PROBLEMS AND PROSPECTS OF SELF-EMPLOYMENT OF TRAINED RURAL YOUTH IN AGRICULTURE

BY

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THESIS

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DECLARATION

I hereby declare that this thesis entitled **"Problems and Prospects of Self-Employment of Trained Rural Youth in Agriculture"** is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title of any other University or Society.

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CERTIFICATE

Certified that this thesis entitled "**Problems and Prospects of Self-employment of Trained Rural Youth in Agriculture**" is a record of research work done independently by **Sri. SIVAPRASAD. S.** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, fellowship or associateship to him.

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SIVAPRASAD. S.

CONTENTS

LIST OF TABLES

LIST OF ILLUSTRATIONS

INTRODUCTION

CHAPTER I

INTRODUCTION

According to census 1991, the total population in India was about 85 crores. Of which, 33.20 million were job seekers. The rural unemployment has become a formidable problem for the planners. About 243 million labour force living in the rural areas are subjected to wide spread unemployment with inadequate work and low income.

The government has been organising planned and systematic programmes for the development of Indian youth and their participation in national development. The National Rural Employment Programme (NREP) envisages generation of 300-400 million mandays every year. The Rural Landless Employment Guarantee Programme (RLEGP) aims at providing employment guarantee of 100 man days per annum for at least one member of each rural landless household. The Integrated Rural Development Programme (IRDP) aims at raising people above the poverty line by investment in production oriented self-employment activities framed by the government and banks. Under the National Scheme of Training Rural Youths for Self Employment (TRYSEM), 2 lakhs youths in rural areas are provided training every year to enable them to settle in vocations of self-employment in agriculture, industry and service sectors. The constantly increasing back log

of unemployment status shows that all these programmes are not enough to curb the problem. By the end of 1990 the unemployed in the country were 172 lakhs (Singh 1994). In Kerala also, the unemployment continues to be a major problem. According to the live register figures of employment exchanges, there were 40.23 lakhs job seekers in the state by 1994 (Economic Review 1995).

Employment trend in the organised public and private organised sectors was also declined. Also the placement through employment exchanges compared to the total number of job seekers were negligible (State Planning Board 1992).

In this context, it is important to find out alternate measures for the effective utilisation of the human resources available in the state. One of the potential fields which can provide self employment avenues in the state is agricultural and allied sectors. If proper training in various self employment avenues in agriculture and management of agricultural operations is imparted to the youth and adequate infrastructural, credit and marketing facilities made available, opportunities for self employment can be developed as a source of income, which in turn will improve the general standard of living of people.

Realising the fact, trainings were given to the youth at various centres by Agricultural Universities, Development departments, Khadi and Village Industries Board, non-governmental organisations, voluntary organisations etc. in agriculture and

allied sectors. The trainings were mainly concentrated on vegetable production, mushroom cultivation, cutflower production, plant nursery management, poultry, dairying, sericulture, fisheries, piggery, beekeeping etc. (Pradeepkumar 1993).

Though trainings were given to the youth in various vocations, many of them have not adopted these sectors as self employment avenues due to various reasons (Muthayya and Loganathan 1990).

This study aims to find out the problems faced by the trained self employed rural youth in two selected avenues viz. sericulture and beekeeping, the prospects for taking up the self employment in these fields. The extent of adoption of scientific practices in these fields and behavioural characteristics of the trained youth as related to their entrepreneurial abilities are also being studied. Apart from all other avenues, sericulture and beekeeping have an organised institutional effort for their promotion and development, at government, quasi government and non government levels (Dar 1992). Through out the State of Kerala the two avenues viz., sericulture and beekkeeping have extension net work. Trainings are being given to the farmers on a planned manner. The development and implementation of the programmes are monitored at government level and policy decisions taken. So, this study is confined to the fields of sericulture and beekeeping.

Sericulture was started in Kerala during 1986-87 with technical assistance of Central Silk Board. The sericulture department is now attached to the Khadi and Village Industries Board in the state. Sericulture is a highly labour intensive enterprise and so much so an employment generating sector. One month onfarm training in sericulture is imparted by the department of sericulture with a stipend of Rs. 250/- per trainee. As per the annual review report of Khadi and Village Industries Board, 1992, by the end of 1991-92 about 6000 farmers were trained of which 5201 farmers were practising.

Beekeeping is considered as a labour intensive enterprise which requires less capital and easy to manage. (Habibulla and Muzafir 1991). As per the annual review report of Khadi and Village Industries Commission 1992, by the end of 1990-91 about 2361 farmers started beekeeping in the State apart from 85 co-operative societies and 16 other charitable societies. The Khadi and Village Industries Commission and different voluntary organisations are imparting training to the farmers with a stipend of Rs.300/- per head.

Need for the study

The future of any country largely depends on youth. Youth seek a more meaningful role and opportunities for participation in development. The fulfilment of the aspirations of this most potent and talented resource of the nation is

crucially linked with the development of the region. It is necessary to organise them and channelise their energy towards diversified goals in the interest of nation's development. So it is important to find out the problems of trained youth in the field of self employment, highlight the prospects for taking up self employment in these fields and motivate them to take up self employment in sericulture and beekeeping. Studying the extent of adoption and behavioural characteristics of the trained youth related to their entrepreneurial abilities may help to suggest suitable measures to improve their entrepreneurial abilities so that more and more trained youth can take up the self employment programmes. Thus the present study is selected with the following objectives.

1. To identify the problems faced by the trained self employed rural youth in the field of sericulture and beekeeping, and the prospects for taking up self employment in these selected fields.

2. To study the extent of adoption of the scientific practices by practising farmers in the field of sericulture and beekeeping.

3. To study the behavioural characteristics of the trained youth related to their entrepreneurial abilities.

Scope of the study

The unemployed youth in Kerala is more than 40 lakhs. This study seeks to explore the problems and prospects in the two selected avenues of self employment in agriculture viz., sericulture and beekeeping. The results of this study may help to streamline strategies to overcome the problems faced by the entrepreneurs in the selected fields, by the concerned developmental agencies. The unemployed youth can be motivated towards self-employment by highlighting the prospects. The study of the entrepreneurial behaviour of the practising farmers, would help to improve the quality of the youth by analysing their strength and weakness and improve upon the weakness. The result of the extent of adoption of scientific practices in the selected fields would help to know how these programmes are being scientifically practiced by the farmers.

Limitations of the study

The present study was undertaken by a single researcher as a part of the requirements of M.Sc. (Ag) degree programme and hence the limitations of time and resources restricted the exploration of the area in a greater depth and in a more comprehensive manner. Consequently the researcher was unable to operate the study in all parts of the state and all avenues of self employment in the field of agriculture. This limitation has narrowed down the scope of generalising the results. Since the

study was based on the expressed opinion of the respondents, it may not be free from their individual bias and prejudice. Moreover, a study of this kind has not been undertaken in the field of sericulture and beekeeping. So there was dearth of relevant findings and supporting literature which could give guidance to the researcher.

No human effort is free from limitations. This study is no exception. However, sincere attempts have been made to accomplish the objectives and utmost care has been taken to make the study as objective as possible.

Presentation of the study

The presentation of the remaining chapters of this thesis is as follows.

Chapter II deals with the definition of concepts review of relevant literature and the theoretical orientation. Chapter III deals with the methodology in which the selection of the study area, sampling procedure, operationalisation and measurement of variables, method of data collection and statistical tools used are explained.

In Chapter IV, results are presented and the discussion is given in Chapter V. Chapter VI deals with the summary of the research work emphasising the salient findings.

The references and appendices are given at the end.

THEORETICAL ORIENTATION

In the best books, great men talk to us, give us their most precious thoughts and pour their souls into ours.

— W.E. Channing

CHAPTER II

THEORETICAL ORIENTATION

This chapter deals with the review of the pertinent research studies which enabled the researcher to develop a better understanding of the problem to be studied. The literature related to the study are presented under the following sub heads.

2.1 Problems and prospects.

2.2 Concept of youth.

2.3 Concept and definition of entrepreneur and entrepreneurial behavior.

2.4 Dimensions of entrepreneurial behaviour.

2.5 Extent of adoption of scientific practices.

2.6 Personal characteristics influencing entrepreneurial behaviour and adoption.

2.7 Conceptual model of the study.

2.8 Hypothesis of the study.

2.1 Problems and prospects

Problem and constraint are two commonly used terms in relation to planned interventions (Roling 1988) for increasing farm production and to accelarate agricultural and rural development. Barrier, limitation, obstacle, and impediment are other terms used on syno-syns for problems or constraints.

According to Websters Third New International Dictionary to constrain is to check, especially from free or easy indication or expression or to force by restriction or limitation imposed by nature, oneself or circumstances or exigencies.

The Random House Dictionary of English language gives the meaning of constraint as something that constrains; the condition of being constrained. Constrain means to repress, to force or to compel. The Oxford English Dictionary define the term 'constrain' as to force a person to (into) a course of action, state, place etc. to restrain within bounds; or to limit. The psychologists defined constraint as "arrest by some cause, reason or principle, foreign to self".

Dantwala (1975) expounded that the reason for low participation of females in farm activities was heavy domestic work including rearing of small children.

Sitalakshmi (1975) expressed that while farm women reported their desire to participate in farming operations, they stated that managing in farm and home simultaneously was a problem experienced by them.

Gupta (1976) indicated that the cost of cattle feed alone accounted for more than two-thirds of the price of milk and the poultry farmers also faced a high feed ingredient price.

Arputharaj *et al*. (1979) pointed out that there was a general complaint about the present high rate of electricity as a burden on poultry farming.

Ayyadurai (1980) reported that high electricity charges, high feed price and non-availability of vaccines were the major problems perceived by a majority of poultry growers.

Spencer (1981) identified that agricultural development projects which stress mechanization tend to have an adverse effect on the female work load as they decrease the amount of land available for planting, weeding and harvesting which are the women's functions in agriculture.

Smucker (1982) interpreted that a major constraint on farmer's employment option in agriculture and other activities is the lack of a system to teach them the skill needed for economic achievement.

Compton (1984) defines problems as the inability to satisfy some lack or need, want or interest. This inability to achieve satisfaction (solve their problem) may result from the absence of certain human or physical resources or from lack of under standing of complex social or economic conditions or from lack of previous experience.

Singh *et al*. (1985) identified that imperfect market for milk, low price for milk, high cost of concentrates,

perishable and seasonal nture of milk, high price of milch animals were the major constraints experienced by the farm families in dairy farming.

Swaminathan (1985) pointed out that presence of young children prevented the women from taking part in the rural labour force irrespective of the level of agricultural development.

Leelaprasad *et al*. (1986) stated that with regard to problems in marketing milk, 27.50 per cent of them complained unremunerative price. Non-availability of credit appeared to be the major constraint followed by scarcity of feed and fodder for cattle.

Shanmugasundaram (1987) pointed out that lack of credit, labour shortage at sowing period and lack of finance were the perceived problems suggested by majority of farm families.

Vasanthakumar (1987) identified that the general problems were high cost of cultivation, unpredictable price for produce, less reliable recommendations, inadequate marketing facilities with respect to small and marginal farmers.

Petharam (1988) and Zinyama (1988) called the problems and/or limitations as constraints.

Pandya and Trivedi (1988) defined constraints as "those items of difficulties or problems faced by individuals in the adoption of technology".

Gogoi and Talukdar (1989) defines constraints as "those factors which have repressive effects on a desired and/or purposive action".

Shivamurthy *et al*. (1992) reported that lack of education on the improved cultivation and rearing practices is the main problem with the sericulture production.

Nehru (1992) reported that inadequate family labour poor knowledge on rearing techniques, high investment, difficulty in marketing and low price are the major problems with sericulture.

Tikader and Sen (1992) reported that inadequate extension and management are the major problem faced by sericulture farmers.

For the purpose of the study, problem or constraint is defined as a limiting factor which stands in the way of scientifically practicing the techniques on which training is given.

2.1.1 Classification of crop production constraints

Gomez (1977) has classified constraints in rice production as physical/biological/cultural practices, economic, institutional, social and psychological.

Waghmare and Pandit (1982) classified the various constraints in the adoption of wheat technology into educational, economic, socio-cultural and practical constraints.

Menon (1983) grouped the constraints on rice production as (a) economic constraints (b) extension constraints and (c) organisational constraints.

Sagar and Ray (1984) classified the factors affecting the farmers productivity of crops into agro-economic, socio-psychological and extension variables.

The simplest classification of 'problems' to agricultural development as given by Sofranko (1984) is on the basis of whether they lie within the farmer or within the farmer's environment.

Many researchers attempted to prepare a list of constraints without making any classification (Zinyama 1988; Roberts, 1987; Ajore, 1986).

To get a comprehensive picture it is better to make a classification of the constraints. It will also be helpful in tackling them in categories.

Axinn (1987) classified the constraints into two sets.

1) External constraints

These refer to the inhibiting factors pertaining to the outside sources of the extension system. Roberts (1987) called these as "environmental constraints" eg. unfavourable policy environment, inappropriate technology, inadequate input supply and lack of marketing and distribution system. The extension system has little or no control over these constraints.

ii) Internal constraints

These pertain to the impeding factors pertaining to the internal characteristics of the extension system. eg. constraints related to personal management such as social distance between extension worker and farmers, lack of commitment and enthusiasm, inadequate training and rewards system etc. and constraints related to programme such as same programmes imposed to the whole country, inappropriate methods of programme implementation etc.

Kothicane *et al*. (1987) grouped the various constraints which were operating in the adoption of new agricultural technology as

i) Technical constraints
ii) Economic constraints
iii) Service and supply constraints
iv) Information transfer constraints

Prasad *et al*. (1987) classified the factors influencing the development of agricultural sector in India into five broad categories.

(i) Common basic constraints
(ii) Technological constraints
(iii) Organizational and administrative constraints
(iv) Extension constraints and
(v) Social constraints

In this study the problems are grouped into five broad categories viz.

(i) General problems
(ii) Communication problems
(iii) Input oriented problems
(iv) Credit oriented problems
(v) Infrastructural problems

2.1.2 Prospects

The prospects in this study is conceptualised as the probability of future success or expectation or what one expects for taking up self-employment as perceived by trained youth in the field of sericulture and beekeeping.

2.2 Concept of youth

The concept of youth as given by different researchers in their studies are given below.

Name of researcher	Year	Identification of youth based on age
Joshi	1979	12 - 30
Kulkarni	1979	12 - 24
Shanmugam	1980	12 - 24
Mathew	1980	16 - 30
Pradeepkumar	1993	18 - 30

The youth in this study is conceptualised as persons within the age group of 15 and 30 years. The respondent should be a trained person in sericulture or beekeeping either by Khadi and Village Industries Board, Central Silk Board, Kerala Agricultural University or Department of Agriculture and he or she should be a practicing or non practising person.

2.3 Concept and definition of entrepreneur and entrepreneurial behaviour

2.3.1 Entrepreneur

Entrepreneur is the central figure of economic activity and prime mover of development. As such development or

under-development is the reflection of the development or under-development of entrepreneurship in the country. Hence promotion of entrepreneurship among farmers is the need of the hour.

The word entrepreneur appeared in the French language "Entreprendre" meaning to undertake. The early sixteenth century men engaged in leading military expeditions were referred to as entrepreneurs. From this usage, it was easy to move to apply entrepreneurs to other types of adventures.

The physiocratic economists of the later eighteenth century, such as Francvis Quesnay and Nicholas Baudean, called the agricultural cultivator an entrepreneur. Since the physiocrats thought that only the land was a source of social product, this puts the entrepreneur in a key position. In the sphere of agriculture, Baudean credited the entrepreneur with all the essential characteristics of risk taking and innovation.

Gordon (1961) stated that entrepreneurs are not simply innovators in the sense of innovators, they are the men with will to act, to assume risks and to bring about change through the organisation of human efforts.

Schumpeter (1961) opined that entrepreneur is basically an innovator and an innovator is one who introduces new combinations of the factors of production and distribution.

Haggen (1964) described the entrepreneur as an economic man who tries to maximise the profits by innovations. Innovations involve problem-solving and he gets satisfaction from using his capabilities in attacking problems.

Joshi and Kapur (1973) described farm entrepreneur as a person who thinks, organises and operates the business and is responsible for the results, that is, losses and gains from the business. He is a pioneer in organising and developing the farm.

Leeds and Stainton (1978) defined entrepreneur as a person who initiates production, takes decision, bears risks involved and organises and co-ordinates the other factors.

Cole (1979) described an entrepreneur as a decision maker.

Saimuddin (1987) defined entrepreneur as the one who detects and evaluates the new situation in his environment and directs the making of such adjustments in the economic system as he deems necessary.

Dixit (1988) said that a true entrepreneur is one who germinates the concept, taken initiative, seizes the opportunity, bears the risks, promotes the organisation and manages it inspite of odds to achieve the said goals. In fact he acts as a "spark plug" to transfer the economic scene and bring a new dynamism into it.

Khan (1992) stated that entrepreneurs are the men of skills, experience, dexterity, expertise and flair.

Sharmah and Singh (1994) reported that entrepreneur is one who can transform raw materials into goods and services, who can effectively utilise physical and financial resources for creating wealth, income and employment and who can innovate new products, standardise or upgrade existing products for creating new markets and new customers.

Desai (1995) reported that entrepreneur is one who can see possibilities in a given situation where others see none and has the patience to work out the idea into a scheme to which financial support can be provided.

2.3.2 Entrepreneurship

Agarwal (1975) explained entrepreneurship entails the ability to identify the resources, and to perceive their economic potential, the ability and willingness to utilise these resources and to invest in their development deferring immediate rewards in favour of future investment.

Khan (1992) reported that entrepreneurship is the basic business acumen of a successful entrepreneur.

Vijayalekshmi (1992) opined that entrepreneurship is the ability to co-ordinate and organise, manage and maintain and reap the best out of even the worst situations.

Sharmah and Singh (1994) is of the option that entrepreneurship is essentially a function, creativity and behaviour manifestation of a person for shifting resources from areas of low productivity to higher productivity.

Sheela (1994) defined entrepreneurship as the ability to discover an investment opportunity and to organise a money making enterprise contributing to real economic growth.

Desai (1995) defined entrepreneurship as the prosperity of mind to take calculated risks with confidence to achieve a pre-determined business or industrial objective. It is the risk-taking ability of the individual coupled with correct decision making.

In this study entrepreneurship is defined as the ability of the trained youth to take risk and management of resources towards maximise the profit with the urge to excel others.

2.4 Dimensions of entrepreneurial behaviour

Singh (1968) found that the successful agricultural entrepreneurs had a positive attitude towards modernisation and individual farming.

Christopher (1969) listed out the characteristics of entrepreneurs as perseverence and hard work, risk taking ability,

high aspiration, willingness to learn, dynamic and creative, adaptable, innovative, good salesmanship, ability to win friends and overcome crisis, initiative, self confidence, will power, determination to succeed, pleasing personality, responsible, excellence in work and perception of time.

Gaikwad and Tirupathi (1970) found that the socio economic background and the economic factors of entrepreneurs had played important role in the process of entrepreneurship formation.

Singh (1970) reported that the business entrepreneurs were exposed to more economic opportunities than agricultural entrepreneurs. Nandy (1973) in his comparitive study of entrepreneurs and non-entrepreneurs from two subcultures showed that the need for achievement, power efficacy and over all modernity were positively correlated with entry into an enterprise, thus taking up an entrepreneurial role.

SIET (1974) study revealed that economic gain was the most important reason for starting an enterprise followed by ambition, social prestige and social responsibility in that order. Younger age, formal education, urban background, experience, high level of aspiration, risk taking and adoption propensity were some of the characteristics that were positively associated with the quality of entrepreneurship.

Gaikwad (1975) observed that all the entrepreneurs were persons with initiative, drive and hardwork, though majority of the entrepreneurs had no technical knowledge.

Tandon (1975) stated that the entrepreneurs must posses the following important qualities. Capacity to assume risks and possessing self confidence, technical knowledge, alertness to new opportunities, willingness to accept change and ability to initiate, ability to marshall resources and ability to organise and administer.

Rao and Metha (1978) enlisted the psychological factors in entrepreneurship viz. need for achievement, need for influencing others, sense of efficacy, risk taking, openness to feedback and learning from experience, need for independence, hope of success, time orientation, competetion and collaboration, flexible authority relationship, social consciousness and dignity of labour.

Singh (1978) identified a set of significant characteristics viz., need for achievement, need for influence, high sense of efficacy, change proneness degree of self perceived readiness, over all modernity and financial back ground.

Ramakrishnan (1979) enlisted the characteristics of entrepreneurs viz., high level of aspiration, managerial competence, self confidence, leadership qualities, risk taking ability and indepenence in thought and action.

Bhagat (1980) stated that unemployed rural women played a dominant role in decision making process especially on money and management of family.

Heggade (1982) stated that women's participation in economic decision making was a vital means by which their economic dependency and social inequality could be removed. Their participation in decision making resulted in increasing the employment opportunity for women, increasing the produce and income level of the community, reducing the exploitative elements in the economic system, co-operatives in the production, marketing and distribution.

Nandapurkar (1982) developed an objective instrument to measure the entrepreneurial behaviour of small farmers by taking ten component viz. innovativeness, ability to co-ordinate farm activities, achievement motivation, decision making ability, information seeking, assistance of management services, cosmopoliteness, knowledge of farming enterprises, risk taking ability and leadership ability and found that assistance of management services and achievement motivation as important factors influencing entrepreneurial behaviour of small farmers.

Sethy *et al*. (1984) opined that the variables like social participation agricultural implements, personal efficacy, risk taking willingness, feed back, psychological modernity, personal achievement motivation, influence motivation, knowledge

about the technology and farm educational exposure were important entrepreneurial characteristics which promoted adoption of improved agricultural technology.

Dixit (1988) in his study reported that Indian entrepreneurs both at rural and urban centres with guts, skills and ambition did exist, but qualities like motivation, sense of commitment, business mentality were invariably absent in small entrepreneurs.

Himachalam (1990) expressed that there should be suitable organisational arrangements for disseminating information about appropriate technology to the prospective entrepreneurs and the entrepreneurs should be given proper training in the technology to be adopted.

Muthayya and Loganathan (1990) reported that joint family seem to take self employment than to those in single family probably because of the in built security provided in the joint family in the event of any failure.

Perumal *et al*. (1990) found that high economic orientation coupled with high risk orientation where the factors responsible for the entrepreneurial venture.

Porchezian (1991) found that farmers who had more farming experience, annual income, social participation, scientific orientation, innovativeness and maintaining high self

reliance, more economic motivation, high degree of credit orientation, overall modernity with diversified occupation were found to have more entrepreneurial behaviour.

Matani (1995) stated that farming entrepreneurship may bring socio economic salvation to Indian society.

Based on the above findings the dimensions namely credit orientation, economic motivation, innovation proveness, scientific orientation, decision making, achievement motivation, management orientation, risk orientation and competition orientation are included in the study.

2.4.1 Credit orientation

Kapattanavar (1983) found that there existed a positive relationship between adoption behaviour and credit orientation. Bhaskaran (1978) and Pillai (1978) reported that credit orientation have no relationship with adoption behaviour but Perumal and Mariappan (1982) and Al-mogel (1985) reported a positive relationship. Jaleel (1992) reported that credit orientation and adoption have a non significant relationship.

2.4.2 Economic motivation

Sivaramakrishnan (1981), Tyagi and Sohal (1984), Singh and Ray (1985), Badachickar (1985) and Haque (1989) reported positive relationship between economic motivation and adoption

behaviour whereas Kumari (1989) reported that there exist no relationship between economic motivation and adoption behaviour.

Chandran (1989) and Gangadharan (1993) reported that economic motivation and adoption have positive significant relationship.

2.4.3 Innovation proneness

It is the interest and desire of persons to seek changes in techniques and introduce such changes in their avocations (Anantharaman 1991).

Ravi (1979) found that there exist a positive relationship between innovation-proneness and adoption behaviour of farmers.

Reddy (1983) and Badachickar (1985) reported that innovation proneness was positively related with adoption behaviour.

Chari and Nandapurkar (1987) indicated a positive relationship between innovation proneness and adoption behaviour of farmers.

Kumari (1989) reported that innovation proness was not related with adoption behaviour whereas Singh (1989) found a positive relationship between innovation proneness and adoption behaviour.

2.4.4 Scientific orientation

Somasundaram (1976) reported a postive and significant association between scientific orientation of small farmers and their adoption behaviour.

Vijayaraghavan (1977) stated that the scientific orientation had significant correlation with the adoption in the case of small farmers where as, the same had no relationship with marginal farmers adoption behaviour.

Venkiduswamy (1977) reported that ther was no relationship between scientific orientation and adoption in the case of small farmers of project block but positive significant association with the adoption of small farmers of nonproject block.

Palaniswami (1978) found that there was no significant relationship between scientific orientation with extent of adoption of improved practices of flower cultivation by both *Malli* and Mullai *growers*.

2.4.5 Decision making

This involves the selection of goals to be attained and also alternative means to be evaluated for their efficacy in attainment of selected goals.

According to Bates (1954) decision making process involves a decision maker and an environment.

Rogers and Shoemaker (1971) postulated the four sequential functions or stages in innovation decision process on knowledge, persuasion, decision and confirmation. Pillai and Bhaskaran (1991) stated that decision making started with the awareness of the issue and was followed by interest. Singh and Singh (1977) opined that the dairy farmers passed through the stages of awareness, interest, trial and evaluation before adopting the innovation.

2.4.6 Achievement motivation

Mc Clelland (1961) defined achievement motivation as a spontaneously expressed desire to do something well for its own sake, rather than to gain power or love, recognition and profit.

Durand (1975) stated that people with a need to achieve do perform better.

Singh and Kumar (1975) described that achievement motivation is conceived as a personality orientation which impels the individual to strive for success for its own sake rather than in anticipation to concrete rewards. His main satisfaction seems to lie in the achievement itself. One can perhaps capture the essence of achievement motivation by the English proverb that "success is its own reward".

Janardhan (1979) and Kalavathy (1989) reported that achievement motivation was not related with job performance.

2.4.7 Management orientation

Samantha (1977), Shanmukhappa (1978), Bhaskaran (1979), Sheshachar (1980), Kamarudeen (1981) and Ramachandran (1992) reported that there exist positive significant relationship between management orienation and adoption.

2.4.8 Risk orientation

Rajkumar (1992) found a nonsignificant relationship between risk orientation and adoption.

Jaleel (1992) and Gangadharan (1993) reported positive significant relationship between risk orientation and adoption.

2.4.9 Competition orientation

It is the orientation of individuals to place oneself in a competitive situation in relation to others for projecting one's excellance in respective fields. This is considered to be a basic motivating force which may lead farmers to attain excellance in comparison to other farmers. Badachicker (1985) stated that competitive orientation of farmers had a positive relationship with management orientation. Bora (1989) revealed a positive relationship between competition orientation and returns to management. Singh (1989) reported a positive relationship with competitive orientation and adoption behaviour of farmer. Anantharaman (1991) reported that competition orientation have no

significant relationship with adoption behaviour of cassava farmers.

2.5 Extent of adoption of scientific practices

Scientists have focussed on the measurement of progressiveness of farmers using adoption as component. (Jaiswal and Dave 1972; Rahiman 1978; Bhaskaran 1978). Adoption of improved practices was taken as a development indicator by Jaleel (1992) and in a study of agricultural modernisation, Rajkumar (1992) found highly significant and positive relationship of progressiveness with adoption of improved agricultural practices.

2.6 Personal characteristics influencing entrepreneurial behaviour and adoption

Studies on certain socio-personal characteristics that may have influence on the entrepreneurial behaviour and extent of adoption of scientific practices have been reviewed and presented under this section. The socio-personal characteristics included in the study are farming experience, annual income, trainings, extension contact, extension participation, mass media exposure, social participation, knowledge and information seeking behaviour.

2.6.1 Farming experience

Jayakrishnan (1984) and Jyapalan (1985) reported a positive significant relationship between farming experience and

adoption whereas Jayaraman (1988), Sutha *et al*. (1991) reported a non-significant relationship between farming experience and adoption behaviour.

Adhiguru (1991) found that the relationship between farming experience and adoption among the rice growers is not significant.

Rajkumar (1992) in a study on agriculture modernisation reported that the relationship of adoption with farm size and farming experience is not significant.

2.6.2 Annual income

Perumal (1970) found that high farm income was associated with the adoption of large number of improved practices. Chandrakandan (1973) found that farmers with more income were found to be better adopters than others. Anbalagan (1974) opined that adopters of practices were getting higher income.

Thangaraju (1974) while comparing the characteristics of trained and untrained sericultrists found that there was no significant difference between trained and untrained groups on annual income with respect to their adoption behaviour.

Seema (1986) found that annual income is nonsignificantly related with the role performance of farm women.

Porchezian (1991) found a non significant relationship with annual income and entrepreneurial behaviour of farmers.

2.6.3 Training attended

Little field et al. (1971), Kamalsen (1971), Singh (1974), Gagni (1978) and Vashistha (1987) reported positive relationship of training with adoption behaviour.

2.6.4 Extension contact

Sundaraswamy (1971), Anbalagan (1974) and Vellapanddian (1974) reported that extension agency contact was associated with adoption of recommended practices.

Somasundaram (1976), Vijayaraghavan (1977) and Venkiduswamy (1977) reported that there was significant correlation between adoption and contact with extension agency among small farmers.

Pradeepkumar (1993) found that more than half of the respondents had no extension agency contact (51.7%) and about one third had contact with extension agency for agricultural purposes (35%) and 13.3% of the respondents had contact with extension agency for non-agricultural purpose.

2.6.5 Extension participation

Reddy (1983) found that extension participation was associated with adoption behaviour of the farmer.

Baadgoenkar (1983) reported that there exist no relationship between extension participation and adoption behaviour but Nataraju and Chennegowda (1986) and Pandurangaiah (1987) reported a positive relationship with adoption behaviour.

2.6.6 Mass Media Exposure

Venkidusamy (1977) reported that mass media exposure had significant relationship with the adoption among small farmers.

Palaniswamy (1978) reported that media participation had significant and positive correlation with extent of adoption among malli growers and have non-significant relationship among mullai growers.

According to Dharmaraja and Samuel (1982) majority of marginal farmers (75%) and small farmers (65%) possessed medium level of mass media exposure.

Raghavacharyulu (1983) analysed that mass media exposure influence the entrepreneurial behaviour of small farmers.

Saradamoni (1983) opined that farmers in land owing households are aware of the radio programmes for farmers and listen to them.

Porchezian (1991) found that mass media exposure is non significantly related to the entrepreneurial behaviour of

farmers. Pradeepkumar (1993) reported that mass media exposure is positively and significantly related with the extent of participation in agriculture and allied fields.

2.6.7 Social participation

Refers to nature of involvement of farmers in social organisations which may help farmers to have contact with fellow farmers and other connected with farm.

Sharma and Singh (1970) stated that social participation is not a discriminating factor in the extent of participation of women in farm operations.

Renukardhya (1983) reported that majority of the trained farmers had high social participation.

Govind (1984) reported that social participation of farm women gave significant and negative association with the extent of involvement in farm activities.

Guruswamy (1987) found that majority of the farm women had low level of social participation followed by high level and only a very small portion had medium level of participation.

Porchezian (1991) found that social participation was significantly and positively related with the entrepreneurial behaviour of farmers.

Gangadharan (1993) found that social participation is positively and significantly related with the adoption of improved practices by pepper growers.

2.6.8 Knowledge

Knowledge plays an important role in the covert and overt behaviour of an individual.

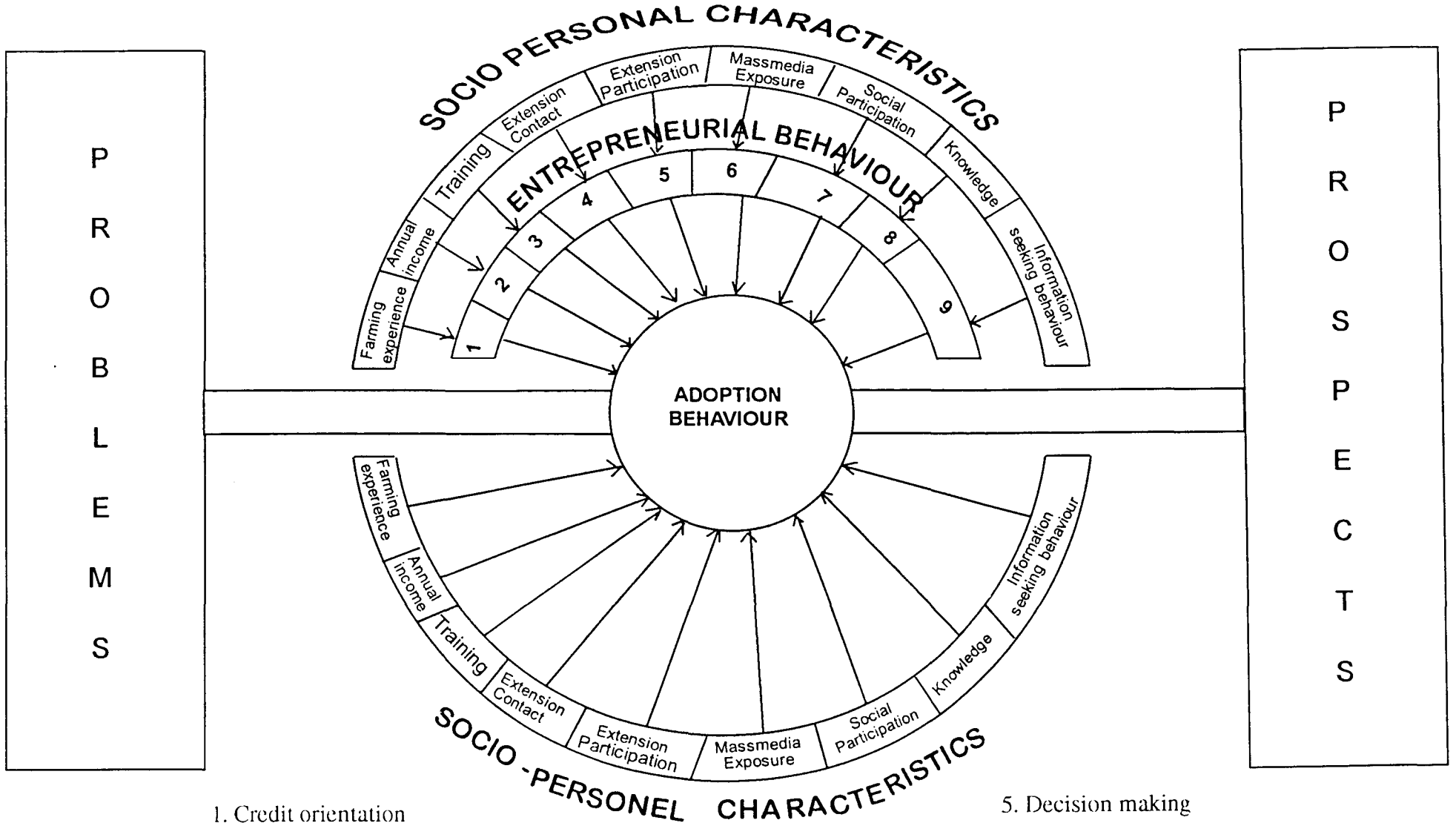
Rogers (1969) employed practical knowledge as one of the variables for peasant modernisation. Knowledge of innovations significantly contributed to explaining adoption behaviour of farmers (Singh and Singh 1970; Rogers and Shoemaker 1971).

Sivaramakrishnan (1981), Sethy *et al*. (1984), Anantharaman *et al*. (1985), Haque (1989) and Singh (1989) reported positive relationship between knowledge and adoption behaviour of farmers.

2.6.9 Information Seeking Behaviour

Supe (1971) indicated that written words had positive and significant association with rational behaviour in decision making process of improved practices.

Several scientists have reported that progressiveness of farmers (Danda 1972; Dwarakinath *et al*. 1975; Bhaskaran 1978; Shilaja 1981; Jaleel 1992) are characterised by frequent external agency contact.



1. Credit orientation
2. Economic motivation
3. Innovation proneness
4. Sceientific orientation
5. Decision making
6. Achievement motivation
7. Managment orientation
8. Risk orientation
9. Competition orientation

Fig. 1. Conceptual frame work

Progressive farmers act as credible sources of information (Sandhu 1970, Babu 1971, Ambastha 1974, Annamalai 1979).

Kaur (1982) found that majority of women found the lessons useful and liked the content 'fruits and vegetable presentation' (60.40 per cent), 59 per cent liked 'Food Science' and 56 per cent liked 'Home management printed lessons'.

2.7 Conceptual model of the study

Based on the above review a conceptual model of the study was developed and presented in Fig. 1.

2.8 Hypotheses of the study

Keeping in view of the objectives of the study and review of literature the following hypothesis were framed for emperical valuation in the present study.

1. There is no significant difference between entrepreneurial behaviour of youth trained in sericulture and beekeeping.

2. There is no significant difference between the entrepreneurial behaviour of practising and non practising youth trained in sericulture.

3. There is no significant difference between the entrepreneurial behaviour of practising and non-practising youth trained in beekeeping.

4. There is no relationship between extent of adoption and dimensions of entrepreneurial behaviour of practising youth in sericulture.

5. There is no relationship between extent of adoption and dimensions of entrepreneurial behaviour of practising youth in beekeeping.

6. There is no relationship between entrepreneurial behaviour and selected socio personal characteristics of practising and nonpractising youth trained in sericulture.

7. There is no relationship between entrepreneurial behaviour and selected socio personal characteristics of practising and nonpractising youth trained in beekeeping.

METHODOLOGY

"While the individual man is an insoluble puzzle, in the aggregate he becomes a mathematical certainity".

– Sherlock Holmes in *The Sign of Four*

CHAPTER III

METHODOLOGY

This chapter deals with the methods and procedures followed in this study, which are presented under the following subheadings.

3.1 Locale of study

3.2 Sampling procedure

3.3 Identification of problems and prospects

3.4 Measurements of variables

3.5 Data collection procedure

3.6 Statistical tools used in this study

3.1 Locale of study

Idukki district was purposively selected as locale of the study because both the entreprises viz. sericulture and beekeeping were flourishing in this district as compared to other districts in Kerala.

3.2 Sampling procedure

3.2.1 Selection of Blocks

Multistage random sampling procedure was followed. First stage unit of sample is the block. Out of eight blocks of Idukki district five blocks were selected following random

sampling procedure. The blocks selected were Thodupuzha, Elamdesom, Idukki, Kattappana and Nedumkandom.

3.2.2 Selection of respondents

The second stage unit of sample is the trained youth in sericulture and beekeeping. The list of trained youth in sericulture and beekeeping was prepared from the training records available at Khadi and Village Industries Board. Using random sampling procedure, 20 farmers comprising 10 practising and 10 non practising farmers in each entreprise namely sericulture and beekeeping were selected from each block. Thus a total sample of 200 farmers with 50 trained practising farmers each in sericulture and beekeeping and 50 trained non practising farmers in each enterprise was found.

3.3 Identification of problems and prospects

One of the objectives of the study was to identify the problems and prospects perceived by the trained youth in sericulture and beekeeping. Various researchers have used different methods to identify the constraints and prospects. The procedure adopted in this study is explained below.

A pilot study was conducted in a non sample area to identify the major problems faced by the entrepreneurs in the field of sericulture and beekeeping. The prospects were also ascertained as perceived by them.

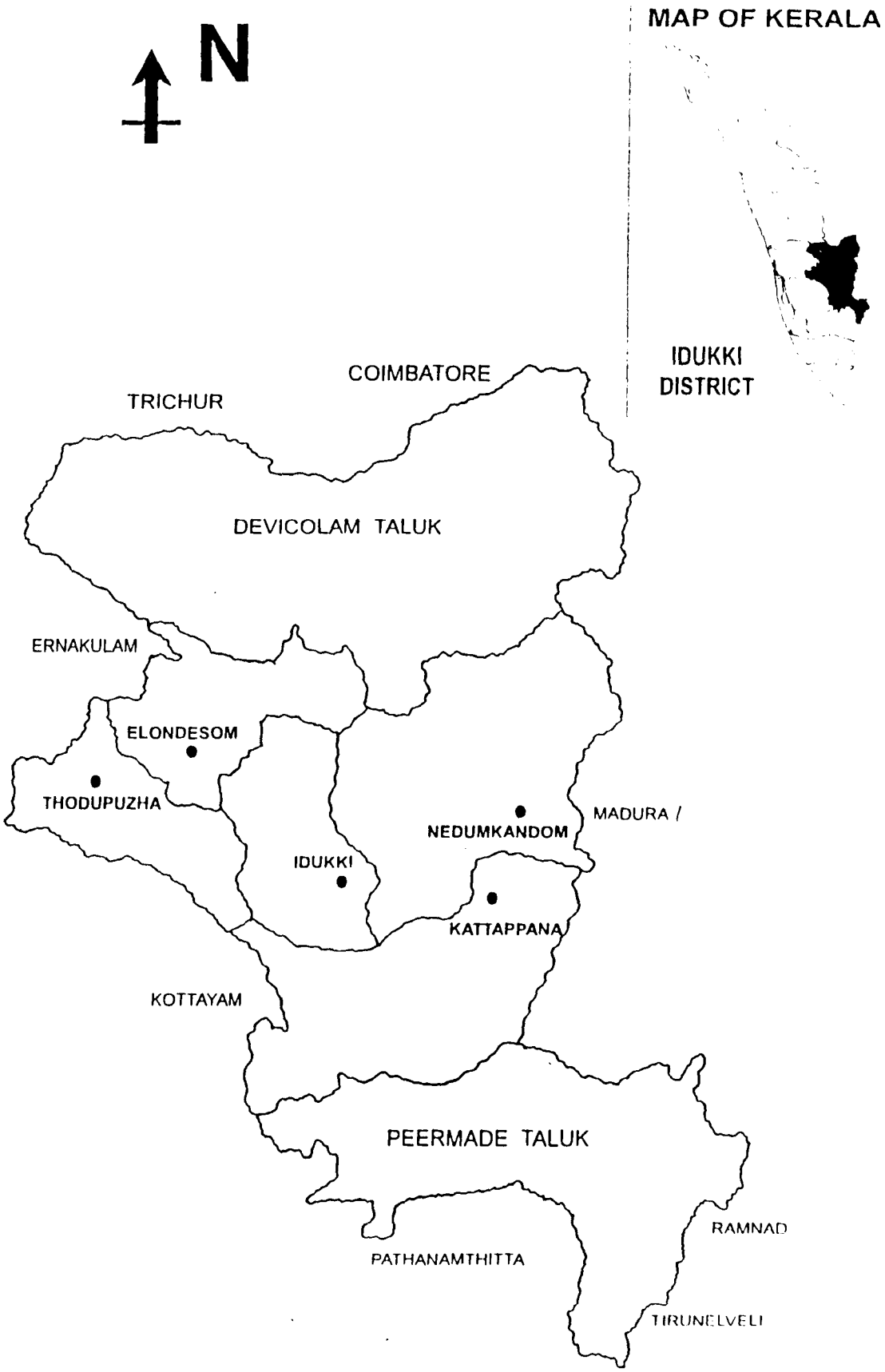


Fig. 2. Map showing the location of the study

Delphi technique was used for this study to obtain data on all the three aspects viz. identification of major problems and prospects, breaking them into component constraints and ranking them.

Sharma *et al.* (1989) in a study for assessment of potential yields of cassava at the National Food Policy Research Institute, Washington, Delphi technique was used to seek the opinion of scientists in different countries to identify the important problems to the realisation of higher production of cassava at the farm level.

3.3.1 Application of Delphi Method

In this study the Policy Delphi procedure was followed. It had three steps consisting of two steps for the identification of problems and prospects and the third step for rating them according to priority of importance.

3.3.1.1 Step I

In this phase, 50 numbers of non sample respondents were asked to list those major problems which they felt important with regard to sericulture and beekeeping respectively and the prospects they feel in adopting it. Personal interview was conducted with practising farmers of sericulture and beekeeping trained but non practising farmers, extension workers and other officials in these two fields.

3.3.1.2 Step II

All the constraints obtained during the first phase were pooled and again presented to all the categories of respondents. For this purpose also data was collected through personal interview. They were asked (1) to state if there is any change in earlier responses. (2) To state their agreement or disagreement to all the expressed problems and prospects. (3) To list out the more specific problems and prospects, if any. (4) To list out any other additional problems and prospects.

In this round, the judges became sequential analysers by breaking up the constraints and prospects into more specific ones.

3.3.1.3 Step III

In this stage, all the collected problems and prospects were again pooled together. The respondents were asked to rate them in a three point continuum based on its importance ranging from 'most important', 'important' and 'least important'. The score assigned was 3, 2 and 1 respectively.

The frequencies of the respondents ranking each problem and prospect in each point of the continuum were found out and then multiplied by weightage of each response category and summed up to get the score of particular item. The problem and the prospect with the higher score value was considered as the most

serious one, followed by others in the order of decreasing score values. These were incorporated in the final interview schedule to measure the perception of respondents regarding the problems identified and prospects of the two selected enterprises.

3.4 Measurement of variables

Two dependent variables and nine independent variables considered for the study are presented below.

3.4.1 Dependent variables

3.4.1.1 Entrepreneurial behaviour (E.B.)

3.4.1.2 Extent of adoption of scientific practices

3.4.2 Independent variables

3.4.2.1 Farming experience

3.4.2.2 Annual income

3.4.2.3 Training attended

3.4.2.4 Extension contact

3.4.2.5 Extension participation

3.4.2.6 Mass media exposure

3.4.2.7 Social participation

3.4.2.8 Knowledge

3.4.2.9 Information seeking behaviour

3.4.1 Procedure for developing entrepreneurial behaviour index

Through discussion with experts in Agricultural Universities, State Agricultural department officials, Khadi and Village Industries Board officials and review of literature, 19 dimensions of entrepreneurial behaviour were identified. These dimensions were subjected to rating by expert judges in a five point continuum ranging from most important to least important to seive out the most important dimensions. Based on the judges opinion nine dimensions were selected for the study. viz. credit orientation, economic motivation, innovation proneness, scientific orientation, decision making, achievement motivation, management orientation, risk orientation and competetion orientation. The measurement procedures followed to quantify the selected dimensions are given below.

3.4.1 Dimensions of entrepreneurial behaviour and their measurements

Dimensions	Measuring technique
1. Credit orientation	Beal and Sibely (1967)
2. Economic motivation	Supe (1969) and Nanjaiyan (1985)
3. Innovation proneness	Arbitrary scale developed for the study
4. Scientific orientation	Supe (1969)
5. Decision making	Porchezian (1991)
6. Achievement motivation	Manohari (1988)
7. Management orientation	Samantha (1977)
8. Risk orientation	Supe (1969)
9. Competition orientation	Shilaja (1990)

Operational definition and measuring procedures of the dimensions of entrepreneurial behaviour are detailed below

3.4.1.1 Credit orientation

This was operationalised as the respondent's behaviour towards credit, use and its repayment. The dimension was measured following the procedure of Beal and Sibely (1967). The scale contains six items. A score of '2' was assigned to 'yes' response and '1' to 'no' response.

By summing up the scores over the six items the credit orientation score for the respondent was obtained. The score range from '6' to '12' (Appendix III).

3.4.1.2 Economic motivation

Economic motivation is defined as an individual's orientation towards achievement of maximum economic ends. (Supe 1969).

The scale developed by Supe (1969) and modified by Nanjaiyan (1985) was used for measuring the economic motivation in this study.

The scale consists of six statements of which three were positive and three were negative. A dichotomus pattern of response (agree, disagree) was followed. The scoring procedure was as follows.

Response	Agree	Disagree
Positive statements	2	1
Negative statements	1	2

The economic motivation score was obtained by adding the weightage of the responses to all the six statements. The total score range would be between '6' to '12'.

3.4.1.3 Innovation proneness

Innovation proneness is operationalised as the degree to which a farmer is relatively earlier in adopting new ideas than the other members of his social system.

The variable was measured using an arbitrary statements developed. The scale consists of three statements with scores 3, 2 and 1 respectively (Appendix III). The respondents were asked to choose any one of the statement. The score for the chosen each statement gives the innovation proneness score of the individual. The possible score range is '1' to '3'.

3.4.1.4 Scientific orientation

The scientific orientation is defined as the degree to which a farmer is relatively ready to adopt scientific ideas. The scale developed by Supe (1969) was used in this study. The scale consists of six statements (Appendix III). The scoring procedure was as follows.

Response	SA	A	UD	DA	SDA
Positive statement	5	4	3	2	1
Negative statement	1	2	3	4	5

The total score was arrived at by summing up scores of the entire statements.

The score range would be between '6' to '30'.

3.4.1.5 Decision making

In the present study, decision making is operationalised as the degree to which a farmer justifies the selection of most effective means from among the available alternatives on the basis of scientific criteria for achieving maximum economic profit.

This dimension was measured using the scale developed by Nandapurkar (1982) and modified by Porchezian (1991). The scale consists of ten items (Appendix III). The response categories and scoring was as follows.

Response	Score
Not considered	1
Considered after consultation with others	2
Considered independently	3

By summing up the scores, over the ten items, the decision making score of the individual was obtained. The possible score range is '10' to '30'.

3.4.1.6 Achievement motivation

It is operationally defined as the desire for excellence in order to attain a sense of personal accomplishment.

Achievement motivation scale used by Manohari (1988) was used for the study. The scale consists of seven statements. The responses were collected on a five point continuum as follows.

Response	Score
Strongly agree	5
Agree	4
Undecided	3
Disagree	2
Strongly disagree	1

The total score for a single respondent will be the summation of scores over all the items. The possible score range would be '7' to 35.

3.4.1.7 Management orientation

This is operationalised as the degree to which a farmer is oriented towards scientific agricultural management comprising

planning, production and marketing functions of farm enterprises. Management orientation was measured using the scale developed by Samantha (1977). The scale consists of 18 statements, six statements each for planning, production and marketing orientation respectively. The respondents were asked to state their agreement or disagreement to each of the statements and scores of 2 and 1 were assigned respectively considering whether the statement is positive or negative. The summation of scores for all the items give the score of the respondent on management orientation. The possible score range is 18 to 36.

3.4.1.8 Risk orientation

Risk orientation is operationalised as the degree to which a farmer is oriented towards encountering risk and uncertainity and have courage to face the problems in starting as enterprise.

The scale developed by Supe (1969) was adopted for the study.

There were six statements and the scoring procedure was as follows.

Response	SA	A	UD	DA	SDA
Positive statements	5	4	3	2	1
Negative statement	1	2	3	4	5

The scores obtained for the statements were summed up to obtain the individual's score on risk orientation. The possible score range is '6' to 30.

3.4.1.9 Competition orientation

Competition orientation is operationalised as the degree to which a farmer is oriented to place himself in a competitive situation in relation to other individuals for projecting his excellance in business.

In this study competition orientation was measured using the scale used by Shilaja (1990). There were six statements and the respondents were asked to state their agreement or disagreement to each of the statements. Score '2' was assigned for agreements and '1' for disagreements in the case of positive statement and vice-versa for negative statements. The individuals score on competition orientation is the summation of scores obtained for each item. The score range is 6 to 12.

3.4.10 Development of an index to assess the entrepreneurial behaviour

An index was developed to describe the entrepreneurial behaviour of the trained youth in sericulture and beekeeping (Y) using the component characters viz. credit orientation, economic motivation, innovation proneness, scientific orientation, decision making, achievement orientation, management orientation, risk orientation and competition orientation as follows.

$$Y = W_1X_1 + W_2X_2 + \ldots\ldots + W_9X_9$$

where $W_1 = \frac{1}{Si^2}$, i = 1, 2, ... 9 is the weight assigned to the ith character and Si^2 the estimate of variance for this character.

i = 1, 2, 3 ..... 9 are the component characters.

3.4.2 Operationalisation and measurement of extent of adoption of scientific practices

This is operationalised as the adoption of improved techniques which are recommended by the Kerala Agricultural University through the package of practices recommendations, for sericulture and beekeeping.

The measuring procedure adopted by Jaleel (1992) and Gangadharan (1993) was used for the study. The adoption score was worked out using the following formula.

$$I = \frac{\sum_{i=1}^{n} \frac{ei}{Pi} \times 100}{n}$$

where

ei = Extent of adoption of recommended practices

Pi = Potentiality of adoption of each recommended practices

n = Total number of selected practices

After calculating the adoption score of each respondent, the mean score was obtained. Then the respondents of the groups were categorised as having high and low level of adoption taking mean score as the base.

3.4.2 Selection and measurement of socio-personal characteristics

Relevant literature were referred to and social scientists were consulted inorder to identify the variables which would possibly influence the entrepreneurial behaviour and extent of adoption of the respondents. Thus 27 variables were identified. The list of these variables were sent/handed over personally to selected judges comprising of Professors, Associate Professors and Assistant Professors of Kerala Agricultural University, Tamil Nadu Agricultural University and different officials of Kerala State department of Agriculture, Kerala and Khadi and Village Industries Board (See Appendix III). The judges were requested to rate the relative importance of the variable in a three point continuum, ranging from most relevant to least relevant and to add pertinant variables if any. Those variables rated as most relevant and relevant by more than 70 per cent of judges were selected for the study.

3.4.2.1 Farming experience

Jaleel (1992) defined farming experience as the actual completed years of experience of the respondent in agriculture.

Farming experience was measured directly by assigning a score of one for each completed year of experience the youth had in farming at the time of investigation, as followed by Jaleel (1992).

3.4.2.2 Annual income

Doddahanumaiah (1990) measured annual income by asking the respondent to state the total annual income of one's family from all sources.

In this study annual income was defined as the total income of the respondent's family derived from all possible sources. Then the mean was worked out to group the respondents as above or below the mean.

3.4.2.3 Training

It was operationalised as the number of formal and/or nonformal training attended by the youth. The score of a respondent on this variable was obtained by assigning one score for each training attended. An additional score was assigned for each repeated attendence.

3.4.3.4 Extension contact

This refers to the degree to which one has contact with or the various extension personnel in his locality.

For the present study the contact with extension agency was operationalised as the degree to which one had contact with various extension personnel in his locality. It was measured by collecting the frequency of contact in a three point continuum viz. like often, occasionally, never with a weightage 2, 1, 0 respectively. The sum of weightage over different extension personnel constitute the score of the respondent on extension contact.

3.4.2.5 Extension participation

Extension participation is defined as the extent of involvement of youth in different extension activities. The extension participation is measured by using the continuum full, partial and nil with scores of 2, 1 and zero respectively. The total score of a respondent was obtained by summing up the scores obtained for each extension activity.

3.4.2.6 Mass media exposure

Mass media exposure refers to the degree to which different mass media sources were utilised by the youth for getting information.

In the present study it was defined as the degree to which different mass media sources like Radio, Newspapers, Television, Farm journals, scientific and research articles, popular articles etc. are utilised by the youth for getting

information. It was measured using a continuum of regularly, sometimes and never, with a score of 2, 1 and 0. The sum total of the score obtained for each item form the score of a respondent on mass media exposure.

3.4.2.7 Social participation

Social participation refers to the extent and nature of participation or involvement of youth in formal organisations either as a member or as an office bearer (Selvakumar 1988).

In this study social participation was defined as the degree of involvement of respondent in social organisation as a member or as an office bearer.

The following scoring pattern was adopted.

	Score
Member in each organisation	1
Office bearer in each organisation	2

Each score was multiplied by the number of organisations in which the respondent was a member to arrive at the total score of the respondent on social participation.

3.4.2.8 Knowledge

Knowledge is operationalised as the extent of under standing of the youth about scientific aspects of sericulture or

beekeeping as the case may be, at the time of interview as evident from his responses to a set of questions prepared on different aspects of sericulture or beekeeping. Seperate teacher made knowledge test was used for sericulture and beekeeping. One score was given for every correct answer and the total knowledge score was arrived at by summing up scores obtained for all the items in the test.

3.4.3.9 Information seeking behaviour

Information seeking behaviour measures the extent to which the respondent is seeking information from different communication sources. It was measured in the present study by using a scale developed by Sajeevchandran 1989. The scale included all possible sources of information categorised under five headings viz. impersonal source, formal personal source, informal personal source, commercial source and other sources. The continuum has three response categories viz. regularly, occasionally and never with score of 2, 1 and '0' respectively.

The sum of scores obtained for each item form the total score of a respondent on this variable.

3.5 Data collection procedure

The data were collected using interview method. The interview schedule was prepared, pretested through a piolet study and revised wherever necessary (Appendix III).

3.6 Statistical methods used

The entrepreneurial behaviour index of the trained youth (Y) was developed using the nine component characters as follows.

$$Y = W_1X_1 + W_2X_2 + \ldots\ldots\ldots W_9X_9$$

where $W_i = \frac{1}{Si^2}$. $i = 1, 2, \ldots\ldots\ldots 9$ is the weight assigned to the ith character and Si^2 the estimate of variance for i^{th} character.

Simple percentage analysis was done to explain the profile characters of respondents.

Simple correlation analysis was done to explain the relationship between the dependent and independent variables.

Analysis of variance was done to compare the entrepreneurial behaviour of the respondents in the four groups.

RESULTS

The Blessed Lord said –

"He who performs his bounden duty without depending on the results is a yogi"

– Bhagawath Geetha. *Chapter VI*

CHAPTER IV

RESULTS

The results of the study are presented under the following sub heads.

4.1 Problems and prospects of sericulture and beekeeping

4.2 Distribution of trained youth based on entrepreneurial behaviour index.

4.3 Comparison of entrepreneurial behaviour of trained youth.

4.4 Distribution of trained youth based on scores on dimensions of entrepreneurial behaviour.

4.5 Extent of adoption of scientific practices in sericulture and beekeeping.

4.6 Relationship between extent of adoption and dimensions of entrepreneurial behaviour.

4.7 Socio personal characteristics of trained youth.

4.8 Relationship of socio-personal characteristics with the entrepreneurial behaviour.

4.9 Relationship of socio-personal characteristics with the extent of adoption.

4.1 Problems and prospects of sericulture and beekeeping

The problems and prospects of the two entreprises viz. sericulture and beekeeping, as perceived by the respondent youth were identified under different categories. The results are presented in Tables 1 to 4.

4.1.1 Problems of sericulture

4.1.1.1 General problems

It is obvious from Table I that the trained youth in sericulture (80%) expressed 'lack of assured price for cocoons' as the most important problem followed by 'Small and marginal holdings' (60%) and 'high cost of cultivation' (55%). It is interesting to note that 50 per cent of the respondents identified 'Red tapism at development offices' and 'severe pest and diseases' were the next important problem.

4.1. Problems and prospects of sericulture and beekeeping

4.1.1 Problems of sericulture

Table 1 Problems of sericulture

n = 100

Sl. No.	Problem	Frequency 'Most important'	Mean score	Rank
4.1.1.1	**General problems**			
1.	Lack of assured price	80	2.80	I
2.	Small and marginal holdings	60	2.60	II
3.	High cost of cultivation	55	2.55	III
4.	Red tapism at development officer	50	2.40	IV
5.	Severe pest and diseases	50	2.25	VI
6.	Lack of encouragement	35	2.15	V
7.	Lack of co-operation among farmers	35	1.95	VII
8.	Lack of awareness	10	1.75	VIII
9.	Non availability of mulberry leaves	0	1.20	IX
4.1.1.2	**Communication problems**			
1.	Inadequate extension support	60	2.60	I
2.	Inadequate training	50	2.30	II
3.	Nonavailability of literature on advanced practices	35	2.10	III
4.	Inadequate Research Support	25	2.00	IV

4.1.1.3 Input oriented problems

n = 100

Sl. No.	Problem	Frequency 'Most important'	Mean score	Rank
1.	Lack of good quality planting materials	35	2.10	I
2.	Inadequate and untimely supply	25	2.00	II
3.	Lack of subsidy for fertilizers and pp. chemicals	0	1.75	III
4.	Varying input prices at different regions	25	2.0	II

4.1.1.4 Credit oriented problems

1.	Non availability of credit	80	2.80	I
2.	Complicated official procedure	60	2.60	II
3.	Delay in sanctioning the loan	50	2.30	III

4.1.1.5 Infrastructural problems

1.	Lack of marketing facilities for cocoons	55	2.55	I
2.	Lack of processing units (reeling centres)	50	2.30	II
3.	Lack of Irrigation facilities for mulberry	35	2.10	III

'Lack of co-operation among farmers' (35%), 'lack of encouragement by Government' (35%) and lack of awareness (10%) were the other problems in the order of importance as perceived by this group.

4.1.1.2 Communication problems

The Table 1 highlights the problems viz. 'inadequate extension support' (60%), 'inadequate training' (50%), 'non availability of literature on advanced practices' (35%) and 'inadequate research support' (25%) were rated in the order of importance.

4.1.1.3 Input oriented problems

A glance on Table 1 revealed that 'lack of good quality planting materials' (35%), 'inadequate and untimely supply' (25%) and 'price fluctuations of critical inputs at different regions' (25%) were the most important problems while 75 per cent of the respondents experienced 'lack of subsidy for fertilisers and pesticides' as an important problem also.

4.1.1.4 Credit oriented problems

Majority of the sampled youth (80%) perceived 'non availability of credit' for running their entreprise as the most serious problem. 'The cumbersome procedure' (60%) and 'delay in sanctioning the loan' (50%) were the other problems related to credit, in the order of importance.

4.1.1.5 Infrastructural problems

The Table 1 highlights that 'lack of marketing facilities for cocoons' (55%), 'lack of processing units' (50%)

were the severe constraints as perceived by the trained youth in sericulture, followed by lack of irrigation facilities for mulberry cultivation' (35%).

Table 2 Prospects of sericulture

n = 100

Sl. No.	Problem	Frequency 'Most important'	Mean score	Rank
1.	Family labour effectively utilised	75	2.75	I
2.	Unemployment and under employment problems solved to some extent	70	2.70	II
3.	Local resources exploited	50	2.50	III
4.	Influence indirect employment generation	50	2.30	IV
5.	Improve farmer's economic condition	35	2.10	V
6.	Effective land utilisation	25	2.00	VI
7.	Secondary industries developed	10	1.70	VII

4.1.2 Prospects of sericulture

Viewing the prospects of sericulture in Table 2 as experienced by the trained youth, it is clear that 75 per cent of them had opined that the sericulture entreprise would help the 'effective utilisation of family labour'. Highlighting the entreprise as a suitable self employment avenue, 70 per cent of the respondents youth opined that with this entreprise 'unemployment and under employment problems can be solved to some extent'. More than 50 per cent of the youth under study expressed that 'local resources exploited' with this entreprise

followed by 'influencing indirect employment generation' (50%). Sericulture will definitely 'improve the farmer's economic condition' as expressed by 35 per cent of the respondents, followed by 'effective land utilisation'. A minority of the study group (10%) expressed that the sericulture entreprise would promote the 'development of secondary industries'.

4.1.3 Problems of Beekeeping

Table 3 Problems of Beekeeping n = 100

Sl. No.	Problem	Frequency 'Most important'	Mean score	Rank
4.1.3.1	**General problems**			
1.	Loss of colonies due to TSB disease	100	3.00	I
2.	Lack of recognition as an organised group	85	2.85	II
3.	Floor price for honey not fixed	60	2.60	II
4.	Lack of insurance to bee colonies	55	2.45	IV
5.	Lack of encouragement by Government	50	2.35	V
6.	Lack of awareness about the prospects	25	1.55	VII
7.	Lack of consultancy service	10	1.75	VI
4.1.3.2	**Communication problems**			
1.	Inadequate extension support	65	2.65	I
2.	No training for the extraction of pollen, jelly etc.	50	2.5	II
3.	Inadequate research programme	50	2.1	III
4.	Non availability of scientific literature	25	2.0	IV

4.1.3.4 Input oriented problems

n = 100

Sl. No.	Problem	Frequency 'Most important'	Mean score	Rank
1.	Non availability of disease resistant bees	75	2.75	I
2.	High cost of resistant bees	60	2.60	II
3.	High cost of bee hives and accessories	55	2.45	III
4.	Lack of supply of exotic bees by Government	50	2.10	IV
4.1.3.5	**Credit oriented problems**			
1.	Inadequacy of loan	55	2.45	I
2.	Inadequate government assistance	30	2.20	II
4.1.3.6	**Infrastructural problems**			
1.	Lack of organised marketing network	60	2.6	I
2.	Inadequate sales net work for bees	25	2.0	II
3.	Lack of arrangements for timely collection of honey	0	1.75	III
4.	Lack of secondary industries	20	1.4	IV

4.1.3.1 General problems

Analysing the Table 3 it is obvious that all the youth (100%) under study reported 'loss of colonies due to Thai Sac Brood disease' as the most serious problem. More than two third of the respondents (85%) mentioned 'lack of recognition and acceptance as an organised group in farming community' as the second major problem. Sixty per cent of the respondents reported

that 'lack of floor price for honey' as the next realised problem, followed by 'lack of insurence to bee colonies' (55%) and 'lack of encouragement by government' (50%) towards beekeeping. Fifty per cent of the respondent youth had opined that 'lack of target oriented production, 'lack of awareness about the prospects of beekeeping' and 'lack of consultancy service' in the field of beekeeping were the other problems as experienced in the order of importance.

4.1.3.2 Communication problems

The data presented in table 3 revealed that 'inadequate extension support' was the most severe problem as 65 per cent of the respondents experienced.

'Inadequate training for the extraction of pollen, jelly etc.' was the next realised problem by half of the respondent group (50%) followed by 'inadequate research programme' (50%) and 'non availability of scientific literature' were the other major problems of beekeeping as experienced by the youth.

4.1.3.3 Input oriented problems

Majority of the sampled youth (75%) opined that 'non availability of disease resistant bees' was the major problem experienced. Two third (60%) of the respondents reported 'high cost of resistant bees' as the next severe problem. More than

half (55%) of the trained youth mentioned 'high cost of bee hives and accessories' followed by 'lack of supply of exotic bees by Government' (50%) were the other problems being experienced in the order of severity as experienced.

4.1.3.4 Credit oriented problems

The table 3 highlights that the 'inadequacy of loan facilities' as well as 'lack of financial support from government' were perceived as the important problems by 55 per cent and 35 per cent of the respondents respectively in the order of severity.

4.1.3.5 Infrastructural problems

As far as infrastructural problems are concerned, 'lack of organsed marketing net work' (60%), 'inadequate sales net work for bees' (25%) and 'lack of secondary industries' (20%) were the most important problems realised by the trained youth. But 75 per cent of the respondents realised 'lack of arrangements for timely collection of honey' as important problem.

4.1.4 Prospects of beekeeping

Table 4.1.4 Prospects of beekeeping

n = 100

Sl. No.	Problem	Frequency 'Most important'	Mean score	Rank
1.	Effective utilisation of family labour	80	2.80	I
2.	Conserve vegetation by farm families	55	2.40	III
3.	Gain additional income to the family	50	2.40	IV
4.	Increase pollination on crops like coconut etc.	40	2.15	V
5.	Secondary industries developed	25	2.00	VI
6.	Influence indirect employment	60	2.60	II

Examining the prospects of beekeeping in table 4, it is clear that more than three fourth (80%) of the trained youth realised 'effective utilisation of family labour' is the most important prospect. Two-third of the respondents (60%) opined the beekeeping entreprise would 'influence indirect employment' and 'conserve vegetation by the farm family' (55%) were the other major prospects experienced. Half of the respondents realised this entreprise would help to 'gain additional income to the family. 'Increase pollination on crops like coconut' (40%) and 'development of secondary industries' (25%) were the other prospects as opined by the trained youth in beekeeping.

4.2 Distribution of trained youth based on entrepreneurial behaviour index

The respondents of the study were classified into low and high group based on their entrepreneurial behaviour index and presented in Table 5. The mean score on entreprenerial behaviour of youth trained in sericulture 45.70 and that of beekeeping was 40.75. On categorising the practising and nonpractising youth in each enterprise, it was observed that 100 per cent of the practising youth in sericulture and 84 per cent of the practising youth in beekeeping were in high group. In the case of non-practising farmers, 100 per cent of sericulture trained youth and 70 per cent of beekeeping trained youth were in the low category.

Table 5 Distribution of trained youth in sericulture and beekeeping according to their entrepreneurial behaviour index

n = 50

Enterprise	Group	Combined Mean value	*Category	Frequency	Percentage
Sericulture	Practising (Group I)	45.70	Low	Nil	Nil
			High	50	100
	Non practising (Group II)		Low	50	100
			High	Nil	Nil
Beekeeping	Practising (Group III)	40.75	Low	8	16
			High	42	84
	Non practising (Group IV)		Low	35	70
			High	15	30

* Low - Below mean
High - Mean and above

4.3 Comparison of entrepreneurial behaviour of trained youth

Table 6 Comparison of entrepreneurial behaviour of the trained youth in sericulture and beekeeping

ANOVA

N = 200

Enterprise	Group	Mean score	'F' value	'CD' value
Sericulture (n = 50)	Practising	55.59	762.47**	1.403
	Non practising	35.81		
Beekeeping (n = 50)	Practising	43.23	48.22**	1.403
	Non practising	38.26		
Sericulture		45.70	95.50**	0.992
Beekeeping (n = 100)		40.75		

The analysis of variance was done to compare the mean score on entrepreneurial behaviour of practising and nonpractising respon-dents in each of the entreprises viz. sericulture and beekeeping, as well as between the trained youth in both the entreprises and the results are presented in Table 6.

A birds eye view of Table 6 revealed that there exist significant difference in the entrepreneurial behaviour between the practising and non practising respondents in both the entreprises viz. sericulture and beekeeping. In both the

entreprises practising youth were found to have significantly higher entrepreneurial score than the non practising youth as evidenced by high 'F' ratio. The trained youth in sericulture had significantly higher entrepreneurial behaviour (45.7) than the beekeeping group (40.75).

4.4 Distribution of trained youth based on the scores on dimensions of entrepreneurial behaviour

Based on the mean score on each dimension of entrepreneurial behaviour practising and nonpractising trained youth in sericulture were classified into high and low groups, the results of which have been presented in Table 7.

Analysing Table 7 it is evident that majority of the sericulture practising trained youth were in the high group on dimensions like credit orientation (54%), economic motivation (56%), Innovation proveness (64%), scientific orientation (80%), decision making (72%), Achievement motivation (60%) management orientation (86%), risk orientation (54%) and competetion orientation (62%).

Regarding the non practising trained youth, 84 per cent of the them had low level of credit orientation. In case of scientific orientation (86%), achievement motivation (70%), management orientation (76%) innovation proneness (68%), decision making (62%), risk orientation (76%) and competition orientation

(60%) also majority were in the low group. Economic motivation level of more than 50 per cent of this group was found low.

Table 7 Distribution of trained youth in sericulture based on dimensions of entrepreneurial behaviour

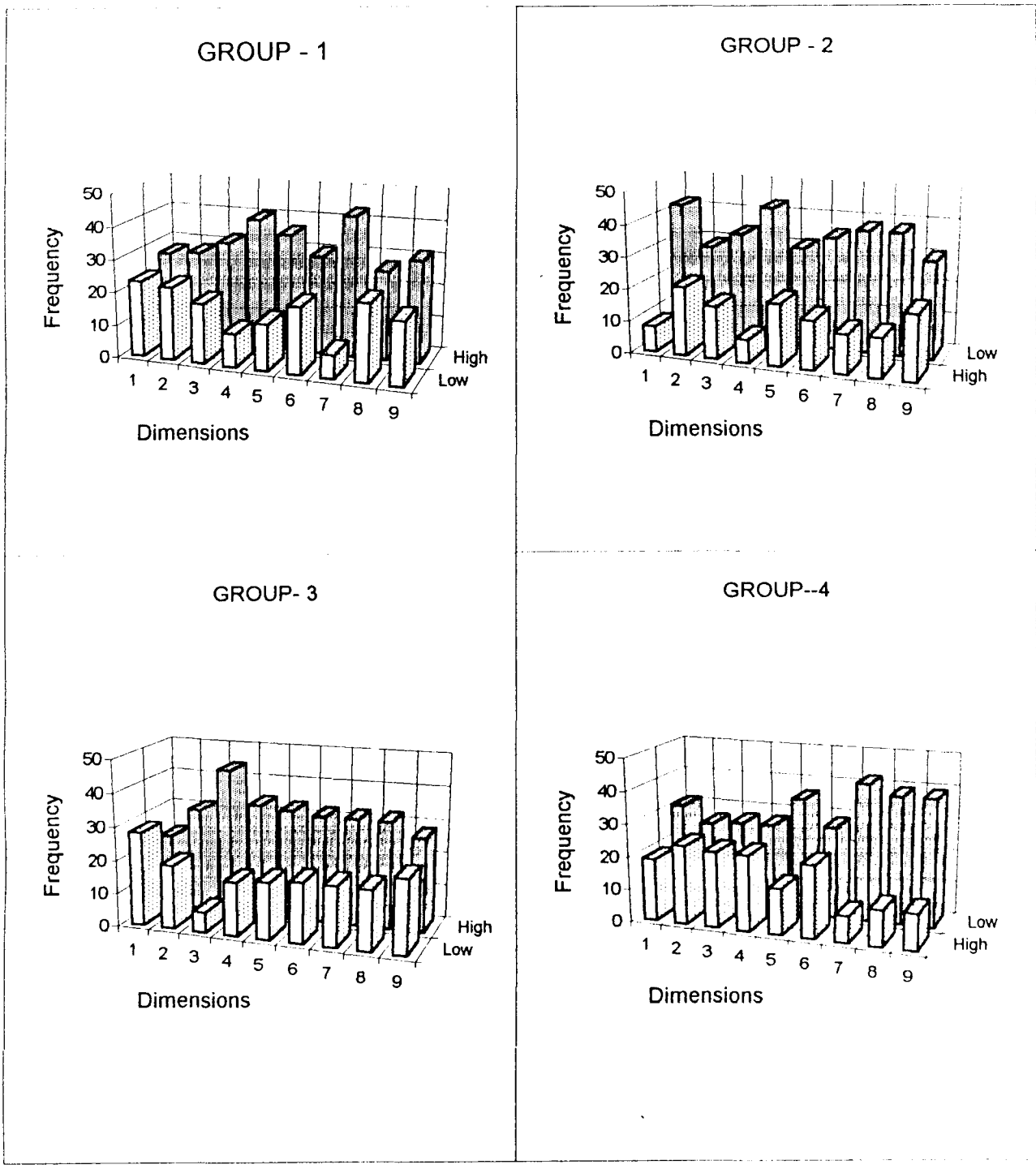
Sl. No.	Dimensions	Mean	*Category	Practising n = 50 Frequency	Practising n = 50 percentage	Non-practising n = 50 Frequency	Non-practising n = 50 percentage
1.	Credit orientation	11	Low	23	46	42	84
			High	27	54	8	16
2.	Economic motivation	10	Low	22	44	29	58
			High	28	56	21	42
3.	Innovation proneness	3	Low	18	36	34	68
			High	32	64	16	32
4.	Scientific orientation	25	Low	10	20	43	86
			High	40	80	7	14
5.	Decision making	24	Low	14	28	31	62
			High	36	72	19	38
6.	Achievement motivation	26	Low	20	40	35	70
			High	30	60	15	30
7.	Management orientation	28	Low	7	14	38	76
			High	43	86	12	24
8.	Risk orientation	22	Low	23	46	38	76
			High	27	54	12	24
9.	Competition orientation	11	Low	19	38	30	60
			High	31	62	20	40

* Low - Below mean
High - Mean and above

Table 8 Distribution of trained youth in beekeeping based on dimensions of entrepreneurial behaviour

Sl. No.	Dimensions	Mean	*Category	Practising n = 50 Frequency	Practising n = 50 percentage	Non-practising n = 50 Frequency	Non-practising n = 50 percentage
1.	Credit orientation	8	Low	28	56	31	62
			High	22	44	19	38
2.	Economic motivation	9	Low	19	38	26	52
			High	31	62	24	48
3.	Innovation proneness	2	Low	6	12	27	54
			High	44	88	23	46
4.	Scientific orientation	16	Low	16	32	27	54
			High	34	68	23	46
5.	Decision making	19	Low	17	34	36	72
			High	33	66	14	28
6.	Achievement motivation	17	Low	18	36	28	56
			High	32	64	22	44
7.	Management orientation	22	Low	18	36	42	84
			High	32	64	8	16
8.	Risk orientation	17	Low	18	36	39	78
			High	32	64	11	22
9.	Competition orientation	9	Low	22	44	39	78
			High	28	56	11	22

* Low - Below mean
High - Mean and above



1. Credit orientation
2. Economic motivation
3. Innovation proneness
4. Scientific orientation
5. Decision making
6. Achievement motivation
7. Management orientation
8. Risk orientation
9. Competition orientation

Fig 3. Distribution of youth based on dimensions of entrepreneurial behaviour

4.4.2 Distribution of trained youth in beekeeping

Dimension-wise distribution of trained youth in beekeeping, both practising and non-practising, is given in Table 8.

It could be seen from Table 8 that large majority of the practising youth had high level of economic motivation (62%), innovation proneness (88%), scientific orientation (68%), decision making (66%), achievement motivation (64%), management orientation (64%), risk orientation (64%) and competition orientation (56%). But 56 per cent of them had low level of credit orientation.

Whereas majority of the non practising respondents were found to be in low group with respect to credit orientation (62%), economic motivation (52%), innovation proneness (54%), scientific orientation (54%), decision making (72%) achievement motivation (56%), management orientation (84%), risk orientation (78%) and competition orientation (78%) as compared to the practising youth.

4.5 Extent of adoption of scientific practices in sericulture and beekeeping

Table 9 Distribution of trained practising youth based on their extent of adoption of scientific practices in sericulture and beekeeping

n = 100

Group	Mean score	*Category	Frequency	Percentage
Sericulture (practising)	87	Low	9	18
		High	41	82
Beekeeping (practising)	90	Low	12	24
		High	38	76

* Low - Below mean
High - Mean and above

Frequency distribution of practising trained youth in sericulture and beekeeping based on adoption of scientific practices in the concerned field is presented in Table 9.

A perusal of Table 9 revealed that 82 per cent of the sampled youth had shown high level of adoption of scientific practices in sericulture. With regard to beekeeping, 76 per cent of the youth had high level of adoption. The corresponding figures in the low category were 18 per cent and 24 per cent respectively.

4.6 Relationship between extent of adoption and dimensions of entrepreneurial behaviour

The relationship between extent of adoption and the nine dimensions of the entrepreneurial behaviour of the practising trained youth in sericulture was studied and results obtained are furnished in Table 10. Seven dimensions were observed significantly correlated with the extent of adoption of the scientific practices in sericulture. Of these, six dimensions viz. credit orientation, economic motivation, innovation proneness, achievement motivation, management orientation and risk orientation were significantly correlated with extent of adoption of scientific practices in sericulture at 1 per cent level while scientific orientation was observed significantly related to extent of adoption at 5 per cent level. It is interesting to note that decision making and competition orientation had no significant relationship with extent of adoption.

Table 10 Correlation between extent of adoption and dimensions of entrepreneurial behavior of trained youth in sericulture and beekeeping

Dimensions	Sericulture 'r' value	Beekeeping 'r' value
1. Credit orientation	0.6929**	0.6932**
2. Economic motivation	0.6511**	0.6965**
3. Innovation proneness	0.8119**	0.3282
4. Scientific orientation	0.2801*	0.4058**
5. Decision making	0.2727	0.3863**
6. Achievement motivation	0.6338**	0.4120**
7. Management orientation	0.6513**	0.2851*
8. Risk orientation	0.6526**	0.6448**
9. Competition orientation	0.3430	0.3214

** Significant at 1 per cent level
* Significant at 5 per cent level

The Table 10 also reveals that seven out of nine dimensions studied with regard to the beekeeping youth, were significantly related to the extent of adoption of scientific practices in beekeeping. Among the seven dimensions, six dimensions viz. credit orientation, economic motivation, scientific orientation, decision making, achievement motivation, and risk orientation had significant correlation with extent of adoption at one per cent level and management orientation had significant relationship at 5 per cent level.

Table 11 Distribution of trained youth in sericulture based on socio personal characteristics

n = 100

Sl. No.	Characteristics	Mean score	*Category	Frequency	percentage
1.	Farming experience (years)	8	Low	52	52
			High	48	48
2.	Annual income	Rs. 2605	Low	63	63
			High	37	37
3.	Training attended	2	Low	22	22
			High	78	78
4.	Extension contact	4	Low	79	79
			High	21	21
5.	Extension participation	8	Low	58	58
			High	42	42
6.	Mass media exposure	7	Low	27	27
			High	73	73
7.	Social participation	8	Low	51	51
			High	49	49
8.	Knowledge	13	Low	48	48
			High	52	52
9.	Information seeking behaviour	25	Low	42	42
			High	58	58

* Low - Below mean
High - Mean and above

Table 12 Distribution of trained youth in beekeeping based on the socio personal characteristics

n = 100

Sl.No.	Characteristics	Mean	*Category	Frequency	percentage
1.	Farming experience (years)	7	Low	40	40
			High	60	60
2.	Annual income	Rs. 2151	Low	66	66
			High	34	34
3.	Training attended	2	Low	30	30
			High	70	70
4.	Extension contact	4	Low	68	68
			High	32	32
5.	Extension participation	6	Low	54	54
			High	46	46
6.	Mass media exposure	5	Low	29	29
			High	71	71
7.	Social participation	3	Low	63	63
			High	37	37
8.	Knowledge	11	Low	42	42
			High	58	58
9.	Information seeking behaviour	19	Low	49	49
			High	51	51

* Low - Below mean
High - Mean and above

4.7 Socio personal characteristics of trained youth

4.7.1 Trained youth in sericulture

Socio personal characteristics of the trained youth in sericulture is presented in Table 11.

4.7.1.1 Farming experience

It is evident from Table 10 that fifty two per cent of the youth were having less than 8 years of farming experience and 48 per cent had more than 8 years of farming experience.

4.7.1.2 Annual income

As far as annual income is concerned, 63 per cent of the respondents were having annual income less than Rs.2605/- whereas 37 per cent were having annual income more than Rs.2605/-.

4.7.1.3 Training attended

It was observed from Table 11 more than 78 per cent of the sampled youth had attended two or more trainings on sericulture. But 28 per cent had attended only one training.

4.7.1.4 Extension contact

In the case of extension contact 79 per cent of the trained youth in sericulture was very poor with scores below four.

4.7.1.5 Extension participation

Majority of the respondents (58%) had low level of extension participation as against 42 per cent in the high category with mean score above eight.

4.7.1.6 Mass media exposure

Regarding mass media exposure two third of the trained youth (73%) had high level of mass media exposure while 23 per cent secured scores below seven on this characteristic, thus came under low category.

4.7.1.7 Social participation

It is interesting to note that more than half (51%) of the sampled youth had lesser social participation. Almost equal per cent of the respondents exhibited higher level of social participation.

4.7.1.8 Knowledge

Knowledge level of the respondents was observed as reasonably high as evidenced by 52 per cent of them falling under high category with comparatively higher mean score of 13 out of 48 per cent had secured knowledge score below the mean score.

4.7.1.9 Information seeking behaviour

In the case of information seeking behaviour also the respondent youth in sericulture secured higher mean score of 25 where the maximum score was fifty eight per cent of the trained youth revealed high level of information seeking behaviour by scoring better than the mean score while 42 per cent were below mean level.

4.7.2 Trained youth in beekeeping

Socio personal characteristics of the trained youth in beekeeping is presented in Table 12.

4.7.2.1 Farming experience

On perusal of Table 12 it was noted that 60 per cent of the youth had more than seven years of experience in farming activities, while 40 per cent had less than seven years of farming experience.

4.7.2.2 Annual income

More than 65 per cent of the sampled youth had a lesser annual income which is even less than Rs.2151/-. Only 35 per cent were having annual income more than this.

4.7.2.3 Training attended

About two third of the respondents (70%) had attended more than two trainings on beekeeping whereas 30 per cent had undergone only one training on beekeeping.

4.7.2.4 Extension contact

As far as extension contact is concerned, 68 per cent of the trained youth in beekeeping were observed to have lesser extension contact as evidenced by high frequency in the low category. Only 32 per cent had higher score on extension contact above the mean.

4.7.2.5 Extension participation

Majority of the sampled youth (54%) had score on extension participation below the mean score of six. On the other hand 46 per cent scored above '6' on this characteristic.

4.7.2.6 Mass media exposure

More than 70 per cent of the respondents had higher exposure to mass media as compared to 29 per cent scored below the mean (5).

4.7.2.7 Social participation

Considering the level of social participation, it was observed that sixty three per cent of the trained youth in beekeeping were in the lower category, while 37 per cent were in the higher category.

4.7.2.8 Knowledge

As in the case of sericulture more than 50 per cent of respondents in the field of beekeeping also were found to have high level of knowledge on beekeeping. The mean score on knowledge was 11 as against the maximum score of knowledge level of 42 per cent was noticed as below the mean level of knowledge of the group.

4.7.2.9 Information seeking behaviour

It is interesting to note that distribution of trained youth in beekeeping based on their information seeking behaviour was almost equal in higher and lower category.

Fifty one per cent of the youth had high level of information seeking behaviour.

4.8 Relationship of socio personal characteristics with entrepreneurial behaviour

Reviewing the Table 13 it is clear that in the case of sericulture practising farmers, farming experience, training, mass media exposure, knowledge and information seeking behaviour were significantly correlated with their entrepreneurial behaviour. Of these, farming experience, training and mass media exposure were significantly related at 5 per cent level and the others at 1 per cent level of significance. A very interesting finding of this study is that farming experience was negatively related to entrepreneurial behaviour of sericulture practising youth.

With regard to non practising youth in field of sericulture (Group II) non of the characteristics studied were found significantly related with their entrepreneurial behaviour.

Considering the 'r' value of the practising youth in beekeeping (Group III) only four characteristics viz. farming experience, extension contact, mass media exposure and knowledge were found significantly related with the entrepreneurial behaviour at 1 per cent level. But farming experience is negatively correlated as observed in the case of Group I.

With regard to the non practising youth in beekeeping, four out of nine characterisitcs studied were seen significantly and positively correlated with entrepreneurial behaviour. Mass media exposure and extension participation were related significantly at one per cent level whereas knowledge and information seeking behaviour at 5 per cent level of probability.

Table 13 Relationship of socio personal characteristics with entrepreneurial behaviour of trained youth in sericulture and beekeeping

n = 50

Characteristics	Correlation coefficient 'r' value			
	GP I	GP II	GP III	GP IV
1. Farming experience	-0.2819*	0.0966	-0.4535**	-0.0986
2. Annual income	0.2683	0.0490	-0.0997	-0.0613
3. Training attend	0.2827*	0.1063	-0.0156	0.1231
4. Extension contact	0.1743	-0.0828	0.3682**	0.2023
5. Extension participation	-0.1186	0.0871	0.1184	0.3779**
6. Mass media exposure	0.2886*	0.0538	0.4248**	0.4056**
7. Social participation	-0.0759	0.1146	0.1750	0.2334
8. Knowledge	0.4121**	0.0801	0.4680**	0.2956*
9. Information seeking behaviour	0.4772**	0.2637	0.1354	0.2947*

** Significant at 1% level
* Significant at 5% level

Table 14 Relationship of socio personal characteristics with extent of adoption

n = 50

Characteristics	'r' value	
	Sericulture	Beekeeping
1. Farming experience	0.2618	-0.4533**
2. Annual income	0.2232	-0.1301
3. Training	0.1551	0.0254
4. Extension contact	0.1347	-0.3907**
5. Extension participation	-0.1250	-0.4269**
6. Mass media exposure	0.2230	0.4269**
7. Social participation	0.0383	0.2037
8. Knowledge	0.4213**	0.4665**
9. Information seeking behaviour	0.4673**	0.1533

** Significant at 1% level
* Significant at 5% level

4.9 Relationship of socio personal characteristics with extent of adoption

Analysing the Table 14 it was clear that with regard to the practising trained youth in sericulture only two characteristics viz. knowledge and information seeking behaviour were related with their extent of adoption. In both the cases the relationship was positive significant at one per cent level of probability.

Whereas, in the case of practising trained youth in beekeeping five variables viz. farming experience, extension contact, extension participation, mass media exposure and knowledge were observed to be significantly related to extent of adoption at one per cent level. It is peculiar to note that farming experience, extension participation and extension contact are negatively related to extent of adoption. While mass media exposure and knowledge revealed positive relationship with extent of adoption of scientific practices in beekeeping.

DISCUSSION

"Do not become the archivists of facts. Try to penetrate to the secret of their occurence, persistently search for the laws which govern them".

— Pavlov's bequest to the academic youths of Russia, Feb. 27, 1936

CHAPTER V

DISCUSSION

The results obtained in this study are discussed and interpreted in this chapter under the following sections.

5.1 Problems and prospects of sericulture and beekeeping.

5.2 Distribution of trained youth based on entrepreneurial behaviour index.

5.3 Comparison of entrepreneurial behaviour of trained youth in sericulture and beekeeping.

5.4 Distribution of trained youth based on the scores on dimensions of entrepreneurial behaviour.

5.5 Extent of adoption of scientific practices in sericulture and beekeeping.

5.6 Relationship between extent of adoption and dimensions of entrepreneurial behaviour.

5.7 Socio personal characteristics of trained youth.

5.8 Relationship of socio personal characteristics with the entrepreneurial behaviour.

5.9 Relationship of social prsonal characteristics with the extent of adoption.

5.1 Problems and prospects of sericulture and beekeeping

Of the two entreprises taken for the study viz. sericulture and beekeeping, sericulture was the newly introduced

entreprise in Kerala. The problems and prospects as experienced by the respondent youth were catalogued under different categories. The results are explained below under different subheads.

5.1.1 Problems of sericulture

5.1.1.1 General problems

The general problems identified under sericulture were 'lack of assured price', 'small and marginal holdings', high cost of cultivation, redtapism at development offices, severe pest and disease incidence, lack of encouragement and lack of co-operation among the farmers in the order of perceived importance (Table 1).

Sericulture being a comparatively new enterprise in Kerala, marketing facilities were not properly established. The farmer entrepreneurs are not organised to have efficient co-operatives in this sector. Moreover the warm humid tropical condition prevailing in Kerala favours pest and disease incidence in silk worms consequently reducing the quality of cocoons produced. All these factors cause impedements in the marketing of cocoons on reasonable price.

The small and marginal holdings is the predominant nature of size of farm holdings in Kerala State. Naturally, this may create problem of space for cultivation of mulberry and thereby affecting sericulture enterprise.

High cost of cultivation may be attributed to the high wage rate in Kerala as compared to the neighbouring states. Sericulture is a labour intensive enterprise and naturally the cost of cultivation will be high.

Redtapism is due to lack of sufficient personnel to superwise and render service to this enterprise. As the Khadi and Village Industries Board is the sole agency to look after this it may be difficult to serve a large number of farmers.

Injustifiably complex procedures in availing credit and subsidy under sericulture development programmes, no doubt, will create problems to entrepreneurs in this field. This problem could be solved to certain extent if there were sufficient trained extension personnel to render service to the farmer entrepreneurs. That is also lacking in this field. SERIFED under Khadi and Village Industries Board is the agency responsible for sericulture development in Kerala. There is no sufficient trained extension personnel to serve the sericulture farmers.

The farmers were of the opinion that no agency was giving encouragement to sericulture farmers other than the credit and subsidy extended by Central Silk Board. There are so many awards and prizes constituted in other fields of agriculture to motivate the farmers to produce quality output. No such programmes are there in the field of sericulture to give a boost to sericulture farmers.

Serious pest and disease incidence was another important problem perceived by 5 per cent of the respondents. This may be due to the reason that the crop is new and the cultivators are not familiar to the pest and disease. Moreover the relative humidity in Kerala is higher and this favours pest and disease incidence to worms as well as mulberry crop.

The facilities extended by the implementing agency other than credit and subsidy were totally absent.

As the youth practising sericulture were located widely dispersed through out the district, farmers are not able to organise themselves to tackle their problems. That is why the problem lack of co-operation among farmers.

5.1.1.2 Communication problem

Reviewing the problems realised under communication the views expressed inadequate extension support as the foremost problem. This could be explained that SERIFED under the Khadi and Village Industries Board is the only agency involved in the development of sericulture and lack of sufficient personnel to look after the extension activities is a problem as observed by the researcher. There is only one district level extension officer and no field level functionaries at present.

Regarding the problem of inadequate training it is to be pointed out that the willing persons it is to be pointed out

that the willing persons are trained on sericulture for one month by Khadi and Village Industries Board initially. There is no machinery to impart follow up training or refresher training. In addition to the initial training, more practical training as well as entrepreneurship development training are required to build up confidence to undertake a new venture.

As the enterprise is relatively new to Kerala sufficient research report or popular articles on sericulture technologies were not available. That created problem among the practising farmers to get pertinent technical information and hence they expressed the problem of nonavailability of literature and inadequate research support.

5.1.1.3 Input oriented problem

Under this caption lack of good quality planting materials was listed as the first realised problems followed by inadequate and untimely supply. This problem emerges out for want of production centres for quality planting materials or may be due to lack of planning in procuring and distributing adequate planting materials in time.

This is followed by lack of subsidy for fertiliser and plant protection chemicals and wide price variation at different places in the same district. The Khadi and Village Industries Board is not giving any subsidy to the critical inputs such as

fertilizer, plant protection, chemical etc. which are costly. Hence the use of these critical inputs are very much restricted and this in turn result in reduced yield. That is why lack of subsidy on fertilizer was listed as an important input oriented problem.

5.1.1.4 Credit oriented problems

Analysing the credit oriented problems, it was seen that non availability, complicated procedure and delay in sanctioning were the major ones. This could be explained that even though Khadi and Village Industries Board is implementing the scheme through credit linked programme, they are not directly involving or helping the youth to avail the facility. It is the usual and routine procedure of the commercial banks to pass through all combursome procedure. So naturally all these problems will creep in.

5.1.1.5 Infrastructural problems

Under this head came lack of marketing facilities for cocoons, lack of processing units, lack of irrigation facilities for mulberry cultivation (Table I). In fact, no marketing facilities for cocoons and processing units are available in the district where sericulture is gaining momentum. As the labour wage rate is high for pot watering, the practicing youth felt the need for sprinkler/drip irrigation. But the financial requirement could not be met by the farmers alone without some

help from government, credit institutions on easy terms on other agencies.

5.1.2 Prospects of sericulture

With regard to the prospects in sericulture as expressed by the practising youth majority of them felt the employment avenues for the family as well as local labourers, and indirect employment generation are the major prospects due to sericulture. As this enterprise is labour intensive and it needs daily attention and continuous work, the family labour as well as locally available labour force can be effectively utilized, thus providing for the otherwise idling labour force. They also held the view that improvement of sericulture can effectively utilise the available local resources, like land and labour and thus fetch additional income to the farm families as well as agricultural labourers. Income generation in turn will reflect on the standard of living of people. Secondary industries based on sericulture like realing, weaving, etc. will be developed.

5.1.3 Problems of beekeeping

5.1.3.1 General problems

The foremost problem identified by the youth trained in beekeeping was the 'loss of colonies due to Thai Sac Brood disease'. This was followed by 'lack of insurance to bee colonies', 'minimum price for honey' and 'non acceptance of

apiculturists'. The problems realised were true in the sense that the sudden outbreak of the disease completely devastated the bee colonies during early 90's because control measures were not known. Even now the beekeepers were not freed from that shock. Later, strains resistant to this disease were introduced. But the farmers could not afford the cost of introduced strain and the cost of maintenance of these colonies was also high. And unlike other enterprises in agriculture honey bees are not covered under insurance scheme. So the loss could not be compensated by any way. Minimum price for honey is not yet fixed as apiculture is considered as a cottage industry and as a subsidiary occupation of most of the farmers. There is no possibility of fixing the minimum price. Moreover the apiculturists were not treated on par with the agriculturists by Government or other input agencies. The next important problems are the lack of encouragement from Government, lack of target oriented production and lack of consultancy service in that order.

This may be substantiated with the following reasons. As the apiculturists are not the organised group and it is not in priority sector, the government is not extending any facilities to beekeepers. The honey bee production is dependent on the availability of crops, flowering seasons of different crops. Hence a target production cannot be standardised. In our state

research development in this field is also very meagre. Hence technical knowhow and expertise in this field is very less.

5.1.3.2 Communication problems

Under communication problem inadequate extension support, lack of training for processing honey were the major realised problems. The Khadi and Village Industries Board has no sufficient extension personnel to cater to the needs of the farmer. Hence, attention could not be bestowed on training aspects. It is doubtful whether the importance and need for training in the field of apiculture is realised by the agencies involved in the development of this sector.

The other problems expressed in this category were inadequate research and scientific activities in this field. At present an All India Co-ordinated project on honey bee is in progress in KAU to evolve technologies on disease management in honey bees and to study adaptability of Italian bees to Kerala conditions. Only after the outbreak of the serious Thai Sac Brood disease reaserch work in this field was initiated.

5.1.3.3 Input oriented problems

The non availability of disease resistant bees, high cost of disease resistant bees, high cost of bee hives and accessories and lack of supply of exotic bees by government were

the problems expressed under this category. This is true because there was no indegenous strain resistant to diseases are available. Some strains available are exotic bees and it is very difficult to get the bees from outside and the cost is also more. That is the reason why almost 90 per cent of the practicing youth ranked this either as most important or important problem thereby assigning a mean score of 2.45 to this problem.

5.1.3.4 Credit oriented problems

Under credit oriented problems inadequate credit facilities and inadequate government assistance were ranked as first and second respectively. It is true that no financial institution is giving loan for this enterprise as risk and uncertainity are more. The government is also not considering this enterprise as a priority sector. Hence no subsidy or financial assistance were extended to this youth.

5.1.3.5 Infrastructural problems

The important problems identified under this subhead were lack of organised marketing net work and inadequate sale net work for bees. As stated elsewhere previously there was no organised marketing network in the district as the production and quality is not guaranteed. The net work for sale of honey etc. was also ranked as a great problem especially the availability of

colonies. The lack of arrangement for timely collection of honey, the production of honey were not uniform and regular. So there was no organised set up to collect the produce at regular interval.

5.1.4. Prospects of Beekeeping

Analysis of the prospects of beekeeping as perceived by the practising youth were effective utilisation of family labour, gaining additional income for the family and generation of indirect employment. Honey bee rearing is a cottage industry that requires the personal attention of family members. Moreover it is a subsidiary occupation to family which brings additional income to the family. Indirect employment especially for women from the main product as well as byproducts are possible. For example rearing of honey bees was found to have influence on the yield of coconut (Habibulla et al. 1991). This may be due to the increased pollination facilitated by the honey bees. Subsidiary occupations like production of ayurvedic medicine, starting of honey parlour etc. are few of the possibilities.

5.2 Distribution of trained youth based on entrepreneurial behaviour

Analysing the entrepreneurial behaviour index of trained youth in sericulture and beekeeping avenues, it was found that all the practising youth had high level of entrepreneurial

behaviour and non practising youth in sericulture had low level of entrepreneurial behaviour (Table 5 and 6). Their mean score is considerably high than the non practising group. In the case of bee keeping entrepreneurs also higher percentage (84%) fallen under the high category with mean score more than 43.23, where as only 15 per cent of the nonpractising group came under the high category based on their entrepreneurial behaviour. This finding is quite justifiable. Uusually those persons having better entrepreneurial behaviour will take up new ventures. It can be concluded that poor entrepreneurial behaviour might be the reason for not taking up the enterprise in the case of nonpractising youth in both the cases. This finding is in time with the result of Thangaraju (1979).

5.3 Comparison of entrepreneurial behaviour of the trained youth in sericulture and beekeeping

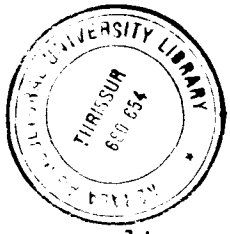
The results of analysis of variance done to compare the entrepreneurial behaviour of practising and nonpractising youth as well as between respondents trained in sericulture and beekeeping showed significant difference among all the groups. The mean score obtained by these categories evidently show that the practising youth in both sericulture and beekeeping had higher mean score indicating the higher entrepreneurial behaviour. More over among these two groups sericulture practising group was having the highest mean score (55.59) on

entrepreneurial behaviour. The results of intra-group differences on both the enterprises would be explained in the same corollary as in the case of previous explanation.

The highest entrepreneurial behaviour was revealed by sericulture practitioners. On the basis of above discussion the null hypothesis that there is no significant difference between practising and non practising youth in entrepreneurial behaviour stands rejected. The alternate hypothesis is that there is significant difference in entrepreneurial behaviour of practising and non practising youth in sericulture and beekeeping. This finding was in conformity with the study of SIET 1974 and Sarmah and Singh (1994).

5.4 Distribution of trained youth in sericulture and beekeeping based on dimensions of entrepreneurial behaviour

A critical analysis of the dimension-wise distribution of respondents (Table 7 and 8) showed that on all the nine dimensions of entrepreneurial behaviour viz. credit orientation, economic motivation, innovation proneness, scientific orientation, decision making, achievement motivation, management orientation risk orientation and competition orientation, frequency of practising youth was higher in the high category with one exception 56 per cent of beekeepers were in low category with respect to credit orientation. The frequency ranged from 54 per cent each in the case credit orientation and risk orientation to 86 per cent for



management orientation. This result once again reinforces the results discussed in the previous section. On almost all dimensions the mean scores are comparatively high due to this distribution.

Contrasting trend was observed in the case of non practising youth with more number in low category. This also confirms the assumption that to undertake an enterprise individualy one should have higher entrepreneurial ability. Besides, the possibility of inherent ability get strengthened through practice or experience could not be neglected. As such the null hypothesis stating no significant difference between practising and non practising youth in both the groups is rejected. The findings of the study is in conformity with that of Porchezian (1991).

5.5 Extent of adoption of scientific practices in sericulture and beekeeping

The distribution of trained practising youth in relation to their extent of adoption of scientific practices of sericulture and bee keeping (Table 9) showed that more than three fourth (82%) of the sampled youth had higher level of adoption in sericulture and beekeeping (76%). This may be due to the reason that the implementing agencies supply improved critical inputs for these enterprises as far as possible. It is understood that the trained youth were imparted training. That is, knowledge

input was provided. It is natural that the knowledge will increase the adoption level if the critical inputs are also made available to them in time. This finding is in concurrence with that of Thangaraju (1979).

5.6 Relationship between extent of adoption and dimensions of entrepreneurial behaviour

The correlation analysis was done to know the nature of influence of entrepreneurial behaviour on the extent of adoption of practices by both the categories. The results presented in Table 10 showed all the entrepreneurial dimensions except decision making and competition orientation were positively and significantly related with the extent of adoption of sericulture practices. The result is in line with the findings of Guruswamy (1987).

In the case of beekeepers all the dimensions except innovation proneness and competition orientation were positively and significantly related with the extent of adoption of beekeeping practices.

The results are discussed below.

Any new enterprise requires investment for its initial establishment. Here the implementing agency arrange credit facility through commercial banks as a credit linked programme. Due to this, the trained youth had proper credit behaviour and

favourable orientation to utilise the credit for productive and intended purposes. The extent of adoption of practices was high and hence this result. And the same reason may be quoted for beekeeping also. This result is in line with the result of Porchezian (1991).

Economic motivation had positive and significant relationship with extent of adoption in both the fields of this study. Generally, people undertake new ventures in order to derive additional income. Especially in a state like Kerala where the annual per capita income is below Rs.6009/- (93-94) and unemployment is a very serious problem, people strive to improve their income by whatever means available. It is this economic motivation that persuade people to adopt improved practices that are proven worthy. Sericulture and beekeeping practitioners are no exception to this general rule. That is why such a result. This result is in conformity with that of Gangadharan (1993).

The dimension innovation proneness is positively and significantly related with the extent of adoption of sericultural practices alone. This is due to the fact that technologies in sericulture are rather new to people of Kerala. The practising youth in sericulture have no choice other than the recommended practices. That means, resistance to change from the existing behaviour doesn't operate here. Hence, their extent of adoption was also high.

But in the case of beekeeping no significant relationship was noticed between innovation proneness and extent of adoption. This may be due to absence or rather less number of innovative technology in the field of beekeeping. Another factor may be the inaccessibility to the available few innovations or their incompatibility. For example, Italian bees though resistant to Thai Sac Brood disease require heavy feed rate.

Scientific orientation is positively and significantly correlated with extent of adoption of both beekeeping and sericulture practices. This result may be the outcome of training received by the respondents. Only trained youth were included as respondents in this study. Data presented in Tables 7 and 8 indicate high scientific orientation score for majority of respondents and hence this result. This study is in line with Somasundaram (1976).

Decision making plays a crucial role in adoption. In the case of sericulture, decision making dimension was not found related with adoption. It may be explained that all the optimum facilities required to manage the enterprise successfully could not be made available to the farmers. The youth who had raised the mulberry plant, but rearing of worms not yet commenced, got confused by observing the bitter experience faced by those who actually commenced rearing of worms, in disposing the cocoons immediately after pupation. Absence of a procurement agency or

sufficient marketing centres make the enterprise non remunerative. The farmers were forced to dispose the products either to some middle men or to the marketing centres at Mysore or Banglore. In both the cases, the enterprise will not be profitable or the practising youth get only marginal profit. To tackle this situation, primary co-operatives should take the responsibility of procurement and floor price fixed for the cocoons.

Achievement motivation in this study was found to be positively and significantly related with the extent of adoption of scientific practises in sericulture as well as beekeeping (Table 10). The very definition of achievement motivation the desire for excellence in order to attain a sense of personal accomplishment justifies this finding. Without adopting recommended and scientific practices, success cannot be achieved. A person with high achievement motivation will strive to accomplish excellence in whatever work he undertakes. This finding is in line with that of Anantharaman (1991).

Management orientation is significant and positively correlated with extent of adoption. Proper management in any level of business is a must. The management orientation would help to improve the enterprise in a positive direction. To run an enterprise profitably with optimum utilization of available resources, managerial ability is a crucial factor to any farmer.

The success of the enterprise depends on how well he plans the course of action, his scientific management of production and finally how he is able to market the produces. If the enterpreneur is oriented towards scientific management comprising planning, production and marketing functions, his managerial capacity will be more leading to adoption of scientific methods to improve to make better production and marketing plan for his enterprise. Through adequate training, contact with fellow farmers and through the practical experience gained, the entrepreneur may perform well in the entreprise he undertake and hence this result. This study is conformity with Anantharaman (1991).

Risk orientation is positively and significantly influencing the extent of adoption. So in any enterprise risk is very high. As far as beekeeping as well as sericulture are concerned the risk is enormous as it involves lot of failure possibilities as it concerned with living beings. By imparting proper training orientation the risk bearing ability of the individuals can be increased. Since they had high risk orientation they never bother to adopt new practices. Hence the result. This result agreed with that of Thangaraju (1979).

The spirit of competition will help a farmer to achieve more than his fellow mates. But in sericulture as the enterprise is a newly introduced one, it is still in the developing stage

and not well established. Almost all the practising farmers are on the same stage of development. So naturally the question of competition does not arise at this stage. As they are now sharing their experiences themselves to establish the enterprise. More over the practising farmers are less in number in a particular locality. This may be the reason for insignificant relationship between competition orientation and adoption.

Beekeeping, being a subsidiary enterprise in Kerala, the great disaster faced by beekeepers recently due to the loss of colonies consequent on TSB disease outbreak, necessitated mutual co-operation of beekeepers to achieve resurrection of the enterprise. So the competition orientation does not operate to influence adoption in beekping.

In the light of discussion the null hypothesis stating that there is no relationship between enterpreneurial behaviour and extent of adoption is rejected but for competition orientation and decision making.

5.7 Socio personal characteristics of trained youth

The results of percentage analysis done to describe the socio-personal characteristics of youth engaged in sericulture as well as beekeeping presented in Table 11 and 12 are discussed below.

For this study, youth in the age group of 15-30 trained either in sericulture and beekeeping were included. Sericulture being a new enterprise there is no possibility of farmers having very long experience. These may the reason for more number of farmers in low category with regard to experience.

In the case of beekeeping, eventhough it was being practiced from very long time back, majority had less than 7 years experience. This is due to the restriction imposed on sampling ie limiting the sample to trained youth below 30 years. Training programmes in an organised manner started only a few years back.

Analysing the annual income of youth, majority of the youth had annual income less than Rs.2605 and Rs. 2151/- in sericulture and beekeeping respectively. This may be due to the fact that the Khadi and Village Industries Board used to select farmers for imparting training for self employment, with their economic level below the poverty line. Hence this result.

Majority of the youth in sericulture and beekeeping had undergone trainings of more than two numbers. Reason attributed may be that the duration of the training and the stipend given might have acted as incentive and motivated them to participate in training. Moreover, there are no specific criteria for selection of the trainees other than income and age.

So the same candidates from a locality would be selected for repeated trainings.

Almost all the youth had low level of extension agency contact in both the groups. This could be substantiated that the Khadi and Village Industries Board, and the Central Silk Board were the sole agencies to do extension work. Due to limited human resource, the extension rendered at field level is very low. Hence this result.

More than half of the sampled youth had lesser extension participation in beekeeping. Reasons attributed in the fore running passage coupled with the poor campaigning lead to this result.

More than half of the sample in both the groups had high level of mass media exposure. This could be explained as, due to the poor field level extension work people engaged with new enterprises had an inquisitiveness to get more information from other sources, that is mass media. Hence the result.

The social participation of youth was observed to be low in both the groups. This may be due to their poor involvement in social organisations with limitations of low annual income and lesser farming experience.

As far as knowledge level is concerned 52 per cent and 58 per cent of the youth in sericulture and beekeeping respectively, had higher level of knowledge. This may be gained from the initial training attended. The high mass media exposure might have helped them to update their knowledge.

More than half of the sampled youth had high level of information seeking behaviour. This is because of the reason that in the low level of extension contact extension participation and social participation they may be inclinded to seek more information on the technology from different available sources. Hence high level of result.

5.8 Relationship of socio personal characteristics with entrepreneurial behaviour

The correlation analysis was done to analyse the relationship between socio-personal characteristics of youth and their entrepreneurial behaviour, in both sericulture and beekeeping (Table 13). In the case of sericulture practising youth, all the variables except annual income, extension contact, extension participation and social participation were positively and significantly correlated with entrepreneurial behaviour. Whereas in the non practising group, none of the characteristics except information seeking behaviour were not significantly related to the entrepreneurial behaviour. Farming experience is negatively correlated. These findings are discussed.

The farming experience is negatively and significantly correlated with the entrepreneurial behaviour. This may be due to the fact that youth with lesser farming experience would have psychological feeling that they must be cautious and shrewed in managing the enterprise. That was why they might have taken sincere and serious effort in developing their entrepreneurial behaviour. Hence higher the entrepreneurial behaviour. This finding agrees with Porchezian (1991).

By attending training the youth might have acquired more technical knowledge and awareness about how to start an enterprise. This might be the reason for this positive relationship in case of sericulture practitioners obtained and more will be the behaviour modification. The finding is in line with that of Sing (1974).

The information obtained through mass media like radio, Television and newspaper and other such sources might have helped the youth to develop their entrepreneurial behaviour. If a person is well informed about the technical aspects, resource availability, facilities offered by government to start the enterprise etc. he may be able to take decision, may develop favourable credit orientation scientific orientation etc. This may be the reason for such a result.

More the knowledge obtained through training, mass media and other sources might have modified the entrepreneurial

More knowledge obtained through training, mass media and other sources might have modified the entrepreneurial behaviour of the youth towards the positive direction. The result agrees with that of Venkiduswamy (1977).

Regarding information seeking behaviour the relationship was significant in both practicing and nonpracticing group. It is natural that any individual engaging in new enterprise is more concerned with latest information for the successful management of the enterprise and higher the information seeking behaviour higher will be the entrepreneurial behaviour.

The non practising farmers for convincing themselves might have sought information from practising farmers regarding their success/failure stories. This may be the reason for the positive correlation.

With reference to the relationship of entrepreneurial behaviour and socio personal charactistics of youth in beekeeping, characteristics like farming experience, extension contact, mass media exposure and knowledge were found to have positive and significant relationship, while farming experience was found negatively correlated. The reasons attributed under sericulture may hold good here also.

It was found in this study that extension contact has significant positive relationship with entrepreneurial behaviour

of beekeeping practitioners. When a person is in more touch with the extension personnel he would be able to get correct information, would be able to improve his technical know how etc. This indirectly will reflect in the entrepreneurial behaviour. The significant positive correlation of knowledge with entrepreneurial behaviour confirm this conclusion. This study is in line with Anbalagan (1974).

The reasons for the significant relationship of mass media exposure and the knowledge with entrepreneurial behaviour in practising in and nonpractising respondents may be substantiated by the same corollary stated in the case of sericulture practising youth. The relationship of extension participation for non practising group under beekeeping may be due to the fact that the non-practising farmers might have participated in more extension activities such as meetings, seminars, campaigns etc. so as to gain information to start with the enterprise and hence higher entrepreneurial behaviour positive relation. The result agrees with that of Porchezian (1993).

In the light of discussion, the null hypothesis stating there exist no relationship between the practicing and nonpracticing group in sericulture and beekeeping in there entrepreneurial behaviour are rejected, but for annual income, extension contact, training, social participation.

5.9 Relationship of socio-personal characteristics with extent of adoption

Correlation analysis was done to assess the relationship between socio personal characteristics of the respondents and their extent of adoption of scientific practices in sericulture and beekeeping. The results are presneted in (Table 14). Examining the table it could be observed that variables viz. knowledge and information seeking behaviour were significantly and positively correlated with extent of adoption of sericulture practices while mass media exposure and knowledge were the significantly related variables in the adoption of beekeeping practices. Moreover, significant negative correlation was observed in the case of farming experience, extension contact and extension participation.

Knowledge is a pre-requisite to adoption. Even though other factors are congenial without proper knowledge one cannot adopt a technology. This finding supports the findings of Gangadharan (1993).

Individuals may seek more information to keep themselves updated whenever they go for new enterprises. Such behaviour would help them while they act. That is why the result. More the information seeking behaviour more will be the extent of adoption.

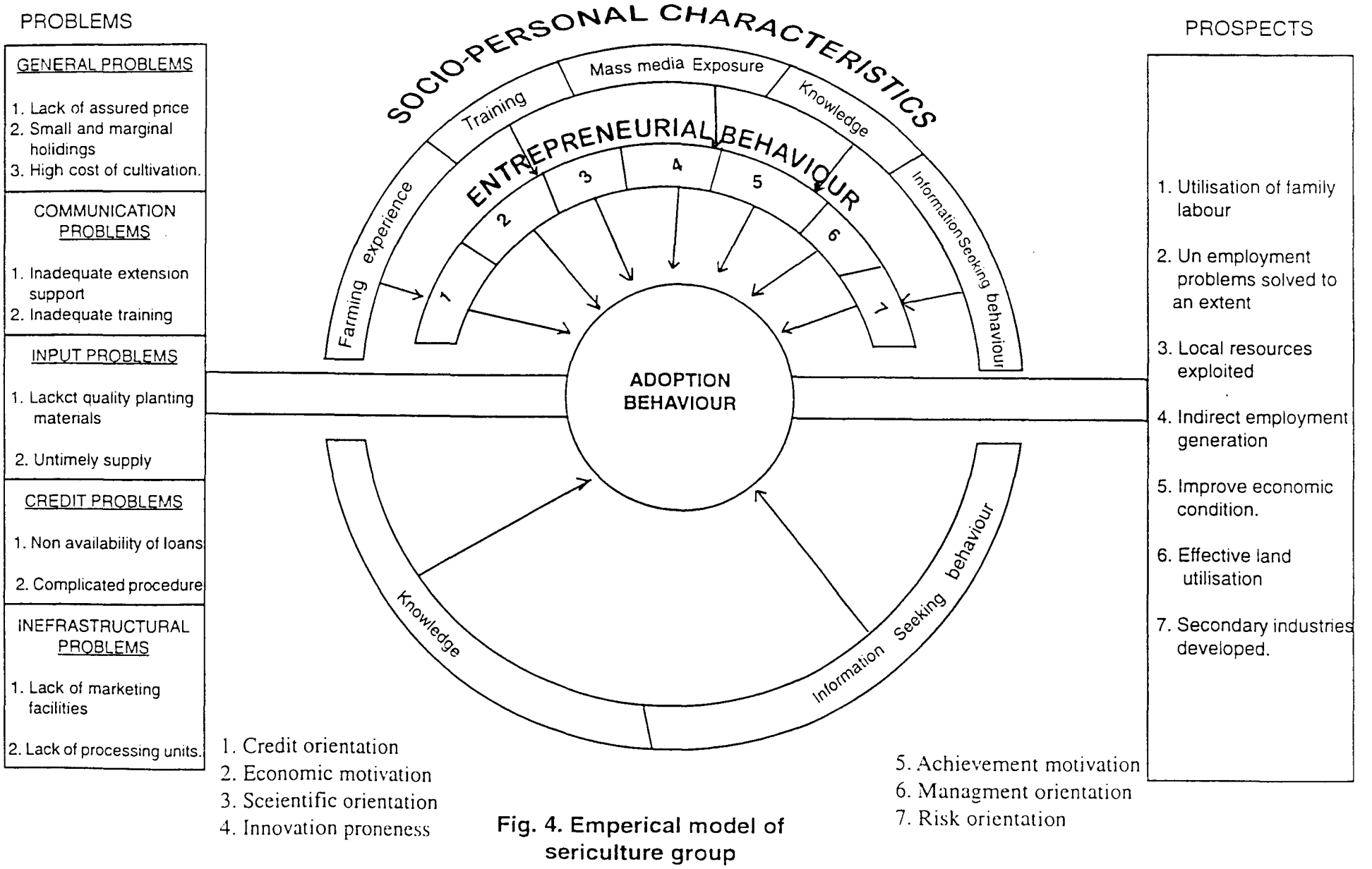


Fig. 4. Emperical model of sericulture group

PROBLEMS

GENERAL PROBLEMS

1. Lack of colonies due to TSB disease
2. Lack of recognition as organised group
3. Floor price for honey not fixed
4. Lack of insurence to bee colonies

COMMUNICATION PROBLEMS

1. Inadequate extension support
2. Inadequate research programme

INPUT PROBLEMS

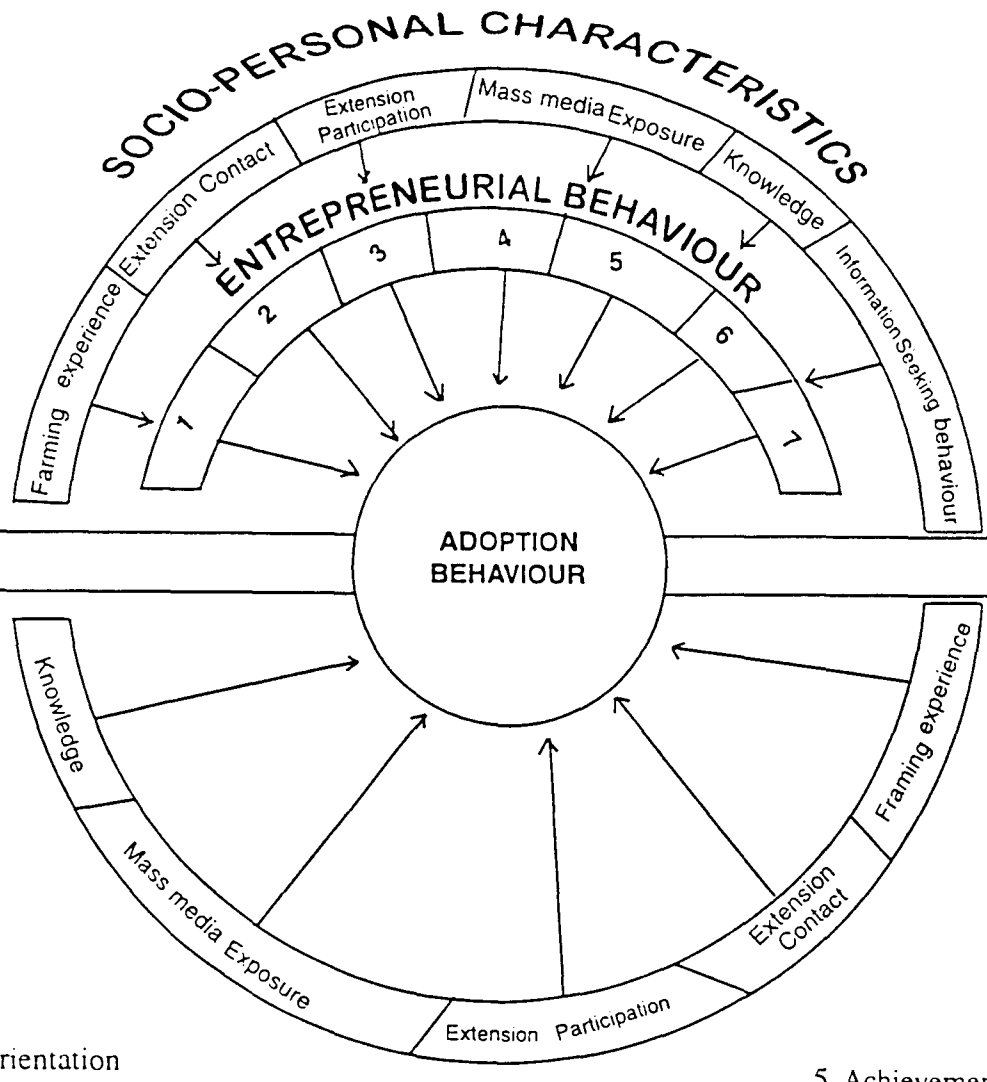
1. Non availability of disease resistant bees
2. High cost of bees

CREDIT PROBLEMS

1. Inadequate loans

INEFRASTRUCTURAL PROBLEMS

1. Lack of marketing Network



1. Credit orientation
2. Economic motivation
3. Sceientific orientation
4. Decision making

5. Achievement motivation
6. Managment orientation
7. Risk orientation

PROSPECTS

1. Utilisation of family labour
2. Conserve vegetation
3. Increase poltination on coconut plants
4. Secondary industries developed
5. influence in direct employment

Fig. 5. Emperical model of beekeeping group

Devastation of beecolonies during recent years may be the reason for inverse relationship of farming experience with extent of adoption. Eventhough extension contact and extension participation are more there is every possibility for the farmers being dejected due to the total failure they faced. The scarcity of Italian bees which is resistant to the Thai Sac Brood disease and its exhorbitant cost may be other reasons for the inverse relationship. The result is confronting with the result of Gangadharan (1993).

In the light of the discussion the null hypothesis stating that there exist no relationship between the socio personal characteristics with extent of adoption in sericulture and beekeeping practising youth, the null hypothesis is rejected but for knowledge and information seeking behaviour in sericulture and mass media exposure and knowledge in the case of practising youth in beekeeping.

SUMMARY

"The mind is its own place, and in itself
can make a Heav'n of Hell, a Hell of Heav'n"

— **Milton,** ***Paradise Lost***

SUMMARY

Wide spread unemployment coupled with underemployment is the major problem exist in the country. Though many development programmes were implemented to irradicate poverty and to provide employment, 243 million labour force is still living in the country with inadequate work.

Government have introduced many self employment programmes and imparted training to the unemployed youth. But due to problems of different kind these avenues were not fully accepted and the prospects were not exploited effectively.

This study was undertaken to investigate the problems and prospects of self employment of the trained rural youth in the field of sericulture and beekeeping.

The specific objectives of the study were

1. To identify the problems faced by the trained self employed rural youth in the field of sericulture and beekeeping and the prospects for taking up self employment in these selected fields.

2. To study the extent of adoption of the scientific practices by practicing farmers in the field of sericulture and beekeeping.

3. To study the entrepreneurial characteristics of the trained youth related to their entrepreneurial abilities.

Idukki district was selected for the study as the district have maximum area and production under sericulture and maximum number of beekeepers with highest honey production. Five blocks were randomly selected.

From the training records maintained by the Khadi and Village Industries Board, list of 50 trained practising and non practising youth each were randomly selected from each field of training viz. sericulture and beekeeping. These four groups constituted a sample of 200 for the study.

The dependent variables were the entrepreneurial behaviour of the youth selected and extent of adoption of scientific practices in sericulture and beekeeping. The nine dimensions identified for the study of entrepreneurial behaviour were credit orientation, economic motivation, innovation proneness, scientific orientation, decision making, achievement motivation, management orientation, risk orientation and competition orientation.

The extent of adoption of the practising youth in the two selected avenues was also studied.

The independent variables identified for the study were sex, farming experience, annual income, training attended, extension contact, extension participation, mass media exposure, social participation, knowledge and information seeking

behaviour. Suitable measuring procedures were adopted on developed to measure the variables under study. Delphi technique was followed to identify the problems and prospects.

The data collected through a pretested interview schedule. Percentage analysis, simple correlation and analysis of variance were the statistical methods used for the analysis of data.

The results of the study were summarised and presented below.

1. The following major problems were realised by the trained youth in sericulture.

1. General problem - Lack of assured price, small and marginal holdings.
2. Communication problem - inadequate extension support and training.
3. Input problem - Lack of quality planting materials and untimely supply.
4. Credit oriented problem - Non availability and complicated procedure
5. Infrastructural problem - Lack of marketing facilities

2. The major prospects experienced were

1. Effective utilisation of family labour
2. Unemployment and under employment problem solved to some extent.
3. Additional income to the family

3. With regard to beekeeping the following problems were identified.

1. General problem - Loss of colonies due to Thai Sac brood Virus disease, lack of insurence to bee colonies and nonfixation of floor price for honey.

2. Communication problem - Inadequate and lack of training on beekeeping and processing of honey.

3. Input oriental problems - Non availability of disease resistant bees and high cost of bees.

4. Credit oriented problem - Inadequate loan facilities

5. Infrastructural problem - Lack of organised marketing network for the produces and inadequate sales network for bees.

4. The major prospects identified were 'effective utilisation of family labour', 'gain in additional income to the family' and 'conservation of vegetation of farm families'.

5. All the practising youth had high level of entrepreneurial behaviour and nonpractising youth had low level of entrepreneurial behaviour.

6. With regard to both inter and intra group in sericulture and beekeeping. Significant difference was seen in the entrepreneurial behaviour of practising and non practising youth in sericulture and beekeeping.

7. Regarding the dimensions of entrepreneurial behaviour the sericulture practising youth had higher credit orientation, economic motivation, innovation proneness, decision making, achievement motivation, risk orientation, management orientation competition orientation, and scientific orientation.

8. Majortiy of the non practising youth in sericulture were in the low category with respect to entrepreneurial behaviour.

9. The trained practising youth in beekeeping had low level of credit orientation. But innovation proneness, scientific orientation, management orientation and competition orientation, decision making, economic motivation, risk orientation and competition were high and for nonpractising group the result is just reverse.

10. Morethan three forth of the sampled youth (82%) had higher levelof adoption in sericulture and 76 per cent in beekeeping, and all the entrepreneurial dimensions except decision making and competition orientation were positively and significantly correlated with extent of adoption in sericulture, whereas in beekeeping innovation proneness and competition orientation had no significant relationship with adoption.

11. Of the personal characteristics studied, it was found that majority of respondents have less farming experience, less annual income, undergone less number of training, low level of extension contact, extension participation and high level of knowledge, information seeking behaviour and mass media exposure.

12. The entrepreneurial behaviour of the trained practising youth was directly and positively influenced by extension contact, extension participation, mass media exposure, knowledge and training attended.

13. Seven dimensions of the entrepreneurial behaviour viz. credit orientation, economic motivation, scientific orientation, decision making, achievement motivation and competition orientation had a positive influence on the extent of adoption.

14. Among the socio personal characteristics knowledge and information seeking behaviour were having significant relationship with adoption in sericulture practising youth,

whereas farming experience, extension contact, extension participation, mass media exposure and knowledge were have a significant relation with adoption in beekeeping. But except knowledge and mass media exposure the other three three had a negative relationship.

Implications of the findings of the study

The problems identified would help the policy makers, planners, extension administers to formulate or modify the development strategy to a more suitable line so that the enterprise will develop further with more profit to the entrepreneurs leading to a sustainable condition.

The scientists can develop appropriate technology specifically tailored to the sericulture and beekeeping entrepreneurs to promote their involvement.

The training authorities can impart more motivational trainings along with technology to the entrepreneurs. They can arrange more practical along with theoritical background.

More and more success stories high lighting the prospects of other self employment avenues in the field of agriculture and allied sectors can be telecasted for the benefit of the entrepreneurs or job seekers as the media plays a crucial role in influencing the youth.

Suggestions for future research

1. A detailed study incorporating more dimensions of entrepreneurial behaviour and personal characteristics can be done on other self-employment avenues which will pave way for identification of more suitable avenues and help to identify its problems and prospects.

2. Work can also be done specifically for rural women who have been trained on different other self-employment avenues.

REFERENCES

REFERENCES

Adhiguru, P. 1991. Integrated programme for rice development in Pondicherry Union Teritory - An analysis. Unpub. MSc. (Ag) Thesis, TNAU, Coimbatore

Agarwal, V.K. 1975. *Initiative, Enterprise and Economic choices in India*. Munshiram Manoharlal. New Delhi

Ajore, R. 1986. Constraints in adoption of improved varieties of wheat by the hill farmers of U.P. *Indian J. Extn. Edn.*, 22(1&2): 75-78

*Al-mogel, A.I. 1985. Factors associated with adoption of recommended farm practices among wheat growing farmers in Al-Hasa, Saudi Arabia. *Dissertation Abstracts* International. *A. Humanities and social sciences*, **46**(11): 32-63

Ambastha, C.K. 1974. Communication patterns of farm innovation developing extension and clinet systems in Bihar - A system approach. Unpub. Ph.D. Thesis, IARI, New Delhi

Anantharaman, M., Ramanathan, S., Gadewar, A.G. and Lakshmi, K.R. 1985. Impact of lab to land programme on technology transfer and economic conditions of farm families. *Annual Report* 1985. Central Tuber Crops Research Institute, Trivandrum. pp. 125-126

Anantharaman, M. 1991. Managerial Efficiency of Cassava Farmers. Unpub. Ph.D. Thesis, College of Agriculture, Vellayani, Thiruvananthapuram

Anbalagan, S. 1974. A study of factors influencing adoption of ackage of practices for High Yielding Varieties of paddy. Unpub. MSc. (Ag.) Thesis, TNAU, Coimbatore

Annamalai, M. 1979. A study on utilisation of Farm Information Sources in Adoption process. Unpub. MSc. (Ag.) Thesis, T.N.A.U., Coimbatore

Annual Report of Khadi and Village Industries. 1992. Khadi and Village Industries Commission, Regional Office, Thiruvananthapuram. pp 5-7

Arputharaj, C. and P.K. Devi. 1979. Economics of poultry farming in Tamil Nadu, Research Study No.65. Agricultural Economics Research Centre, University of Madras, Madras

Ashaletha, S. 1993. Role of Agricultural Assistants in Agricultural Development in Thiruvananthapuram District. Unpub. M.Sc. (Ag) Thesis, KAU, College of Agriculture, Vellayani

Ayyadurai. D. 1980. Spatial distribution of poultry farm and facilities offered by Tamil Nadu Poultry Development Corporation. Unpub. MSc. (Ag) Thesis, Tamil Nadu Agricultural University, Coimbature

Axinn, G.H. 1987. The different systems of Agricultural Extension Education with special Attention to Asia and Africa. In W.M. Rivera and Schram, S.S. (Eds.) Agricultural Extension - world wide issues, practices and emerjing priorities. Croom Helm, London. pp. 103-114

Babu, A.R. 1971. An analysis of information gap between Extension personal and farmers with regard to Modern Rice Technology. Unpub. M.Sc. (Ag.) Thesis, I.A.R.I., New Delhi

Badachickar, S.V. 1985. A critical analysis of extension guidance received and management orientation, economic performance, adoption pattern of farmers from different levels of drought prone areas of Bijapur district, Karnataka State. Unpub. Ph.D. Thesis, U.A.S., Bangalore

Badagoankar, Suhas,S. 1983. Measurement of farmers knowledge and factors affecting the adoption behaviour of groundnut cultivators of Uttara Kannada district of Karnataka State. Unpub. (MSc. Ag) Thesis, UAS, Banglore

Bates, J. 1954. A model for the science of decision. *Philosophy Sci.*, 21: 326-331

*Beal George, M. and Sibley, D.N. 1967. Adoption of Agricultural Technology by the Indians of Guatemala. *Rural Sociology Report* **62**: Department of Sociol and Anthropol. IOWA State University Ames, IOWA

Bhagat, R. 1980. Family life of working rural women. A few cases. *Indian J. Ext. Educ.* **16**(3and4): 67

Bhaskaran, S. 1978. To study the impact of institutional credit and its influence in the behaviour of farmers in adopting HYV of paddy cultivation. Un Pub. MSc. (Ag) Thesis, KAU, Vellayani

Bhaskaran, C. 1979. A critical analysis of the interpersonal communication behaviour of small and other farmers in a less progressive, progressive and more progressive village in Kanyakumari district of Tamil Nadu. Unpub. MSc. (Ag) Thesis, UAS, Banglore

Bora, S.P. 1989. Farmers management attributes. In : Ray, G.L. (Ed.). *Studies in Agricultural Extension and Management*. Mittar publications, New Delhi, pp. 131-156

Census of India. 1981. Series 10, Kerala (Part II B). Government of India, New Delhi

Chandrakandan, K. 1973. A study on Farm Practices Attributes and socio-personal factors of farms in relation to adoption of agricultural practices in Thanjavur district, Tamil Nadu. Unpub. MSc. (Ag.) Thesis, Tamil Nadu Agricultural University, Coimbatore

Chandran, S.A. 1989. Impact of development programmes of promoting pepper production in Kerala. Unpub. MSc. (Ag) Thesis. Kerala Agricultural University, College of Agriculture, Vellayani

Chari, A.P. and Nandapurkar, G.G. 1987. A scale to measure Managerial ability of farmers. *Maha. Jour. of Extn. adn.* **6**: 163-168

Christopher, K.J. 1969. Socio-psychological factors influencing the adoption of innovation of starting a small scale industry Unit. *SIET* Hyderabad

Cole, H. 1979. *Business enterprise in its social settings*. Harvard University Press, Cambridge

Compton, J.L. 1984. Extension Programme Development in *Agricultural Extension - A reference manual*, FAO. Rome: 112

Dar, M.A. 1992. "Studies on the problems and prospects of sericulture in Jammu and Kashmir State after monopolisation". National Conference on Sericulture Research. Abstt. of papers. pp. 152-153

Danda, A.K. 1972. Communication behaviour of progressive farms of India. Society and culture **3**(1): 67-69

Dantwala, M.L. 1975. "A profile of poverty and unemployment in 12 villages". Ind. J. of Agrl. Econ. **30**(2): 5-7

Desai, V. 1995. *Small scale Industries and entrepreneurship*. Himalaya publishing House, Bombay

Devadas, K.P., S. Muthu and K. Thanyamani. 1972. "Role of selected farm women in Agricultural Development". *Indian journal of Home Science* **6**(1): 50-51

Dharmaraja, D., Samuel. 1982. An analysis of the impact of village adoption programme. Unpub. MSc. (Ag) Thesis, Acaud R.I., Madurai, Tamil Nadu

Dixit, B.K. 1988. Small scale industries - Hills and remadies. *Yojana*. **32**(4): 1-15

Doddahanumaiah. 1990. Enterprise aspiration, motivation pattern and value orientation of rural literate and illeterate youth in Banglore. Unpub. MSc. (Ag.) Thesis, U.A.S., Bangalore

*Durand, D. 1975. Effects of achievement motivation and Skills training in the entrepreneurial behaviour of black businessmen. Organisational behaviour and Human performance. **14**: 76-90

Dwarakinath, R., Channegouda, M.R. and Jayaramaiah, K.M. 1975. Communication sources of HYV Growers. *Mysore J. Agric. Sci.* **9**: 702-710

Economic Review Report. 1995. State Planning Board, Kerala. pp 10-15

Final Population Totals. 1991. Series-12. Kerala. Census of India. Director of census operations, Kerala

Gagni, A.O. 1978. Farmer's Training and Rural Development. Rural Development Abstract. Commonwealth Bureau of Agricultural Economics, Oxford, U.K.

Gaikward, V.R. and Tirupathy, R.N. 1970. Socio-psychological factors influencing industrial entrepreneurship in rural areas - A case study in Tanuku region of West Godavari, A.P., *National Institute of Community Development, Hyderabad.*

Gaikward, V.R. 1975. Effectiveness of achievement motivation training in developing entrepreneurs. *Paper presented at the research conference on management.* IIM, Ahamedabad

Gangadharan, K.K. 1993. Adoption of improved agricultural practices by pepper growers of Idukki district. M.Sc. (Ag.) Thesis, College of Agriculture, Vellayani

Gagni, A.O. 1978. Farmers Training and Rural Development. *Rural Development Abstract.* Common Wealth Bureau of Agricultural Economics. Oxfor, U.K.

Gogoi, D.K. and Talukdar, P.K. 1984. The concent of constraint and problem: Need for constraint analysis and typology of constraints in Transfer of Technology. *Paper presented at the workshop on methodologies and Approaches to constraint analysis in the transfer of Agricultural Technologies. (August 8 - 10)*. National Academy of Agricultural Research Management, Hyderabad.

Gomez, K.A. 1977. On farm assessment of yield constraints. Methodological problems. In constraints to higher yields on Asian rice farms :An interim report, IRRI, Philippines : 1-14

Gordon, L. 1961. Private enterprise and international development. *The Amrew*. 6(1): 5-13

Govind, S. 1984. Participation of farm women in farm and home activities. M.Sc. (Ag) Thesis, TNAU, Coimbatore

Gupta, 1976. A study of differential motives of Dairy farmers of Milk Co-operative Societies of ICDP Karnal Towards Dairy innovations. Unpub. Ph.D. Thesis, NDRI, Karnal

Guruswamy, S. 1987. Role of women in decision making process of dryland farming. M.Sc. (Ag.) Thesis, TNAU, Madurai

Habibulla, Shaw and Muzafir. 1991. Beekeeping activity, prospect of increasing farmers income in the rural areas of Malasia. *Journal of Rural Development* 10(1) pp. 55-65

Haggen, E.E. 1964. *On the theory of Social change, How economic growth begins.* Tavistock publishers, London

Haque, M.A. 1989. Adoption of recommended species of fishes composite fish culture. In : Ray, G.L. (Ed) studies in *agricultural extension and management.* Mittal publications, New Delhi pp. 99-130

Himachalam, O.D. 1990. Entrepreneurship development in small scale sector. *Yojama.* **34**(3): 16-28

Heggade, O.D. 1982. Women's participation in co-operation. *The co-operator* **20**(2): 369-371

Inkeles, Alex and Smith, D. 1966. "The OM Scale" : A conparative socio psychological measure of Individual modernity". *Sociometry,* **29**: 52-70

Jaiswal, N.K. and Dave, A.K. 1972. Measurement of progressiveness in farming. In : Sinha, P.R.R. (Ed.). *Studies in Extension Education.* N.I.C.D. Hyderabad

Jaleel, M.M. 1992. Factors influencing the development of agriculture among the 'Kanikar' Tribe of Kerala. Unpub MSc. (Ag.) Thesis, KAU, Vellayani

Janardhanan, K.S. 1979. A study on job performance and jobsatisfaction of Agricultural Extension Officers factors associated with them. Unpubh. M.Sc. (Ag.) Thesis, UAS, Bangalore

Jayakrishnan, S. 1984. Adoption of low cost technology among paddy growers. Unpub MSc.(Ag.) Thesis, TNAU, Coimbatore

Jayapalan, R. 1985. Constraints involved in certified rice seed production - An analysis. Unpub. M.Sc. (Ag.) Thesis. TNAU, Coimbatore

Jayaraman, M.N. 1988. A study on the Adoption of Neem coated urea for paddy. Unpub. M.Sc. (Ag.) Thesis, TNAU, Coimbatore

Joshi, S.S. and Kapur, T.R. 1973. *Fundamentals of farm business management*. Kalyani Publishers, London

Kalavathy, S. 1989. Job satisfaction of Agricultural Graduates engaged in selected avenues of employment in Alleppey District. Unpub. M.Sc. (Ag.) Thesis, KAU, College of Agriculture, Vellayani

Kamalsen, P.S. 1971. A study on the effectiveness of one day Farmers' Training Camp under HYVP in Trivandrum District. Kerala. Unpub. MSc. (Ag.) Thesis, TNAU, Coimbatore

Kamarudeen, M. 1981. A study on the impact of National Demonstration Programme on paddy cultivation in Trichur district. Unpub. MSc. (Ag.) Thesis, Kerala Agricultural University, Vellayani

Kappattanavar, S.T. 1983. A comparative study on Knowledge adoption behaviour and credit orientation of small, medium and big farmers of Dharwad district in Karnataka State. Unpub. MSc. (Ag) Thesis, University of Agricultural Science, Bangalore

*Kaur, S. 1982. Comprehension and use of information a study of correspondence course for farm ladies in Punjab. Ph.D. Thesis, PAU, Ludhiana

Khan, M.A. 1992. Entrepreneurship development programmes in India. Kanishka publishing House, New Delhi

*Knight, A. John. 1975. A study on the relative effectiveness of three modes of presentation, preference, listening and post listening behaviour of farm broadcast listerns. Ph.D. Thesis, Division of Agricultual Extension, IARI, New Delhi

Kothicane, R.R., Bhilegoankar, M.G. and Deshmukh, R.G. 1987. Constraints causing Technological gap in Irrigated farming. *Maharashtra Jour. of Extn. Edn.* **6**: 81-88

Kulkarni, U.V. 1979. A study on the needs and interest hierarchy of rural youth (girls) and their life orientation in Dharwad District of Karnataka. Unpub. MSc. (Ag) Thesis, U.A.S., Bangalore

Kumar, Krishna. 1972. Education, Innovative Behaviour and Individual Modernity ina Developing Society: an attempt in model construction. Unpub. Ph.D. Thesis, Michign State University, Michigan

Kumari, P. Anitha. 1989. Transfer of technology on pulses and oilseed cultivation in the Onattukara tract of Kerala. Unpub. M.Sc. (Ag) Thesis, College of Agriculture, Vellayani, Trivandrum

Leela Prasad, V., Rajendran, R. and Hermonand Rao, V.M. 1986. "Planning and management of Animal Husbandry. Journal of Research Development. 5(3): 259-312

Leeds, C.A. and Stainton, R.S. 1978. Management and business studies. Macdonald and evans. Second Edn. London

Littlefield, C.L., Frank, M., Rachel and Donald, L.G. 1971. *Office Administration Mangement*. Prentice Hall of India Pvt. Ltd., New York

Manohari, P.L. 1988. A study on the profile of women farm graduates. Unpub. MSc. (Ag) Thesis, TNAU, Coimbatore

Matani, A.G. 1995. Fostering farming entrepreneurship towards Rural Development Indian Journal of Training and Development 25(1): 33-41

Mathew, Joy. 1980. A study on the role of rural youth in the agricultural development of rural areas. MSc. (Ag) Thesis, Kerala Agricultural University, College of Agriculture, Vellayani

Menon, A.G.G. 1983. Socio-economic constraints in increasing rice production in Kerala. Paper presented at the seminar on stagnation in Agricultural production in Kerala with special reference to paddy. (July 1-3), College of Agriculture, Vellayani, Thiruvananthapuram

Mc clelland, D.C. 1961. *The Achieving Society* Vakils; Free Press, New York

*Moulik, T.K. 1965. A study of the predictive values of some factors of adoption of nitrogenous fertilisers and the influence of sources of information on adoption behaviour. Ph.D. Thesis, I.A.R.I., New Delhi

Muthayya, B.C. and Loganathan, M. 1990. Psycho-social factors influencing entrepreneurship in Rural areas. *Journal of Rural Development*, Vol 9(1) pp. 237-281

Nataraju, M.S. and Chennegowda, M.B. 1986. Adoption behaviour of dairymen in relation to their personal characteristics. *Mysore J.agric. Sci.* 20(3): 225-230

Nandapurkar, G.G. 1982. *Small farmers - A study on their entrepreneurial behaviour*. Metropolitan Book Company Pvt. Ltd. New Delhi

Nandy, A. 1973. Entrepreneurial cultures and entrepreneurial men. Economic and political weekly. 8(470): 98

Nanjaiyan, K. 1985. Rationality in Decision making by small farmers. Unpub. Ph.D. Thesis, TNAU, Coimbatore

Nehru, S.M. 1992. "Sericulture in Kerala - Still to take - off". *National conference on mulberry sericulture Research. Abstract papers.* December 10-11 pp. 146

Palaniswamy, A. 1978. Adoption of Behaviour of Malli and Mullai flowers growing farmers. Unpub. M.Sc. (Ag) Thesis, TNAU, Coimbatore

Pandya, R.D. and Trivedi, J.C. 1988. Constrains in adoption of gobar gas technology. *Rural India.* 5(7): pp. 123-126

Pandurangaiah, BM. 1987. A study on identification, profile, communication pattern and adoption behaviour of opinion leaders with respect to dairy enterprises. Unpub. MSc. (Ag) Thesis. UAS, Bangalore

Perumal, G. 1970. A study on Factors and Agencies Responsible for the spread of Hybrid Maize in Coimbatore District. Unpub. M.Sc. (Ag.) Thesis. Coimbatore Agricultural College and Research Institute, University of Madras

Perumal, G. and Mariappan, K. 1982. A study on the influence of rural community settings on the adoption of improved agricultural practices. *Rural Development Review*. 1(2): 135-137

Perumal, G. R. Vijayaraghavan and Theodore, R.K. 1990. Entrepreneurial characteristics of successful women entrepreneurs - A case analysis approach Departmental subproject 271 Department of Agricultural Extension and rural sociology. T.N.A.U., Coimbatore

Petharam, R.J. 1988. Constraints to the transfer of Australian Farming Systems Research to the Third World *Agricultural systems Research for Developing Counries*. Australian Centre for International Agricultural Research Canberra. 156-162

Pillai, G. and Balakrishna. 1978. A study on adoption of soil conservation measures by farmers in scheme areas of Trivandrum district. Unpub. MSc. (Ag) Thesis. College of Agriculture, Vellayani, Trivandrum

Pillai, G.B. and S. Bhaskaran. 1991. Mushroom cultivation - a self employment avenue for rural youth. Indian Mushrooms. Proceedings of the National Symposium on mushrooms.

Porchezian, M.R. 1991. An analysis of entrepreneurial behaviour of farmers. M.Sc. (Ag) Thesis. T.N.A.U., Coimbatore

Pradeepkumar, R. 1993. Aspiration of educated unemployed youth for self employment in Agriculture and allied fields. MSc. (Ag) Thesis, Kerala Agricultural University, College of Agriculture, Vellayani

Prasad, C., Choudhary, B.N. and Nayar, B.B. 1987. Constraints in Transfer of Technology. In First Line Transfer of Technology projects. ICAR New Delhi. 54-56

Raghavacharyulu, V. 1983. A study on the entrepreneurial behaviour of small farmers. M.Sc. (Ag.) Thesis. TNAU, Coimbatore

Rahiman, O.A. 1978. Some factors influencing communication patterns among members of Chavcha mandal in Kerala. *Agri. Res. J.* Kerala **16**(1): 54-59

Rajkumar, K. 1992. Agricultural modernisation and Technology adoption - An analysis. Un PUb. MSc (Ag) Thesis, T.N.A.U., Coimbatore

Ramachandran, C. 1992. Impact of Rice mini kit Trials on the Adoption Behaviour of Farmers. Un pub. M.Sc. (Ag) Thesis, KAU, Vellayani

Ramakrishnan, K. 1979. Interview techniques of a method of selection. In : Rao, and Moulik, T.K. (Ed) *Identification and selection of small scale entrepreneurs*

Rao, T.V. and Mehta Prayag. 1978. Psychological factors in Entrepreneurship, In Udai pareek and Rao, T.V. (Ed) *Developing Entrepreneurship. A hand book learning system*. New Delhi

Ravi, K.C. 1979. Information seeking and adoption behaviour of tapioca growing farmers. Unpub. MSc. (Ag.) Thesis. TNAU, Coimbatore

Reddy, G. Kullayi. 1983. A study on management orientation farming efficiency and consultancy pattern of rainfed groundnut growers in Kolar district of Karnataka State. Unpub. MSc. (Ag) Thesis. UAS, Bangalore

Renukardhya, B.N. 1983. A critical study on farmers training programme on selected command areas of Karnataka State. Ph.D. Thesis, U.A.S., Banglore

Rexlin, R. 1984. Women's participation in decision making on farm practices. Unpub. MSc. (Ag) Thesis, TNAU, Coimbatore

Roberts, Nigel. 1987. "Successful Agricultural Extension". *Agricultural Extension world wide Issues practices and emerging priorities*. Croom Helm, London: 75-98

Rogers Everett, M. 1969. Modernisation Among Peasants. The impact of communication. Rinehart and winston, Newyork

Rogers Everett, M. and Floyd, F., Shoemaker. 1971. Communication of innovations - A cross cultural Approach. The Free Press, New York

Roling, Niels. 1988. *Extension science: Information Systems in Agricultural Development*. Cambridge University Press, Cambridge, New York

Roy, H.C. 1965. Progressiveness of farmers. Unpub. MSc. (Ag) Thesis, Bihar Agricultural College, Sabour, Bhagalpur

Sagar, R.L. and Ray, G.L. 1984. Factors contributing to the farmers productivity of crops. *Indian J. Extn. Edn.* 20(1&2) pp. 95-98

Saimuddin. 1987. Entrepreneurship development. A key to economic growth. In Sainuddin (Ed.) *Entrepreneurship development in India*. Mittal Publisher, New Delhi

Sajeevchandran. 1989. Impact of development programmes in promoting pepper production in Kerala. Unpub. MSc. (Ag) Thesis, KAU, Vellayani

Samantha, R.K. 1977. A study of some Agro-economic socio-psychological and communication variables associated with repayment behaviour of Agricultural credit users of nationalised banks. Un Pub. Ph.D. Thesis, B.C.A.U. West Bengal

Sandhu, A.S. 1970. Characteristics, Listening behaviour and programme preferences of the radio owing farmers in Punjab. Unpub. Ph.D. Thesis. I.A.R.I., New Delhi

Saradamoni, K. 1983. Declining employment for labour increasing involvement by land owning women. *Women in rice farming*. Grower publishing company Ltd., New Delhi.

Sarmah, R.C. and Singh, A.K. 1984. Determinants of entrepreneurship in agriculture. *Productivity* 35(11): 536-539

*Schumpeter, J.A. 1984. *The theory of economic development* Trans. R. Opic. Cambridge, Haward University Press

Selvakumar, B. 1988. Information support utilisation for awareness, conviction and Adoption of Cotton white fly control measures, By contact and non contact farmers. Unpub MSc. (Ag) Thesis, TNAU, Coimbatore

Sethy, B., Sinha, B.P. and Bhal, R. 1984. Some entrepreneurial characteristics in adoption of an improved farm technology. *Indian Journal of Extension Education*. 20 (1&2): 30-37

Seema, B. 1986. Role of farm women in decision making process of a farming community in Trivandrum district. M.Sc. (Ag.) Thesis. KAU, College of Agriculture, Vellayani

Shanmugam, A. 1980. Needs, attitude, participation and preference of school going and nonschool going rural farm youth. Unpub. M.Sc. (Ag) Thesis, TNAU, Coimbatore

Shanmugasundaram, R. 1987. "Enriched farm yard manure : Acceptance and constraint analysis". Un Pub. MSc. (Ag) Thesis, Tamil Nadu Agricultural University, Coimbatore

Shanmukhappa, S 1978. A study on the Adoption Behaviour and value orientation of Arecanut growers of Shimoga district in Karnataka State. Unpub. M.Sc. (Ag) Thesis, College of Agriculture, Dharwad

Sharma, D.K. and Singh, T.R. 1970. Participation of rural women in decision making process related to the farm business. *Indian J. Ext. Educ.* **6**(1&2): 43-48

Sharma, J.S. and Gandhi, Vasant and Kunchai, Darunee. 1989. Delphi survey for the assessment of potential yields of cassava in the Third World. National Food Policy Research Institute, Washington D.C. 36-56 in decision making process related to farm business. *Indian J. Ext. Educ.* **6**(1&2): 43-48

Sheshachar, K. 1980. A study in the Adoption Behaviour, consultancy pattern and value orientation of chilli cultivators in Dharwad district of Karnataka State. Unpub. M.Sc. (Ag.) Thesis, GKVK, Bangalore

Sheela, S. 1994. Role of women entrepreneur. *Women entrepreneurship in spice industry.* Spices Board, Cochin

Shilaja, S. 1981. Influence of leaders in the development of rural areas. Unpub. M.Sc. (Ag.) Thesis, K.A.U., Vellayani

Shilaja, S. 1990. Role of women in mixed farming unpublished Ph.D. Thesis, UAS., Bengalore

Shivamurthy, M., Venkataranganaika and Ansari, M.R. 1992. "A study on knowledge and adoption behaviour of sericulturists in Dharward district of Karnataka". *National Conference on mulberry sericulture Research, Abstract papers*. December 10-11 pp. 148

SIET. 1974. Socio-psychological factors influencin the adoption of starting a small industry unit - A research study, *SIET* Hyderabad

*Singh, N.P. 1968. A study of the relationship between anxiety and risk taking amongst successful and unsuccessful agricultural entrepreneurs of Delhi, *Manes*, 15(2): 111-119

Singh, A.K. 1970. An analysis of Training Needs of Agricultural Extension officers working in intensive Agricultural Area Programme Blocks of Bihar. Ph.D. Dissertation of IARI, New Delhi

Singh, N.P. 1978. Management of entrepreneurial development programmes. *Paper presented in the workshop on Trainees growth and Monitoring, held at Poona*

Singh, L.B. 1994. Unemployed educated young men in India : Their problems of adjustment. *The Indian Journal of* social work Vol. 3 : 357-364

Singh, A.K. 1974. Impact of Farmer's Training in knowledge, Attitudes and Adoption with respect to HYV of wheat in Gwalior District in Madhya Pradesh. Unpub. M.Sc. (Ag.) Thesis, A.P.A.U., Hyderabad

Singh, D.V. and Bhati. J.P. 1976. Women in Hill Agriculture : A case study of Himachal Pradesh", *Indian J. Agrl. Econ.* **40**(3): 269

Singh, A. and Singh, R. 1977. Impact of dairy enterprise on productivity and employment. *Agricultural Situation in India*. **32**(3): 73-82

Singh, T.P. and Kumar, K. 1975. Achievement motivation socio economic status and green revolution. *Ind. J. Extn. Educ.* **11**(192): 1-7

Singh, A.K. and Ray, G.L. 1985. Variables contributing to the level of fertiliser use of farmers. *Indian J. Extn. Edn.* **21**(3&4): 1-10

Singha, S.N. and Singh, K.N. 1970. A multivariate Analysis of Adoption Behaviour of Parmas. Indian J. Extn. Edn. **6**(3-4): 39-44

Singh, A.K. 1989. Fertiliser promotion. In : Ray, G.L. (Ed.). Studies in Agricultural Extension and Management. Mittal Publications, Delhi. pp. 25-59

Sitalakshmi. 1975. "Role of women in Agriculture" Indian Journal of Home Science, 9(1): 27-29

Sivaramakrishnan, S. 1981. A study on the differential adoption of recommended agricultural practices of selected crops. Unpub. M.Sc. (Ag) Thesis. College of Agriculture, Vellayani, Trivandrum

Smucker, J.N. 1982. "The Role of Rural Harijan Women in Development". AID Research and Development Abstracts. 10(2): 29-30

Sofranko, A.J. 1984. Introducing Technological change in social setting. In *Agricultural Extension - A reference mannual*, FAO, Rome : 63

Somasundaram, D. 1976. "A diagnostic study of small farmers with respect to new agricultural technology and its effective communication of adoption". Unpublished Ph.D Thesis, Division of Agricultural Extension, IARI, New Delhi

Spencer, D.S.C. 1981. "Women in a developing Economy - A West African case study". AID Research and Development Abstracts. 9(1): 31

State Planning Board. 1992. Employment generation strategy in the eighth five year plan - *Report on Rupees Thousand Crores Employment Programme*, Thiruvananthapuram

Subramoniam, K. 1986. Communication behaviour of tribal farmers. A system analysis. M.Sc. (Ag) Thesis, KAU, College of Agriculture, Vellayani

Supe, S.V. 1969. Factors related to Direct degree of Aesponsibility in Decision making among farmers. Unpub. Ph.D. Thesis, IARI, New Delhi

Supe, S.V. 1971. Farmers information source credibility in relation to their rational adoption behaviour. Indian J. Ext. Educ. 7(1&2): 29-33

Subramanian, R. 1976. "Factors influencing adoption of poultry farming". Unpub. M.Sc. (Ag) Thesis. TNAU, Coimbatore

Sundaraswamy, B. 1971. Extent of adoption of recommended practices and information sources consulted by the farmers in respect of Hybrid Jowar cultivation in the selected taluks of Mysore District. Unpub. M.Sc. (Ag) Thesis, Coimbatore Agricultural College and Research Institute, University of Madras

Sutha, T., Muthaiah, M. and Annamalai, R. 1991. Differential knowledge level and Adoption Behaviour of Rubber Growers. Tamilnadu Journal of Extension Education, 2(4): 340-343

Swaminathan, L.P. 1985. Agricultural Development and Demographic Behaviour of Rural Women in Periyar District. Un Pub. MSc. (Ag) Thesis. Tamil Nadu Agricultural University, Coimbatore

*Tandon, B.C. 1975. *Environment and entrepreneurs*. Chung Publishers, Allahadbad

Thangaraju, A. 1979. Extent of adoption of sericulture technology by the trained and untrained sericulturist of Coimbatore district. MSc. (Ag) Thesis, TNAU, Coimbatore

Tikader, A. and Sen, S.K. 1992. "The Role of sericultural Extension and Management on transfer of technology". *National conference on mulberry sericulture Research. Abstract papers*. December 10-11 pp. 152

Tyagi, K.S. and Sohal, T.S. 1984. Factors associated with adoption of dairy innovation. *Indian J. Extn. Edn.* 20(3&4): 1-8

Vasanthakumar, J. 1987. Constraints to Agricultural Development of small and Marginal Farmers". Journal of Rural Development 6(3): 309

Vashistha, P.B. 1987. *Farmer's Training and Rural Development* in India. Deep and Deep publications, New Delhi

Vellapandiyan, C. 1974. A study on adoption and adoption categories of some improved Agricultural practices. Un Pub. MSc. (Ag) Thesis, TNAU, Coimbatore

Venkidusamy, C. 1977. Study of the motives of Small Farmers in Project (SFDA) and non-project Blocks for the adoption of HYV Cotton. Unpub. MSc. (Ag) Thesis, TNAU, Coimbatore

Vijayalekshmi, V. 1992. Women entrepreneurship in Rajkumari Chandrsekhar edited *Women's Resource and National Development A perspective*. Gaurav Publishing House. New Delhi

Vijayaraghavan, P. 1977. Study of the factors affecting the knowledge and adoption of HYV of paddy by small and marginal farmers. Unpub. MSc. (Ag) Thesis, TNAU, Coimbatore

Wagmare, S.K. and Pandit, V.K. 1982. Constraints in Adoption of wheat Technology by the Tribal farmers. *Indian J. Extn. Edn.* **18**(1&2): pp. 95-98

Waisamen, Frederick, B. and Kumata, H. 1972. Education, Functional Literacy and participation in Development *International Journal of comparative sociology*

*Zinyama, L.M. 1988. Farmers perception of the constraints against increased crop production in the subsistance communal Farming Sectors of Zimbavwe. *Agric. Admin.* and *Extension* **20**: pp. 47-107

* Original not seen

APPENDICES

APPENDIX I

DEPARTMENT OF AGRICULTURAL EXTENSION

COLLEGE OF AGRICULTURE

VELLAYANI 695 522

To

Dear Sir/Madam,

Sri. S. Sivaprasad, M.Sc.(Ag.) student of this department doing his PG project under my guidance has taken up a research programme on "Problems and prospects of self-employment of trained rural youth in Agriculture". In this connection he has collected some dimensions of entrepreneurial behaviour and given as Annexure I. A list of socio psychological and economic variables which are likely to influence the entrepreneurial behaviour is also given as Annexure II.

Considering your vast experience in the field of Agricultural Extension you are selected as one of the judges. You are requested to indicate your judgment about the appropriateness of the dimensions to measure the entrepreneurial behaviour and rate the variables with regard to the relevance of each variables in influencing the entrepreneurial behaviour of trained rural youth. Kindly record your judgment in the three point continuum

of "most important", "important" and "least important" by putting a ( ) mark in the appropriate column in the case of dimensions of entrepreneurial behaviour and "most relevant", "relevant" and "least relevant" in the case of variables influencing the entrepreneurial behaviour. If you feel any more important variable has left out, kindly add the same with your judgement.

I request you to kindly spare some of your valuable time to go through these dimensions and variables and give your valuable responses. Thanking you in advance for your kind contribution for completing this portion of her research work.

With regards,

Yours faithfully,
Sd/-
Dr. Sobhana
Associate Professor
Department of Agricultural Extension
College of Agriculture
Vellayani

ANNEXURE I

DIMENSIONS OF ENTREPRENEURIAL BEHAVIOUR

MI-Most important I-Important LI-Least important

Sl. No.	Dimensions		MI	I	LI
1.	Decision making capacity	defined as the degree to which a ruralyouth justifies the selection of most effective means from among the available alternatives on the basis of scientific criteria for achieving maximum economic profit.			
2.	Self confidence	refers to the extent of feeling of a rural youth about her/his own powers, abilities and resourcefulness to perform any activity which she/he desires to undertake.			
3.	Achievement motivation	refers to the desire for excellence of a rural youth to attain a sense of personal accomplishment.			
4.	Innovativeness	defined as the degree to which a farmer is relatively earlier in adopting new ideas.			
5.	Risk orientation	defined as the degree to which a ruralyouth is oriented towards risk and uncertainty and have courage to face the problems in starting an enterprise.			

Sl. No.	Dimensions		MI	I	LI
6.	Value orientation	defined in those aspects of a rural youth aspects of a rural youth which commit him/her to the observance of certain norms, standards, criteria for selection whenever he/she is in a contingent situation which allows her to make a choice.			
7.	Change proneness	refers to the behaviour pattern of rural youth who has interest in and desire to seek change into her/his operations when praticable and feasible.			
8.	Credit orientation	define as the favourable and positive attitude of an individual towards obtaining credit from institutional sources for starting an enterprise.			
9.	Deferred gratification	refers to the postponement of immediate benefits of short range rewards in order to secure more long range goals and the resulting satisfaction.			
10.	Management orientation	refers to the degree to which individual is oriented towards scientific management comprising of planning, production, marketing of his/her enterprise.			

Sl. No.	Dimensions		MI	I	LI
11.	Competition orientation	defined as the degree to which a rural youth is oriented to place herself in a competetive situation.			
12.	Self concept	in relation to the set of cognitition and feelings that a rural youth have about herself/himself as an entrepreneur.			
13.	Self reliance	refers to the ability of a rural youth to depend one's ownself for introducing changes in her life.			
14.	Economic motivation	refers to the occupational excellence in terms of profit making and relative value placed on economic ends by an individual.			
15.	Scientific orientation	defined as the degree to which a rural youth is oriented towards the use of scientific methods in decision making in starting and running an enterprise.			
16.	Over all modernity	refers to the attitude of rural youth towards modern way of living in different spheres of life with respect to education, social, economic and cultural conditions.			

Sl. No.	Dimensions		MI	I	LI
17.	Innovation proneness	is referred to as the behaviour pattern of an individual who have interest in and desire to seek changes in the existing systems and to when practical and feasible			
18.	Initiative	defined as the capacity of rual youth to come forward on his/her own to take up some activities or enterprises.			

ANNEXURE II

SOCIO-PERSONAL AND ECONOMIC VARIABLES

Sl. No.			MR	R	LR
1.	Age	defined as the number of calender years completed by the rural youth at the time of interview.			
2.	Religion	refers to the religion in which the rural youth belongs			
3.	Caste	refers to the caste hierarchy of a rural youth whether belongs to upper/backward/scheduled caste			
4.	Family size	defined as the specific number of members in the family living together			
5.	Family type	refers to the single type (nuclear) family or joint family			
6.	Family occupation	defined as the position of the family which acts as a source of income in which the family members spends major part of their time and attention.			
7.	Occupation of the respondents	defined as the position of the family which acts as a source of income in which the individual spends major part of her/his time and attention.			
8.	Educational status of the respondent	refers to the level of formal education attained by the respondent.			

Sl. No.			MR	R	LR
9.	Educational status of the family	refers to the level of formal education attained by the members of the family.			
10.	Annual income	refers to the total earnings of the family from farm and other sources.			
11.	Material possession	defined as the money value of the materials possessed by the rural youth.			
12.	Perceived knowledge of the technology	defined as the thorough knowledge and understanding of the rural youth about the technology so that she/he can put the technology into practice.			
13.	Social participation	refers to the extent and nature of participation of a rural youth in various activities of social organisations			
14	Social contact	defined as the frequency with which a rural youth comes into contact with various agencies like agricultural officers, scientists, officials of various organisations in a specific period of time.			
15.	Mass media exposure	defined as the extent to which a rural youth is exposed to different mass			
16.	Information seeking behaviour	defined as the extent to which the rural youth is seeking information from different communication sources.			

Sl. No.			MR	R	LR
17.	Fatalism	defined as the degree to which a rural youth perceives a lack of ability to control her future.			
18.	Level of aspiration	refers to the rural youth's overall assessment of his/her concern for wishes and hopes for the future or for the fears and worries about the future in his/her own reality world.			
19.	Cosmopoliteness	defined as the degree to which a rural youth is oriented to his / her immediate outside social system.			
20.	Attitude towards self-employment	defind as the degree of positive or negative feeling of rural youth towards self-employment.			
21.	Indebtedness	refers to the total debt in terms of money the rural youth owes at the time of investigation to the various money lending sources such as private money lenders, banks, merchants co-operative etc.			
22.	Market perception	is referred to the capacity or tendency of an individual to identify the market trend to sell the produce for greater returns.			
23.	Land holding	refers to the total land owned by the individual.			

Sl. No.			MR	R	LR
24.	Farming experience	refers to the total land owned by the individual.			
25.	Training attended	refers to the member of trainings of formal or informal, attended by the rural youth organized by any of the development agencies imparting technical know how.			
26.	Extension content	refers to the freequency of visit/contact by the extension agency made with the respondent			
27.	Extension participation	refers to the frequency and extent of participation by the respondent in various extension activities with the objective to acquire technical know how.			

APPENDIX II

PART A

RELEVANCY SCORE OF SELECTED DIMENSIONS OF ENTREPRENEURIAL BEVAVIOUR

Sl. No.	Dimensions	Per cent score
I	Credit orientation	81.48
II	Economic motivation	88.62
III	Innovation proneness	76.66
IV	Scientific orientation	75.47
V	Decision making capacity	92.18
VI	Achievement motivation	90.77
VII	Management orientation	75.18
VIII	Risk orientation	85.88
IX	Competition orientation	75.59

PART B

RELEVANCY SCORE OF SELECTED INDEPENDENT VARIABLES

Sl.No.	Variables	Pre cent score
I	Farming experience	77.51
II	Annual income	76.96
III	Training attended	94.11
IV	Extension contact	75.18
V	Extension participation	82.59
VI	Mass media exposure	72.22
VII	Social participation	85.16
VIII	Knowledge	92.20
IX	Information seeking behavior	94.96

APPENDIX III

DEPARTMENT OF AGRICULTURAL EXTENSION

COLLEGE OF AGRICULTURE, VELLAYANI

"PROBLEMS AND PROSPECTS OF SELF-EMPLOYMENT OF TRAINED RURAL YOUTH IN AGRICULTURE"

INTERVIEW SCHEDULE

*1. Name of the respondent and address :

*2. Age in completed years :

*3. Educational status :

*4. Caste. FC/BC/SC :

5. Farming experience (in years) :

*6. Farm size

*Land particulars	Area (in acres)			Total
	Owned	Leased in	Leased out	
Wet land				
Garden land				
Total				

7. Annual income (in Rupees)

a) On farm income :

b) Off farm income :

8. Trainings attended

Name of the training	Organisation which imparted training	Duration	No. of times attended	Remarks

9. Extension contact

Extention Worker	Frequency of contact		
	Often	Occasionally	Never
a. VIW			
b. AA/AO/ADO/SO			
c. Others			

10. Extension participation

Extension activities	Extent of participation		
	Full	Partially	Nil
a. Group Meetings			
b. Demonstration			
c. Seminars			
d. Exhibition/melas/Festivals			
e. Training			
f. Field visits/study tours			

11. Mass Media Exposre

Media/Source	Regularly	Sometimes	Never
a. Radio			
b. News paper			
c. Television			
d. Farm Magazine			
e. Scientific & Research			
f. Farm articles/Popular articles in other magazines			

12. Social participation

Organisation	Membership				Extent of participation			
	Past		Present					
	Member	Office bearer	Member	Office bearer	Regularly in all the activities	Occassionally	Rarely	Never
a. Panchayat								
b. Krishi Bhavan								
c. Sericulture society								
d. Apiculturists Association								
e. Co-op. Marketing Society								
f. Co-op. Milk Society								
g. Co-operative Banks (Primary co-op.sty.)								
h. Karshika Vikasana Samithy								
i. Farmers discussion groups								
j. Distinctive features like M.L.A., M.P. etc.								
k. Other (specify)								

13. Knowledge about Sericulture

	Perceived knowledge of technology
1. Name the mulberry variety suitable for Kerala	
2. How many cuttings are planted per pit	
3. What is the size of cutting	
4. Mention the fertiliser recommendation	
5. For 100 dtt what should be the shed size	
6. How many instars are there of larvae in the lifecycle of silkworm	
7. Name the pupal coat	
8. Name the chemical used for dusting on larvae after moulting.	
9. Name the structure on which the pupation takes place	
10. Name two chemicals used for disinfection of the shed and equipments	
11. Why we use wet foam strips around a bd in the chawki	
12. When the cocoon can be harvested after mounting of larvae on the Chandrika	
13. Why cocoons are marketed immediately after harvest	
14. Name the most important disease of silkworm	
15. Name one major pest of the larvae	
Knowledge about Beekeeping	
1. Name the domesticated bee species	
2. How many workers will be there in a colony	

	Perceived knowledge of technology
3. Name the type of bee hive common in Kerala	
4. How many colonies are recommended per ha. of plantation	
5. Name the disease which spread through and the state recently.	
6. Name the species resistant to the above disease	
7. Why the honey is kept in 60°C in water bath for 30 minutes	
8. Name the agencies which romote beekeeping in the state	
9. Which are the products obtained from beeculture other than honey.	
10. Name two natural enemies of bees	
11. How you manage the colony during lean season	
12. Shifting of colonies usually done after sunset - why?	
13. On inspection of the colony how you judge that the colony is healthy	
14. It is not advisable to extract honey by souring. Why? When we inspect the colony we spread cloth or a towel over th ehive why?	

14. Information seeking behaviour

Of the following which source you consult to get information regarding Sericulture/beekeeping. Also give the extent of use of the information sources by marking ( ) in appropriate column.

	Regularly	Occasionally	Never
1. Impersonal Source			
a. Radio			
b. Newspaper			
c. T.V.			
d. Farm Magazine			
e. Research journals			
2. Formal Personal Source			
a. Agrl. Assistants/VIW			
b. Agrl. Officer			
c. Sericulture Officer			
d. Agrl. Scientists			
3. Informal Personal Source			
a. Friends & Relatives			
b. Neighbours and fellow farmers			
c. Family members			
d. Progressive farmers			
e. Local leaders			
4. Commercial Sources			
a. Fertiliser dealers			
b. Pesticide dealers			
c. Co-operative officials			
d. Bank personnels			
5. Other Sources			
a. Exhibition/Melas			
b. Group meetings			
c. Training			
d. Demonstrations			
e. Seminars			

15. Credit orientation

	Items	Response Yes/No
1.	Do you think an entrepreneur like you should borrow money for agrl. purpose	
2.	There is nothing wrong in taking credit from institutional sources for increating farm production	
3.	Did you avail credit in the past 2 years for agrl. purpose	
4.	Is credit essential for the successful running of the enterprise?	
5.	Do you think an entrepreneur can repay the credit availed, from the returns of the entreprise?	
6.	The procedure for availing loans for self employment should be simplified	

16.	Economic Motivation	Agree	Disagree
1.	One should workhard for economic profit		
2.	Though everything in life cannot be achieved through money, it is a critical factor for good living		
3.	All I want from my job is to make just a reasonable living for the family		
4.	I would work hard without rest in order to earn maximum money to run by family		
5.	In addition to my routine farm practices I like to take up some other enterprises to earn more money		
6.	Self employment is important to me to earn reasonable amount and net not to be dependent to any body		

17. Innovation Proneness	Agree	Disagree

When would you prefer to start an enterprise?
(tick only one statement)

1. As soon as the knowledge about the technology /enterprise is required
2. After seeing the success of other rural youth
3. I prefer to wait for sometime until my friends have completed their enterprise successfully.

18. Scientific Orientation	SA	A	UD	DA	SDA
1. New methods of farming give better results to farmers than old methods.					
2. Only scientific agriculture can bring prosperity to our nation					
3. A good farmer experiments with new ideas in farming					
4. Even a farmer with lot of experience should use new methods of farming					
5. Traditional methods of farming have to be changed to raise the level of living of farmers					
6. The way a farmers' forefathers farmed is still the best way to farm today					

19. Decision making

Decision on	Not considered	Considered after consulation with others	Considered independently
a. To try new varieties			
b. To get loans			
c. To try new practices			
d. To change cropping pattern			
e. To meet extension workers			
f. To hire labourers			
g. To start new enterprises			
h. To buy farm equipment			
i. To buy farm equipment & fertilisers & pesticides			
j. To attend training programme			

20. Achievement motivation

	SA	A	UD	DA	SDA
1. One should enjoy work as much as play.					
2. One should work hard at everything one undertakes until he is satisfied with a result					
3. One should succeed in his occupation even if one has been neglectful of his family.					
4. One should have determination and driving ambition to achieve certain things in life even if these qualities mae one unpopular.					

	SA	A	UD	DA	SDA
5. Work should come first even if one cannot get rest.					
6. Even when one's interests are in danger, he should concentrate on his job and forget his obligation to others.					
7. One should get difficult goals for oneself and try to reach them.					

21. Management Orientation

A. Planning Orientation	A	DA
1. Each year one should think afresh about the crops to be cultivated or the enterprise to be started.		
2. It is not necessary to make prior decision about the variety of crop to be cultivated or about the specificity of the enterprise to be started.		
3. The input required for raising the crop or running the enterprise should be assessed well in advance.		
4. It is not necessary to think ahead of the cost involved.		
5. One need not consult with any of the experts in the field for the planning work.		
6. It is possible to increase the returns through a well defined production plan.		

B. Production orientation	A	DA
1. Timely starting of an enterprise ensures good returns.		
2. One should use as much inputs he likes		
3. Optimising the input requirement by analysing the demand, saves money.		

B. Production orientation	A	DA
4. In crop production, for timely weed control one should know suitable berbicides.		
5. Seed rate should be given as recommended by specialists.		
6. With low water rates one should use as much irrigation water as available.		

C. Marketing Orientation		
1. Market news is not useful to a farmer		
2. A farmer can get good price by grading his produce		
3. Warehouses can help the farmers to get better price for his produce		
4. One should sell his produce to the nearest market irrespective of the price.		
5. A farmer can get better price by processing his produce		
6. One should grow those crops with more market demand.		

22. Risk orientation

Sl. No.	Statements	SA	A	UD	DA	SDA
1.	A farmer should grow a large number of crops to avoid greates risks invòlved in growing one or two crops.					
2.	A farmer should rather take more of canoe in making a big profit, than to be content with a smaller, but less risky profit.					
3.	A farmer, who is willing to take greater risk than the average farmer, usually does it better financially.					
4.	It is good for a farmer to take risks when he known his chance of success are high					

Sl. No.	Statements	SA	A	UD	DA	SDA
5.	It is better for a farmer not to try farming, unless most other farmers have used it with success					
6.	Trying an entirely new method for a farmer involves greater risks but is north it.					

23. Competition Orientation

		Agree	Disagree
1.	The key points of success should not be divulged to other entrepreneurs		
2.	The better returns in comparison to the neighbours bring more prestige		
3.	It is of no use to keep information and what other entrepreneurs are doing		
4.	Production oriented ocompetitions should be organised		
5.	Through better production programmes one gets recognition in the society.		
6.	It is not good for an entrepreneur to become two ambitions inlife.		

24. Problems and Prospects

Sericulture	Most important	Impor-tant	Least important
1. General problems			
1. Small and marginal holdings			
2. High cost of cultivation			
3. Lack of assured price of cocoons			
4. Lack of encouragement from govt.			
5. Red tapism in development activities			
6. Lack of space for mulberry cultivation			
7. Severe pest and diseases to the larvae			
8. Non availability of leaves during summer			
9. Lack of Co-operation among farmers			
10. Lack of awareness about the Govt. prospects			
2. Communication problems			
1. Inadequate extension support			
2. Inadequate training			
3. Non availability of literature on advanced practices			
4. Inadequate research support			
3. Input oriented problems			
1. Inadequate and untimely supply			
2. Lack of good quality planting materials			
3. Lack of subsidy to inputs other than planting materials			
4. Varying prices at different regions			

Sericulture	Most important	Impor- tant	Least important
4. Credit oriented problems			
1. Inadequacy/Nonavailability			
2. Complicated official procedure			
3. Delay in sanctioning			
5. Infrastructural problems			
1. Inadequate irrigation facilities			
2. Lack of marketing facilities for cocoons			
3. Lack of processing units			

Prospects	Most impor- tant	Impor- tant	Least impor- tant
1. Family labour is effectively utilised			
2. Local resources are exploited			
3. Improve the farmer's economic condition			
4. Unemployed/underemployment problems solved to some extent.			
5. Influence to indirect employment generation			
6. Effective land utilisation			
7. Secondary industries developed			

	Most important	Impor-tant	Least important
Beekeeping			
1. General problems			
1. Loss of colonies due to Thai-sac brood disease.			
2. Lack of encouragement.			
3. Non acceptance of apiculturists by Govt.			
4. Minimum price for honey not fixed			
5. Lack of insurance coverage to bee colonies			
6. Lack of target oriented honey production policy			
7. Lack of consultency service			
8. Lack of Public awareness on the prospects			
2. Communication problems			
1. Inadequate extension support			
2. Lack of facilities for development of resistence in native bees.			
3. No training for extraction of pollen, wax, jelly etc.			
4. Inadequate research programme			
5. Non availability of literature on advancement in bee culture.			
3. Input oriented problems			
1. Non availability of disease resistent bees			

	Most important	Impor-tant	Least important
2. High cost of disease resistant bees.			
3. Lack of supply of exotic bees by Govt.			
4. High cost of bee hives and accessories			
4. Credit oriented problems			
1. Inadequate loan			
2. Inadequate govt. assistance			
5. Infrastructural problems			
1. Lack of arrangement for timely collection, proper storage and processing			
2. Lack of organised marketing net works			
3. Inadequate sales network for bees			
4. Lack of secondary industry.			
Prospects			
1. Effective utilisation of family labour			
2. Influence in direct employment			
3. Gain additional income to the farmer			
4. Conserve vegetation of the farm family			
5. Increase pollination on crops like coconut etc.			
6. Secondary industries can be developed for product diver-sification			

25. Extent of Adoption of Scientific practices

A. Sericulture

1. Total area under mulberry cultivation

2. What is the area in which mulberry cultivated as inter-crop?

3. What is the area in which the recommended spacing is adopted

4. Is triangular system of planting adopted under rainfed condition

5. What is the quantity of NPK applied.

6. What is the quantity of organic manure applied per pit

7. Do you use plant protection chemicals against pest and diseases of mulberry

Name of pest/ Disease	Total area affected	name of pesticide used	Dosage

8. Do you give pruning in Mya-June to the rainfed crop.

9. For 100 dfl, what would be the size of the shed you constructed.

10. Do you regulated the temperature in side the rearing house to 25-28°C

11. Do you disinfect the rearing house and equipments against silk worm diseases, using bleaching powder solution.

12. Would you cover the egg card with black paper at blue egg stage

13. Would you dust R.K. Powder over the newly moulted worms.

14. Mention the major diseases and pests of silk worms along with its control measures

Name of disease/pests	Name of pesticide used	Dosage used
1.		
2.		
3.		
4.		
5.		

15. Would you market the cocons immediately after harvest

B. Beekeeping

1. Do you use a division board to the bee box for increasing or reducing the internal space

2. Would you inspect the bee-hives twice a week

3. Do you use a honey extractor for extraction.

4. Honey is stored at 60°C in water bath for 30-45 minutes Do you practice this method?

5. To protect the colony from ant, is there wells around hive stand?

6. Do you look for the infesta-tion of colonies by bee enemies

Bee enemies	Mode of management
1. Wax moth	
2. Wax beetles	
3. Mites	
7. Do you provide sugar syrups during summer.	
8. Mention whether shifting of colonies is practiced after sunset.	

* Not for study

PROBLEMS AND PROSPECTS OF SELF-EMPLOYMENT OF TRAINED RURAL YOUTH IN AGRICULTURE

BY

SIVAPRASAD S.

ABSTRACT OF THE THESIS
SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT
FOR THE DEGREE OF
MASTER OF SCIENCE IN AGRICULTURE
(AGRICULTURAL EXTENSION)
FACULTY OF AGRICULTURE
KERALA AGRICULTURAL UNIVERSITY

DEPARTMENT OF AGRICULTURAL EXTENSION
COLLEGE OF AGRICULTURE
VELLAYANI
THIRUVANANTHAPURAM

1997

ABSTRACT

This study was designed to identify the problems and prospects of trained rural youth in agriculture with extent of adoption of scientific practices and their entrepreneurial behaviour. Sericulture, being a newly introduced self employement avenue and beekeeping being an old avenue with a lot of trainings imparted to the unemployed youth were selected as the self employment avenues for the study. Following multistage random sampling 200 trained youth were selected from the five blocks of Idukki district as 50 practising and 50 non practising in each selected avenue and interviewed to study their entrepreneurial behaviour, extent of adoption of scientific practices in sericulture and beekeeping and their profile characteristics. Regarding the problems in sericulture lack of assured price, small holding size, inadequate extension support, lack of quality planting materials, non availability of credit, lack of marketing facilities were identified as major problems and effective utilisation of family labour, minimise unemployment status and gain additional income to the family were the major prospects. In beekeeping, loss of bees due to virus disease, lack of fixed price for honey, inadequate training, non availability of credit, disease free bees, lack of organised marketing network were identified as major problems whereas

effective utilisation of family labour, gain additional income to the family, and conservation of vegetation were the major prospects.

Majority of the practising youth in two avenues had high level of entrepreneurial behaviour and the non practising youth had low level of entrepreneurial behaviour.

Study revealed that majority of the sampled youth had high level of adoption in sericulture and beekeeping. Decision making ability and competition orientation have no correlation with extent of adoption in sericulture, whereas in beekeeping, innovation proneness and competetion orientation have no relation.

Regarding the personal characteristics majority of the had less farming experience, less annual income less training, low level of extension contact, extension participation and high level of knowledge, information seeking behaviour and mass media exposure. Extension contact, extension participation, mass media exposure, knowledge and training attended had no significant relationship with entrepreneurial behaviour.

Farming experience, annual income, mass media exposure, knowledge and information seeking behaviour were positively and significantly influencing extent of adoption of scientific practices.