males were 0.7 million (50.59 per cent) and the remaining 0.69 million (49.41 per cent) were females, respectively. There was an increase of 10.77 per cent in the population compared to population as per 2001. In the previous census, the district recorded an increase of 14.46 per cent to its population compared to 1991. In 2011, the density was 386 people per km\(^2\). In 2001, the density was 346 people per km\(^2\). The district is spread over 3,979 km\(^2\). Of the total Kolar population, 31.25 per cent lived in urban regions of
the district. In total, 480,073 people lived in urban areas. Sex ratio in the urban region of Kolar district was 992 in 2011. Similarly, the child sex ratio was 979 in 2011 Census. Child population (0-6 years) in the urban region was 54,192. This child population was 11.29 per cent of the total urban population of the district. Literacy rate in the district in 2011 was 86.13 per cent, of which males and females accounted for 90.05 per cent and 82.18 per cent, respectively. As per 2011, 68.75 per cent of the population of the district lived in rural areas. The total Kolar district population living in rural areas was 1.056 million, of which males and females were 535,431 (50.7 per cent) and 520,897 (49.3 per cent), respectively. In rural areas of the district, sex ratio was 973 females per 1,000 males. The child sex ratio was 955 girls per 1,000 boys. Child population in the age group of 0-6 years was 116,231 in rural areas. The child population comprises 11.0 per cent of total rural population of the district. Literacy rate in rural areas of the district was 69.08 per cent in 2011. Gender wise, the male and female literacy stood at 78.11 per cent and 59.82 per cent, respectively.

In 2011, Ramanagara had a population of 1.08 million, of which male and female populations were 548,008 (50.6 per cent) and 534,628 (49.4 per cent), respectively. In 2001, the district had a population of 1.031 million. There was a change of 5.05 per cent in the population compared to population of 2001. In the previous census of 2001, the district recorded an increase of 7.84 per cent to its population compared to 1991. In 2001, the district population density was 288 people per km$^2$. The district administers 3,516 km$^2$. Of the total population of 2011, 24.73 per cent lived in the urban regions of the district. In total, 267,759 people lived in urban areas. Sex ratio in the urban region of the district was 975 in 2011. Similarly, the child sex ratio in the district was 964 in 2011. Child population (0-6 years) in the urban region was 30,512. This was 11.40 per cent of the total urban population. Literacy rate in the district, as per Census 2011, was 81.54 per cent, of which males and females were 85.47 per cent and 77.51 per cent, respectively. In actual number, it was 193,447 people in the urban region of which males and females are 102,591 (53.03 per cent) and 90,856 (46.97 per cent), respectively.

In 2011, Tumkur district had a population of 2.68 million, of which male and female populations were 1.35 million (50.37 per cent) and 1.33 million (49.63 per cent), respectively. In 2001, the district had a population of 2.58 million. There was a change of 3.87 per cent in the population compared to population of 2001. In the
previous census of 2001, the district recorded an increase of 12.10 per cent to its population compared to 1991. The density of population in 2011 was 253 people per km$^2$. In 2001, the density was 244 per km$^2$. The district administers an area of 10,597 km$^2$. In 2011, 22.36 per cent of the population of the district lived in urban regions of the district. In total, 599,078 people lived in urban areas. Sex ratio in the urban region was 984 in 2011. Similarly, the child sex ratio was 959 in 2011. The child population (0-6 years) in the urban region was 62,057. This child population was 10.36 per cent of the total urban population. Literacy rate in 2011 was 87.32 per cent, with males accounting for 90.93 per cent and females for 83.67 per cent, respectively. As per 2011 Census, 77.64 per cent of the population of the district lived in rural areas. The total population living in rural areas was 2,08 million. In rural areas of the district, sex ratio was 983 females per 1,000 males. The child sex ratio was 959 girls per 1,000 boys. The child population in the age group of 0-6 years was 203,685 in rural areas. The child population comprised 9.92 per cent of total rural population of the district. Literacy rate in rural areas was 64.45 per cent in 2011. Gender wise, male and female literacy stood at 80.48 per cent and 62.71 per cent, respectively. In total, 1.34 million people here were literates.

Chikkaballapura district came into being on September 10, 2007 after the State Cabinet approval on June 21, 2007. This was essentially carved out of the district of Kolar and has six taluks under its administration. It came into being on the same day as Ramnagara district. The district has a population of 1.15 million (Census 2011) and is spread over an area of 4,524 km$^2$. It has a population density of 308 per sons per km$^2$. Chickballapur is the district headquarters, located within 3 km of Muddenahalli, the birthplace of eminent engineer and statesman Sir M. Visvesvarayya. The district is poised for greater growth and development through several programmes on the anvil, namely, Kanivenarayanapura nearby, which is a site of the upcoming Sri Sathya Sai Baba University and College of Medicine, Indian Institute of Technology, Muddenahalli, Visvesvaraya Institute of Advanced Technology, the Sports Village, and a Silk City. Chikballapura is adjacent to the upcoming US $ 22 billion, BIAL IT Investment Region, one the largest infrastructure projects in the history of Karnataka and the largest IT region in India.
1.16 **Research Methodology**

Only a brief description of research methodology is given below, as there is a separate chapter on Research Methodology describing the details of primary and secondary sources of data, statistical techniques and standard tests for hypotheses. As for primary sources of data, two sources of data have been taken recourse to, namely, the producers of fruits and vegetables, and the consumers of fruits and vegetables marketed by the HOPCOMS through its retail outlets. The producers are essentially farmers who grow fruits and vegetables for the market, as cash crops. The farmers live and work in their respective districts, except for farmers in the two districts of Bangalore Urban and Bangalore Rural in the rural vicinity of the markets. For collecting data from the farmers and consumers, two separate questionnaires have first been custom-designed and pilot tested. Then, two separate sample sets – one for farmers and the other for consumers - have been chosen for doing the interviews using the questionnaires. While the farmer-producers for the survey have been chosen from all of the six districts, although in varying proportions, the consumers have been chosen randomly from the city of Bangalore for the study focuses mainly on the HOPCOMS outlets of the city.

A sample of 280 farmers who are fruits and vegetables growers have been chosen for the questionnaire-based interviews. Among them, however, a 100 farmers have been chosen from Bangalore Rural district, and 10 each from Ramanagar, Kolar, Tumkur and Chikkaballapura districts. The numbers have been varying for the reason that most farmers who supply fruits and vegetables to the HOPCOMS are in the rural vicinity of the HOPCOMS outlets, which are heavily concentrated in Bangalore city with 285 outlets, out of the 324 reportedly operating in the recent years. Farmers from Ramnagara, Kolar, Tumkur and Chikkaballapura districts also supply fruits and vegetables but the HOPCOMS outlets in operation in these districts are quite small in number: 285 outlets (about 88 per cent) in Bangalore Urban district, 5 outlets in Bangalore Rural district, 20 outlets in Kolar district, 4 in Ramanagara district and 10 in Chikkaballapura districts, with no outlets in Tumkur, although fruits and vegetables are supplied to the HOPCOMS in Bangalore from the district.

The farmer-producers sample has also been chosen to gain an understanding of their perspectives and perceptions on the working of the HOPCOMS and their own
role in the cultivation and production of horticultural products, but particularly fruits and vegetables. Essentially, how well the HOPCOMS serve the farmers and how fair is it (HOPCOMS) in dealing with the farmers as producers and benefitting them as a cooperative organization.

Another sample of 356 consumers have been selected for interviews based on the questionnaire and they have been chosen using different processes. The city of Bangalore has been divided into four broader zones, namely, North, East, West and South and then 7 outlets in each zone have been chosen on a random basis. Further, 10 customers each from each of the 7 outlets in each zone aggregate to thus: 4 x 7 x 10 = 280 consumers. To give representation to the consumers of the headquarter HOPCOMS outlet, 20 consumers have been chosen, again randomly, to add up to 300 for the entire city. And for providing representations for the customers in the service districts of 324 – 285 = 39 outlets, a small number of consumers (56) have been chosen in the order of 10 each consumers from Bangalore Rural and Chikkaballapura districts, 16 from Ramanagara district, and 20 from Kolar district. Thus, a total of 356 consumers have been chosen for interviews, all randomly: 280 for Bangalore city service districts, 20 for HOPCOMS headquarter outlets, and 56 for the other four districts. Tumkur district has no HOPCOMS outlets and hence has no representation in the sample of consumers.

The interviews have been conducted with the farmers and consumers, in an open, free-associational manner such that the interviews have never been taxing either for the farmers or the consumers. The scholar has administered the questionnaires himself to the farmers and the consumers such that the delivery in each case is the same with little or no variations.

The secondary sources of data, particularly, the National Horticulture Board (NHB), Mysore Horticulture Society (MHS), Department of Agriculture, Department of Horticulture, Agricultural and Processed Food Products and Export Development Authority (APEDA), HOPCOMS Head Offices, Census Organization, Research and Government Reports and Documents from various government, educational and research institutions have been visited, collected and used in the study.

Simple statistical analysis used in the study is the simple frequency and percentage analysis to generate one-way tables to discuss descriptively the
characteristics and opinions / perceptions of the farmers and consumers using the questionnaires survey data. For temporal data on fruits and vegetable cropped area, production, yield, monetary value and such related data for the six districts of state, trend as well as compound growth rate analysis have been chosen to highlight the trends and growth rate variations within, among the districts and over time. A suitable multivariate analysis has been used in the analysis of questionnaire survey data, both for the farmers’ and consumers’ data to bring out the patterns and perceptions of the two important segments of population who are involved in the production and marketing of fruits and vegetables at one end and in the consumption of the same range of fruits and vegetables at the other end. SPSS package has been used in the statistical analysis of the data.

For diagrammatic representations, MSEXCEL has been used and for mapping GIS technology has been used. For assembling ideas and perspectives for the thesis, extensive library research has been carried out with the libraries in the Universities of southern Karnataka, notably, Mysore and Bangalore Universities GKVK, and also the libraries of the select Government Departments.

1.17 Scope and Limitations

The scope of this study is to understand the workings of HOPCOMS in the urban and rural districts of Bangalore, through a careful analysis and interpretation of data gathered using two custom-designed questionnaires, one for the producers of fruits and vegetables and the other is for the consumers of fruits and vegetables from the HOPCOMS retail outlets, operative in the Bangalore Urban and Bangalore Rural districts. The thesis makes clear how the HOPCOMS operate in the areas of procurement, storage, processing, packaging, and sale of the fruits and vegetables at reasonable prices.

One of the limitations of the study is that it is a one-scholar study and is therefore constrained by time / timeline and cost of the project. Although it is a study of HOPCOMS, the focus is primarily on the Producers (the fruits and vegetables growers) and the Consumers (the general public, people) and what the two of them think of the workings of HOPCOMS and how they are affected by them. The perspectives and insights gained and discussed are not however exhaustive, but limited because of the limitations of time and cost. Again, because of this limitation,
qualitative research approaches such as the group discussion and focus group workshops could not be conducted, which would have certainly yielded good results and authenticity to discussions and arguments in the thesis.

1.18 The Organization of the Thesis

The thesis is a blend of seven commissioned chapters. The present chapter, first chapter which is an introductory chapter and titled ‘Introduction’ has the purpose of providing a background for the study, particularly on the theme of the research, HOPCOMS, and the relevant aspects of the HOPCOMS the study is concerned about. It states the problem of the study, in regard to what the study purports to examine, assess, analyze, and interpret, followed by the research questions it tries to answer and the hypotheses it tests to prove. It then gives a brief on the study area – the two districts of Bangalore Urban and Bangalore Rural, and also on the research methodology adopted, in all its components – the primary and secondary sources of data, the statistical techniques adopted, the methods of graphical representations, and the library research accomplished to assemble the thesis.

The second chapter, A Review of Literature, is a review of relevant and recent literature on five broad areas, namely, agriculture, horticulture, fruits and vegetable cropping, cooperative marketing, and HOPCOMS and similar organizations in the service of farmers and consumers. The third chapter, A Profile of the Study Area: Karnataka and the Six Districts, is a chapter that discusses the geography of the state and the six districts, all in southern Karnataka, and the fruits and vegetables area, production, yield, and marketing, especially through cooperatives and HOPCOMS. The discussion is rather generic, in regard to fruits and vegetables cropping and marketing.

The fourth chapter, Research Methodology, is a discussion on the materials and methods adopted in the study. Particularly, the chapter discusses five areas of importance in the research, primary sources of data, including the farmers and consumers as samples, questionnaires and the areas covered in each of them, secondary sources of data, which are documentary and historical in nature, statistical techniques used in the study to analyze the questionnaire survey data (the farmers’ and the consumers’ data) such as the simple frequency and percentage analysis, trend analysis and growth rates, and a multivariate analysis to generate perspectives and
insights at a higher analytical level, graphical representation of data and analytical outputs and mapping, using SPSS, MSEXCEL, and Geographical Information Systems (GIS) for mapping, and finally library research towards building background for the study, through a comprehensive review, and for assembling ideas, perspectives, and corroborations for the study findings and conclusions.

The fifth and the sixth chapters are the core chapters, which write about the empirical study, analysis and interpretation of data. The fifth chapter, The HOPCOMS and Fruits and Vegetables Marketing, is a descriptive as well as analytical study of the cooperative that simply goes by the name Society and operative in five of the six districts of our concern, namely, Bangalore Urban, Bangalore Rural, Ramnagara, Kolar and Tumkur, with Chikkaballpura district HOPCOMS retail outlets, although the district supplies fruits and vegetables to the HOPCPMS. The sixth chapter, HOPCOMS: The Farmers’ and Consumers’ Perspectives, is an entirely analytical study of what the farmers and consumers perceive about the functioning of the HOPCOMS, and how beneficial and advantageous their retail outlets are for the two groups of beneficiaries. It is in this chapter that the results of the statistical analyses of questionnaire survey data are examined critically and interpreted for an understanding of the workings of the HOPCOMS.

The seventh chapter, Conclusion and Recommendations, is first a summary and then an encapsulation of the findings and conclusions of the research reported thus far in the six foregoing chapters towards implications of the study, for agricultural marketing, for agricultural marketing policy, and the subject and themes of analysis. The scholar, on assessing the HOPCOMS through the perspectives and insights of the farmers and the consumers, makes recommendations for improving the functioning and activities of the HOPCOMS and suggestions for further research.

The thesis has an appendage of References cited and Appendices of questionnaires custom-designed for the study, and sample data and analysis examples.
1.19 Conclusion

This introductory chapter has developed a background for understanding the relevance and importance of agriculture, particularly, fruits and vegetables farming, production, yield and marketing of the fruits and vegetables, horticulture development in India and Karnataka, and cooperatives in marketing and in the service of farmers and consumers of fruits and vegetables. A problem statement has been derived from the background and the objectives, research questions, and hypotheses have been set down and formulated for answering and testing, respectively. In order to introduce the study area, a brief profile has been built on the State of Karnataka agriculture, the working of HOPCOMS in the context of six districts – Bangalore Urban, Bangalore Rural, Ramanagara, Chikkaballapura, Kolar, and Tumkur – in the southern Karnataka. The research methodology adopted in the study has also been briefly indicated, followed by the scope and limitations of the study because it is a one-scholar enterprise. The thesis is set with a seven-chapter structure such that the study could be entirely discussed threadbare.

There is a comprehensive review of literature in the following chapter throwing light on the researches, their methodologies and their findings and conclusions, which could be used later in the thesis as corroborations.