

**IMPACT ASSESSMENT OF SKILL BASED  
TRAININGS OF KRISHI VIGYAN KENDRA,  
THRISSUR**

**By**

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**(2014-11-171)**



**THESIS**

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*for the degree of*

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**Department of Agricultural Extension**

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**KERALA, INDIA**

**2016**

## DECLARATION

I hereby declare that the thesis entitled “**Impact assessment of skill based trainings of KVK, Thrissur**” is a bonafide record of research work done by me during the course of research and the thesis has not been previously formed the basis for the award to me any degree, diploma, fellowship or other similar title, of any other University or Society.



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Certified that thesis entitled “**Impact assessment of skill based trainings of KVK, Thrissur**” is a bonafide record of research work done independently by **Ms. Aparna.T.G (2014-11-171)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, associate ship or fellowship to her.

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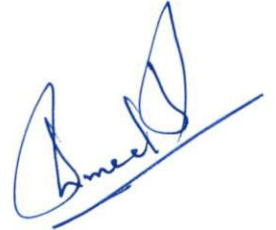
We, the undersigned members of the advisory committee of **Ms. Aparna T. G (2014-11-171)**, a candidate for the degree of **Master of Science in Agriculture**, with major field in **Agricultural Extension**, agree that the thesis entitled "**Impact assessment of skill based trainings of KVK, Thrissur**" may be submitted by **Ms. Aparna T. G (2014-11-171)**, in partial fulfillment of the requirement for the degree.



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**DEDICATED TO MY FAMILY AND  
TEACHERS**



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# INTRODUCTION

## CHAPTER I

### INTRODUCTION

“Practice is the hardest part of learning, and training is the essence of transformation”

-Ann Vaskamp

Various efforts have been taken up by the government of India and other welfare organizations to provide different skill oriented vocational training courses to rural people in order to create awareness, education and employment opportunities especially for the rural women to become self-sufficient by adopting new ways and technologies in fields and homes. During fifth five year plan, Indian Council of Agricultural Research (ICAR) launched an innovative project for imparting skill oriented vocational training in the country by establishing ‘Farm Science Centres’ popularly known as Krishi Vigyan Kendras (KVKs). In India, it is a landmark in the transfer of agricultural technology for effective linkage between research and farmers on one hand and between research and extension on the other.

Krishi Vigyan Kendras (KVKs) are the frontline institutions in agricultural technology transfer in the country, involved in conducting on farm trials (OFT), Front line demonstrations (FLD), trainings and advisory services at grass root level based on need assessments and definite action plans, in addition to special programs and intervention projects. The aim of KVK is to reduce the time lag between generation of technology at the research institution and its transfer to the farmer’s fields. A district being the operational jurisdiction, it provides several trainings to farmers, women, youth and organized groups to build up the human resource capacity aiming at enhancing agricultural production, productivity, employment and income generation among the participants from the agriculture and allied sectors on a sustained basis. The



main purpose is to have an appropriate technology which may be economically profitable, ecologically sustainable, and technically feasible and culturally compatible.

The KVK functions with the collaborative participation of scientists, subject matter specialists, extension workers, farmers, farm women and rural youth. The three main principles of KVK are agricultural production as the prime goal followed by work experience as a method of imparting training and stress on weaker sections of rural population. Teaching by doing and learning by doing have been the main methods of imparting skill based training to the farmers by KVKs

Training plays a major role in the advancement of human performance in a given situation. It provides a systematic improvement of knowledge and skills which in turn helps the trainees to function efficiently and effectively in their given task on completion of the training. It is a process of acquisition of new skills, attitude and knowledge in the context of preparing for entry into a vocation or improving ones productivity in an organization or enterprise. To make the trainings effective, it requires a clear picture of how the trainees will use this information after training for local practices instead of what they had adopted before in their situation.

The KVKs organize composite training programme of short and long duration based on systematic study of the training needs and technology gaps and impart need based and skill-oriented vocational training to the practicing farmers who wish to go in for self-employment. The training programmes take into account all methods and means, which will result in skill development in trainees in the areas of their interest. It can be formal, informal and non-formal or a combination of all the three, depending upon the needs and resources of the farmers. Each KVK has been provided with scientific/ technical staff and supporting staff.

Ajrawat *et al.*, (2013) stated that KVK is able to bring about significant changes in the socio-economic status as well as knowledge level among different categories of trainees through proper trainings and guidance. Therefore, giving importance to training and guidance is important for successful functioning of KVK.

Human resource is the most precious and qualitative strength of any country which forges a country ahead towards progress and prosperity. It brings about socio-economic and cultural transformation of any society. One of the main ways to develop human resource is training. Training can be regarded as an age long concept which performs the therapeutic function of shaping knowledge, skill and attitude that are required for effective performance of duties and or assignment. Training is conducted whenever an individual engages in an activity that results in the ability to exercise a skill that he does not previously have. The training generally involves four basic components (1) acquiring knowledge of the skill; (2) observing a model perform the skill; (3) practicing the skill; and (4) reinforcing the newly acquired behaviour.

Vocational training refers to a certain type of training whose main objective is preparing people for work. It is training for a specific vocation in industry or agriculture or trade. It is training for career or trade excluding the professions. It is an important policy instrument for enhancing employment and can develop appropriate skills and there by improve labour supply and the employability of work force. Vocational education and training is compulsory that develops knowledge, skill and attitude linked to particular forms of employment.

Dubey *et al.*, (2008) reported that trainings of KVK are able to bring about significant changes in the socio-economic status as well as the level of knowledge among different categories of trainees. It also played a major role in influencing technological changes, besides management orientation.

Lal and Tandon (2011) concluded that vocational training programmes had a positive impact on the knowledge gain, developing the skills among the rural youth and also benefiting the rural women for generation of income. Such training programmes can be replicated and need based vocational training programmes may be incorporated so that the rural youths can earn their livelihood.

Krishi Vigyan Kendra, Thrissur established in 2004 under KAU, through its multitude of interventions, from scientific cultural practices to value addition and

formation of growers societies, has been the light house for farming community of Thrissur. KVK, Thrissur also organizes several skill based capacity building programmes. In fact, the KVK has been one of the most prolific during the past few years in its reach out, coverage of clientele and diversity of topics dealt with. It is very difficult for the KVK to keep on a regular follow up on all types clientele benefitted from the institution, with the prevailing limitations of staff and infrastructure. As a result a systematic study has not been conducted so far to analyze impact and application of skills transferred through the KVK, on long term basis.

In this context, this study is of great significance, which might help in introspection for quality improvements in terms of relevance, planning, and methodology of the KVK trainings, and application of training outputs among the participants. Keeping the importance of training in view the study was planned to ascertain the effect of skill based training programmes for employment generation among the farmers in the district

### **Objectives of the study**

This study was proposed to look in to three specific objectives regarding post training application of skill based trainings of KVK, Thrissur;

1. To assess the post training application of skill based trainings in income and employment generation among the participants
2. To identify the determinants of application of the skills gained
3. To analyze the constraints in utilization of training outputs

### **Scope of the study**

In a developing country like India, training plays an important role in the advancement of human resource which is indirectly related to economic development. Krishi Vigyan Kendras (KVKs) conduct a variety of training programmes designed based on the clientele problems, needs and interests for their benefit. It is hoped that

the findings of the present impact study will help KVKs and other extension agencies to re-orient their trainings for preparing a suitable strategy for implementation of training programmes to the farmers, to develop favourable attitude of the farmers towards KVK training programmes in order to develop cognitive compartment of farmers with regard to improve agricultural practices and to reduce the existing technological and adoption gap among the farmers. Most importantly this study tries to point out how post training skill application can be improved, by identifying the factors contributing to it in different stages. The findings will also be beneficial for policy planners and Programme Coordinators of KVK's in developing training policies and action plans to deliver their role smoothly. This study has tried to identify the various perceived constraints by the trainees while application of the skills gained which need to be sorted out at the earliest, so that the overall context of trainings by KVKs can be improved. Systematic monitoring and evaluation of the training programmes will help in the success of training programs ultimately.

### **Limitations of the study**

The study was conducted as a part of post graduate research programme and hence it had the inherent limitations of resources such as finance, time and researcher's experience. Since the study was based on direct opinion of the respondents, it may not be free from personal bias and prejudices. Besides, the study area was confined to Thrissur district only which is the mandate area under KVK Thrissur. Hence the findings and conclusions made by the present study may slightly differ, in the case of other areas and conditions. Regardless of the limitations, all efforts were made by the researcher to conduct the study in as much of an objective and systematic manner as possible. Therefore the present study would hopefully provide a better insight to KVKs to re-orient their trainings in order to reduce the existing technological and adoption gap among the farmers.

## **Presentation of the thesis**

The thesis is presented in five chapters. The first chapter is an introductory section, highlighting the objectives, scope and importance and limitations of the study.

The second chapter provides the review of literature regarding in line to the objectives of study. The third chapter is the methodology that was followed in carrying out the research. The fourth chapter deals with results and discussions of the study. The fifth chapter includes summary, conclusion and implications of the study. References, appendices and abstract are furnished at the end.

# REVIEW OF LITERATURE

## CHAPTER II

### REVIEW OF LITERATURE

A review of the existing literature on a topic helps the researcher to develop the theoretical frame work of the study and assess the nature and quantum of research studies already undertaken in the area of research. Keeping this in view a systematic review of the literature concerning the related concepts, which are meaningful and relevant to the present study, has been attempted in this chapter. This will provide a theoretical basis for the empirical investigation. It also assists in evaluating one's own research efforts by comparing them with the related efforts of others. The literature that appeared relevant are presented under the following heads.

- 2.1 Outcomes of trainings through KVK
- 2.2 Types of participation for KVK
- 2.3 Trainee characteristics for KVK
- 2.4 Factors affecting training effectiveness
- 2.5 Profile characteristics of KVK trainees

#### **2.1 Outcomes of trainings through KVK**

Ahmad *et al.*, (2007) noticed that those who received trainings were mainly young, literate and doing agriculture. After the training most of the trainees adopted the improved techniques and technologies and a positive trend was reported in growing vegetables and orchards besides the cereal crops. The training also gave them awareness which improved their farming; some also got employment on the basis of training while other had started other business on small scale. As a whole training has motivated farming community, created employment and other income generating activities etc.

Ajrawat *et al.*, (2013) stated that KVK is able to bring about significant changes in the socio-economic status as well as knowledge level among different categories of trainees through proper trainings and guidance. Therefore, giving importance to training and guidance is important for successful functioning of KVK training programmes.

Alagukannan and Srinivasan (2014) concluded that KVK is the key institute for the holistic development of village community by adopting proper agricultural and allied practices towards sustainability. The innovation adopted in transfer of technology by KVK, Tuticorin by the way of village level volunteers can be followed by the KVKs across the country.

Badodiya *et al.*, (2014) concluded that independent variables namely education, size of land holding, social participation, credit availability, annual income, source of information, contact with extension personnel, innovativeness, cosmopolitaness & knowledge about organic farming were found having significant association with dependent variable- perception of trained farmers about organic farming practices.

Bhati *et al.*, (2012) reported that intensive educational training effort made by the trainers and also due to the realization of importance of these practices in actual field situation leads to significant increase in the knowledge level of the farmers and they started working as extension workers in the village's in order to solve the problems in village level more efficiently.

Dubey *et al.*, (2008) reported that trainings of KVK is able to bring about significant changes in the socio-economic status as well as the level of knowledge



among different categories of trainees. It also played a major role in influencing technological changes, besides management orientation.

Dubey and Srivasta (2007) reported that KVKs will bring significant changes in the level of knowledge and adoption of wheat production technologies among trainees. Training and guidance given to trainees have played prime role in influencing technological changes, besides management orientation.

Kumar (2003) concluded that KVK has a significant role of in promotion of improved production practices of jute and ensuring their adoption. Training and demonstrations have a substantial impact on over the existing knowledge and adoption of the beneficiary farmers than the non-beneficiary farmers.

Kumari *et al.*, (2009) revealed that the home science trainings conducted by the KVK had a significant impact on skill up gradation of trained entrepreneurs by acquiring more knowledge and skill of the sophisticated technologies in the areas of fruit preservation etc. It also helped them to sustain their small scale entrepreneurial activities through regular up gradation of knowledge and skill in new technologies.

Kumbhare and Khonde (2009) revealed that half of the farmers adopted the recommendations of KVK and gain knowledge of improved practices at medium level. The characteristics of the respondents like education, land holding, social participation, socioeconomic status, and farmer's involvement in agricultural programme are found to be significantly correlated with the impact of KVK training on the adoption behaviour and knowledge gain of the farmers.

Lal and Tandon (2011) concluded that vocational training programmes had a positive impact on the knowledge gain, developing the skills among the rural youths

and also benefiting the rural women for generation of income. Such training programmes can be replicated and need based vocational training programmes may be incorporated so that the rural youths can earn their livelihood

Manhas *et al.*, (2009) observed that the training programme was a good learning experience for the participants, they felt that their expectations were extremely met by attending and perceived that it was highly effective. After training, 84 per cent of trainees expressed that they have developed high level of confidence. In general, the trainees have revealed that the training programme was well planned and organized effectively; satisfying the needs and requirements of the trainees.

Meena and Singh (2010) reported that all KVKs are playing significant role in accelerating the agricultural production. In order to increase adoption of improved practices, KVKs need to make intensive efforts through its trainings for the farming community

Meena (2013) said that the training was well executed well satisfying the information need and requirement of the participants. It was assured by the trainees to the trainers that they will transfer the knowledge gained in the training to the farmers of their service area.

The vocational training programmes organized by KVKs for rural women for their empowerment had a great impact in Kashmir valley. The authors found that majority of the rural women developed their socio economic status and psychological confidence through these trainings (Nazir *et al.*, 2012).

Prasad and Kushwaha (2015) said that the knowledge level of KVK trained farm women towards crop production was improved.

Rathore and Dhakar (2012) observed that majority of the trainee respondents have high level of knowledge, followed by medium level of knowledge, whereas in the case of non-trainees the medium level respondents were maximum that is trainees have greater knowledge than the non-trainees about improved production technologies.

Krishi Vigyan Kendras are the grass root level vocational training institutions, designed for bridging the gap between the available technologies at the one hand and their applications for increased production at the other (Sanjeev,1987).

Santhi et al.,(2013) concluded that the training imparted at KVK paved way for their developing personality traits like standard of living, decision making pattern, the needs for keeping clean interior, exterior and adopting balanced menu in their diet, resource allocation methods which in turn result in empowerment.

Senthilkumar *et al.*, (2013) revealed that KVK trainings were effective and increased knowledge levels of farmers .The area in which knowledge gained is recorded as high, induces management, marketing, breeding etc.KVK trainees adoption rate also shows an increasing trend.

Senthilkumar et al., (2014) indicated that the respondents were satisfied with training output, quality of teaching and physical facilities provided during the training. Even though considerable efforts have been made in training of farmers in the common vocations and areas of interest, there still remains a lacuna which needs to be filled.

Shankara *et al.*, (2014) shows the effectiveness of training programmes conducted by KVKs in changing the knowledge, skills of the personnel and in turn it

helps in adoption of technologies learnt in the training programmes. The majority of the respondents agreed that the information given by the trainers was more informative.

Sharma *et al.*, (2012) inferred that participating in the vocational trainings conducted by KVK helps the rural women to engage in income generating activities thereby overall empowerment of rural women. By adopting the skills acquired from vocational training helped them to increase their income, saving, social participation, low prestige items, clothing, status of family in the society, size of social circle and social recognition of self etc.

Singh *et al.*, (2010) opined that KVKs are realising the objectives of the vocational training programmes in terms of achieving desired outcomes, impacts and also the follow-up of the trainings will provide much needed guidance to the trainees to avoid discontinuance of the enterprises.

Singh *et al.*, (2011) concluded that most of the Krishi Vigyan Kendra trained trainees were found to have fully skilled about the wheat and paddy crop production package of practices and also suggested to provide demonstration and skill oriented training to the farmer on package of practices of vegetable, fruit and food grain crop production for human resources development.

Singh *et al.*, (2015) revealed that conductance of on campus vocational training programmes by Krishi Vigyan Kendra had a positive impact on the knowledge gained because they played an important role in developing the skills among the practicing farmers and also benefiting the farmers particularly women for generation of income.

Sridhar *et al.* (2013) said that KVK is playing vital role in raising the socio-economic status of the rural community. They found that farmers are maintaining a regular relationship with KVKs for upgrading their knowledge.

Srinivas and Sailaja (2013) stated that after training programme conducted by KVK, knowledge, attitude and acquisition of skills were increased in participants' food processing and preservation aspects

Sumathi (2014) inferred that due to the training methodology adopted and continuous effort made by the trainer's majority of the farmers had shown significant increase of knowledge level and they will disseminate the technologies to the other farmers at village level to solve the problems very efficiently.

Yadav and Pareek (2014) revealed that Krishi Vigyan Kendra can bring significant positive changes in the socioeconomic status as well as knowledge level of trainees which helped them to use improved farm implements.

## **2.2 Types of participation for KVK**

Bhati *et al.*, (2012) found that on-campus trainings conducted by KVK helped majority of the trainees to gain more knowledge. It is assessed based on the knowledge gain after the training compared to pre training score.

Jiyawan *et al.*, (2012) recommended that KVK personnel should visit the fields more frequently and teach the farmers about various activities carried out by KVK for their benefit and it is encouraging to note that majority of respondents had positive attitude towards KVK and its activities. But still there lies a scope to contact the farmers who had unfavorable attitude to enlighten them about the benefits of KVK and bring about changes in their attitudes.

Prasad and Kushwaha (2015) mentioned that KVK impart need based and skill oriented vocational training which is helpful for the development of farm women beneficiaries. They have better and improved level of socio-economic status than non-beneficiaries farm women.

Rachna and Sodhi (2013) indicated that conductance of the trainings will provide much needed guidance to the trainees. Mushroom growing enterprise does not require additional arable land, thus farmers with small and marginal land holdings can augment their dwindling farm income.

Senthilkumar *et al.* (2013) observed that field visits are effective to motivate farmers for the adoption of new technologies apart from the vocational trainings alone.

Sharma *et al.*, (2013) concluded that KVK's training on Fruit and vegetables preservation (FVP) was effective in enhancing the knowledge and adoption of technologies; Therefore, it could be employed that more & more such training programme in FVP may be organized which would be benefited to farm women in particular & farming community in general.

Singh *et al.*, (2007) reported that to make the training programmes fruitful they should be organized as off campus with minimum duration and one day training is most suitable and September to November is appropriate time for organizing training to farmers.

Srinivas and Sailaja (2013) concluded that knowledge, attitude and acquisition of skills and adoption level was increased among the participants when they exposed to the scientific beekeeping, food processing and preservation aspect after the training programme conducted by KVK.

Vashisht and Nandal (2011) realized that the technical know-how provided by KVK through trainings helped the rural women to utilize seasonal fruits and vegetables in the best way by processing it by their own which lead to improvement in the nutritional status of their family.

Veeranjaneyulu *et al.*, (2014) found that every trainee has become an earner of supplementary income and this has given a boost to livelihoods of rural women and additional employment especially to house wives.

### **2.3 Trainee characteristics for KVK**

Bar (2015) said that KVK training has made significant impact in increasing the knowledge level of the tribal farmers and farm women on various farm activities and socio-economic attributes of the respondents had not much influence in increasing the knowledge level of respondents. Therefore KVKs have to organize more need based training programmes to enrich the knowledge and skill competency of tribal farmers to adopt the changed practices of production for their sustainable livelihood.

Bar *et al.*, (2015) concluded that farmers to attend KVK training appropriate selection of trainees, content addressing the local needs, easily understandable, immediate use and emphasis on skill up-gradation ,group discussion exercise, encouraging interaction, circulation of reference materials and use of more audio-visual aids for conducting training to motivate tribal farmers to attend KVK training.

Binkadakatti and Pawar (2011) reported that trained farmers have more knowledge compared to untrained, because they participated in trainings organised by KVK, and also they were in regular touch with subject matter specialists of KVK.

Biswas *et al.*, (2014) stated that majority of ex-trainee respondents under KVK belonged to the category of small farmers of 20-30 years old, unmarried, belonged to low income group, scheduled caste category having high school education as literacy status and land up to one hectare.

Goel *et al.*, (2015) clearly indicated that the Krishi Vigyan Kendras are realising the objectives of the mushroom cultivation training programmes in terms of achieving desired outcome and impact. The follow-up of the trainings by the KVKs will provide much needed guidance to the trainees and avoid discontinuance of the enterprise.

Pradeepkumar (1993) observed that almost all the respondents had more favourable attitude towards self employment in agriculture and allied fields and this was shared almost equally by both genders.

Rani and Subhadra (2009) inferred that there is a need for conducting more number of need based and well tailored training programmes suited to farm women which would in turn help them to have more extension agency contacts.

Sharma *et al.*, (2013) said that the exposure of KVK training programmes significantly changed the attitude of farmers in desired direction, like high knowledge, high level of attitude of on-campus trainees compared to off-campus trainees. Therefore serious attention is required to educate the off-campus trainees in order to develop their attitude positively towards KVK training programmes.

Sridhar *et al.*, (2015) stated that KVK trainings resulted in the empowerment of rural women for taking control of the management of local development in their villages. Women empowerment will not only be beneficial to women, but society as a whole shall benefit politically, economically and culturally.



### 2.3 Factors affecting training effectiveness

Ahmad *et al.*, (2012) concluded that KVK's transfer of technology programme have contributed immensely in increasing productivity of farm enterprise but have very little impact on generating gainful employment for the farmers. This clearly reflects that KVKs need to orient its effort for entrepreneurship development among farming community so that farmers/trainees are not only self employed but also create opportunity for unemployed others.

Alyahya *et al.*, (2012) acknowledged that the actual barrier and obstacle to training effectiveness comes from within the human resources development functions. To identify the skill gaps sometimes the appraisal system may be inadequate or poorly executed. A well designed and executed training will facilitates participant's involvement, attitudinal changes and this provides opportunity for application of new skills and knowledge etc

Arthur *et al.*,(2003) reported that the observed effectiveness of training programs are related to the training method used, the skill or task characteristic trained, and the choice of training evaluation criteria. Therefore while making informed choices and decisions in the design, implementation, and evaluation of organizational training programs give importance for the above factors.

Barman and Kumar (2013) found that facilitation plays a great role in the case of training. So in any training it is important to facilitate the training session instead of providing knowledge. To make the training effective, topics like principles of adult learning, group dynamics and facilitation skills like observation, active listening , feedback, analysing, encouraging, decision making, respecting, problem solving,

conflict management, focus, time management, acceptance, flexibility, summarizing, paraphrasing, probing, evaluating and attending skills etc must be included in the training.

Biswas *et al.*, (2014) revealed that awareness generation through vocational training by the KVK on various improved farming practices was efficient, but the adoption rate of all the technologies were not equal. So, KVK needs better coordinated efforts in collaboration with other line departments in order to address the technology gap as well as to create better socioeconomic impact among the farming community.

Himanshu *et al.*,(2014) revealed that major constraints faced by women while starting small scale enterprises were hindered by the lack of government strategies to address gender issues, lack of suitable mechanisms, poor access to resources technology and market, lack of women extension workers, inadequate access to credit etc.

Joseph *et al.*(1991) found that non availability of straw, inadequacy of finance and problem of marketing as the major constraints of mushroom cultivation.

Karra *et al.*,(2013) revealed that, in order to make trainings effective we want to thoroughly study the reasons for non utilization and non application of learned knowledge and skills at back home situation , the organization problems and means to overcome these bottlenecks.

Kunche *et al.*, (2011) inferred that in order to improve the effectiveness of training there are some conditions like the training environment should be favorable, provide good quality of materials, to deliver effective solutions offers a mix of

pedagogical and technological experience and the learning phase is evaluated by conducting test before and after training

Meena and Singh (2013) inferred that for improving the functioning of KVKs, sorting out of the various constraints perceived by the trainers and trainees like lack of practical trainings, lack of transport and inadequate infrastructural facilities of KVK etc are very important. It also helps the policy planners and programme coordinators in developing training policies and action plans to perform their activities smoothly.

Patel *et al.*, (2016) concluded that the importance of training in enhancing farmers skills which is beneficial in reducing the constraints intensity and helpful in better farming.

Patil and Kokate (2011) concluded that Subject Matter Specialists of KVKs had higher training needs about agriculture and allied sciences. should timely assess the training needs of Subject Matter Specialists and accordingly need based training module need to be designed for capacity building of the KVK professionals.

Pillai and Bhaskaran (1991) observed that, preservation and marketing of produce and non availability of spawn as the major constraints in adopting mushroom cultivation among growers.

Pourouchottamane *et al.*, (2012) said that even though considerable efforts have been made by KVKs in training of farmers and rural youths in different aspects there still remains a gap which needs to be addressed. Hence KVKs have to re-orient their trainings as well as increase the number of trainings based on these findings to reduce the existing technological and adoption gap to bring any visible changes.

Rahiman et al.,(1991) concluded that lack of market for mushrooms, difficulty in mother spawn production ,and lack of financial assistance are the major problems faced by mushroom growers.

Sajeev *et al.*, (2012) argued that even though considerable efforts have been made in training of farmers in the common vocations and areas of interest, there still remains a gap which needs to be addressed. The KVKs have to re-orient their trainings based on these findings to fill the gap existing with respect to imparting need based training in the respective districts of Manipur.

Sajeev and Singha (2010) stated that even though considerable efforts have been made in training of farmers in the common vocations and areas of interest, there still remains a gap .Therefore the KVKs have to reorient their trainings to fill this existing gap. Inadequacy in terms of frequency of training imparted was in the most popular areas of training also.

Sharma *et al.*, (2014) indicated that systematically planned and proper follow up action of training programmes not only increased the knowledge and skill of the beneficiaries, but also their production and profit .Therefore the KVKs should plan and organise need based vocational training programmes for entrepreneurship development and in turn will increase the income and employment in the rural areas. so training programmes should be designed based on actual training needs and socioeconomic profile of potential trainees.

Singh *et al.*, (2013) reported that both the trainers and trainees are facing various constraints in carrying out training programmes they are lack of professional growth in the organisation and promotional opportunities, irregular supply of inputs, insufficient practical facilities for imparting training and no availability of required

inputs, lack of practical exercise and coordination with other agencies , inadequate demonstration facilities etc respectively.

Singh *et al.*, (2011) reported that the Krishi Vigyan Kendra trained trainees were found to be fully skilled and investigators are referred to provide skill training along with demonstrations because demonstrations are important for improvement of skills for human resource development.

Tiwari and Pathak (2011) concluded that, the major constraints in training as perceived by the beneficiaries were more complicated procedure for training, most of training are unsuitable for small and marginal farmers and at the selection time of the trainees for training the basic necessities of farmers do not kept in mind as socioeconomic constraints, technical constraints, administrative constraints and managerial constraint etc. Therefore it is important to reorient trainings in a way that it should be need based and practical, reference materials should be given at the starting of training, as per need field visit should be more, training should be in prescribed manner in local language for easy understanding to farmers.

Tyagi and Tyagi (2014) mentioned that even though the trainees were satisfied with coverage of topics, training output and teaching quality and the efforts that have been made for the training of farmers in the common vocations, there still remains a lacuna which needs to be filled. The K V K 's do require re – orienting their trainings for effective adoption of technologies among the target groups such as field demonstration and field visits to different farms is more effective to motivate the farmers for adoption of new technology.

## **2.5 Profile characteristics of KVK trainees**

### **2.5.1 Age**

Jayalekshmi (1996) said that age has a non significant relationship with the entrepreneurial behavior of rural women.

Muller (1997) observed that in effective groups age was negatively and significantly correlated with participation in group activities.

Varma (1996) stated that age is a significant factor that can influence the attitude of farm women towards starting their own enterprises in agriculture and allied areas.

### **2.5.2 Education**

Jayalekshmi (1996) found that the education was positively and significantly related to the entrepreneurial behavior of farm women.

Parvathy (2000) stated that the educational status was positively and significantly correlated with self-confidence.

### **2.5.3 Mass media contact**

Kamarudeen (1981) said that mass media participation was positively and significantly related to attitude of farmers.

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

Varma (1996) reported that mass media participation had significant effect in forming a favourable attitude towards self employment.

### **2.5.4 Social participation**

Ferreira et al. (1983) found that all farmers with high social participation tend to adopt more of the improved technology.

Rajendran (1978) revealed that social participation of farmers was positively and significantly related with the adoption behavior of farmers.

Renukaaradhya (1983) said that majority of trained farmers had high social participation compared to others.

Sharma and Singh (1970) reported that social participation is not an discriminating factor in the extent of participation of farm women in farming activities.

#### **2.5.5 Scientific orientation**

Beal and Sibley (1967) found that the farmer's favorable attitude towards science was positively related with the adoption of farm practices.

Supe and Salode (1975) observed that the scientifically oriented farmers had high extent of adoption of the demonstrated cultivation practices.

#### **2.5.6 Achievement motivation**

Mc Clelland (1961) defined that achievement motivation is the desire to do well, not so much for the sake of the social negotiation or prestige level, but to attain an inner feeling of personal accomplishment.

Sreedaya (2000) stated a positive and significant relationship between achievement motivation and need satisfaction of farmers.

#### **2.5.7 Economic motivation**

Sivaprasad (1997) observed that economic motivation is an important character that persuades people to adopt improved practices that are proven worthy.

Thomas (1998) reported that the more one is motivated by economic ends, the more he will try to adopt the practices which are aimed at increasing sustainable returns.

# MATERIALS AND METHODS



## CHAPTER III

### MATERIALS AND METHODS

Research methodology involves the tools and processes used for analysis of data, employed systematically to solve the research problem and highlights how research is done scientifically. It enables the researcher to establish with a high degree of confidence cause and effect relationship between the research activities and observed outcomes. In this chapter, the methodology employed for the study is presented under the following heads;

3.1 Research design of the study

3.2 Locale of the study

3.3 Sampling procedure employed

3.4 Selection, operationalisation and measurement of the variables

3.5 Methods of data collection

3.6 Statistical tools used

#### **3.1 Research design of the study**

Ex post-facto research design was followed for the study because the researcher does not have direct control over the independent variables as their manifestations had already occurred or because they were inherently not manipulable (Kerlinger, 1983). For the present study, more of qualitative variables were selected by careful analysis of available literature and keeping the specific objectives in mind.

#### **3.2 Locale of the study**

“Krishi Vigyan Kendra” (KVK) was a novel concept developed by Indian Council of Agricultural Research (ICAR) which rests upon a solid base of transfer of

technology from laboratory to farmer's field. KVKs were established in different states, throughout India. In this research work, the study area was confined to Thrissur district which is the mandate area of KVK, Thrissur, Kerala.

## MAP SHOWING LOCALE OF STUDY

### MAP OF THRISSUR DISTRICT



Fig.1:Map of Thrissur District

### 3.3 Sampling procedure employed

Krishi Vigyan Kendra, Thrissur conducts trainings in various topics under Agriculture, Horticulture, Animal Husbandry, Aquaculture etc. Since it was not possible to evaluate all the trainings, it was decided to focus on three trainings which were the foremost in the focal areas of the KVK during the study period. They are mushroom production, value addition of fruits and vegetables and mechanized coconut

climbing. The list of participants from different batches of these trainings organized during the past five years were taken as the sampling frame. Forty beneficiaries were selected randomly from each training. Thus the total sample comprised of 120 beneficiaries, with three groups of respondents.

### 3.4 Selection, operationalisation and measurement of the variables

A variable can be regarded as some kind of yardstick that gives us a basis for the evaluation of the single unit of analysis. Thus selection of appropriate variables is very important for a research is concerned. Based on review of relevant literature and discussion with adviser various variables were selected for relevancy rating. These variables were given to 30 judges who are experts in the field, to assess the relevancy of each item in a 4-point continuum, viz., ‘Very much Relevant’, ‘Relevant’, ‘Slightly Relevant’, ‘Irrelevant’ (Appendix I ). The responses were quantified with a scoring system of 4, 3, 2 and 1 respectively. The total score for each variable and the mean scores were arrived at. Those variables with scores above mean were selected to be included in the interview schedule.

**Table 1. Summary list of variables and their measurement procedures**

Sl.No.	Variables	Measurement procedures
<b>Independent variables</b>		
3.4.1	Age	Sindhu (2002)
3.4.2	Educational status	Trivedi (1963)
3.4.3	Annual income	Sivaprasad (1997)
3.4.4	Size of land holding	Balu (1980)

3.4.5	Farming experience	Sreedaya (2000)
3.4.6	Occupational status	Anup (2003)
3.4.7	Family status	Supe and Singh (1968)
3.4.8	Ownership of house	Developed for the study
3.4.9	Mass media exposure	Prasad (1982)
3.4.10	Contact with extension agency	Kareem (1974)
3.4.11	Social participation	Kamarudeen (1981)
3.4.12	Scientific orientation	Supe (1969)
3.4.13	Self confidence	Bijimol(1995)
3.4.14	Risk orientation	Supe (1969) & Gangadaran (1993)
3.4.15	Achievement motivation	Singh (1970) & Manohari (1988)
3.4.16	Economic motivation	Nanjaiyan (1985)
<b>Dependent variables</b>		
3.4.17	Skill application	Developed for the study
3.4.18	Post training judgment	Developed for the study

### Measurement of independent variables

The operational definition and scoring for the independent variables has been conceptualized as follows;

### 3.4.1 Age

It was operationally defined as the number of chronological years the trainee has completed at the time of interview. It was measured by following the scoring procedure of Sindhu (2002) with slight modification.

**Table 2. Age scoring procedure**

Sl.No.	Category	Score
1	26-35 years	1
2	36-45 years	2
3	46-55 years	3
4	More than 55 years	4

### 3.4.2 Educational status

Operationally defined as the extent of formal education acquired by the trainee at the time of interview. The educational status was measured by following the procedure of Trivedi (1963) in his socio-economic status scale with slight modification.

**Table 3. Educational status scoring procedure**

Sl.No.	Category	Score
1	Basic education	1
2	Primary education	2
3	High school	3
4	Higher secondary	4
5	Degree and above	5

### 3.4.3 Annual income

Annual income was operationally defined as the earning in rupees of the respondent from agriculture and allied sources in a year. The method used by Sivaprasad (1997) was used with slight modification.

**Table 4. Annual income scoring procedure**

SI.No.	Category	Score
1	Below 0.5 lakh	1
2	0.5 lakh-1 lakh	2
3	1 lakh-2 lakh	3
4	2 lakh -3 lakh	4
5	More than 3 lakh	5

### 3.4.4 Size of land holding

It is operationally defined as the area possessed by the family of the trainee, measured in cents for which the respondent had legal rights. The method used by Balu (1980) with slight modification

**Table 5. Size of land holding scoring procedure**

SI.No	Category	Score
1	10-20 cents	1
2	20-30 cents	2
3	30-50 cents	3
4	More than 50 cents	4

### 3.4.5 Farming experience

This is operationally defined as the number of years since the trainee is involved in farming. Sreedaya (2000) scale was followed with slight modification for this study.

**Table 6. Farming experience scoring procedure**

Sl.No	Category	Score
1	Below 5 years	1
2	6-10 years	2
3	11-15 years	3
4	More than 16 years	4

### 3.4.6 Occupational status

It is operationally defined as the profession or employment of the trainee from which major source of income comes. The categorization and scoring procedure followed by Anup (2003) was used with slight modification.

**Table 7. Occupational status scoring procedure**

Sl.No	Category	Score
1	Agriculture	1
2	Self-employment	2
3	Salaried / waged employment	3
4	Retired	4

### 3.4.7 Family status

It is operationally defined as the status of family members of the trainee i.e. whether they were staying alone or with relatives etc. The scoring procedure developed by Supe and Singh (1968) are used for measurement with slight modification.

**Table 8. Family status scoring procedure**

Sl.No	Category	Score
1	Nuclear family	1
2	Joint family	2
3	Along with relatives	3
4	Along with children	4

### 3.4.8 Ownership of house

It is operationally defined as the status of possession of the living quarters of the respondent. It was measured using an arbitrary scale developed for the present study.

**Table 9. Ownership of house scoring procedure**

Sl.No.	Category	Score
1	Self owned	1
2	Owned by husband	2
3	Owned by relatives	3
4	Rented	4



### 3.4.9 Mass media exposure

This is operationalised as the degree to which the trainees were exposed to different mass media channels for seeking information.

In order to measure, the method of Prasad (1982) was used where the trainees were asked to indicate how often they used each of them.

**Table 10. Mass media exposure scoring procedure**

Frequency	Score
Never	0
Once in a month	1
Once in a fortnight	2
Once in a week	3
Twice or more in a week	4
Every day	5

### 3.4.10 Contact with extension agency

This is operationally defined as the extent of contact of a trainee with different extension agencies / personnel.

The method followed by Kareem (1974) is used for quantifying the variable with slight modification.

**Table 11. Contact with extension agency scoring procedure**

Sl.No.	Category of response	Score
1	Once in a month	1
2	Once in a fortnight	2
3	Once in a week	3
4	Twice or more times in a week	4

### 3.4.11 Social participation

It is operationally defined as the degree of involvement of the respondents in social organisation as members or office bearers.

For measuring social participation, the method used by Kamarudeen (1981) is used with slight modification for the present study.

**Table 12. Social participation scoring procedure**

Sl.No	Category	Score
1	Membership in one organization	1
2	Membership in two to three organizations	2
3	Membership in more than three organizations	3

### 3.4. 12 Scientific orientation

Defined as the degree to which trainee is oriented to the use of scientific methods in decision making in farming.

For measurement, scale developed by Supe (1969) is used. The scale consists of six statements, regarding the use of scientific methods of farming in which five statements are positive and one is negative. The responses were collected on a five point continuum as shown below, for positive statements and just reverse in the case of negative statements.

**Table 13. Scientific orientation scoring procedure**

Points in the continuum	Score
Strongly disagree	1
Disagree	2
Undecided	0
Agree	3
Strongly agree	4

### 3.4.13 Self confidence

It is operationally defined as the degree of faith a trainee has in their own powers, abilities and resourcefulness to perform any activity.

The scale of Bijimol (1995) was adopted with slight modifications. The scale consisted of 8 statements of which three were positive and five negative. These statements were rated on a 5 point continuum as shown below, for positive statements and for negative statements just reverse.

**Table 14. Self-confidence scoring procedure**

Points in the continuum	Score
Strongly disagree	1
Disagree	2

Undecided	0
Agree	3
Strongly agree	4

#### 3.4.14 Risk orientation

It is operationally defined as the degree to which a trainee is oriented towards encountering risk and uncertainty in starting and continuing in the application of skills gained.

Measured with the help of the scale developed by Supe (1969), modified by Gangadaran (1993). The scale consist of six statements of which fifth statement is negative .The responses were collected on a five point continuum as shown below.

**Table 15. Risk orientation scoring procedure**

Points in the continuum	Score
Strongly disagree	1
Disagree	2
Undecided	0
Agree	3
Strongly agree	4

For negative statement the scoring pattern was just reserved. The scores obtained for each statement were summed up to arrive at the total risk taking ability of the trainee.

### 3.4.15 Achievement motivation

Achievement motivation refers to the desire for excellence in order to attain a sense of personal accomplishment.

It was measured by the scale developed by Singh (1970) and modified by Manohari (1988). The scale consists of seven statements. The responses were collected on a five point continuum as follows

**Table 16. Achievement motivation scoring procedure**

Points in the continuum	Score
Strongly disagree	1
Disagree	2
Undecided	0
Agree	3
Strongly agree	4

Total score for each respondent is obtained by summing up the scores on all items and the mean score was worked out.

### 3.4.16 Economic motivation

Operationalised as the extent to which the trainee is oriented towards achievement of the maximum economic ends such as maximization of farm profits.

Measured with the scale developed by Nanjaiyan (1985). The scale consists of six statements with equal number of positive and negative statements. The responses were collected on a five point continuum as shown below for positive statements and just reverse for negative statements.

**Table 17. Economic motivation scoring procedure**

<b>Points in the continuum</b>	<b>Score</b>
Strongly disagree	1
Disagree	2
Undecided	0
Agree	3
Strongly agree	4

The scores for all the statements were summed up to get individual total score and the mean score was worked out.

**Measurement of dependent variables**

**3.4.17 Skill application**

Skill application is operationally defined as the successful application of skills gained after attending the various skill based trainings from KVK, Thrissur. All aspects of skill application were looked in to, like the extent, duration and type of post training skill application. After consulting training experts from KVK, referring relevant literature and based on the insights drawn from pilot study, a scale consisting of seven statements was prepared for the study to measure post training skill application.

**Table. 18.a. Extent of post training skill application**

<b>Sl.No.</b>	<b>Extent</b>	<b>Score</b>
1	No change	0
2	Discontinuance	1

3	Decline	2
4	Status -quo	3
5	Expansion-single unit	4
6	Networking- with others	5

**Table. 18.b. Duration-details of duration of engagement in the activity**

Sl.No.	Duration of skill application	Score
1	Occasionally	1
2	Few days in a week	2
3	Continuously-everyday	3

**Table 18.c. Degree of generation of employment**

Sl.No.	Extent	Score
1	No employment generation	1
2	Part time	2
3	Full time	3

After getting responses, trainees were classified as having low skill application, medium skill application and high skill application based on the their extent of post training activities, time spent for skill application per month and generation of any employment opportunities. Multinomial logistic regression analysis was used for understanding the effect of other variables on skill application.

**Table 18.d. Skill application scoring procedure**

Sl.No.	Level of skill application	Rank	Score for rank
1	Low skill application	0,1	1
2	Medium skill application	2,3	2
3	High skill application	4,5	3

### **3.4.18 Post training judgement**

Post training judgement is operationally defined as whether the trainees uphold the advantages or disadvantages of the skill based training obtained predominantly over the other.

The post training judgement is classified in to two; they are positive judgement and negative judgement. Positive judgement means the benefits while application of skills are seen predominantly and negative judgement means that constraints faced while application of skills are seen predominantly. Multinomial logistic regression was used for measuring the effect of other variables on post training judgement .

**Table 19. Post training judgement scoring procedure**

Sl.No	Post training judgement	Score
1	Negative post training judgement	0
2	Positive post training judgement	1



### **3.4.19 Constraints faced by trainees**

Constraints faced by trainees are operationally defined as the potential roadblocks that may stand in the way of a successful application of skills gained from the trainings.

It was ranked by taking the frequency of each constraint separately for three group's i.e. mushroom production, value addition of fruits and vegetable and mechanized coconut climbing and arranging them in descending order.

### **3.5 Method of data collection**

Keeping the objectives in mind, a draft interview schedule was prepared, circulated among experts and based on their suggestions modifications were made wherever found necessary. The final interview schedule in English (Appendix II) was prepared with great care to eliminate errors and to avoid confusion and ambiguity regarding various items. A Malayalam version of the same was also prepared to use at the time of interview.

The primary data collection was done by conducting two ex-trainees meet of KVK in mushroom production and mechanized coconut climbing and the other respondents were directly interviewed by the researcher. The questions were objective type and the responses were transcribed in the schedule itself. Key informant interviews and rechecking was also done for those responses which were not clear. In the meanwhile secondary data was also collected from the office records and reports of KVK, Thrissur .

### **3.6 Statistical tools used in the study**

The data collected from respondents were scored, tabulated and analyzed using Statistical Package for Social Sciences (SPSS version 16). The statistical tests used for analysis and interpretation of data included:

3.6.1 Descriptive statistics such as cross tabulation, frequency and percentages

3.6.2 Regression multinomial logistics

3.6.3 Kruskal-Wallis one way analysis

### 3.6.1 Descriptive statistics

Simple percentage, cross tabulation and frequencies were worked out to find out distribution of trainees according to different variables. The results of independent variables selected for the study were interpreted using this analysis.

Classification of sample population into different categories was calculated as follows

**Table 20: Descriptive statistics**

Category	Range (score)	Values
High	$(\geq \text{mean} + \text{standard deviation})$	$\geq \text{mean}$
Medium	$(\geq \text{mean} + \text{standard deviation}) + (\leq \text{mean} - \text{standard deviation})$	Between
Low	$(\leq \text{mean} - \text{standard deviation})$	$\leq \text{mean}$

### 3.6.2 Regression Multinomial Logistics

SPSS was used to analyse the relationships between a non-metric dependent variable and metric independent variables. It will assist study the presence of relationship between the dependent variable and the combination of independent variables.

### 3.6.3 Kruskal-Wallis oneway analysis of variance

The Kruskal-Wallis oneway analysis of variance is a non-parametric test used to assess the relationship between dependent and independent variables.

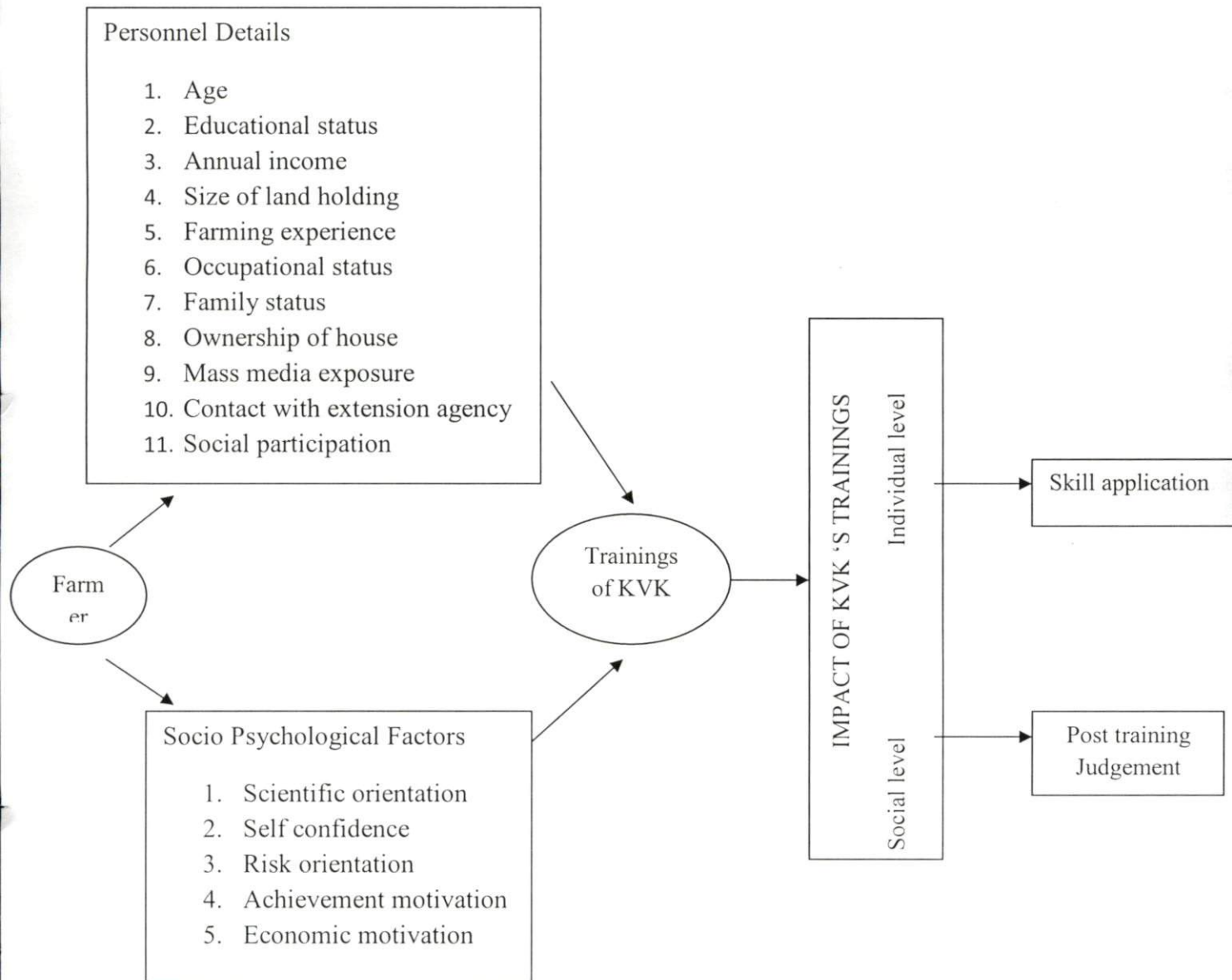
Quartiles were found out in the score pattern of each independent variable. Dependent variables were ranked. Then to the respondents coming in each quartile, ranks were allotted instead of the actual scores for dependent variables. The K value was calculated as,  $K = R^2/N$

Where R= the sum of ranks in each category

N= the sample size

Then the statistic was found out as  $12K/N(N+1) - 3(N+1)$ . This statistic can be assumed to follow  $X^2$  distribution for large samples. Hence the calculated value of the statistic was tested against the tabled value of  $X^2$ , to know whether the groups differed significantly in the dependent variables. If they differed, it meant that the independent variable which was taken for categorizing the sample had significant relationship with the dependent variable.

Fig. 2. Conceptual framework for the study



## PHOTOS TAKEN DURING DATA COLLECTION



# RESULTS AND DISCUSSION

## CHAPTER IV

### RESULTS AND DISCUSSION

The findings of the study as per the methodology prescribed in the preceding chapter are presented with discussions under the following sub-heads.

- 4.1. Analyzing the independent variables chosen under the study.
- 4.2. Post training skill application and Post training judgement
- 4.3 Delineating the factors affecting post training skill application and post training judgement
- 4.4. Study based on group statistics
- 4.5. Constraints faced by the trainees in application of skills gained
- 4.6. Post training benefits gained as perceived by the trainees

A total of 120 respondents who received skill based trainings from KVK on three major streams of end use namely; mushroom production, value addition of fruits and vegetables, mechanized coconut climbing were recorded. The summary of the measurements on different parameters recorded for skill based trainings group wise are presented so that it may serves as indicator for the trainers to think over, analyse and modify their mode of training and concentrate on certain typical vulnerable points to be taken care of / controlled/ improvised.

#### **4.1. Analyzing the independent variables chosen under the study**

##### **4.1.1 Profile characteristics of trainees of KVK, Thrissur**

This section reveals the distribution of trainees with respect to various profile characteristics and it includes the discussions relevant to those characters. The variables studied under profile characteristics were personal characteristics such as age,

educational status, annual income, size of land holding, farming experience, occupational status, family status, ownership of house and socio psychological characteristics such as mass media exposure, contact with extension agency, social participation, scientific orientation, self-confidence, risk orientation, achievement motivation and economic motivation.

#### 4.1.1.1 Educational status and age of respondents

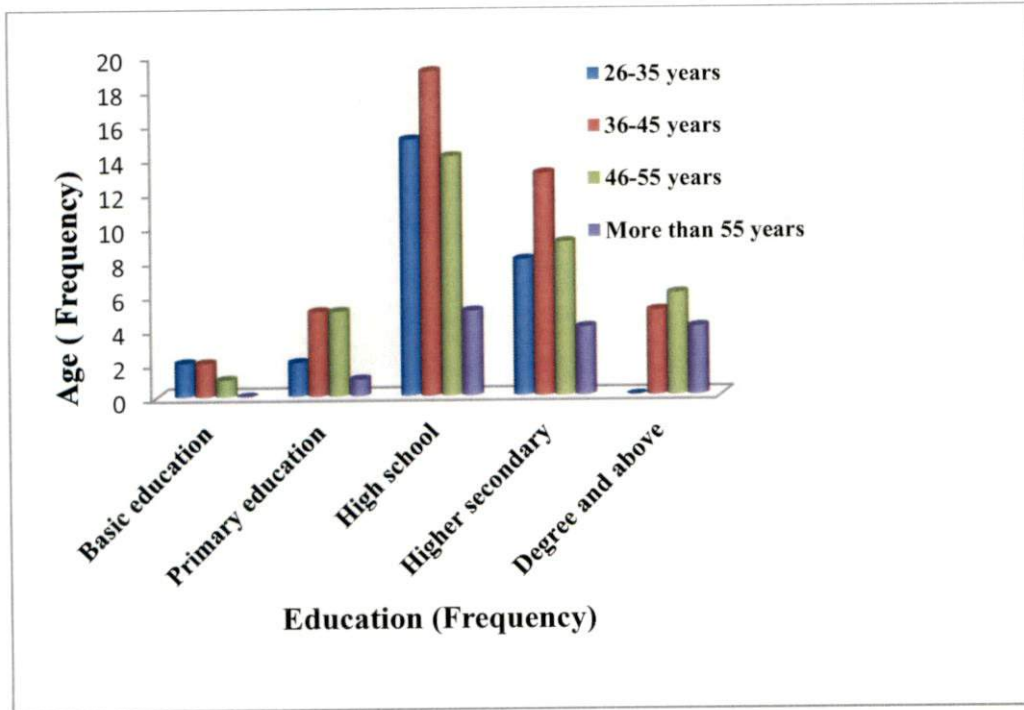
**Table 21. Distribution of respondents according to age and educational status (N=120)**

Age of respondents	Educational status of respondents					Total
	Basic education	Primary education	High school	Higher secondary	Degree & above	
26-35 years	2	2	15	8	0	27 (22.58)
36-45 years	2	5	19	13	5	44 (36.66)
46-55 years	1	5	14	9	6	35 (29.16)
More than 55 years	0	1	5	4	4	14 (11.6)
<b>Total</b>	5 (4.18)	13 (10.83)	53 (44.16)	27 (28.33)	15 (12.5)	<b>120 (100.0)</b>

*\*Percentages are given in parenthesis*



**Fig.3. Distribution of respondents according to age and educational status**



The frequency distribution of respondents on the variables age and educational status are shown in Table. 21. Among the trainees, 36.66 per cent were middle aged i.e., between 36 to 45 years, 29.16 per cent were above middle aged, i.e, in the age group between 46 to 55 years, 22.58 per cent were young people whose age was between 26-35 years and 11.6 per cent were aged people who were in the age group of more than 55 years. It is clear that majority (65.82 %) of the respondents were middle to old aged because they were more interested towards starting their own enterprise and they were also familiar with these kinds of works, therefore they did not feel any difficulty. The reason for the less participation of young people may be that, they were more interested towards white collar jobs as they feel agriculture as a work with less social status and low wage rate. In case of educational status, majority were educated up to high school (44.16%) followed by higher secondary (28.33%), degree level and above (12.5%), primary school (10.83%) and basic education (4.18%). None of the respondents were observed as illiterate, which reflects the higher literacy rate

prevailing among the people of Kerala. It is interesting to find that over 12.5 per cent of the respondents possessed degree and above education which indicates the importance people of Kerala attaches to higher education. Majority of the trainees seem to be the youngest lot i.e., below 45 years and majority among them has high school-higher secondary education. This indicates that those who were not able to pursue college education, turn to agriculture related occupation and by promoting opportunities for them in agri based enterprises can be developed and sustained.

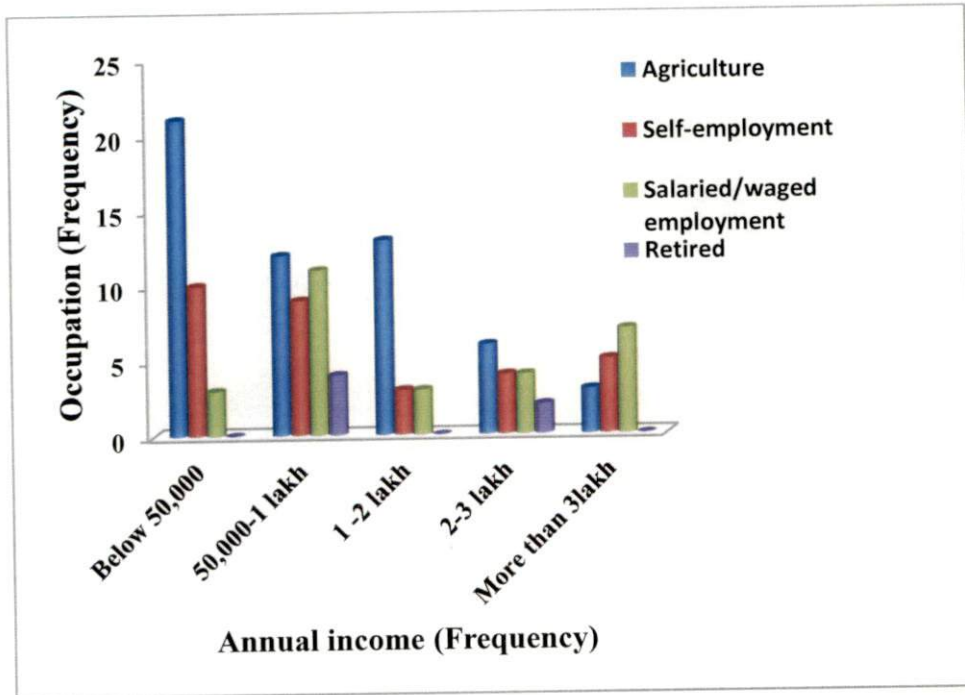
#### 4.1.1.2 Annual income and occupational status of respondents

**Table 22. Distribution of respondents according to annual income and occupational status (N=120)**

Annual income of the respondents	Occupation of the respondents				Total
	Agriculture	Self-employment	Salaried/waged employment	Retired	
Below 50,000	21	10	3	0	34 (28.33)
50,000-10,0000	12	9	11	4	36 (30.01)
1 lakh-2 lakh	13	3	3	0	19 (15.83)
2 lakh-3 lakh	6	4	4	2	16 (13.33)
More than 3 lakh	3	5	7	0	15(12.50)
<b>Total</b>	55 (45.83)	31 (25.83)	28 (23.33)	6 (5.01)	<b>120 (100.0)</b>

*\*Percentages are given in parenthesis*

**Fig.4. Distribution of respondents according to annual income and occupational status**



A cursory view of the result presented in the Table. 22, shows that nearly one third of the respondents (30.01%) had an annual income between Rs.50,000-1 lakh followed by 28.33 per cent with annual income below Rs.50,000, 15.83 per cent had annual income between Rs.1-2 lakh and 15 per cent had an annual income more than 3 lakh. Only 13.33 per cent had between 2-3 lakh annual incomes. The result presented indicates the relatively poor economic status of the respondent trainees. This could be due to the fact that the respondents were not getting good remunerative for agriculture related works from their small land holding size. As a result their standard of living is also coming down. Regarding occupational status, out of the total trainees 45.83 per cent of respondents were farmers who had their main source of income as agriculture followed by 25.83 per cent of respondents were self employed, 23.33 per cent of respondents were waged/ salaried employees and only 5.01 per cent of the trainees were retired. An interesting pattern is that more percentage of people among all income

groups except the highest income group, are engaged in agriculture as a major occupation. This certifies the notion agriculture, still is the backbone of our rural life. Among the highest income group, more people were engaged in salaried jobs.

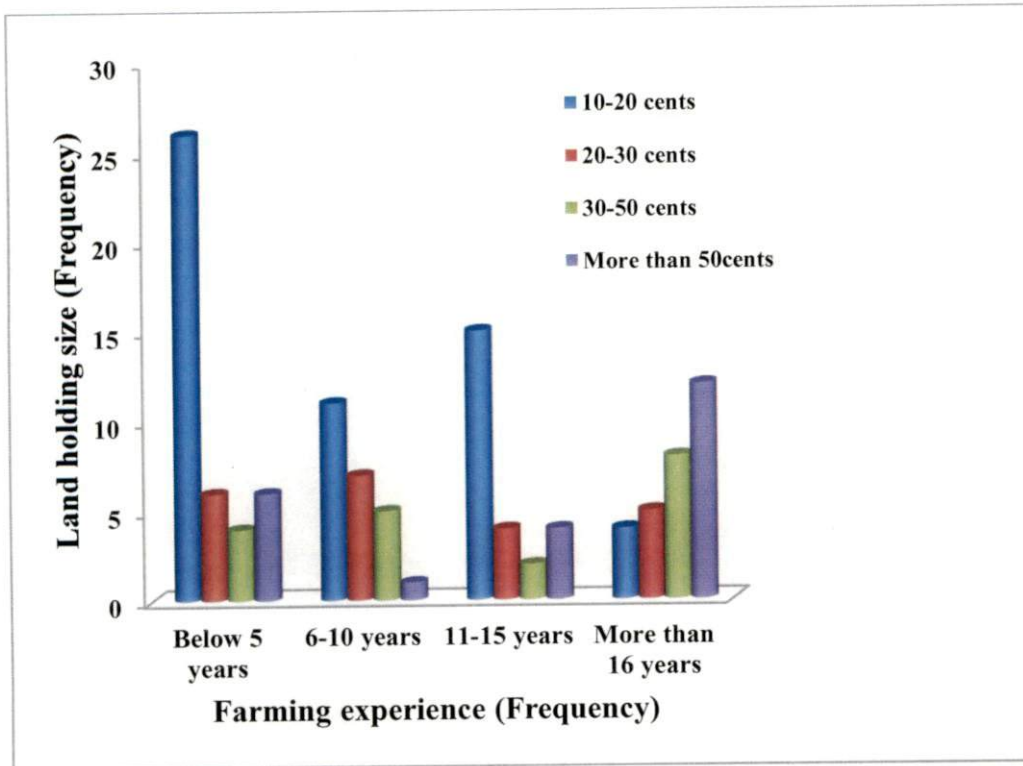
#### 4.1.1.3 Size of land holding and farming experience of respondents

**Table 23. Details of land holding size and farming experience of respondents (N=120)**

Land holding size of the respondents	Farming experience of the respondents				Total
	Below 5 years	6-10 years	11-15 years	More than 16 years	
10-20 cents	26	11	15	4	56 (46.66)
20-30 cents	6	7	4	5	22 (18.35)
30-50 cents	4	5	2	8	19 (15.83)
More than 50cents	6	1	4	12	23 (19.16)
<b>Total</b>	<b>33 (36.7)</b>	<b>17 (18.9)</b>	<b>18 (20.0)</b>	<b>22 (24.4)</b>	<b>120 (100.0)</b>

*\*Percentages are given in parenthesis*

**Fig.5. Distribution of land holding size and farming experience of respondents**



It is evident from the above table that a higher proportion of the respondents (46.66%) belonged to the category having 10-20 cents, followed by 19.16 per cent of respondents having more than 50 cents, 18.35 per cent having 20-30 cents and 15.83 per cent having 30-50 cents. Majority, that is 46.66 per cent of respondents were having 10-20 cents, shows the fact that the average size of land holding in Kerala is less than one acre, hence, the sample is the true representation of the existing population. Also Kerala state is characterized by high fragmentation of land holdings, which may be another reason for most of the respondents have only a small holding at their disposal which can be devoted to agriculture. Regarding farming experience the results indicates that majority (36.7%) of the trainees were having below 5 years of experience in farming , followed by 24.4% of the farmers having more than 16 years of farming experience and 20 per cent of farmers having 11-15 years of experience. Only 18.9 per cent of farmers had 6-10 years of experience. Farming experience generally prepares

the farmer to take necessary risks and adopt timely coping mechanisms to get over the adverse situation and it also makes the farmers confident in taking decisions. It can be also understood that small holder farmers having less than 20 cents of land are turning more towards agro based micro enterprises during the recent times. Highest majority of the trainees (46.66%) were in this category and out of them 66 per cent had less than 10 years of farming experience and 26.8 per cent were in farming for 11-15 years. This shows the utmost necessity for promoting skill based trainings for small holder farmers.

#### 4.1.1.4 Family status and ownership of house of respondents

**Table 24. Details of respondents family status and ownership of house (N=120)**

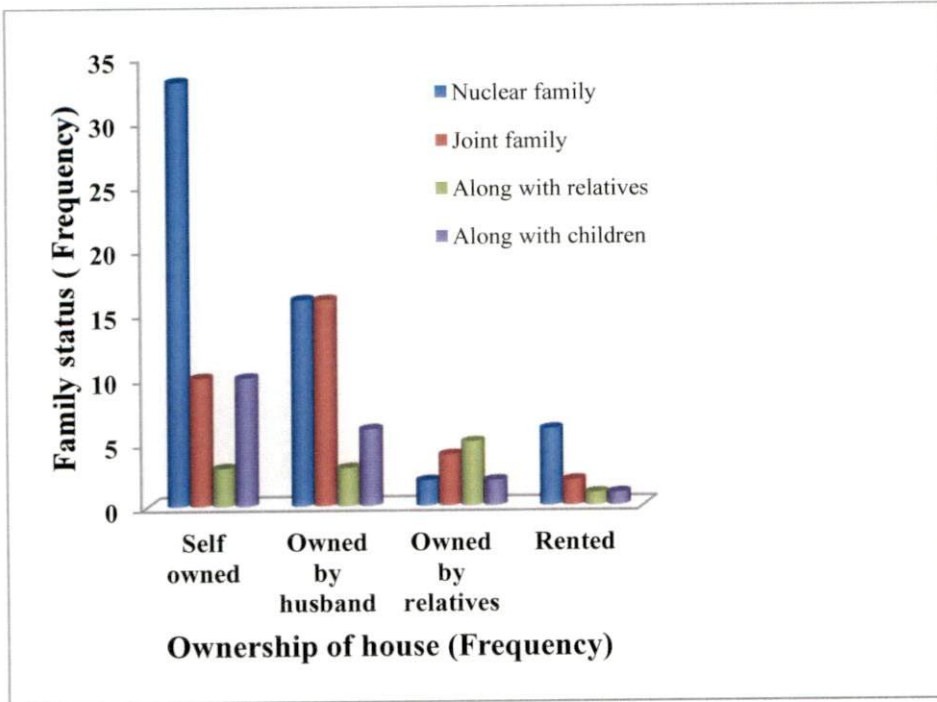
Family status of the respondents	Ownership of house of the respondents				Total
	Self owned	Owned by husband	Owned by relatives	Rented	
Nuclear family	33	16	2	6	57 (47.5)
Joint family	10	16	4	2	32(26.66)
Along with relatives	3	3	5	1	12(10.01)
Along with children	10	6	2	1	19(15.83)
<b>Total</b>	56 (46.66)	41(34.16)	13(10.83)	10(8.35)	<b>120(100.0)</b>

\*Percentages are given in parenthesis

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**Fig.6. Distribution of respondents according to family status and ownership of house**



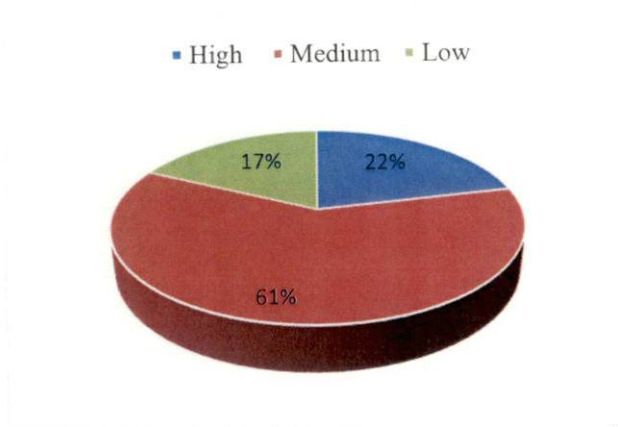
A close look of Table. 24, revealed that half of the respondents (47.5%) were coming from nuclear families followed by 26.66 per cent from joint family, 15.83 per cent were staying along with their children and only 10.01 per cent were staying along with relatives. The result reflects the growing picture of nuclear families in the state due to the immediate separation after marriage since they do not wish to take more family burden, joint family is on the decline now a days in Kerala. This finding is in line with the findings of Hussain (1994). Observations from the ownership of the house shows that majority (46.6%) had their own house followed by 34.16 per cent respondents, where house is owned by the husband and 10.83 per cent owned by relatives. Only 8.35 per cent were living in rented houses. Only those who own a house and a little land associated with it, will have the freedom to take up a micro enterprise like mushroom production or value addition of fruits and vegetables and then go on to

expand it in that premises. Therefore having own premises is important in the case of trainee in achieving high skill application.

#### 4.1.1.5 Mass media exposure

**Table 25. Distribution of respondents according to their mass media exposure (N=120)**

Sl. No.	Category	Range (score)	Frequency	Per cent
1	High exposure to mass media	$\geq 20$	26	21.66
2	Medium exposure to mass media	20-9	73	60.83
3	Low exposure to mass media	$\leq 9$	21	17.51
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.7. Distribution of respondents with respect to their mass media exposure**

A glance at the Table.25 revealed that a good portion of the respondents were in the medium group (60.83 per cent) and 21.66 per cent of the respondents were in high group and 17.51 per cent in low group of mass media exposure. On mass media,

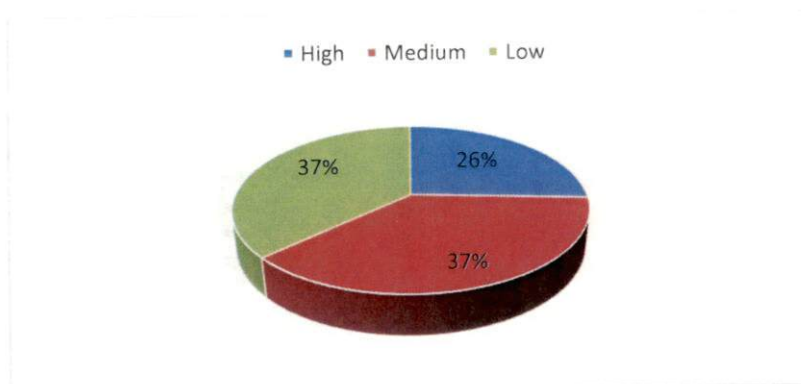


paper and television were regularly used, sometimes used radios, agricultural magazines while emails and mobile apps were rarely used.

#### 4.1.1.6 Contact with extension agency

**Table 26. Distribution of respondents with respect to their contact with extension agency (N=120)**

Sl No.	Category	Range(score)	Frequency	Per cent
1	High contact with extension agency	$\geq 7.4$	31	25.83
2	Medium contact with extension agency	7.4-1	45	37.51
3	Low contact with extension agency	$\leq 1$	44	36.66
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.8. Distribution of respondents with respect to their contact with extension agency**

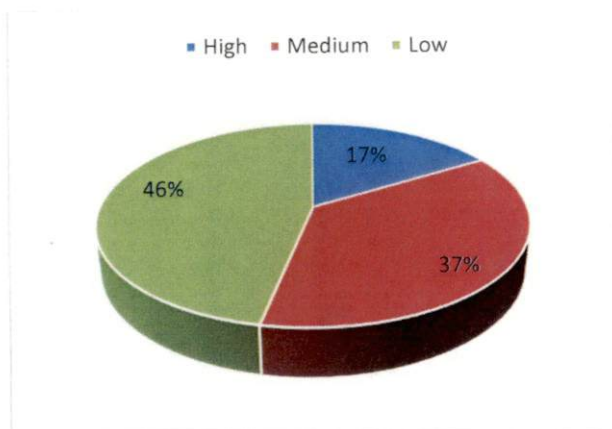
It can be observed from the Table. 26 that 37.51 per cent of respondents had medium level of contact with extension agency, followed by 36.66 per cent with low level and 25.83 per cent with high level of extension contact. Among different extension agencies respondents have more contact with agricultural officers followed

by trainers and office members. In case of frequency of contact more contact is with trainers and agricultural officers. The high literacy rate and mass media exposure observed might have contributed to the overall medium level of contact with extension agencies.

#### 4.1.1.7 Social participation

**Table 27: Distribution of respondents with respect to their social participation**

Sl. No.	Category	Range(score)	Frequency	Per cent
1	High social participation	$\leq 4$	20	16.67
2	Medium social participation	1- 4	44	36.67
3	Low social participation	$\geq 1$	56	46.66
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.9. Distribution of respondents with respect to their social participation**

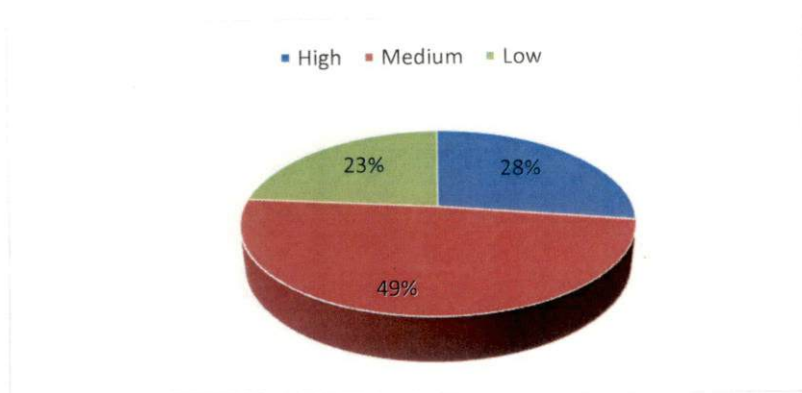
From the data furnished in the Table.27 shows that nearly half (46.67%) of respondents had low level of social participation followed by 36.67 per cent

respondents with medium and 16.67 per cent with high level respectively. It determines the ability of an individual to socialize with others and their involvement in activities undertake with in groups. From above results it could be presumed that respondents less interest towards social activities. Respondents have membership in various organizations like Panchayat, Kudumbasree, Swasraya sangham, and extend of participation was also more among the respondents.

#### 4.1.1.8 Scientific orientation

**Table 28: Distribution of respondents according to their scientific orientation**

Sl. No.	Category	Range (score)	Frequency	Per cent
1	High scientific orientation	$\geq 19.35$	33	27.51
2	Medium scientific orientation	19.35-11	59	49.16
3	Low scientific orientation	$\leq 11$	28	23.3
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.10. Distribution of respondents according to their scientific orientation**

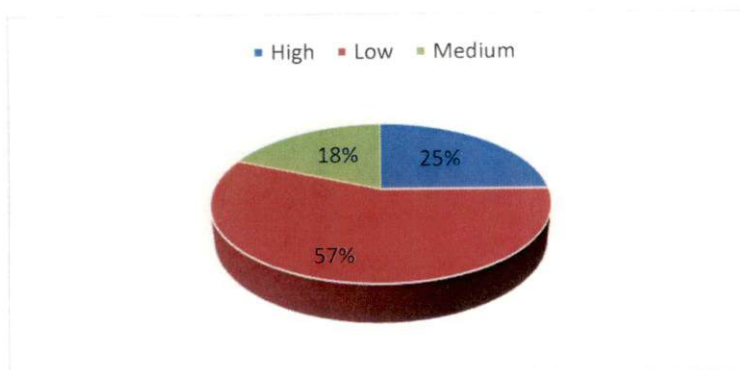
From (Table 28) it is evident that half (49.16 per cent) of the respondents had medium level of scientific orientation followed by 27.51 per cent of respondents belonged to high level and 23.33 per cent of respondents belonged to low level of scientific orientation. Medium to high scientific orientation is a promising trend in the study area and more exposure to trainings might have influenced the respondents to have this. Scientific orientation helps an individual to systematically proceed from problem identification to solution, thus making the decision more effective.

The results are in line with the findings of the study conducted by Kumar(2003).

#### 4.1.1.9 Self confidence

**Table 29. Distribution of respondents with respect to their self confidence**

Sl. No.	Category	Range (score)	Frequency	Per cent
1	High level of self confidence	$\geq 24$	30	25.00
2	Medium level of self confidence	24-14	68	56.67
3	Low level of self confidence	$\leq 14$	22	18.33
<b>Total</b>			<b>120</b>	<b>100</b>



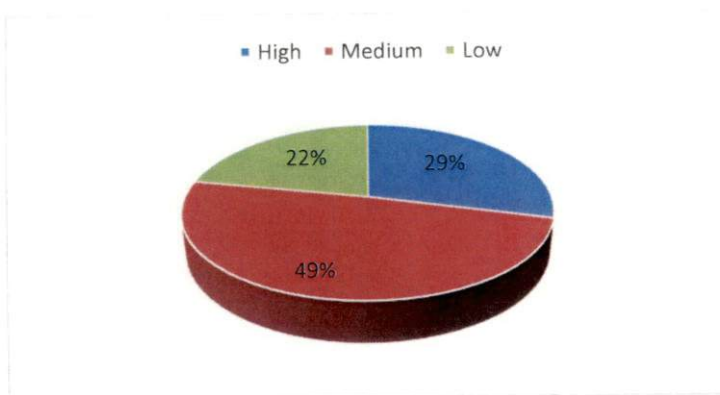
**Fig.11. Distribution of respondents according to their self confidence**

Results furnished in the Table.29 indicates that almost 56.67 per cent of respondents had medium level of self confidence whereas nearly 25 per cent of respondents had high level and 18.33 per cent had low level of self confidence.

#### 4.1.1.10 Risk orientation

**Table 30. Distribution of respondents with respect to their risk orientation**

Sl. No	Category	Range (score)	Frequency	Per cent
1	High risk orientation	$\geq 20$	35	29.17
2	Medium risk orientation	20-13	59	49.16
3	Low risk orientation	$\leq 13$	26	21.67
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.12. Distribution of respondents according to their risk orientation**

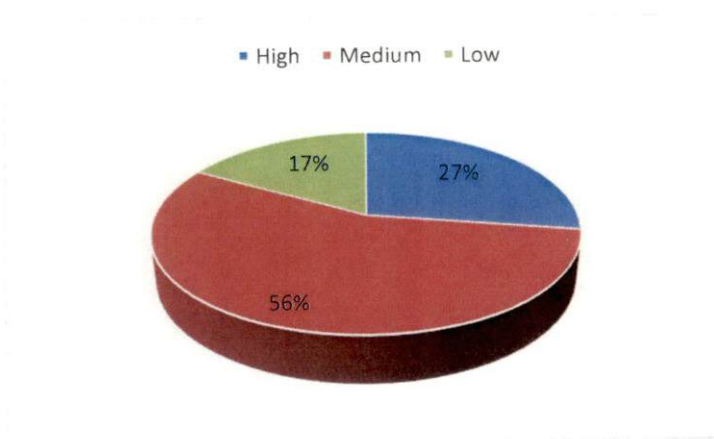
It is clear from the data in the Table.30 that nearly half of the respondents (49.16 per cent) had medium level of risk orientation followed by 29.17 per cent had high level and 21.67 per cent of respondents had low level of risk orientation. An individual's risk bearing capacity depends upon his/her personal, psychological and

socio-economical characteristics. The respondents with medium level of education, farming experience, and income might have exhibited medium to high risk orientation.

#### 4.1.1.11 Achievement motivation

**Table 31. Distribution of respondents with respect to their achievement motivation**

Sl. No	Category	Range (score)	Frequency	Per cent
1	High achievement motivation	$\geq 22$	33	27.51
2	Medium achievement motivation	22-13	67	55.83
3	Low achievement motivation	$\leq 13$	20	16.66
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.13. Distribution of respondents according to their achievement motivation**

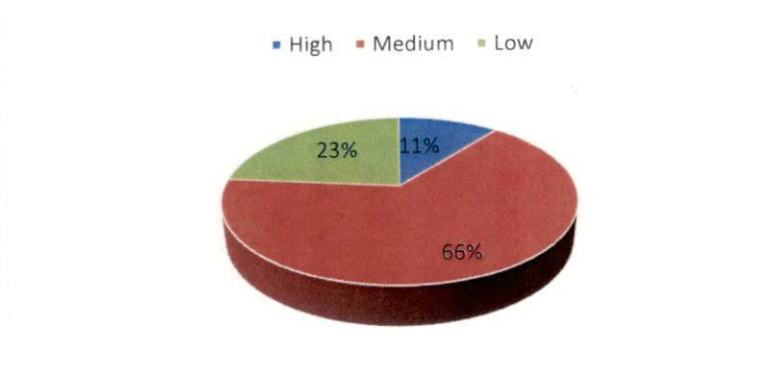
Careful examination of the Table. 31 shows that more than half of the respondents, 55.83 per cent were in the medium level of achievement motivation followed by 27.51 percent of the respondents with high level and 16.66 per cent with

low level of achievement motivation. Achievement motivation is need to achieve something and it is important for a person to perform better. So this might be the reason for the medium to high range of achievement motivation among respondents.

#### 4.1.1.12 Economic motivation

**Table 32. Distribution of respondents with respect to their economic motivation**

Sl. No.	Category	Range (score)	Frequency	Per cent
1	High economic motivation	$\geq 17.4$	13	10.83
2	Medium economic motivation	17.4-9	79	65.83
3	Low economic motivation	$\leq 9$	28	23.34
<b>Total</b>			<b>120</b>	<b>100</b>



**Fig.14. Distribution of respondents according to their economic motivation**

From the results in the Table.32, it is evident that majority of the respondents (65.83%) had medium level of economic motivation followed by low level (23.34 per cent) and high level (10.83 per cent) of economic motivation. It could be assumed that farmers had reasonable interest towards economic benefits may be the reason for the big majority coming under medium level of economic motivation. Economic

motivation is important to motivate a person to perform more effectively to improve their economic performance. Hence these trainees strive hard in all possible ways to raise their income.

#### 4.2. Post training skill application and post training judgement

##### 4.2.1 Post training skill application

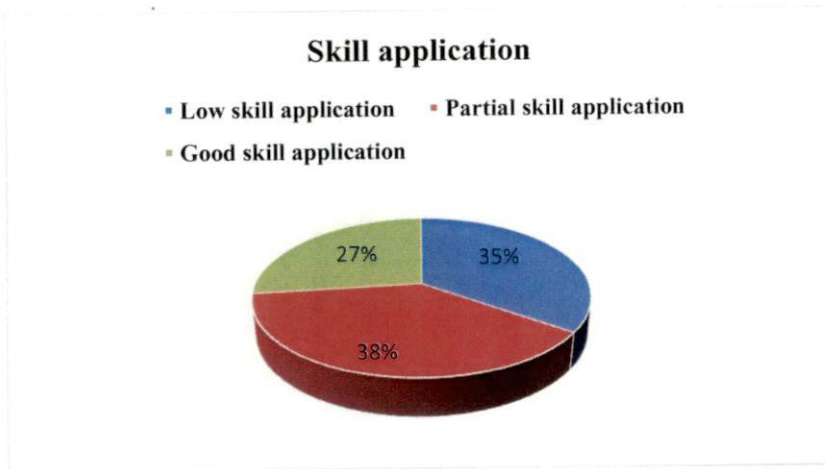
##### 4.2.1. Level of post training skill application

**Table 33. Distribution of respondents with respect to their post training skill application (N=120)**

s	Level of skill application	Frequency	Percentage
1	No/Low skill application	42	35.00
2	Partial skill application	46	38.34
3	Good skill application	32	26.66
Total		120	100



**Fig.15. Distribution of respondents according to their post training skill application**



In the case of post training skill application, about 26.6 per cent had good skill application followed by 35 per cent with no/ low skill application and 38.34 per cent with partial skill application. This might be due to the constraints faced by the trainees while application of skills gained.

Looking at the whole picture, it can be said that 65 per cent of the trainees took up skill application (38%+27%), which can be seen as a success of KVK. But the fact that only 27 per cent reached the level of good skill application remains. Trainees in the partial application level cannot be counted on as successful or their enterprises sustainable. Therefore, there is the need for strengthening of skill trainings, to install better entrepreneurial capacity among the trainees.

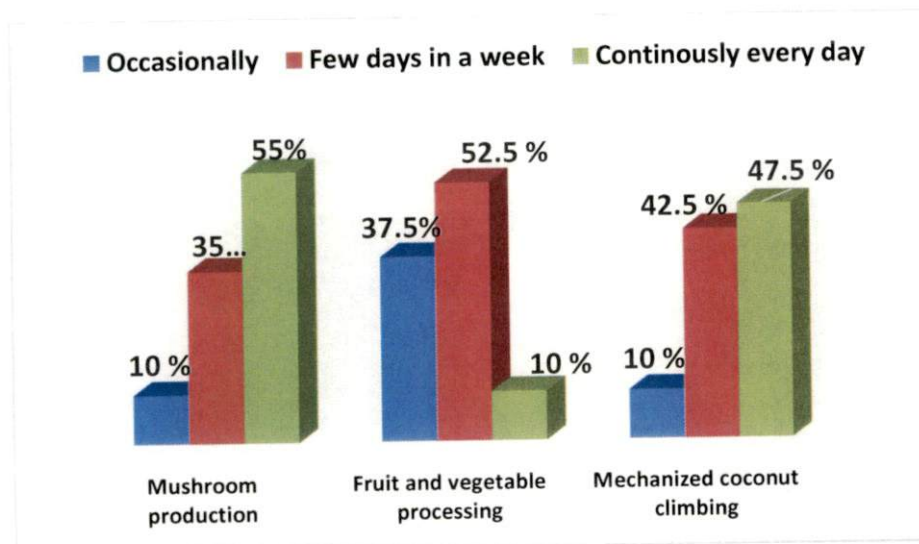
#### 4.2.2. Duration-details of duration of engagement in the activity

**Table 34. Details of duration of engagement in the activity**

Sl.No.	Duration of skill application	Mushroom production	Fruit and vegetable processing	Mechanized coconut climbing
1	Occasionally	4 (10)	15 (37.5)	4 (10)
2	Few days in a week	14 (35)	21 (52.5)	17 (42.5)
3	Every days	22 (55)	4 (10)	19 (47.5)

*\*Percentages are given in parenthesis*

**Fig.16. Details of duration of engagement in the activity**



From the results in Table.34, it is evident that 55 per cent of trainees of mushroom production, 10 per cent of trainees of fruit and vegetable processing and 47.5 per cent of trainees of mechanized coconut climbing were engaged continuously in these activities. Majority of trainees of mushroom production and mechanized coconut climbing utilized the skills gained through training as their main source of income. Beneficiaries of training on fruit and vegetable processing were largely farm women and the poor percentage of skill application here must be due to their being dependents and hence lacking in decision making power.

### 4.2.3 Degree of generation of employment

**Table 35. Extent of employment generation among three groups**

Sl.No.	Extent	Mushroom production	Fruit and vegetable processing	Mechanized coconut climbing
1	No employment generation	3(7.5)	24 (60)	6 (15)
2	Part time	12 (30)	11 (27.5)	8 (20)
3	Full time	25 (62.5)	5 (12.5)	26 (65)

*\*Percentages are given in parenthesis*

**Fig.17. Degree of employment generation**

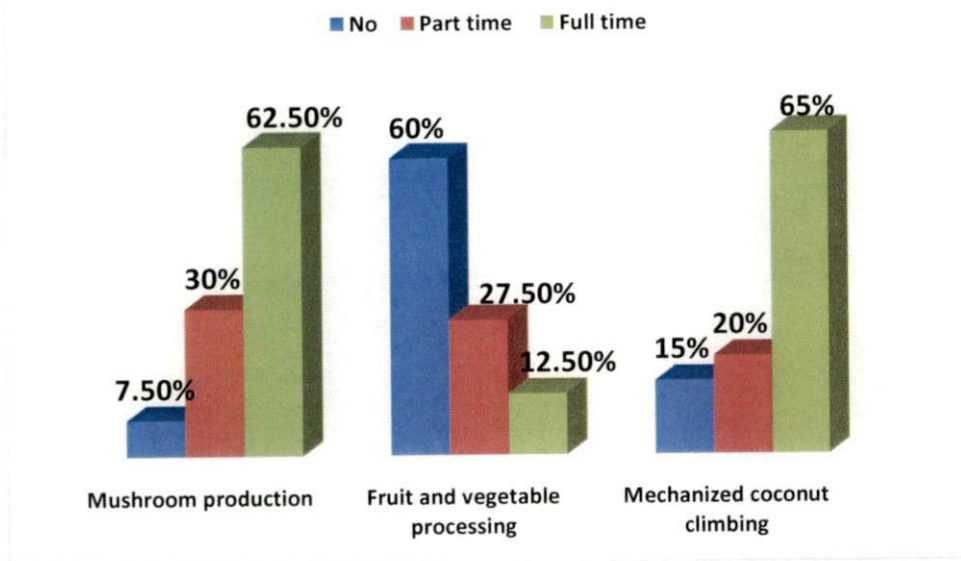


Table.35, shows that 65 per cent trainees of mechanized coconut climbing, 62.50 per cent trainees of mushroom production and only 12.50 per cent trainees of fruit and vegetable processing created full time employment opportunities.. In the case of part time employment generation, mushroom stands first with 30 per cent followed by fruit and vegetable processing (27.5%) and coconut climbing (20%).

Overall, it could be stated as a success of KVK Thrissur that trainings resulted in so much of employment generation.

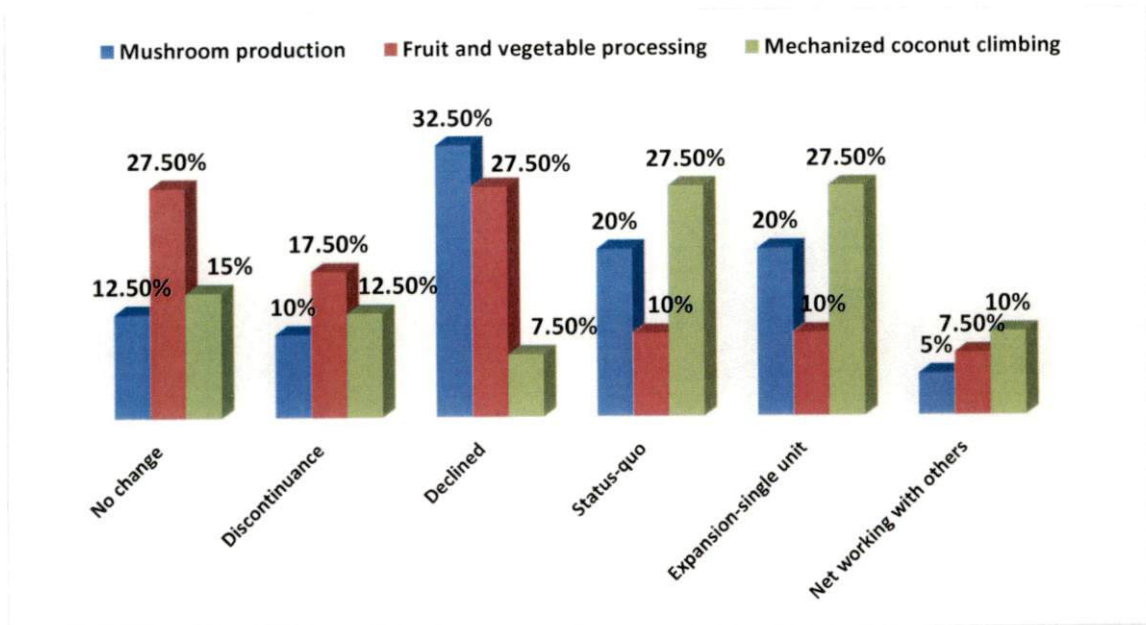
#### 4.2.4. Extent of skill application among three groups

**Table 36. Distribution of respondents according to extent of skill application**

Sl. no	Extent	Mushroom production	Fruit and vegetable processing	Mechanized coconut climbing
1	No change	5 (12.5)	11(27.5)	6 (15)
2	Discontinuance	4 (10)	7 (17.5)	5 (12.5)
3	Decline	13 (32.5)	11 (27.5)	3 (7.5)
4	Status-quo	8 (20)	4 (10)	11 (27.5)
5	Expansion- single unit	8 (20)	4 (10)	11 (27.5)
6	Networking- with others	2 (5)	3 (7.5)	4 (10)

*\*Percentages are given in parenthesis*

**Fig.18. Distribution of respondents according to extent of skill application**



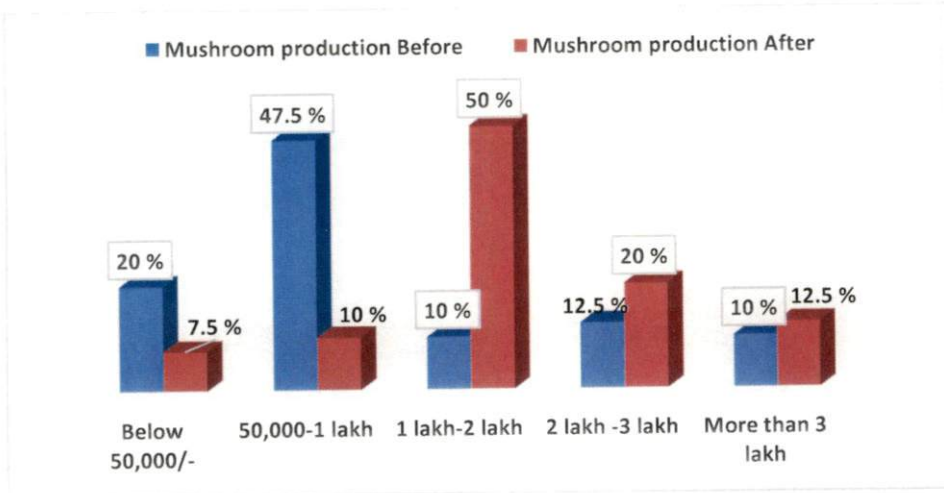
Careful examination of the Table. 36 shows that 27.50 per cent of trainees of coconut climbing and 10 per cent trainees of vegetable and fruit processing and 20 per cent of trainees of mushroom production started initially and expanded their activities further. Like that 10 per cent trainees of coconut climbing, 7.5 per cent trainees of vegetable and fruit processing and 5 per cent of trainees of mushroom production started initially and then continued by collaborating with SHG.

#### 4.2.5. Comparison of annual income of trainees of three groups before and after training

**Table 37. Comparison of annual income of trainees of mushroom production**

Sl.No.	Annual Income (Rs.)	Mushroom production	
		Before (%)	After (%)
1	Below 50,000	20	7.5
2	50,000-1 lakh	47.5	10
3	1 lakh-2 lakh	10	50
4	2 lakh -3 lakh	12.5	20
5	More than 3 lakh	10	12.5

**Fig.19. Annual income of trainees of mushroom production**



Above table shows that annual income of trainees of mushroom production is in an increasing trend. Before training, 47.5 per cent had annual income between 50,000-1 lakh and after training it changed to 1 lakh-2 lakh (50 %). It might be due to the income generated from their newly applied skill.

**Table 38. Comparison of annual income of trainees of value addition of fruits and vegetables**

Sl.No.	Annual Income (Rs.)	Value addition of fruits and vegetables	
		Before (%)	After (%)
1	Below 50,000/-	37.5	25
2	50,000-1 lakh	40	10
3	1 lakh-2 lakh	10	42.5
4	2 lakh -3 lakh	7.5	12.5
5	More than 3 lakh	5	10

**Fig.20. Comparison of annual income of trainees of value addition of fruits and vegetables**

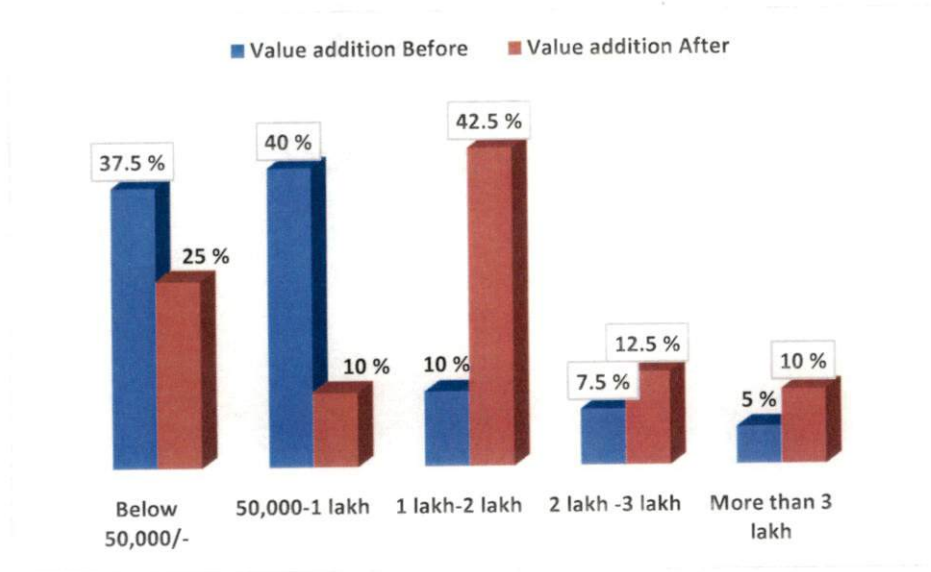


Table 38 shows an increasing trend in the annual income of trainees of value addition of fruits and vegetables. Before training annual income of 40 per cent ranges between 50,000-1 lakh and after training 42.5 per cent had annual income between 1 lakh-2 lakh. It might be due to the income generated from their newly applied skill.

**Table 39. Comparison of annual income of trainees of mechanized coconut climbing**

Sl.No.	Annual Income (Rs.)	Mechanized coconut climbing	
		Before (%)	After (%)
1	Below 50,000/	27.5	10
2	50,000-1 lakh	20	22.5
3	1 lakh-2 lakh	22.5	27.5
4	2 lakh -3 lakh	12.5	17.5
5	More than 3 lakh	17.5	22.5

**Fig.21. Annual income of trainees of mechanized coconut climbing**

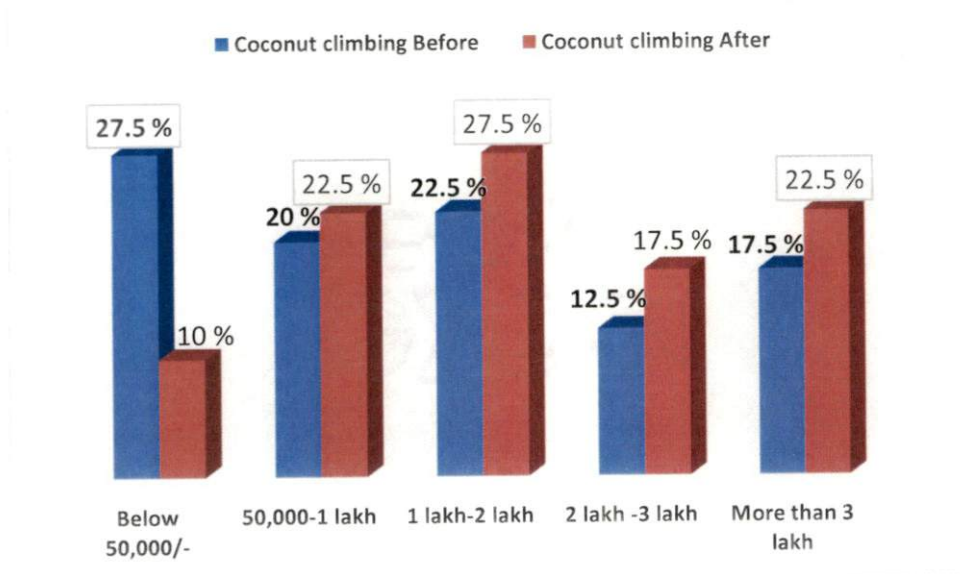


Table39 shows the increasing trend of annual income of trainees of mechanized coconut climbing after training. The incremental increase in income is less compared to the other two trainings, and this must be because in the case of this training, majority of the trainees were already using the device for earning income, and the training would have only lead to increasing their efficiency.

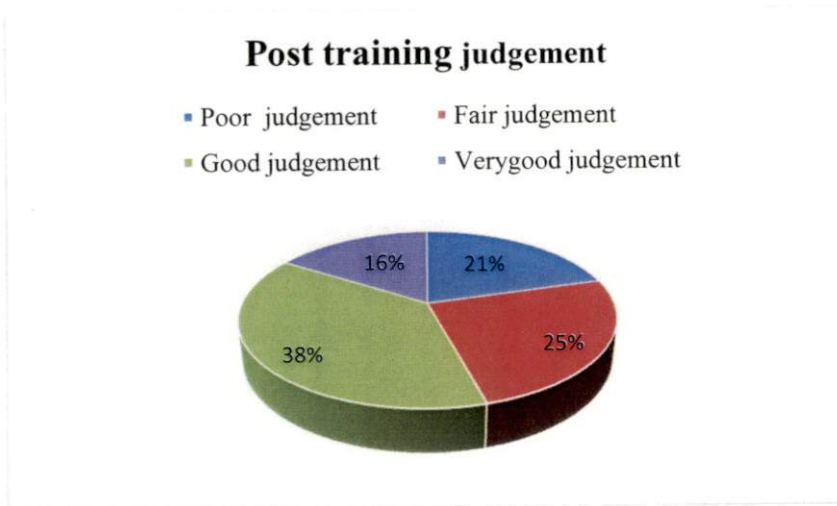
#### 4.2.2 Post training judgement

**Table 40. Distribution of respondents with respect to their level of post training judgement**

Sl.No.	Level of judgement	Frequency	Percentage
1	Poor judgement	25	20.83
2	Fair judgement	30	25.00
3	Good judgement	46	38.33
4.	Very good judgement	19	15.84
Total		120	100



**Fig.22. Distribution of respondents according to their post training**



The above table shows the different levels of post training judgement, 15.84 per cent had very good judgement followed by 38.33 per cent respondents had good judgement, 25 per cent had fair judgement and 20.83 had poor judgement post training judgement.

The statements for post training judgement reflected positive and negative aspects of the trainings as felt by the trainees. Overall, 54 per cent the trainees rated the benefits due to the trainings above drawbacks, which is a true reflection of the good skill application rate, after the training. However, 46 per cent of the trainees (25%+21%) were not very impressed by the trainings as they viewed the demerits above the merits. Thus, quality wise and delivery wise improvement is called for, in the skill training programs imparted by KVK.

### 4.3. Delineating the factors affecting post training skill application and post training judgement

#### 4.3.1 Results of Multinomial Logistic Regression Statistics for skill application

Table 41. Multinomial Logistic Regression Statistics

Likelihood Ratio Tests				
Effect	Model Fitting Criteria	Likelihood Ratio Tests	df	Sig.
	-2 Log Likelihood of Reduced Model	Chi-Square		
Intercept	114.856	0	0	0
Age	107.672	3.236	2	0.353
Education	106.417	1.981	2	0.371
Annual income	105.297	0.861	2	0.650
Land holding	104.679	0.243	2	0.886
Farming experience	110.537	6.101	2	0.438
<b>Occupational status</b>	106.614	2.179	2	<b>0.162**</b>
Family status	104.909	0.473	2	0.789
<b>Ownership of house</b>	107.705	3.269	2	<b>0.106**</b>
Mass media exposure	104.567	0.131	2	0.775
<b>Extension agency contact</b>	109.492	5.056	2	<b>0.155**</b>
<b>Social participation</b>	111.557	7.121	2	<b>0.083**</b>

<b>Scientific orientation</b>	107.402	2.966	2	<b>0.102**</b>
<b>Self confidence</b>	106.553	2.117	2	<b>0.171**</b>
<b>Risk orientation</b>	106.529	2.093	2	<b>0.169**</b>
<b>Achievement motivation</b>	108.649	4.213	2	<b>0.089**</b>
<b>Economic motivation</b>	135.042	30.606	2	<b>0.001**</b>
<b>Note : **Significance level at 10%</b>				

The Table above shows results of multinomial logistic regression analysis computed for different variables as they relate to skill application. Nine variables were found to be significant at 10 per cent level of significance.

#### **4.3.2 Odds ratio and percent probability of matching pertaining to different levels of skill application**

**Table 42. Odds ratio and percent probability of matching**

<b>Level of skill application</b>	<b>Variables</b>	<b>Odds ratio</b>	<b>% probability</b>
<b>Low level to medium level of skill application</b>	Occupational status	0.349	25.87
	Scientific orientation	1.189	54.31
	Risk orientation	0.760	43.18
	Achievement motivation	0.747	42.75
	Economic motivation	0.557	35.77

<b>Medium level to high level of skill application</b>	Occupational status	0.427	29.92
	Ownership of house	0.274	21.50
	Extension agency contact	0.773	43.59
	Social participation	0.277	21.69
	Scientific orientation	1.271	55.96
	Self confidence	1.223	55.01
	Risk orientation	0.783	43.91
	Achievement motivation	0.737	42.42
	Economic motivation	0.575	36.50

Table above provides summary of computed odds ratio and per cent probability of matching from low skill application towards high skill application. Nine variables, occupational status, ownership of house, contact with extension agency, social participation, scientific orientation, self confidence, risk orientation, achievement motivation, and economic motivation were important at medium level to high level of skill application while the other five variables were useful at low to medium level of skill application.

Occupational status of respondents was significant at 16.2 per cent. An odds ratio of 0.349 indicated 25.87 per cent probability of matching from low level to medium level and an odds ratio of 0.427 indicated 29.92 per cent probability of matching from medium level to high level of skill application. It might be due to the fact that majority of respondent's main occupation is agriculture alone so that they will

surely utilize the skills gained for their betterment with the resources available with them.

Ownership of house of respondents was significant at 10.6 per cent. An odds ratio of 0.274 indicated 21.50 per cent probability of matching from medium level to high level of skill application. Only those who own a house and some land associated with it, will have the freedom to take up a micro enterprise like mushroom production or value addition of fruits and vegetables and then go on to expand it in that premises. Therefore having own premises is important in the case of trainee in achieving high skill application.

Extension agency contact of respondents was significant at 15.5 per cent. An odds ratio of 0.773 indicated 43.59 per cent probability of matching from medium level to high level of skill application. It might be due to the information obtained from various extension sources which could be utilized for the improvement of various farming activities of the trainees. The information concerning production techniques, marketing aspects, credit etc will help the trainees to take appropriate decisions regarding their skill application.

Social participation of respondents was significant at 8.3 per cent. An odds ratio of 0.277 indicated 21.69 per cent probability of matching from medium level to high level of skill application. It might be due to majority of respondents were members in one or other organizations in their area. This helps them to come in contact with other members of the society which in turn helped them to get information about new production technologies, government schemes and also they got the opportunity to share experience with other successful farmers in the respective fields. This will motivate them in starting their own enterprise by utilizing the resources and skills gained from trainings.

Scientific orientation of respondents was significant at 10.2 per cent. An odds ratio of 1.189 indicated 54.51 per cent probability of matching from low level to

medium level and an odds ratio of 1.271 indicated 55.96 per cent probability of matching from medium level to high level of skill application. This will be because of the high literacy rate of respondents taken under the study. The systematic understanding of the techniques obtained from trainings helped them in fruitful utilization of skills in order to maximize their profit and to avoid unnecessary risks rising while application of skills.

Self confidence was significant at 17.1 per cent. An odds ratio of 1.223 indicated 55.01 per cent probability of matching from medium level to high level of skill application. It might be due to the fact that the respondents were having a feeling of consciousness of reliance on one self's or one's circumstances, which would be reflected in their abilities of decision making, and skill utilization. Their self confidence also helps them to face any hurdles which arise on their path of functioning.

Risk orientation of respondents was significant at 16.9 per cent. An odds ratio of 0.760 indicated 43.18 per cent probability of matching from low level to medium level and an odds ratio of 0.783 indicated 43.91 per cent probability of matching from medium level to high level of skill application. This might be due to the fact that farmers differ in their willingness to take risks. The propensity to assume or avoid risk has been shown to have an impact on how long it takes the trainees to make a decision and how much information they require before making their choice. According to McClelland (1961), risk orientation will be more for high achievement motivators. In the present study the observed importance of achievement motivation may be the reason for significant and positive effect of risk orientation on skill application.

Achievement motivation of KVK trainees was found to be positively and significantly related to skill application. It might be due to the fact that achievement motivation plays an important role in doing a skill with a certain standard of excellence from the part of trainees. This is will help them to maintain their contact with the

officials of the institutions for getting necessary advises even after training regarding skill application.

Economic motivation was found to be positively and significantly related to skill application. It might be because of the desire for earning money stood first along with the need to do something new by the trainees. As a basic aim for each and every individual is to improve their financial status it is natural that earning money itself served as a motivational factor. It will help to derive some remarkable changes in their overall status and esteem.

The results also give an indication about the personal psychological factors to be concentrated on while trying to instill entrepreneurial orientation among people who have never tried it. By trying to improve the scientific orientation, risk orientation, achievement motivation and economic motivation of the people, they could be encouraged for skill application subsequent to training. It might be good to consider incorporation these aspects to as part of primary skill trainings by way of sessions and exercises.

Extension agency contact, social participation, scientific orientation, self confidence, risk orientation, achievement and economic motivation were found to be the significant factors associated with respondents who have medium level of skill application. Boosting of these factors through proper extension efforts will accelerate the process of transition of respondents from medium level to high level of skill application.

### 4.3.3 Results of Multinomial Logistic Regression Statistics for post training judgement

Table 43. Multinomial Logistic Regression Statistics

Likelihood Ratio Tests				
Effect	Model Fitting Criteria	Likelihood Ratio Tests	df	Sig.
	-2 Log Likelihood of Reduced Model	Chi-Square		
Intercept	103.520	0	0	0
Age	99.182	0.840	1	0.359
Education	99.586	1.244	1	0.265
Annual income	98.375	0.033	1	0.856
Land holding	98.345	0.003	1	0.957
<b>Farming experience</b>	99.755	1.414	1	<b>0.240**</b>
Occupational status	98.694	0.352	1	0.554
Family status	98.343	0.001	1	0.971
Ownership of house	98.617	0.275	1	0.600
<b>Mass media exposure</b>	107.323	8.981	1	<b>0.005**</b>
<b>Extension agency contact</b>	100.814	2.472	1	<b>0.122**</b>
<b>Social participation</b>	100.181	1.839	1	<b>0.184**</b>
Scientific orientation	99.200	0.858	1	0.354



Self confidence	98.888	0.547	1	0.460
Risk orientation	99.408	1.067	1	0.302
<b>Achievement motivation</b>	101.732	3.390	1	<b>0.079**</b>
Economic motivation	98.685	0.344	1	0.558
<b>Note : **Significance level at 10%</b>				

The Table above shows results of multinomial logistic regression analysis computed for different variables as they relate to post training judgment. Four variables were found to be significant at 10 per cent.

#### 4.3.4 Odds ratio and percent probability of matching pertaining to different levels of post training judgment

**Table 44. Odds ratio and percent probability of matching**

Level of post training judgment	Variables	Odds ratio	% probability
<b>Positive judgment</b>	Farming experience	1.358	57.59
	Mass media exposure	1.160	53.70
	Extension agency contact	1.136	53.18
	Social participation	1.561	60.95
	Achievement motivation	1.131	53.07

Table above provides summary of computed odds ratio and per cent probability of matching from positive judgment. Five variables i.e. Farming experience, mass

media exposure, contact with extension agency, social participation and achievement motivation were found to be important in the case of post training judgment.

Farming experience of respondents was significant at 24 per cent. An odds ratio of 1.358 indicated 57.59 per cent probability of matching from positive post training judgment. It might be due to fact that an experienced farmer is sure to make a better evaluation of different practices and likely to be more prompt in decision making too.

Mass media exposure of respondents was significant at 0.5 per cent. An odds ratio of 1.160 indicated 53.70 per cent probability of matching from positive post training judgment. It might be due to exposure to authentic information from reliable sources is likely to facilitate greater post training judgment. It attracts more trainees to any practice if supported with success stories of others and it also provides vast amount of information on technical aspects, resource availability, government schemes etc. This enable trainees to take decisions, analyse the risks involved, pursue innovative practices etc which contribute to their post training judgment.

Extension agency contact of respondents was significant at 12.2 per cent. An odds ratio of 1.136 indicated 53.18 per cent probability of matching from positive post training judgment. It is because the trainees are in more contact with an extension personnel or agency so that they get the correct information to improve upon their technical and entrepreneurial knows how.

Social participation of respondents was significant at 18.4 per cent. An odds ratio of 1.561 indicated 60.95 per cent probability of matching from positive post training judgment. It might be due to the fact that social participation acts as a suitable platform for the exchange of ideas on skill application. They also serve the purpose of discussing prospects and problems of skill application in production aspects.

Achievement motivation of respondents was significant at 7.9 per cent. An odds ratio of 1.131 indicated 53.07 per cent probability of matching from positive post training judgment.

From the results it is evident that, personal psychological factors such as mass media exposure, contact with extension agency, social participation and achievement motivation were found to be the important factors associated with the respondents having positive judgment. An improvement in these factors should lead to a relatively skeptical person change to having a positive mindset towards technology training. Extension agents should give special attention and time if possible, to such deliberate people, they can be given membership in farmer bodies, and their achievement motivation can be improved through capacity building programs, success stories and exposure to well functioning agri enterprises.

#### 4.4. Study based on group statistics

##### 4.4.1 Results of Kruskal-Wallis Test

**Table 45. Kruskal-Wallis test results of three groups**

Variables	Mean rank			Chi-square value
	Mushroom production	Fruit and vegetable processing	Mechanized coconut climbing	
<b>Educational status</b>	<b>56.21</b>	40.83	38.33	<b>9.606***</b>
<b>Annual income</b>	48.10	35.05	<b>51.95</b>	<b>7.578**</b>
<b>Mass media exposure</b>	<b>56.86</b>	38.38	40.15	<b>9.220***</b>
<b>Social participation</b>	<b>48.79</b>	47.33	39.00	<b>2.863*</b>
<b>Risk orientation</b>	<b>53.95</b>	34.92	46.43	<b>8.227***</b>

<b>Achievement motivation</b>	47.79	33.98	<b>53.32</b>	<b>8.962***</b>
<b>Economic motivation</b>	48.57	36.28	<b>50.27</b>	<b>5.303*</b>
Note: *** Significance level at 1%, ** Significance level at 5%, * Significance level at 10%				

The table above shows the result of Kruskal-Wallis test among three groups and it was found that among sixteen variables, seven variables were significant at one per cent, five per cent and ten per cent which shows some variation among three groups. The seven variables are educational status, annual income, mass media exposure, social participation, risk orientation, achievement motivation and economic motivation.

Among the three groups, it was observed that respondents of mushroom production shows highest mean rank for variables like educational status (56.21), mass media exposure (56.86), social participation (48.79) and risk orientation (53.95). It might and be due to the respondents of mushroom production had educational status minimum up to higher secondary and their mass media exposure is more because of the high educational status and their ultimate aim to know the fluctuating market prices for their product. Majority of mushroom cultivators are women so their social participation is more in organizations like self help groups in order to earn some income by their own which improved their decision making in home activities so that they are ready to take more amount of risk also. Respondents of mechanized coconut climbing shows highest mean rank for annual income (51.95), achievement motivation (53.32) and economic motivation (50.27). This must be because almost all of the respondents of coconut climbing were males and their annual income will be naturally more being the main of income earners of many families. Their desire to achieve will be more because of their greater economic motivation. Respondents of value addition of fruits and vegetables show lower mean rank for all variables than the other two groups because they were mostly women who involved in small scale businesses. Variables

like educational status, mass media exposure, risk orientation and achievement motivation were found to be highly significant among them.

#### 4.5 Constraints faced by the trainees while application of skills gained

While measuring impact of training programmes, it is important to examine any potential roadblocks that may stand in the way of a successful application of skills gained. These roadblocks are commonly referred to as training constraints, and here are some of them that must be overcome in order to achieve an effective skill application.

**Table 46. Details of constraints faced by the trainees of mushroom production**

Sl. No	Constraints	Rank
1	Marketing problems	I
2	Unavailability of mushroom spawn	II
3	Lack of financial assistance	III
4	High cost of raw materials	IV
5	Severe attack of pest and diseases	V
6	Customers unaware about the nutritional values of mushroom	VI

The major constraints faced by trainees of mushroom production, while application of skills gained is depicted in Table: 46. Marketing problems indicate inability of respondents to find a market for their products because marketing is a crucial part of any business, directly dealing with the economic freedom and control of the resources. Due to the less shelf life of mushrooms immediate marketing facilities are needed in this aspect. High price of raw materials followed by shortage of self finance because

the respondents are coming from lower economic status therefore financial assistance is required. Here arises the difficulty in availing financial assistance from various institutions because they are reluctant to give loans since they suspect the feasibility of the projects. Even if they are ready to lend loans they suffocate farmers with numerous office procedures and the respondents normally refuse to avail loans. It is interesting to say that majority of mushroom cultivators were women. For profitable mushroom production the quality of spawn is important. Non availability of good quality mushroom spawn is another problem at the time of requirement which force the cultivators to use inferior quality spawns at high prices from private agencies. Sometimes they will not get sufficient quantity of spawn from these agencies which will affect their normal functioning. Pest and diseases attack is very dangerous because once affected means entire set up want to reconstruct which is very economical. Public is unaware about the nutritional quality of mushroom is another factor which reduces the marketing scope of mushroom products.

**Table 47. Details of constraints faced by the trainees of value addition of fruit and vegetables**

Sl. No	Constraints	Rank
1	Lack of financial assistance	I
2	Marketing problems	II
3	High cost of fruits and vegetables	III
4	High transportation cost	IV
5	Lack of proper publicity of the product	V
6	Less knowledge about the standardization of products	VI

In value addition of fruits and vegetables the major constraints experienced by the respondents were lack of financial assistance by credit institutions which is similar to that of mushroom production, important constraint is the respondent's inability in marketing of the produce and high cost of vegetables and fruits. Usually the products should not have any standard brand name which results in difficulty in selling the product. Due to lack of proper means to spread the information about the product and lack of more knowledge about the procedures for standardization of products the quality of the product is considered as inferior to other similar products are some of the severe problems in expanding the business.

**Table 48. Details of constraints faced by the trainees of mechanized coconut climbing**

Sl. No	Constraints	Rank
1	Non availability of enough machines	I
2	Time constraints	II
3	Unaware about the efficiency of machine by public	III
4	Difficulty of women to use in public places	IV
5	Defects of existing machines	V
6	Difficulties in carrying machine	VI

In mechanized coconut climbing non availability of enough number of machines is an important problem faced by the farmer. Rate of climbing is less compared to traditional climbing method. Public is unaware about the efficiency of machine so they hesitate to call climbers using climbing machine. Women climbers face difficulty to use in front of public because the machines less gender friendly and unsafe are some of the existing defects. Machine is very difficult to carry from one place to another.

#### 4.6 Post training benefits gained as perceived by the trainees

**Table 49. Details of post training benefits gained as perceived by the trainees**

Sl.No	Benefits	Rank
1	Improvement in knowledge	I
2	Monthly income increased	II
3	Created lot of self employment opportunities	III
4	Self satisfaction improved	IV
5	Standard of living increased	V
6	New relations and networking	VI

The data presented in Table: 49 shows the details of post training benefits gained as perceived by the trainees. The findings revealed that majority of the respondents had increased their knowledge after going through these training programmes. Application of skills gained improved the economic status of trainees and their families. Majority of women trainees after going through skill based training programmes and adopting recommended techniques became independent. This helped them to take decisions after earning money of their own. Majority got new relations with peoples from different disciplines like scientists, farmers etc.



## PHOTOS TAKEN DURING DATA COLLECTION



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# SUMMARY AND CONCLUSION

## CHAPTER V

### SUMMARY AND CONCLUSION

Krishi Vigyan Kendras (KVKs) are the frontline institutions in agricultural technology transfer in the country. Their main aim is to reduce the time lag between generation of technology at the research institution and its transfer to the farmers fields. They conduct several trainings and advisory services at grass root level based on need assessments and definite action plans, in addition to special programs and intervention projects. A district being the operational jurisdiction, it provides several trainings to farmers, women, youth and organized groups to build up the human resource capacity aiming at enhancing agricultural production, productivity, employment and income generation among the participants from the agriculture and allied sectors on a sustained basis. The main purpose is to have an appropriate technology which may be economically profitable, ecologically sustainable, and technically feasible and culturally compatible.

In this study, various factors affecting post training skill application, post training judgement and various perceived constraints by the trainees while application of the skills gained were sorted out. So that systematic monitoring and evaluation of the training programmes will help in the success of training programs ultimately.

The present study was conducted to comprehensively understand the nature, extent and economics of post training income generating activities undertaken by the trainees of KVK, Thrissur. Specifically, the study objectives were;

1. To assess the post training application of skill based trainings in income and employment generation among the participants
2. To identify the determinants of application of the skills gained
3. To analyze the constraints in utilization of training outputs

The study area was confined to Thrissur district which is the mandate area of KVK, Thrissur. KVK, Thrissur conducts trainings on various disciplines so it was not possible to evaluate all the trainings. Hence three trainings were focused on *i.e.* mushroom production, value addition of fruits and vegetables and mechanized coconut climbing which were the foremost in the focal areas of the KVK during the study period. Forty beneficiaries of KVK training were randomly selected from each training as respondents hence making a total sample size of 120 trainees.

Selection of variables was largely based on careful analysis of available relevant literature, discussion with adviser by keeping the specific objectives in mind. The factors that would assist in analysing post training skill application, post training judgement, reasons for non application of skills gained and constraints in utilization of the training outputs were selected. The experts knowledgeable in the same field were consulted to assist to final rate the most appropriate variables to suit the study.

The study used multinomial logistic regression analysis for understanding the effect of variables on post training skill application and post training judgement. Multinomial logistic regression analysis measures the levels of skill application which were prevalent among the trainees. The Kruskal-Wallis oneway analysis of variance is a non-parametric test used to assess the relationship between three different groups.

The data was collected by conducting ex-trainees meet and personal interviews with trainees of KVK, Thrissur using a well-structured and pre-tested interview schedule developed for the study.

Statistical Package for Social Sciences (SPSS version 16) was used to tabulate, analyse and interpret the data. The statistical tests used for analysis and interpretation of data included; percentage analysis, cross tabulation, frequency, Multinomial logistic regression and Kruskal-Wallis oneway analysis of variance.

**The salient findings of the study were;**

1. Majority of the respondents fall under the age group of 36-55 years representing 65.82 per cent
2. The largest proportion of the respondents were educated up to high school level representing 44.16 percent.
3. Nearly one third of the respondents (30.01%) had an annual income between Rs.50,000-1 lakh.
4. Regarding occupational status, out of the total 45.83 per cent of respondents were farmers who had their main source of income as agriculture.
5. Majority, that is 46.66 per cent of respondents were having 10-20 cents , shows the fact that the average size of land holding in Kerala is too small.
6. Farming experience indicated that the largest proportion (36.7%) of the trainees were having below 5 years of experience.
7. Almost half of the respondents (47.5%) were coming from nuclear families followed by 26.66 per cent from joint family.
8. Observations from the ownership of the house showed that majority (46.6%) had their own house and only 8.35 per cent were living in rented houses.
9. Major portion of the respondents had only medium level of (60.83 per cent) mass media exposure.
10. About 37.51 per cent of respondents had medium level of contact with extension agency, followed by 36.66 per cent with low level and 25.83 per cent with high level of extension contact.

11. Nearly half (46.67%) of respondents had low level of social participation followed by 36.67 per cent respondents with medium level.

12. Half (49.16 per cent) of the respondents had medium level of scientific orientation followed by 27.51 per cent belonged to high level. Medium to high scientific orientation is a promising trend in the study area.

13. Regarding self-confidence, almost 56.67 per cent of respondents had medium level of self confidence whereas nearly 25 per cent of respondents had high level of self confidence.

14. Half of the respondents (49.16 per cent) had medium level of risk orientation followed by 29.17 per cent who had high level of risk orientation.

15. More than half of the respondents (55.83 per cent) had medium level of achievement motivation followed by 27.51 percent of the respondents with high level.

16. Majority of the respondents (65.83%) had medium level of economic motivation followed by low level (23.34 per cent) level of economic motivation.

17. Regarding post training skill application 38 per cent had partial skill application followed by 35 per cent had low skill application and 27per cent had high skill application.

18. Nine variables were found to be significant at 10 per cent which reflected how each influenced or affected the post training skill application of respondents. The factors affecting low to medium level of skill application is occupational status, scientific orientation, risk orientation, achievement motivation, and economic motivation and the other variables namely occupation, ownership of house, contact with extension agency ,social participation, self-confidence, achievement motivation, and economic motivation affect medium to high level of skill application.

19. About 38.33 per cent of respondents had good judgement followed by 25 per cent had fair judgement, 20.83 had poor and 15.84 per cent had very good post training judgement. Altogether 59 per cent had positive post training judgement and 41 per cent had negative post training judgement.

20. Four variables were found to be significant at 10 per cent shows how each factor affected the post training judgement. The factors affecting positive post training judgement were farming experience, mass media exposure, contact with extension agency, social participation and achievement motivation .

21. Seven variables were significant at one per cent, five per cent and ten per cent which shows some variation among three groups. They are educational status, annual income, mass media exposure, social participation, risk orientation, achievement motivation and economic motivation.

22. Respondents of mushroom production shows highest mean rank for variables like educational status (56.21), mass media exposure (56.86), social participation (48.79) and risk orientation (53.95).

23. Respondents of mechanized coconut climbing shows highest mean rank for annual income (51.95), achievement motivation (53.32) and economic motivation (50.27).

24. Respondents of value addition of fruits and vegetables show lower mean rank for all variables than the other two groups because they were mostly women who involved in small scale businesses.

25. The major constraints faced by trainees of mushroom production, while application of skills gained were marketing problems, unavailability of mushroom spawn, lack of financial assistance, high cost of raw materials, severe attack of pest and diseases and customers unaware about the nutritional values of mushroom.



26. The major constraints faced by trainees of value addition of fruits and vegetables, while application of skills gained were lack of financial assistance, marketing problems, high cost of fruits and vegetables, high transportation cost, lack of proper publicity of the product and less knowledge about the standardization of products.

27. The major constraints faced by trainees of mechanized coconut climbing of KVK were non availability of enough machines, time constraints, unaware about the efficiency of machine by public, difficulty of women to use in public places, defects of existing machines and difficulties in carrying the somewhat bulky machine.

In conclusion, post training skill application was largely acting as an income source and employment generating opportunity for majority of respondents. Agriculture was the main occupation of majority of respondents. It was found that there are several factors affecting the skill application from low to high level. By trying to improve these factors the trainees could be encouraged for skill application subsequent to training. Boosting of these factors through proper extension efforts will accelerate the process of transition of respondents from medium level to high level of skill application. In case of post training judgement, some factors were found to be significant. An improvement in these factors should lead to a relatively skeptical person change to having a positive mindset towards technology training. Extension agents should give special attention and time if possible, to such deliberate people, they can be given membership in farmer bodies, and their achievement motivation can be improved through capacity building programs, success stories and exposure to well functioning agri enterprises.

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# APPENDICES



**APPENDICES**  
**APPENDIX I: JUDGES FOR KNOWLEDGE TEST RATING**

**INTRODUCTORY LETTER TO JUDGES FOR KNOWLEDGE TEST RATING**

**KERALA AGRICULTURAL UNIVERSITY**  
**College of Horticulture**  
**Department of Agricultural Extension**

Dr. Jayasree Krishnankutty. M.  
Associate Professor

Date : 28-07-2015  
Vellanikkara

Dear Sir /Madam

Attached with this is the list of impact indicators prepared by my student, Aparna.T.G as a part of her M.Sc (Ag) thesis work. Her work entitled “**Impact assessment of skill based trainings of KVK, Thrissur**” tries to look mainly at the post training application of skills transferred through KVK trainings.

I would like to request you to spare a little of your valuable time to go through them and rate them according to their relevance to be included in the final interview schedule, so as to formulate the final list of variables to be included in the study.

Thank you in advance

With best regards,

Dr. Jayasree Krishnankutty.M.

**Impact assessment of skill based trainings of KVK, Thrissur**

**Objectives of the study**

- To assess the post training application of skill based trainings of KVK, Thrissur in income and employment generation among the participant.
- To identify the determinants of application of the skills gained.
- To analyze the constraints in utilization of training outputs.

Please indicate the relevance of each of these variables to be included in the final interview schedule for studying the above mentioned objectives.

Please indicate by marking tick mark{✓} in appropriate column

VR-Very much relevant                      SR-Slightly Relevant  
R- Relevant    IR-Irrelevant

Sl. No	Variables	VR	R	SR	IR
<b>a)</b>	<b>Trainee variables</b>				
	Age				
	Educational level				
	Marital status				
	Family status (Nuclear, joint, alone with children...)				
	Occupation				
	Annual income				
	Farming experience				
	Size of land holding				
	Size of family				
	Type of house				
	Ownership of house (by husband, self, rented, parents...)				
	Material possession				
	Cosmopolitaness				
	Mass media exposure				
	Social participation				
	Contact with extension agency				
	Economic motivation				
	Scientific orientation				
	Achievement motivation				

	Confidence				
	Risk orientation				
	Trainings attended				
<b>b)</b>	<b>Training variables</b>				
	Ease in obtaining information about training				
	Availability of trainings				
	Opinion about duration of training				
	Opinion about coverage/content of training				
	Training location				
	Time of training				
	Selection method of trainees				
	Practicals for training(Hands on exposure)				
	Facilities provided for training				
	Opinion about monitoring and evaluation				
	Opinion about follow up of training				
<b>c)</b>	<b>Trainer variables</b>				
	Training methodology				
	Selection of topics				
	Treatment of subject matter				
	Competency of trainers				
	Availability of training aids				
	Use of audio visual aids				
	Quality of audio visual aids used				
	Quality of training notes supplied				
	Communication efficiency of trainers				
	Other variables ,if any please specify				

Name :

Designation:

Signature :

## APPENDIX II: TRAINEE INTERVIEW SCHEDULE

### IMPACT ASSESSMENT OF SKILL BASED TRAININGS OF KVK, THRISSUR INTERVIEW SCHEDULE

Respondent no:

Date:

Name and address of farmer:

Contact number:

1. Age:

- 26-35 years     36-45 years     46-55 years     More than 55 years

2. Educational status:

- Illiterate     Basic education     Primary education     High school     Higher secondary  
 Degree and above

3. Annual income:

- Below 50,000     50,000-1 lakh     1 lakh-2 lakh     2lakh-3lakh     More than 3lakh

4. Size of land holding

- 10-20 cents     20-30 cents     30-50 cents     More than 50 cents

5. Farming experience

- Below 5 years     6 - 10 years     11-15 years     More than 16 years

6. Occupation

- Agriculture     Self-employment     Salaried/waged employment     Retired

7. Family status

- Nuclear Family     joint family     Living with relatives  
 Living alone with children     Any other

8. Ownership of house

- Self owned     Owned by husband     Owned by anyother relative/family house

Rented

9. Mass media exposure

Sl.no	Sources of information	Frequency of utilization					
		Every day	Two to six times a week	Once in a week	Once in a fortnight	Once in a month	Never
1	Newspapers						
2	Radio						
3	Journals						
4	Television						
5	Internet						
6	Farm magazines						
7	e-mails						
8	Mobile applications						
9	Expert systems in agriculture						
10	Others(specify)						

10. Contact with extension agency

Sl.no	Name and extension agency	Frequency of contact			
		Two or more times in a week	Once in a week	Once in a fortnight	Once in a month
1.	Demonstrators				
2.	Agricultural officers				
3.	University scientists				
4.	Representatives from firms				

### 11. Social participation

Sl.no	Name of organisation	Member	Office bearer	Frequency of participation		
				Attend all meetings	occasional	Not attending any of the meetings
1	Panchayat					
2	Co-operative societies					
3	Agril.Development advisory committee					
4	Farmers clubs					
5	Padasakhara committee					
6	Kudumbasree					
7.	Any religious committee					
8.	Others					

### 12. Scientific orientation

Statements	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.Tradiitonal methods of farming have to be changed to raise the level of living of farmers					
6.The way a farmer's forefathers farmed is still the best way to farm today					

13. Self confidence

Statements	SA	A	UD	DA	SDA
1.I feel no obstacle can stop me from achieving my final goal					
2.Iam generally confident of my own ability					
3.Iam bothered by inferiority feelings					
4. I do not have initiative					
5.I usually workout things for myself rather than get someone to show me					
6.I get discouraged easily					
7.Life is a strain for me in much of the time					
8.I find myself working about something or the other always					

14. Risk orientation

Statements	SA	A	UD	DA	SDA
1.A farmer should grow large number of crops to avoid greater risks involved in growing one or two crops					
2.A farmer should take more of chance 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 better financially					
4.It is a good for a farmer to take risk when he knows his chance of success is fairly high					
5.It is better for a farmer not to try a farming method useless most other in the locality have used it with success					
6.Trying entirely a new method in farming by a farmer involves risk but is worth it					

15. Achievement motivation

Statements	SA	A	UD	DA	SDA
1.What ever you, do you should be the best in it					
2.One should work hard at everything one undertakes until he satisfied with a result					
3.One should have determination & driving ambition to achieve certain things in life even if these qualities may one unpopular					
4.One should succeed in his occupation at any cost					
5.Money is the only basis of comfort and status in life					
6.Because money makes the man go, one should earn as much money as he can					
7.The charm of life is one spending money and not in accumulating money					

16. Economic motivation

Statements	SA	A	UD	DA	SDA
1.The farmer should work towards larger yield and economic returns					
2.The most successful farmer is one who makes the most profit					
3.Afarmer should try new farming areas which may give more money					
4.A farmer should attend each trainings to increase his monetary profit by acquiring new skills					
5.It is difficult for farmers children to make good start unless he provides them with economic assistance					
6.A farmer must earn his living but the most important thing in life cannot be defined in economic terms					



17. What did you do to utilize the skills obtained from the training?

1. Practically nothing- I continued with my occupation
2. Practically nothing –Could not practice it due to....
3. Started doing but later stopped
4. Started doing but later in a reduced intensity
5. Started doing then later expanded
6. Started doing then later merged with other SHGs
7. Continues to do

18. Constraints faced:

Benefits:

19. If doing, income generated:

20. Employment generated

a) Average work hours/ day/week:  Occassionally  Few days in a week  Continuously-  
everyday

b) Are you employing any other people:  No  part time  full time

c) Annual income : Before.....After.....

**APPENDIX III : MULTINOMIAL LOGISTIC REGRESSION STATISTICS**

**Parameter Estimates**

Level of skill application <sup>a</sup>	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
							Lower Bound	Upper Bound
1 Intercept	16.403	6.755	5.897	1	.015			
Age	-.172	.782	.048	1	.826	.842	.182	3.900
Education	-.273	.730	.140	1	.708	.761	.182	3.183
Annual income	.191	.501	.145	1	.703	1.210	.454	3.228
Land holding	-.270	.578	.218	1	.640	.763	.246	2.371
Farming experience	.438	.564	.602	1	.438	1.549	.513	4.683
Occupation	-1.054	.753	1.959	1	.162	.349	.080	1.525
Family status	.247	.555	.198	1	.656	1.280	.431	3.800
Ownership of house	-.712	.746	.912	1	.340	.491	.114	2.116
Mass media	-.010	.107	.009	1	.923	.990	.802	1.221
Contact with extension agency	-.044	.178	.062	1	.803	.957	.674	1.357
Social participation	-.212	.698	.092	1	.762	.809	.206	3.180
Social participation	.025	.307	.007	1	.934	1.026	.562	1.873
Scientific orientation	.173	.149	1.350	1	.245	1.189	.888	1.593
Self confidence	.153	.148	1.069	1	.301	1.165	.872	1.558
Risk orientation	-.275	.200	1.892	1	.169	.760	.514	1.124
Achivement orientation	-.292	.176	2.733	1	.098	.747	.529	1.056
Economic motivation	-.585	.176	11.058	1	.001	.557	.395	.786

2	Intercept	16.313	6.711	5.909	1	.015			
	Age	.672	.724	.861	1	.353	1.958	.474	8.095
	Education	-.825	.727	1.289	1	.256	.438	.106	1.821
	Annual income	.371	.469	.628	1	.428	1.450	.578	3.635
	Landholding	-.160	.557	.082	1	.774	.852	.286	2.537
	Farming experience	-.427	.532	.642	1	.423	.653	.230	1.852
	Occupation	-.850	.721	1.391	1	.238	.427	.104	1.756
	Family status	.366	.543	.454	1	.500	1.441	.498	4.174
	Ownership of house	-1.296	.801	2.620	1	.106	.274	.057	1.314
	Mass media contact	-.030	.105	.082	1	.775	.970	.790	1.192
	Contact with extension agency	-.258	.181	2.021	1	.155	.773	.542	1.102
	Social participation	-1.283	.740	3.004	1	.083	.277	.065	1.183
	Social participation	.402	.327	1.513	1	.219	1.495	.788	2.837
	Scientific orientation	.240	.147	2.676	1	.102	1.271	.954	1.694
	Self confidence	.201	.147	1.871	1	.171	1.223	.917	1.631
	Risk orientation	-.245	.198	1.526	1	.217	.783	.530	1.155
	Achivement orientation	-.305	.179	2.899	1	.089	.737	.519	1.047
	Economic motivation	-.553	.160	11.982	1	.001	.575	.421	.787

a. The reference category is: 3.00.

**APPENDIX IV: MULTINOMIAL LOGISTIC REGRESSION STATISTICS**

**Parameter Estimates**

Post skill judgement <sup>a</sup>	B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
							Lower Bound	Upper Bound
0 Intercept	-5.613	2.588	4.703	1	.030			
Age	-.320	.352	.827	1	.363	.726	.364	1.448
Education	.408	.372	1.200	1	.273	1.503	.725	3.116
Annual income	.042	.230	.033	1	.856	1.043	.664	1.637
Land holding	.014	.256	.003	1	.957	1.014	.614	1.673
Farming experience	.306	.261	1.379	1	.240	1.358	.815	2.264
Occupation	.198	.334	.350	1	.554	1.219	.633	2.348
Family status	.010	.288	.001	1	.971	1.010	.575	1.775
Ownership of house	-.178	.341	.271	1	.602	.837	.429	1.635
Mass media	.148	.053	7.721	1	.005	1.160	1.045	1.288
Contact with extension agency	.128	.083	2.389	1	.122	1.136	.966	1.336
Social participation	.445	.336	1.761	1	.184	1.561	.809	3.014
Social participation	-.240	.152	2.491	1	.114	.787	.584	1.060
Scientific orientation	.070	.076	.847	1	.358	1.072	.924	1.244
Self confidence	-.046	.062	.545	1	.460	.955	.845	1.079
Risk orientation	-.091	.090	1.037	1	.309	.913	.766	1.088
Achivement orientation	.123	.070	3.079	1	.079	1.131	.986	1.297
Economic motivation	.041	.069	.346	1	.557	1.042	.909	1.193

a. The reference category is: 1.00.

APPENDIX V:KRUSKAL-WALLIS TEST RESULTS OF THREE GROUPS

Variables	Mean rank			Chi-square value
	Mushroom production	Fruit and vegetable processing	Mechanized coconut climbing	
<b>Educational status</b>	<b>56.21</b>	40.83	38.33	<b>9.606***</b>
<b>Annual income</b>	48.10	35.05	<b>51.95</b>	<b>7.578**</b>
<b>Mass media exposure</b>	<b>56.86</b>	38.38	40.15	<b>9.220***</b>
<b>Social participation</b>	<b>48.79</b>	47.33	39.00	<b>2.863*</b>
<b>Risk orientation</b>	<b>53.95</b>	34.92	46.43	<b>8.227***</b>
<b>Achievement motivation</b>	47.79	33.98	<b>53.32</b>	<b>8.962***</b>
<b>Economic motivation</b>	48.57	36.28	<b>50.27</b>	<b>5.303*</b>
Age	46.41	48.32	40.32	1.78
Land holding	46.33	42.13	46.58	0.665
Farming experience	42.65	50.17	42.13	1.973
Occupation	45.79	40.47	48.77	1.872
Family status	45.83	49.23	39.97	2.384
Ownership of house	43.88	47.43	43.65	0.497
Scientific orientation	47.43	44.25	43.40	0.399
Self confidence	45.91	40.13	48.98	1.826
Note: *** Significance level at 1%, ** Significance level at 5%,* Significance level at 10%				

# Abstract

# **IMPACT ASSESSMENT OF SKILL BASED TRAININGS OF KRISHI VIGYAN KENDRA, THRISSUR**

**By**  
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**ABSTRACT OF THE THESIS**  
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# Abstract

Krishi Vigyan Kendras (KVKs) are the frontline institutions in agricultural technology transfer in the country, involved in conducting on farm trials (OFT), front line demonstrations (FLD), trainings and advisory services at grass roots level, based on need assessment and definite action plans, in addition to special programs and intervention projects. A district being the operational jurisdiction, a KVK provides several trainings to farmers, women, youth and organized groups to build up the human resource capacity aiming at enhancing agricultural production, productivity, employment and income generation among the participants.

The present study entitled “Impact assessment of skill based trainings of Krishi Vigyan Kendra” was undertaken in Thrissur district which is the mandate area of KVK, Thrissur with the objectives to assess the post training application of skill based trainings in income and employment generation among the participants, to identify the determinants of application of the skills gained and to analyze the constraints in utilization of training outputs.

Sampling frame included participants from three types of trainings viz. mushroom production, value addition of fruits and vegetables and mechanized coconut climbing, which had the highest number of participants among the KVK trainings during the study period. Simple random sampling was done for sample selection from these selected three skill areas. Forty trainees were selected from each training and thus the total sample comprised of 120 beneficiaries. Pre tested semi structured interview schedules were used for response collection. Personal interviews and focused group discussions were conducted to generate required primary data.

Majority (65.82%) of the trainees were middle to old aged and having high school-higher secondary education (72.49%). This is an indicator that those who were not able to pursue college education, turn to agriculture related occupations and by promoting opportunities for them, agri based enterprises can be developed and sustained. One third of the respondents (30.01%) had an annual income between Rs.50,000-1 lakh and 45.83 per cent of trainees were engaged in farming as main source of income. An interesting pattern is that more percentage of people among all income groups except the highest income group, are engaged in agriculture as a



major occupation. This reinforces the fact that agriculture, still is the backbone of our rural life. Among the highest income group, more people were engaged in salaried jobs. The largest proportion of trainees (46.6%) had less than 20 cents of land and out of them 66 per cent had less than 10 years of farming experience. This shows the utmost necessity for promoting skill based trainings for small holder farmers. Nearly half (46.6%) had their own house and 47.5 per cent were coming from nuclear families. Only those who own a house and a little land associated with it, will have the freedom to take up a micro enterprise like mushroom production or value addition of fruits and vegetables and then go on to expand it in that premises. Therefore having own premises is important in the case of trainees in achieving high skill application.

Regarding post training skill application, 65 per cent respondents had partial-good level of skill application and only 35 per cent fell under low/ no skill application. Variables like contact with extension agency, social participation, scientific orientation, self-confidence, risk orientation, achievement motivation, and economic motivation were found to be important at medium level to high level of skill application while contact with extension agency ,social participation, self-confidence, achievement motivation, and economic motivation were significant in the case of low to medium level of skill application. It might be good to consider incorporation of these aspects to as part of primary skill trainings by way of sessions and exercises which will accelerate the process of transition of respondents from medium level to high level of skill application.

Regarding post training judgement 54.17 per cent trainees showed good level of judgement and 20.83 per cent were not very impressed by the trainings as they viewed demerits above the merits. Five variables were found to be important in the case of post training judgment. They were farming experience, mass media exposure, contact with extension agency, social participation and achievement motivation. An improvement in these factors should lead to better judgement. There were several constraints faced by respondents of each category for application of skills gained, some of the commonly felt constraints were marketing problems, lack of financial assistance and high cost of raw materials.

KVK , Thrissur fared reasonably well in imparting of skill trainings and post training skill application. Post training skill application was acting as an income source and employment opportunity for majority of trainees. However, about one third of the trainees did not use the newly acquired skills. Efforts to enhance skill application should be taken in future designing and delivery of trainings.

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