

**A STUDY ON PERFORMANCE OF FARMER PRODUCER
ORGANIZATIONS IN SHIVAMOGGA DISTRICT OF
KARNATAKA**

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DEPARTMENT OF AGRICULTURAL EXTENSION

COLLEGE OF AGRICULTURE, SHIVAMOGGA

**UNIVERSITY OF AGRICULTURAL AND HORTICULTURAL
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COLLEGE OF AGRICULTURE, SHIVAMOGGA
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SCIENCES, SHIVAMOGGA**

CERTIFICATE

This is to certify that the thesis entitled 'A STUDY ON PERFORMANCE OF FARMER PRODUCER ORGANIZATIONS IN SHIVAMOGGA DISTRICT OF KARNATAKA' submitted in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE (AGRICULTURE) in AGRICULTURAL EXTENSION** to the College of Agriculture, Shivamogga, University of Agricultural and Horticultural Sciences, Shivamogga is a bonafide record of research work carried out by **Mr. DHARMARAJ, B. M., ID. No. MA1TAG0213** (bmdharmaraj@gmail.com) during the period of his study in this University under my guidance and supervision and no part of this thesis has previously formed the basis for the award of any other degree, diploma, associateship, fellowship or any other similar titles.

**Shivamogga
August, 2019**



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**A STUDY ON PERFORMANCE OF FARMER PRODUCER
ORGANIZATIONS IN SHIVAMOGGA DISTRICT OF KARNATAKA
(DHARMARAJ, B. M.)**

ABSTRACT

The present study was conducted in the year 2018-19 to assess the performance of Farmer Producer Organizations (FPO) in Shivamogga district of Karnataka state. An ex-post-facto research design was engaged. A total of 120 members out of six FPO from four taluks were considered as the sample for the study. Data is collected through pre-tested semi structured interview schedule. The study revealed that exactly half of the FPOs (50.00 %) were having medium level of overall performance followed by high (33.33 %). All the FPOs were performing activities like custom hiring services, input supply, auditing of accounts, conduct of meetings, rules and regulations of the FPO, book keeping and documentation followed by 83.33 per cent of the FPOs possess internet facility and offering farm advocacy. Just above half of the farmer members(52.50 %) were possessed medium level of knowledge and (52.50 %) of them belonged to middle aged group, more than half(58.33 %) of members had medium education category, about(40.00 %) of the members were semi medium farmers and less than half(42.50 %) of the them had low income. About 44.16 per cent of the members had medium level of extension contact, 46.66 per cent of the members had medium level of extension participation and 42.50 per cent of them belong to medium level of organizational participation. Less than half of them (45.84 %) were distributed in medium level of economic motivation. Just below fifty per cent (48.34 %) of the members had medium category of credit orientation. Majority of the members expressed the constraints such as problems related to lack of processing units (83.33 %), non-existence of procurement system (53.33 %). The suggestions like establishment of processing units (71.66 %), Procurement system to be improved (59.76 %), Credit facility can be enhanced 55.83 per cent of members were expressed.

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ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆಯಲ್ಲಿನ ರೈತ ಉತ್ಪಾದಕ ಸಂಸ್ಥೆಗಳ ಕಾರ್ಯಕ್ಷಮತೆಯ ಕುರಿತು ಒಂದು

ಅಧ್ಯಯನ

(ಧರ್ಮರಾಜ್, ಬಿ.ಎಂ.)

ಸಾರಾಂಶ

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವನ್ನು ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆಯಲ್ಲಿ ೨೦೧೮-೧೯ ನೇ ಸಾಲಿನಲ್ಲಿ ರೈತ ಉತ್ಪಾದಕ ಸಂಸ್ಥೆಗಳ ಕಾರ್ಯಕ್ಷಮತೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ಕೈಗೊಳ್ಳಲಾಯಿತು. ಈ ವಿದ್ಯಮಾನವು ಈಗಾಗಲೇ ಸಂಭವಿಸಿದ್ದರಿಂದ ಎಕ್ಸ್‌ಪೋಸ್ಟ್ ಫಾಕ್ಟೋ ಸಂಶೋಧನಾ ವಿನ್ಯಾಸವನ್ನು ಕೈಗೊಳ್ಳಲಾಗಿದೆ. ಆಯ್ದು ಆರು ರೈತ ಉತ್ಪಾದಕ ಸಂಸ್ಥೆಗಳಿಂದ ತಲಾ ೨೦ ಸದಸ್ಯರಂತೆ ಒಟ್ಟು ೧೨೦ ರೈತ ಸದಸ್ಯರನ್ನು ಒಳಗೊಂಡ ಮಾದರಿಯನ್ನು ಆಯ್ದು ಮಾಡಲಾಗಿದೆ. ಪೂರ್ವಭಾವಿ ಪರಿಶೀಲಿತ ಸಂದರ್ಶನ ವೇಳಾಪಟ್ಟಿಯನ್ನು ಬಳಸಿಕೊಂಡು ಸಂದರ್ಶಿಸಲಾಯಿತು. ಅಧ್ಯಯನ ಫಲಿತಾಂಶದಿಂದ ತಿಳಿದು ಬರುವುದೇನೆಂದರೆ ಪ್ರತಿಶತ ೫೦.೦೦ ರಷ್ಟು ರೈತ ಉತ್ಪಾದಕ ಸಂಸ್ಥೆಗಳು ಮಧ್ಯಮ ಶೇ. ೩೩.೩೩ ರಷ್ಟು ಹೆಚ್ಚಿನ ಮಟ್ಟದ ಒಟ್ಟಾರೆ ಕಾರ್ಯಕ್ಷಮತೆಯನ್ನು ಹೊಂದಿವೆ ಎಂದು ಕಂಡುಬಂದಿರುತ್ತದೆ. ಎಲ್ಲಾ ರೈತ ಉತ್ಪಾದಕ ಸಂಘಗಳು ಯಂತ್ರಾದಾರ ಸೇವೆಗಳು, ಬೀಜ ಗೊಬ್ಬರ ವಿತರಣೆ, ಖಾತೆಗಳ ಲೆಕ್ಕ ಪರಿಶೋಧನೆ, ಸಭೆಗಳ ನಿಯೋಜನೆ, ಸಂಸ್ಥೆಯ ನೀತಿ ಮತ್ತು ನಿಯಮಗಳನ್ನು ಕಾಗದ ಪತ್ರಗಳ ದಾಖಲೆ ಮುಂತಾದ ಚಟುವಟಿಕೆಗಳನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ನಿರ್ವಹಿಸುತ್ತಿವೆ. ಶೇ. ೮೩.೩೩ ರಷ್ಟು ರೈತ ಉತ್ಪಾದಕ ಸಂಸ್ಥೆಗಳು ಅಂತರ್ಜಾಲ ಮತ್ತು ಕೃಷಿ ಸಂಬಂಧಿತ ಸಲಹೆ ನೀಡುವ ಕಾರ್ಯದಲ್ಲಿ ಭಾಗಿಯಾಗಿವೆ. ಸಂದರ್ಶನದಲ್ಲಿ ಪ್ರತಿಕ್ರಿಯಿಸಿದವರಲ್ಲಿ ಅರ್ಧಕ್ಕಿಂತ ಹೆಚ್ಚಿನವರು (ಶೇ. ೫೨.೫೦) ಸಂಸ್ಥೆಯ ಬಗ್ಗೆ ಮಧ್ಯಮ ಜ್ಞಾನದ ಮಟ್ಟವನ್ನು ಹೊಂದಿದ್ದಾರೆ ಮತ್ತು ಬಹುಪಾಲು (ಶೇ.೫೨.೫೦) ಸದಸ್ಯರು ಮಧ್ಯಮ ವಯಸ್ಕರಾಗಿದ್ದಾರೆ. ಅರ್ಧಕ್ಕಿಂತ ಹೆಚ್ಚು (ಶೇ. ೫೮.೩೩) ಸದಸ್ಯರು ಮಧ್ಯಮ ಶಿಕ್ಷಣ ಹೊಂದಿರುತ್ತಾರೆ. ಸುಮಾರು ಪ್ರತಿಶತ ೪೨.೫೦ ರಷ್ಟು ಸದಸ್ಯರು ಇತರೆ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಮಧ್ಯಮ ಮಟ್ಟದ ಭಾಗವಹಿಸುವಿಕೆ ಕಂಡು ಬಂದಿರುತ್ತದೆ. ಪ್ರತಿಶತ ೪೨.೦೦ ಸದಸ್ಯರು ಅರೆ ಮಧ್ಯಮ ರೈತರಾಗಿದ್ದು, ಶೇ. ೪೨.೫೦ ರಷ್ಟು ಸದಸ್ಯರು ಕಡಿಮೆ ಮಟ್ಟದ ವಾರ್ಷಿಕ ಆದಾಯ ಹೊಂದಿರುವರು. ಸುಮಾರು ಪ್ರತಿಶತ ೪೪.೧೬ ರಷ್ಟು ಸದಸ್ಯರು ಮಧ್ಯಮ ಮಟ್ಟದ ವಿಸ್ತರಣಾ ಸಂಪರ್ಕ ಹೊಂದಿರುತ್ತಾರೆ. ಅರ್ಧಕ್ಕಿಂತ ಕಡಿಮೆ (ಶೇ. ೪೫.೮೪) ಸದಸ್ಯರು ಮಧ್ಯಮ ಮಟ್ಟದ ಆರ್ಥಿಕ ಪ್ರಚೋದನೆ ಹೊಂದಿರುತ್ತಾರೆ ಮತ್ತು ಪ್ರತಿ ಶತ ೩೮.೩೪ ರಷ್ಟು ಸದಸ್ಯರು ಹೆಚ್ಚಿನ ಮಟ್ಟದ ಸಮೂಹ ಮಾಧ್ಯಮದಲ್ಲಿ ಭಾಗವಹಿಸಿದ್ದವರಾಗಿರುತ್ತಾರೆ. ಸುಮಾರು ಶೇ. ೪೮.೩೪ ರಷ್ಟು ಸದಸ್ಯರು ಸಾಲದ ಬಗ್ಗೆ ಮಧ್ಯಮ ಮಟ್ಟದ ದೃಷ್ಟಿಕೋನ ಉಳ್ಳವರಾಗಿದ್ದಾರೆ. ಬಹುಪಾಲಿನಷ್ಟು ಸದಸ್ಯರು ಸಂಸ್ಕರಣ ಘಟಕಗಳ ಕೊರತೆ (ಶೇ. ೮೩.೩೩), ಸೂಕ್ತ ಸಂಗ್ರಹದ ವ್ಯವಸ್ಥೆ (ಶೇ.೫೩.೩೩) ಇತ್ಯಾದಿ ಸಮಸ್ಯೆಗಳನ್ನು ವ್ಯಕ್ತಪಡಿಸಿದರು. ಸಂಸ್ಕರಣಾ ಘಟಕಗಳ ಸ್ಥಾಪನೆ (ಶೇ.೨೧.೬೬) ಉತ್ಪನ್ನಗಳ ಸಂಗ್ರಹ ವ್ಯವಸ್ಥೆಯ ಸುಧಾರಣೆ (ಶೇ. ೫೯.೨೬) ಹಾಗೂ ಸಾಲದ ಸವಲತ್ತುಗಳನ್ನು ಹೆಚ್ಚಿಸುವಂತೆ ಆಗ್ರಹಿಸಿ ಶೇ. ೫೫.೮೩ ರಷ್ಟು ಸದಸ್ಯರುಗಳು ಅಭಿಪ್ರಾಯಪಟ್ಟರು.

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INTRODUCTION

I INTRODUCTION

Post structural economic reform in the early nineties focused more on industry, tax reforms, foreign trade and investment, banking and capital markets without any specific focus on agriculture. Though there has been impressive growth in terms of gross domestic product, real development in terms of growth shared by all sections of population has not taken place. We still grapple with the problems of poverty, unemployment, inequalities in access to health, education and making agriculture a real growth sector. Though agriculture contributes only about one sixth of GDP, it employs more than half of the working population of the country signifying its paradoxical position in the economy. More so, because Indian agriculture is the home of small and marginal farmers (85 % of total land holdings). As per the last Agriculture Census done in 2010-11 and it was estimated that 117 million of land holdings were small and marginal out of total 138 million. Thus, livelihoods of a vast section as well as food security depend on the sustainable agriculture growth and performance of small and marginal farmers. (<http://www.cso.india.inc>).

Needless to mention, in a country like India, the role of small farmers (small holdings) in poverty reduction is well recognized. However, in the absence of robust public / private support system at the ground level farmers face challenges in accessing land, water, inputs, credit, technology and market. Then, there are emerging challenges like risk and vulnerabilities due to climate change and natural calamities.

Changing diet pattern amongst growing middle-class people to more of vegetables, fruits, milk and meat products is putting high pressure on the small farmers to either produce high value crops or remain excluded from the market being non-responsive. High value crops bring high risk too, which the small and marginal farmers are averse to. There is fast gender diversification taking place in agricultural activities, with more women taking the major responsibilities where men are gradually shifting to non-farm activities. This feminization of agriculture is taking place without any structural changes in matters relating their property rights or access to productive resources.

There are structural and governance challenges too. Though agriculture is a 'state subject' under the constitution, central government plays critical role in shaping macro level agricultural policies where the states implements them.

In spite of the challenges discussed above, there are technological as well as institutional innovations taking place to enable small farmers for increasing productivity and income through collective initiatives. Different models of collectives have been tried in India such as Primary Agricultural Credit Society (PACS), Self

Help Groups, Federations of SHGs, Common Interest Groups (CIGs), Joint Liability Groups (JLGs), Farmers Club, Producers Organisations etc., Some have succeeded where majority have not for varieties of reasons. To provide further impetus to the farmers collective, government mooted the idea of making the collectives think and behave like business entities by getting incorporated as Producers' Companies under the Companies Act of 1956 (amended in 2002). In fact, Government of India, as a matter of policy considers Producers Company as the most appropriate institutional form around which farmers must build their capacity to collectively leverage their production and marketing strength.

The future of sustainable agriculture growth and food security in India depends on the performance of small and marginal farmers. But these farmers are lack with sustainable livelihood option as they are prone to asymmetries. They are not economically viable to adopt latest technologies and unable to realize good value from the marketable surplus by individually selling their produce.

Aggregation or collective action is the only way which enables farmers to exploit emerging opportunities at domestic and global levels. With a view of reorganizing marginal and small farmers intervention in existing farming and allied activities in collective voice, co-operatives and contract farming came in to existence. But the success was observed in very few cases such as milk cooperatives, seed production and poultry farming etc. On the other hand, many cases of co-operatives and contract farming were failed to achieve sustainability because of improper organizational setup and restricted operational area.

To accelerate the collective farming covering different enterprises and to cover larger operational area all over the country, Alagh committee was framed. To provide better income enhancement opportunities for the farmers with proper organizational setup on sustainable basis, Alagh committee on 6th February, 2003 recommended the concept of Farmer Producer Organization (FPO).

A Farmer Producer Organization / Company is a group of farmers or producers to carryout business activities related to the primary produce, product or related inputs. It is a registered body that is registered under Section IX A of companies Act, 1956 and a legal entity. Producers are the shareholders in the organization. Each member in a FPO can have only one vote, but can contribute different amounts of share capital. (<https://www.nabard.org>)

To meet the financial needs of producers, India's apex development financial institution *i.e.* NABARD has taken an initiative to provide credit support to FPOs for financial intervention. The 'Producers Organization Development Fund' (PODF) had been set up on 1st April 2011, with an initial corpus of Rs. 50 crores by Govt. of India.

Under Union budget 2014-15, the GOI sanctioned Producer Organization Development and Upliftment Corpus (PRODUCE) fund of Rs. 200 crores for promotion of 2000 FPOs.

The Producer Organization Promoting Institutions (POPIs) play a major role in organizing, providing technical support, capacity building, monitoring and stabilization of FPOs by rendering technical services, consultancy services and all other activities for the promotion of the interests of its members. POPIs includes NGOs, corporates, state government departments, NABARD subsidiaries, KVKs, big FPCs, farmers federations, commodity board / federations, cooperative milk union and other experienced institution.

Presently 759 FPOs are functioning throughout India. Karnataka state has 119 FPOs. Shivamogga district has 9 FPOs which are promoted by NGO (Chaitanya Rural Development Society) and State Department of Horticulture. ([http:// www.sfacindia.com](http://www.sfacindia.com))

These producer company operates under similar regulatory framework that applies to companies, which is totally different from cooperatives. Now a day's producers' companies are known as new generation co-operatives. Producer Company is hybrid concept which consists of characteristics of private limited company and a cooperative society.

It combines the valuable features of cooperatives and efficiency of corporate company. The act of Producer Company came to retain the desirable structure of co-operatives while at the same time enabling the primary producer to have flexibility, freedom and efficiency of private limited company. The FPO concept is one of the best alternatives for the primary producer to get coordinated themselves to move up in the supply chain by value addition and business ownership. Producer Organizations are the collection of producers to share the benefit of economies of scale and provide valuable services like knowledge about agriculture technology, advisory services, procurement, processing, credit and distribution etc., such cooperatives magnify the synergy level of shareholders, reduce the transaction and transportation cost and provide a platform for sharing the information and collective decision making. Such cooperatives are registered under State Cooperative Societies Act.

FPOs are effectively working towards interest of farmers by providing platform to achieve the coordination between technology, input delivery and extension services which are often required to do business activity. These organizations are playing roles of poverty alleviation by providing better income enhancement opportunities, provides sustainable livelihood option, creation of social

welfare and transforms small holder agriculture. There by FPOs ensure farmer's empowerment.

1.1 Concept of FPO

A Farmer Producer Organization / Company is a group of farmers or producers to carryout business activities related to the primary produce, product or related inputs. (<https://www.nabard.org>).

1.2 Problems of Indian farmers

Indian farmers are prone to problems such as (a) Decline in per acre income due to increased cost of production. (b) Non availability and untimely supply of credit and agricultural inputs. (c) Non availability of labor and costly wages. (d) Dependency on intermediaries (money lenders, input dealers, middle men). (e) Lack of assured income due to price variation and crop failures. (f) Low adoption of coping mechanism to overcome impact of climate change.

1.3 Emergence of FPO

To eliminate the problems faced by the farmers, Aggregation or collective action in the form of cooperatives and contract farming came in to force. But success was observed in very few cases such as milk cooperatives, seed production and poultry farming etc. covering limited enterprises and restricted to limited operational area.

To accelerate the collective farming covering different enterprises and to cover larger operational area all over the country, Yoginder K Alagh committee was framed. To provide better income enhancement opportunities for the farmers with proper organizational setup on sustainable basis, Y.K. Alagh committee on 6th February, 2003 recommended the concept of Farmer Producer Organization (FPO). Indian Organic Farmers Producer Company Limited (IOFPCL), Kochi, Kerala is the first FPO in India which was established on September, 2004 under IX A Companies act 1956.

1.4 Triggering factors for establishment of 1st FPO (IOPCL)

The farming district of Wayanad in Kerala, it is well known that a scenario of agrarian distress led to higher prominence for such farmers' movements. Presenting some details on this here provides useful background illustrations of the organizational processes involved and their underlying motivations and risks.

The agrarian economy of Kerala fell under distress during the early 2000s, with wild fluctuations and sharp falls in prices in successive years. This was

compounded by the fact that these years were characterized by adverse weather conditions which affected crop yields. These factors together resulted in a high degree of instability in farming incomes.

Wayanad is world famous for cultivation of pepper, cardamom, ginger and other spices and condiments, as well as coffee. At villages such as Pulpally and Mullankolli, previously known as the 'Kuwait in Kerala' or 'the Gulf in Kerala' for the prosperity that came with booming pepper and coffee prices, farmers became distressed, however, and have more or less similar tales of woe to recount. When the prices of pepper, coffee, tea and ginger touched a high during the latter half of the 1990s, life suddenly became rosy for the local farmers and they increased the area under these crops.

Despite substantial increase in production of major agricultural commodities, there has subsequently been much income loss consequent to the globally induced fall in prices of agricultural commodities, also due to cheaper imports from various countries such as Brazil and Vietnam. Added to this was a decline in soil fertility due to continuous application of fertilizers and pesticides. Therefore, production costs increased, while yields and prices dropped, all of which had negative effects on profitability. Due to this, it has been argued, many farmers have committed suicide. Parallel to this situation, many carcinogenic cases were reported in villages which have been using pesticides such as Furadan and DDT indiscriminately in their paddy fields. This raised uproar among farmers, leading to agitations and protest movements.

Around 20,000 farmers in Kerala joined hands to form an organization called the Indian Farmers Movement (INFAM). With continuous protests of the farmers under INFAM for debt relief to farmers and intensive discussions of the negative long-term effects of conventional agricultural practices on the health of human beings as well as the environment, more consciousness emerged among farmers regarding the crucial importance of organic farming. INFAM organized 700 cluster level trainings and 1,500 farmer awareness programmes at panchayat level throughout the state. Organizations such as the M.S. Swaminathan Research Foundation (MSSRF) also facilitated such activities to organize awareness programmes (Swaminathan, 1999).

Out of 20,000 farmers who were part of INFAM, around 2,000 producers in Wayanad district have come forward to register themselves into a society called Organic Wayanad (OW). Established in 2002 in Wayanad district which has initiated activities in organic farming, OW along with partner organizations in other areas spearheaded the formation of the IOPCL, the first primary producers' company in the country.

1.5 Features of FPO

- It is a registered body under IXA companies act 1956.
- Members have common interest such as input centric, commodity/crop centric and technology centric etc.
- FPO functions in accordance with norms and operating procedures.
- Producers are the only shareholders of FPO.
- It deals with business activity related to primary produce or product.
- There will be equitable sharing of profit among members.
- FPO has linkages and network with other FPOs or similar organizations.
- There will be clear and transparent transactions.
- Each member is having one vote irrespective of the quantum of shares owned by him.
- Democracy ensured through regular elections.
- FPO has both long term and short-term objectives and plan of action.
- FPO ensures long term stability and sustainability.

1.6 Functions of FPOs

- Financial Services:** Arrange loans for raising crops, purchase / hiring of tractors, farm equipment, pump sets, water resources, laying of pipelines, mulch animals, working capital etc.
- Input Supply Services:** Provide low cost and quality inputs to members - fertilizers, pesticides, seeds, sprayers, pump sets, accessories, feed etc.
- Procurement and Packaging Services:** Procure produce from its member farmers; can facilitate storage, value addition and packaging.
- Processing & Marketing Services:** Direct marketing / value addition to enable members to save in terms of time, transaction costs, weight losses, distress sales, price fluctuations transportation, quality maintenance etc.
- Insurance Services:** Crop Insurance, Electric Motors Insurance, animal and Life Insurance.
- Technical Services:** Promote best practices of farming, maintain marketing information system, diversifying and raising levels of knowledge and skills in agricultural production and value addition to products.

- g) **Networking Services:** Making channels of information and other business services accessible to rural producers; facilitating linkages with financial institutions, building linkages of producers, processors, traders and consumers, facilitating linkages with government programmes

1.7 Introduction about Farmer Producer Organization Promoting Institute (POPI)

The primary responsibility of POPI is to see that PO reaches the sustainable level of business and the staff of PO acquire technical and managerial capability to run the business successfully when the POPI withdraws its support. The principal role of POPI is, therefore, to build the capabilities of the staff and the management of PO through training and continuous hand holding. The broad responsibilities of POPI are indicated below:

- a) Cluster identification
- b) Diagnostic and Feasibility Studies
- c) Business planning
- d) Mobilization of producers and Registration of FPO
- e) Resource mobilization
- f) Development of Management Systems and Procedures
- g) Business Operation
- h) Assessment and Audit

Several thousand Farmer Producer Organizations (FPOs) exist across the country, registered under various statutes such as the Cooperative Laws, Trusts and Federations and lately under the Companies Act as Producer Companies. However, the vast majority of FPOs continue to struggle to establish viable and sustainable business models and achieve significant revenues and returns to their members.

As part of SFAC's mission to link small farmers to technology as well as to the markets in association with private, corporate or cooperative sector and if necessary, by providing backward and forward linkages, an initiative has been taken to establish State Level Federations of FPOs to create a State level umbrella support for the member FPOs.

1.7.1 Chaitanya Rural Development Society (CRDS)

It is a registered non-profitable organization grounded in social values for the care of the weaker sections of the society and to serve them without any consideration of caste and creed. It was found in 1996 and is inspired by good leadership. It acts as a

catalyst and convener of social justice and development. The society aims at the uplift and sustainable development of rural poor, empowerment of women, backward and minority communities through Education, Health, Environment, Agriculture, Horticulture, Watershed development, Forestry, Social awareness programmes and Community based rehabilitation programmes.

It has been promoting its mission through a number of programmes, since its establishment for the realization of its vision. The organization acting as promoting institute for nine Farmer producers' organizations namely Harogoppa Farmers Producer Company, Attibylu Farmers Producer Company, Maravalli Farmers Producer Company, Jogadasiri Farmers Producer Company, Kallukoppa Farmers Producer Company, Rippenpet Farmers Producer Company. Organization today has extended the services to over 725 villages in two districts, namely Shivamogga and Davanagere.

The vision of the organization is to conceive and implement the development programmes that will support the rural poor people for their socio-economic development through awareness, motivation, training and capacity building activities leading to sustainable management of natural resources.

1.7.2 Department of Horticulture, Government of Karnataka, Shivamogga

Horticulture sector, as in rest of the India, it is an unauthorized sector in Karnataka also. Hence, an effort is being made to organize the farmers into the groups under various programs of the department of horticulture from 2013-14 onwards. Since then the farmers have been mobilized to work in groups from seed to marketing, adopting, Good Management Practices (GMP) from production up to post harvest management. Aggregating producers into collectives is universally accepted as one of the most effective means of reducing the risk in agriculture and improving the access of small and marginal producers to investments, technology and markets.

In the context of 2014 being declared as “*Year of Farmer Producer Organizations (FPOs)*” by the ministry of Agriculture, Government of India, greater attention was given to these emerging bodies. The Department of Horticulture, Government of Karnataka has initiated formation of FPO during the year 2014-15 with the support of FPO nodal agency Small Farmers Agribusiness Consortium (SFAC), New Delhi by mobilizing the Farmer Clusters already formed by the Department and other farmers into the larger groups of 1000 members to form a Farmer Producer Company under Companies Act 2013.

The State Department of Horticulture, Shivamogga has taken such initiation by establishing three producer company across the district namely Shivamogga Tungabhadra Horticulture Farmers Producers Company Mallapura Shivamogga (Tq), Malenadu Horticulture Farmers Producer Company Masuru, Sagara (Tq) and Malnad

Spices and Nuts Producer Company Baranduru, Bhadravathi (Tq) to convey conducive effect of Producer organizations under the schemes such as RKVY, NHM through which the activities of extension of producer organization is done. The program aims at “lowering the cost of production and opening up avenues for direct market linkages for higher returns to the farmers”

1.8 Difference between Characteristics of Cooperatives and Producer Company

Features	Cooperatives	Producer Company
1. Core Philosophy	Cooperation among cooperatives. One for all, all for one.	Competitive advantage. Equity.
2. Objectives	Generally single objective, but could be multipurpose also.	Multi objective
3. Governed by Act/Rules	Societies registration act 1960 & MACS or called MP Swayattata	Under Company Amendment Act 1956 under Part X-A or called Producer Company Act 2002.
4. Area of Operation	Restricted, discretionary.	Entire union of India.
5. Membership	Eligible individuals as per the provision of concerned act.	Any Individual, group or association, producer of goods or services.
6. Share transferability	Non transferable	Limited to members on par value
7. Management style & structure	Democratic. Conventional	Democratic. Professional.
8. Interface with Govt.	Highly patronized to the extent of interference.	Limited to statutory requirements.
9. Extent of autonomy	Limited in real world scenario.	Fully autonomous, self-ruled within provision of Act.
10. Privileges	Many to the extent of making dependent	Equivalent to the coops with sense of competitiveness

In Shivamogga district a total of nine FPOs are functioning, out of which 6 are promoted by NGO (CRDS) and 3 are promoted by State Department of Horticulture. Though these FPOs are started between the period 2016 to 2018, no study has been conducted to know the performance of FPOs, knowledge level of FPO members and the various facilities availed by the members of FPO. Therefore, the present study has been conducted with the following specific objectives

1.9 Objectives of the study

1. To study the performance of Farmer Producer Organizations
2. To assess the knowledge level of members about the activities of Farmer Producer Organizations
3. To document the success story of Farmer Producer Organization members
4. To identify the problems faced by the members and suggestions to strengthen the functioning of Farmer Producer Organization

1.10 Scope of the study

The study provides information on performance of various farmer producer organization in the district which enables for formulating guidelines for better performance of the FPOs. The study also provides information on to what extent the members are having knowledge about various activities of Farmer Producer Organizations. The various facilities availed by members, the constraints faced and suggestions helps for further strengthening of FPOs.

1.11 Limitations of the study

The study has some limitations within which the findings need to be interpreted carefully. However, during the research period considerable care and thought was exercised in making the study as objective, scientific and systematic as possible. The study has the limitations of time, resources of the researcher and the population of the study was restricted to jurisdiction of FPO operating in Shivamogga district. Out of total nine FPOs the 6 FPOs started functioning in the past three years were only considered for assessing performance. Hence, the findings of the study cannot be generalized to FPOs operating in other areas.

REVIEW OF LITERATURE

II REVIEW OF LITERATURE

A brief review of literature is an integral part of any investigation, as it not only gives an idea on the work done in the past, but also provides the basis of interpretation and discussion of the research findings. A brief review of the earlier research work relating to the objectives of the present study is presented under the following headings.

- 2.1 Performance of Farmer Producer Organizations
- 2.2 Knowledge level of the members about the activities of FPO
- 2.3 Personal and socioeconomic characteristic of the members
- 2.4 Success stories of the FPO members
- 2.5 Problems expressed by the members
- 2.6 Suggestions to overcome the constraints

2.1 Performance of Farmer Producer Organizations

Rondot and Collion (2001) analyzed the crucial aspects that had contributed to institutional changes, which lead to efficient backward and forward linkages among the farming sector. The successful producer organizations could significantly predict the future risks and were equipped to consult other partners. These organizations require effective communication channels to access policy and market related information from both within the country and worldwide, disseminate within the beneficiaries and other organizations of the same nature. The study also concluded that despite of the efficient efforts by the producer organizations, the strengthening of the abilities of the beneficiaries was moderate and asymmetrical due to the considerable influence of social conduct and their respective cultural norms.

Bijman and Iliopoulos (2002) analyzed the trading pattern of the agricultural marketing cooperatives in Europe. He stated that cooperatives were playing a vital role in marketing of the value-added products and horticulture crops. The study revealed that 84 per cent of processed milk, 64 per cent of Sugar beet, 95 per cent of cut- flowers were efficiently traded through marketing cooperatives in Netherlands. Similar observations were also found in other European countries, as considerable amount of the produce was traded through cooperatives. However, due to dynamics and fluctuations in the market behavior, analyzing the efficacy of the cooperatives periodically is of great concern among the researchers.

Bingen *et al.* (2003) studied the importance of degree of investments that have impacted the producer organizations in enhancing their capacity. The study revealed

that it requires strategic and concentrated efforts towards human capacity building and social infrastructure for strengthening the farmers groups. Farmers had vital role in managing and enhancing the turnovers of the organizations. The increased investments in the producer organizations impacted the higher access to farm inputs and services on demand.

Esham and Usmi (2007) studied the history, prospects and legal framework which paved the way for establishing Farmer Producer Organizations in Sri Lanka. The study revealed that, significant increase in the management costs of agri-business firms and asymmetry in the bargaining powers with Small farmers under contract. The FPOs were established in 1995 after the recommendation of National Development Council. The Department of Agriculture, Ministry of Irrigation and Export Development Board were the main promoting agencies involved in the development of FPOs. FPOs were functioning with major activities like commercialization of agriculture, credit access to members etc., and their membership had varied between 215 and 2234. Majority of the organizations failed due to concentration of powers and lack of entrepreneurial skills.

Bachke (2009) studied the farmer producer organizations in Mozambique, where 80 per cent farmers are small holders and only 7.3 per cent were members of any farmer organization. He argued that in African countries, Monopsonic exploitation of the small-scale farmers through contract farming was effectively rectified by collectivization of farmers through farmer producer organizations (FPO). The study highlighted that factors like type of equity shares and the costs associated with membership determined the openness of the organization. He used panel data in 2002 and 2005 to empirically estimate the impact of farmer organizations on the farm income through Propensity score matching, Difference in differences analysis and fixed effects models. The results revealed that there exists 50 per cent and 30 per cent increase in the income of the member farmers from animal and plant production respectively. He also observed that there was greater dissemination of information, lower transaction costs and market-oriented cultivation of crops.

Nabcons (2011) studied the status and scope of producer companies in India. The study found that most of the PCs were in operation for three years or less. It has been concluded that the PCs in Maharashtra and Madhya Pradesh received sufficient government support for their establishment. The membership status included SHGs and cooperatives at the base level rather than the primary producers. These premature PCs were dealing with wide range of products like Vanilla, Food grains, Groundnuts, Oilseeds, Medicinal plants etc. The value of the shares ranged from ` 10 to ` 100 per share. Except VAPCOL, most of the PCs faced weak balance sheet problem which was attributed to higher initial fixed costs during the establishment. None of the PCs

formulated their long-term business plan and the functioning of the PCs were largely influenced by qualification of CEOs and the promoting institutions. It was observed that out of 9 PCs, the return on investment was negative, less than 1 per cent and 20 per cent for 3, 5 and 1 PCs respectively.

Shah (2011) analyzed the effectiveness of dairy co-operative in Kaira district of Gujarat. Farmers opted dairy cooperatives over private companies because milk cooperatives were able to absorb additional supply by producing dairy products such as dry milk powder, butter and ice-cream, which offer higher prices than traditional milk. Study reveals that dairy cooperatives offered Rs. 16 to 20 per liter for cow milk and Rs. 24 to 26 per liter for buffalo milk which was found higher than other channels. In addition, the dairy cooperative provided 18 per cent bonus to the farmers based on the amount of milk procured from them. Average cow milk and buffalo milk producer who owned 1 or 2 animals, augmented their monthly income from Rs. 470 to Rs. 1121 and Rs. 953 to Rs. 2242. The profit margins of the milk produced by either animal was quite similar even though cows produce a higher quantity of milk. In Gujarat, dairy cooperatives like AMUL have brought many rural areas into this successful venture and have increased milk production over the years.

Trebbin and Hussler (2012) studied organizational structure and performance of VAPCOL in Maharashtra. It was found that VAPCOL was one of the largest producer organization in India having the enormous membership base with wide network of cooperatives, SHGs and farmers' associations across 5 states. It had a turnover of 34 million Indian Rupees in the first year of its functioning. Mango and Cashew nuts are the main crops in which value addition, processing was carried out and marketed under its own brand name. In addition, VAPCOL managed to sell 21 per cent of its mango produce to ITC with 15 to 20 per cent higher than the prevailing market prices. It was also observed that the PC had raised employment opportunities for 42.5 per cent of members between 8 to 12 months after establishment. It was concluded that members commitment plays a vital role in successful performance of any producer company.

Jithendra Kumar (2013) studies the performance of dairy cooperatives and their impact on milk production, income and employment in Chittoor district of Andhra Pradesh. The study revealed that the societies which were above the average level has shown better performance with an increase in membership and milk procurement and profits of societies showed an increasing rate except the society.

Trebbin (2014) studied the market linkages and typology of producer companies in India. It was found out that most of PCs were dealing with agriculture (181) and some of the other areas include handicrafts (10), energy (7), fishery (4) etc., Most of the PCs operated were registered between 2010 to 2012, which were promoted

by NGOs. Fruits and vegetables were the highest commodities handled by the PCs (20) followed by seed production (14), spices (12), dairy (11) etc., The study revealed that modern retail chains like Mother Dairy and SAFAL had the immense potential of strengthening the PCs as it procures 60 per cent of its supplies through farmer associations itself. But price realizations were also not significantly higher due to huge competition from other channels too. Very a smaller number of PCs had direct linkage with the retail super markets. However, there was considerable efforts by private companies like Reliance and Monsanto to establish their PCs in Madhya Pradesh and Maharashtra, respectively.

Navaneetham *et al.* (2017) studied the status and trend of producer companies in India. The results revealed that there has been a significant rise in the establishment of FPCs registered under Companies Act, 2003. The compound annual growth rate of 31.1 per cent had been experienced in the registration of them between the years 2004 to 2016. This may be due to the increased government support towards the establishment of PCs through SFAC. The region-wise analysis of the establishment of PCs showed that western region of India constituted highest number of registered PCs (44 %) and eastern region has experienced least number of registered PCs (10 %). It has been observed that PCs are better performing under high value cash crops like fruits and vegetables than food grains.

Deepa *et al.* (2018) conducted a survey of 8 FPOs in Uttar Pradesh. Detailed structured interview method was used to collect the data. The FPOs were dealing with the wide range of commodities like Egg, Banana, Mushroom, Milk and its products, Mint oil etc. Majority of the FPOs were supported by NABARD for three years since their inception. The main objective of the FPOs were to eliminate the middlemen from taking away highest share in marketing channels. Farmers were directly paid according to the prevailing market rates after deducting part of the amount for the reserve fund of FPOs. Innovative processed products like mushroom pickle, mushroom protein powder, dry gravy, badi or chunks were produced and marketed under respective brand names. Large FPOs have also supported their members by providing electricity in the infrastructure poor regions of the state. The operational area ranged from one village to 10 districts, where the FPOs were highly successful.

Majority of FPOs in the country are functioning for less than two years. It was found that farmer producer organizations were mainly dealing high value crops like fruits and vegetables. These organizations primarily deal with marketing and input supply services but after their success they tend to widen their market opportunities by entering into processing and value addition. However, the present status, determinants state-wise performance of FPOs in India and factors determining the formation of FPOs need to be understood to strengthen them.

2.2 Knowledge level of the members

Nagenthirarajah and Thiruchelvam (2008) conducted a study on knowledge of farmers about pest management practices in Pambaimadu, Vavuniyadistrict. They found that nearly 60.00 per cent of the vegetable cultivating farmers had medium level of knowledge of plant protection practices. Only 6.00 per cent of the farmers had above average level of knowledge towards recommended plant protection measures.

Kadu and Kotikhane (2012) in a study on knowledge of self-help group women members regarding food processing and dairy management practices in Parbhani district of Marathwada region of Maharashtra revealed that majority of the respondents had medium level of knowledge in food processing and dairy management practices.

Kumhar *et al.* (2013) conducted a study on knowledge level of dairy co-operative members and non-members about improved animal husbandry practices in Jaipur district of Rajasthan. He found that majority of dairy co-operative members (73.61 %) had medium knowledge level whereas 8.33 per cent and 18.06 per cent members were having low and high knowledge about improved animal husbandry practices, respectively. In case of non-members, it was found that 72.22 per cent, 15.28 per cent and 12.50 per cent belonged to low, medium and high knowledge levels, respectively.

Mavinakatti (2013) conducted a study on knowledge and opinion of farmers regarding Bhoochetana programme in Dharwad district of Karnataka. She reported that 38.66 per cent of respondents belonged to medium knowledge category followed by low knowledge (34.00 %) and high knowledge categories (27.34 %), respectively.

Prasanth *et al.* (2013) conducted a study on impact of producer company model on knowledge levels of organic and conventional cotton farmers in Karimnagar district of Telengana and indicated that majority of organic cotton farmers had high (75.00 %) level of knowledge on organic cotton practices whereas majority of conventional cotton farmers had low (43.00 %) level of knowledge.

Shelke *et al.* (2013) in a study at Bhiwapur village in Nagpur district of Maharashtra revealed that 44.17 per cent of members of self-help group had medium level of knowledge and 40.00 per cent of members had low level knowledge and 15.83 per cent of members had high level of knowledge about working of self-help groups.

Verma and Yadav (2013) conducted a study on knowledge level of farmers about recommended cultivation practices of groundnut in Govindgarh panchayat samiti of Jaipur district of Rajasthan. They concluded that 59.68 per cent of farmers

were having medium knowledge, 22.58 per cent respondents were having high knowledge and 17.74 per cent farmers were having low knowledge about recommended cultivation practices of groundnut.

Kavitha *et al.* (2014) in a study on knowledge and attitude of members of women self-help group in Goat farming in Thrissur district, Kerala found that three fourth of the respondents (75.33 %) had medium knowledge of goat farming whereas 16.00 per cent of respondents possessed high knowledge while 8.67 per cent had low knowledge.

Mohapatra and Das (2014) made an attempt to examine the knowledge level of milk producers on various dairy management practices in Sadar block of Cuttack district of Odisha. The findings clearly showed that the knowledge level of cooperative members was more than the non-members and the dairy co-operative societies were successful in disseminating modern technology and knowledge among its members through regular training, extension services, method demonstrations, field trials, provision of animal health care facilities and free supply of fodder seed mini-kits.

Rathod *et al.* (2014) explored the knowledge level of dairy farmers towards artificial insemination in Bidar district of Karnataka. He revealed that majority of dairy farmers (62.50 %) belonged to medium knowledge level followed by 23.00 per cent and 14.50 per cent to low and high knowledge levels respectively about artificial insemination.

Nwobodo and Agwu (2015) examined the knowledge level of youth farmers in Benue district of Nigeria on climate change and revealed that majority of respondents (92.40 %) had moderate knowledge of climate change, 6.50 per cent had high knowledge while 0.80 per cent had low knowledge of climate change.

Upadhyay *et al.* (2015) conducted a study on knowledge of women dairy co-operative members and non-members about improved dairy production technologies in two panchayat samities of Rajasthan. A comparative view of the knowledge level of the women dairy co-operative members and non-members clearly revealed that 37.50 per cent of members possessing high level of knowledge and 58.33 per cent of members belonged to medium level of knowledge while, 35.83 per cent of non-members were possessing low level of knowledge. Only 1.67 per cent of non-members came under high knowledge category. It may be concluded that women dairy co-operative member's knowledge towards improved dairy production technologies was much higher than the non-member.

Puneet (2016) reported that majority of the KVK trained farmers (39.17 %) had medium knowledge level regarding dairy management practices followed by high (30.83 %) and low (30.00 %) knowledge level about dairy management practices.

From the above reviews, it can be inferred that majority of the respondents belonged to medium level of knowledge regarding farmers group / organization.

2.3 Personal and socio-economic characteristic of the members

2.3.1 Age

Shankaraiah (2011) in his study on 'attitude of farmers and scientists towards technologies dissemination through mobile message service' found that majority of farmers (52.50 %) were under middle age category followed by old (35.00 %) and young (12.50 %) age category.

Hardevinder *et al.* (2012) in their study on Analysis of Kisan Mobile Advisory Service in South Western Punjab found that majority of the respondents i.e. 56.7 per cent were young *i.e.* less than 30 years of age. Eighteen per cent of the farmers belonged to middle age category while one fourth (25.3 %) were of more than 45 years of age.

Madhushree (2014) revealed that a little more than half (50.83 %) of the farm women belonged to middle age followed by young age (25.83 %) and old age (23.33 %).

Kumud *et al.* (2016) reported that the maximum number of respondents 34 (51.51 %) were middle aged followed by 20 (30.30 %) of respondents were in young age category and 12 (18.18 %) respondents were in old age.

Priyanka (2016) reported that 66.67 per cent of the beneficiary farmers were found in middle age group followed by old (31.67 %) and young (1.67 %) age group. Among non-beneficiaries, high per cent (68.34 %) of farmers were found in middle age group, followed by old (25.00 %) and young (6.67 %) age group.

Puneet (2016) reported that majority (61.67 %) of the KVK trained dairy farmers were middle aged group followed by 23.33 per cent were belonged to young aged group and 15.00 per cent were belonged to old aged category.

Sali *et al.* (2016) conducted a study on adoption of soil test recommendation by the farmers and reported that nearly half (47.00 %) of the respondents were in old age group.

Sundar *et al.* (2016) reported that among 150 trainee and non-trainee farmers, majority of them were under young age category (below 35 years).

Yadav *et al.* (2016) reported that nearly half (48.33%) of the tomato growers were found in middle age group, 33.33 per cent were in middle age group and 18.33 per cent were in old age group.

Leelavathi (2017) reported that majority (46.67 %) of the respondents belonged to middle age group, followed by young age (45.83 %) and old age (7.50 %) category.

Kavya (2018) revealed that majority (56.67 %) of farm men belonged to middle age group, 30.00 per cent and 13.33 per cent of them belonged to old and young age groups, respectively and majority (73.33 %) of farm women belonged to middle age group, followed by 15.00 and 11.67 per cent of them belonging to old and young age groups, respectively.

From the above reviews, it can be inferred that majority of the respondents belonged to middle age category.

2.3.2 Education

Khin Mar (2005) observed that majority of the dairy women (60.83 %) were illiterate, while 22.50 per cent of the them were educated up to primary level, followed by middle school (10.33 %). Thus, 4.17 per cent of dairy women were educated up to high school level and only 1.67 per cent of them were studied up to college level.

Bharath Kumar (2010) observed that majority (51.66 %) of the horticulturists belonged to medium level of education, followed by 29.17 per cent having high and 19.17 per cent having low level of education.

Meena *et al.* (2011) studied on role perception about ICT among farmers found that 47.14 per cent farmers had up to primary education, 25.41 per cent farmers had college education and 24.29 per cent had gone to middle school. While 9.28 per cent had secondary education and only 7.80 per cent were illiterates.

Shankaraiah (2011) conducted study on 'attitude of farmers and scientists towards technologies dissemination through mobile message service' found that majority of farmers (52.50 %) were under medium education level followed by high (27.50 %) and low (20.00 %) education level.

Hardevinder *et al.* (2012) in the study on analysis of kisan mobile advisory services in South Western Punjab found that majority of the respondents (65.3%) were belonged to medium category of education (between 10th to secondary or diploma). About one fourth of the respondents (22.60 %) had high educational level while 12.00 per cent were of low educational level.

Chinmayi (2015) reported that in men SHGs education level was more in high category *i.e.*, 45.33 per cent followed by medium level (30.67 %) and low level (24%), in women SHGs also education level was more in high category (41.33 %) followed by low (33.34 %) and medium level (25.33 %). Overall the respondents belonged to high level of education category (43.33 %), followed by low level (28.67 %) and middle level (28.67 %).

Kumud *et al.* (2016) reported that maximum number of respondents, 25 (37.87 %) had education up to 12th, followed by illiterate 17 (25.75 %), higher education above 12th respondent 14 (21.21 %), whereas 10 (15.15 %) had education up to 8th level.

Priyanka (2016) reported that higher proportions of beneficiary farmers were educated up to high school level (55.00 %). Whereas, only 23.34 per cent of farmers were educated up to middle school, 16.67 per cent of the farmers were educated up to PUC and (1.67 %) primary school level. None of the beneficiary farmers were illiterate. On the other hand, very less per cent of beneficiary farmers were found with graduation and above level of education (3.34 %).

Puneet (2016) reported that 35.83 per cent of KVK trained farmers were educated up to high school level followed by 33.33 per cent were educated up to college level, 15.00 per cent, 12.50 per cent and 3.33 per cent were educated up to middle school, primary school and illiterate respectively.

Sundar *et al.* (2016) reported that among 150 trainee and non-trainee farmers, the majority of them had education up to high school level.

Yadav *et al.* (2016) reported that nearly one-fourth (24.16 %) of the tomato growers were educated up to secondary level, 22.50 per cent had higher secondary education, 15 per cent had lower primary education, 14.16 per cent had upper primary education level and 11.60 per cent of tomato growers were illiterate.

Leelavathi (2017) revealed that a large number (60.00%) of the respondents had medium level of education whereas, 27.50 per cent of them had high level of education and 12.50 per cent of the respondents had low education level.

Kavya (2018) reported that about 38.33 per cent of farm men had high level of education whereas, one third of them (36.67 %) had medium level of education and 25.00 per cent of them had low education level. Nearly half of the respondents (43.34 %) of farm women had medium level of education whereas, one third of them (33.33 %) had low level of education and 23.33 per cent of them had high education level.

From the above reviews, it can be inferred that majority of the respondents belonged to middle level of education category.

2.3.3 Land holding

Chinmayi (2015) witnessed from the study that majority of members belonged to marginal farmers in both men and women SHGs *i.e.* 38.67 and 26.66 per cent respectively. Least per cent of farmers belongs to big farmers.

Kumud *et al.* (2016) reported that maximum number of land households 32 (48.48 %) were marginal land followed by small landholding households 20 (30.30 %), followed by large land holding 14 (21.21 %).

Nishitha (2016) reported that 51.67 per cent of farm men belonged to small size land holding category and the other 48.33 per cent of them belonged to marginal category of land holding.

Priyanka (2016) reported that high per cent of beneficiary farmers were found in big land holding category (53.34 %) followed by medium land holding category (46.67 %). Around 55 per cent of non-beneficiaries were found in small land holding category followed by 26.67 and 18.34 per cent of farmers in marginal and medium land holding category, respectively.

Puneet (2016) reported that 43.33 per cent of the KVK trained farmers possessed small land holding, followed by marginal (40.00 %) land holding, 12.50 per cent farmers had medium land holding and 4.17 per cent farmers belonged to big land holding category.

Sali *et al.* (2016) conducted a study on adoption of soil test recommendation by the farmers and reported that more than one third of respondents 35.00 per cent had small land holding up to 1.01 to 2.00 ha.

Sundar *et al.* (2016) reported that among 150 trainee and non-trainee farmers, the land holding of majority farmers were in between 1 to 2 hectares.

Yadav *et al.* (2016) reported that nearly one-third (33.34 %) of the tomato growers had medium land holding, 26.67 per cent had semi-medium land holding, 21.67 per cent had small land holding, 13.34 per cent had big land holding and few (5.00 %) of them had marginal land holding.

Leelavathi (2017) reported that 32.50 per cent of the respondents possessed semi medium landholding, followed by medium (24.17 %) landholding, 23.34 per cent of the respondents had small landholding, 10.83 per cent had marginal land

holding, 8.33 per cent of the respondents belonged to big landholding and only one respondent (0.83 %) was landless.

Kavya (2018) revealed that exactly half (50.00 %) of farm men and farm women belonged to small size land holding category and the other 26.67 per cent of them belonged to large size category of land holding and 23.33 per cent of them had marginal land holding.

From the above reviews, it can be inferred that majority of the respondents belonged to marginal to small land holding category.

2.3.4 Annual income

Khin Mar (2005) found that 45.00 per cent of dairy women had medium annual income *i.e.* Rs. 30,001 to 50,000, followed by low *i.e.* up to Rs. 30,000 (29.16 %) and high annual income *i.e.* above Rs. 50,000 (23.33 %).

Bharath Kumar (2010) observed that more than half (60.00 %) of the horticulturists belonged to medium level of annual income followed by 21.67 per cent with low and 18.33 per cent with high level of annual income.

Chinmayi (2015) found that in men SHGs majority (40 %) of the families had low level of income followed by medium level income (37.33 %). Remaining 22.67 per cent had high income. In case of women SHGs majority (41.33 %) of the families had medium level of income followed by low level income (40 %). Only 18.67 per cent of the families had high income.

Priyanka (2016) reported that maximum per cent (58.34 %) of the beneficiary farmers of Bhoochethana programme belonged to medium annual income category whereas, forty per cent of farmers belonged to high annual income category. Least per cent (1.67 %) of the beneficiaries belonged to low annual income category. Majority of non-beneficiary farmers belonged to low annual income category (91.67 %). Whereas, 8.34 per cent of non-beneficiaries belonged to medium annual income category. None of the non-beneficiary farmers belonged to high annual income category.

Puneet (2016) reported that more than half (70.00 %) of the KVK trained farmers had high level of annual income *i.e.* more than Rs. 50,001/- followed by medium (16.67 %) level of annual income *i.e.* between Rs. 30,001 to Rs. 50,000/- and only 13.33 per cent had low annual income *i.e.* less than Rs. 30,000 per annum.

Sali *et al.* (2016) conducted a study on adoption of soil test recommendation by the farmers and reported that 33.00 per cent respondents had annual income in between Rs. 50,000 to Rs. 1, 00,000.

Sundar *et al.* (2016) reported that among 150 trainee and non-trainee farmers, the annual income of majority farmers was within 20,000, respectively.

Yadav *et al.* (2016) reported that more than half (55.83 %) of the tomato growers were found with medium annual income, 29.16 per cent with low annual income and 15 per cent with high annual income group.

Leelavathi (2017) reported that 43.33 per cent of the families had medium level of income followed by low level of income (37.50 %). Remaining 19.17 per cent had high level of income level.

Kavya (2018) revealed that as high as 43.33 per cent of respondents belonged to medium level of annual income category, whereas 41.67 per cent and 15 per cent of respondents were belonging to high and low level of annual income category, respectively.

From the above reviews, it can be inferred that majority of the respondents belonged to medium level of income category.

2.3.5 Extension contact

Madhushree (2014) observed that 40.00 per cent of farm women had medium level of extension contact and an equal per cent (30.00 % each) belonged to low and high level of extension contact.

Chinmayi (2015) observed that 38.67 per cent of the respondents had medium extension contact followed by low (42.67 %) and high (18.67 %) in case of men SHG members, whereas little less than half of the respondents had low extension contact (46.67 %) followed by medium (30.67 %) and high (22.67 %) in case of women SHG members.

Priyanka (2016) reported that majority of the beneficiary farmers were having medium extension contact (70.00 %). Whereas, 28.34 per cent of beneficiaries belonged to high extension contact and least per cent (1.67 %) of the beneficiaries belonged to low extension contact. Majority of the non-beneficiary farmers belonged to low extension (55.00 %) contact. Whereas, 31.67 per cent of non-beneficiaries belonged to medium extension contact. Least per cent of non-beneficiaries belonged to high extension contact (13.34 %).

Puneet (2016) reported that more than three fourth (80.00 %) of KVK trained farmers had medium extension contact followed by low (17.50 %) and high (2.50 %) extension contact.

Sali *et al.* (2016) conducted a study on adoption of soil test recommendation by the farmers and reported that over half (52.00 %) of the respondents having medium level of extension contact.

Sundar *et al.* (2016) reported that among 150 trainee and non-trainee farmers, the frequency of extension contact was both occasional and regular for majority farmers

Yadav *et al.* (2016) reported that majority (61.66 %) of the tomato growers had medium extension contacts, 21.66 per cent had low extension contacts and 16.66 per cent had high extension contacts.

Leelavathi (2017) reported that just more than half (50.83 %) of the respondents had medium level of extension contact followed by high level of extension contact (25.00 %). And 24.17 per cent of the respondents had low level of extension contact.

Kavya (2018) observed with respect to extension agency contact, that a greater number (53.33 %) of farm men had medium level of extension agency contact, followed by 28.33 and 18.34 per cent of them having low and high levels of extension agency contact, respectively. It can be seen that 46.67 per cent of farm women had low level of extension agency contact, followed by 31.67 per cent and 21.66 per cent of them having high and medium levels of extension agency contact, respectively.

From the above reviews, it can be inferred that majority of the respondents belonged to medium level of extension contacts category.

2.3.6 Extension participation

Madhushree (2014) observed that most (43.33 %) of the farm women had medium level of extension participation, followed by 31.67 and 25.00 per cent of farm women having high and low level of extension participation, respectively.

Chinmayi (2015) observed that, in men SHGs members that extension participation was more in medium category *i.e.*, 40 per cent followed by low level (37.33 %) and high level category (22.67 %), in women SHGs also extension participation was more in medium category (38.67 %) followed by low (34.67 %) and high level (26.67 %) category.

Puneet (2016) reported that more than one third (36.67 %) of respondents had medium level of extension participation, followed by high (32.67 %) and low (30.83 %) category.

Yadav *et al.* (2016) reported that majority (67.50 %) had medium extension participation, 20.83 per cent of them had high extension participation and 11.67 per cent of them had low extension participation.

Leelavathi (2017) revealed that 40.00 per cent of the respondents had high level of extension participation, while 32.50 and 27.50 per cent were having low and medium levels of extension participation respectively.

Kavya (2018) in her study it is seen that most (43.34 %) of the farm men had medium level of extension participation, followed by equal percent (28.33 %) of them having high and low levels of extension participation, respectively and it is observed that 41.67 per cent of farm women had medium level of extension participation, while 36.67 per cent and 21.66 per cent were having low and high levels of extension participation, respectively.

From the above reviews, it can be inferred that majority of the respondents belonged to medium level of extension participation category.

2.3.7 Organizational participation

Neelaveni *et al.* (2002) revealed that half of the respondents had medium level of organizational participation, followed by low (26.67 %) and high (7.50 %) social participation.

Vanitha (2002) stated that 36.67 per cent of the women had medium level of organizational participation whereas equal percent of women (31.67 %) had small and high level of organizational participation, respectively.

Priyanka (2016) reported that maximum per cent of the beneficiary farmers (71.67 %) belonged to high organizational participation. Whereas, twenty-five per cent of farmers belonged to medium organizational participation and 3.34 per cent of farmers were found in low organizational participation. Majority of non-beneficiary farmers belonged to low organizational participation (75.00 %). Whereas, twenty-five per cent of non-beneficiaries belonged to medium organizational participation.

Puneet (2016) reported that three fourth (75.00 %) of the respondents *i.e.* members of dairy cooperative society were belonged to medium organizational participation category followed by primary agricultural co-operative society (73.33 %) and SHG (32.50 %).

Leelavathi (2017) observed that, 36.66 per cent of the respondents belonged to medium organizational participation category. Whereas, 34.17 per cent of the respondents belonged to high organizational participation category and 29.17 per cent of them belonged to low level organizational participation category.

From the above reviews, it can be inferred that majority of the respondents belonged to medium level of organizational participation category.

2.3.8 Economic motivation

Nataraju (2012) reported that high level of economic motivation was noticed among 24.17 per cent of dairy farm women and medium level of economic motivation was exhibited by 59.17 per cent and 16.67 per cent were found to have low level of economic motivation.

Raksha and Lali (2012) revealed that, 57.00 per cent of rural women had high level of economic motivation, followed by medium (34.00 %) and nine per cent of them having low level of economic motivation.

Nishitha (2016) revealed that majority (51.67 %) of farm men had high level of economic motivation; while 33.33 percent of them belonged to medium level and the remaining 15.00 per cent belonged to low level of economic motivation and forty per cent of farm women had medium level of economic motivation, followed by 25.00 per cent of them having low level and 35.00 per cent of farm women were having high level of economic motivation.

Puneet (2016) reported that more than half (54.17 %) of KVK trained farmers had high economic motivation followed by medium (25.00 %) and low (20.83 %) category of economic motivation

Supriya (2016) in her study on Decision making pattern and work participation of farm women in management of coffee plantation in Kodagu District reported that 47.78 per cent of the farm women had medium level of economic motivation, whereas, 35.56 and 16.66 per cent of them had high and low level of economic motivation.

Leelavathi (2017) revealed that majority (45.83 %) of the respondents were distributed in medium economic motivation category followed by low economic motivation category (35.83 %) and 18.34 per cent of respondents were distributed in high economic motivation category.

Kavya (2018) revealed that reveals that more than half (53.33 %) of farm men had medium level of economic motivation. While, 25.00 and 21.67 per cent of farm men had high and low levels of economic motivation respectively and farm women had medium (43.33 %) to low (38.33 %) level of economic motivation.

From the above reviews, it can be inferred that majority of the respondents belonged to high level of economic motivation category.

2.3.9 Mass media participation

Frempong *et al.* (2006) revealed that more than two third of the respondents utilized telephone, television, radio and video decks for getting information on problems related to agriculture and allied subjects.

Dhaka and Chayal (2010) observed that 44.00 per cent had a medium exposure to the mass media followed by 30.67 per cent and 25.33 per cent had high and low exposure to the mass media, respectively.

Meera *et al.* (2010) conducted study on critical analysis of e-learning opportunities and e-readiness in the public extension system: Empirical evidence from Tamil Nadu concluded that respondents (extension workers) in overall were observed to be having (73.00 %) mass media exposure.

Madhushree (2014) observed that more (35.00 %) number of farm women belonged to medium level of mass media exposure followed by 33.33 per cent having high level and 31.67 per cent having low level of mass media exposure.

Puneet (2016) reported that exact half (50.00 %) of the KVK trained farmers had medium level of mass media participation, followed by low (31.67 %), while 18.33 per cent of the respondents belonged to high mass media participation.

Kavya (2018) revealed that most (45.00 %) of the farm men had high level of mass media participation followed by 33.33 per cent and 21.67 per cent having low and medium levels of mass media participation, respectively. 45 per cent of farm women had low level of mass media participation, followed by 41.67 per cent and 13.33 per cent having medium and high level of mass media participation respectively.

From the above reviews, it can be inferred that majority of the respondents belonged to medium level of mass media participation category.

2.3.10 Credit Orientation

Patil (1994) studied on farmers knowledge of jowar, cotton and sugarcane cultivation. Reported that 45.33 per cent of farmers belonged to medium category followed by 38.00 per cent of them had high credit orientation and 16.66 possessed low credit orientation

Jayaprada (2007) in her study on Impact of Karnataka Vikas Grameen Bank on Agriculture Development of Beneficiaries in Dharwad District concluded that, 59.70 per cent of the respondents belonged to medium credit taking ability category,

whereas 23.60 and 16.60 per cent of them had high and low credit taking ability category, respectively.

From the reviews mentioned in this section, it could be inferred that majority of the farmers belonged to the category of medium level of credit taking ability.

2.4 Success stories of the FPO members

Singh *et al.* (2008) reported that inclusion of short duration Yellow Mosaic virus (YMV) free variety of urdbean (IPU 94-1) was found to shift 20 percent mono-cropped area into double cropped area in the villages namely Amirta, Kalauli Tir and Helapur in Hamirpur district of Uttar Pradesh. The concept of pulse seed village which was initiated in the project was a success story.

Ashis *et al.* (2010) reported that Chaitaram Batra a middle-class farmer, who earned his livelihood with his family uncomfortably in previous years because of following small scale production systems with low external inputs and traditional varieties. Due to acceptance of concept of one hectare (2.5 acre) rain fed food security model with proper enterprises and improved variety guided by scientists of Krishi Vigyan Kendra, Nabarangapur, his annual gross income had significantly increased from Rs.13,300 to Rs. 47,190 which shows his annual profit is Rs. 29,420 over Rs. 6,225 previously, excluding family labor engaged and of around Rs. 5,000 in terms of green vegetable, dal *etc.* which were consumed by his family members.

Shelke *et al.* (2011) reported that due to adoption of bullock drawn planter there is an average increase in yield of 11.21 per cent of different crop was observed. The planter was shared by 6 to 9 farmers on annual basis. It was observed that average seasonal benefit of Rs.10,522 and average annual benefit calculated on Soybean and Bengal gram which are the major crops was Rs. 21,044. There was saving in manpower of three women and one skilled man. The cost of sowing is reduced by 46 per cent and time has been saved by 66 per cent.

Vinod *et al.* (2014) reported that Vinod Kumar, an innovative farmer of village Kralian, Vijaypur block of District Samba. A major producer of off-season vegetables (Onion, Cauliflower and Turmeric), improved varieties of paddy and wheat, turmeric grower, fruit and forestry plantations, *etc.* after intervention of KVK. In 2013, his total income from various crops was Rs. 12.55 lakhs. He was awarded at various occasions at national and state levels.

Vinod *et al.* (2015) reported that Mr. Sham Singh, a commercial farmer who had successfully integrated into the main stream economy through production and marketing of Strawberry along with vegetable and fruit production by adopting new

technologies of the production, diversification, competitive and marketing strategies in his farming operation to maximize the annual income from farming.

2.5 Problems expressed by the members

Senanayake (2004) reviewed the growth and performance of FPOs in Sri Lanka. He observed that FPOs were introduced to support the farmers in input supply, technology adoption, marketing and commercialization. The major functioning of FPOs was restricted to provide the services required by the farmers, rather than developing themselves into independent business entities. The FPOs could not perform to their fullest potential due to their inherent problems like political dominance in the formation stage and the administrative levels, lack of active participation by the shareholders, absence of entrepreneurial spirit, lack of cooperation among the participants, inefficient planning and implementation of business projects, prioritization based on the needs of the administration rather than needs of the farmers. He recommended that the policies of the government should only be restricted to promotion and should not interfere with the functioning of FPOs.

Esham and Usmi (2007) assessed the level of farmers' participation in FPO. The study revealed that there were both active and passive shareholders with the moderate level of participation of 55 per cent in different commercial activities. The yearly meetings of the FPO were also having the participation level ranging from 59 per cent and 21 per cent among the active and passive shareholders respectively. Most of the members viewed the organization merely as a service provider rather than profit-oriented organization. Therefore, they did not anticipate for the dividends amounting to their shares of FPO. Participation from the non-governmental institutions were confined to 10 per cent. Only 31 per cent of the farmers were having the complete knowledge regarding the role and different activities of the FPO. The survey concluded that the level of the satisfaction among the farmers in irrigation management and market-oriented agriculture was 74 and 29 per cent, respectively.

Bernard and Spielman (2009) analyzed the determinants and the extent of participation of farmers in rural producer organizations. It was found that economically weaker sections of farmers were denied the membership of POs in Ethiopia. The results showed that only 9 per cent of small holders were members of rural producer organizations and only 40 per cent of total farmers had access to such organizations. Socio-economic variables like age of the household head, education and landholdings were found to be significant at 1 per cent. It has also been observed that in some parts of Ethiopia, where farmer participation was increased up to 8 per cent, determining variables were education and landholdings. The study suggests that farmer education and credit support would increase the rural producer organizations in the country.

FAO (2010) reported about opportunities for development of producer organizations. Extension services were found successful in increasing productivity of smallholder farms through infrastructure support, technical and input support. Government has promoted producer organizations through right policies and incentive system. It is found that Producer organizations were mainly formed for fairer market conditions, fairer access to international markets, improved government support in relation to extension service and decision-making process. Private sector and NGOs have also made significant contribution for the development of producer organizations.

Latha and Prabhakar (2011) analyzed the problems and prospects of NGOs in India. They argued that non-governmental organizations are playing a major role in eliminating the rural poverty by voluntary initiatives. Some of the main problems which were observed are paucity and delay in sanctioning of funds by the government, lack of skilled and dedicated staff, deviation in the utilization of funds, more administrative controls, poor participation levels etc., The study suggested to remove the stringent rules which bound the NGOs in getting higher funds, encouraging the participation of younger generations, coordinating between various universities and NGOs etc.,

Nabcons (2011) studied the status and scope of producer companies in India. Out of nine PCs included in the study, majority of the PCs showed to have the weak balance sheets. They also opined that minimal capital reserves and imposition of corporate tax posed a big problem for the functioning of them. Professional business experts were not employed in most of PCs. Other problems which were hindering the efficiency of PCs were lack of business leadership, lack of diversification in business, low credit and technology awareness levels. The study concluded that there was no nodal organization established by the state or center which can contribute to the growth of producer companies.

Chagwiza *et al.* (2016) analyzed the determinants of the dairy cooperative membership among small holders in Ethiopia. Binary logistic regression model was applied to assess how socio- economic characteristics influence the small holders' membership in cooperatives and propensity score matching technique for assessing their impact on farm income. The independent variables like age of household head, family size, land size, level of education and distance to the cooperative milk collection center were found to be significant whereas price per liter of milk, the price per kilogram of butter or the proportion of dairy income to total income were non-significant in assessing cooperative membership.

Wanglin and Abdulai (2016) analyzed the impact of cooperative membership on apple farmers in China using propensity score matching technique. It was found that there existed a positive and significant relationship between membership and apple

yields, farm net returns and household income. Small-scale farmers, who were resource poor realized higher Productivity and income gains from cooperative membership than medium and large-scale farmers. Thus, cooperatives played a vital role in increasing the incomes of smallholders to reduce rural poverty in China.

Puneet (2016) reported that the majority of KVK trained farmers expressed the constraints such as financial problem (71.67 %) followed by shortage of green fodder during summer season (59.17 %), low price for the milk (44.17 %), improper veterinary services (43.33 %), high rates of mulch animals (39.17 %), high maintenance cost (38.33 %), low milk production (30.83 %), inadequate money and lack of loan facility (30.00 %), inadequate knowledge of diseases and their control (10.83 %) and delay in milk payment (9.17 %).

Raju *et al.* (2017) studied producer companies in Andhra Pradesh. Major issues which were hindering the growth of FPCs were lack of coordinated approach of the promoting agencies and the government in promoting the farmer organizations. The study highlighted that there existed considerable gap in the potential of the organizations and the progress made till date. It could be attributed to lack of efficient business plans, limitations in knowledge of promoting agencies, more administrative controls, lack of sufficient infrastructure *etc.* The study suggested to utilize the fullest potential by capacity building and channelize the FPOs into innovative approaches like e-NAM, future markets *etc.*

Venkataraman (2017) stated that enough attention was not paid to the growth trajectory of FPCs at the time of formation, and this was the reason behind the failure of the nearly 2,000 odd NGO-promoted FPCs to take off in a big way in contrast to the milk producer companies (MPCs) promoted by the National Dairy Development Board (NDDB). Lack of financial capital and lack of knowledge about running business are major problems that confront the board of directors of the FPC. The study concluded that incorporation of design-thinking principles could help in achieving higher success rate.

Deepa *et al.* (2018) conducted a survey of 8 FPOs in Uttar Pradesh. Some of the weaknesses which were encountered during the survey were lack of reliability on successful functioning of the FPOs, lack of financial support from the external sources like NABARD after three years. Farmers did not perceive the FPOs as profit-oriented organization and also, they reported that lack of government support pose a bigger hindrance to the FPOs to develop quickly with the utilization of their fullest potential. FPOs as business entities faced number of threats like increased competition from already existing private companies, lack of self-sustainability and more administrative controls by the CEOs offer lesser chance to expand in their business activities. It has been observed that there is low participation of the beneficiaries in different initiatives

by the voluntary organizations and FPOs. The socio-economic variables like age, education, farm size and distance from the location were the major determinants in the participation of farmers in FPO. The impediments in the functioning of FPOs include lack of adequate infrastructure, lack of capital, and lack of professionalism in the business *etc.* But the empirical studies in the Indian context are scarce and determinants of participation of farmers in Telangana needs to be estimated.

2.6 Suggestions to overcome the constraints

Mundhwa and Padheriab (1998) observed that major suggestions given by dairy women to overcome the problems experienced by them in dairy farming were milk price should be enhanced (97.78 %), followed by cattle feed should be provided at reasonable price (93.33 %), loan should be provided to purchase mulch animals (91.11 %), improved seeds of fodder crops should be provided (86.67 %), training should be given to dairy women (77.78 %), extension needs to be strengthened for animal production activities (66.67 %) and technologies to be evolved by animal scientists should be simple, practicable, economical and based on local resources (63.33 %).

Bharathi and Chaya (2005) reported that majority (78.30 %) of the respondents suggested that the project should be continued and started in other villages also, further majority of them (69.10 %) who suggested that loan amount should be increased. Activities which run all seasons should be given were suggested by 67.50 per cent. Sixty-five per cent of the respondents suggested that they require information on banking and marketing aspects along with marketing facilities.

Chinmayi (2015) reported that majority of the respondents (80 %) suggested that training programmes conducted based on their needs followed by 73.33 per cent members suggested to increase the loan and subsidy amount, 56.67 per cent of members suggested that unity should be maintained, 46.67 per cent of members suggested that follow-up should be increased.

Puneet (2016) reported that the majority of KVK trained farmers expressed the suggestions such as regular and timely supply of green fodder at reasonable rate (72.50 %) followed by the loan amount for the purchase of dairy animals to be increased and government schemes need to inform (70.00 %), more educational trips to be organized by dairy co-operative society for the benefit of dairy enterprises (67.50 %), training programme has to be conducted based on the farmer's needs (55.83 %), field visits are to be organized to fodder demonstration units (48.33 %), More importance to be given to educating aspects such as feeding of mulch animals, pregnant animals, care of pregnant animals and about cross breed mulch animals (45.83 %), training to be given for concentrates preparation using local resources (19.17 %).

METHODOLOGY

III METHODOLOGY

A Research study on “A Study on Performance of Farmer Producer Organizations in Shivamogga district of Karnataka” was conducted during the year 2018-19 in Shivamogga District of Karnataka State. This chapter deals with research methods and techniques used in the study. It mainly describes the procedure followed in the selection of district, taluks, villages and respondents. Besides description of locale, the variables studied and their measurement procedure, data collection methods and use of statistical tools have also been outlined. They are presented under the following sections: -

3.1 Research design

3.2 Locale of the study

3.3 Selection of villages and members

3.4 Dependent variables and their measurements

3.5 Independent variables and their measurements

3.6 Success story of the FPO members

3.7 constraints and suggestions

3.8 Procedure followed in data collection

3.9 Statistical tool used for the study

3.1 Research design

In the present study, Expost-facto research design was employed, because the phenomenon had already occurred and the researcher does not have any control over independent variables.

3.2 Locale of the study

The study was conducted in Shivamogga District of Karnataka State. Shivamogga district is located in the central part of the state of Karnataka, India. It lies on the banks of the Tunga River and the city is popularly called "The Gateway of Malnad" or “Malenaada Hebbagilu” in Kannada. It has a total area of 8,465 Sq. Km and population of 17, 52,753 (2011 census). The district is landlocked and bounded by Haveri District, Davanagere District, Chikmagalur District, Udupi District and Uttara Kannada. It lies between the latitudes 13°27' and 14°39' N and between the longitudes 74°38' and 76°04' E at a mean altitude of 640 meters above sea level. The two major rivers that flow through this district are Tunga and Bhadra. As the district lies in the tropical region, rainy season occurs from June to October. The average

annual temperature of Shivamogga District is around 26 °C. The districts provide an ideal region to undertake the study in view of the diverse culture, climate encompassing the maidan region consisting of Shikaripura, Soraba, Shimoga and Bhadravathi blocks and Malnad region consisting of Thirthahalli, Sagara and Hosanagara blocks endowed with majestic Sahyadrihill range and thick forest cover. Out of 30 districts in Karnataka, Shivamogga district was purposively selected as it is one of the front running districts in the FPO program in Karnataka. The major NGOs namely Shri Kshetra Dharmsthala Rural Development Project (SKDRDP), Chaitanya Rural Development Society and the Department of Horticulture are actively involved in promotion of FPOs.

3.3 Selection of villages and members

The criteria followed to select FPOs was that the FPO should have been completed minimum of three years of its function. Presently Karnataka state has 75 FPOs of which nine FPOs are operating in Shivamogga district. Among seven taluks of Shivamogga district, four taluks were purposively selected based on availability of highest number of members of FPO. Six actively functioning FPOs were purposively selected for the study, three each promoted by NGO and State Department of Horticulture. Two villages from each of the FPOs *i.e.* total of 12 villages out of six FPOs were selected. Ten members from each village on the basis of their availability at the time of interview were selected. Thus, the total sample size of the study was 120. The map showing locale of study in Shivamogga district is presented in Table 1 and Fig.1.

3.4 Dependent variables and their measurements

3.4.1 Performance of the FPO

Performance is one of the criteria by which the effectiveness of an organization, institution or a group is measured. It is operationally defined for this study as effectiveness of the selected FPO in financial management, technical service, backward and forward linkage, insurance services, self-reliance, social and community action etc., for the betterment of the company / organization as a whole.

To measure the performance of the FPO, the procedure developed by NABARD (National Bank for Agriculture and Rural Development) was adopted with suitable modification in consultation with experts, POPIs (Producers Organizations Promoting Institutions) of the FPOs promoters and previous studies on FPO. This procedure consisted of 25 performance indicators. Under each criterion, members of the groups were asked to indicate the level of performance of their group. Some of the indicators were assessed by looking into the different records maintained by the organization.

Table 1: Details of taluks and villages selected for the study

Name of the village	No. of FPO	Name of the FPO	No. of respondents selected
1. Shivamogga Taluk			
1. Narayanpura 2. Hitturu	1	Shivamogga Tungabhadra Horticulture Farmers Producers Organization	20
2. Shikaripura Taluk			
1. Horagoppa 2. Korlahalli	1	Harogoppa Farmers Producers Company Limited	20
3. Attibylu 4. Eleneerkoppa	1	Attibylu Farmers Producers Company Limited	20
1. Sunnadakoppa 2. Hulginakoppa	1	Sunnadakoppa Horticulture Farmers Producers Organization	20
3. Sagara Taluk			
1. Masuru 2. Keladi	1	Malenadu Horticulture Farmers Producers Organization	20
4. Bhadravathi Taluk			
1. Baarandooru 2. Kenchanalli C.	1	Malenadu Spices and Nuts Producers Company Limited	20
Total:			120

Under each indicator four related statements were framed and scoring was assigned to each statement as 0 to 3. By considering the response of members and thorough observation of the records maintained by the organization, the organization score was marked. The total score was computed by summing up the score on all the 25 criteria of performance. The maximum and minimum score that may be obtained by each group was 75 and 0 respectively. Thus, after computing performance score, the FPOs were grouped into low, medium and high-performance categories by taking the mean and half standard deviation as a measure of check.

Performance category

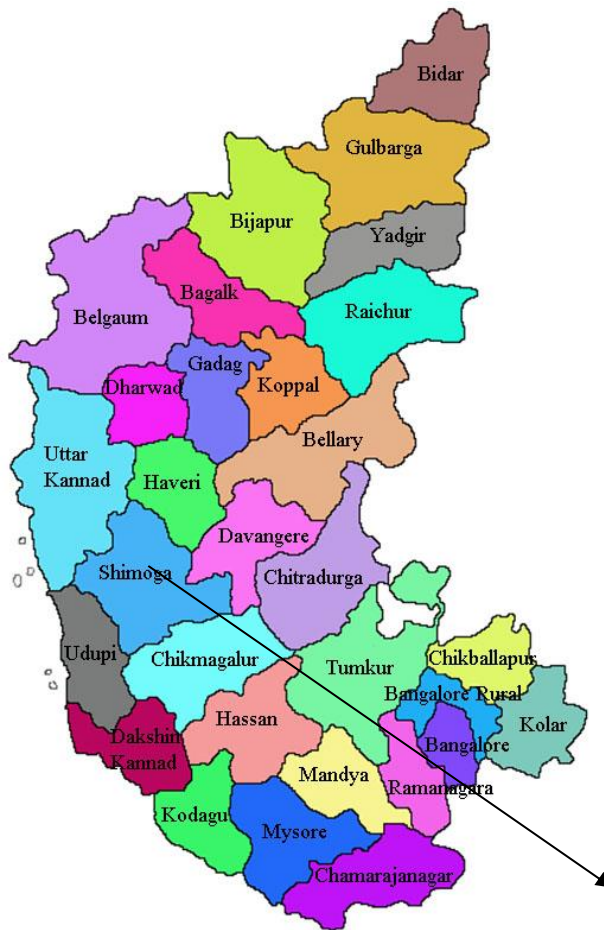
Category	Criteria	Score
Low	Less than (Mean – ½ SD)	Less than 46.13
Medium	Between (Mean ± ½ SD)	46.13 to 52.10
High	More than (Mean + ½ SD)	More than 52.10

3.4.2 Knowledge level of FPO members

Knowledge level of farmers about Farmers Producer Organization / Company is defined as the quantum of accurate information known to the respondents about the Farmers Producer Organization / Company. A teacher made test was employed to measure the knowledge level of the respondents about the FPO.

A list of 20 questions was prepared covering various aspects of FPO. The questions were provided with four multiple choice three irrelevant and one right answers. By considering score 1 for rightly answered and 0 score for wrong answers. The questions and answers pertaining to knowledge test were carefully designed in consultation with experts and referring NABARD guidelines for FPO. The answers were quantified by giving one score to the correct answer and zero score to the incorrect answer. The total score was computed by summing up of scores of the correct answers for a particular respondent indicates his knowledge level about FPO. The maximum and minimum score that may be obtained by each individual was 20 and 0 respectively. Thus, after computing knowledge score, the respondents were grouped into low, medium and high level of knowledge categories by taking the mean and half standard deviation as a measure of check.

Karnataka State map



Shivamogga district



Fig 1 Map showing the study area

Knowledge category

Category	Criteria	Score
Low	Less than (Mean-1/2 SD)	Less than 13.69
Medium	Between (Mean \pm 1/2 SD)	13.69 to 15.30
High	More than (Mean + 1/2 SD)	More than 15.30

3.5 Independent variables and their measurements

Sl. No.	Independent variables	Empirical measurements
1	Age	The procedure followed by Hinge (2009)
2	Education	Scale developed by Trivedi (1963) with Slight modification
3	Land holding	Criteria developed by Ministry of Rural Development; Government of India followed by Arul Prakash (2004)
4	Family Annual Income	The procedure followed by Hanchinal (1999)
5	Extension Contact	Procedure followed by Hardikar (1998) Slight modification
6	Extension Participation	Scale followed by Binkadakatti (2008) Slight modification
7	Organizational Participation	Procedure followed by Hardikar (1998) Slight modification
8	Economic Motivation	Scale developed by Supe (1969) and followed by Biradar (2008)
9	Mass media exposures	the procedure followed by Mankar (2003) with slight modifications
10	Credit Orientation	Procedure developed by Beal and Sibley (1967)

The independent variables selected for the study were Age, Education, Land holding, Annual income, Extension contact, Extension participation, Organizational participation, Economic motivation, Mass media exposure, Credit orientation. Operational definition of the variables and measurement procedure used are presented in the following headings.

3.5.1 Age

It is referred to the chronological age of the respondents in completed years at the time of investigation. The procedure followed by Hinge (2009) was used to categorize the respondents as mentioned below.

Category	Age in years
Young	Up to 30 years
Middle	31-50
Old	Above 50

3.5.2 Education

The variable education was expressed as the number of years of formal education acquired by the respondents at the time of investigation. The categorization and scoring was made in accordance with the socio-economic status scale followed by Trivedi (1963).

Categories	Score
Illiterate	0
Primary school	1
Middle school	2
High school	3
Pre university	4
Graduates	5
Post Graduate	6

Scores of each respondent was taken by considering the above scoring pattern. The respondents were classified in to low, medium and high categories by calculating mean and standard deviation as a measure of check.

Category	Criteria	Score
Low	Less than (Mean – ½ SD)	Less than 5.01
Medium	Between (Mean ± ½ SD)	5.01 to 8.93
High	More than (Mean + ½ SD)	More than 8.93

3.5.3 Land holding

Category	Land holding (in acres)
Landless	Nil
Marginal farmers	Up to 2.50 acres
Small farmers	2.51 to 5.00 acres
Semi-medium farmers	5.01 to 10.00 acres
Medium farmers	10.01 to 25.00 acres
Big farmers	Above 25.00 acres

Land holding refers to the number of acres of agricultural land possessed by the respondent's family. The criteria of Ministry of Rural Development, Government of India, circular number; 250-12/10/19/RD III (vol. V) dated 15th November, 1991 (Anon. 1991) was used to classify the respondents in to different land holding categories. One hectare of irrigated land was equated to 2.5 ha of dry land. The respondents were classified in to 6 categories as mentioned below.

3.5.4 Annual income

It was calculated by adding the income from agriculture and other subsidiary occupation. The subsidiary income was defined as one which comprised of income from all sources other than agriculture. The procedure followed by Hanchinal (1999) was used to categorize the annual income of the respondents.

Category	Criteria	Score (in lakhs)
Low	Less than (Mean – ½ SD)	Less than Rs. 1.82
Medium	Between (Mean ± ½ SD)	Rs. 1.82 to Rs. 5.04
High	More than (Mean + ½ SD)	More than Rs. 5.04

3.5.5 Extension contact

It refers to the degree to which the respondent meets the extension personnel of various development departments, universities, NGOs and private agencies etc. to get information on aspects related to agriculture and allied activities. The procedure followed by Hardikar (1998) was used for scoring of this variable. The extension contact of respondents was classified by considering frequency and percentage. The scoring procedure is as mentioned below.

Frequency	Score
Regular	2
Occasional	1
Never	0

3.5.6 Extension participation

It refers to the extent of participation of respondent in different extension activities like training programmes, demonstrations, krishimela, field visits, exposure visits, campaigns etc. It was quantified on a 3-point continuum scale followed by Binkadakatti (2008). The list consisting of various extension activities was prepared and the respondents asked to indicate their extent of participation in each activity as regular, occasional and never. The respondents were classified based on extent of participation in the organization by considering frequency and percentage. The score assigned was as follows.

Frequency	Score
Regular	2
Occasional	1
Never	0

3.5.7 Organizational participation

It refers to the degree to which the respondent visits the various development departments, universities, NGOs and private agencies *etc.* to get information on aspects related to agriculture and allied activities. The procedure followed by Hardikar (1998) was used for scoring of this variable. The organizational participation of respondents was classified by considering frequency and percentage. The scoring procedure is as mentioned below.

Participation in organization	Score
Regular	2
Occasional	1
Never	0

3.5.8 Economic motivation

Economic motivation refers to the value or attitude for which the respondent attached greater importance to profit maximization. It was quantified by using the scale developed by Supe (1969) and followed by Biradar (2008). The scale consists of 5 positive statements, the responses were recorded on 3-point continuum ranging from “Agree” “Undecided” and “Disagree” with scores of 3, 2 and 1 respectively. Maximum and minimum scores obtained by the respondents on the scale were 15 and 5. Based on the total score, respondents were grouped into three categories by using mean and standard deviation as measure of check.

Category	Criteria
Low	Less than (Mean – ½ SD)
Medium	Between (Mean ± ½ SD)
High	More than (Mean + ½ SD)

3.5.9 Mass media exposure

It refers to the degree of exposure and frequency of use of different mass media information sources like newspaper, farm magazine, radio and television by the respondents. The respondents were asked to indicate as how often they use each of these mass media sources. The variable was quantified by using the procedure followed by Mankar (2003) and the scores assigned as detailed below.

Extent of exposure	Score
Regular	2
Occasionally	1
Never	0

By considering the total score obtained by each respondent, they were grouped in to three categories taking mean and half standard deviation as measure of check.

Category	Criteria	Score
Low	Less than (Mean – ½ SD)	Less than 3.37
Medium	Between (Mean ± ½ SD)	3.37 to 5.84
High	More than (Mean + ½ SD)	More than 5.84

3.5.10 Credit orientation

This was operationalized as the favorable and positive attitude of an individual farmer towards obtaining credit from institutional sources for agriculture purpose. The measurement and scoring procedure of Beal and Sibley (1967) was employed for this variable.

Items	Response	Score
1. Do you think that a farmer like you should borrow money for agricultural purpose?	Yes/ no	1 0
2. In your opinion how, difficult it is to secure credit for agricultural purpose	Very easy/easy/ difficult/ very difficult	3 2 1 0
3. How a farmer is treated when he goes to secure credit?	Very fair/ fair/ badly/ very badly	3 2 1 0
4. There is nothing wrong in taking credit from institutional source for increasing farm production	Strongly agree/ agree/disagree/ Strongly disagree	3 2 1 0
5. Did you use credit in the last two years for cultivation	Yes/ no	1 0
6. Please mention the regularities of repayment	Regular/ not regular	1 0
7. Please mention the amount of loan borrowed for various agricultural purposes for the last two year (Rs. ___)	Yes/ no	1 0
8. Do you borrow from any private money lenders if yes, Mention the amount borrow in the previous year (Rs. _____)	Yes/ no	0 1

The grand total was arrived at by adding the scores obtained by respondents in each of the above items. The scores added for all the items formed the credit orientation score of the respondents. The maximum and minimum score that could be obtained by the respondents were 14 and 0 respectively. Higher the score reveals favorable attitude of farmers towards obtaining the credit from institution sources. Further, the respondents were categorized into 3 categories based on mean and standard deviation as a measure of check.

Category	Criteria	Score
Low	Less than (Mean – ½ SD)	Less than 8.22
Medium	Between (Mean ± ½ SD)	8.22 to 9.27
High	More than (Mean + ½ SD)	More than 9.27

3.6 Success story of the FPO members

It refers to in depth study of a person who raises to fortune, acclaim or brilliant achievement in particular field. Among the total number of respondents, 2 successful Farmer Producer Organization members were interviewed and their success stories were documented and presented with the relevant photographs.

3.7 Constraints and suggestions

To know the constraints faced by the respondents and suggestions for improvement, the possible responses were listed in consultation with the experts. The respondents were asked to indicate various constraints and their suggestions, the same were presented in frequency and percentage.

3.8 Method of data collection

Based on the objectives of the study, a structured schedule was prepared with the help of NABARD'S guidelines on Farmer Producer Organization and with the valuable suggestion of Advisory committee and other experts in the field of Agricultural Extension and NGO's promoters to improve the content of schedule which included performance of FPO, Knowledge level of members and all the variables selected for the study. Data collection was done during the month of March and April 2019 by personal interview method with the help of the schedule.

The schedule has three parts.

Part A: General information about FPO, name of the members.

Part B: Personal and socio-economic characteristics of FPO members

Part C: Statements related to knowledge assessment, performance of FPO, Indicated constraints and suggestions for improvement of functioning of FPO.

Personal interview was conducted under informal atmosphere. Each question was explained to the respondents with equal emphasis. The onlookers influence was avoided to considerable extent throughout the study. Informal discussions and observations were also held to understand the respondents and the situation in detail, which in turn was helpful in better interpretation of the results in full context of FPO and community.

3.9 Statistical tool used for the study

The data were collected from the beneficiaries was tabulated and analyzed using suitable statistical methods as per the suggestions of the statistician and members of the advisory committee.

The statistical methods used in present study are described below:

3.9.1 Mean

The arithmetic mean is the sum of the scores divided by their number. This measure was used to categorize the dependent and independent variables into low, medium and high categories.

$$\bar{x} = \frac{\text{Sum of all the items}}{\text{Total number of items}}$$

3.9.2 Frequency

This measure was used to know the distribution pattern of respondent's variable wise and to categorize the respondents based on their opinion on each activity.

3.9.3 Percentage (%)

This measure was used for simple understanding of the numeric with different groups.

3.9.4 Standard Deviation (SD)

This measure was used to categorize the dependent and independent variables into low, medium and high categories.

$$SD = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

Where,

SD= Standard deviation

$(x - \bar{x})^2$ = the sum of squared deviations from the mean

x = Arithmetic mean

n = Number of items



Plate 1: Collection of secondary data from CEOs of Farmer Producer Organizations



Shree Narayana Horticulture Farmers Producer Company Ltd
 ಶ್ರೀನಾರಾಯಣ ಹೂತುಕೃಷಿ ರೈತ ಉತ್ಪಾದಕ ಕಂಪನಿ ಸೀಯಮಿಟೆಡ್
 ಇಳಿಬೀದಿ, ಮುಗುಳು/ಅರಸೀಕೆರೆ, ಬೆಂಗಳೂರು

ಕ್ರ. ಸಂ.	ಕೊಡುಗೆ ಕೆ.ಎಂ.ಎಸ್.	ಕಂಪನಿ	ಒಟ್ಟು 50 KG ಪ್ಯಾಕೆಟ್
1	M.O.P. (ಶ್ರೀಮತಿ)	IPL	600-00 192
2	ಯುಎಂಎಸ್	MPL	500-00 263
3	20/26/0:13	FACT	500-00 41
4	10:26:26	IFFCO	500-00 154
5	SUPALA 15/15	SUPALA	9/11-00 240
	D.P.	MCF	500-00 171



Plate 2: The activities of Farmer Producer Organizations



Plate 3: Interviewing the respondents during data collection

RESULTS

IV RESULTS

The research findings have been presented on the basis of analysis of data using relevant statistical tools and techniques in relation to the specific objectives of the study. The results of the study are presented under the following sub headings:

- 4.1 Performance of Farmer Producer Organizations
- 4.2 Knowledge level of the members about the activities of FPO
- 4.3 Personal and socioeconomic characteristic of the members
- 4.4 Problems faced by the members of FPO
- 4.5 Suggestions offered by the members to strengthen the performance of FPO
- 4.6 Success stories of the FPO members

4.1 Performance of Farmer Producer Organizations

4.1.1 Overall performance of FPO

The data presented in the Table 2 revealed that, fifty per cent of the members were having medium level of overall performance followed by high (33.33 %) and low (16.67 %) level of overall performance.

4.1.2 Activity wise performance of FPO

The data presented in the Table 3 revealed that, cent percent of the FPOs are performing activities like custom hiring services, input supply, auditing of accounts, conduct of meetings (AGM, monthly meetings etc.,) rules and regulations of the FPO, book keeping and documentation and followed by 83.33 per cent of the FPOs possess internet facility and offering advisory/ technical services. Majority (66.64 %) of the FPOs conducting training programmes. Fifty per cent of the FPOs are engaged with procurement, packaging system and market linkage activities. Only 16.67 per cent of the FPOs engaged with credit services, storage and primary processing facility to its members. None of the FPOs are engaged in offering insurance services to its members.

4.1.3 Facilities availed by the members of FPO

The data presented in the Table 4 depicted that cent per cent of the members availed the input supply services provided by the FPOs, followed by technical services (84.16 %), procurement and packaging services (51.66%),market linkage(40.83 %),storage facilities(16.66%), processing and marketing services (15.00 %) and financial/ credit services (10.83 %).

Table 2: Overall performance of the FPOs**(n=6)**

Sl. No.	Category	Frequency	%
1	Low	1	16.67
2	Medium	3	50.00
3	High	2	33.33
Mean= 49.11		SD= 5.96	

Table 3: Activity wise performance of the FPOs**(n = 6)**

Sl. No.	Activity	Performing		Non-performing	
		Frequency	%	Frequency	%
1	Financial / Credit services	1	16.67	5	83.33
2	Insurance services	0	0.00	6	100.00
3	Procurement and packaging system	3	50.00	3	50.00
4	Custom hiring services	6	100.00	0	0.00
5	Input supply	6	100.00	0	0.00
6	Market linkage	3	50.00	3	50.00
7	Technical / advisory services	5	83.33	1	16.67
8	Aggregation and storage facility	1	16.67	5	83.33
9	Internet services	5	83.33	1	16.67
10	Primary Processing	1	16.67	5	83.33
11	Auditing of accounts	6	100.00	0	0.00
12	Conduct of training programmes	4	66.64	2	33.36
13	Conduct of meetings (AGM, monthly meetings etc.,)	6	100.00	0	0.00
14	Rotation of executive body	2	33.36	4	66.64
15	Rules and regulations of the FPO	6	100.00	0.00	0.00
16	Book keeping and documentation	6	100.00	0.00	0.00

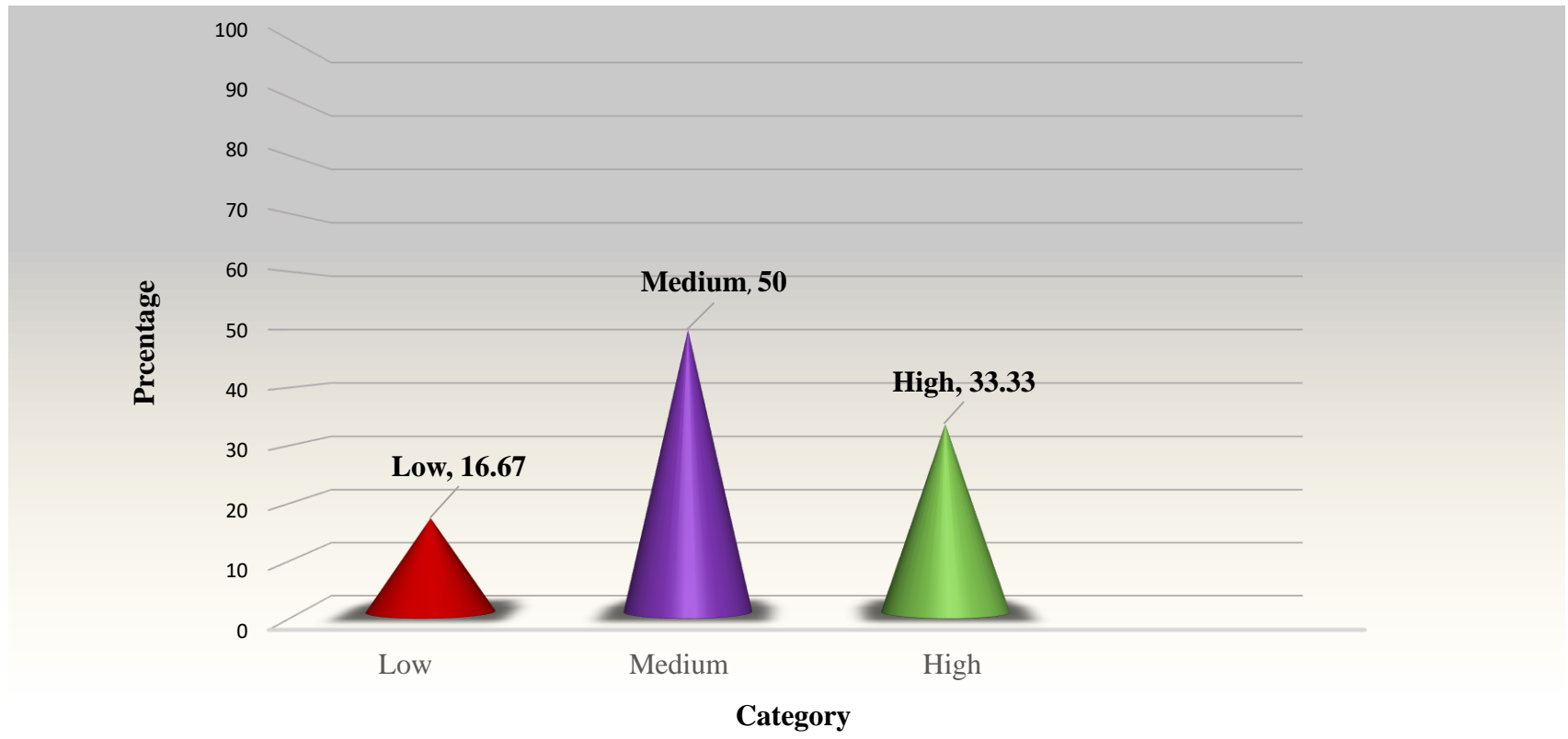


Fig 2. Overall Performance of the FPOs

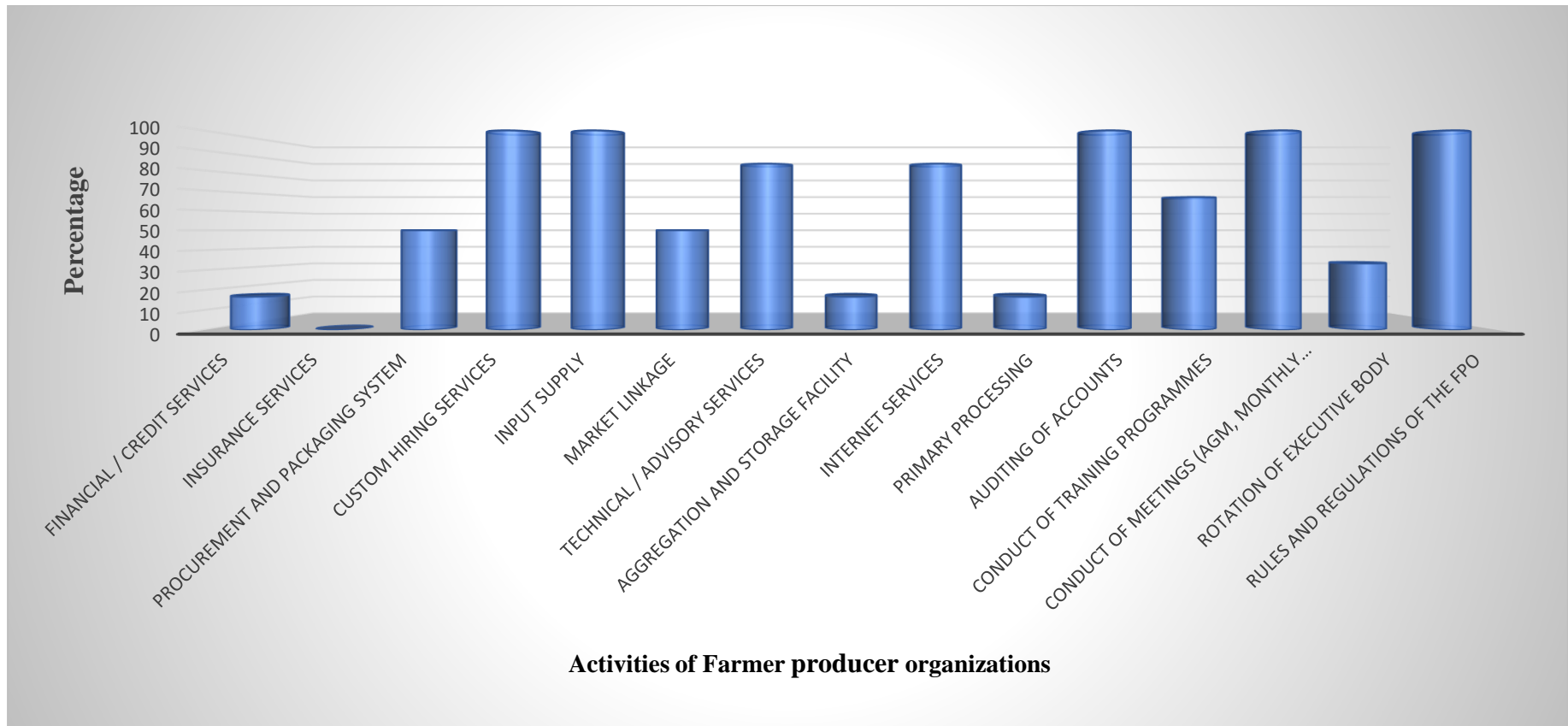


Fig.3 Activity wise Performance of FPOs in Shivamogga district

Table 4: Facilities availed by members of FPO**(n=120)**

Sl. No.	Activity / services	Availed		Unavailed	
		Frequency	%	Frequency	%
1	Financial / credit Services	13	10.83	107	89.17
2	Input Supply Services	120	100.00	0	0.00
3	Procurement and Packaging Services	62	51.66	58	48.34
4	Processing & Marketing Services	18	15.00	102	85.00
5	Insurance Services	0	0	120	0.00
6	Technical Services	101	84.16	19	15.84
7	Market linkage	49	40.83	71	59.17
8	Storage facilities	20	16.66	100	83.34

4.2 Overall Knowledge level of the members about the activities of FPO

The data with respect to extent of knowledge possessed by the members is furnished in Table 5 which revealed that just above half of the members (52.50 %) were possessed medium knowledge level followed by high (25.00 %) and low (22.50 %) knowledge level on farmer producer's organization.

4.2.1 Knowledge level of the members on various components of FPO

The data with respect to the quantum of knowledge on various components of FPO possessed by the members is furnished in Table 6 which revealed that majority (90.00 %) of the members are having knowledge on services that FPOs had been provided followed by knowledge on formalities of registration (85.00 %), just above half of the members (55.83 %), knowledge on purpose of conduct of meeting (58.33 %), knowledge about concept, objectives behind the setup of Farmer Producer Organizations (55.83 %), knowledge on procedure related to governing body of organization (45.83 %) and knowledge on institutional support 37.50 per cent.

4.3 Personal and socioeconomic characteristics of the members

4.3.1 Age

The data presented in Table 7 indicated that majority (52.50 %) of the members belonged to middle aged group, followed by old age (40.80 %) and young age (6.70 %) category.

4.3.2 Education

It was clear from the Table 8 that a large number (58.33 %) of the members had medium education category whereas, 27.51 per cent of them belongs to high education category and 14.16 per cent of the members belongs to low education category.

4.3.3 Land holding

It was witnessed from the data presented in Table 9 depicts that 40.00 per cent of the members belong to semi medium farmer's category, followed by small farmers (27.50 %), marginal farmers (21.66 %), medium farmers (8.34 %), big farmers (2.50 %) and no members was landless.

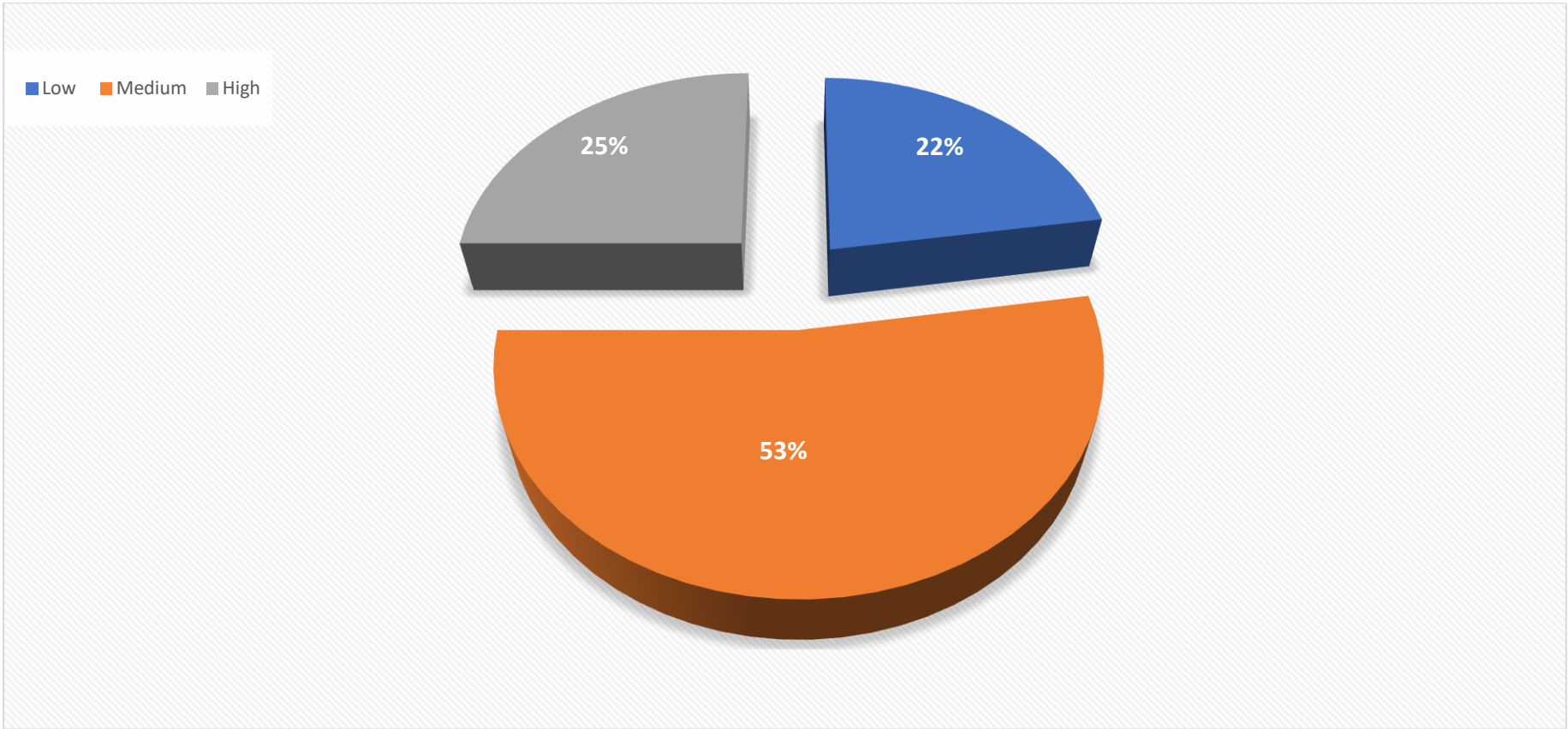


Fig.4 Distribution of FPO members according to their Overall Knowledge level on FPO

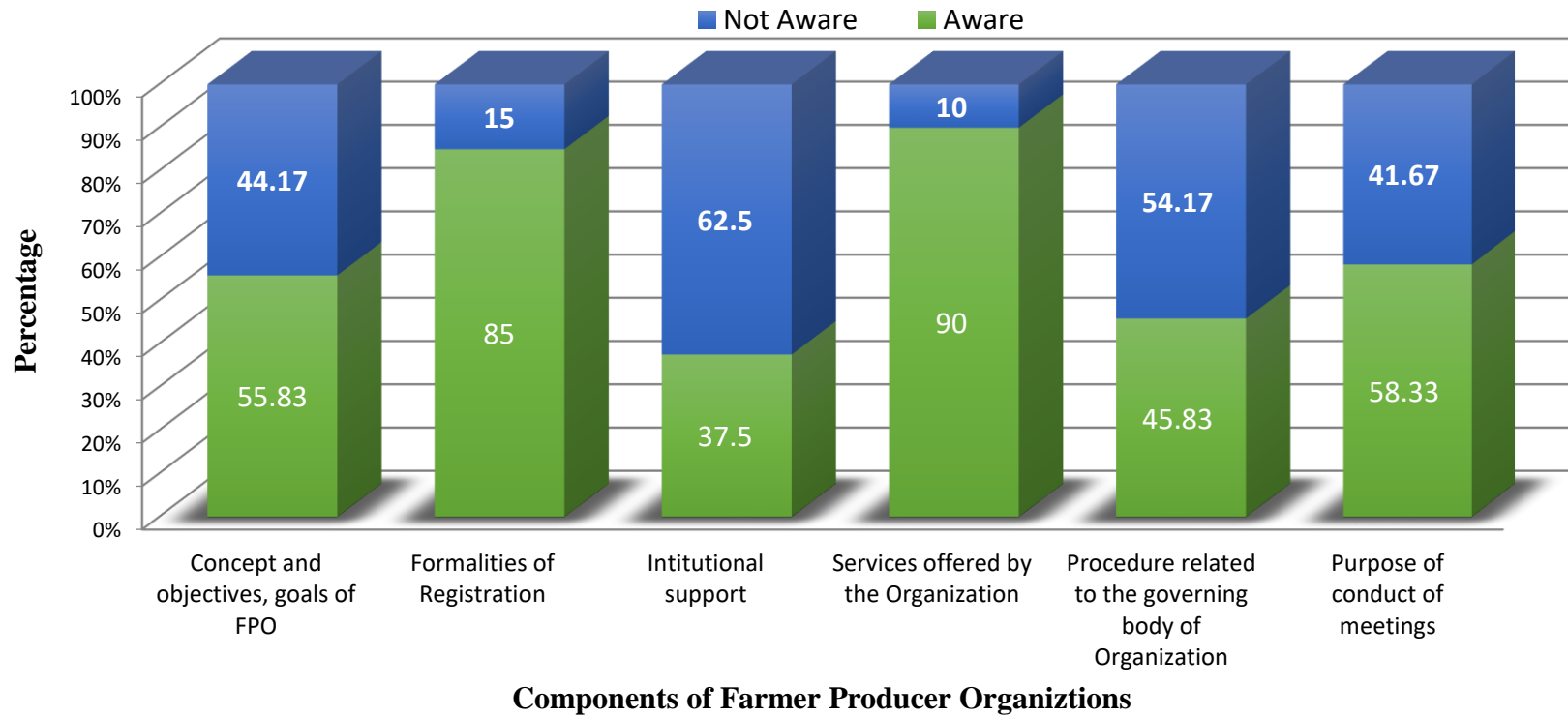


Fig 5. Knowledge level of the members on particular components of FPO

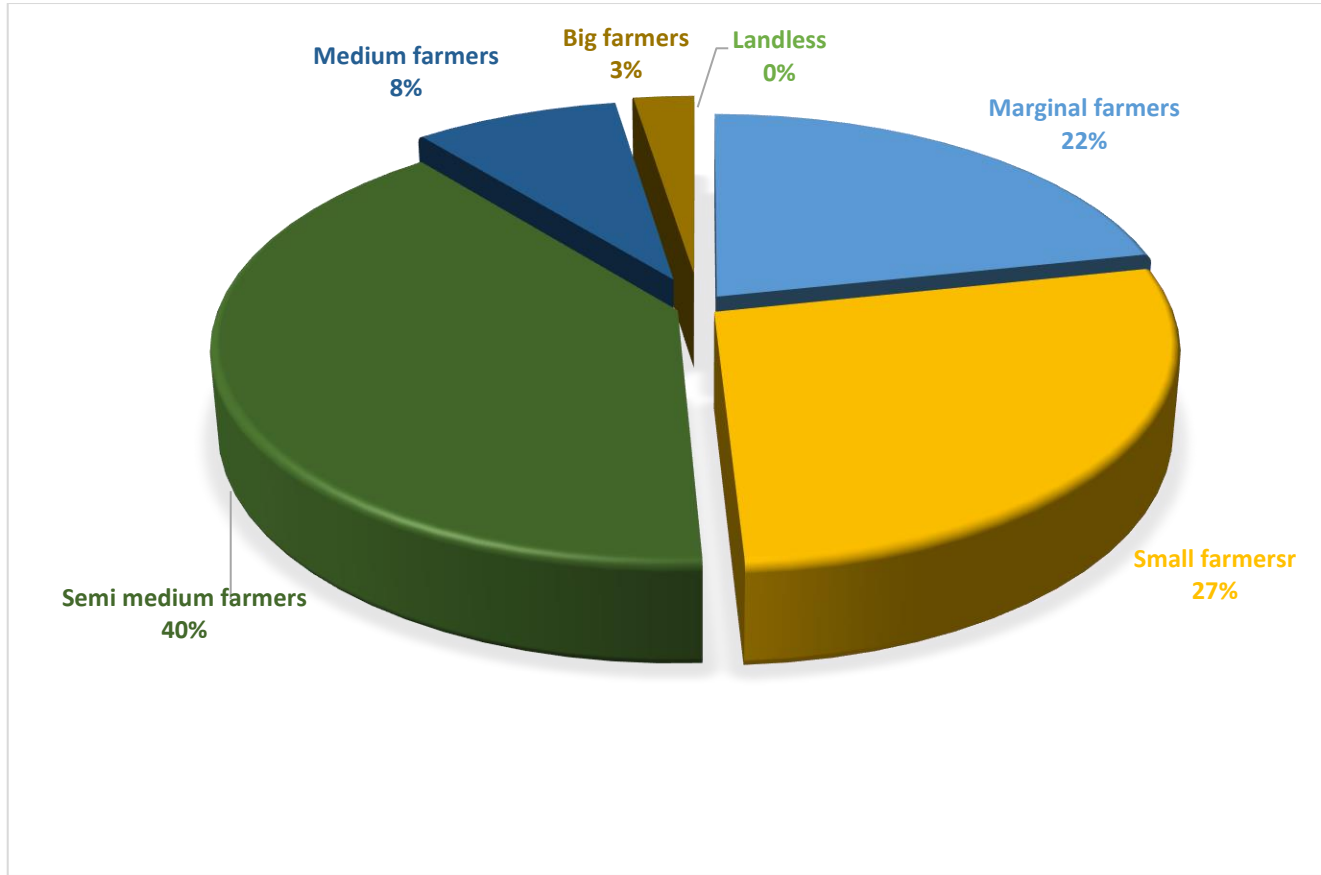


Fig. 6 Distribution of members according to land holding

Table 5: Distribution of FPO members according to their overall knowledge level on FPO

(n=120)

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 13.69	27	22.50
2	Medium	13.69 to 15.30	63	52.50
3	High	Above 15.30	30	25.00
Mean= 14.50			SD= 1.61	

Table 6: Knowledge level of the members on particular components of FPO

(n=120)

Sl. No.	Components	Frequency	%
1	Concept and objectives, goals of FPO	67	55.83
2	Formalities of Registration	102	85.00
3	Institutional support	45	37.50
4	Services offered by the organization	108	90.00
5	Procedure related to governing body of the Organization	55	45.83
6	Purpose of conduct of meetings	70	58.33

Table 7: Distribution of members according to their age

(n=120)

Sl. No.	Category	Criteria	Frequency	%
1	Young	18 years - 30 years	8	6.70
2	Middle	31 years - 50 years	63	52.50
3	Old	Above 50 years	49	40.80

Table 8: Distribution of members according to their education**(n=120)**

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 5.01	17	14.16
2	Medium	5.01 to 8.92	70	58.33
3	High	Above 8.92	33	27.51
		Mean = 3.58	SD = 0.59	

Table 9: Distribution of members according to land holding**(n=120)**

Sl. No.	Categories	Land holding	Frequency	%
1	Landless	Nil	0	0
2	Marginal farmers	Up to 2.50 acres	26	21.66
3	Small farmers	2.51 to 5.00 acres	33	27.50
4	Semi medium farmers	5.01 to 10.00 acres	48	40.00
5	Medium farmers	10.01 to 25.00 acres	10	8.34
6	Big farmers	Above 25.00 acres	3	2.50

4.3.4 Annual income

Annual income of the members is presented in Table 10 which shows that 42.50 per cent of the families had low level of income followed by medium level of income (32.50 %) and high level of family income (25.00%).

4.3.5 Extension contact

It was noticed from the Table 11 that less than half of the members (44.16 %) had medium level of extension contact followed by high level of extension contact (29.18 %) and 26.66 per cent of the members had low level of extension contact.

With respect to the frequency of extension contact Table 12 depicts that members had 'regularly' consulted Assistant Agriculture Officer/ Horticulture Officer (51.70 %), Agriculture Officer/ Horticulture Officer (50.84 %), University Scientist / KVK (3.34 %), Assistant Director of Agriculture/ Horticulture (2.50 %), Agriculture Assistant / Horticulture Assistant (2.50 %), Joint Director of Agriculture/ Horticulture (1.67 %), Deputy Director of Agriculture/ Horticulture (0.84 %) for obtaining information. Members occasionally consulted Agriculture Assistant / Horticulture Assistant (85.84 %), Assistant Director of Agriculture/ Horticulture (65.84%), Agriculture Officer/ Horticulture Officer (42.50 %), Assistant Agriculture Officer/ Horticulture Officer (41.60 %), University Scientist / KVK (56.66%), Deputy Director of Agriculture/ Horticulture (5.83 %) and Joint Director of Agriculture/ Horticulture (3.33 %) and others like Input dealers (50.84 %). It is also observed that majority of the members had not consulted Joint Director of Agriculture/ Horticulture (95.00 %), followed by Deputy Director of Agriculture/ Horticulture (93.34 %), others like Input dealers, University scientist/ KVK, Assistant Director of Agriculture/ Horticulture 49.16 per cent, 40.00 per cent and 31.66 per cent respectively.

4.3.6 Extension participation

The results of the Table 13 indicated that, 46.66 per cent of the members had medium level of extension participation, while 40.00 and 13.34 per cent were having low and high level of extension participation, respectively.

The data presented in Table 14 shows the frequency of participation of members in various extension activities. Just below fifty per cent (45.83 %) of the members had 'regularly' participated in krishimela followed by exhibitions (38.34 %) training programmes (20.83 %), method demonstrations (9.18 %), result demonstrations (9.16 %), exposure visit (5.00 %) campaigns (3.34 %) and field days (2.50 %). It is also observed that more number of members had 'occasionally' participated in the extension activities such as method demonstrations (66.66 %), result demonstrations (63.34 %), exposure visits (58.34 %), training programmes

Table 10: Distribution of members according to their annual income**(n=120)**

Sl. No.	Category	Annual Income (in lakhs)	Frequency	%
1	Low	Up to Rs. 1.82	51	42.50
2	Medium	Rs. 1.82 to Rs. 5.04	39	32.50
3	High	Rs. 5.05 and above	30	25.00
Mean = Rs. 3,43,825			SD = Rs. 3,22,183	

Table 11: Distribution of members according to their extension contact**(n=120)**

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 4.35	32	26.66
2	Medium	4.36 to 7.22	53	44.16
3	High	Above 7.23	35	29.18
Mean = 5.79			SD = 2.86	

Table 12: Extension contact of the members**(n=120)**

Sl. No.	Source	Frequency of contact		
		Regular	Occasional	Never
1	Joint Director of Agriculture/ Horticulture	2 (1.67 %)	4 (3.33%)	114 (95.00 %)
2	Deputy Director of Agriculture/ Horticulture	1 (0.83 %)	7 (5.83%)	112 (93.34 %)
3	Assistant Director of Agriculture/ Horticulture	3 (2.50 %)	79 (65.84%)	38 (31.66 %)
4	Agriculture Officer/ Horticulture Officer	61 (50.84 %)	51 (42.50 %)	8 (6.66 %)
5	Assistant Agriculture Officer/ Horticulture Officer	62 (51.70 %)	50 (41.60 %)	8 (6.70 %)
6	Agriculture Assistant / Horticulture Assistant	3 (2.50%)	103 (85.84 %)	14 (11.66 %)
7	University Scientist / KVK	4 (3.34 %)	68 (56.66 %)	48 (40.00 %)
8	Others (Input dealers)	0 (0 %)	61 (50.84 %)	59 (49.16 %)

Table 13: Distribution of members according to their extension participation**(n=120)**

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 4.69	48	40.00
2	Medium	4.70 to 7.88	56	46.66
3	High	Above 7.88	16	13.34
Mean = 6.29			SD = 3.18	

Table 14: Extension participation of the members**(n=120)**

Sl. No.	Extension activities	Frequency of participation		
		Regular	Occasional	Never
1	Training programmes	25 (20.84 %)	47 (39.16 %)	48 (40.00 %)
2	Method demonstrations	11 (9.18 %)	80 (66.66 %)	29 (24.16 %)
3	Result demonstrations	11 (9.16 %)	79 (63.34 %)	33 (27.50 %)
4	Krishimela	55 (45.83 %)	46 (38.34 %)	19 (15.83 %)
5	Exhibitions	46 (38.34 %)	39 (32.50 %)	35 (29.16 %)
6	Field days	3 (2.50 %)	39 (32.50 %)	78 (65.00 %)
7	Exposure visits	6 (5.00 %)	70 (58.34 %)	44 (36.66 %)
8	Campaigns	4 (3.34 %)	36 (30.00 %)	80 (66.66 %)

(39.17 %), krishimela (38.34 %), exhibitions (32.50 %), field days (32.50 %) and campaigns (30.00 %). Whereas 66.66 per cent of the members never participated in campaigns followed by field days (65.00 %), training programme (40.00 %), exposure visits (36.66 %), exhibitions (29.16 %), result demonstration and (27.50 %) and method demonstration (24.16 %).

4.3.7 Organizational participation

The results presented in Table 15 shows the distribution of members according to organizational participation. It was observed that, 42.50 per cent of the members belonged to medium organizational participation category. Whereas 38.34 per cent of the members belonged to low organizational participation category and 19.16 per cent of them belonged to high level organizational participation category.

A perusal of Table 16 reveals the extent of participation of members in various organizations. The majority of the members regularly participated in the FPO activities (75.84 %), followed by dairy cooperative society (54.16 %), primary agricultural cooperative society (31.66 %), panchayath raj institutions (24.16 %), NGOs (20.00 %), KVK/Research stations (3.34 %), department of agriculture (2.50 %), department of horticulture (1.56 %). It is also observed that more number of members had 'occasionally' participated in the organizations such as, department of horticulture (84.16 %), panchayath raj institutions (68.34 %), department of agriculture (61.66 %), primary agricultural cooperative society (45.84 %), Farmer Producers Organization (24.16 %), KVK/Research stations (16.66 %), dairy cooperative society (6.66 %), NGOs (1.66 %). Whereas 80.00 per cent of the members were never participated in organizations like KVK/Research station followed by NGOs (78.34 %), dairy cooperative society (39.18 %), department of agriculture (35.84 %), primary agriculture cooperative society (22.50 %), department of horticulture (14.28 %) and panchayath raj institutions (7.50 %).

4.3.8 Economic motivation

With regard to economic motivation Table 17 reveals that less than half of the members (45.84 %) were distributed in medium economic motivation category followed by high economic motivation category (37.50 %) and 16.66 per cent of members were distributed in low economic motivation category.

4.3.9 Mass media exposure

Table 18 reveals that 38.34 per cent of the members had high level of mass media exposure, followed by 32.50 per cent had low and 29.16 per cent had medium level of mass media exposure.

Table 15: Distribution of members according to their organizational participation

(n=120)

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 6.17	46	38.34
2	Medium	6.17 to 8.57	51	42.50
3	High	Above 8.57	23	19.16
Mean = 7.37			SD = 2.39	

Table 16: Organizational participation of the members

(n=120)

Sl. No.	Organizational participation	Extent of participation		
		Regular	Occasional	Never
1	Department of Agriculture	3 (2.50 %)	74 (61.66 %)	43 (35.84 %)
2	Department of Horticulture	2 (1.56 %)	101 (84.16 %)	17 (14.28 %)
3	Farmer Producer Organization	91 (75.84 %)	29 (24.16 %)	0 (0.00 %)
4	Primary Agricultural Co-operative Society	38 (31.66 %)	55 (45.84 %)	27 (22.50 %)
5	Panchayath raj institutions (GP, TP, ZP)	29 (24.16 %)	82 (68.34 %)	9 (7.50 %)
6	Dairy Cooperative society	65 (54.16 %)	8 (6.66 %)	47 (39.18 %)
7	KVK/Research stations	4 (3.34 %)	20 (16.66 %)	96 (80.00 %)
8	NGO	24 (20.00 %)	2 (1.66 %)	94 (78.34 %)

Table 17: Distribution of members according to their economic motivation**(n=120)**

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 13.84	20	16.66
2	Medium	13.84 to 14.85	55	45.84
3	High	Above 14.85	45	37.50
Mean= 14.35			SD= 1.01	

Table 18: Distribution of members according to their mass media exposure**(n=120)**

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 3.37	39	32.50
2	Medium	3.37 to 5.84	35	29.16
3	High	Above 5.84	46	38.34
Mean = 4.60			SD = 2.46	

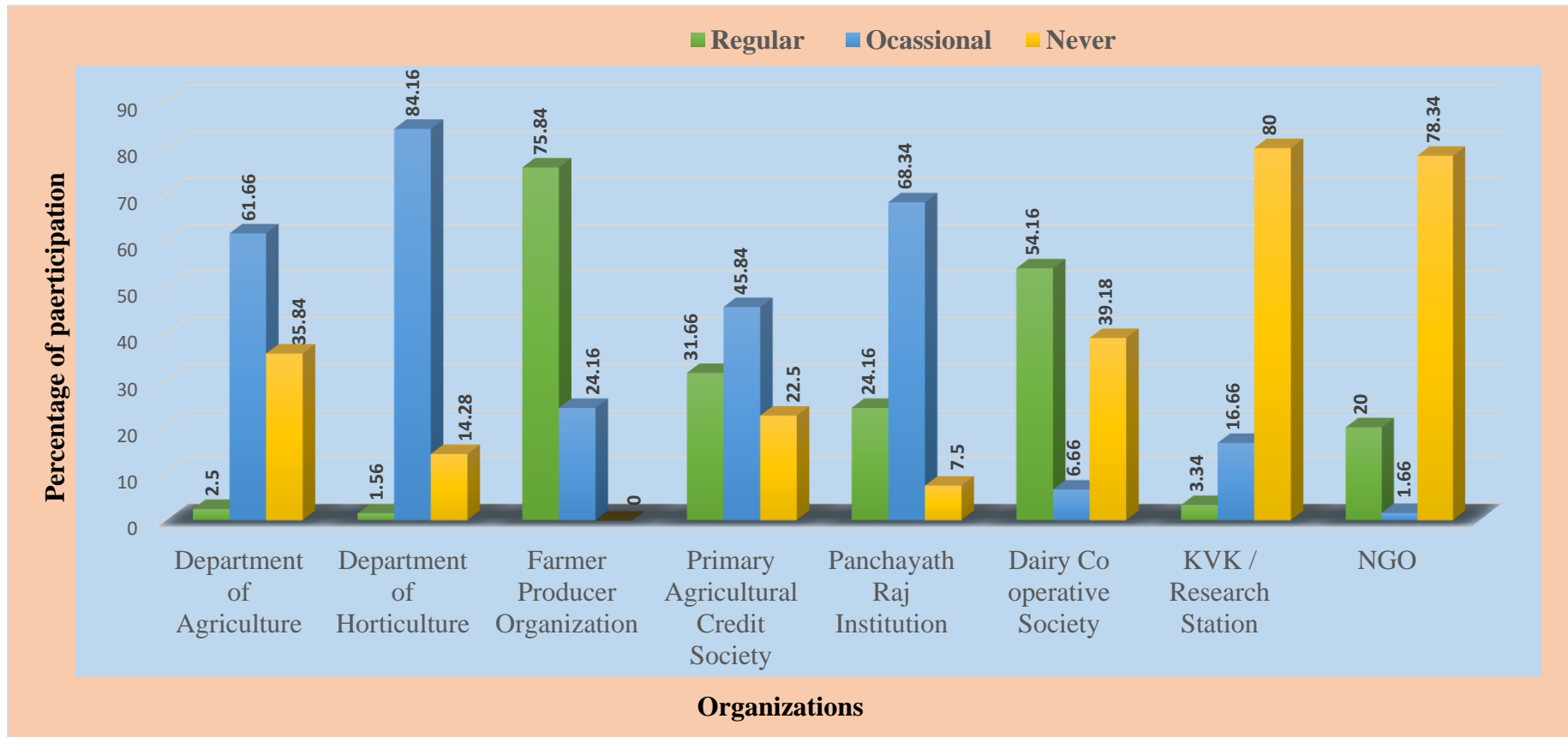


Fig. 7 Organizational Participation of the members

4.3.10 Credit Orientation

Table 19 reveals the credit orientation of the members. It was observed that just below fifty per cent (48.34%) the members had medium category of credit orientation followed by low (37.50 %) and high category of credit orientation (14.16 %).

4.4 Problems faced by the members of FPO

The results presented in the Table 20 reveals various constraints faced by the members with respect to FPOs. Majority of the members expressed the constraints such as problems related to lack of processing units (83.33 %), non-existence of procurement system (53.33%), absence of proper market linkage (50.00 %), Poor credit facilities (50.00 %), non-availability of custom hiring service (33.33 %), complexity of registration process (27.50 %), high initial share capital/ membership charge (18.33 %), heavy paper work, book keeping and inadequate knowledge about various services provided by FPO (16.66 %) and lack of proper input supply (15.83 %).

4.5 Suggestions offered by the members to strengthen the performance of FPOs

Table 21 depicts suggestions given by the members for better performance of the FPOs. The suggestions like establishment of processing units (71.66 %), Procurement system to be improved (59.76 %), Credit facility can be enhanced (55.83 %), proper market linkage can be made (50.00 %), availability of CHS should be made at lesser rates (41.66 %), FPO registration procedure should be made simple (40.00 %), conduct of awareness programme about FPO services (16.66 %), membership charges should be reduced (19.16 %).

4.6 Success stories of the FPO members

The success stories of two successful member of Farmer Producer Organization were documented and reported as success story in discussion chapter.

Table 19: Distribution of members according to their credit orientation**(n=120)**

Sl. No.	Category	Criteria	Frequency	%
1	Low	Up to 8.22	45	37.50
2	Medium	8.22 to 9.27	58	48.34
3	High	Above 9.27	17	14.16
Mean= 8.50			SD= 5.96	

Table 20: Problems faced by the members of FPO**(n= 120)**

Sl. No.	Items	Frequency	%
1	Lack of processing units	100	83.33
2	Non-existence of procurement system	64	53.33
3	Poor credit facilities	60	50.00
4	Absence of proper market linkage	60	50.00
5	Non-availability of custom hiring service	40	33.33
6	Complexity of registration process	33	27.50
7	High initial share capital/ membership charge	22	18.33
8	Heavy paper work and book keeping	20	16.66
9	Inadequate knowledge about various services provided by FPO	20	16.66
10	Lack of proper input supply	19	15.83

Table 21: Suggestions offered by the members to strengthen the performance of FPOs**(n = 120)**

Sl. No.	Suggestions	Frequency	%
1	Establishment of processing units	86	71.66
2	Procurement system to be improved	71	59.76
3	Credit facility can be enhanced	67	55.83
4	Proper market linkage can be made	60	50.00
5	Availability of CHS should be made at lesser rates	50	41.66
6	FPO registration procedure should be made simple	48	40.00
7	Conduct of awareness programme about FPO need to be conducted	20	16.66
8	Membership charges should be reduced	23	19.16

DISCUSSION

V DISCUSSION

This chapter includes the detailed discussion on the results of the study. The possible reasons and explanations have been given to interpret the observed phenomena. The interpretation and discussions are presented under the following heads:

- 5.1 Performance of Farmer Producer Organizations
- 5.2 Knowledge level of the members about the activities of FPO
- 5.3 Personal and socioeconomic characteristic of the members
- 5.4 Problems faced by the members of FPO
- 5.5 Suggestions offered by the members to strengthen the performance of FPO
- 5.6 Success stories of the FPO members
- 5.7 Conclusion
- 5.8 Future line of work

5.1 Performance of Farmer Producer Organizations

5.1.1 Overall Performance of Farmer Producer Organizations

The Table 2 showed that 50.00 per cent of the FPOs were having medium level of overall performance followed by high overall performance (33.33 %). This might be due to the reason that as these FPOs were promoted by various POPIs. Non-Government Organization namely Chaitanya Rural Development Society (CRDS) and State Department of Horticulture are involved in establishment and promotion of FPOs. These POPIs have conducted training programmes regarding concept, formation and managements of FPOs to its members. The POPIs have contact with members of FPOs even before the formation of FPOs as these two POPIs are involved in other activities like watershed development programmes and horticulture development programme to these farmers. The same farmers were motivated and organized into FPOs since the farmers are already know about the POPIs *i.e.* State Department of Horticulture and Chaitanya Rural Development Society.

The majority of the FPOs, they follow the activities like adherence to rules and regulations of FPO, formation and timely rotation of executive body, regular conduct of FPO meetings, account maintenance, input supply, market linkage, custom hiring services and the members share in responsibility of FPO among themselves due to this majority of the FPOs has medium overall performance followed by high overall performance. Only one FPO (16.67 %) falls under the category of low level overall performance, this is due to reason that as this FPO is not involved in activities like

storage facility, credit services, procurement and market linkage and insurance services and also this FPO is having less number of members and their participation is also low in the activities of FPO hence this FPO falls under the low level of overall performance.

The other reason for this result could also be due to the fact that Shivamogga district being malnad area, one of the agriculturally important districts of the Karnataka state. Almost all members of FPOs are practicing agriculture and allied activities for their livelihood. In order to get benefit out of the FPOs they are actively involved in the functioning of FPOs. Middle aged members and medium education level of the members is added to reason for the above results.

5.1.2 Activity wise performance of FPO

The data presented in the Table 3 revealed that, cent percent of the FPOs are performing activities like input supply as the inputs are the essential requirements for growing up of crops. Since FPOs are stationed at rural areas now the inputs are available at doorsteps. Earlier farmers used to visit nearby towns for purchasing inputs which requires almost one day time and cost of transportation of inputs also burden on them. Due to the formation of FPOs the members are getting essential external inputs like seed, chemical fertilizers and plant protection chemicals locally at reasonable prices. Therefore, all the FPOs are performing the activity related to the supply of inputs.

Custom hiring services are provided by the all the FPOs to its members due to migration of rural youths to the nearby towns. There exists scarcity of agriculture labor due to the reduced size of landholding, the members are not in a position to purchase heavy equipment's on their own. It is also difficult for owning of heavy equipments due to its heavy cost. In Custom hiring services, the equipments and farm machineries are available on hire basis whenever the members need it. That's why all the FPOs are performing the activity of custom hiring services in addition to this the subsidy provided by the government motivated the organization to own their equipments.

Book keeping and documentation, auditing of accounts and following rules and regulations were performed by all the FPOs. The documents and books are like mirror to see the transaction made in FPOs. This will also bring transparency on the financial activities of the FPOs. Auditing of accounts helps to know to what extent the records are maintained correctly. Since there is involvement of NABARD money during the initial stages of FPOs, they also insist to maintain certain records compulsorily. Therefore, all the six FPOs adhere to the rules and regulations of the FPOs and audited their accounts periodically.

The activity of conducting meeting regularly was profound by all the FPOs. If there are meetings at regular interval the members can discuss their issues and which helps to reduce the conflicts among the company members.

Technical / advisory services and internet services are performed by 83.33 per cent of FPOs. The main objective of extension services is to provide a technical guidance to the farming community so that they can make use of their knowledge in the day to day farming activities. Due to availability of a greater number of farmers in FPOs helps for easy dissemination of information by FPOs. The extension work of extension personnel of various development department becomes easier. Therefore, the technical / advisory services are performed by five out of six FPOs. Since the FPO is also engaged in market and input supply services therefore they have internet facilities for communication purpose.

Training programmes were conducted by more than half of the FPOs (66.64 %). Training programmes were conducted during initial stages of FPO formation to acquaint the members regarding the concept and functioning of FPOs. Later stages the various other training programmes like improved cultivation practices, pest management, nutrient management, value addition and marketing related programmes were conducted by FPOs to its members.

As procurement and packing, market linkage are the post-harvest activities performed by 50.00 per cent of FPOs. Procurement of commodities and packing them neatly helps to fetch higher market prices as compared with selling in a traditional way.

The activity of rotation of executive members is performed by 33.36 per cent of FPOs this helps to develop leadership qualities among the members and reduces the dominance of few selected members. Primary processing and storage facility were performed by only one FPO out of six. This is due to availability of processing and storage facility in that FPO.

None of the FPOs are performing insurance services as this activity is already carried by other development departments and bankers while lending the loan. Increased rate of premium and delay in process of settling the claims are the reason for non-performance of this activity.

5.1.3 Facilities availed by the members of FPO

The Table 4 shows that cent per cent of the members availed the input supply services as the all the members requires essential inputs during crop season. Technical services are availed by 84.16 per cent of the members as these FPOs are promoted by horticulture department and NGO. The extension staff of these organization provides

technical services to its FPO members. Procurement and packaging services are availed by 51.66 per cent of the members due to availability of these services in three out of six FPOs. Storage facilities were availed by 16.66 per cent of the members due to non-availability of storage facilities like warehouses and godowns in rural areas. The high cost of construction of warehouses is the added reason for not having the storage facilities by majority (83.34 %) of the members.

5.2 Overall Knowledge level of the members about the activities of Farmer Producer Organizations

The data with respect to extent of knowledge possessed by the members is furnished in Table 5 which revealed that more than half of the members (52.50 %) of the FPO members were having medium knowledge level followed by high knowledge level (25.00 %). The probable reason for having medium to high level of education is due to various training programmes, exposure visits, advisory services provided by extension personnel of POPIs to FPO members. The middle age of members and possessing of formal education is the added reason for having medium to high level knowledge. The similar findings were in line with the findings of Kadu and Kotikhane (2012).

5.2.1 Knowledge level of the members on various components of FPO

The data with respect to the quantum of knowledge on various components of FPO possessed by the members is furnished in Table 6 which revealed that majority (90.00 %) of the members are having knowledge on services that FPOs had been provided. Probable reason for this would be that 100.00 per cent of the members are utilizing the services of FPO like input supply *i.e.* seeds, fertilizer and custom hiring services by all its members, followed by knowledge on formalities of registration (85.00 %) probable reason is that membership is mandatory to get the benefits or services of Farmer Producer Organizations hence all the members know about the registration or membership.

5.3 Personal and socio-economic characteristics of Farmer Producer Organization members

5.3.1 Age

It is observed from the Table 7 that out of 120 members, 63 members were middle aged group of 31 to 50 years followed by old aged members *i.e.* 49 members. The reason for having a greater number of middles to old aged members is due to the reason that either the elderly members of the family or active members who is looking the family agriculture activities is becoming the members of FPO as compared with low aged category members. The middle and old age members are having more

experience and have a sense of responsibility in performing the FPO activities. These findings were in line with the findings of Puneet (2016).

5.3.2 Education

Educational background of the sample household is very important to describe as the bulk of their access to credit, institutions, market, processing, registration of membership etc. This is mainly dependent on the level of educational attainment by the members of FPOs. It is an essential element of human resource development as it improves the knowledge and develops required skill base among the individuals. It could be evident from the Table 8, majority of the FPO members were belong to medium education level *i.e.*, 58.33 per cent followed by high category of education (27.50 %). This might be because of the more awareness about importance of education in their family, the farmer members were residing very nearer to the towns like Shivamogga, Bhadravathi, Shikaripura, and Sagara who had good transportation facilities and enough opportunity for availing college and higher-level education. The awareness about importance of education in their family and the efforts of government to provide basic education to all rural people and establishment of schools in their respective villages contributed for low to medium level of education. This calls for encouraging the rural population to acquire higher education. Similar findings were also reported by Hardevinder *et al.* (2012).

5.3.3 Land Holding

It was observed from Table 9 that nearly 40 per cent of the FPO members belonged to semi medium farmers (5.01-10.00 acres), followed by small farmers (2.51-5.00 acres) 27.50 per cent. The possible reason could be the fragmentation of ancestral land from generation to generation might have led to smaller size of land holdings. In order to get benefit from the government schemes some of the families are also had separate landholdings in their respective names.

On the contrary only 2.50 per cent of the members belonged to big land holding category due to joint family type. Those who had agriculture as the main occupation of the family. They always try to possess more acres of land in additional to their ancestral property. The findings are in conformity with the findings of Leelavathi (2017).

5.3.4 Family annual income

Family annual income of the members is presented in Table 10 which shows that 42.50 per cent of the FPO member's family were belong to low category level of income up to Rs. 1.82 lakh followed by medium category level of income (32.50 %) *i.e.* Rs.1.82 to Rs. 5.04 lakh. As the results showed that among the land holders'

majority of the members were possessing semi small land holding (40.00 %) and small land holding (27.50 %) as a result the Family annual income ranges from low to medium.

Remaining 25 per cent of the members belongs to higher family annual income category *i.e.* above 5.04 lakhs. Due to that these farmers are grows commercial crops like arecanut, black pepper and cardamom. Similar findings were also reported by Chinmayi (2015).

5.3.5 Extension contact

It was noticed from the Table 11 that 44.16 per cent of the members had medium level of extension contact followed by high level of extension contact (29.18 %). The reason might be that, the members have been assured that these extension contacts are for their own welfare from which they can get recent information and clarify their doubts about farm practices. In addition, to this the extension personnel of POPIs are regularly visiting the FPOs and providing extensions services to its members. In contrary some of the members had low extension contact (26.66 %), the possible reason could be lack of interest, busy schedule of work and the extension agent might not be available to the members during their office visit. Lack of member's contact with extension personnel and his ignorance might be the other reason for low level extension contact.

The data regarding extension contact in Table 12 Indicated that majority of the members occasionally contacted the extension personnel of assistant agriculture/horticulture officer (51.70 %), agriculture/horticulture officer (50.83 %). The members have more interest to meet officers of these departments in order to get first-hand information on various aspects. As these farmers grows more of horticulture crops and they also wanted to have rapport to get benefits in the form of materials from the officers of various departments. The members were also occasionally contacted agriculture/horticulture 85.84 per cent and extension personnel since these personnel were working at hobli level and easily accessible to the members. Similar findings were also reported by Chinmayi (2015).

5.3.6 Extension participation

The results of the Table 13 indicated that, 46.66 per cent of the members had medium level of extension participation, while 40.00 per cent low level of extension participation. The main reason for this result is that majority of the members had medium extension participation due to good quantum of motivation, more interest in extension activities and medium socio-economic condition. As FPOs promoted by Chaitanya Rural Development Society (CRDS) and Department of Horticulture are

coordinating them to participate in the extension activities like krishimela, exhibitions and training programmes.

The Table 14 shows the frequency of participation of members in extension activities. With respect to frequency of extension participation in various extension activities indicated that 45.83 per cent of the members regularly participated in krishimela, this could be for the reason that all the members belong to Shivamogga district and University of Agricultural and Horticultural Sciences is conveniently located, hence members attended the krishimela regularly. The promoting institute i.e. Chaitanya rural development society (CRDS) is operating in Shivamogga district and it is also organizing krishimela at taluka and hobli level which made the members to participate in krishimela regularly. Similar findings were also reported by Kavya (2018).

5.3.7 Organizational Participation

The results presented in Table 15 shows distribution of members according to organizational participation. It was observed that, 42.50 per cent of the members belonged to medium organizational participation category. Whereas, 38.34 per cent of the members belonged to low organizational participation category. The probable reasons for medium level organizational participation is due to the fact that, most of the members participate 'regularly' in the activities of FPO, then in the activities of majority of the organizations.

A perusal of Table 16 reveals that the participation of members in various organizations. With respect to extent of organizational participation, a majority of the members had 'regularly' participated in Farmer Producer Organization (75.83 %), Dairy Co-operative society (54.16 %) and Primary Agricultural Co-operative Society (31.66 %). The other possible reasons that could be attributed to this were, the members had agriculture as main occupation and dairying as allied activities. The members used to participate in the activities of Farmer Producer Organization, Dairy Co-operative society and Primary Agricultural Co-operative Society as they are residing in their own village and also for obtaining services, technical information and credit to make use of available government schemes. Similar findings were also reported by Chinmayi (2015).

5.3.8 Economic Motivation

With regard to economic motivation from Table 17, majority (45.84 %) of the members were distributed in medium economic motivation category followed by high economic motivation (37.50 %). Economic motivation is an individual's motive to attain maximum profit. The horticulture crops of having high commercial value, assures higher returns by adopting improved cultivation practices. Assured continuous

income from the crop might have contributed for members medium level of economic motivation. The above findings were in line with the findings of Leelavathi (2017).

5.3.9 Mass media exposures

Table 18 reveals that 38.34 per cent of the members had high level of mass media participation and 29.16 per cent had medium level of mass media participation.

The reason for high to medium mass media participation might be due to the awareness and importance of information by the members and their higher socio-economic level. Television and radio were the most effective common media which were possessed by a large majority of the members. Television has brought about a revolution in the field of entertainment, education and communication. Its strong visual impact as compared to only reading in case of newspaper and listening in case of radio replaced them. Also, the illiterates get very good educative programs from this stronger media.

On the contrary the probable reason for low mass media participation (32.50 %) by the members might be due to less utility, lack of practicability and inconvenient timing of the agricultural programmes. The circulation of newspapers and availability of radio signals are the limitations for some of the interior villages. Similar findings were also reported by Kavya (2018).

5.3.10 Credit Orientation

In Table 19 depicted with regards credit orientation farmers had medium level of credit orientation (48.34 %). The farmers with regards to credit orientation the possible reason might be that in adoption of latest technology required the use of higher amount. Hence, this might have shown medium orientation towards credit. Similar findings were also reported by Jayapradha (2007).

5.4 Problems faced by the members of FPO

The Table 20 shows the various constraints faced by members that the FPOs were less advance in using processing technology, more than three fourth of the members (83.33 %) expressed their problem of lacking processing units, probable reason for this might be that high cost involved in establishing processing units and lack of technical knowledge regarding processing technology. The second major constraint is that procurement system 53.33 per cent as only three FPOs are performing the activity of Procuring commodity and other the reason might be that improper or lack of market linkage between and farmers and buyers. As a result of poor marketing linkage and credit facilities 50 per cent of members are facing the improper procurement system is the third major constraint followed by lack of custom hiring services (33.33 %). The findings are in line with Chinmayi (2015).

5.5 Suggestions offered by the members to strengthen the performance of FPOs

Suggestions offered by the members to strengthen the performance of FPOs are presented in Table 21 depicts that establishment of processing units related to primary processing was the suggestion given by majority (71.66 %) of the members. As some of the members due to the non-availability of processing facilities for their high value produce such as arecanut and horticulture crops like chilly, tomato etc., hence suggested to set up processing units so that they can fetch higher price their produce. About 59.76 per cent of the members opined to improve the market gap between buyers and farmers by bridging between the ensured buyers and farmers with proper procurement system on contractual/agreement-based method. Sixty-seven members suggested for enhancing the credit facility for the members either as collateral loan/pledge loans on by keeping their produce as sign of assurance. Nearly less than half of the (41.66 %) members suggested to make the availability of farm equipments on time and with lesser rents under the custom hiring services of farm equipments during the pre-monsoon and post-harvest period of time. About forty-eight members opined that registration process should be made simple as it will be helpful even for illiterates to get membership in the FPOs. Very a smaller number of members *i.e.* 19.16 per cent of the members opined that membership charges imposed to get membership was heavy that can be reduced. The findings are in line with Puneet (2016).

5.6 Success stories of the FPO members

5.6.1 “Crop diversity is the key reason for the success!!!”



Mr. Rajanna H. O. is an enthusiastic farmer from Hitturu village, Bairankoppa post of Shivamogga taluk and district in Karnataka state. He is basically from an agricultural background. He possesses a total of 6 acres of agricultural land in which he is cultivating arecanut and black pepper in 2 acres of land as mixed farming and he has 25 coconut palms, several honey bee boxes and vermicompost pits in his farm field. He was passionate towards dairy farming,

but had a problem of inputs and credit to set up livestock activity in his farm.

Due to the non-availability of input feed supplement in his locality, he was unable to meet the crisis of feed for the cattle. He got to know the services given by the producer's company in the awareness programme conducted by the state department of horticulture. Then he got membership in the *Shivamogga Tungabhadra Horticulture Farmers Producers Company Limited* in the year 2017 at Mallapura



village near to his resident. The FPO has been supplying inputs like seeds, fertilizers, pesticide and also cattle feed on subsidized rates to its members. He purchased four cattles by the help of credit assistance given by FPO and started benefitting the cattle feed supplement provided by the company. He had purchased motor bike by availing loan and using it to put the milk at Mallapura Dairy Cooperative Society daily. He has been able to give 20 liters of milk every day at dairy. He has been able to earn Rs.560 per day, which accounts Rs.1,68,000 per annum. He is thankful to Shivamogga Tungabhadra Horticulture Farmers Producers Company Limited and State Department of Horticulture for transforming average earning farmer in to well earning dairy farmer.

“I have adopted diversified cropping pattern and dairy farming at low cost technology. I also advice my farmer friends to adopt integrated farming to earn more income. The concept like FPO should be set up in every villages so that it will brighten many farmer’s life just like mine he added at the last”. - Rajanna H O, beneficiar

5.6.2 “Organizational innovations doubles the achievement motivation of farmer!”



Achyutha son of Hanumatappa is a young farmer from Baranduru village of Bhadravathitaluk, Shivamogga district. He possesses 2 acres of agricultural land in which he is cultivating paddy in 1.5 acres and in the remaining half acre, he has 20 coconut palms. He is maintaining two dairy animals and getting an income of Rs. 50, 000 per annum by selling milk. Before the establishment of Malenadu Spice and Nuts Producers’ Company Private Limited in 2016, he was serving as tractor driver along with farming. Once after producer company introduced with the neera processing technology, training has been given to coconut farmers on acquiring skill of tapping neera by climbing coconut palm with help of climbing friendly equipment, he shifted from traditional method of selling coconut products like copra and tender coconut to selling of neera, a by-product of coconut with the help of climbing device given by producer company. In traditional method selling coconut he had problem of fluctuations in the market price and also had burden of transportation cost. But once after he started selling neera to the producer company he is able to earn Rs. 1000 Out of 40 litres of neera from 20 palm per day. Which accounts Rs. 30,000 per month. Earlier he was able to earn only Rs.8000 per month out of rental driving of tractor

now is engaged with earning almost every day. The training on neera extraction skill trained by the Malenadu Spice And Nuts Producer Company Limited transformed him as an economically stable coconut farmer.

5.7 Conclusion

In the present day due to a smaller number of extension person. It becomes difficult to contact each and every individual farmer by individual contact method. Due to the establishment of FPOs the members are getting the services like inputs, advisory services, custom hiring services at the doorstep at reasonable prices on the other side the extension work becomes easier due to union of farmers into organization. The members of FPO have enough knowledge on cultivation of crops. The POPI should concentrate on forward linkages and establishment of processing units and providing storage facilities to its member.

5.8 Future line of work

Studies in following aspects can be taken up to make the producer company serve farmers better.

1. The present investigation had the limitation of time and resource of a single investigator and the sample size were only 120 selected from Shivamogga district alone. In order to derive wider generalization, a study with large sample size could be appropriate. A comprehensive study taking into consideration several farmer producer companies need to be taken up for greater generalization.
2. Case studies on successful producer companies can be taken up.
3. Impact studies on producer companies on the socio-economic condition of farmers can be taken up.

SUMMARY

VI SUMMARY

In the country like India, role of small farmers in poverty reduction is well recognized. However, in the absence of robust public/private support system at the ground level farmers face challenges in accessing land, water, inputs, credit, technology and market. There are structural and governance challenges too. In spite of the challenges discussed above, there are technological as well as institutional innovations taking place to enable small farmers for increasing productivity and income through collective initiatives. Different models of collectives have been tried in India such as Self-Help Groups, Common Interest Groups (CIGs), Joint Liability Groups (JLGs), Farmers Club, Farmer Producers Organisations etc., The GoI mooted the idea of making the collective thinking and behave like business entities by getting incorporated as Producers' Companies under the Companies Act of 1956 (amended in 2002). Y. N. Alagh committee, on 6th February, 2003 recommended the concept of Farmer Producer Organization (FPO). Producers are the shareholders in the organization. In fact, Producers Company is the most appropriate institutional form which enable farmers to build their capacity to collectively leverage their production and marketing strength.

A Farmer Producer Organization / Company is a group of farmers or producers to carryout business activities related to the primary produce, product or related inputs. (<https://www.nabard.org>). Presently 759 FPOs are functioning throughout India. Karnataka state has 119 FPOs. Shivamogga district has 9 FPOs which are promoted by NGO (Chaitanya Rural Development Society) and State Department of Horticulture.

Objectives of the study

1. To study the performance of Farmer Producer Organizations
2. To assess the knowledge level of members about the activities of Farmer Producer Organizations
3. To document the success story of Farmer Producer Organization members
4. To identify the problems faced by members and suggestions to strengthen the functioning of Farmer Producer Organizations

In the present study, Ex post facto research design was used. Shivamogga was purposefully selected for study as the district has a greater number of FPOs in Karnataka. A total of 120 samples were selected based on the villages having highest number of members. Pretested interview schedule was used to collect the data from the members by personal interview method. The data collected was analyzed by using statistical tools such as frequency, percentage, mean, standard deviation.

Major findings of the study are as follows:

- ✓ Majority of the FPOs were possessed medium (50.00 %) and high (33.33 %) about overall performance.
- ✓ All the six FPOs were performing activities like custom hiring services, input supply, auditing of accounts, conduct of meetings, follow up of rules and regulations, book keeping and documentation was found cent per cent. Majority of the FPOs (83.33 %) were possessed internet services and technical advisory services to its members. About 66.64 per cent of them were engaged in regular conduct of training programmes. Only 50 per cent of the FPOs involved in procurement and market linkage activities. Two FPOs (33.36 %) are followed the rotation of Board of Directors, followed by only 16.67 per cent of the FPOs were offered credit services, storage and primary processing units to its members and none of the FPOs provided / enabled insurance services.
- ✓ Every member from each FPOs were availed the input supplement services provided by the FPOs followed by about 84.16 per cent of members availed technical / advisory services.
- ✓ Majority (52.50 %) of the members had medium level of overall knowledge on activities of FPO followed by 25 per cent of the members had high level of overall knowledge.
- ✓ Majority (90.00 %) of the members having knowledge on services provided by the FPO followed by 85 per cent of the members had knowledge on formalities of registration.
- ✓ Majority (52.50 %) of the members belonged to middle age group followed by old age group (40.80 %).
- ✓ More than fifty per cent of the members (58.33) belonged to medium education category followed by 27.51 per cent high education category.
- ✓ Majority (40.00 %) of the members possessed semi small farmers of having 5 to 10 acres followed by small farmers (27.50 %).
- ✓ With regard to annual income, majority (42.50 %) were belong to low income group
- ✓ About 44.16 per cent of the members had medium extension contact followed by high extension contact 29.18 per cent.

- ✓ Just less than fifty per cent of the members (46.66 %) had medium extension participation and about 40.00 per cent of the members possess low extension participation.
- ✓ Medium category of organizational participation was observed in 42.50 per cent of the members followed by low category (38.34 %).
- ✓ With regard to economic motivation, majority (45.84 %) of the members were distributed in medium economic motivation category and about 37.50 per cent lies in high economic motivation category.
- ✓ About 38.34 and 32.50 per cent of the members had high and low mass media exposure respectively.
- ✓ Majority of the members had medium level of credit orientation (48.34 %) followed by low level 37.50 per cent.
- ✓ Majority of the members expressed the constraints such as problems related to lack of processing units (83.33%), lack of procurement system (53.33 %) and lack of credit facilities (50.00 %).
- ✓ More than half of the members (71.66 %), opined their suggestion on establishment of processing units followed by improve in procurement system (59.76 %) and exactly half of members (50.00 %) opined that proper market linkage can be made.

Implications of the study

In the light of findings of the study and personal experiences of researcher at the time of personally interviewing members, following implications are made.

- ✓ Majority of non-members and even considerable percentage of members possess low to medium level of knowledge regarding FPO. For any programme to be successful, the beneficiaries should have thorough knowledge of entire programme. So, existing institutional setups like KVKs, development departments and NGOs may be effectively utilized for creating awareness among farmers about various activities of farmer producer organizations.
- ✓ Majority of members possess favorable attitude towards FPOs. Strengthening the functioning of Producer Company through institutional support needs to be taken up. Input agencies, investors, buyers, financial institutions and NGOs need to be linked with FPOs.
- ✓ Majority of members expressed lack of processing units as the major constraint. There is an immediate need for working out a mechanism for providing the processing technological support to producer companies either through government or through independent institutional mechanisms.
- ✓ Majority of members expressed lack of credit facilities as the major constraint. There is an immediate need for working out a mechanism for providing the critical support to producer companies either through government grants or through independent institutional mechanisms.
- ✓ Members also expressed registration procedures as very cumbersome, arduous and time taking. Hence, simplifying the registration procedure and providing helping hand while registration needs to be taken up

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APPENDICES

UNIVERSITY OF AGRICULTURAL AND HORTICULTURAL SCIENCES
College of Agriculture, Shivamogga
DEPARTMENT OF AGRICULTURAL EXTENSION
“A STUDY ON PERFORMANCE OF FARMER PRODUCER
ORGANIZATIONS IN SHIVAMOGGA DISTRICT OF KARNATAKA”

Interview Schedule

Respondent No.: _____

PART – A

I General Information

1.	Name of the respondent :	
2.	Village :	
3.	Taluk and District :	
4.	Contact number :	
5.	Name of the FPO :	

II Personal and socio-economic characteristics

1.Age : years

2. Education (Give ‘√’ mark on appropriate column)

Illiterate	Primary School	Middle School	High School	PUC	Degree		Other
					G	PG	

3. Land Holding (ha)

Sl.No	Type of land	Area (Ha)
1.	Rainfed	
2.	Irrigated/ Garden land	
Total:		

4. Annual family income:

1. Agriculture and Allied sources : Rs. _____

2. Other sources : Rs. _____

Total : Rs. _____

5. Extension Contact:

Please indicate the frequency of contact with the extension personnel

SI. No.	Persons/Source	Frequency of visit		
		Regularly	Occasional	Never
1	Joint director of Agriculture/ Horticulture			
2	Deputy Director of Agriculture/Horticulture			
3	Assistant Director of Agriculture/ Horticulture			
4	Agriculture Officer/ Horticulture officer			
5	Assistant Agriculture officer/Horticulture officer			
6	Agriculture Assistant/Horticulture Assistant			
7	University Scientists/ KVK			
8	Others (specify)			

6. Extension Participation:

Please indicate the frequency of participation in Extension activities

Sl. No.	Extension activities	Frequency		
		Regular	Occasional	Never
1	Training programmes			
1	Method demonstrations			
2	Result demonstrations			
3	Krishimela			
4	Exhibitions			
5	Field days			
6	Exposure visits			
7	Campaigns			
8	Others (specify)			

7. Organizational participation

Please indicate the extent of participation in the following organizations

Sl.No.	Organization	Extent of participation		
		Regularly	Occasionally	Never
1	Dept. of Agriculture			
2	Dept. of Horticulture			
3	Farmer producer organization			
4	Primary Agricultural Co-op. Society			
5	Panchayathraj institutions (GP,TP,ZP)			
6	Dairy Cooperative Society			
7	KVK / Research stations			
8	NGO			
9	Others (Specify)			

8. Economic motivation: Read the following statements and give your response to each. (A- Agree, UD-Undecided, DA- Disagree)

Sl. No.	Statements	A	UD	DA
1.	A farmer should work towards larger yields and economic profits.			
2.	The most successful farmer is the one who makes the best profits.			
3.	A farmer should try any new farming idea which may earn more money.			
4.	A farmer should grow commercial crops to increase monetary profits in comparison to growing of food crops for home consumption			
5.	It is difficult for farmer's children to make good start unless he provides them with economic assistance.			
6.	A farmer should earn for his living, but the most important thing in life cannot be defined in economic terms.			

9. Mass media participation:

Please indicate the frequency of use of mass media sources

Sl. No.	Source	Frequency of use		
		Regular	Occasional	Never
1	Newspaper			
2	Farm magazine			
3	Radio			
4	Television			
5.	Internet			
6.	Other			

10. Credit Orientation

1.	Do you think through FPO a farmer like you should borrow money for agricultural purpose?	Yes/No		
2.	In your opinion how difficult it is to secure credit from FPO for agricultural purpose	Very easy/easy/difficult/very difficult		
3.	How farmers are treated when they go to secure credit from FPO?	Very fair/fair/badly/very badly		
4.	There is nothing wrong in taking credit through FPO for increasing farm production	Strongly agree/agree/disagree/strongly disagree		
5.	Did you use credit in the last two years for cultivation	Yes/No		
6.	Please mention the regularities of repayment	Regular/not regular		
7.	Please mention the amount of loan borrowed through FPO for various agricultural purpose for the last two year	Yes/No		
2016-17		2017-18		
Sl. No.	Amount of Loan (Rs.)	Purpose	Amount of Loan(Rs.)	Purpose
1				
2				

PART – B

I.KNOWLEDGE OF FARMER MEMBERS REGARDING FARMERS PRODUCER ORGANIZATIONS

1) What do you mean by FPO?

- a) Farmers Producer Organization b) Farm Procurement Organization
c) Farm Product Organization d) None of these

2) Mention the promoter of your FPO

- a) NGO b) Horticulture department
c) Agriculture department d) None of these

3) When did Farmers Producer Organization was started in your village?

- a) 2013-14 b) 2014-15 c) 2015-16 d) 2016-17

4) How many FPOs are functioning in your taluq?

- a) One b) Two c) Three d) More than three

5) The optimum number of farmers required to form FPO is _____

- a) < 500 b) 500-699 c) 700-1000 d) >1000

6) Who can form the producer Organization?

- a) Primary producer only b) Traders c) Farm laborers d) All of these

7) FPO offers services for

- a) Member farmers only b) Non-member farmers only c) Both a and b d) None

8) What are the goals of FPO?

- a) To improve bargaining power of small farmers and Collective action
b) Offer Input services at affordable rate
c) Increasing marketing avenues for farm produce
d) None of these

9) What are the services offered by FPOs?

- a) Input supply b) Custom hiring services c) Credit facilities d) All of these

10) What are the infrastructure facilities created under your FPO?

- a) Storage godowns b) Processing unit c) Cold storage d) None

11) Who gives credit assistance for establishing processing Unit?

- a) NABARD b) Regional Rural Bank c) Co-op. Societies d) None of these

12) Mention the inputs distributed through FPO?

- a) Chemical fertilizer b) Pesticides c) Seeds d) All of these

13) What are the different modes of transfer of information offered by FPO?

II PERFORMANCE OF FARMER PRODUCER ORGANIZATIONS

PERFORMANCE INDICATORS FOR FPO		
Items	Criteria	Score
1. Rules and regulations for the FPO	Exists, understood and followed by all penalties for breaking rules	
	Exists and understood by most but not fully followed penalties in some but not all cases	
	Exists, many members are not aware, no penalties	
	Only promoters and staff say that they exist, members do not know them	
2. Credit service	Demand based	
	Provided based on member's decision	
	Purpose based	
	No such services	
3. Percentage of loan offered to members	> 50% of the members	
	25-50% of the members	
	< 25% of the members	
	Nil	
4. Internet services	Equipped with internet connection as well as computer along with operating staff	
	Equipped with computer along with one operating staff with no internet connection	
	Possess computer but lack with the operating staff	
	Doesn't possess internet service	
5. Rotation of executive body	Fixed time period	
	Variable time period	
	Only when required	
	No rotation of body	
6. Conduct of meeting	Regular interval	
	Not so regularly	
	More irregularly	
	Not fixed time and day	
7. Auditing of accounts of FPO	Every year	
	Quarterly	
	Sometimes when required	
	No auditing taken place so far	

PERFORMANCE INDICATORS FOR FPO		
Items	Criteria	Score
8. Training programmes organized	More than 5 training programmes are organized	
	3-5 trainings programmes are organized	
	3 training programmes are organized	
	No training programmes organized	
9. planning, implementing, monitoring and evaluating programmes	Regular with 100 % members involvement	
	Regular but only 50 % of the member	
	Irregular and 50% of the members	
	Nil	
10. Attendance of the members for meeting	>90%	
	75 - 90%	
	50 -75%	
	< 50%	
11. Insurance service	Insurance service is provided for all the farmers as well as crops of the area	
	Insurance service is provided only for few selected crops in the area	
	Insurance service is provided only for farmers but not for crops	
	No insurance service at all	
12. Backward linkage (Input supply)	Best quality input on/before onset of sowing operations	
	Good quality input on /before onset of sowing operations	
	Average quality input but not on timely basis	
	No input supply activities have been carried out	
13. Training programmes attended	More than 75% training programmes attended.	
	50-75% trainings programmes are attended.	
	50% training programmes are attended.	
	No training programmes attended.	
14. Market linkage	Favorable and exists for all crops.	
	Favorable and exists for only few crops.	

PERFORMANCE INDICATORS FOR FPO		
Items	Criteria	Score
	Poor market linkage	
	Nil	
15. Dissemination of market information	Accurate and timely	
	Accurate but not timely	
	Timely but not Accurate	
	No technical information	
16. Aggregation and storage of produce/input	Organizations are equipped with better go down and storage units	
	An average go down facility to store the produce/input	
	Poor go down facility	
	No go down or storage facility	
17. Primary processing (drying, cleaning and grading)	Well advanced processing units are available	
	An average kind of primary processing units are available	
	Poor or bad processing units	
	No such facilities are existed	
18. Custom hiring service	All the farm equipments are available on time	
	All the farm equipments are available for the members but not on time	
	Only few equipments are available on time for the farmers	
	No custom hiring services are available	
19. Participation of members in decision making	Issues fully undersigned by all members decisions collectively taken by all members	
	Issues understood by representatives or promoters and some members, who also influence decisions	
	Understanding issues and decision taking limited to representatives and one or two members	
	High dependence on promoters and or on take all decisions	
20. Participation of members in responsibility sharing	All members regularly share the responsibility on rotation	
	Responsibility shared among some few	

PERFORMANCE INDICATORS FOR FPO		
Items	Criteria	Score
	members	
	Same people take responsibility or depend on staff or promoter	
	High dependence on promoter and or staff	
21. Book keeping and Documentation	All books are up to date and correctly maintained and regularly audit has done	
	All books are up to date and correctly maintained but no auditing has taken place	
	Books are well maintained but not regularly updated.	
	No document or books are properly maintained	
22. Sanctioning of loans	sanctioned to all the members	
	sanctioned to >50% of the members	
	sanctioned to <50% of the members	
	No loans are sanctioned	
23. Loan repayment	More than 90% repayment has done in stipulated time.	
	70% to less than 90% repayment has done	
	50% to less than 70% repayment has done	
	Below 50% members has repaid.	
24. Attitude of members towards FPO and its activities	More than 90% of the members expressing favorable attitude	
	More than 75% up to 90% of the members expressing favorable attitude	
	50-75% members expressing favorable attitude	
	Less than 50% of members expressing favorable attitude	
25. Team spirit among the group members	Team spirit is excellent	
	Team spirit is good	
	Team spirit is average	
	Team spirit is poor	

III Problems Expressed by the Members of Farmers producer Organization

Please state the constraints

SL. No.	Items	
1.	Lack of processing units	
2.	Inadequate knowledge about various services provided by FPO	
3.	Non-existence of procurement system	
4.	Poor credit facilities	
5.	Absence of proper market linkage	
6.	Non-availability of custom hiring service	
7.	Complexity of registration process	
8.	High initial share capital/ membership charge	
9.	Heavy paper work and book keeping	
10.	Lack of proper input supply	
11.	If any other:	

IV Suggestions of Farmers to Strengthen the Functioning of Farmer Producer Organization

Please give your valuable suggestions to overcome the problems

1. _____
2. _____
3. _____
4. _____
5. _____

Other additional information about respondent/ FPO:

APPENDIX-II

Abbreviations used in the thesis

GDP	Gross Domestic Product
SHGs	Self-Help Groups
CIGs	Commodity Interest Groups
JLGs	Joint Liability Groups
NABARD	National Bank for Agriculture and Rural Development
PRODUCE	Producer Organization Development and Upliftment corpus
PODF	Producers Organization Development Fund
KVK	Krishi Vigyan Kendra
FPC	Farmer Producer Company
NGO	Non-Government Organization
SFAC	Small Farmers Agro Consortium
FPO	Farmer Producer Organization
IOFPCL	Indian Organic Farmers Producer Company Limited
PACS	Primary Agricultural Credit Society
INFAM	Indian Farmers Movement
POPIs	Producer Organization Promoting Institute
OW	Organic Waynad
MSSRF	M. S. Swaminathan Research Foundation
GMP	Good Management Practices
RKVY	Rashtriya Krishi Vikas Yojana
NHM	National Horticulture Mission
CRDS	Chaitanya Rural Development Society
FAO	Food and Agriculture Organization
PC	Producer Company
CEO	Chief Executive Office
%	Per cent