EMPOWERMENT OF VEGETABLE FARMERS THROUGH MARKET - LED EXTENSION

By

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THESIS

Submitted in partial fulfilment of the
requirement for the degree of

Master of Science in Agriculture

Faculty of Agriculture
Kerala Agricultural University

Department of Agricultural Extension

COLLEGE OF HORTICULTURE
VELLANIKKARA, THRISSUR - 680 656
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2007

DECLARATION

I, hereby declare that this thesis entitled **"Empowerment of vegetable farmers through market-led extension"** is a bonafide record of research work done by me during the course of research and that it has not been previously formed the basis for the award to me of any degree, diploma, fellowship or other similar title, of any other University or Society.

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CERTIFICATE

Certified that this thesis entitled **"Empowerment of vegetable farmers through market–led extension"** is a record of research work done independently by **Ms. Shinogi, K.C.** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma or fellowship to her.

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ACKNOWLEDGEMENT

It is with great respect and devotion, I place on record my deep sense of gratitude and indebtedness to my major advisor ***Dr. Jayashree Krishnankutty,*** *Assistant Professor, Department of Agricultural Extension and chairperson of my Advisory Committee for her sustained and valuable guidance, constructive suggestions, unfailing patience, friendly approach, constant support and encouragement during the conduct of this research work and preparation of the thesis. I gratefully remember her knowledge and wisdom, which nurtured this research project in right direction without which fulfillment of this endeavor would not have been possible.*

I place a deep sense of obligation to ***Dr. F.M.H. Khaleel,*** *Professor and Head, Department of Agricultural extension, College of Horticulture and member of my Advisory Committee for the help and co-operation received from him during the entire programme. He in spite of a busy schedule has offered constructive suggestions for the betterment of this manuscript.*

I am deeply indebted to ***Dr. Satheesh Babu,*** *Associate Professor, Department of Agricultural Economics, College of Horticulture and member of my Advisory Committee for his unstinted support, critical comments and valuable suggestions during the preparation of this manuscript.*

I am very thankful to ***Sri. S.Krishnan,*** *Assistant Professor, Department of Agricultural Statistics, College of Horticulture and member of my advisory committee for kindly providing facilities and timely help during the statistical analysis of the data.*

I extend my profound thanks to **Dr. Joy Mathew,** *Professor and Head, Central Training Institute, Mannuthy for his unclenching support during the fledging stages of my MSc course.*

I am very much obliged to **Dr. P. Ahmed,** *Professor, Department of Agricultural Extension, College of Horticulture, Vellanikkara for his eminent suggestions, critical assessment, and timely help at various stages of my work.*

My sincere thanks are due to **Dr. K. M. Sreekumar,** *Associate Professor and Head, Department of Agricultural Entomology, College of Agriculture Padnekkad for the valuable help and advice rendered during the course of my study.*

I take this opportunity to thank my seniors **Helen madam** *and* **Grace,** *my classmates* **Jaliya** *and* **Kavya** *and my junior* **Madhu** *for their support and encouragement.*

I am extremely thankful to my dear most friends **Nisha Jose , Nisha , Sameera P , Deepaku , Anuradha , Rasana , Smitha Bhasi , Sameera K , Sangitha , Dana , Nazeeb , Nooh , Ummer , Navomy , Shihab , Shijo , Jamsheed , Ampily , Archana , Sreerekha , Smisha , Gayathry chechy , Vinesh** *and also* **to all my batch mates** *for the heartfelt help, timely suggestions and back-up which gave me enough mental strength to get through all mind-numbing circumstances.*

Words cannot really express the true friendship that I relished from **Jinsy , Vinod , Ashique , Bijo , Imrose , Arun Visa , Jyothish , Kannan , Jiss ,**

Jiyas , Shabab , Anisha Kalkoor , Reshmi chechy and Anto , for their sincere support all through out.

I express my sincere thanks to Santhoshettan , Roy chettan , Nalini chechy , Shaju chettan , Nisha chechy , Raji and Sumitha chechy for the timely and wholehearted co-operation and assistance they always accorded me during the course of investigation.

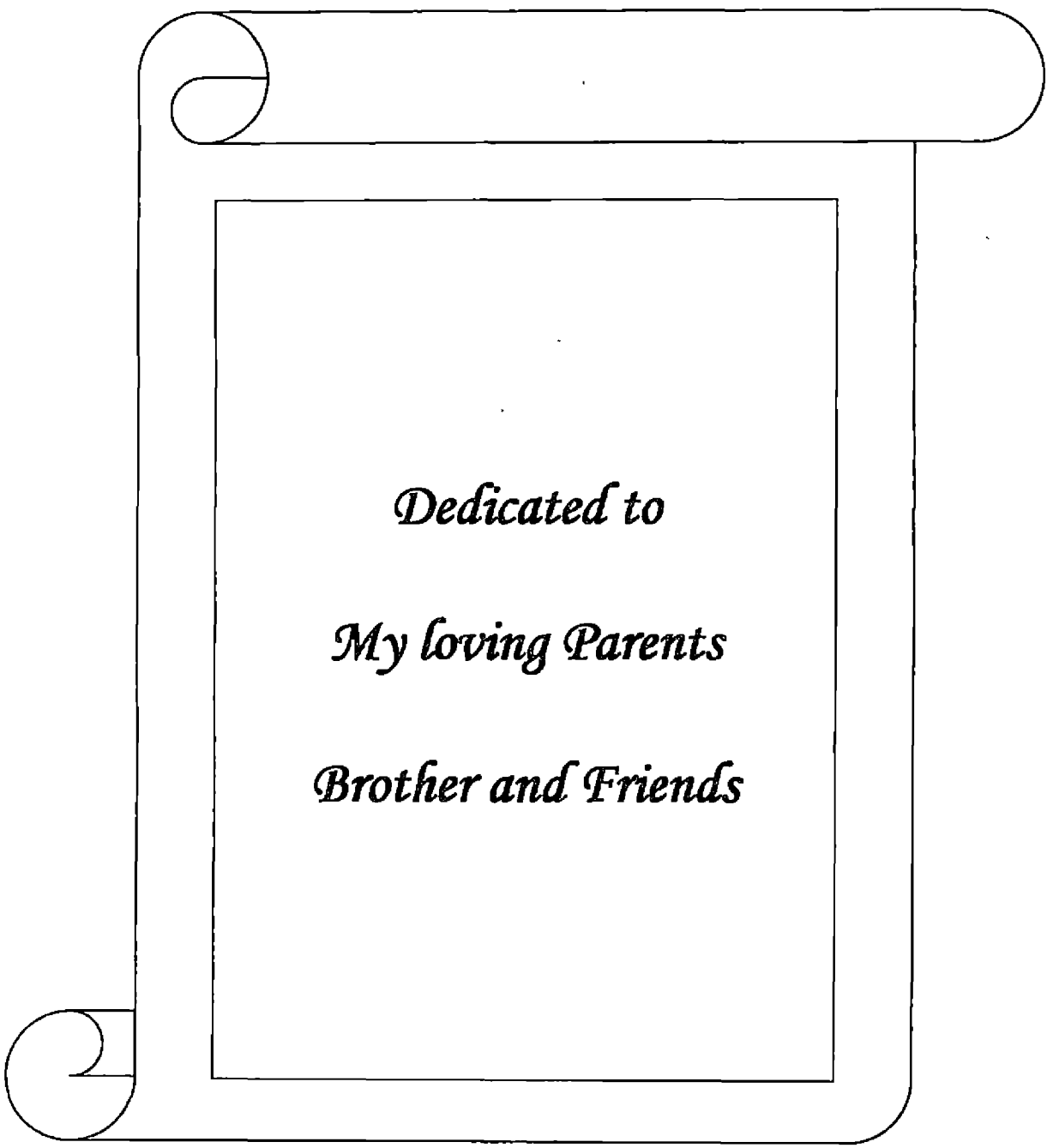
My sincere thanks to the Officials and members of VFPCK , Kudumbasree , and Krishi Bhavans of Kasargod and Thrissur districts ,for their timely help during all stages of my study.

I express my deep sense of gratitude to Kerala Agricultural University for extending financial and technical support for pursuance of my study and research.

I express my deep love to my Achan , Amma , Ammama , younger brother Jinesh , Mema and sweet cousins Catherine and Alex without whose moral support and affection this would not have been a success.

Finally, I bow my head before THE ALMIGHTY whose blessings enabled me to undertake this venture successfully.

Shinoqi, K. C


Dedicated to
My loving Parents
Brother and Friends

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LIST OF ABBREVIATIONS

SHG	-	**Self Help Groups**
VFPCK	-	**Vegetables and Fruit Promotion Council Keralam**

INTRODUCTION

I. INTRODUCTION

India's extension system is at a pivotal point in its evolution. Since independence, the extension system, mainly the public extension system, has focused primarily on agriculture and rural development goals that changed from time to time. Starting from the pre-independence period and continuing up through the implementation of T & V, the extension system was oriented towards "diffusion of innovation". This linear model of extension though widely criticized, still continues to operate at all levels.

Extension approaches to transfer farm technologies have been changing since we started community development program in 1952. Today, extension faces not only the challenge of meeting the increased demand for food, but also the issues related to sustainable development, environmental protection, conservation of natural resources, as well as improving the socio-economic status of weaker sections of rural community (Vijayaragavan,2004). These call for a new set of technologies, and management practices that address to the needs of food security, poverty alleviation and new market demands within and out side the country.

The process of globalization and economic liberalization and revolution in information and communication technology are the strong phenomena responsible for bringing tremendous change in Indian agriculture – a significant contributor to national economy. The agriculture situation has become more volatile, competitive, knowledge – based and market oriented. It has been realized that the agricultural development in our country has to be market driven and responsive to the changed world trade environment. Now, Agricultural Extension is being viewed in the context of livelihood for the rural poor. Marketing extension, participatory technology development and cyber extension are some of the new dimensions of extension.

Providing livelihood to the poor farmers seems to be a greater need of the day than simply increasing farm production. It is important, as Farrington *et al.* (2002) mention, "to look beyond agricultural extension to a more inclusive livelihood extension". It is a challenge to put extension within the framework of pro-policies of the state. To what extent poor farmers benefited from the various extension programs and whether researchers and extensionists perceives their roles vis-à-vis poor farmers.

The new dimensions and the consequent shift to livelihood have raised many inter-related issues those need to be addressed. Policy makers and extensionists frequently ask to what extent extension has been able to meet the requirements of the poor. The whole exercise of framing extension policies and developing extension infrastructure depends up on this basic premise. There is a need to review the extension context as it existed and consider the new dimensions of development that is likely to influence the extension system.

Indian agriculture is characterized by lack of strong linkages between production and marketing strategies. More than 75 per cent of agricultural producers are small and marginal farmers. Farmers need to be supported with information, knowledge, and the skills to adopt improved technologies that result in improved farming with characteristics that are productivity enhancing, vulnerability reducing, and employment creating. However, the requirements of farmers and rural families go beyond agricultural production technologies. Changes in recent years, not least the increasing penetration of markets into rural areas and the need to tailor products to ever more stringent market requirements means that extension support must now address a broader range of farmer objectives.

Farmers receive most of the production technologies from the extension system. Extension system now needs to be oriented with knowledge and skills related to market. In the 1990s publicly funded extension took on broad new goals

of natural resource management and diversification. The need for a group approach to extension and the importance of producer group (farmer interest groups, commodity associations etc.) were also recognized, but many to these changes remained at the level of planning and rhetoric.

At times, certain concepts become popular and draw the attention of people. One of such concept is Empowerment. Since mid 1980s, this concept became popular in the field of development, especially with reference to women. But the term has been used to convey several meanings. Empowerment literally means "to invert with power". According to World Bank (2002), ' Empowerment' means enhancing the capacity of poor people to influence the state institutions that affect their lives, by strengthening their participation in political processes and local decision-making and it means removing the barriers- political, legal and building the assets of poor people to enable them to engage effectively in markets.

Empowering farmers socio-economically through increased awareness about their capabilities as well as access to resources is an important step to develop self confidence in them. This will help to strengthen them to achieve their economic, social, cultural and personal growth and welfare. In short, empowerment of farmers aims at equipping them to be economically good and personally self-reliant, with a positive self-image to enable them to rise above any critical situation.

In order to bring the concept of empowerment into reality, farmers should unite themselves in to social groups like Farmers Interest Groups, or Self-Help Groups. These groups have a common perception of need and the advantage of collective action. People participate only in those economic, social and cultural processes that have the potential to bring about favorable changes in their lives. The awareness these groups have created and the attitudinal changes they have brought in the minds and outlook of the members have definitely helped in realizing their own intrinsic strength. While successfully playing their pre-

determined role in economic empowerment, the SHGs have also begun to play a role as vehicles of social progress.

An efficient marketing system is essential for the development of the agricultural sector. In as much as it provides outlets and incentives for increased production, the marketing system contributes greatly to the commercialization of subsistence farmers. Failure to develop the agricultural marketing system is likely to negate most, if not all, efforts to increase agricultural production (FAO, 2000). It is expected that future agricultural growth would largely accrue from improvements in productivity of diversified farming system with regional specialization and sustainable management of natural resources, especially land and water. Effective linkages of production systems with marketing, agro-processing and other value added activities would play an increasingly important role in the diversification of agriculture (GOI 2001).

While the extension so far has been focusing on transfer of technologies as its major goal, in the coming years, extension has to re-orient its goal towards enhancing the overall capacity of farmers. Unlike the situation, where farmers are given only general recommendations for a wide area, in future, the technologies should be location specific and farmers will also get a cafeteria of technologies with provision for alternatives. Since these sustainable and location specific technologies to be transferred are knowledge intensive, farmers need a higher level of managerial skills. Thus, the extension services have to improve the overall managerial and decision making capacity of farmers. This means that extension should find innovative ways for creating infrastructure and strengthening the capacity of farmers and farmers' organizations, which will improve their access to technological and developmental information. This will result in empowerment of rural people.

The market-led extension framework device approaches that farmers can adapt from planting to final market transaction. Market information is of great

significance in farming. In the absence of timely, accurate information, there may be a glut in the market or scarcity conditions may prevail. Extension's over emphasis on increasing productivity does not match with today's requirements, as the farmers need credit, storage, market intelligence etc. to reap the benefit of increased production. The market-led extension approach will facilitate decision making as to "where to grow and when and where to sell".

Expert Committee on Agricultural Marketing (2001) emphasized that a massive program of marketing extension needs to be launched at the field level wherein extension messages should encompass all important dimensions of agricultural marketing. Marketing extension service to educate the farmers, improve their marketing skills, bring change in their attitude and equip them on various intricacies of agricultural marketing was grossly inadequate in earlier days. But now the market-led extension service establishes its position by helping the farmers realize high returns for the produce, minimize the production costs and improve the product value and marketability. Self help groups that have become a major force in accelerating rural development, mostly face through market-led extension. Thus they should be able to play a significant role in empowering the rural poor.

While the revamping of the agricultural marketing system in the country is ongoing, the need for establishing a sound agricultural marketing information system in the country has been strongly felt. Such a system will ensure proper utilization of the emerging trade opportunities by the farming community. Market information is needed by farmers in planning production and marketing. In order to improve the present market information system, Directorate of Marketing and Inspection (DMI), Ministry of Agriculture has formulated a central sector scheme AGMARKNET (Agricultural Marketing Information System Network) for linking all regulated markets spread all over the country.

AGMARKNET program plays a catalytic role for ushering in "Market-led agricultural extension" in India, highly scalable, planned through bottom up process, and implemented through active involvement and collaboration of agricultural market committees in India. This digital development in rural areas of India facilitates rural prosperity, rural empowerment, and a warehousing of data for development.

In Kerala, organizations like VFPCK (Vegetable and Fruit Promotion Council Keralam) are promoting market-led extension among activities among vegetable farmers through the formation of self-help groups (SHGs). They have a well built team for field extension staff who conduct regular field visits to deliver new technologies and practices with the help of a farmer (Master Farmer). A master farmer is selected from each SHG and he transfers new technologies to the members. They also have a well managed farmers market and committee for marketing management under the supervision of each field extension worker. All these factors together form a strong network and may be contributing to the success story that the VFPCK is.

In this context, the role of extension worker at field level is in the following pattern.

- Empowerment of farmers through building awareness and self confidence,
- Development of initiative, creativity and responsibility among farmers,
- Leadership development
- Motivational development
- Establishing linkages with external agencies for resources.

Considering all the above factors the main objectives of this study are fixed as

1) Analyzing the marketing behaviour of vegetable farmers belonging to SHGs and not belonging to SHGs.

2) Evaluation of empowerment achieved through market-led extension

3) Identifying the techno-economical and socio psychological indicators of empowerment.

Scope and Importance of study

Unveiling the role of market-led extension activities through self-help groups in the empowerment of farming community, provides a good foundation to the future development projects for the rural farmers. Identifying the marketing problems and technological gap among the non SHG group of farmers will help to plan the future development projects accordingly. But it is also important to be aware of the present status of market-led extension activities in order to plan the future.

In this context, an attempt is being done to find out the hidden facts and realities behind the SHG movement in Kerala through this study. This study will also give a good understanding about the impact of the self-help group approach in the rural empowerment as well as in the transfer of technology, thus it helps to locate the research and extension gaps in the market-led extension activities through self-help groups especially among the rural farmers.

Limitations of the study

The present study was undertaken as a part of the post-graduate research programme and it had the inherent limitations such as time and money. The findings from this study can not be generalized to include all self-help groups around the world, as self-help groups are set up for various reasons. Then, the data

collection procedure was personal interview and the information got from the respondent groups about the functioning of self-help groups as well as various other management practices may not be free from their individual bias.

Presentation of the thesis

The thesis is presented in six chapters. The first chapter i.e., introduction has covered the brief back ground, relevance and limitations of the study along with the specific objectives. The second chapter covers the review of literature in line with the objectives. The third chapter comprises of the methodology followed for the study along with a brief description of the study area. The fourth chapter deals with the results of the study. The fifth chapter gives relevant support to the result obtained from the study. The sixth chapter deals with the summary and conclusion of the study followed by references and appendices.

CONCEPTUAL FRAMEWORK

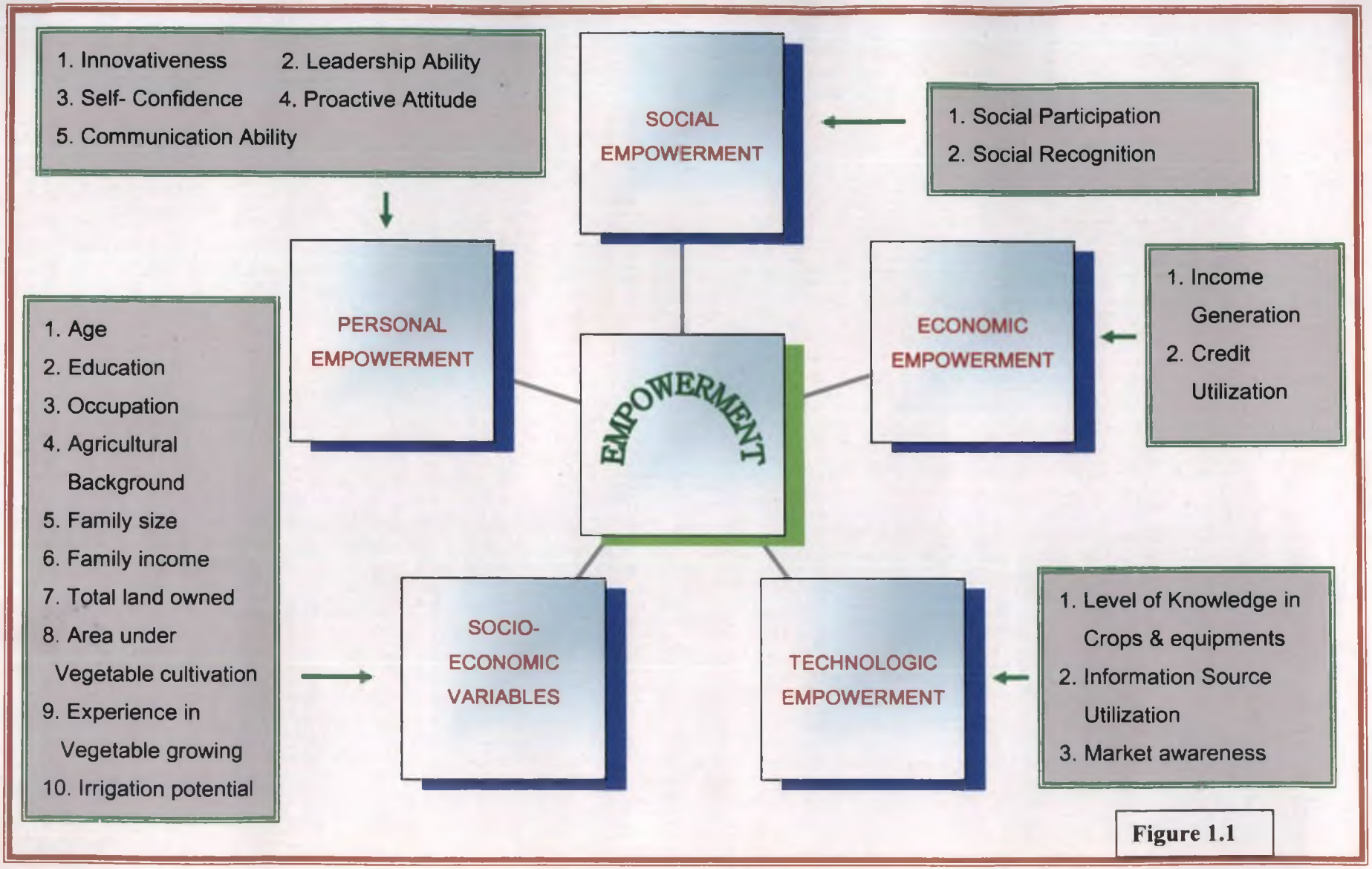


Figure 1.1

Map showing the study area

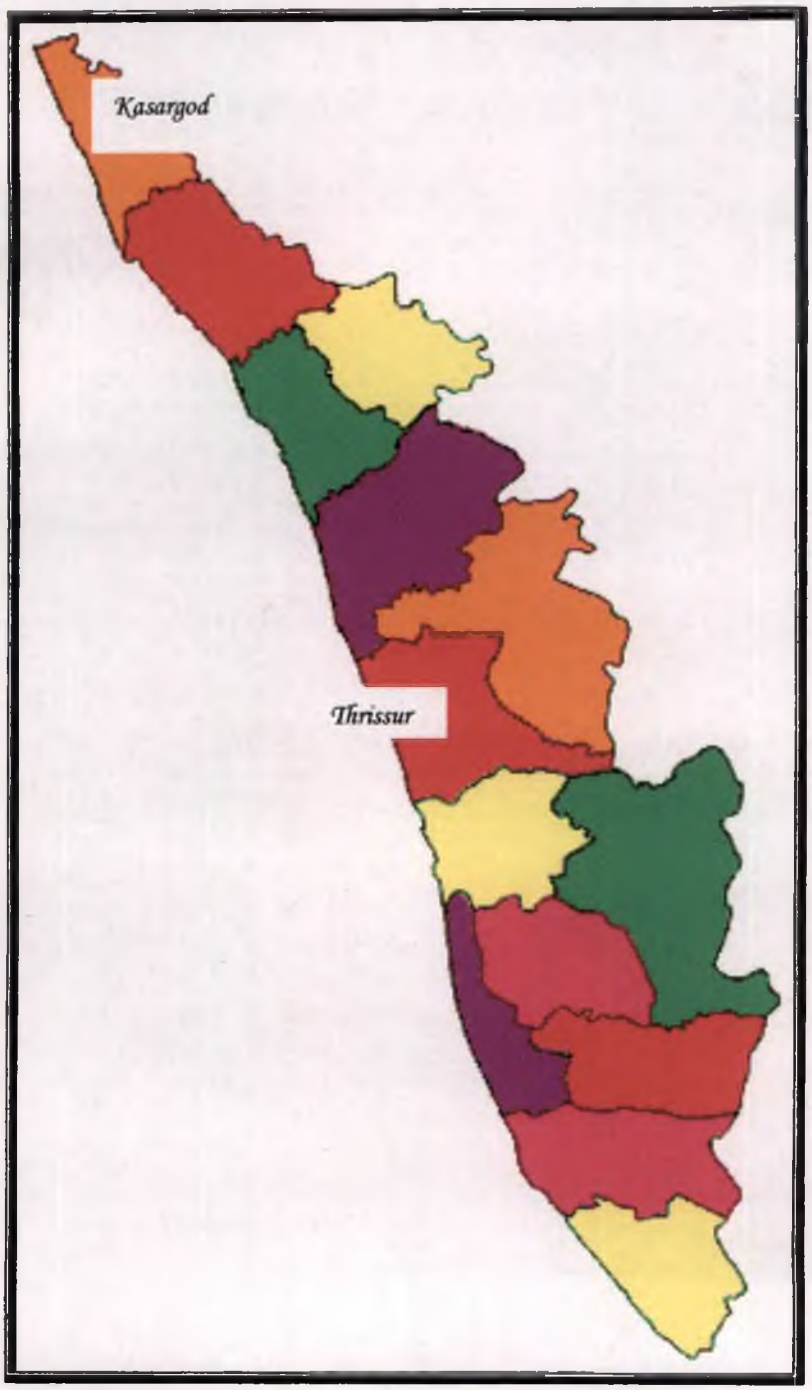


Figure 1.2

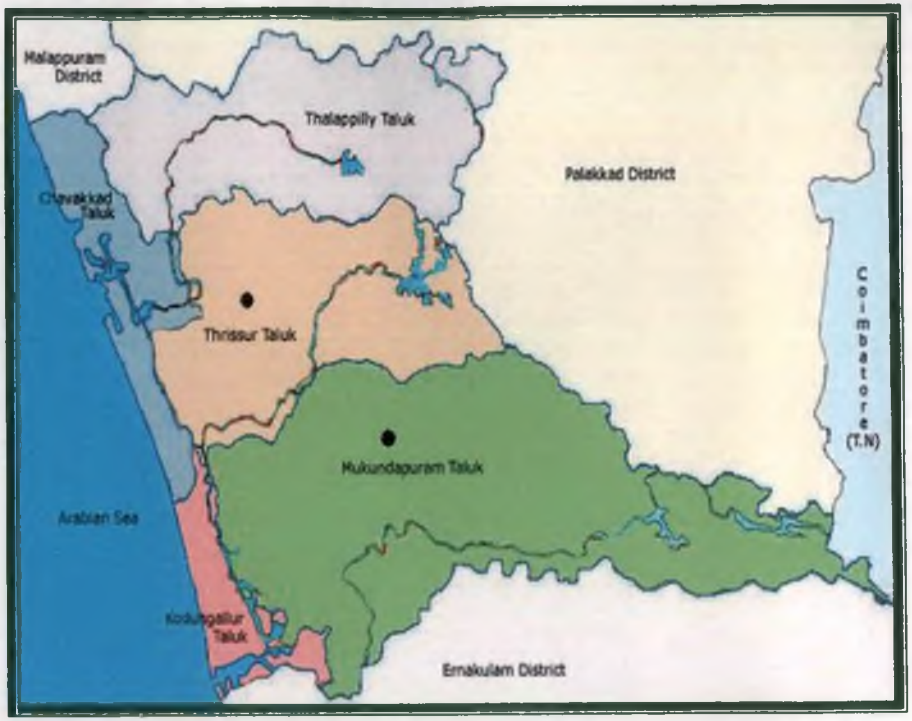


Figure 1.3

● **Selected locations for the study**

REVIEW OF LITERATURE

II. REVIEW OF LITERATURE

In line with the specific objectives an attempt is made to review the past studies to support the present study "empowerment of vegetable farmers through market-led extension". The chapter is divided in to five sub headings as follows

2.1 Factors and indicators of Empowerment
2.2 Role of SHGs in rural development
2.3 Socio-economic characteristics of vegetable farmers
2.4 Marketing behaviour of farmers
2.5 The concept of Market-led Extension
2.6 Importance of Marketing channels

2.1 FACTORS AND INDICATORS OF EMPOWERMENT

For the study, Empowerment is viewed in terms of four factors viz; Economic empowerment, Personal empowerment, Social empowerment and Technological empowerment.

Economic empowerment can be described as bringing income in and by promoting decision-making independence in spending amongst group members (Centre for Social Research, n.d). Economic empowerment takes into account the economic strength of individual or group. There is a widespread belief that economic strength is the basis of social, political and psychological power in society (Mayoux, 2000).

Moser (1989) defined Personal empowerment as "The capacity of women to increase their own self-reliance and internal strength. This is identified as the right to determine choices in life and to influence the direction of change, through the ability to gain control over material and non-material resources". This concept views empowerment as focused on individual strength and self-esteem to gain

control over available resources and to exercise their right to obtain quality of life for themselves and their family.

Oakley and Marsden (1984) have identified three levels of participation leading to empowerment. The first level they call as 'manipulatory' or 'therapeutic', and place mass mobilization campaigns in this category. At the second level they say only 'token' forms of participation with the extension of information, consultation and collaboration of one sort or another. At the upper levels are 'partnerships, delegated power and citizen control which are regarded as 'real' forms of participation.

According to Kronenburg (1986) with the newly acquired power of knowledge, which has not been given or taken away from somewhere but has been auto generated, the participants can influence the course events to liberate themselves from oppressive situations and determine their own destiny ie; knowledge empowerment.

According to Lord (1991) Personal empowerment can be described as a process involving positive changes to a person's psychological constructs (internal beliefs) such as collective efficacy, self-efficacy, self-esteem and proactive attitude

According to Blascovich and Tomaka (1991) Self- esteem can also facilitate the empowerment process because it relates to an individual's sense of value or worth and 'is a favourable or unfavorable attitude towards the self' (Rosenberg 1965).

Barner (1994) has opined that any empowerment experience must ensure the development of some characteristics among the individuals either in their personal capacity or as community members.

The characteristics include well trained, confident, enthusiastic, motivated, committed, ability to use natural creativity, ability to take responsibility, ability to work on their own or in a group; ability to take decisions, individually as also by involving others, proud of their work, proud of the group to which they belong, developing trust in others for oneself, comfortable about questioning the status quo; ability to understand the context and consequences of their actions, knowledge about how well they are performing empowered outside the work place/ community as well; and ability to keep learning and developing.

Kinlaw (1995) observed that Empowerment begins at the level of individuals and then spreads at the community level through active participation of the empowered people. According to him the process of psychological empowerment, occurs through three stages; dependence, independence and interdependence.

For making a transaction from the stage of dependency to the stage of interdependency certain skills will have to be developed. The process may be as follows; develop skills to take responsibility, take actual responsibility, share responsibility, develop effective networks for information and influence, help other people in the community/ community / group to acquire personal skills they need to become effective and enhance personal and group activity.

According to Karl (1995) Empowerment is a multifaceted process, involving the pooling of resources to achieve collective strength and countervailing power, and entailing the improvement of manual and technical skills; administrative, managerial, and planning capacities, and analytical reflective abilities of local people. Empowerment is a process and is not, therefore, something that can be given to people. The process of empowerment is both individual and collective. Since it is through involvement in groups that people most often begin to develop their awareness and ability to organize to take action and bring about change.

The empowerment of a group can be attained by the efficacy of the group's capabilities to produce a desired outcome. According to Bandura (1997) collective efficacy is defined as a 'group's shared belief in its conjoint capabilities to organize and execute the course of action required to produce given levels of attainment.

Sengupta (1998) observed that Empowerment gives the people of a community, the ability and opportunity to take part in decision-making process with regard to socio-economic and political issues affecting their existence. Empowerment of the deprived begins with their ability to voice their opinion through the process of consensual politics and dialogue. For a successful adoption and implementation of empowerment from grass root level, he proposed a strategy with potential project goals and steps to achieve as given follows.

Table 2.1 Potential project goals and steps to achieve goals

Potential Project Goals	**Steps to Achieve Goals**
Level I: Socio – Psychological Empowerment	
1) Establish sustainable community level groups to ensure sustainability of project cycle	a) Encourage establishment of groups. b) Assist in legalization of groups, if necessary and appropriate. c) Provide basic leadership training
2) Promote and increase people's sense of empowerment	a) Promote group formation and rotate leadership positions among group members. b) Promote interaction between groups

	and formal sectors. c) Provide problem solving training. d) Train project staff in issues relevant to the project cycle.
3) Provide training for gender sensitivity among group members	a) Creating awareness of gender roles and gender needs. b) Build training methodologies for addressing important gender issues like health, education, decision-making process and political participation for both women and men groups. c) Involve institution to provide women as trainers to address groups on gender issues. d) Encourage intervention (at farming level) through group pressure to alter gender discrimination at family level.
Level II: Economic Empowerment	
1) Increase net income of group / community members	a) Provide credit amount, timing and repayment conditions (grace period, installments or lump sum) which match the cycle of their productive activity. b) Provide funds for consumption needs. c) Provide alternation to traditional production/ processing/ marketing. d) Increase supply of inputs brokering

	services and increase security of supply of inputs. e) Increase access to the sale points. f) Provide quality control systems to increase value
2) Increase groups/ community's access to increase value.	a) Create links between target groups (producers) and institutions, which offer appropriate skills for future entrepreneur's needs (financial, training, brokering and other marketing services). b) Generate regular progress reports of group activities undertaken on the project (loans, savings, group activities, technical results)
3) Increase capital stock of the enterprise	a) Provide saving facilities. b) Charge interest as per risk perceptions. c) Increase loans based on savings accumulated.
4) Increase management skills of group/ community members	a) Provide business training such as accounts, maintenance, recording of minutes of meetings etc. b) Specific needs and directed activity-oriented training keeping in view the needs, time frame and other conditions of trainees.

According to Sinha (1999) Empowerment can be viewed as a process,

1) which will make one understand his/ her unique potential and enable his/ her, to break barriers to realize that potential for realizing objectives and goals,

2) by which he / she will be willing to think independently to live in his/ her own way and to have the courage to make his/ her own perceptions and judgment,

3) by which he/ she will be willing to know not only what he/ she thinks, but also what she feels, wants, needs, desires, suffers over, gets frightened or augured by and to accept his/ her right to experience such feelings,

4) by which he/ she lives authentically, to speak and act from his/ her innocent conviction and feelings,

5) by which he/ she is committed to his/ her right to exist. As a result, he/ she will realize that his/ her life does not belong to other and that he/ she is not here on the earth to live up to some one else's expectation,

6) by which he/ she starts respecting himself/ herself and understands the possibility of growth and experience of joy in the process of exploiting his/ her distinct potential.

Murugan and Dharmalingam (2000) Empowerment is a process of awareness and capacity building, leading to a greater participation, decision making power and right now is a transformative action. The process of empowerment strengthens their innovative ability through acquiring knowledge, power and experience.

According to Prasad, (2002) Empowerment is a process geared towards participation, greater decision-making and transformative action through awareness and capacity building. In practice, empowerment can not be observed as distinct from approach parallel to other participatory approaches. Empowering of the rural poor will only be found in promotional activities that can be described as community based, fostering people's organizations, or project partnerships.

Alder and Stewart (2004) reported that one of the proposed benefits of empowerment is a reduction in psychological distress, as certain internal conditions are elevated such as a person's self-value and well-being. For instance, both self-efficacy and self-esteem has been related to socio-economic status and various aspects of health and health related behaviours.

According to Moyle *et al.* (2006) In addition to the collective belief of the group the individual's belief in his or her own ability also helps to achieve goals. Self-efficacy beliefs can enhance human accomplishment and well being by empowering personal action and to persevere in the face of obstacle. Self-efficacy refers to the belief in one's capabilities to organize and execute the courses of action required to complete a task (Bandura 1986).

A sense of self-efficacy can encourage rural women to develop a sense of personal competence to learn new skills or to pursue new activities. It is proposed that the motivation of the village women to participate in self-help group is likely to reflect their own belief in their ability to succeed in groups. In addition, beliefs regarding the consequence of the action (i.e., income generation for themselves and their family) will result in achieving the desired goal.

According to Antony (2006) Empowerment is a multidimensional process, which should enable the individuals or a group of individuals to realize their full identity and power in all spheres of life. It consists of greater access to knowledge and resources, greater autonomy in decision making to enable them to have grater

ability to plan their lives, or have greater control over the circumstances that influence their lives and free them from the shackles imposed on them by custom, belief and practice.

Satyanarayana (2006) reported that the term Empowerment has the most conspicuous features containing the word 'power'. Power means control over material assets, intellectual resources and ideology. Power has to be acquired; it needs to be exercised, sustained and preserved. The process of challenging existing power relations and gaining greater control over the resources of power can be called empowerment.

According to Kumar (2006) Empowerment is something we all deserve to feel, it makes us redefine life. We start seeing obstacles as challenges. We see failures as learning experiences. We now know we have all the skills, the capabilities and the brief that nothing can stop us now.

Hasalkar *et al.* (2006) defined Empowerment as a process, which enhances the ability of disadvantaged and powerless individual or group to challenge and change in their favor, existing power relationship that places them in subordinate economic, social and political positions.

According to Madhuri (2006) Empowerment is a process, not an event, which challenges traditional power equations and relations. It covers aspects such as people's control over material and intellectual resources.

Rekha and Nachimuthu (2006) said that empowerment can be defined as a multidimensional process that helps people gain control over their own lives. It is a process that fosters power (that is, the capacity to implement) in people, for use in their own lives, their communities, and in their society, by acting on issues that they define as important.

Empowerment is multidimensional in that it occurs within sociological, psychological, economic, and other dimensions. Empowerment also occurs at various levels, such as individual, group, and community. Empowerment is a social process, since it occurs in relation to others. Empowerment is a process that is similar to a path or journey, one that develops as we work through it.

According to them Personal Empowerment has to start with one's own self and then extends to others. They have to develop in them self-confidence, develop their self –esteem, feel the self worth, gain inner strength, motivation and willingness to empower themselves. The process of empowerment does not end by educating or by providing employment. The process has to do with the individual at the core.

Collective Empowerment is presumed as harder without personal or self-empowerment. It can be attained through social interactions with others. When the social interaction takes place, the ideas, thoughts, experiences are shared whereby others will also get educated and attain awareness and psychological maturity. To get empowered requires the willingness and interest of that person.

Education + Willingness to learn / know / develop

+ Clarity / Confidence = Empowerment

In order to fulfill the process, we need to make them aware that, this education is life long and it leads to their personal development, which in turn helps them in their progress and growth in the life, where by they will be motivated to be more, achieve and accomplish more and more. Thus 'Empowerment is a journey not a destination'

2.2 ROLE OF SELF HELP GROUPS IN RURAL DEVELOPMENT

SHG movement strives to empower the rural people and also to contribute towards the socio-economic progress of the country. SHGs have emerged as an alternative credit support to rural poor in their effort to become economically independent. This improves their quality of life by way of increase in family income, which leads to better quality of food, clothing and education of children, thereby improving the socio-economic status in general.

Heck and Bernard (1979) the functional and developmental performance of SHGs broadly cover socio-economic dimensions that affect the members, their contribution, participation at large and the problems that the group face.

The Royal Tropical Institute (1981) defined SHG as a membership organization or group that implies that its risks, costs and benefits are shared among its members on an equitable basis and that its leadership and/or managers are liable to be called to account by membership for their deeds.

According to Verhagan and Koenraad (1984) the characteristic features of SHGs are

a) Voluntary membership
b) Participatory planning
c) Education and training
d) Resource mobilization
e) Self management
f) Anti bureaucracy
g) Empowerment building
h) Linkage building
i) Process extension and movement building
j) On-going evaluation and sustainability.

NABARD (1995) defined SHG as a homogeneous group of rural poor voluntarily governed to same whatever amount they can conveniently save out of their earnings and mutually agree to contribute to a common fund to lend to the members for making their productive and emergent consumptive credit needs.

Pitt and Khandker (1995); Montgomery (1996); Puhazhendhi and Badatya (2002) described Self help groups as an institutional arrangement positively affect qualitative dimensions of poverty and contribute to social and economic emancipation of the poor and weaker sections. However, impact on social empowerment was more pronounced than the economic empowerment and the implementation was cost effective when SHGs are functioning under NGOs. The positive impact of microfinance on labour supply of men and women, asset creation, consumption and school enrollments by gender were found to be stronger when the credit is provided directly to women.

The concept of SHG in the view of SAPNA (1997) (South Asian Perspectives Network Associations) is the organized group to solve the actual problems in such a way that the members are autonomically empowered by realizing importance of snatching their rights and utilizing their own part of resources.

Senthurajah (1998) explained SHG basically as the mobilized group of people of different category for development activities by imbibing collective strength and vitality to them.

Nanda (1999) SHGs had a positive impact on members in respect of self-confidence, Social development, Skill formation and social empowerment.

According to Kulshrestha and Gupta (2001) an SHG is a voluntary group, formed to attain some common goals; most of its members have similar social

identity, heritage, caste or traditional occupations and come together for a common cause and manage resources for the benefit of the group members.

SHG performs a number of functions such as enabling members to become self-dependant and self-reliant, providing a forum for members for discussing their socio-economic problems, developing decision-making capacity and leadership qualities among members. The awareness the SHG have created and the attitudinal changes they have brought in the minds and outlook of the members have helped in realizing their own intrinsic strength.

Meenabigai (2004) defined Self help groups as a homogeneous group of rural poor, voluntarily formed to save whatever amount they can conveniently save out of their earnings and mutually agree to contribute to a common fund, from, which to lend to its members for productive and urgent credit needs.

Gangaiah *et al.* (2006) observed that the effective organization of self help groups (SHGs) is a significant instrument in the process of empowerment. The emerging changes in the value and attitudes of the members of the SHGs are a clear manifestation of socio-economic empowerment inventions yielding relatively quicker results. The socio economic programs reinforce each other and promote all-round development of the children, the women, the households and the communities. It is a process that ultimately leads to self- fulfillment of each member of the society.

Pillai and Harikumar (2006) said that the very existence of SHGs is highly relevant to make the people of below poverty line hopeful and self-reliant. SHGs enable them to increase their income, improve their standard of living and status in society. It acts as a catalyst for bringing this section of the society to the main stream.

Marketing is an important area of functioning of the SHGs. However, they face different problems in the marketing of products by them like lack of linkage with the marketing agencies, lack of adequate sale promotion measures, lack of permanent market for the products of SHGs, poor quality of products due to the application of traditional technology, resulting in poor market, stiff competition from other major suppliers and lack of a well defined and well knit channel of distribution for marketing.

Gupta and Gupta (2006) viewed SHG as a group of people that meets regularly to discuss issues of interest to them and to look at solutions of commonly experienced problems. The group may or may not be promote by government or non-government institutions. The basic objective of an SHG is that it acts as the forum for members to provide space and support to each other. SHG comprise of very poor people who do not have access to formal financial institutions. It enables its members to learn to co-operate and work in a group environment. The very existence of SHGs is highly relevant to make the people of below poverty line hopeful and self-reliant. SHGs enable them to increase their income, improve their standard of living and status in society.

Moyle et al. (2006) reported that the self- help group approach promotes conditions to improve the status of women as collective, by helping women to understand their situation and to educate them regarding income generation activities through mobilization of their own resources.

Since its introduction, the self-help group approach has inspired interest from researchers in favour of qualitative evidence and case study analysis to evaluate the empowerment of women. Often widely interpreted and difficult to measure, researchers are eliciting to describe it more as a process, with some authors putting together 'empowerment indicators' (Biswas 1999; Hashemi et al. 1996) to assess progress towards empowerment. Such indicators include increased

mobility, decision-making power, economic security, access to information and participation in development programmes.

2.3 SOCIO- ECONOMIC CHARACTERISTICS OF VEGETABLE FARMERS

Subhashini (1990) reported that 81.67 per cent of the farmwomen belonged to middle age group followed by 17.5 per cent in old age group. Less than 1 per cent belonged to young women in hill vegetable farming.

Bonny (1991) reported that majority (67 per cent) of commercial vegetable growers had medium level of knowledge on improved vegetable cultivation practices.

Pochiah et al (1993) reported that most of the vegetable growers (43.3 per cent) had primary school level followed by high school (20.80 per cent), illiterate (15 per cent), middle school (13.40 per cent) and collegiate (7.5 percent) levels of education.

He also reported that majority (55.80 per cent) of the vegetable growers had medium level of farming experience followed by low (24.2 per cent) and high levels (20 per cent) of farming experience.

Alagirisamy (1997) indicated that majority of the vegetable growers (52.5 per cent) were educated up to middle school followed by 29.16 per cent, who had secondary school education. A less percentage (18.34 per cent) had primary school education. No one was an illiterate.

He also observed that most (91.66 per cent) of the vegetable growers were found to possess more than 10 years of farming experience followed by 8.34 per

cent of vegetable growers with 5 to 10 years of experience in vegetable cultivation.

Further the revealed that more than half of the vegetable growers (55.84 per cent) had medium level of information seeking behaviour followed by 34.16 per cent and 10 per cent with high and low levels of information seeking behaviour respectively.

Jahagirdar and Sundarasamy (2002) studied the socio- economic profile analysis of the tomato growers. The study revealed that 54 per cent of the respondents were old followed by middle age (30 per cent) and young (16 per cent) respectively. About 44 per cent of the respondents were of primary education category and only 4 per cent were illiterate. Majority (58 per cent) of the respondents were in the low category. Very less (8 per cent) were in high organizational participation. With regard to extension participation majority of (70 per cent) were in low category followed by 30 per cent in high category.

Kamalakannan (2004) reported that 75 per cent of the commercial vegetable growers belonged to middle age group followed by the equal distribution of remaining population as low age group (12.5 per cent) and high age group (12.5 per cent). Concerning farming experience, 68.75 per cent of the commercial vegetable farmers had medium level of farming experience and the rest, 21.25 per cent of them with high level of farming experience and 10 per cent of them with low level of farming experience.

He also reported that 70 per cent of the vegetable growers had medium level of education followed by 5 and 25 per cent of them had high and low levels of education respectively. Regarding irrigation potential, 66.25 per cent of the vegetable growers had medium level of irrigation potential and 23.75 and 10 per cent of them possessed high and low irrigation potential respectively.

2.4 MARKETING BEHAVIOUR OF FARMERS

According to Acharya and Agarwal (1987) "Marketing is a matching process by which a producer provides a marketing- mix that meets the consumer demand of a target market. The marketing process brings together producers and consumers for the exchange of the product".

The producers' surplus is the quantity of produce that is, or can be made available by the farmers to the non-farm population. The producers' surplus is of two types viz, marketable surplus and marketed surplus.

"Marketable surplus is the residual left with the producer farmer after meeting his requirements for family consumption, farm needs for seeds and feed for cattle, payment to labour in kind, payment to landlord as rent, and social and religious payments in kind".

Marketed surplus is that quantity of the produce, which the producer farmer actually sells in the market, irrespective of his requirements for family consumption, farm needs and other payments. The marketed surplus may be more, or less or equal to the marketable surplus.

Bonny and Prasad (1996) inferred that majority of the commercial vegetable growers had rated inadequate market facility as one of the most important constraints experienced by them in marketing of vegetables.

Pandiaraj and Manoharan (1996) studied marketing behaviour of farmers in six villages of Madurai Market Committee in Tamil Nadu. They found that 93.33 percent of the regulated market participant farmers graded their produce before marketing. Thus, the grading bahaviour was found to be influenced by institutional participation.

The studies in general, revealed a market characterized by lengthy marketing channels, high marketing cost and low marketing efficiency. It was dominated by pre harvest contractors and traders who reap the major share of consumer's rupee.

A large price spread is observed in almost all the studies. It can be justified only when quality services are rendered and low net margins are realized by the intermediaries. Earlier studies by Selvin (1987) and Sandhya (1992) have also highlighted the inefficiencies existing in fruit and vegetable marketing in Kerala.

Pandey and Tewari (2004) said that every agricultural commodity is produced for sale in the market to earn some cash income. Even food grains cultivated by the farmers are meant for sale once the family requirements are satisfied. However the surplus available for sale varies from farmer to farmer for various reasons.

The surplus available for sale is also depends on the kind of food crop; whether it is edible oilseeds or fruits or vegetables or milk or eggs etc. as a whole of the crop produced may not be available for sale because some quantity is retained for seed purpose; home consumption, gifts to friends and relatives and some quantity is lost due to spoilage etc.

Varadarajan and Bose (2004) defined marketable surplus as the difference between the total production and total retention per acre. The marketable surplus creates its own effect on the marketable decision of the farmers.

The estimated quantity to be marketed by producer is arrived at after providing some percentage for various items of retention, which is the marketable surplus. These items include provision for domestic use, friends, relatives and keeping for seed purposes.

2.5 CONCEPT OF MARKET-LED EXTENSION

Reddy and Chandrashekara (2001) viewed that there is a significant shift from agriculture supply driven to demand driven paradigm, in the new emerging and changing economic policy. It is viewed that future agricultural growth would be information driven. New information must reach to the ultimate user at the fastest speed to harness its potential benefits.

Table 2.2 Paradigm shift from Production- led extension to Market- led Extension

Aspects	Production-led extension	Market-led extension
Purpose / objective	Transfer of production technologies	Enabling farmers to get optimum returns out of the enterprise
Expected end results	Delivery of messages Adoption of package of practices by most of the farmers	High returns
Farmers seen as	Progressive farmer High producer	Farmer as an entrepreneur "Agripreneur"

Focus	Production / yields "seed to seed"	Whole process as an enterprise / High returns "Money to money"
Technology	Fixed package recommended for an agro-climatic zone covering very huge area irrespective of different farming situations	Diverse baskets of package of practices suitable to local situations / farming systems
Extensionist's interactions	Messages Training Motivating Recommendations	Joint analysis of the issues. Varied choices for adoption Consultation
Linkages / liaison	Research – Extension - Farmer	Research-Extension-Farmer extended by market linkages
Extensionist's role	Limited to delivery mode and feedback to research system function	Enriched with market intelligence besides the TOT Establishment of

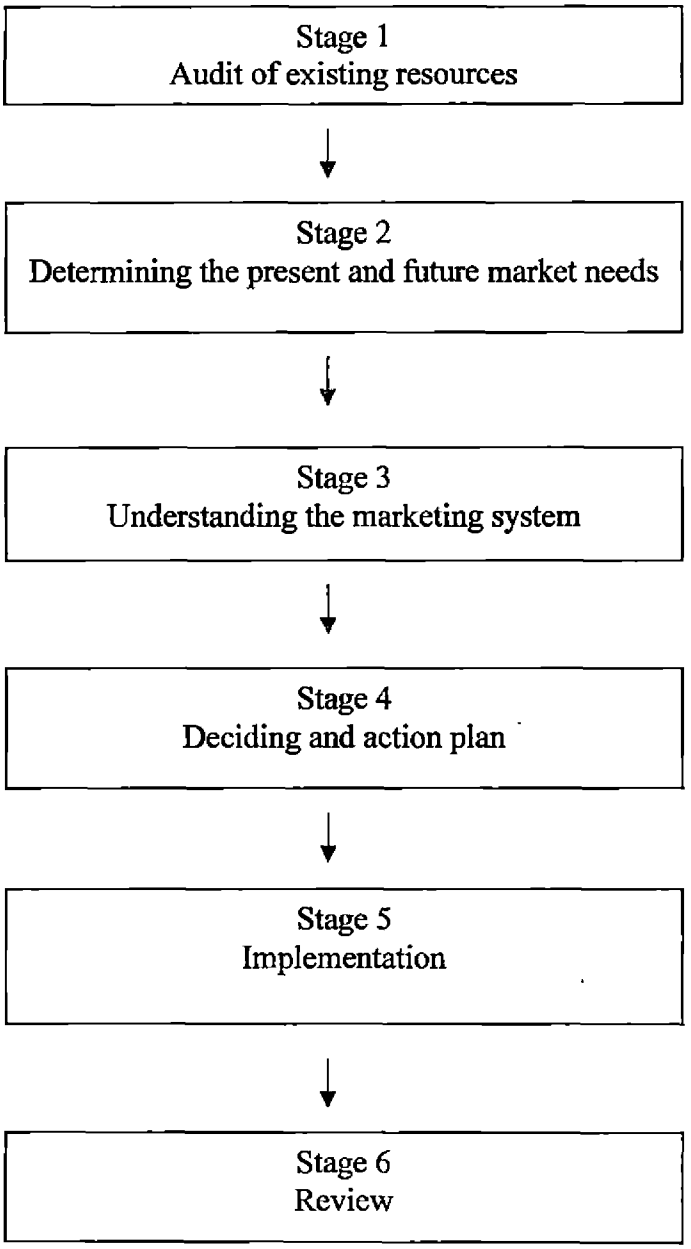
		marketing and agro-processing linkages between farmer groups, markets and processors.
Contact with farmers	Individual	Farmers' Interest Groups Focused groups/ SHGs
Maintenance of Records	Not much importance as the focus was on production	Very important as agriculture viewed as an enterprise to understand the cost benefit ratio and the profits generated
Information Technology support	Emphasis on production technologies	Market intelligence including likely price trends, demand position, current prices, market practices, communication network etc besides production technologies

Expert committee on agricultural marketing (2001) emphasized that a massive programme of marketing extension needs to be launched at the field level

wherein extension messages should encompass all important dimensions of agricultural marketing.

Pandey and Tewari (2004) outlined the stages in promoting marketing extension as

Figure 2.1 Stages in promoting marketing extension



Rao (2004) pointed out twelve features of Market-led extension management as follows

1) Identifying producers and production systems and also customer oriented market system for proper planning.

2) Training in specific areas to producers, staff and customers.

3) Creating awareness about demand and distribution system to the producer in the markets.

4) Orienting extension personnel pertain to decision and delegation on marketing activities as per the calendar of work and time of management.

5) Organizing display of products and materials through exhibitions and conducting demonstrations as part of marketing.

6) Using electronic, computer media to obtain market information at a faster rate.

7) Mass media use of market technologies and also about producers and customers experiences about the products, prices etc.

8) Strengthening linking systems between markets, marketing research and extension, producer and customers.

9) Extension Education to drive marketing functions of producer/ manufacturer.

10) Educating the group leaders and community leaders in establishing

warehouses, go-downs and storage and cold storage facilities for proper marketing of their products.

11) Giving more emphasis to group approaches and selected individual approaches in the activities of market management and development.

12) Strengthening human relations among the partners of marketing by way of motivating, coordinating, controlling, communicating and budgeting and also by way of updating their skills.

They also outlined the linkages in Market-led extension management as follows

Figure 2.2 Market-led extension management

Vijayabhinandana (2004) opined that as far as market-led extension management is concerned the information on the following aspects are important

1) Market prices and trends
2) Market intelligence
3) Post harvest, processing, value addition and storage
4) Availability of inputs
5) Agricultural distribution system.

AGMARKNET project by Ministry of Agriculture has a role in enhancing the market-led extension activities in India.

Suri (2005) reported that AGMARKNET project – the Internet based information system aims at providing single window service catering to diversified demands of information. It will encourage information exchange and dissemination for the benefit of farmers and other market participants as well. Online marketing information service will connect distant markets and promote the efficient marketing in near future. AGMARKNET has also generated interest among various organizations in the public and private sector for helping the farming community.

A portal has been developed to facilitate dissemination of market-wise price of various commodities. The portal has linkage with various organizations concerned with agricultural marketing. The markets can now easily access prices of other markets through the AGMARKNET portal. The market officials can timely inform the farmers visiting the markets, about prevailing prices in other markets. The portal provides access to spot, future, minimum support prices and international commodity prices. The portal is being constantly enriched.

2.6 IMPORTANCE OF MARKETING CHANNELS

Marketing of vegetables needs quick transportation and storage facilities. Their marketing involves large number of intermediaries for performing different activities that take away high margins from the price paid by the consumers.

Ramasamy (1981) conducted a study to find out the problems in production and marketing of major vegetables in Coimbatore district. Producer – Commission agent – Wholesaler – Retailer – Consumer was identified, as the major marketing channel for brinjal and Producer – Commission agent – Wholesaler – Retailer – Consumer was identified as the major marketing channel for bhindi.

Ojha *et al* (1983) studied the role of middlemen in agricultural marketing. It was found that middlemen took away the lion's share of the price paid by the consumer and consequently producer got only a poor share of price. The studies revealed that, majority of farmers were selling their produce through traditional channel of commission agents and that a big majority of farmers didn't prefer to sell their produce through commission agents.

Vigneshwar (1986) conducted a study on dynamics of fruits and vegetables marketing in India. Out of the total production of about 20 million tonnes of fruits and 35 million tonnes of vegetables, nearly 30-40 percent was accounted for post – harvest losses. It was also estimated that about 10-25 percent of the perishables and semi perishables were lost due to spoilage in the absence of adequate cold storage facilities.

Acharya and Agarwal (1987) noted that marketing channels for fruits and vegetables vary from commodity to commodity and from producer to producer. In rural areas and small towns, many producers perform the function of retail sellers.

Large producers directly sell their produce to the wholesalers or producing firms. Some of the common marketing channel for fruits and vegetables are

1) Producer to Consumer

2) Producer to Primary Wholesalers to Retailers or Hawkers to Consumers

3) Producers to Processors

4) Producers to Primary Wholesalers to Processors

5) Producer to Primary Wholesalers to secondary Wholesalers to Retailers to Consumers

6) Producer to Local Assemblers to Primary Wholesalers to Retailers or Hawkers to Consumers

An important feature of marketing channels for fruits and vegetables is that these commodities just move to some selected large cities or centers and subsequently are distributed to urban population and other medium size urban market centers. The wholesale markets of these urban centers work as transit points and thus play an important role in the entire marketing channel for fruits and vegetables. It has been realized that the marketing channel for farm products, which are highly perishable like fruits and vegetables should be as short as possible.

Subramanyan (1988) made on interstate comparison of practice and associated costs of marketing of vegetables in Karnataka, Andra Pradesh and Tamil Nadu. Producer – Commission agent was the most popular marketing channel, followed by direct sale by cultivators. Commission charges were found

to be high in Karnataka and Andra Pradesh, at around 10 percent. Most of the cultivators in Tamil Nadu used carts for transporting vegetables due to short distances transported and ready availability of carts in villages.

Koujalagi and Kunnal (1991) identified different channels in marketing to estimate the costs and to assess the problems in marketing of pomegranate. Two channels were identified

Channel 1: Producer – Pre harvest contractor – Commission agent cum Wholesaler – Retailer – Consumer.

Channel 2: Producer – Commission agent cum Wholesaler – Retailer – Consumer.

The commission agent formed the major item of marketing cost in both channels constituting about 44 percent of the total marketing cost in both the channels.

Sandhya (1992) identified different marketing channels for bottle gourd and ash gourd.

1) Producer – Consumer
2) Producer – Retailer – Consumer
3) Producer – Wholesaler – Consumer
4) Producer – Wholesaler – Retailer – Consumer
5) Producer – Commission agent – Wholesaler – Consumer
6) Producer – Commission agent – Retailer – Consumer
7) Producer – Commission agent – Wholesaler – Retailer – Consumer

Producer – Commission agent – Wholesaler – Retailer – Consumer was the most important channel identified.

Agarwal and Saini (1995) studied the vegetable marketing in Rajastan. The marketing channels identified in the marketing of cole crops

1) Producer – Commission agent – Retailer – Consumer

2) Producer – Commission agent – Mashakhories - Retailer – Consumer

Channel II was an important channel in the sale of vegetables for the farmers of the area in spite of more number of middlemen involved in this.

Ramachandran (1997) suggested remedies to problems encountered in vegetable cultivation, at the institutional level by organizing farmers into self help groups (SHGs) with the objective of ensuring a stable and sustainable income to the cultivators. The concept of SHGs though a novel one, is still in the early stage. However, it is already beginning to yield positive results, thereby giving us cause for optimism.

Marketing of produce through co-operative societies is also a step in the right direction. Each society can have its own 'collection points' where the produce brought by the members can be pooled. Pooling of produce increases the volume of output available for sale, thereby ensuring better grading, storage and processing facilities. The raw produce can be converted in to 'ready to use' form and made available to consumers in attractive packages of convenient size. The raw or processed produce can be sold through retail outlets owned by the society itself. Co-operative marketing holds a lot of promise and has immense potential that is just waiting to be tapped.

Pandey and Tewari (2004) reported that the channels for marketing are an important aspect of agricultural marketing which affect the prices paid by consumers and the corresponding share received by the producer. The shorter the channel, lesser the market costs and cheaper the commodity to the consumer.

The channel of marketing and price for different commodities has been a focus area of research in agricultural marketing. The channel, which provides commodities at cheaper price to consumer and also ensure greater share to producer is considered the most efficient channel.

According to Sangitha (2005), Marketing channels are the trade channels or the distribution path through which the produce is transported from the point of production till it reaches the ultimate consumer. As the number of market functionaries increases, they add value to the commodity in the marketing channel resulting in a fall in the producer's share in the consumer's rupee.

Varadarajan and Bose (2005) pointed that the marketing channels are combinations of agencies through which the seller who is often, though not necessary manufacturers, markets his product to the ultimate consumer.

They have identified three types of marketing channels in the marketing of Betel leaf

Channel I: Producer – Commission Agent – Wholesaler – Retailer – Consumer

Channel II: Producer – Village Trader - Commission Agent – Wholesaler – Retailer – Consumer

Channel III: Producer – Wholesaler – Retailer – Consumer

METHODOLOGY

III. METHODOLOGY

This chapter describes the methods and procedures followed in the present study. The main sub heads are as follows

3.1. Locale of the study
3.2. Selection of sample
3.3. Selection of variables for the study
3.4. Operationalisation and measurement of socio-economic variables
3.5. Operationalisation and measurement of dependent variables
3.6. Data collection procedure
3.7 Statistical tools used

3.1. Locale of the study

Thrissur and Kasargod districts were purposively selected for the present study since they had the highest number of actively functioning SHGs in vegetable production and marketing.

3.2. Selection of sample

The selection of sample was done based on the criterion of major occupation of the respondent. Farmers who are actively cultivating any of the vegetable on commercial basis were selected as one group of respondents (non SHG group) and farmers who are engaged in commercial vegetable cultivation as a member of any SHG were selected as the second group of respondents. For this, a list of total SHGs undertaking the activity under Kudumbasree, VFPCK, Harithasangams and Women in agriculture was collected from the two selected districts.

Six SHGs were randomly selected from each of the two districts. From each SHG, five farmers were randomly selected and this made a sample size of 30 SHG farmers from one district. Five non-SHG farmers were also randomly selected from the same locality of the selected SHG, to form a sample size of 30 non-SHG farmers from one district. Repeating the same procedure in the other district also, the total sample size for the study became 120 farmers.

3.3. Selection of variables for the study

The degree of empowerment of the respondent was the dependent variable of the study. Empowerment is measured under four components as follows

1) Social Empowerment
2) Personal Empowerment
3) Technological Empowerment
4) Economical Empowerment

A comprehensive list of 30 dependent variables was prepared based on the objectives of the study, review of literature, discussion with experts and the observation made by the researcher. The list was presented to 30 judges for relevancy rating. Scientists of agricultural extension from Kerala Agricultural University, Tamil Nadu Agricultural University and University of Agricultural Sciences, Bangalore, formed the judges for the study.

The total score obtained for each variable was calculated. The mean score of each variable was found out. Variables with a mean score of 2.3 and above were selected as dependent variables for the present study. The selected variables were as follows

I. Social Empowerment
   1) Social participation
   2) Social recognition

II. Personal Empowerment
   3) Innovativeness
   4) Communication ability
   5) Proactive attitude
   6) Leadership ability
   7) Self confidence

III. Technological Empowerment
   8) Level of knowledge in crops and equipments
   9) Information source utilization
   10) Market awareness

IV. Economic Empowerment
   11) Income generation
   12) Credit utilization

Based on the objectives, reviews of literature and also in line with the similar past studies 15 independent variables were also measured. They are as follows

1. Age
2. Educational status
3. Occupational status
4. Agricultural background
5. Family size
6. Family income
7. Total land owned

8. Area under vegetable cultivation
9. Experience in vegetable growing
10. Vegetables grown on commercial basis
11. Farming group membership
12. Other organizational membership
13. Irrigation potential
14. Marketable and Marketed surplus
15. Frequency of use of marketing channels

3.4. Operationalisation and measurement of socio-economic variables

3.4.1. Age

Age refers to the number of calendar years completed by the farmer respondent at the time of interview.

In the present study age was measured using the given below scoring pattern

Category	Score
< 20 yrs	1
20 – 30 yrs	2
30 – 40 yrs	3
40 – 50 yrs	4
> 50 yrs	5

3.4.2. Educational status

This refers to the years of formal education achieved by the respondent. To measure this variable scale developed by Trivedi (1963) and used by Kamalakannan (2003) was adopted in the present study.

Category	Score
Illiterate	0
Functionally literate	1
Primary school	2
UP school	3
High school	4
Pre degree / equivalent	5
College & above	6

3.4.3. Occupational status

Occupational status refers to the major activity of the respondent in which he or she involved for most part of the day, and which generates income.

A score of '1' was given to agriculturists and '0' to, that of any other job group to measure this variable in this study.

3.4.4. Agricultural background

Respondents who belonged to traditional farm family and following traditional practices in vegetable cultivation were coming under 'traditional background' and respondents who were recent in agriculture and following new methodologies in vegetable cultivation were coming under 'recent agricultural background'.

This was measured by following the given below arbitrary scoring pattern

Category	Score
Traditional	1
Recent	2

3.4.5. Family size

This refers to the total number of family members of the respondent. An arbitrary scoring system was developed to measure this variable as follows

Category	Score
1–4 members	4
5–8 members	3
9–12 members	2
> 12 members	1

3.4.6. Family income

This refers to the total earning of all the family members of the respondent in one year. This was obtained by adding the income of each member of the family for one year.

In the present study procedure used in the socio – economic scale of Venkataramaiah (1983) was adopted.

Category	Score
< 5000	1
5000 – 25000	2
25000 – 50000	3
50000 – 1 lakh	4
1 lakh & above	5

3.4.7. Total land

Total land was measured as the total owned land in acres. The scoring pattern used was as follows

Category	Score
< 0.5 acre	1
0.5 – 1 acre	2
> 1 acre	3

3.4.8. Area under vegetable cultivation

Are under vegetable cultivation of each respondent was measured in acres. The scoring pattern adopted was given below

Category	Score
< 0.1 acre	1
0.1 – 0.5 acre	2
> 0.5 acre	3

3.4.9. Experience in vegetable growing

This refers to the total number of years the respondent has been engaged in vegetable cultivation. The given below scoring pattern was used to measure this variable

Category	Score
< 5 yrs	1
5 – 15 yrs	2
15 – 25 yrs	3
> 25 yrs	4

3.4.10. Vegetables grown on commercial basis

This refers to the total number of different vegetables grown on commercial basis by the respondent.

To measure this variable the total number of vegetables grown on commercial basis itself was taken as the score.

3.4.11. Farming group membership

This refers to the involvement of the respondent in any farmer group either as a member or as an office bearer.

If the respondent is a member of any farming group a score '1' was given, else a score '0' was given to measure this variable.

3.4.12. Other organization membership

This refers to the involvement of the respondent in any organization other than the farmer group.

If the respondent is a member of any farming group a score '1' was given, else a score '0' was given to measure this variable.

3.4.13. Irrigation potential

This refers to the availability of water to irrigate the crop. To measure this variable the scale used by Bonny (1991) was adopted.

Category	**Score**
Throughout the year	2
Seasonal	1
Not assured	0

3.4.14. Marketable and Marketed surplus

Marketable surplus is the residual left with the producer farmer after meeting his requirements for family consumption, farm needs for seeds and feed for cattle, payment to labour in kind, payment to landlord as rent, and social and religious payments in kind".

Marketed surplus is that quantity of the produce, which the producer farmer actually sells in the market, irrespective of his requirements for family consumption, farm needs and other payments.

To measure marketable and marketed surplus an arbitrary scoring system was developed as follows

Category	Score
1 Kg – 50 Kg	1
50 Kg – 100 Kg	2
100 Kg – 250 Kg	3
250 Kg – 500 Kg	4
500 Kg – 1000 Kg	5
> 1000 Kg	6

3.4.15. Use of marketing channels

Marketing channels refers to the channels through which the produce is being marketed and reached to the final consumer.

To measure the type and frequency of use of the identified channels 5 items were rated on a 3-point continuum as 'Always', 'Mostly' and 'Sometimes'.

3.5. Operationalisation and measurement of dependent variables

3.5.1. Innovativeness

Innovativeness is operationally defined as the extent to which the respondent is relatively earlier in the adoption of new ideas and technologies.

In the present study the scale developed by Feaster (1968) modified by Prasad (1983) and used by Krishnankutty (1995) was adopted to measure innovativeness. Here eight items were rated on a 4- point continuum ranging from 'Strongly Agree' to 'Strongly Disagree'.

3.5.2. Communication ability

Berlo (1960) defined communication skill as a composite of skills in writing, speaking, reading, listening and reasoning. In face to face interaction, i.e., in an interpersonal communication situation, the transmission of technology largely takes place through "Word–of–Mouth" communication.

Communication ability refers to the ability of the respondent to communicate or transfer his or her ideas to the group and in turn to know the ideas of other members.

To measure this variable, an arbitrary scale consisting of six items was developed and these items were rated on a 4-point continuum ranging from 'Strongly Agree' to 'Strongly Disagree'.

3.5.3. Proactive attitude

According to Schwarzer (1999) proactive attitude is a personality characteristic, which has implications for motivation and action. It is concentrated

in the belief that potential changes can be made to improve oneself and one's environment, through the use of resources, responsibility and values.

In the present study proactive attitude was measured using an arbitrary scale developed for the purpose. 6 items were there and responses were scored on a 4-point scale ranging from 1= 'Strongly Disagree' to 4= 'Strongly Agree' for positive statements and reverse scoring was used for negative statements.

3.5.4. Leadership ability

According to George (2005) leadership ability is the degree to which a beneficiary perceived himself or herself that he or she could initiate or motivate the action of other individuals and his or her ability to influence people to achieve desired goals.

Leadership ability refers to the ability of the respondent to influence a group toward the achievement of goals.

In the present study leadership ability of the respondent was measured using an arbitrary scale developed for the purpose. Seven items were there and responses were scored on a 4-point scale ranging from 0= 'Never True' to 4= 'Always True' for positive statements and reverse scoring was used for negative statements.

3.5.5. Self confidence

According to Uncommon Forum Psychology (2007) self confidence is a belief in yourself and your abilities, a mental attitude of trusting or relying on yourself.

Parimaladevi (2005) defined self-confidence as the belief of the respondent in their own abilities, initiative and zeal to achieve their goals or aim.

In the present study self-confidence refers to the extent of feeling about one's own powers, resources and capabilities to perform any activity that the farmer decides to undertake.

Self-confidence was measured here using an arbitrary scale developed for the purpose. 5 items were there and responses were scored on a 4-point scale ranging from 0= 'Never True' to 4= 'Always True' for positive statements and reverse scoring was used for negative statements.

3.5.6. Level of knowledge in crops and equipments

The respondent's knowledge in crops and equipments was measured by using a simple teacher made test developed for the purpose. From a list of 25 questions related to various aspects of vegetable cultivation, 13 were selected based on relevancy.

A score of '1' was given to the correct answer and '0' for wrong answer. The sum of the scores obtained for all the items indicated the knowledge score of the respondent.

3.5.7. Market awareness

Market awareness refers to the degree of general awareness of the respondent about the new trends in market that helps him to earn maximum possible profit.

Arbitrary scale developed for the purpose was used to measure this variable. Six items were rated on a 4-point continuum ranging from 'Strongly Agree' to 'Strongly Disagree'.

3.5.8. Information source utilization

According to George (2005), Information source utilization refers to the use of various sources of information by the beneficiary in order to get information on agricultural technology.

It is operationalised as the extent of use of different information sources by a group member with a view to obtain information about ways and means for improving effectiveness of group.

For the present study information source utilization is operationally defined as the extent of use of different information sources available by the respondent to improve his or her farming practices.

Procedure developed by Nair (1969) and modified by Bhasker (1997) was adopted to measure this variable in the present study.

3.5.9. Income generation

Income generation can be operationally defined as the ability of the respondent to contribute a considerable amount to his or her family income through his or her activities.

To measure this variable an arbitrary scale was developed that consists of 4 items and were rated on a 4-point continuum ranging from 'Strongly Agree' to 'Strongly Disagree'.

3.5.10. Credit utilization

Sajin (2003) defined credit utilization as the behaviour of respondent in utilizing the credit facilities from institutional or non institutional sources in adequate quantity and utilizing it for the right purpose without making default in repayment.

Credit utilization refers to the extent of utilization of the credit available for the farmer to improve his or her farming practices.

To measure this variable the scale used by Narayan (2002) was adopted. Here three questions were asked and the response was scored as 0= 'No' and 1='Yes'.

3.5.11. Social participation:

Sadamate (1978) defined social participation of the respondent as participation in social institutions as a member or as an office bearer.

Social participation refers to the degree of involvement of the respondent in formal and informal social organizations either as a member or as an office bearer, which also includes the extent of participation in organizational activities.

Scale developed by Vipinkumar (1994) and used by Manju (1997) was adopted in this study. The scale considered two aspects: 'Membership of individual in organization' as well as 'Frequency of participation'.

3.5.12. Social recognition:

This refers to the extent to which the respondent perceives how the society, peer group and family consider him as a capable person.

To measure this variable Scale developed by Narayan (2002) was adopted. Here four items were rated on a 4- point continuum ranging from 'Strongly Agree' to 'Strongly Disagree'.

3.6. Data Collection Procedure:

Prior to the data collection, a pilot study was conducted in a non sample area viz., Palakkad district. Discussion with farmers, Krishi Bhavan officals, SHG members, VFPCK officials and extension professionals, also was done for finalizing the interview schedule.

The English version of the interview schedule was translated to Malayalam version and used for the data collection purpose. Data was collected by direct personal interview of the respondents. Two groups of respondents were selected. The first group of respondents constituted by commercial vegetable farmers who were doing cultivation being a member of any SHG and the second group of respondents constituted by commercial vegetable farmers who did not have membership in any SGH.

3.7. Statistical Tools Used:

1) Percentage Analysis

In percentage analysis, the percentage distribution of respondents in relation to each variable was calculated.

2) Chi – Square Test

Chi-Square test was used to measure the discrepancy between characteristics of the groups under non-SHG and SHG with respect to member, office bearer, use of available resources etc.

3) Mann – Whitney U Test

Mann – Whitney U test is an important non parametric method to determine whether two samples have come from identical population. Here this was used to compare the two groups of samples viz., SHG group and no-SHG group. A mean individual rank was obtained in this analysis.

4) Odds Ratio

The Odds ratio is a way of comparing whether the probability of a certain event is same for two groups. An Odds ratio of 1 implies that the event is equally likely in both groups. An Odds ratio, greater than 1 implies that the event is more likely in the first group. An Odds ratio, less than 1 implies that the event is less likely in the first group.

In this study, Odds ratio was used to identify those socio-economic variables that had a positive impact on empowerment of vegetable farmers and also to find out the discrimination between impact of various socio-economic variables on empowerment among the SHG and non-SHG group of respondents. Here odds in favour of empowerment are against odds in favour of non-empowerment.

RESULTS

IV. RESULTS

This chapter deals with the major findings of the present study. They are explained under the following three sub heads

4.1 Socio-economic characteristics of respondents.

4.2 Marketing behaviour of vegetable farmers

4.3 Empowerment status of respondents

4.4 Influence of socio-economic characteristics on empowerment

4.5 Development of empowerment threshold

4.1 SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

4.1.1 Age

Table 4.1 Age wise distribution of respondents in the SHG & Non-SHG groups

Sl.No.	Age (in years)	SHG (%) n=60	Non – SHG (%) n=60
1	20 – 30	5.0	1.7
2	30 – 40	16.7	10 .0
3	40 – 50	38.3	35 .0
4	> 50	40 .0	53.3

Table 4.1 reveals that about 40 per cent of the respondents of SHG group belonged to the age group of above fifty, while 53.3 per cent of the non-SHG groups of respondents belonged to this age group.

4.1.2 Educational Status

Table 4.2 Distribution of respondents according to educational status

Sl.No.	Educational Status	SHG (%) n=60	Non – SHG (%) n=60
1	Illiterate	5.0	6.7
2	Functionally literate	8.3	5.0
3	Primary School	13.3	16.7
4	U P School	11.7	10.0
5	High School	50.0	48.3
6	Pre Degree / Equivalent	5.0	8.3
7	College & Above	6.7	5.0

It is observable from the table 4.2 that in the case of educational status of SHG group 50 per cent of the respondents had completed their high school, where as only 48.3 per cent of the non SHG group of respondents belonged to this group.

4.1.3 Occupational Status

In the SHG as well as non- SHG groups, the major occupation of all respondents was agriculture and most of them were doing all farming practices alone without any hired labour.

4.1.4 Agricultural Background:

Table 4.3 Distribution of respondents according to agricultural background

Sl.No.	Agricultural Background	SHG (%) n=60	Non – SHG (%) n=60
1	Traditional	85.0	83.3
2	Relatively new	15.0	16.7

In the SHG group, 85 per cent of the farmers had the traditional background and the rest 15 per cent were relatively new in vegetable cultivation. In the non-SHG group, 83.3 per cent of the farmers were from traditional background and the rest 16.7 per cent of the respondents were recent in vegetable cultivation.

4.1.5 Family Size

Table 4.4 Distribution of respondents according to family size

Sl.No.	Family members	SHG (%) n=60	Non – SHG (%) n=60
1	1 – 4	35.0	60.0
2	5 – 8	65.0	40.0

In the SHG group of respondents, only 35 per cent of the farmers belonged to the first group (1-4 members), while 60 per cent of the respondents belonged to this category in the non-SHG group.

4.1.6 Family Income

Table 4.5 Distribution of respondents according to annual income

Sl.No.	Income (in Rs.)	% of Respondents	
		SHG n=60	Non – SHG n=60
1	< 5000	3.3	1.7
2	5000 – 25,000	80.0	91.7
3	25,001 – 50,000	10.0	3.3
4	50,001 – 1,00,000	6.7	3.3

It can be noticed from the table 4.5 that majority (91.7 per cent) of the respondents of the SHG group belonged to the income group ranging from Rs.5000 – Rs.25,000, while 80 per cent of the other group (Non-SHG) belonged to this income group.

4.1.7 Owned Land & Land under Vegetable Cultivation

Out of the total respondents, 29.5 per cent of the SHG farmers and 13.4 per cent of the non- SHG farmers were landless and doing vegetable farming in leased land. The area distribution of the rest (land owners) and percentage of farmers under different category is explained in the following table 4.6.

Table 4.6 Distribution of respondents based on owned land

Sl.No.	Owned land	SHG (%) n=60	Non – SHG (%) n=60
1	< 0.5 acre	25.0	50.0
2	0.5 – 1 acre	31.7	28.3
3	> 1 acre	13.8	8.3

Out of the 25 per cent of the respondents (Table 4.6) of SHG group, distribution of land under vegetable cultivation was found to be as per the following table 4.7

Table 4.7 Distribution of land under vegetable cultivation in the Less than 0.5 acre owned land group of SHG

Sl.No.	Land under vegetable cultivation	Respondents (%) n=15
1	< 0.1 acre	50.0
2	0.1 – 0.5 acre	50.0

Out of the 31.7 per cent of the respondents (Table 4.6) of SHG group, distribution of land under vegetable cultivation was found to be as per the following table 4.8

Table 4.8 Distribution of land under vegetable cultivation in the 0.5 – 1 acre owned land group of SHG

Sl.No.	Land under vegetable cultivation	Respondents (%) n=19
1	< 0.1 acre	11.1
2	0.1 – 0.5 acre	83.3
3	> 0.5 acre	5.6

Out of the 13.8 per cent of the respondents (Table 4.6) of SHG group, distribution of land under vegetable cultivation was found to be as per the following table 4.9

Table 4.9 Distribution of land under vegetable cultivation in the Above 1 acre owned land group of SHG

Sl.No.	Land under vegetable cultivation	Respondents (%) n=8
1	0.1 – 0.5 acre	86.7
2	> 0.5 acre	13.3

Out of the 8.3 per cent of the respondents (Table 4.6) of Non-SHG group, distribution of land under vegetable cultivation was found to be as per the following table 4.10. Here, 80 per cent of the farmers were cultivating vegetables in their own land and the rest 20 per cent were cultivating vegetables in leased land.

Table 4.10 Distribution of land under vegetable cultivation in the Less than 0.5 acre owned land group of Non-SHG

Sl.No.	Land under vegetable cultivation	Respondents (%) n=5
1	< 0.1 acre	50
2	0.1 – 0.5 acre	50

Out of the 28.3 per cent of the respondents (Table 4.6) of Non-SHG group, distribution of land under vegetable cultivation was found to be as per the following table 4.11. Here, 76.5 per cent of the farmers were cultivating vegetables in their own land and the rest 23.5 per cent were cultivating vegetables in leased land.

Table 4.11 Distribution of land under vegetable cultivation in the 0.5 - 1 acre owned land group of Non-SHG

Sl.No.	Land under vegetable cultivation	Respondents (%) n=17
1	< 0.1 acre	5.9
2	0.1 – 0.5 acre	52.9
3	> 0.5 acre	17.7

Out of the 50 per cent of the respondents (Table 4.6) of Non-SHG group, distribution of land under vegetable cultivation was found to be as per the following table 4.12. Here, 93 per cent of the farmers were cultivating vegetables in their own land and the rest 7 per cent were cultivating vegetables in leased land.

Table 4.12 Distribution of land under vegetable cultivation in the Above 1 acre owned land group of Non-SHG

Sl.No.	Land under vegetable cultivation	Respondents (%) n=30
1	< 0.1 acre	10.7
2	0.1 – 0.5 acre	39.3
3	> 0.5 acre	50.0

4.1.8 Experience in Vegetable Growing

Table 4.13 Distribution of respondents based on experience in vegetable growing

Sl.No.	Experience (in years)	SHG (%)	Non – SHG (%)
1	< 5 years	6.7	6.7
2	5 – 15 years	41.7	23.3
3	15 – 25 years	28.3	35.0
4	> 25 years	23.3	35.0

In the first group of respondents (SHG group), 28.3 per cent of the farmers had '15-25 years' of experience and 23.3 per cent had 'above 25 years' of experience in vegetable farming. Only 6.7 per cent had 'less than 5 years' experience and the rest 41.7 per cent had '5-15 years' experience in vegetable farming.

Out of the total respondents of non-SHG group 35 per cent of the farmers had '15-25 years' of experience and 35 per cent had 'above 25 years' of experience in vegetable cultivation. Only 6.7 per cent had less than 5 years experience and the rest 23.3 per cent had '5-15 years' experience in vegetable farming.

4.1.9 Vegetables Grown on Commercial Basis

Among SHG as well as Non-SHG groups of farmers, various kinds of vegetables cultivating were being cultivated for commercial purpose. The major vegetables and the number of farmers cultivating each type is explained in the following table 4.14

Table 4.14 Distribution of respondents based on cultivation of different vegetable crops

Sl.No.	Vegetables	SHG (%) n=60	Non – SHG (%) n=60
1	Amaranths	76.7	56.7
2	Okra	33.3	41.7
3	Cowpea	83.3	68.3
4	Bitter gourd	60.0	46.7
5	Snake gourd	23.3	23 .3
6	Pumpkin	28.3	35.0
7	Ash gourd	33. 3	41.7
8	Cucumber	46.7	48.3
9	Brinjal	31.7	25.0
10	Chilly	16.7	26.7
11	Coleus	13.3	13.3
12	Ridge gourd	23.3	25.0
13	Little gourd		23.3
14	Banana	81.7	46.7

As per the above table 4.14 vegetables coming under the first five ranks in terms of commercial cultivation by more number of farmers were Amaranths, Cow pea, Bitter gourd, Cucumber and Banana. This ranking was found to be same for both group of respondents (SHG & Non-SHG).

4.1.10 Farming Group Membership

Table 4.15 Distribution of respondents of SHG & Non-SHG groups based on farming group membership

Sl.No.	Category	SHG (%) n=60	Non – SHG (%) n=60
1	Members	100.0	61.7
2	Non members	0	38.3

The table 4.15 reveals that the whole respondents of SHG group had farming group membership. However, only 61.7 per cent of the non-SHG respondents had membership in any one of the farmer groups in their locality.

4.1.11 Other Organizational Membership

Table 4.16 Distribution of respondents of SHG & Non-SHG groups based on other organizational membership

Sl.No.	Category	SHG (%) n=60	Non – SHG (%) n=60
1	Members	58.3	28.3
2	Non members	41.7	71.7

While considering both groups, 58.3 per cent of SHG farmers and 28.3 per cent of the non-SHG farmers had membership in organizations other than farmer's organization.

4.1.12 Irrigation Potential

Table 4.17 Distribution SHG & Non-SHG group respondents based on Irrigation water availability

Sl.No.	Category	SHG (%) n=60	Non – SHG (%) n=60
1	Throughout year	43.3	33.3
2	Seasonal	56.7	56.7
3	Not assured	0.0	10.0

With regards to the irrigation potential, it is clear from the table 4.17 that 43.3 per cent of the farmers had round the year irrigation facility and the rest 56.7per cent had seasonal availability of irrigation water.

In the second group of respondents (non – SHG group), 33.3 per cent of the farmers could irrigate their crops round the year with out any hurdles, 56.7 per cent of the farmers had seasonal availability and the rest 10 per cent had not assured supply of irrigation water.

4.2 MARKETING BEHAVIOUR OF VEGETABLE FARMERS

4.2.1 Marketable and Marketed Surplus

In the SHG group of farmers, 91.67 per cent of the respondents could market the whole amount of their produce (marketable surplus) without much loss. Here Marketable surplus was almost equal to the marketed surplus. Out of the total marketable surplus 97.57 per cent was the marketed surplus and only 2.43 per cent was the left over amount of produce from all marketing channels.

In the non-SHG group of respondents, 75 per cent of the respondents could market the whole amount of their produce (marketable surplus) without much loss. Out of the total marketable surplus 95 per cent was the marketed surplus and rest 5 per cent was the left over amount from all marketing channels.

4.2.2 Marketing Channels

Five types of marketing channels were identified as being used by respondents of each group to market their produce. They are as follows

1) Direct selling to consumer
2) Through commission agents
3) In wholesale market
4) In retail shop
5) Through farmer's market

Each channel was used by the two groups of farmers either as alone or in combination with other channels. The percentage of respondent farmers using each marketing channel alone or in combination with other channels is given in the following tables 4.18, 4.19 and 4.20.

Table 4.18 Distribution SHG group of respondents (%) based on use of each marketing channel

	DS	CA	WM	RS	FM
DS	3.3	----	----	----	----
CA	----	----	----	----	----
WM	5.0	----	----	----	----
RS	15.0	----	3.3	6.7	----
FM	5.0	1.7	----	6.7	38.3

Table 4.19 Distribution Non-SHG group of respondents (%) based on use of each marketing channel

	DS	CA	WM	RS	FM
DS	3.3	----	----	----	----
CA	----	15.0	----	----	----
WM	1.7	----	6.7	----	----
RS	5.0	----	21.7	15.0	----
FM	3.3	1.7	3.3	3.3	5.0

Table 4.20 Distribution SHG and Non-SHG group of respondents (%) based on use of each marketing channel

Sl.No	Channel	SHG	Non-SHG
1	DS x WM x RS	6.7	3.3
2	DS x WM x FM	----	5.0
3	CA x WM x RS	----	1.7
4	DS x RS x FM	----	1.7
5	DS x CA x RS x FM	----	1.7
6	DS x WM x RS x FM	1.7	1.7
7	DS x CA x WM x RS x FM	5.0	----
8	CA x WM x RS x FM	1.7	----

** DS - Direct selling to consumer, CA - Through commission agents, WM - In wholesale market, RS - In retail shop & FM - Through farmer's market

In the SHG group of respondents, 38.3 per cent of the farmers 'always' marketed their produce through farmer's market, 6.7 per cent of the farmers 'always' marketed their produce through retail shops and 3.3 per cent of the farmers were always marketer their produce through direct selling to consumers.

In the non-SHG group of respondents, 21.7 per cent of the farmers were 'always' depending on wholesale markets and retail shops, 15 per cent of the respondents were mainly marketing their farm produce through retail shops and 15 per cent of the farmers were only depending on commission agents to market their produce.

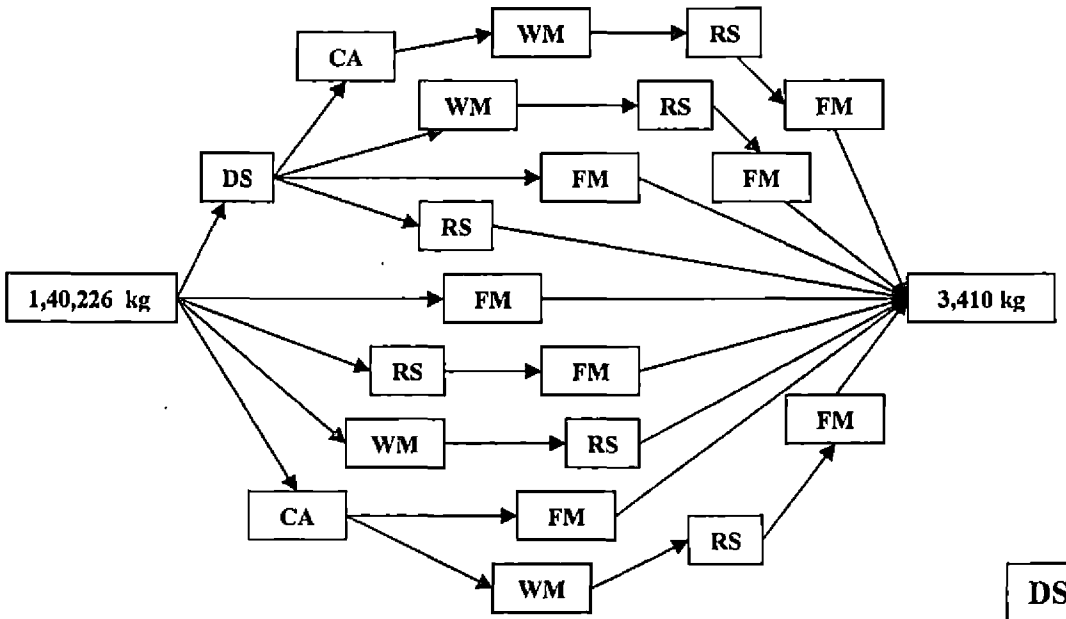
Among the SHG farmers who were using more than two channels for marketing, 6.7 per cent were using three channels (DS x WM x FM) at a time where as 5 per cent of the respondents were using five channels (DS x CA x WM x RS x FM) together.

Among the Non- SHG farmers who were using more than two channels for marketing, 5 per cent were using three channels (DS x WM x FM) at a time and 3.3 per cent of the respondents were using another combination DS x WM x RS.

There were various marketing channel combinations used by the two groups (non-SHG group and SHG group) of respondents and each group had different combinations from that of the other one.

The major channel combinations identified as more common among both groups, are listed below. It is diagrammatically explained through Figure 4.1 and Figure 4.2

Marketing channels used by SHG group



Channel I: DS – CA – WM – RS - FM

Channel II: DS – WM – RS - FM

Channel III: DS - FM

Channel IV: DS - RS

Channel V: FM

Channel VI: RS - FM

Channel VII: WM - RS

Channel VIII: CA - FM

Channel IX: CA – WM – RS -FM

DS – Direct Selling, **CA** – Commission Agents

WM – Wholesale Market, **RS** – Retail Shops

FM – Farmers Market

Figure 4.1

Marketing channels used by non-SHG group

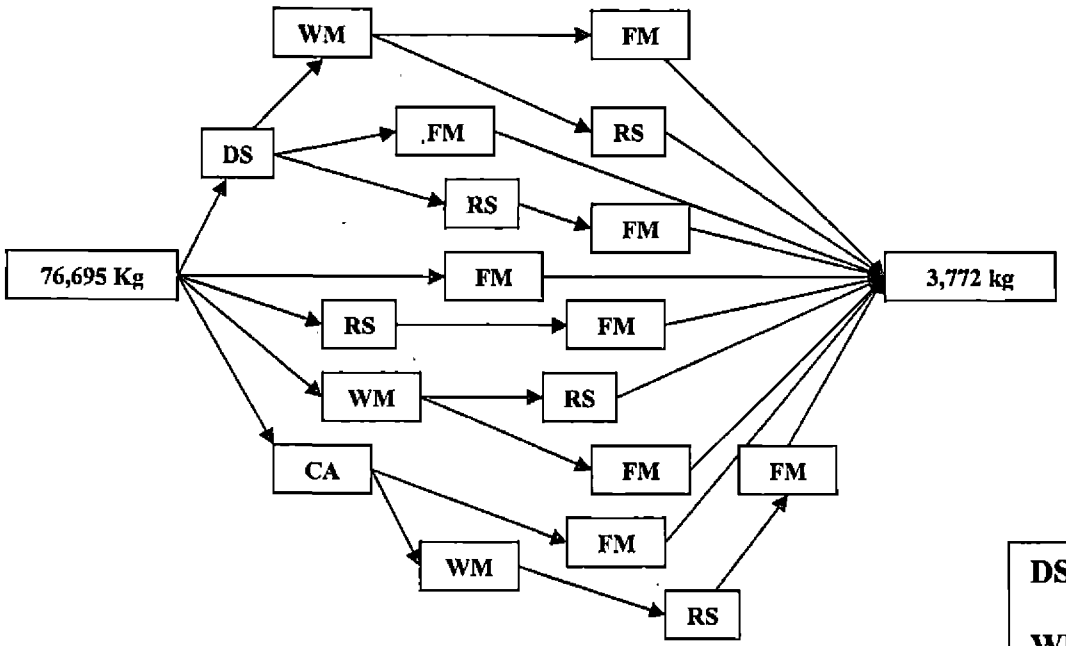


Figure 4.2

Channel I: DS –WM – FM

Channel II: DS – WM – RS

Channel III: DS - FM

Channel IV: DS – RS - FM

Channel V: FM

Channel VI: RS - FM

Channel VII: WM – RS

Channel VIII: WM - FM

Channel IX: CA - FM

Channel X: CA – WM – RS - FM

DS – Direct Selling, **CA** – Commission Agents

WM – Wholesale Market, **RS** – Retail Shops

FM – Farmers Market

I) Major channels used by SHG group

1. Channel 1 : Direct selling, Commission agents, Wholesale market, Retail shops & Farmer's market
2. Channel 2 : Direct selling, Wholesale market, Retail shops & Farmer's market
3. Channel 3 : Direct selling & Farmer's market
4. Channel 4 : Direct selling & Retail shops
5. Channel 5 : Farmers market
6. Channel 6 : Retail shops & Farmer's market
7. Channel 7 : Wholesale market & Retail shops
8. Channel 8 : Commission agents & Farmer's market
9. Channel 9 : Commission agents, Wholesale market, Retail shops & farmer's market

II) Major channels used by non- SHG group

1. Channel 1 : Direct selling , Wholesale market & Farmer's market
2. Channel 2 : Direct selling , Wholesale market & Retail shops
3. Channel 3 : Direct selling , Retail shops & Farmer's market
4. Channel 4 : Direct selling & Farmer's market
5. Channel 5 : Farmers market
6. Channel 6 : Retail shops &Farmer's market
7. Channel 7 : Wholesale market & Farmer's market
8. Channel 8 : Wholesale market & Retail shops
9. Channel 9 : Commission agents & Farmer's market
10. Channel 10 : Commission agents ,Wholesale market, Retail shops & Farmer's market

The volume of produce marketed by both group of respondents through each channel was found to be as per the following table4.15 (SHG) & table 4.16 (Non-SHG)

Table 4.21 Volume of the produce marketed by the SHG group

Sl.No	Channel	Volume marketed (in Kg)	% share
1	Channel 1	3,459	2.43
2	Channel 2	11,394	8.02
3	Channel 3	10,639	7.48
4	Channel 4	18,575	13.07
5	Channel 5	88,900	62.54
6	Channel 6	6,733	4.74
7	Channel 7	1,273	0.90
8	Channel 8	350	0.25
9	Channel 9	820	0.58

Table 4.22 Volume of the produce marketed by the Non-SHG group

Sl.No	Channel	Volume marketed (in Kg)	% share
1	Channel 1	8,220	7.39
2	Channel 2	2,990	2.69
3	Channel 3	2,045	1.84
4	Channel 4	3,165	2.84
5	Channel 5	3,110	2.80
6	Channel 6	6,490	5.83
7	Channel 7	15,480	13.91
8	Channel 8	5,040	4.53
9	Channel 9	33,305	29.94
10	Channel 10	31,405	28.23

The percentage volume of the produce marketed by the non-SHG and SHG groups through various channel combinations is shown in Figure 4.3 & Figure 4.4.

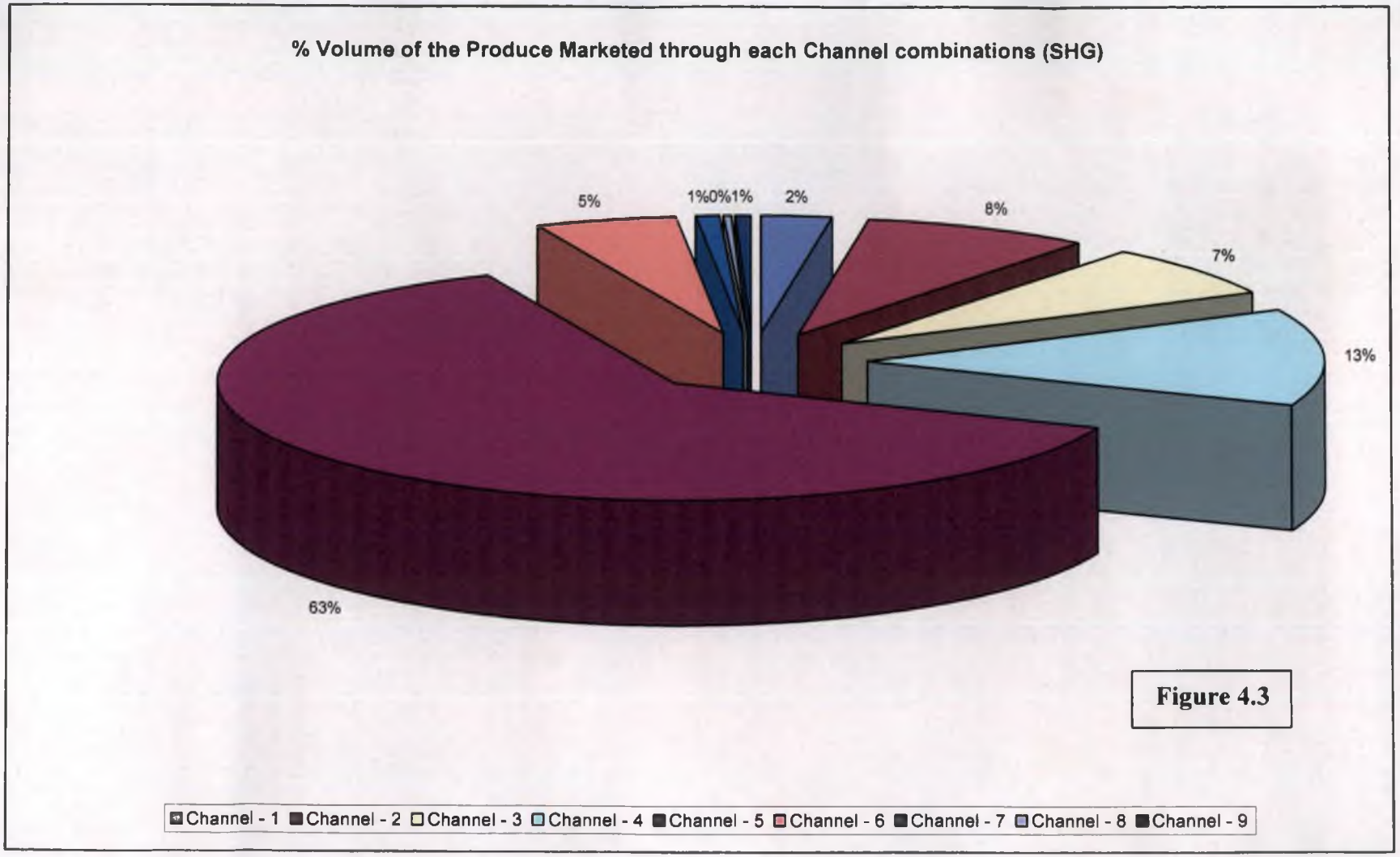

% Volume of the Produce Marketed through each Channel combinations (SHG)
5%
1%
0%
1%
2%
8%
7%
13%
63%
Channel - 1
Channel - 2
Channel - 3
Channel - 4
Channel - 5
Channel - 6
Channel - 7
Channel - 8
Channel - 9

Figure 4.3

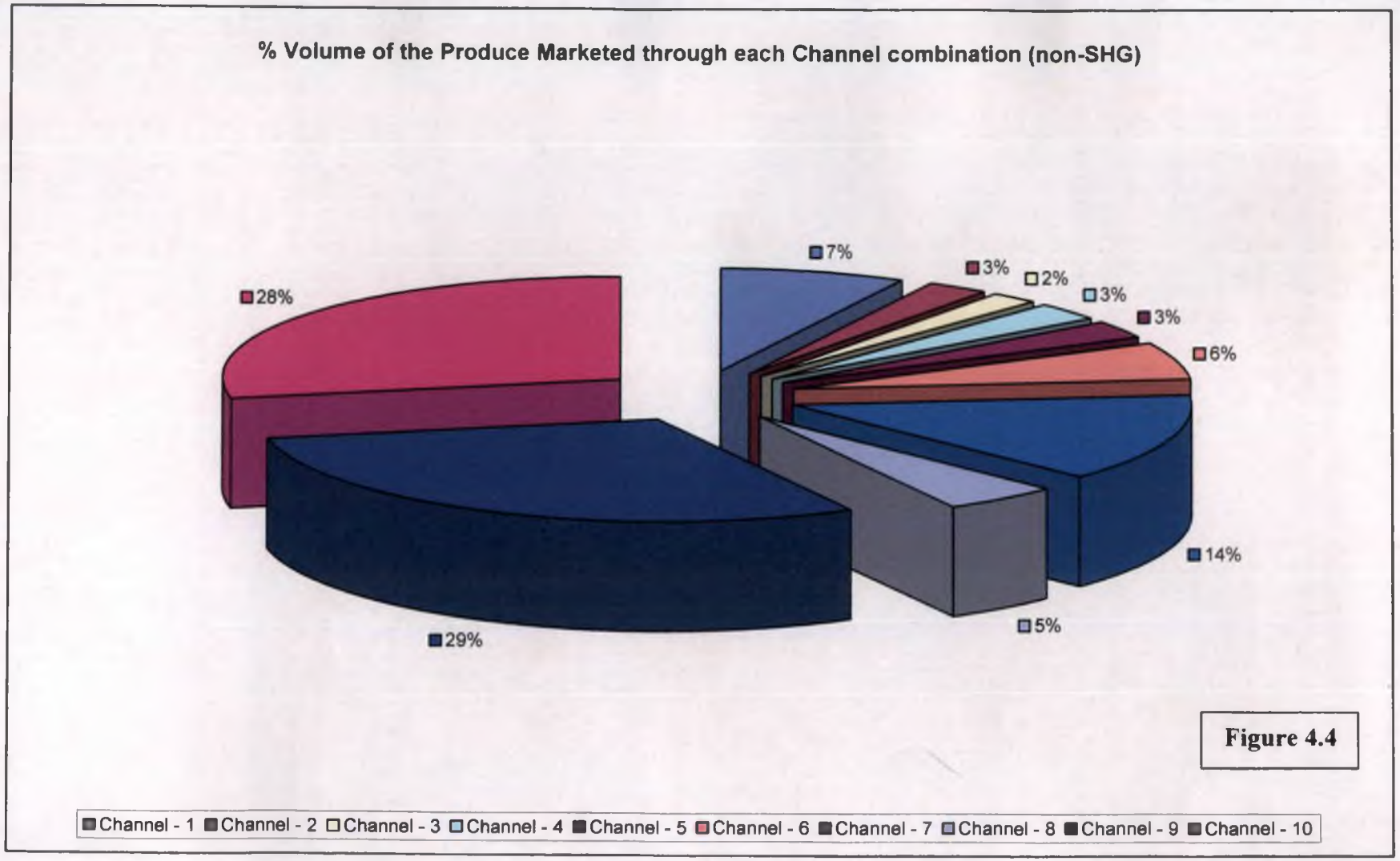

% Volume of the Produce Marketed through each Channel combination (non-SHG)
28%
7%
3%
2%
3%
3%
6%
14%
5%
29%
Channel - 1
Channel - 2
Channel - 3
Channel - 4
Channel - 5
Channel - 6
Channel - 7
Channel - 8
Channel - 9
Channel - 10

Figure 4.4

4.15 Proximity of Marketing Channels

Proximity of marketing channels to the producer allows them to use those channels frequently compared to other channels. The farmer sells his or her produce to the closer channel if he or she has no other alternative like selling through SHG markets.

In order to identify the most effective channel in marketing among the two target groups (SHG & Non-SHG) a method called Critical Path Method (CPM) was adopted. This shows the proximity of each channel to the producer among both groups of respondents.

The activity diagram of CPM described in the following figure 4.5 and figure 4.6 shows a network of channels and which were connected by arrows. The length of arrows represents how much near or far those channels to the respondent to market his or her whole produce in a minimum time period. Each channel was represented as a rectangle here. The rectangle that was more close to the left side of the diagram indicates the more accessibility of that channel to the farmer and so frequency of use of that channel was also more compared to the rest. As the rectangles moves to the right side of the diagram, accessibility of that channel decreases and also its frequency of use.

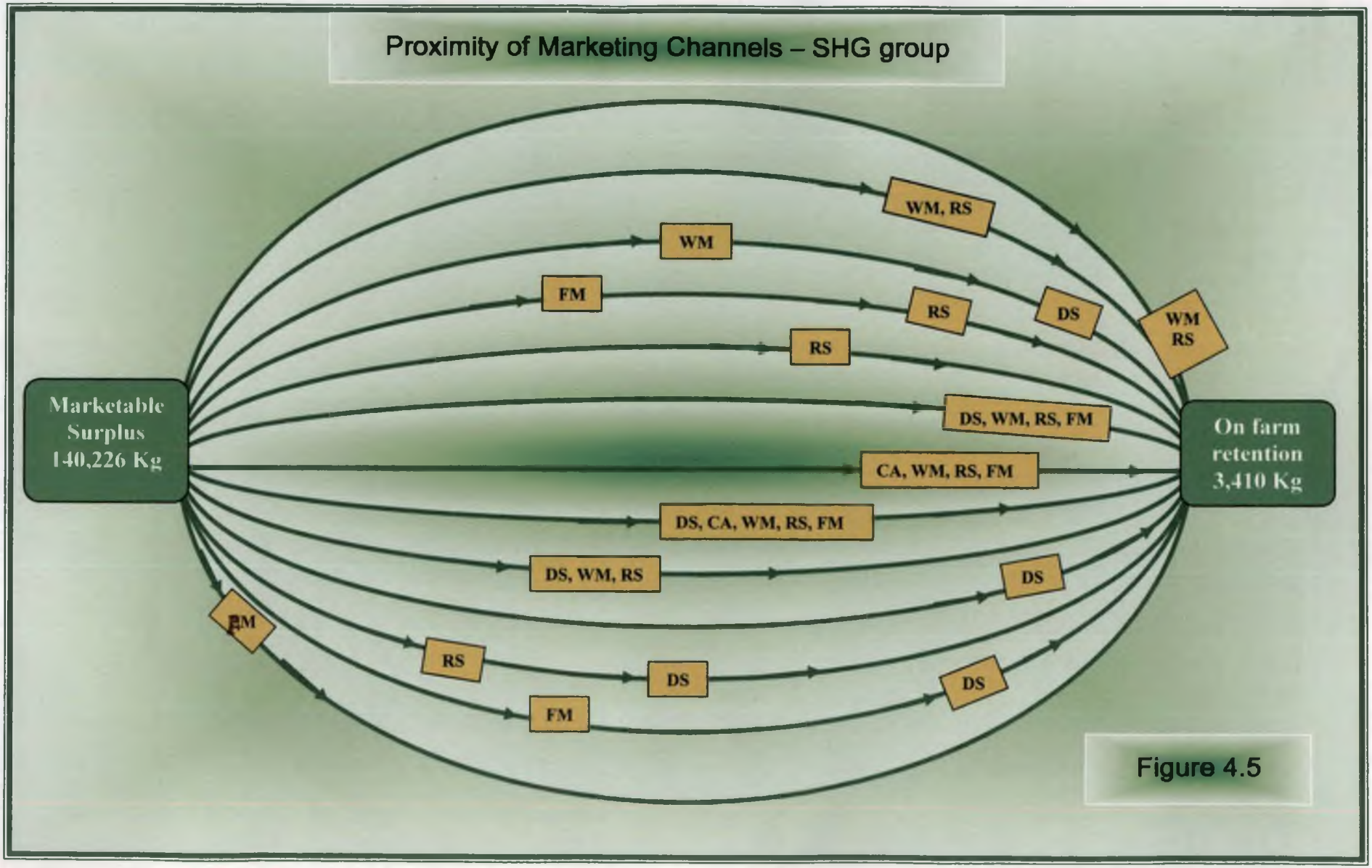

Proximity of Marketing Channels – SHG group
Marketable Surplus 140,226 Kg
WM, RS
WM
FM
RS
DS
WM RS
RS
DS, WM, RS, FM
CA, WM, RS, FM
DS, CA, WM, RS, FM
DS, WM, RS
DS
FM
RS
DS
FM
DS
On farm retention 3,410 Kg

Figure 4.5

Among the SHG group of farmers, a net work of thirteen channels could be seen in the proximity diagram where as, the Farmers Market (FM) was found to be closer compared to all other channels. Farmers belonged to the SHGs of VFPCK were the most frequent users of this channel and they could market their whole produce through this channel. It is also clear from the diagram that there was no other channel to which the SHG farmers depended solely as farmers market.

The combined use of Retail Shops (RS) and Direct Selling (DS) was found to be in the second place after Farmers Market. But, out of the two Retail Shops were found to be more frequently used one compared to the other. This combination was mostly used by the Kudumbasree group of farmers and they were depending on direct selling at the last phase of the crop that is why direct selling was less frequent here. It is also obvious from the diagram that farmers who were depending solely on either Retail Shops (RS) or Direct Selling (DS) was less that is why those two channels were remaining more close to the right corner of the diagram.

The least preferred channel for marketing was found to be the combination of Wholesale Market and Retail Shops (WM & RS).

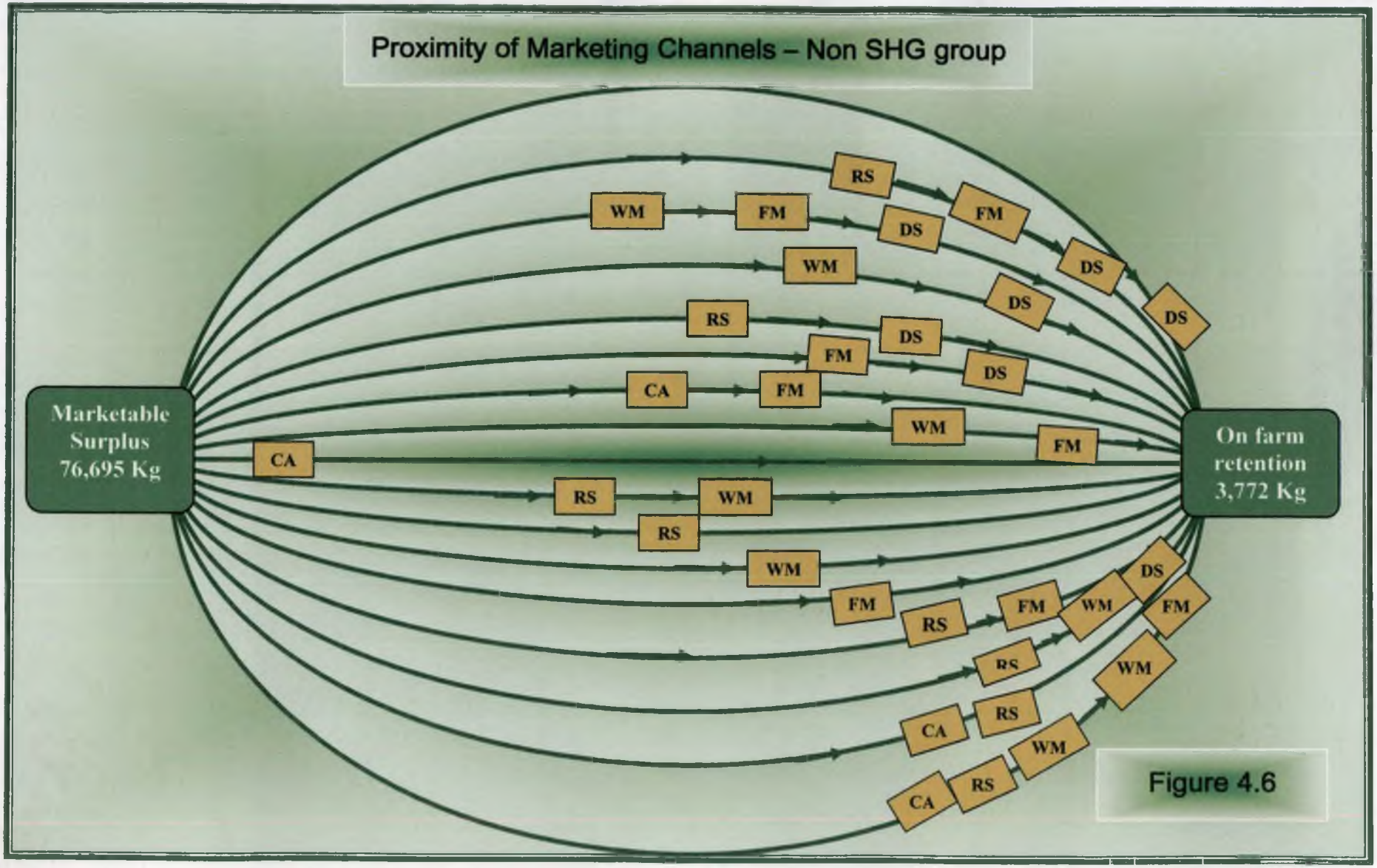

Proximity of Marketing Channels – Non SHG group
Marketable Surplus 76,695 Kg
On farm retention 3,772 Kg
RS
WM
FM
DS
CA

Figure 4.6

Among the Non-SHG group of farmers, a net work of seventeen channels was identified through the proximity chart. Commission Agents (CA) was found to be closer compared to all other channels. Farmers who were cultivating summer vegetables in rice fields were mainly using this channel because this is their closer channel and commission agents purchase their produce from the field itself and farmers need not waste time to search for other channels to market their whole produce.

All other channels were undoubtedly far from the first channel and the combination of Retail Shops (RS) and Wholesale Markets (WM) was found to be in the second place after that Retail Shops (RS) comes in the picture. There are fourteen other channel networks too in the proximity diagram and they remains close to each other. Since there was no assured market among the Non-SHG group of farmers from different locality were using channels differently based on their preference and perception about the channel.

4.2 MEASUREMENT OF EMPOWERMENT STATUS OF RESPONDENTS

4.2.1. Social Empowerment

4.2.1.1 Social Participation

In SHG group of respondents all farmers had membership in farmer's group and in some other organizations. Out of that 78.3 per cent of the members were actively participating in all group meetings, 18.3 per cent were frequent visitors in group meetings and only 3.3 per cent were not interested in attending any group meetings even though they had group membership.

In the non –SHG group of respondents, 80 per cent of the respondents were having membership in one or two farming groups and certain other organizations. Out of that 39.58 per cent of the respondents were 'always' attending group meetings and rest 33.3 per cent were not interested in attending any group meetings.

4.2.1.2 Social Recognition

Table 4.23 Mean rank of SHG & Non-SHG groups for social recognition

Sl.No	Items	Mean Rank	
		SHG	Non- SHG
.1	Social Recognition	75.63	45.37

Table 4.23 reveals that the SHG group of respondents were getting more social recognition than the non-SHG group of farmers because they had produced an individual mean score of 75.63 in analysis, while the other group had only 45.37 for the same variable.

4.2.2 Personal Empowerment

Table 4.24 Mean Rank of SHG & Non-SHG groups for personal empowerment

Sl.No	Items	Mean Rank	
		SHG	Non- SHG
1	Innovativeness	75.80	45.20
2	Communication Ability	73.62	47.38
3	Proactive Attitude	73.26	47.74
4	Self –confidence	60.21	60.75
5	Leadership Ability	64.88	56.13

It is clear from the above table that SHG group of respondents had more innovativeness to adopt a new idea, more communication power in a group, good proactive attitude about various concepts and more leadership ability in a group because for all those variable they had produced more individual scores compared to the non-SHG group of respondents. However, in the measurement of self-confidence they were found to be almost equal.

4.2.3 Technological Empowerment

4.2.3.1 Level of knowledge in crops and equipments & Market Awareness

Table 4.25 Mean Rank of SHG & Non-SHG groups for technological empowerment

Sl.No	Items	Mean Rank	
		SHG	Non- SHG
7	Level of knowledge in crops and equipments	74.38	46.63
8	Market Awareness	78.03	42.97

To the questions regarding the level of knowledge in vegetable farming, it was observable that the SHG group of respondents had more awareness about the new varieties and management practices and produced a good mean individual score to this group of respondents compared to the other group (non-SHG).

It was also observable that the SHG group of respondents had more market awareness than the non-SHG group.

4.2.3.1. Information Source Utilization

The number of respondents using both mass media and interpersonal sources to access various kinds of agriculture and related information and their frequency of use are explained through the following tables, Table 4.26 and Table 4.27.

From table 4.26 it is clear that the most frequently used mass media channels in both groups were News paper, Radio and Television even though there is a slight difference in their frequency of use among the two groups of respondents.

The major three interpersonal sources identified from table 4.27 were Agricultural Assistants, Neighbors and Animators of NGO. Among SHG group of respondents 36.7 per cent of the respondents were 'always' depending up on 'animators of NGO' to gain new technology that shows the positive impact of SHGs under various NGOs, where as only 3,3 per cent of the non-SHG group of respondents were depending on this interpersonal source of information.

Table 4.26 Mass media used by each group of respondents & frequency of use of each source

Sl.No	Source	Frequency of use of each source (%)							
		Most Often		Often		Sometimes		Rarely	
		Non - SHG	SHG	Non - SHG	SHG	Non - SHG	SHG	Non - SHG	SHG
1	TV	30 .0	38.3	30.0	16.7	13.3	35.0	10.0	3.3
2	Radio	36.7	51.7	11.7	13.3	30.0	11.7	13.3	8.3
3	News Paper	48.3	46.7	20.0	11.7	5.0	16.7	5.0	1.7
4	Movies	1.7	3.3	1.7	1.7	8.3	25.0	38.3	26.7
5	Farm Magazines	13.3	16.7	8.3	10.0	15.0	28.3	11.7	13.3

Table 4.27 Interpersonal sources used by each group of respondents & frequency of use of each source

Sl.No	Source	Frequency of use of each source (%)							
		Most Often		Often		Sometimes		Rarely	
		Non - SHG	SHG	Non - SHG	SHG	Non - SHG	SHG	Non - SHG	SHG
1	Agricultural Officers	5.0	5.0	15 .0	25.0	11.7	26.7	16.7	25
2	Agricultural Assistants	6.7	8.3	8.3	26.7	10.0	35.0	16.7	16.7
3	University Scientists	0		5.0		13.3	18.3	11.7	18.3
4	Block Officers	3.0		1.7		10.0	5.0	11.7	13.3
5	Neighbors	5.0	11.7	25.0	20.0	8.3	20.0	8.3	8.3
6	Relatives	8.3	10.0	16.7	25.0	15.0	21.7	5.0	11.7
7	Animators of NGO	3.3	36.7	3.3	11.7	8.3	10.0	6.7	10.0

4.2.4 Economic Empowerment

4.2.4.1 Income Generation

Table 4.28 Mean Rank of SHG & Non-SHG groups for income generation

Sl.No	Items	Mean Rank	
		SHG	Non- SHG
1	Income Generation	90.00	31.00

From the above table it is clear that due to the SHG membership the farmers could generate more income to his or her family compared to the non-SHG group of respondents.

4.2.4.2 Credit Utilization

In the SHG group of respondents, 58.3 per cent of the respondents of SHG group were not using the available credit facility for agricultural purposes, Out of the rest 51.7 per cent 38.3 per cent of the respondents have repaid the loan and 3.3 per cent of the farmers have not repaid the borrowed credit. Among the non-SHG group members, 48.3 per cent of the respondents were not using any available credit facilities. Out of the rest 51.7 per cent 45 per cent of the respondents have repaid it in time and 6.7 per cent of the farmers have not repaid the borrowed credit.

4.3 MEASUREMENT OF EMPOWERMENT STATUS OF RESPONDENTS

Table 4.29 Mean Rank of SHG & Non-SHG groups for empowerment variables

Sl.No	Items	Mean Rank	
		SHG	Non- SHG
1	Social Empowerment	76.37	44.63
2	Personal Empowerment	76.05	44.95
3	Technological Empowerment	76.04	44.96
4	Economical Empowerment	90.28	30.73

It is clear from the table 4.25 that the SHG group of respondents had more individual scores to each indicator, in the measurement of 'socio-psychological and techno-economical' indicators of empowerment. This reveals the fact that they had more empowerment compared to the non-SHG group of respondents and the maximum empowerment was observable in economic level.

4.4 INFLUENCE OF SOCIO-ECONOMIC CHARACTERISTICS ON EMPOWERMENT

The following table 4.30 shows the impact of each socio-economic variable on empowerment process among the two groups of respondents.

Table 4.30 Impact of Socio-economic variables on empowerment

Sl.No	Variables	Odds Ratio	
		SHG	Non- SHG
1	Age	1.344	0.296
2	Educational status	1.373	2.737
3	Family income	2.520	1.738
4	Owned land	1.661	1.015
5	Owned land under vegetable cultivation	0.705	1.343
6	Leased land under vegetable cultivation	1.761	1.306
7	Experience in vegetable growing	2.213	1.254
8	Irrigation potential	0.454	0.394

The Odds ratio appeals of the odds in favour of empowerment are against odds in favour of non-empowerment. The score above 1.5 can be treated as good because they interpret out of the every three members at least in cases that variable have an aur in the empowerment.

The above table 4.30 says that among SHG group of farmers for all socio-economic variables except owned land under vegetable cultivation and irrigation potential the odds ratio is above one but, four variable such as family income, land

owned, leased land under vegetable cultivation and experience in vegetable growing had produced score 'above 1.5'. Thus, they had a positive impact in the process of empowerment among the SHG group of farmers.

In the case of non-SHG group, educational status and family income had score 'above 1.5' and so out of the every three respondents in two cases the above variables had a positive impact on empowerment.

4.5 DEVELOPMENT OF EMPOWERMENT THRESHOLD

To assess the empowerment status of the SHG group of respondents as a result of various market-led extension activities the scores obtained for all the four sections of dependant variables were taken in to account. For developing the empowerment threshold the extent of personal empowerment gained by different groups of SHG and non-SHG groups as a result of increased social interaction were analyzed.

In the measurement of social participation there were various sub groups to measure the extent of involvement of each participant in various social activities. A score '2' was given to those respondents who had membership in one organization and a score of '4' was given to those respondents who had an office bearer position in any of the organization. The level of personal empowerment in each of these groups is given below table 4.31.

Table 4.31 Mean Rank of SHG & Non-SHG groups for personal empowerment

Sl.No	Participation type		SHG		Non- SHG	
	Member	Office bearer	No of respondents n = 60	Mean Rank	No of respondents n = 60	Mean Rank
1	2 organization	1 organization	12	90.7	3	91.3
2	2 organization	-- Nil --	22	104.0	8	80.4
3	1 organization	-- Nil --	15	94.1	23	79.4
4	-- Nil --	-- Nil --	----	----	12	78.9

The above table 4.31 reveals that the respondent groups of both SHG and non-SHG who had membership in two organizations and office bearer in one organization had produced equal scores (Mean Rank of empowerment = 91). This rank of empowerment was worked out by considering the total scores produced by SHG as well as non-SHG group of respondents who were coming under the above four groups, for the five personal empowerment variables. The mean score of personal empowerment for each of the above four group was calculated. The scores of SHG and non-SHG groups became same for the first group. Thus, the score 91 was considered as the empowerment platform i.e., the highest level where both respondent groups stands as equals.

We could measure the empowerment gained by different groups as 'more empowered' or 'less empowered' by relating those scores with this empowerment platform score so that this value is considered as the 'Empowerment threshold'. It was clear from the table that the SHG group of respondents had more empowerment from that of non-SHG group of respondents under the same situation. The SHG group of farmers who had membership in two organizations and office bearer ship in one organization had produced empowerment scores 104 and 94 respectively and so both of these categories came under more empowered group, where as the non-SHG members of the same category had only 80 and 79 respectively as empowerment scores and these two groups were thus included under 'less empowered'.

DISCUSSION

V. DISCUSSION

This chapter comprises of the conclusions derived from the present study. The purpose of this study was to explore the link between various market-led extension activities and the techno-economical and socio-psychological empowerment of vegetable farmers, who were doing vegetable farming as a member of any SHG. The results of this study clearly supports the above mentioned technical, economical, social and personal empowerment of the SHG group of farmers when compared to that of non-SHG group of farmers. The item wise results are explained under the following sub heads

5.1 Socio-economic characteristics of respondents.

5.2 Marketing behaviour of farmers

5.3 Analysis of the degree of empowerment of respondents

5.4 Influence of socio-economic characteristics of the respondents on empowerment

5.5 Empowerment threshold

5.1 SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

5.1.1 Age

The results reveal that 60 per cent of the SHG farmers and 53.3 per cent of the non-SHG farmers belonged to below 50 years of age and so we could say that they were comparatively new in agricultural practices too and they might be more open to newer practices though they had a traditional background. This was not in agreement with the result obtained by Subhashini (1990) and Kamalakannan (2004) but the result obtained for the non-SHG group was found to be in agreement with that of Jahagirdar and Sundarasamy (2002)

5.1.2 Educational Background

It is true that the power to adopt new ideas increases with the increase in education level. The results reveal that 61.7 per cent of the SHG farmers and 61.6 per cent of the non-SHG farmers had undergone high school education and so the technology transfer to this group may not be a tedious process. However, the result on total empowerment defends this statement because there was more empowerment among the SHG group of respondents compared to the non-SHG group. The result was in line with that of Alagirisamy (1997) and Jahangirdar and Sundarasamy (2002) in some aspects but, against the report of Pochiah *et al* (1993)

5.1.3 Agricultural Background

Table 4.3 reveals that 85 per cent of the SHG respondents and 83.3 per cent of the non-SHG respondents had traditional background in agriculture. However, they were following most of the recent practices in vegetable cultivation. This reveals that even though most of the respondents of both group had traditional background they were not at all reluctant to adopt newer practices of agriculture. It was also observed that only those who had an immense interest in agriculture were doing vegetable cultivation commercially.

5.1.4 Family Size

The result obtained from table 4.4 was against the general concept that small family size is a highly favourable condition to become empowered easily. As per the table, 65 per cent of the SHG farmers had 5-8 members in the family, 60 per cent of the non-SHG farmers had 1-4 members in their family. The non-SHG group should have more empowerment if the above statement about small family size is right but it was observed that the SHG group of respondents had more empowerment compared to the non-SHG group.

5.1.5 Family Income

As per the result obtained, only 1.7 per cent of the SHG members belonged to the 'less than Rs.5000' income group and 91.7 per cent belonged to Rs.5000-25,000 income group. This means majority of the SHG farmers belonged to the average income group and due to this reason the economic empowerment became more clear in this group compared to the non-SHG group and they need to be economically improved compared to the higher income group of farmers.

5.1.6 Owned Land & Land under Vegetable Cultivation

In the SHG group of respondents, only 13.8 per cent of the farmers had 'above 1 acre' land owned and out of them only 13.3 per cent of the farmers were cultivating vegetables in 'above 50 cents' of land owned. In the 0.1-0.5 acre landowner group of farmers, 83.3 per cent of the farmers were cultivating vegetables in '10-50 cents' of land owned. The landless group of the same SHG group of respondents also performs well as the above two groups so that we could clearly state that both these variables had a role in the economic empowerment process. In the non-SHG group of farmers, leased land under vegetable cultivation was found to be less compared to the SHG group.

5.1.7 Experience in Vegetable Growing

Experience in vegetable growing should definitely have a role in the process of technological empowerment because as the experience increases the level of knowledge in crops and equipments increases. But, only those farmers who have an innovative mentality to know more only get the latest information about the up coming technologies and new acceptable methods of vegetable growing. The result also proved the same. In both group of respondents about 93.3 per cent of the farmers had 5- 25 or more years experience in vegetable cultivation but, only those farmers group (SHG) who were in close contact with any of the

information sources could produce a positive result in technological empowerment because of their experience. Bonny (1991) and Kamalakannan (2003) also got the similar result but was found to be defending the result obtained by Alagirisamy (1997).

5.1.8 Vegetables Grown on Commercial Basis

Vegetables coming under the first five ranks in terms of commercial cultivation by more number of farmers were found to be same in both respondent groups (SHG & non-SHG) though there was a difference in the volume of the produce marketed. It was observable that a greater percentage of respondents from SHG group were cultivating these crops compared to the non-SHG group. The greater marketing facilities through farmers market and collective bargaining power had shaped this group of respondents to market the whole produce compared to the non-SHG group.

The result also indicates the present market demand of vegetables i.e., which crops had greater demand in the market. The cultivation of similar crops by majority of the respondents of two groups supports the fact that those vegetables had a greater marketability.

5.1.9 Farming Group & other Organizational Membership

Almost the entire SHG group of respondents had some group membership other than the membership in SHGs. On the other hand, only 61.7 per cent of the non-SHG farmers had farmer group membership even though they were full time farmers. This shows the lack of organized activities and planning among the rural farmers. Because of this disorganized manner of existence, introduction of newer technologies and farming practices become a tedious process among the non-SHG group of farmers.

The non-SHG group of farmers was reluctant to be a part of any other social organization too and only 28.3 per cent of the non-SHG group of farmers had membership in any other organization against the 58.3 per cent of the SHG group. It was also clear that only a few members of the non-SHG group were active members of their member organization and this keeps them away from being empowered in social level.

5.1.10 Irrigation Potential

The result obtained clearly says that the SHG group of farmers had greater irrigation potential compared to the non-SHG group and due to this reason; they could produce more vegetables. In the case of vegetables, the timely availability of irrigation had a greater role in the production process compared to other crops. It was also a fact that compared to the non-SHG group of farmers most of the SHG group of farmers were cultivating vegetables on leased land and they were selecting these lands based on the favourable climatic condition and water availability.

5.2 MARKETING BEHAVIOUR OF FARMERS

Marketing is the last link in the chain of production process. An efficient marketing system, which ensures reasonable return to the producers, is essential to induce them to produce more.

During the pre-independence period, Indian agriculture was backward, stagnant and there was hardly any marketable surplus. Therefore, the system of marketing though defective, did not attract much attention. However, in the post-independence period and particularly after green revolution, agricultural marketing has become a prime concern for the planners. Due to the increase in agricultural productivity, the marketable surplus has increased.

5.2.1 Marketable & Marketed Surplus

With regards to the marketable surplus, it was found that among the SHG group of farmers the amount of marketable surplus was nearly twice as that of the non–SHG farmers. However, the amount of marketed surplus is different for different farmers among both groups of respondents. This result was in line with that of Pandey and Tewari (2004) about the difference in marketed surplus among farmers. The SHG group of respondents had more produce compared to the non-SHG farmers and could market almost the whole amount. This may be due to their accessibility to a more structured marketing facility.

5.2.2 Marketing Channels

An important component of marketing system is the widespread network of regulated wholesale markets and these markets are usually located near or in a township. The farmers sell their produce to the commission agents with the help of brokers. There are various other systems of agricultural marketing that exist in India. An important traditional system is the sale of produce to moneylenders and village traders and this system is closely related to the problem of rural indebtness. The price paid by the moneylenders is considerably lower than the market price.

Major direct marketing channels adopted by the SHG and non-SHG farmers are found to be direct selling, commission agents, wholesale market, retail shops and farmers market. All these channels had almost equal role in the marketing process among both group of respondents. The findings of Ramasamy (1981) and Sandhya (1992) regarding the important marketing channels of vegetables was similar to that of the above result.

Regarding the proximity of marketing channels among the two respondent groups, commission agents were found to be nearest to the non-SHG members

and farmer's market was the nearest marketing facility to the SHG group. But, though commission agents were close to the non-SHG group it was not that much effective as the farmers market because farmers did not get a reasonable profit for their effort through commission agents. Commission agents used to fix vegetable prices after leaving their profit margin (commission) and this prevents farmers from selling their produce on market price. It was also observed that most of the rural farmers of non-SHG group insisted on selling their produce to commission agents because use of this channel reduces their effort to find a suitable place to market.

Among the SHG group of farmers 'farmers market' provides the bargaining power on their produce to the buyer and thus they could sell vegetables on prevailing market price. Here, the facilitators of the farmers market help them to know about the prevailing market price and also to choose the ideal buyer to their produce. From the proximity chart the least preferred channel for marketing was found to be the combination of Wholesale Market and Retail Shops (WM & RS). The reasons behind this are deduced as follows.

1. Since 1/3 rd of the selected respondents had been marketing their produce only through Farmers Market there was no chance to the use of these channels.

2. Second 1/3rd of the selected respondents group was Kudumbasree members and they were mainly depending on Retail Shops because their volume of produce was less as they were marketing their produce either separately or by a group of 5-6 of a locality.

3. The other 1/3rd selected from Harithasangam members or Women in Agriculture group and they marketed their produce

mainly through Wholesale Market (WM) and also through Direct Selling especially to the neighbor consumers.

So, the combination of WM and RS did not work well in this group of respondents.

It was also observed that among the non-SHG farmers, especially those who were marketing their produce through commission agents never wanted to enquire about the present market demand or prevailing price, and they usually sell their produce on farm gate price fixed by the intermediaries or commission agent. Thus, the farmers get only less amount compared to the actual market price. This same result was produced earlier in the study of Ojha *et al* (1983).

In general, it was comprehensible that the VFPCK group of farmers had more uniqueness in marketing practices and also in profit making than the rest of the SHGs selected for the study. They had their own marketing strategies and a well structured market and the Wholesalers were coming to this market to procure the produce. Here, the farmer in charge of that market along with the field worker acts as the middle men here in marketing and farmers getting current market price to their produce.

5.3 MEASUREMENT OF EMPOWERMENT STATUS OF RESPONDENTS

5.3.1 Social Empowerment

The two variables selected to measure social empowerment viz., social participation and social recognition had produced positive results. This shows the greater involvement of SHG group of farmers in various social activities. As a result of their greater interaction in various social activities, the members of the same society accepted them more and this increases their empowerment status at

social level. Involvement in social activities also helps them to be empowered mere personally.

It was also clear that the level of social participation among the non-SHG members was found to be less compared to the SHG group. The non-SHG group of farmers who had membership in any social organization was not at all interested to keep regular attendance in any group meetings except the office bearers, where as the SHG group of farmers were found to be regular in group meetings. This shows the level of collective empowerment gained because of SHG approach. Karl (1995) and Bandura (1997) earlier mentioned about role of collective empowerment to produce desired outcome in a group.

Rekha and Nachimuthu (2006) also opined that empowerment is a social process and achieving collective empowerment is presumed harder without personal or self-empowerment.

5.3.2 Personal Empowerment

It was observed that self-help group of farmers had produced high level scores in the measurement of innovativeness, communication ability, proactive attitude and leadership ability compared to non-SHG group of farmers. This finding reveals that because of SHG approach and market-led extension, there were evidences for the development for some positive characteristics among the members and that made them more powerful to stand before challenges of life. This was in accordance with the conclusion of some earlier workers like Barner (1994), Murugan and Dharmalingam (2000), Kumar (2006), Hasalkar *et al.* (2006) and Madhuri (2006).

Because of the positive changes, that had happened in a personally empowered farmer, he or she will realize their identity and this helps them to develop a positive self-image. Thus, the person starts to interact with others more

both inside and outside the group. The SHG group of people showed more eagerness in attending group meetings to discuss issues and to look at solutions of commonly experienced problems. This finding was in line with the opinion of earlier workers like Antony (2006) and Gupta and Gupta (2006).

5.3.3 Technological Empowerment

Three variables were measured under this empowerment viz., level of knowledge in crops and equipments, market awareness and information source utilization. These three variables were found to be interrelated because; proper use of the available information sources had produced an increase of knowledge in crops and equipments and increased market awareness in the SHG group of farmers. It was also observed that agricultural assistants were found to be more acceptable by both group of respondents but, SHG group of farmers were more influenced by interpersonal sources.

Measurement of technological empowerment had thrown light on the importance of marketing channels in the marketing process of farm produce. Proper selection of marketing channels helps the farmer to earn a reasonable price to his produce. The support given by various farmer friendly organizations like VFPCK and SHGs formed under various NGOs helps farmers to become more aware about the present market trend and market practices. This led them to develop more bargaining power and as a result they become economically more empowered. Pillai and Harikumar (2006) also reported that marketing is an important area of functioning of SHGs. The research report of Sengupta (1988) also supports the above finding.

5.3.4 Economic Empowerment

Income generation was found to be more because of SHG approach. Through the activities of SHG, most of the respondents could produce a reasonable income and could generate additional income to his or her family

compared to the earlier period. As a result of this improvement in income, most of the SHG group of respondents did not need any credit support for a better living and could repay the borrowed credit in time compared to the non-SHG group.

Ramachandran (1997) suggested that the formation of SHGs among vegetable farmers with the objective of ensuring a stable and sustainable income to the cultivator. The results of the present study also support the value of SHGs among them personally, socially, technologically and economically.

The conclusion about the features of market-led extension management through NGOs, SHGs and other government organizations found to be similar to that of Rao (2004) because of the identified features like

1) creating awareness about the present demand and distribution system to the producer in the markets,

2) strengthening linking systems between markets, marketing research and extension, producers and customers and

3) giving more emphasis to group approaches in the activities of market management and development.

5.4 INFLUENCE OF SOCIO-ECONOMIC CHARACTERISTICS ON EMPOWERMENT

The Odds ratio for socio-economic variables such as family income, land owned leased land under vegetable cultivation and experience in vegetable growing had the power in the process of empowerment among the SHG group of farmers. It was also observed that out of the every three respondents in two cases the above variables had a positive impact on empowerment. However, educational

status and family income had the same influence among the non-SHG group of farmers.

This indicates that among SHG farmers, family income, area under vegetable cultivation and experience vegetable farming had significant and positive influence on empowerment. Where as educational status and family income had significant and positive influence on empowerment in the case of non SHG farmers.

Better economic status usually motivates people to seek out more awareness of income generation and try out new methods. The results point towards this general fact. The obvious variable for empowerment, namely educational status emerged important only in the case of non-SHG farmers. This might be because, in the case of SHG farmers, the cohesion and organized form of activities by way of being SHG members may be leading to their empowerment, even without having higher education.

5.5 EMPOWERMENT THRESHOLD

Empowerment can not be measured by simply asking a person how much empowered you are and scoring his response. Empowerment can be measured only through external factors such as social aspects, personal aspects, technological aspects and economic aspects. A pre fabricated platform is needed to measure the increase in the empowerment level and from that platform we could measure the empowerment level that had happened in a person or in a group. Through this way we could understand how much are they empowered more from the platform level or how below they are from the platform.

While we are comparing two groups of respondents, it is also essential to find out the level of empowerment that had happened among the two groups of respondents under similar situations and that can be taken as the threshold value

of empowerment. Here, the value of empowerment threshold was obtained from the correlation of two variables such as social participation and personal empowerment. The maximum equal score of personal empowerment that could be attained by the SHG and non-SHG group of respondents who were having the same level of social participation.

The result highlights the fact that both SHG and non-SHG group of respondents who had the same mode of social participation produced equal scores for personal empowerment and thus this was taken as the 'empowerment threshold'. Further analysis of other participation types reveals that among the non-SHG group of respondents, only those who had an office bearing position attained significant personal empowerment but among the SHG group of respondents no such position was needed. So it shows SHG itself leads to personal empowerment.

The personal empowerment is considered as an indirect measure of total empowerment because once a person becomes empowered personally; naturally his or her social participation increases and get more acceptance in the society and thus he or she become more empowered at social level. As a result the other two indicators such as technological and economical empowerment also become more significant in that person. So once a person is empowered personally that leads him or her to the complete empowerment later.

SUMMARY

VI. SUMMARY

Market –led extension activities through SHG movement has empowered the rural people especially the farming community and thus contributes to the socio-economic progress of the country. SHG has emerged as an alternative credit support to rural farmers especially women to become economically independent and to empower themselves. The SHG farmers were empowered through the development of more innovativeness, leadership ability, income generation, opportunity to improve the hidden talents and thus gaining more importance in the society.

Market –led extension activities also helps rural farmers for gaining more market orientation and competence. This helps to change the marketing behaviour of farmers. All these were analyze through this study. The main objectives of the study are as follows

1) Analyzing the marketing behaviour of vegetable farmers belonging to SHGs and not belonging to SHGs.

2) Evaluation of empowerment achieved through market-led extension

3) Identifying the techno-economical and socio psychological indicators of empowerment.

The present study was carried out in Thrissur and Kasargod districts of Kerala state. Farmers who are actively cultivating any of the vegetable on commercial basis were selected as one group of respondents (non SHG group) and farmers who are engaged in commercial vegetable cultivation as a member of any SHG were selected as the second group of respondents

The interview schedule, comprising of the items to measure sociological, personal, technological and economical empowerment, of SHG and non-SHG group of respondents was prepared. For this, a comprehensive list of 30 dependent variables was prepared based on the objectives of the study, review of literature, discussion with experts and the observation made by the researcher and from that 12 variables were selected after judges rating. The different variables selected are as follows

I. Social Empotement : Social participation, Social recognition

II. Personal Empowerment : Innovativeness, Communication ability, Proactive attitude, Leadership ability, Self confidence

III. Technological Empowerment : Level of knowledge in crops and equipments, Information source utilization, Market awareness

IV. Economical Empowerment : Income generation, Credit utilization

Based on the objectives, reviews of literature and also in line with the similar past studies 15 independent variables were also selected.

The major findings of the present study are presented below

1) Among the two respondent groups, 83-85 per cent of the farmers had a traditional background in vegetable farming and only 15 -17 per cent of the SHG respondents were relatively new in this field.

2) Among the respondent groups, 91.7 per cent of the SHG respondents and 80 per cent of the non-SHG respondents belonged to the medium income group ranging from Rs. 5000 – 25,000.

3) Out of the total respondents, 15 per cent of the SHG farmers and 13.4 per cent of the non-SHG farmers were landless and doing vegetable cultivation on leased land.

4) The major vegetables coming under the first five ranks in terms of commercial cultivation by more number of farmers were amaranths, cow pea, bitter gourd, cucumber and banana. Even though there was a slight change in the ranking of these vegetables among the two groups (SHG and Non-SHG) they remained as same among both groups.

5) Out of the total respondents, 43.3 per cent of the SHG farmers and 33.3 per cent of the non-SHG farmers had year round irrigation facility, 56.7 per cent of the SHG farmers and non-SHG farmers had only seasonal availability of irrigation water.

6) Among the SHG group of farmers, 91.67 per cent of the SHG respondents and 75 per cent of the non-SHG respondents could market the whole amount of their produce without much loss.

7) The major marketing channels identified were direct selling, through commission agents, through wholesale markets, in retail shops and in farmers market. Nine channel combinations among the SHG farmers and ten channel combinations among non-SHG farmers were identified.

8) The channel that remains more close to the SHG group was found to be farmers market and that allows them to market their whole produce without much loss, where as the channel that remains close to the non-SHG group was found to be commission agents and farmers were getting only less price to their produce compared to the SHG group of respondents.

9) It was found that 78.3 per cent of the SHG members were actively participating in all group meetings. While, among the non-SHG group even though 80 per cent of the farmers had membership in any of the farming group only 39.58 per cent of them were always attending group meetings.

10) The most frequently use mass media channels in both groups were news paper, radio and television. Then, among interpersonal sources agricultural assistants, neighbors and animators of NGOs were found to be important.

11) In credit utilization, 58.3 per cent of the SHG respondents and 48.3 per cent of the non-SHG respondents were not using the available credit facility for agricultural purposes.

12) With regards to the empowerment, the SHG group of respondents produced positive results in the measurement of personal, social, technological and economic empowerment. However, economic empowerment scores were high compared to other three.

13) In the measurement of personal empowerment, innovativeness, communication ability, proactive attitude and leadership ability produced positive results. While, self confidence was found to be equal among both groups.

14) It was observed that the SHG respondents had more market awareness, more frequent and effective use of information sources and high level of knowledge in crops and equipments compared to non-SHG group.

Implications of the study

The present study exploited the importance of market-led extension activities through SHGs in empowering the rural farmers. The result of this study will be of great use in planning future development programmes for supporting vegetable farmers because the result clearly stated that empowerment is a factor of four components viz., personal, social, technological and economic components. So in order to ensure the complete empowerment the thrust should be on these dynamic factors.

Involvement of non-government organizations and farmer friendly organizations like VFPCK with the marketing of agricultural produce is also a welcome development because they are one of the agents of empowerment among the rural farmers and they have helped the farmers to escape from the exploitative practices of the private dealers. In nutshell, the inclusion of farmers in the SHG activities gives support to personal, social, technological and economic empowerment and economic empowerment is essential for betterment of the quality of life of farm families.

This study also presents the need for further research to explore the other effects of empowerment among the farming community as a result of market oriented extension activities.

EMPIRICAL DIAGRAM OF RESULT

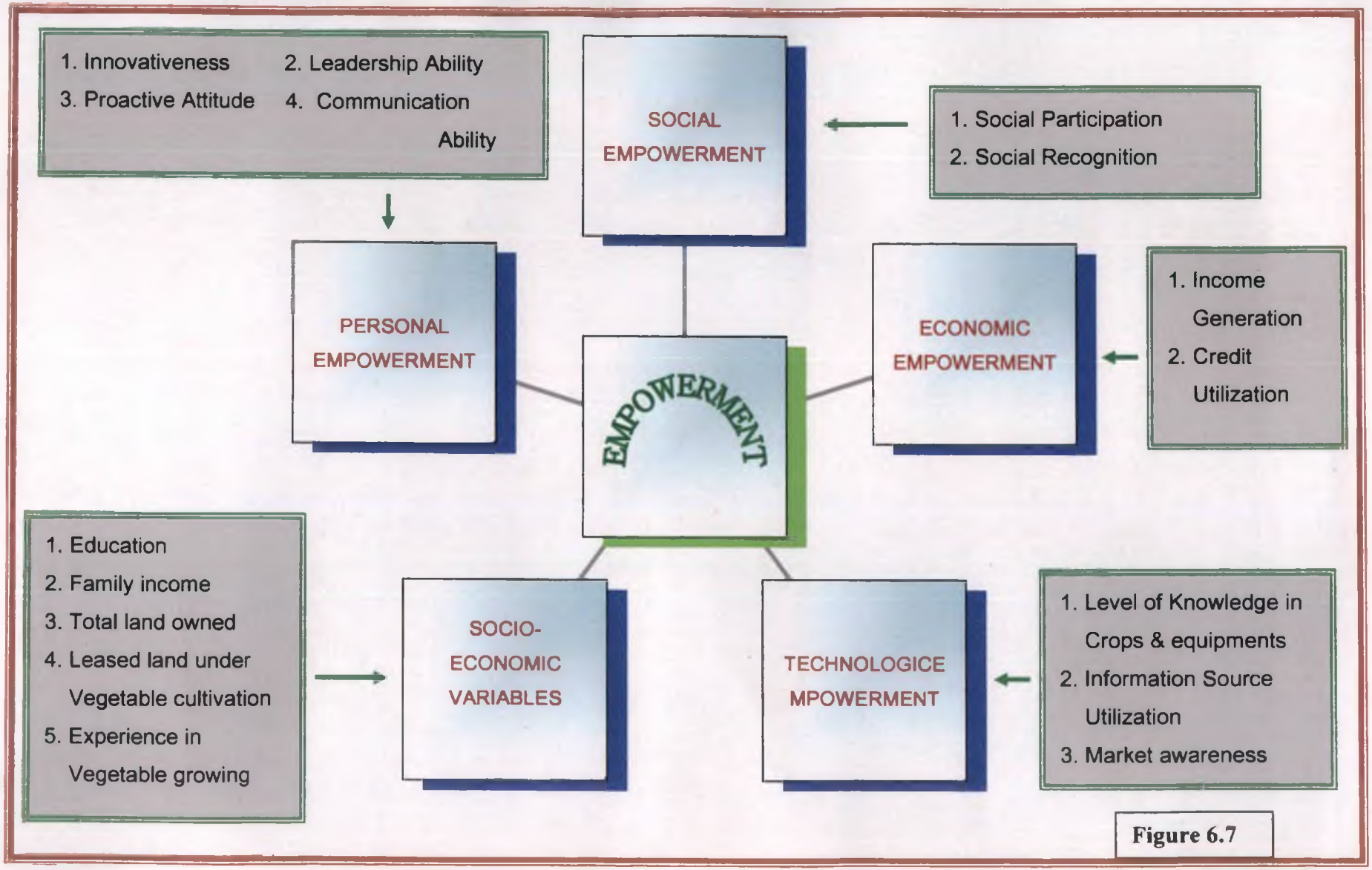


Figure 6.7

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APPENDICES

APPENDIX – I

KERALA AGRICULTURAL UNIVERSITY
COLLEGE OF HORTICULTURE
DEPARTMENT OF AGRICULTURAL EXTENSION

Dr. Jayashree Krishnankutty, M
Assistant Professor

Vellanikkara
27-3-2007

Dear Sir/ Madam

Ms.Shinogi.K.C is undertaking a study titled "Empowerment of Vegetable Farmers through Market-led Extension" as a part of fulfillment of her PG programme under my guidance.

In this context, she has identified certain variables for assessing the techno-economical and socio-psychological indicators of empowerment.

Considering your rich experience and expertise, you have been identified as a judge for rating the relevancy of the given list of variables for inclusion in the final interview schedule. You may please indicate your opinion about the relevancy of each variable under the appropriate column.

I am aware that you have a busy schedule. Yet, I hope you will kindly spare sometime for us. Your kind response would greatly help us in conducting this study.

Thanking you,

Yours sincerely

JAYASHREE KRISHNANKUTTY,M

Techno-Economical and Socio-Psychological Indicators of Empowerment

Empowerment is divided under four headings as social empowerment, personal empowerment, technological empowerment and economic empowerment. The variables identified under each heading are listed below. Kindly rate your response in the following continuum based on each variable relevancy

MR – Most Relevant
R - Relevant
SR – Slightly relevant
IR - Irrelevant

Sl.No	VARIABLES	MR	R	SR	IR
A)	**Personal Empowerment**				
1	Innovativeness				
2	Self- Esteem				
3	Self- Efficacy				
4	Communication ability				
5	Proactive attitude				
6	Risk taking ability / Risk orientation				
7	Leadership ability				
8	Self confidence				
9	Ability to work in teams				
B)	**Social Empowerment**				
10	Social participation				
11	Social mobility				
12	Social recognition				
13	Social inclusion				
14	Social status				
C)	**Technological Empowerment**				
15	Level of knowledge in crops and equipments				
16	Marketing competence				
17	Information source utilization				
18	Skill acquired				
19	Market awareness				
20	Training attended / Capacity building				
21	Awareness about development programs				
D)	**Economic Empowerment**				
22	Purchasing behaviour				
23	Income generation				
24	Credit utilization				
25	Economic orientation				
26	Credit orientation				
27	Saving behaviour				
28	Contribution to family income				
29	Access to resources				
30	Profit orientation				

APPENDIX - II

List of variables ranked as first 12 with mean score obtained after judges rating of the identified variables.

Sl.No	Variables	Mean
1	Level of knowledge in crops and equipments	2.682
2	Communication ability	2.636
3	Market awareness	2.636
4	Income generation	2.636
5	Proactive attitude	2.591
6	Innovativeness	2.500
7	Leadership ability	2.500
8	Social participation	2.500
9	Social recognition	2.500
10	Information source utilization	2.500
11	Self confidence	2.409
12	Credit utilization	2.364

APPENDIX – III

KERALA AGRICULTURAL UNIVERSITY
COLLEGE OF HORTICULTURE
Department of Agricultural Extension
Vellanikkara, Thrissur

1) Respondent No :

2) Name :

3) Address :

4) Age :

5) Educational Status

Sl.No	Category	Score
1.	Illiterate	
2.	Functionally literate	
3.	Primary School	
4.	U P School	
5.	High School	
6.	Pre Degree / Equivalent	
7.	College & Above	

6) Occupational Status :

7) Agricultural background : Traditional / Recent

8) Family Income :

Sl.No	Category	Score
1.	<5000	
2.	5000 – 25000	
3.	25000 – 50000	
4.	50000 – 1,00,000	
5.	1,00,000 & above	

9) Total Land (Owned) :

10) Area under Vegetable Cultivation :

a) Own land :

b) Lease in :

11) Experience in vegetable growing : ..... years

12) Vegetables grown on commercial basis :

13) Farming group membership :

14) Other organizational membership :

15) Irrigation potential :

Sl.No	Category	
1.	Through out the year	
2.	Only during seasons	
3.	Un assured and irregular water supply	

16) Family size with educational qualifications

Sl.No.	Name of member	Age	Educational qualification	Employed or Not	Occupation
1.					
2.					
3.					
4.					
5.					
6.					

17) Crops cultivated and the amount of Marketable and Marketed Surplus

Sl.No	Crops	Marketable Surplus	Marketed Surplus
1.	Amaranthus		
2.	Okra		
3.	Cowpea		

4.	Bitter gourd		
5.	Snake gourd		
6.	Pumpkin		
7.	Ash gourd		
8.	Cucumber		
9.	Brinjal		
10.	Chilly		
11.	Coleus		
12.	Bottle gourd		
13.	Little gourd		
14.	Banana		
15.	Others		

18) How do you sell your produce?

Sl.No	Channel	Always	Mostly	Rarely
1.	Direct selling to Consumer			
2.	Through Commission agents			
3.	In Wholesale Market			
4.	In Retail Shop			
5.	Through Farmers Market			
6.	Others			

I) Social Empowerment

1) Social Participation

a) Are you a member / office bearer in any of the following organization?

- If yes, please specify the organization and role.

Sl.No	Organization	Member	Office bearer
1.	Panchayath		
2.	Co-operative society		

3.	Vegetable growers association		
4.	Farmer's organizations		
5.	Trade Unions		
6.	Political organization		
7.	Others (specify)		

b) If you are a member, how frequently you attended its meetings and other activities - Regularly / Occasionally / Never

2) Social Recognition

Sl.No.	Statements	SA	A	D	SD
1.	The community / society consider me as a capable person				
2.	My peer group consider me as a capable person				
3.	My family members consider me as an income-contributing member of the family.				
4.	I am a worthy independent citizen comparable to anyone in the society				

II) Personal Empowerment

3) Innovativeness

Sl.No	Statements	SA	A	D	SD
1.	Do you want to learn new ways to farm?				
2.	If the agricultural extension worker gives a talk on improved cultivation aspects, would you attend?				
3.	If the Govt. would help you to establish a farm elsewhere would you move?				
4.	Do you want a change in your way of life?				
5.	A farmer should try to farm the way his parents did?				

6.	Do you want your sons to be farmers?				
7.	It is better to enjoy today and let tomorrow take care of it?				
8.	A man's fortune is in the hands of God.				

4) Communication Ability

Sl.No	Statements	SA	A	D	SD
1	Usually I can make people agree with me when I talk				
2	I can influence others through my way of interaction in a group				
3	I feel it is difficult task for me to communicate an idea to others.				
4	I belief most of differences of opinion among members can be resolved with good communication				
5	Even though I have good intensions when I speak others mostly misunderstand them.				
6	It is difficult to make people listen.				

5) Proactive Attitude

Sl.No	Statements	SA	A	D	SD
1	Generally, people and life have been fair to me.				
2	When a person or situation seems negative I lose the interest to try.				
3	I feel responsible for my own life.				
4	I focuses my efforts on things that I can control.				
5	I usually have the ability to choose my own action.				
6	People are usually not receptive to new ideas.				

6) **Self – Confidence**

Sl.No	Statements	Always True	Mostly True	Sometimes True	Never True
1	I am sure of my abilities.				
2	I feel responsible for my actions.				
3	I accept who I am and generally know my shortcomings and positive points.				
4	I can do any piece of work within a specific period of time				
5	I think I can handle well most of life's situations.				

7) **Leadership ability**

Sl. No.	Statements	Always True	Mostly True	Sometimes True	Never True
1.	I can give clear directions.				
2.	In a difficult situation, usually I will know what to do.				
3.	I feel comfortable being a group leader.				
4.	I can't run a meeting.				
5.	Others usually come to me for opinions.				
6.	Given a choice, I would like to be a group member than a leader.				
7.	Mostly leaders have more responsibilities and less recognition.				

III) Technological Empowerment

8) Level of knowledge in Vegetable crops

Sl.No	Statements	Yes / No
1.	Priya and Preethi are bitter gourd varieties.	
2.	Application of Carbaryl in pit before sowing of seeds will decrease the attack of fruit flies in bitter gourd and snake gourd	
3.	Ambily is a small fruited variety of pumpkin.	
4.	Spreading of dried twigs on the ground before trailing of vines will help to decrease the disease incidence in pumpkin and ash gourd.	
5.	Plants affected by little leaf should be uprooted first in brinjal before spraying with insecticide.	
6.	Sevin is the trade name of Carbaryl.	
7.	Vegetables can be harvested after 24 hrs. of spraying of Nuvan	
8.	Haritha is a green coloured variety of brinjal	
9.	Fruit traps are more safe and economic against fruit flies than chemical spraying in cucurbitaceous vegetables.	
10.	Tobacco decoction is effective against both pests and diseases	
11.	Vegetables can be harvested at anytime from morning to evening	
12.	Evaporative cool chambers are used to store harvested vegetables in the field	
13.	TA-19 is a snake gourd variety	

9) Information Source Utilization

a) Mass media

Sl.No	Source	Frequency			
		Most often	Often	Sometime	Rarely
1.	T.V				
2.	Radio				
3.	News Paper				
4.	Movies				
5.	Farm Magazines				
6.	Any other				

b) Interpersonal Sources

Sl.No	Source	Frequency			
		Most often	Often	Sometime	Rarely
1.	Agricultural Officers				
2.	Agricultural Assistants				
3.	University Scientists				
4.	Block Officers				
5.	Input Agencies				
6.	Neighbours				
7.	Relatives				
8.	Animators of the NGOs				
9.	Any other				

10) Market Awareness

Sl.No	Statements	SA	A	D	SD
1	I know where I get reasonable price for my produce.				
2	I am well aware about the nearby markets where I				

	can sell my produce.				
3	I am well aware about the various marketing policies and marketing strategies.				
4	I am aware of the various market malpractices.				
5	The market fluctuates so frequently, it is difficult to keep up with the current prices.				
6	I usually give my produce for marketing without researching about the market.				

IV) Economic Empowerment

11) Income Generation

Sl.No	Statements	SA	A	D	SD
1	After being a member of the SHG I have started to get additional income.				
2	I get a reasonable income through the activities of the SHG.				
3	After being a member of the SHG occasionally I earn money through its activities.				
4	I have started to spend money on my own decision after being a member of the SHG.				

12) Credit Utilization

1) Have you availed any loan for farming : Yes / No

If Yes, details :

2) Have you repaid the loan in time : Yes / No / Partially

3) Have you faced any problem in availing financial assistance : Yes / No

If Yes, details

Appendix IV

KERALA AGRICULTURAL UNIVERSITY
COLLEGE OF HORTICULTURE
Department of Agricultural Extension
Vellanikkara, Thrissur

1. നമ്പർ :
2. പേര് :
3. വിലാസം :
4. വയസ്സ് :
5. വിദ്യാഭ്യാസ യോഗ്യത

നമ്പർ	വിഭാഗം
1	നിരക്ഷരൻ
2.	സാക്ഷരൻ
3.	പ്രൈമറി സ്കൂൾ
4.	യു.പി. സ്കൂൾ
5.	ഹൈസ്കൂൾ
6.	പ്രീഡിഗ്രി
7.	കോളേജും അതിനു മുകളിലും

6. തൊഴിൽ നിലവാരം :
7. കാർഷികമായ ചുറ്റുപാട് : പരമ്പരാഗതം / ആധുനികം
8. കുടുംബ വരുമാനം :
9. ആകെ ഭൂമി (സ്വന്തം) :
10. പച്ചക്കറി കൃഷി ചെയ്യുന്നഭൂമി :
    എ) സ്വന്തം ഭൂമി :
    ബി) പാട്ടത്തിനെടുത്തത് :
11. പച്ചക്കറി കൃഷിയിലുള്ള പരിചയം : ..... വർഷം
12. വാണിജ്യാടിസ്ഥാനത്തിൽ കൃഷി ചെയ്യുന്ന പച്ചക്കറികൾ :
13. ഏതെങ്കിലും കർഷകസമിതിയിലുള്ള അംഗത്വം :
14. മറ്റെതെങ്കിലും സംഘടനയിലുള്ള അംഗത്വം :

15. ജലസേചനത്തിനുള്ള സൗകര്യം

നമ്പർ	വിഭാഗം
1.	വർഷം മുഴുവൻ
2.	സീസണിൽ മാത്രം
3.	യാതൊരു ക്രമവുമില്ലാത്ത രീതി

16. കുടുബാംഗങ്ങളുടെ പേരുവിവരം

നമ്പർ	പേര്	വയസ്	വിദ്യാഭ്യാസ യോഗ്യത:	ജോലി ഉണ്ടോ ഇല്ലയോ എന്ന്	ജോലി
1.					
2.					
3.					
4.					
5.					
6.					

17. കൃഷിചെയ്യുന്ന പച്ചക്കറികളും അവയുടെ വിൽപ്പനയും

നമ്പർ	വിളകൾ	വിൽക്കാനായി ഉണ്ടായിരുന്നത്	വിറ്റത്
1.	ചീര		
2.	വെണ്ട		
3.	പയർ		
4.	പാവക്ക		
5.	പടവലം		
6.	മത്തൻ		
7.	കുമ്പളം		
8.	വെള്ളരി		
9.	വഴുതിന		
10.	പച്ചമുളക്		
11.	കൂർക്ക		
12.	ചുരക്ക		

13.	കോവക്ക		
14.	കായ		
15.	മറ്റെന്തെങ്കിലും		

18. പച്ചക്കറികൾ വിൽക്കുന്നതെങ്ങിനെ?

നമ്പർ	ചാനൽ	എല്ലായ്പ്പോഴും	അധികവും	വല്ലപ്പോഴും
1.	ഉപഭോക്താവിനു നേരിട്ട് നൽകുന്നു.			
2.	ബ്രോക്കർ മുഖേന			
3.	മൊത്ത കച്ചവടച്ചന്തയിൽ			
4.	പച്ചക്കറി-പലചരക്കു കടകളിൽ			
5.	കൃഷിക്കാരുടെ ചന്തയിൽ			
6.	മറ്റേതെങ്കിലും മാർഗ്ഗം			

I) സാമൂഹിക ശാക്തീകരണം

1. സാമൂഹിക കാര്യങ്ങളിലുള്ള പങ്കെടുക്കൽ.

എ) താഴെ പറയുന്ന ഏതെങ്കിലും സംഘടനകളിൽ അംഗമാണോ? :

അതെ എങ്കിൽ സംഘടനയുടെ പേരും നിങ്ങളുടെ സ്ഥാനവും :

നമ്പർ	സംഘടന	അംഗമണോ	ഓഫീസർ പദവി
1.	പഞ്ചായത്ത്		
2.	സഹകരണ സംഘം		
3.	പച്ചക്കറി കർഷകരുടെ സംഘടന		
4.	കർഷകരുടെ സംഘടന		
5.	തൊഴിലാളി യൂണിയൻ		
6.	രാഷ്ട്രീയ പാർട്ടികൾ		
7.	മറ്റുള്ളവ		

ബി) ഏതെങ്കിലും സംഘടനകളിൽ അംഗമാണ് എങ്കിൽ എത്ര പ്രാവശ്യം മീറ്റിങ്ങുകളിലും മറ്റു പ്രവർത്തനങ്ങളിലും പങ്കെടുക്കുറുണ്ട്

പതിവായി / ഇടക്കിടെ / പങ്കെടുക്കാറില്ല

2) സാമൂഹിക അംഗീകാരം

നമ്പർ	പ്രസ്താവനകൾ	വളരെ യോജിക്കുന്നു	യോജിക്കുന്നു	വിയോജിക്കുന്നു	ശകതമായി വിയോജിക്കുന്നു
1.	പൊതുവേ സമൂഹത്തിൽ ഞാനൊരു കഴിവുള്ള വ്യക്തിയായി അംഗീകരിക്കപ്പെടുന്നു				
2.	എന്റെ സുഹൃത്തുക്കൾ എന്നെ ഒരു കഴിവുള്ള വ്യക്തിയായി അംഗീകരിക്കുന്നു				
3.	എന്റെ കുടുംബാംഗങ്ങൾ എന്നെ കുടുംബത്തിലേക്കായി വരുമാനം ഉണ്ടാക്കുന്ന ഒരു വ്യക്തിയായി കാണുന്നു				
4.	സമൂഹത്തിൽ മറ്റാരേയും പോലെ ഞാനും വിലയുള്ള ഒരു സ്വതന്ത്ര വ്യക്തിയാണ്.				

II) വ്യക്തി ശാക്തീകരണം

3) മുന്നിട്ടിറങ്ങാനുള്ള കഴിവ്

നമ്പർ	പ്രസ്താവനകൾ	വളരെ യോജിക്കുന്നു	യോജിക്കുന്നു	വിയോജിക്കുന്നു	ശകതമായി വിയോജിക്കുന്നു
1.	നിങ്ങൾക്ക് പുതിയ കൃഷിരീതികൾ പഠിക്കേണ്ട ആവശ്യം ഉണ്ടോ?				
2.	പരിഷ്കരിച്ച കൃഷിരീതിയെ ക്കുറിച്ചുള്ള ഒരു ക്ലാസ്സ് നടക്കുകയാണെങ്കിൽ നിങ്ങൾ അതിൽ പങ്കെടുക്കുമൊ?				
3.	മറ്റൊരു സ്ഥലത്ത് ഒരു കൃഷി ചെയ്യാനുള്ള സഹായം സർക്കാർ ഒരുക്കി തന്നാൽ നിങ്ങൾ സ്വീകരിക്കുമൊ?				

4.	നിങ്ങളുടെ ജീവിതരീതി മാറ്റാൻ നിങ്ങൾക്കാഗ്രഹമുണ്ടോ?				
5.	ഒരു കർഷകൻ അയാളുടെ മാതാപിതാക്കൾ ചെയ്തിരുന്ന രീതിയിൽ വേണം കൃഷി ചെയ്യാൻ				
6.	ഒരു മനുഷ്യന്റെ ഭാഗ്യം ദൈവത്തിന്റെ കൈയ്യിലാണ്				
7.	താങ്കളുടെ മക്കൾ കൃഷിക്കാരാകുന്നത് ഇഷ്ടപ്പെടുന്നുണ്ടോ?				
8.	ഇന്ന് ആസ്വദിക്കുക- നാളത്തെ കാര്യം നാളെ എന്നതാണ് എന്റെ പോളിസി				

4) ആശയ വിനിമയശേഷി

നമ്പർ	പ്രസ്താവനകൾ	വളരെ യോജിക്കുന്നു	യോജിക്കുന്നു	വിയോജിക്കുന്നു	ശക്തമായി വിയോജിക്കുന്നു
1.	സാധാരണയായി ഞാൻ സംസാരിക്കുമ്പോൾ മറ്റുള്ളവരെകൊണ്ട് ആ കാര്യം അംഗീകരിപ്പിക്കുവാൻ എനിക്കു കഴിയും				
2.	സാധാരണയായി ഒരു ഗ്രൂപ്പിൽ എന്റെ ഇടപെടലിന്റെ രീതി കൊണ്ട് മറ്റുള്ളവരെ സ്വാധീനിക്കാൻ എനിക്കു കഴിയാറുണ്ട്				
3.	ഒരു ആശയം മറ്റുള്ളവർക്കു പകർന്നു കൊടുക്കുക എന്നത് വള രെ ബുദ്ധിമുട്ടുള്ള കാര്യമായി എനിക്കു തോന്നാറുണ്ട്				

4.	ഒരു ഗ്രൂപ്പിൽ അംഗങ്ങൾക്കിടയിലുള്ള ഒട്ടു മിക്ക അഭിപ്രായ വ്യത്യാസങ്ങളും നല്ല ആശയവിനിമയത്തിലൂടെ പരിഹരിക്കാം എന്നു ഞാൻ വിശ്വസിക്കുന്നു				
5.	നല്ല ഉദ്ദേശത്തിലാണ് ഞാൻ സംസാരിക്കുക എന്നിരുന്നാലും മറ്റുള്ളവർ അതിനെ തെറ്റായി എടുക്കുന്നു.				
6.	മറ്റുള്ളവരുടെ ശ്രദ്ധയാകർഷിക്കുക എന്നതു വളരെ ബുദ്ധിമുട്ടുള്ള കാര്യമാണ്				

5) മുൻധാരണ

നമ്പർ	പ്രസ്താവനകൾ	വളരെ യോജിക്കുന്നു	യോജിക്കുന്നു	വിയോജിക്കുന്നു	ശക്തമായി വിയോജിക്കുന്നു
1.	പൊതുവിൽ, മറ്റുള്ളവരും ജീവിതവും എന്നോടു നീതി പുലർത്തിയിട്ടുണ്ട്				
2.	ഒരു വ്യക്തിയോ സന്ദർഭമോ പ്രതികൂലമായി തോന്നിയാൽ, കാര്യങ്ങൾ ചെയ്യാനുള്ള താത്പര്യം നഷ്ടപെടുന്നു				
3.	എന്റെ ജീവിതത്തിന് എനിക്ക് തന്നെയാണ് ഉത്തരവാദിത്വം				
4.	എന്റെ നിയന്ത്രണത്തിൽ നിൽക്കുന്ന കാര്യങ്ങൾക്ക് വേണ്ടി മാത്രമെ ഞാൻ പ്രയത്നിക്കാറുള്ളു				
5.	സാധാരണയായി ഒരു സാഹചര്യത്തിൽ എങ്ങിനെ പ്രവർത്തിക്കണമെന്ന് തിരഞ്ഞെടുക്കാനുള്ള കഴിവ് എനിക്കുണ്ട്				
6.	സാധാരാണയായി ജനങ്ങൾ പുതിയ ആശയങ്ങളോടു താൽപ്പര്യം കാണിക്കാറില്ല				

6) ആത്മവിശ്വാസം

നമ്പർ	പ്രസ്താവനകൾ	അധികവും ശരി	ചിലപ്പോൾ ശരി	വല്ലപ്പോഴും ശരി	ഒരിക്കലും ശരിയല്ല
1.	എനിക്കു എന്റെ കഴിവുകളിൽ വിശ്വാസമുണ്ട്				
2.	എന്റെ പ്രവർത്തികളുടെ ഉത്തരവാദിത്വം എന്നിലാണ്				
3.	എന്നിലുള്ള നല്ലതും ചീത്തയുമായ എല്ലാ കാര്യങ്ങളെക്കുറിച്ചും ഞാൻ ബോധവാനാണ്				
4.	ഒരു നിശ്ചിത സമയത്തിനുള്ളിൽ എനിക്കു ഏതൊരു ജോലിയും ചെയ്തു തീർക്കാൻ കഴിയും				
5.	ഒട്ടുമിക്ക സാഹചര്യങ്ങളും നന്നായി കൈകാര്യം ചെയ്യാൻ എനിക്ക് കഴിയും				

7) നേതൃത്വ പാടവം

നമ്പർ	പ്രസ്താവനകൾ	അധികവും ശരി	ചിലപ്പോൾ ശരി	വല്ലപ്പോഴും ശരി	ഒരിക്കലും ശരിയല്ല
1.	വ്യക്തമായ ദിശാബോധം മറ്റുള്ളവർക്ക് നൽകുവാൻ എനിക്കു കഴിയും				
2.	ഒരു പ്രതികൂല സാഹചര്യത്തിൽ സാധാരണയായി എന്തു ചെയ്യണമെന്ന് എനിക്കറിയാം				
3.	ഒരു ഗ്രൂപ്പ് ലീഡർ ആയിരിക്കാൻ എനിക്കു അസൗകര്യം തോന്നാറില്ല.				
4.	എനിക്ക് ഒരു മീറ്റിംങ്ങ് നടത്താൻ ബുദ്ധിമുട്ടാണ്				
5.	സാധാരണയായി മറ്റുള്ളവർ എന്നോടു അഭിപ്രായം ചോദിക്കാറുണ്ട്				

6.	ഇഷ്ടമുള്ളത് തിരഞ്ഞെടുക്കുവനുള്ള സ്വാതന്ത്ര്യം ഉണ്ടെങ്കിൽ ഒരു ഗ്രൂപ്പ് ലീഡറായിരിക്കുന്നതിനെക്കാളും ഗ്രൂപ്പ് മെംബറായിരിക്കാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു				
7.	ഒരു ലീഡർക്കു മിക്കവാറും ഉത്തരവാദിത്വം കൂടുതലും അംഗീകാരം കുറവും ആയിരിക്കും				

III) സാങ്കേതിക ശാക്തീകരണം:

8) പച്ചക്കറി കൃഷിയിലുള്ള അറിവ്

നമ്പർ	പ്രസ്താവനകൾ	Yes / No
1.	പ്രിയ, പ്രീതി എന്നിവ കയ്പക്കയുടെ രണ്ടിനങ്ങളാണ്	
2.	വിത്ത് പാകുന്നതിനു മുൻപ് കുഴികളിൽ കാർബാറിൽ ഇടുന്നത് പടവലത്തിലും പാവലിലും പഴയീച്ചയുടെ ആക്രമണം കുറക്കുന്നു	
3.	മത്തന്റെ ഒരു ചെറിയ ഇനമാണ് അമ്പിളി	
4.	വള്ളികൾ പടരുന്നതിന് മുമ്പ് മണ്ണിൽ കമ്പുകൾ വിരിക്കുന്നത് മത്തനിലും കുമ്പളത്തിലും രോഗബാധ തടയും	
5.	വഴുതിനയിൽ കുറിയ ഇല രോഗം ബാധിച്ച ചെടികൾ കീടനാശിനി തളിക്കുന്നതിനു മുമ്പ് പിഴുതു മാറ്റണം	
6.	സെവിൻ എന്നതു കാർബാറിലിന്റെ മറ്റൊരു പേരാണ്	
7	നുവാൻ തളിച്ച് 24 മണിക്കൂറിനുള്ളിൽ പച്ചക്കറികൾ പറിച്ചെടുക്കേണ്ടതാണ്	
8.	പച്ചനിറത്തിലുള്ള ഒരു വഴുതനയിനമാണ് ഹരിത.	
9.	പച്ചക്കറികളിൽ പഴയീച്ചയുടെ ആക്രമണത്തിനെതിരെ കീടനാശിനികളേക്കാളും ചിലവു കുറഞ്ഞതും സുരക്ഷിതവുമായ മാർഗ്ഗമാണ് പഴക്കെണികൾ	
10.	പുകയിലക്കഷായം രോഗങ്ങൾക്കും കീടങ്ങൾക്കും എതിരെ ഫലപ്രദമാണ്	
11.	രാവിലെ മുതൽ വൈകുന്നേരം വരെയുള്ള ഏതു സമയത്തും പച്ചക്കറികൾ പറിച്ചെടുക്കാവുന്നതാണ്	
12.	പറിച്ചെടുത്ത പച്ചക്കറികൾ കൃഷിയിടത്തിൽ തന്നെ ഉണ്ടാക്കവുന്ന ചെറിയ ശീതീകരണ അറയിൽ കേടു കൂടാതെ സൂക്ഷിക്കാം	
13.	പടവലത്തിന്റെ ഒരിനമാണ് TA-19	

9) വാർത്താ സ്രോതസ്സുകളുടെ ഉപയോഗം

എ) മാധ്യമങ്ങൾ

നമ്പർ	സ്രോതസ്സ്	ഉപയോഗം			
		അധികവും	പതിവായി	ചിലപ്പോൾ	വല്ലപ്പോഴും
1.	ടെലിവിഷൻ				
2.	റേഡിയോ				
3.	പത്രം				
4.	സിനിമ				
5.	കാർഷിക മാസിക				
6.	മറ്റുള്ളവ				

ബി) വ്യക്തികൾ മുഖേന

നമ്പർ	സ്രോതസ്സ്	ഉപയോഗം			
		അധികവും	പതിവായി	ചിലപ്പോൾ	വല്ലപ്പോഴും
1.	അഗ്രിക്കൾച്ചറൽ ഓഫീസർ				
2.	അഗ്രിക്കൾച്ചറൽ അസിസ്റ്റന്റ്				
3.	യൂണിവേഴ്സിറ്റി ശാസ്ത്രജ്ഞൻമാർ				
4.	ബ്ലോക്ക് ഓഫീസർമാർ				
5.	അയൽക്കാർ				
6.	ബന്ധുക്കൾ				
7.	സന്നദ്ധസംഘടനയിലെ അംഗങ്ങൾ				
8.	മറ്റുള്ളവ				

10) വിപണിയെക്കുറിച്ചുള്ള അറിവ്

നമ്പർ	പ്രസ്താവനകൾ	വളരെ യോജ്ഞി ക്കുന്നു	യോജ്ഞി ക്കുന്നു	വിയോജ്ഞി ക്കുന്നു	ശക്തമായി വിയോജ്ഞി ക്കുന്നു
1.	എവിടെയാണ് എന്റെ ഉൽപ്പന്നങ്ങൾക്കു ന്യായമായ വില ലഭിക്കുക എന്ന് എനിക്കറിയം				
2.	എന്റെ പച്ചക്കറികൾ വിൽക്കാൻ കഴിയുന്ന, ചുറ്റുവട്ടത്തുള്ള മാർക്കറ്റുകളെക്കുറിച്ച് ഞാൻ ബോധവാനാണ്				
3.	വിവിധ മർക്കറ്റിംങ്ങ് പോളിസികളെക്കുറിച്ചും സ്ട്രാറ്റജി കളെക്കുറിച്ചും ഞാൻ ബോധവാനാണ്				
4.	വിപണിയിലെ മോശം പ്രവണതകളെക്കുറിച്ചുള്ള ഒരു ഏകദേശ ബോധം എനിക്കുണ്ട്				
5.	കമ്പോളത്തിലെ .ഇടക്കിടെയുള്ള വ്യതിയാനം മൂലം വിലനിലവാരം നിലനിൽക്കുന്നില്ല.				
6.	കമ്പോളത്തെ ക്കുറിച്ച് വലിയ അന്വേഷണമൊന്നും കൂടാതെയാണ് ഞാൻ സാധാരണ എന്റെ ഉല്പന്നങ്ങൾ വിൽക്കാറുള്ളത്				

IV സാമ്പത്തിക ശാക്തീകരണം

11) വരുമാനം ഉണ്ടാക്കൽ

നമ്പർ	പ്രസ്താവനകൾ	വളരെ യോജ്ജി ക്കുന്നു	യോജ്ജി ക്കുന്നു	വിയോജ്ജി ക്കുന്നു	ശക്തമായി വിയോജ്ജി ക്കുന്നു
1.	സ്വയം സഹായ സംഘത്തിൽ അംഗമായതിനു ശേഷം എനിക്ക് കൂടുതൽ വരുമാനം ലഭിക്കുന്നു				
2.	സ്വയം സഹായ സംഘത്തിന്റെ പ്രവർത്തനത്തിലൂടെ എനിക്കു മോശ മല്ലാത്ത ഒരു വരുമാനം ഉണ്ടാക്കാൻ സാധിക്കുന്നു.				
3.	സ്വയം സഹായ സംഘത്തിൽ അംഗമായതിനു ശേഷം എനിക്ക് അതിന്റെ പ്രവർത്തനത്തിലൂടെ ഇടക്കിടെ പണം ലഭിക്കുന്നു				
4.	സ്വാശ്രയ സംഘത്തിൽ അംഗമായതിനു ശേഷം എന്റെ സ്വന്തം തീരുമാനത്തിനനുസരിച്ച് ഞാൻ അത്യാവശ്യം പണം ചിലവഴിക്കാറുണ്ട്				

12) ക്രെഡിറ്റിന്റെ ഉപയോഗം

1. കാർഷിക സംബന്ധമായ കാര്യങ്ങൾക്കു വേണ്ടി ലോൺ എടുത്തിരുന്നോ?
   ഉണ്ട് എങ്കിൽ വിശദാംശങ്ങൾ.

2. ലോൺ സമയത്തിന് തിരിച്ചടച്ചുവൊ?
3. ലോൺ ലഭിക്കുന്നതിനായിഎന്തെങ്കിലും ബുദ്ധിമുട്ട് അനുഭവപ്പെട്ടുവോ?
   ഉവ്വ് എങ്കിൽ, വിശദാംശങ്ങൾ :

EMPOWERMENT OF VEGETABLE FARMERS THROUGH MARKET - LED EXTENSION

By

SHINOGI, K. C.

ABSTRACT OF THE THESIS

Submitted in partial fulfilment of the
requirement for the degree of

Master of Science in Agriculture

Faculty of Agriculture
Kerala Agricultural University

Department of Agricultural Extension

COLLEGE OF HORTICULTURE
VELLANIKKARA, THRISSUR - 680 656
KERALA, INDIA

2007

ABSTRACT

The word empowerment can not be contained in its dictionary meaning itself. This word has been ostensibly used without knowing what its weight is. The present study examined the empowerment of vegetable farmers in four dimensions viz., social empowerment, personal empowerment, technological empowerment and economic empowerment through market-led extension activities. Sixty vegetable farmers, participating in self-help groups from two districts and sixty vegetable farmers from the same districts, doing vegetable cultivation with out any self-help group participation took part in the study.

The result highlights the fact that the self-help group of respondents had empowerment at the four dimensions and thus ensured the total empowerment. Socio-economic variables viz., educational status of the farmer, family income, land owned, leased land under vegetable cultivation and farmer's experience in vegetable cultivation also proved their relation to the empowerment level through the study.

It was found that personal empowerment had a role in enhancing social participation and social recognition that led to social empowerment and technological empowerment through the increased use of information sources. These changes in people equipped them to add more and more amount to their income and economic empowerment had happened.

The empowerment threshold was calculated by correlating two variables such as social participation and personal empowerment. The maximum equal score of personal empowerment that could be attained by the SHG and non-SHG group of respondents who were having the same level of social participation was fixed as the threshold value of empowerment.