STUDY ON INNOVATIVE BEHAVIOUR AND ASPIRATIONS OF RURAL YOUTH TOWARDS AGRICULTURE IN NORTH KARNATAKA

SHRIDHAR B. PUROHIT

DEPARTMENT OF AGRICULTURAL EXTENSION EDUCATION
COLLEGE OF AGRICULTURE, DHARWAD
UNIVERSITY OF AGRICULTURAL SCIENCES,
DHARWAD - 580 005

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BY

SHRIDHAR B. PUROHIT

DEPARTMENT OF AGRICULTURAL EXTENSION EDUCATION
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CERTIFICATE

This is to certify that the thesis entitled "STUDY ON INNOVATIVE BEHAVIOUR AND ASPIRATIONS OF RURAL YOUTH TOWARDS AGRICULTURE IN NORTH KARNATAKA" submitted by Mr SHRIDHAR B. PUROHIT for the degree of MASTER OF SCIENCE (AGRICULTURE) in AGRICULTURAL EXTENSION EDUCATION to the University of Agricultural Sciences, Dharwad is a record of research work carried out by him during the period of his study in this university, under my guidance and supervision, and the thesis has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar titles.

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(S. H. GOTYAL)

2. _____
(S. S. GULEDAGUDDA)

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C O N T E N T S

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LIST OF ABBREVIATIONS

APMC	-	Agricultural Produce Market Committee
BAIF	-	Bharatiya Agro Industries Foundation
RSK	-	Raitha Samparka Kendra
KVK	-	Krishi Vignyan Kendra
IFAD	-	International Fund for Agriculture and Development
ICT	-	Information and communication Tools
ILO	-	International Labour Organisation
FAO	-	Food and Agriculture Organisation
UN	-	United Nations
ICAR	-	Indian Council of Agriculture Research
AAU	-	Assam Agricultural University
SGSY	-	Swarnajayanti Gram Swarozgar Yojana

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1. INTRODUCTION

Ours is the land of youth. This is our greatest asset of India. Youth are the productive human resource of socio-economic and agricultural development. It is therefore, essential to locate the role of youth in mainstream development of agriculture and socio-economic. The place of youth class is more important in future of the country. Such a diversity necessitates customized initiatives to meet needs and activate their untapped potential. Youth often have greater capacity for innovation, imagination, initiative and Entrepreneurship than older adults and these characteristics should be effectively harnessed by extension services to provide better livelihood opportunities for youth in agriculture. The development and harnessing of the talents and energies of youth towards constructive work is of greater importance than any other efforts.

Rural youth can play an important role in agriculture and other allied activities. The rural youth, male and female because of their family and community background in farming can be active partners in various agricultural activities for young people to take to agriculture, farming must be both intellectually satisfying and economically rewarding. Youth are recognized as effective “agents of change” they can help in the process of dissemination and adoption of modern techniques and methods of agriculture and can take active part in removal of resistance to innovations among rural people. Agriculture generally involves five stages viz., production, consumption, processing, storage and marketing. In most of these stages rural youth can actively be involved.

The International Fund for Agriculture and Development (IFAD) 2001 emphasized the need to invest in “the rural youth of today, the farmers of tomorrow”. Investing in young people living in rural areas is key to enhancing agricultural productivity and food security, boosting rural economies, and reducing rural to urban migration. Young people have enormous potential for the innovation and risk taking that is often at the core of growth and development in rural areas, particularly in small holder agriculture.

Youth are very prone to adopt new technologies in the agriculture. This capacity may better equip them to address the emerging requirements of agriculture and the rural nonfarm economy. Over 60 per cent of the world’s rural population is made of youth, with half of them being young farmers engaged in farm activity and this is also emphasized by US President Barack Obama commented out that India is fortunate to have over half of its total population of 1.2 billion under the age of 30. Out of the 600 million young persons, over 60 per cent live in villages. Most of them are educated.

At present, we are deriving very little demographic dividend in agriculture. On the other hand, the pressure of population on land is increasing and the average size of a farm holding is going down to below one hectare. Because rural youth are migrating to urban areas in taking up jobs other than the farming which is considered as the serious problem of the country which in turn definitely hinders the growth of the agricultural sector. Therefore the National Commission on farmers stressed the need for attracting and retaining educated youth in farming. The National policy for farmers, placed in Indian Parliment in November 2007, includes the following goal- “to introduce measures which can help to attract and retain youth in farming and processing of farm products for higher value addition,

by making farming intellectually stimulating and economically rewarding". Nowadays, youngsters constitute only 13-19 % of farmers. It is imperative to make agriculture a lucrative and profitable occupation in order to increase that number, such a steady income can be achieved only by combining hard work with modern technology. So we need the growth of a strong services sector in rural India. Agri-business centres and agri-clinics are needed on a big scale. Farm schools will have to be established in the fields of young farmers in order to promote primary farmer to farmer learning. The development of agricultural sector in rural areas in general depends to a large extent on adoption of improved agricultural methods and recommended practices.

Youth have to be mobilised so that they are able to participate fully and gain ownership over youth development strategies and policies. Rural youth organisations of all kinds should be established and strengthened as a key element in enhancing the organisational capacity of the poor. The investment on youth in agriculture is still minimal, as there are only a few youth focused programs and thus, few clear examples of impact. Nevertheless, the ICAR and departments of Agriculture in many states are recognizing the farmers including the young and innovative ones for the innovative and diversified farming ventures taken up by them. Many young farmers are taking up high risk high returns agri-ventures like protected agriculture, precision farming, organic agriculture, floriculture, medicinal and aromatic plants cultivation etc, which are mostly avoided by the aging farmers. These new agri-ventures need to be actively supported by the government agencies and financial institutions with skill training, financing and marketing support.

Youth is often understood to be the period of transition from childhood to adulthood, encompassing processes of sexual maturation and growing social and economic autonomy from parents and carers. There is no universally accepted definition of youth, since the age ranges anywhere from 8 to 40 yrs. On the occasion of the International Youth Year in 1985, the United Nations General Assembly for the first time defined youth as people between the ages of 15 and 24 for its work on youth.

FAO defines the priority age range for rural youth development from 10 to 25. The World Development Report (2007) expanded the range to include all people between 12 and 24 years.

The Government of India (GOI) officially defines youth as persons between the ages of 13 and 35 years.

The United Nations (UN) and the International Labour Organisation (ILO), however, defined the youth as persons between 15 and 24 years of age.

Age and location are the two key defining characteristics of rural youth. Age definitions of youth vary quite considerably. Rural youth should be at the forefront of efforts to broaden opportunities for rural people.

Youth are participating in most of the agriculture operations like ploughing, harrowing, sowing, transplanting, weeding, harvesting, post- harvest activities and so on. Rural youth participate in marketing where the trade or enterprise is highly/commercialized. Rural youth play a key role in performing various tasks related to dairy and goatery enterprises activities like maintenance of cattle/

goat shed, feeding of animals/goats, collection of fodder for animals/ goats etc. It is disturbing to note that our youth are losing interest and confidence in agriculture and allied activities, hence they are not willingly involved in agricultural operations. In spite of excellent and tremendous development in the field of agriculture, science and technology, only a few have been adopted. Youth are more receptive to new innovations/techniques in any field of development than the elder ones. The youth, if provided proper training in modern agricultural technologies, they not only come forward to accept changes but also they can influence and educate the members of farming community about modern agricultural technologies. Among human resources of any nation, the vital chunk happens to be its youth.

According to 2011 census, India had a total youth population of 673 millions which is 55 per cent of the total population. Out of this population, about 65 per cent were rural youth and the remaining 35 per cent were urban youth. As, majority of the youth comes from rural areas, they are considered as the nation builders of tomorrow. This important section of the rural population can respond to the needs of country only if they are offered fruitful opportunities for growing up as useful citizens. Youth have been playing quite a significant role in almost every country of the world as they possess zeal and vigour. So, it is necessary to create opportunities for the national development. As psychologists said, “Youth possess dynamic energies, creative activities and adventurous spirit” they undergo psychological and physiological changes as they grow.” So, the development of youth determines the development of the country. The youth can make their constructive contribution to national development and through which society can benefit from the idealism and the sense of dedication of youth at the same time, they also get benefitted from their active participation in agricultural development activities, since such participation increases their self-esteem, gives them a sense of identity and of being needed by the society, the youths must be exposed to the social realities and the pressing problems, that the country is confronted with, for being and becoming active partners in national progress and development. India both before and after independence witnessed emergence of youth as a potential force, to reckon with involvement of youth in national developmental activities is felt significantly relevant because of their boundless energy and innate idealism, which could give a positive direction in improving the quality of life. The government of India has been organizing planned and systematic programmes for the development of Indian youth for their participation in national development.

Due to their limited access to assets (in particular land), markets, finance and education and skills training, rural youth are often unemployed or work informally – often in unpaid, very low skilled, insecure and sometimes hazardous jobs. If young people living in rural areas do not find enough incentives, profitable economic opportunities and attractive environments in which to live and work, they will continue to migrate to cities. This trend would not only contribute to the mega urbanization and growing urban unemployment.

The 2007 World Development Report, which focuses on ‘the next generation’, expands the definition of youth to include all young people aged between 12 and 24. Similar definitional variations exist with regard to location.

Recent trends suggest that India might very well be at the "tipping point" of the transition in its agriculture dependent population. A large proportion of youth in the countryside is on their way out of agriculture. Rising disenchantment with the profession pushes them out of agriculture while opportunities in other sectors of the booming economy pull them out of agriculture. This is suggested by this study which attempts to identify the drivers of this process of withdrawal and assess the odds of an average farmers' move out of agriculture.

Youth have a number of characteristics according to proceedings of the 8th Annual Conference of the Nigerian Rural Sociological Association, such as innovations proneness, minimal risk aversion, less fear of and drab existence pattern of the rural areas. Agriculture failure, less conservative, greater physical strength, faster is without prestige and so the stigma of poverty, illiteracy, rate of learning greater knowledge acquisitions propensity and backwardness is a disincentive to youth participation and social propensity.

At present a great efforts are on to modernize agriculture and maximize levels of production and farm income. Indian agriculture is striving towards inclusive growth by ensuring augmentation in productivity. This goal can only be achieved when new scientific innovations, innovation in technology are effectively adopted by a large number of farmers. Innovation plays an important role in increasing agril. Production and optimizing resource utilization. The youths of today are the future citizens of the country. They are hope of tomorrow they are backbone of country. Youths reflects the national potentiality and represent the life blood of the nation. We have to harness the best in frontier science and marry it with the best in traditional knowledge and ecological prudence. Such a blend leads to the science of eco technology. In addition to eco technology, Universities have to develop excellence in biotechnology, space technology, nuclear technology, nanotechnology, renewable energy and management technology. The Universities in India should enable every scholar to become an entrepreneur.

Innovation plays an important role in food production as well as in optimising resources utilisation by farmers. An innovation is an idea, practice or object that is perceived as new by an individuals or others in a given system. (Rogers 1985). The technology or practice that are developed through research are innovations which may be new varieties of crops, new breeds of livestock, new chemicals etc irrespective of time period an idea or practice is originally developed , when it first becomes aware of it is more advantage than the people who aware lately. It is an innovation to that person using something old in new ways or applying something new to successfully produce desired social and economic outcome in an innovation.

Efforts to develop agriculture are expected to result in improved agricultural production. 'Improved' obviously something new than it previous practice. Agricultural innovations believe that advantageous innovations will sell themselves that are obvious benefits of an idea will be widely realised by potential adopters and that innovation will therefore diffuse rapidly and this diffusion spreads very quickly in case of youth because they are more accessible to ICT tools so the diffusion will takes place rapidly.

Forms of Innovation

- New Products: Any innovations which are new to social system and are may be modification from the existing products. e.g new hybrid varieties of crops, new implements. Seed cum fertilizer driller.
- Yield increasing innovation: Innovations that are leads to increase in the yield. e.g high yielding varieties, improved inputs, genetically modified crops.
- Cost reducing innovation: Innovations that reduces cost of production, and labourers, e.g machineries, seed cum fertilizer driller.
- Marketing innovation: Innovations in marketing strategies like packaging, taste in the products by modification in the existing products, marketing channels.

Most currently there are no measurement scale to measure innovative behaviour of rural youth in agriculture but there are on organizational work behaiour and employees innovative behavior in organization aspects. These measures emphasizes more on work culture, individual innovations but in agricultural sciences to measure innovative behaviour one scale is developed in University of agricultural sciences, Dharwad by Rajshekhar Basnayak. (2012). The same scale has been adopted with modification with respect to rural youth.

Operational Definition: It is multistage process of identifying or recognizing a problem, generating new ideas (either developed by others or as a self) and realizing and implementing new ideas. In this study innovative behaviour is operationalized as the sum of new technologies by the rural youth. (Bateman and Grant 1999)

According to Far and Ford (1990) innovative behaviour is an individual's behavior that aims to achieve the initiation and intentional introduction of new and useful ideas, process, products or procedures.

Scot and Bruce (1994) defines Innovative behavior as a complex behavior consisting of activities pertaining to both the generation / introduction of new ideas and realization and implementation of the new ideas.

Subramaniam and Youndt (2005) Innovative behaviour is defined as the process of bringing new problem solving ideas into use described, innovative behaviour as a knowledge management process that involves recognising a problem, creating solutions for the problem and creating support for the solutions.

Aspirations of rural youth

An aspiration refers to a person or a group of person's orientation towards a particular social status or status attribute like occupation, education, income and so on (Haller, 1968). In the present study aspiration refers to rural youth's orientation towards occupation, enterprise, and general aspiration.

There are less number of studies in this area of research in Karnataka. Hence, keeping this in view an attempt is made to study the innovative behaviour and aspirations of rural youth towards agriculture with the following specific objectives.

Specific objectives of the study:

1. To study the innovative behaviour and aspirations of rural youth towards agriculture.
2. To study the extent of their participation in farm activities.
3. To study the personal and socio economic characteristics of their family.
4. To identify the problems perceived by them.

Scope of the study

The present study is on rural youth. Today the rural youth plays an important role in agricultural development. Youth are more prone to modern technologies in agriculture and they adopt such technologies more quickly in their farm activities and also diffusion of such technologies are rapid because youth are now a days more accessible to ICT tools.

This present study helps to know the innovative behavior and their aspirations towards the agriculture. And also we can know up to what extent the rural youth are participating in farm activities with how much innovative they are. Today unemployment is a major problem to the rural youth and now they are to come out of this problem by migrating from rural areas to urban areas, as employment opportunities are more in urban areas hence, occupational aspirations of rural youth has been taken as one of the objectives in the present study also the present study helps to identify the what are the problems they are facing during farm activities.

This study on rural youth will be useful for the policy makers for better planning and Implementation of the schemes in rural areas.

Limitations of the study

The study was confined to only two districts (Haveri and Belagavi) of North Karnataka state so the generalization made based on the findings of the study may not be directly applicable to other areas. To this study *ex post-facto* design is used.

2. REVIEW OF LITERATURE

A brief review of previous studies conducted on rural youth and innovative behaviour have been chronologically arranged in this chapter. Since limited reviews are available on the innovative behaviour similar reviews in line with the present study were also included. The reviews are presented below under various headings in accordance with the objectives of the study.

2.1 Concept of rural youth

2.2 Innovative behaviour and aspirations of rural youth

2.3 Extent of rural youth participation in farm activities

2.4 Personal, psychological and socio-economic characteristics of rural youth

2.5 Problems perceived by the rural youth

2.1 Concept of rural youth

Bajema *et al.* (2002) according their study rural youth are the persons of age 18-34.

Prasad (2002) defined rural youth as a person (male) in the age group of 18 to 30 years live in the village and engaged in farming.

Bhanu (2006) quoted that rural youth as persons in age between 18 to 35 years and residence of rural areas and farming as business.

Prakash *et al.* (2011) considered youth in his study as the persons in the age group of 18 to 24 are taken as youth in his study.

Savitha (2011) conceptualised rural youth as those persons who are in age limit of 15 to 35 and living rural areas and taking up farming.

Hutchins *et, al* (2012) defined youth in their study as individuals' lies between in the age group of 12 to 24 considered as the youth.

Richard (2012) mentioned youth as those individuals age is in the group of 15 to 35 are considered as the youth in their study.

Smith (2013) indicated rural in their study as persons in the age group of 15 to 35 and residence of the rural areas.

Mohammad *et al.* (2013) mentioned rural youth in their study as those persons lies in the age limit of 18 to 35 and those youth living in the villages and engaging in the agriculture.

Naik and Pattanaik (2014) considered youth under the age limit of 12 to 24 and living in the rural youth.

Victor (2014) according to his study persons whose age is between 18 and 35 taken them as youth.

Hari *et al. (*2013) in their study they defined youth as the person's age between 18 to 35 and living in the rural areas.

Tikale *et al. (*2015) according to their study rural youth are the persons of age 15 to 24 and residing in rural areas and farming as their occupation.

Aragow (2015) in his study defines youth as those individuals who found between lower ages limits of 14 years old and 29 years.

John *et al.* (2015) defined rural youth in their study as the individual's age in limit of 18 to 35 and individuals residing in rural areas and taking up farming.

2.2 Innovative behaviour and aspirations of rural youth

Das *et al.* (1973) did a research on predictability of innovative behaviour in agricultural innovativenes, and found that innovations in all three areas contributed towards agricultural innovative behaviour, with family planning being the highest contributory, followed by home and health innovativeness. Together, these three can explain 62.15 % of the total variation due to agricultural innovativeness. Income can explain another 16.91 % of the variation, with the remaining part begin explained by other socioeconomic factors. It is recommended that agencies initiating programs to introduce technological change should work together to develop an integrated plan. This would bring better results at less cost.

Nagesh (2006) in his research on entrepreneurial behaviour of pomegranate growing farmers in Bagalkot district of Karnataka found that 48.33 per cent of the farmers belonged to medium entrepreneurial behaviour category, 25.83 per cent of farmers were educated upto high school, and half (60.00 %) of the farmers were dependent only on agriculture,

Mathew *et al.* (2009) revealed that in their study on the innovative behaviour of employees within a small to medium sized enterprises that the strength of the organisation like innovative culture, problem solving, creativity is negatively correlated with innovative behaviour of employees which means there is lack of access to new information, lack of supporting innovative capabilities and fostering innovative behaviour.

Scot and Bruce (2011) carried out a research on determinants of innovative behaviour a path model of individual innovation in workplace found that role expectations, systematic problem solving are highly correlated with innovative behaviour.

Rajashekhar (2012) conducted research on innovative behaviour and diffusion of technology by awardee farmers in North Karnataka. It is found that the 41 per cent respondents had low innovative behaviour, followed by 33 per cent of respondents had high innovative behaviour and 26 per cent had medium innovative behaviour.

Alao *et al.* (2015) reported in their study on perception of youth roles in agricultural innovation management system among arable crop farmers in farming communities of Osun State, Nigeria. Showed that about 60.3 per cent of the respondents strongly agreed that youth should mobilize and

sensitize peers and people for innovation dissemination and assist in execution of project plan for innovation utilization. Also, 57.9 per cent agreed that youth should assist in monitoring and evaluation of project plan for innovation utilization, 57.10 per cent youth should provide both material and non-material resources for innovation utilization, and 56.30 per cent youth should assist in drawing up of project plan for innovation utilization. The respondents perceived youth roles in innovation dissemination and utilization as very important.

Aspirations of rural youth

Narendran (2000) revealed that, 26 per cent of the non-school going rural youth aspired to study up to PUC, 22 per cent aspired to study diploma, 22 per cent aspired to study degree, 18 per cent aspired to study SSLC and 12 per cent aspired to study upto the level of post-graduate education. Whereas, 86 per cent of the school going rural youth aspired to join PUC but only 14 per cent aspired to join diploma. Out of 86 per cent who aspired to join PUC, 58 per cent aspired to join science group, 33 per cent aspired to join arts group but only 9 per cent aspired for vocational courses.

Bajema *et al. (*2002) in their study aspirations of rural youth reported that almost all (96 %) of the rural students in this study aspired to continue their education after high school. Types of institutions they aspired to attend schools, community colleges, and four-year colleges and universities, indicating their awareness of post-secondary educational opportunities. The percentage of farm students (10.50 %) aspiring to study agriculture was over twice that of town students (3.90 %). These findings may indicate an opportunity to help town students to learn more about various careers in the field of food, agriculture, and natural resources, occurring more frequently off-the-farm than on-the-farm.

Victoria *et al.* (2009) in their study the analysis indicated that a large proportion (90.00 %) of the 12th-grade rural students are planned to continue their education beyond high school. Thirty-five per cent planned to graduate from a university/college and some of the youth planned to obtain a Master's degree or equivalent. Least number of the youth are want to complete 10^{th} grade and less than one per cent of the youth plans to drop out of high school.

Prakash *et al.* (2011) did a study on participation of rural women in dairy farming in Karnataka' the study found that agriculture (52.50 %) was the major occupation of the family followed by laborers (28.33 %). The remaining farm women included home makers (15.00 %) and government job holders (04.17 %).

Borua and Brahma (2012) conducted study on the knowledge level and extent of adoption of selected technology by rural youth trained in KVKs of AAU in Assam in Krishi Vigyan Kendras (KVKs) under Assam agricultural university and revealed that majority of the respondents (52.00 %) had medium knowledge level and 68.75 % had medium extent of adoption of the selected technology practices that were imparted in the training conducted by the KVKs.

Hutchins *et al.* (2012) conducted the study on planning for the future: an investigation of work bound rural youth results indicated that the half of rural youth in this study planned to continue their education after high school (56.00 %), followed by planned to work and further their education (34.00 %).

Hari *et al. (*2013) carried out a research on comparison of educational and occupational aspirations of rural youth from farm families of Rajasthan and Kerala states concluded that Kerala has the high (21.50 %) aspirations towards the education and only 7.00 per cent of the respondents has prefers agriculture as occupational aspiration. And in Rajasthan about 11.00 per cent of the respondents preferred agriculture and allied as their main occupations and 39.25 per cent of respondents prefers government jobs and followed by private.

Mohammad (2013) revealed in his study on career choices of secondary students with special reference to gender, type of stream and parental education that predominant career choices of sample subjects on the basis of gender. The order of their career choice in preferential sequence in male subjects is found to be medical (20.00 %), Scientific (19.00 %), and Technical (13.00 %), Sports (13.00 %), Literary (8.00 %), Outdoor (8.00 %), Crafts (7.00 %), House hold (5.00 %), Agriculture (4.00 %) and Fine arts (3.00 %). However, in case of females the order of vocational preference/s is reflected as medical (23.00 %), Scientific (15.00 %), Sports (11.00 %), Literary (10.00 %), Technical (9.00 %), Crafts (8.00 %), House hold (8.00 %), Fine arts (7.00 %), Outdoor (6.00 %) and Agriculture (3.00 %). The results reveal that medical choice seems to be dominant in both the genders followed by scientific choice. Least preference seems towards fine arts by male subjects and agriculture by females.

Smith (2013) conducted research on occupational aspiration of youth in colleges: an sociological analysis of present and future position of youth in Siliguri city concludes that 10.10 per cent male and 18.30 per cent female wants to become a school teacher. Similarly 10.60 per cent male and 13.60 per cent female respondent aspire for Government or private engineering services. 5.30 per cent male and 1.90 per cent female students want to be a college teacher, followed by 4.30 per cent male and 2.90 per cent female want to be an official job in West Bengal Civil Service or Police or Banking. 4.80 per cent male and 7.20 per cent female wants to build their future career as a manager or human resource in Multi-National Companies or in tea management or tourism sector. 3.90 per cent male and 1.90 per cent female wants to become a Charter Accountant 3.90 per cent male respondent admitted that any type of job they can accept and they have no special choices.

Dhakre (2014) carried out a research on aspiration of agriculture students towards agriculture enterprise in West Bengal: a case study, and found that the majority of the students had positive aspiration of students towards agriculture enterprise. So the study also revealed that aspiration of students towards agriculture enterprise was positively and significantly associated with father occupation, family size and aim of joining.

Naik and Pattanaik (2014) it was found that maximum number of tribal parents (60.87 %) completed the primary school education and nearly 18.75 per cent of them tribal mother was found illiterate. About 83.00 per cent family's main occupation is farming and 38.00 per cent mother goes to farming field regularly for their life hood. Only 4.62 per cent parents works in government and non-government agencies.

Tikale *et al.* (2015) carried out a research on aspirations of rural youth towards self-development revealed in their study that in case of profile of rural youth nearly half of respondents (46.00 %) had medium age (24 to 28 years). The 30.00 per cent of rural youth educated up to college level.

2.3 Extent of participation of rural youth in farm activities.

Coppard (2001) carried out research on the rural non-farm economy in India and concluded that total rural workers engaged in non-farm activities formed 11.92 per cent of total main rural workers participation of female workers in non-farm activities was 5.80 per cent of the 11.80 million workers in Orissa, 80 per cent of these are engaged in agricultural and related activities.

Abdullah *et al. (*2015) found out in their study on examining the extent of youth participation in agricultural training program in Malate youth farm Kwara State, that extent of participation in the development program is mostly related to the approach of the program. If a development program or project is initiated by the people, then it is bottom – up approach. Therefore, the degree of participation is expected to be high, or else if the program is initiated by the government, it is a top – bottom approach, and therefore, extent of participation is expected to be low because such program is imposed on the people by the government or an external body. This approach is referred to in the field of community development as partnership approach. In this case, the extent of participation is expected to be moderate.

Ugwoke *et al.* (2005) conducted study on youth participation in farming activities in rural areas of Imo state, Nigeria: implications for extension, shows that the youths in the study area participated in most farming operations, especially bush clearing (81.00 %), cultivation (83.00 %), Planting (84.00 %), weeding (79.00 %) and harvesting (74.00 %), active involvement of the youths in agricultural activities.

Sarah *et al. (*2010) analysed in their study on rural youths participation in agriculture: prospects, challenges and the implications for policy in Nigeria' the study revealed that 79 per cent of rural youths were involved in agricultural activities and also expressed the problems faced by them, Only 2.80 per cent of youth reported that inputs were readily available in their communities. And marketing of farm produce was associated with numerous problems, including low prices (59.30 %), bad road network (37.00 %) and poor/lack of storage facilities (13.00 %).

Muhammad *et al.* (2011) conducted research on extent of rural women's participation in agricultural activities. It is fond that cleaning of animal's sheds was at the top with highest mean score, while on the other hand feeding and caring of livestock and Poultry birds ranked 2nd. The involvement of rural women is low and ranked 8th among other livestock related activities

Prakash *et al.* (2011) did a study on participation of rural women in dairy farming in Karnataka, the study revealed that 80.83 per cent of women involved in activities like fodder collection while 75.00 per cent women performed chaffing of fodder for animals. The women also looked after storage of feed and fodder (77.50 %) in the form of hay making. The act of preparing feed i.e. mixing of concentrates with roughages or fodder was performed by 67.50 per cent of rural women.

Okwoche *et al.* (2012) carried out study on an assessment of youth participation in agriculture and rural development, Benue State, Nigeria' the result showed that 85.00 per cent of the youths were literate. In participation in agriculture and rural development, 96.00 per cent of youth were in

various schools ranked 1st and 72.00 per cent were involved in religious and marketing activities ranked 2nd and 70.00 per cent in agriculture production ranked 3rd among other activities. Study concludes that the extent of youth vitality, responsible conduct and their participation in community activities is positively correlated to the development of their area.

Prince *et al. (*2013) quoted in their study on factors influencing farmer's participation in agricultural projects: the case of the agricultural value chain mentorship project in the Northern region of Ghana is the probability of participating in an agricultural project reduces by about 2 per cent if a farmer stays in school for an additional year. Farmers who have access to credit are about 15 per cent more likely to participate in an agricultural project. A farmer who has access to agricultural extension service is also about 14 times more likely to participate in an agricultural project.

Ghosh and Ghosh (2014) analysed in their study on analysis of women participation in Indian agriculture, depicts active involvement and participation of women in the agricultural sector in almost all the states with few exceptions like Kerala, Punjab and West Bengal where women are actively participating in non-agricultural activities. It is almost uniform for all the states showing very slight changes in few states which includes house-hold industry, service sector etc. Thus the entire work can be concluded with the facts that women participation in Agriculture is increasing with time and women.

John *et al.* (2015) in their study on determinants of rural youth's participation in agricultural activities: the case of Kahe east ward in Moshi rural district, Tanzania' analysed that the participation of young women in agriculture through investing in their own farms. Half (52.00 %) of the respondents were females and 48 per cent were males who participated in agricultural activities through working in their family farms. The study found out that participation in agriculture through working in family farms is more practiced (52.00 %) by young women than young males (48.00 %).

Sunday *et al. (*2015) found out in their study on determinants of decision and participation of rural youth in agricultural production a case study of youth in southern region of Nigeria. The result implies that a number increase in the rural male youth reduces the increase involvement of youth in agricultural activities by about 60.50 per cent compared to a number increase in female youth. A unit increase in the formal education of youth reduces the increase involvement of rural youth in agricultural activities by about 7.00 per cent compared agricultural participation among youth.

2.4 Personal, psychological and socio-economic characteristics of rural youth

Age

Prasad (2002) carried out research on a study on general knowledge of rural youth about improved agriculture, their attitude and participation in farm activities in Dharwad district of Karnataka defined rural youth as a person (male) in the age group of 18 to 30 years live in the village and engaged in farming.

Ugwoke *et al. (*2005) conducted study on youth participation in farming activities in rural areas of Imo State, Nigeria: implications for extension, shows that about half of the respondents (50.00 per cent) were between 31 and 40 years while 44.30 per cent were between 21 and 30 years. Only 5.71 per cent were less than 20 years old.

Bhanu (2006) in her study on study on aspirations of rural youth and their attitude towards rural developmental activities in Dharwad district of Karnataka state, quoted that rural youth as persons in age between 18 to 35 years and residence of rural areas and farming as business.

Savitha (2011) did a study on participation and decision making of rural youth in agriculture conceptualised rural youth as those persons who are in age limit of 15 to 35and living rural areas and taking up farming.

Hutchins *et, al* (2012) in their study on planning for the future: An investigation of work bound rural youth defined youth in their study as individuals lies between in the age group of 12 to 24 considered as the youth.

Richard (2012) mentioned youth as those individuals age is in the group of 15 to 35 are considered as the youth in their study.

Hari *et al. (*2013) carried out a research on comparison of educational and occupational aspiration of rural youth from farming families of Kerala and Rajasthan in their study they defined youth as the person's age between 18 to 35 and leaving in the rural areas.

Mohammad (2013) mentioned rural youth in their study on extent of Rural Women's participation in agricultural activities. Study as those people lies in the age limit of 18 to 35 and those youth leaving in the villages and engaging in the agriculture.

Smith (2013) did a research on occupational aspiration of youth in colleges; a sociological analysis of present and future position of youth in Siligari city indicated that rural in their study as persons in the age group of 15 to 35 and residence of the rural areas.

Naik and pattanaik (2014) conducted research on career aspirations and career development barrier of tribal students in the Salboni block of Jangalmahal considered youth under the age limit of 12 to 24 and leaving in the rural youth.

Sowjanya (2014) indicated in her study on management efficiency of dairy farm women that majority (65.00 %) of the farm women belonged to middle age group of 30 to 50 years, followed by young age group of less than 30 years (18.33 %), while only 16.64 per cent of the farm women belonged to more than 50 years age group.

Stephen, *et al. (*2014) found in their study on attracting youth to agriculture: the career interests of young farmers club members in Uganda. Findings indicated that almost equal numbers of males (49.00 %) and females (51.00 %) participated in the study. Students' ages ranged from 13 to 19 years with a majority (73.40 %) being 16 to 18 years of age; 21.61 % were 13 to 15 years of age, and 2.00 % indicated they were 19 years or older.

Riju Mathew (2015) did a research on a study on the problems of tribal youth in Kerala special reference of Pathanamthitta dist., Kerala, based on observation the rural youth were in the age group of 18-35.

Education

Hiremath (2000) in his study on participation of rural youth in farm and non-farm activities in Dharwad taluk, reported that more than 27.00 per cent of youth had education up to primary school level, 16.67 per cent had education up to S.S.L.C. 13.33 per cent of youth had education up to P.U.C. and 6.67% had education up to degree level.

Shakuntala and Chaman (2000) in their study Socio- economic characteristics of rural families reported that majority of heads of the families (80.00 %) and about 87.00 per cent of house wives in the village were illiterate.

Sophia (2001) in her study on a study on knowledge and adoption of sustainable cultivation practices in sugar cane and cotton by farmers in Cuddalore district of Tamil Nadu conducted in cuddalore district of Tamil Nadu indicated that 56.25 per cent of Sugar cane farmers were educated up to primary school level and 13.75 per cent had education up to higher secondary level and meagre per cent of sugarcane farmers (2.55 %) were educated up to college level and 5.00 per cent were illiterates.

Ugwoke, *et al.* (2005) conducted study on youth participation in farming activities in rural areas of Imo State, Nigeria: implications for Extension' shows that about 73.00 per cent of the youths sampled had either secondary or tertiary education. This is important, as it will likely enhance the adoption of modern farm technologies.

Prakash *et al.* (2011) did a study on participation of rural women in dairy farming in Karnataka, the study revealed that 53.33 per cent of respondents were literates while 46.67 per cent of the women were illiterates.

Shilpashree (2011) in her study on awardee farmers in North Karnataka, reported that 62.50 per cent of the awardee farmers were educated up to pre university course, followed by high school (10.00 %), primary school (22.50 %) and middle school (5.00 %). Farming experience

Nataraju (2012) conducted a study on participation of women in dairy farming in Chikkamagalore. He found that 35.00 per cent of the dairy farmers were educated up to high school level, followed by middle school level (30.00 %), primary school level (15.00 %) and college level (14.17 %) Whereas, 5.83 per cent of them were illiterate.

Sowjanya (2014) reported in her study on management efficiency of dairy farm women that as high as 47.50 per cent of the respondents were illiterates, followed by primary school of 1-4th std (21.66 %), middle school of 5-7th std (16.67 %), high school of 8-10th std (10.00 %), PUC (3.34 %) and only 0.83 per cent of the farm women had graduation and above education level.

Victor (2014) reported in his study on factors influencing the involvement in non-agricultural income generating activities of rural youth: a case study in Jabalpur district of Madhya Pradesh, India that majority of respondents were educated up to high school (42.50 %), currently employed (59.50 %), had medium (48.98 %) rural life preference and low (35.63 %) achievement motivation. The economic motivation of majority of the respondents was categorized as medium (49.80 %).

John *et al.* (2015) in their study on determinants of rural youth participation in agricultural activities: the case of kahe east ward in Moshi rural district, Tanzania, shows that among rural youth who participate in agriculture through selling labour power, (84.40 %) respondents had primary education, (15.60 %) had secondary education, only two per cent had vocational training and none had higher education. Those who invested in their own farms include 72.70 % with primary education, 25.80 % with secondary education, only one per cent of all respondents had vocational training.

Stephen, *et al.* (2014) found in their study on attracting youth to agriculture: the career interests of young farmers club members in Uganda. Found that most students were in the senior four class (54.6 %), i.e., grade 10, followed by senior six or grade 12 with 21.6 %, senior three or grade 9 was third with 18.6 %, and senior two, grade 8, had the fewest number of participants (4.9 %) in the clubs.

Annual income

Sarah *et al. (*2010) analysed in their study on rural youth participation in agriculture: prospects, challenges and the implications for policy in Nigeria' is the study revealed that Over 62 % of youths earned 10,000-50,000 per annum from agricultural activities. Only 2.8 % of youths reported that inputs were readily available in their communities.

Prakash *et al.* (2011) did a study on participation of rural women in dairy farming in Karnataka the study found that agriculture (52.50 %) was the major occupation of the family followed by laborers (28.33 %). The remaining farm women included home makers (15 %) and government job holders (4.17 %).

Prakash *et al.* (2011) reported in his study on participation of rural women in dairy farming in Karnataka indicated that the most of the respondent families were marginal farmers (33.33 %) with low annual family income (60.83 %) having agriculture (52.50 %) as the major occupation.

Upadayay and Desai (2011) reported that most (45.83 %) of the respondents belonged to low income category of up to ₹ 50,000, whereas 32.51 per cent belonged to medium income category of in between ₹ 50,001 to ₹ 10,000 and only 21.66 per cent belonged to high income category of above ₹ 10,000.

Jaishridhar *et al.* (2013) reported that majority (72.00 %) of the respondent belonged to medium income category (₹ 45,280-1, 53,054), whereas 17.33 and 10.67 per cent of the respondents belonged to high (above ₹ 1,53,054) and low (less than ₹ 45, 280) income categories, respectively.

Sowjanya (2014) reported that in her study on management efficiency of dairy farm women more than half (52.50 %) of the farm women belonged to medium income level, followed by high (40.83 %) and low income level (6.67 %), respectively.

John *et al.* (2015) in their study on determinants of rural youth participation in agricultural activities: the case of kahe east ward in Moshi rural district, Tanzania' reveals that, for the rural youth who participate in agriculture through selling labour power, 25 (52. 10 %) respondents relied much on both agriculture and other sources as their main sources of income, 13 (27.10 %) relied much other sources and 10(20.80 %) relied much on agriculture.

Land holding

Chaudhari (2006) in his study on constraints faced by farm women in adoption of improved cattle management practices in arid Rajasthan, found that more than half of trained dairy farmers (54.00 %) possessed semi medium land holding, followed by medium land holding (21.00 %) and small land holding (19.00 %). Whereas, only 6.00 per cent of trained dairy farmers had marginal land holding. In case of untrained dairy farmers more than one third of the respondents (37.00 %) had semi medium land holding followed by small (35.50 %) marginal (19.00 %) and medium (19.00 %) land holdings.

Pushpa (2006) reported in her research on a study on livestock production systems of rural and peri-urban livestock owners, that, more number of respondents (41.25 %) possessed above 2 ha land and equal (23.17 %) of the respondents were possessed 1 ha land and 2 ha landholdings (21.25 %), whereas only 9.37 per cent of the respondents were landless.

Jyothi (2012) indicated in her study on perception of Bhagyalakshmi scheme by rural women of Dharwad district that majority of the beneficiaries and non-beneficiaries were marginal farmers (Up to 2.5 acres) with 62.67 and 72.00 per cent of land holding, respectively. This was followed by small land holding (2.51 to 5.00 acres) with 21.33 per cent and 20.00 per cent of beneficiaries and non-beneficiaries, respectively.

Mavinakatti (2013) revealed in his study on knowledge and opinion of farmers regarding Bhoochetana programme, that 27.34 per cent of respondents belonged to semi medium farm category, followed by small farm (24.00 %), medium farm (22.66 %) and big farm (15.34 %) categories. Whereas, only 10.66 per cent of the respondents belonged to marginal farm category.

Kathiriya *et al.* (2013) observed in their study on role of rural women in dairy farming of Rajkot district Tamilnadu that 33.33 per cent of rural women had marginal land holding followed by small land holding (28.34 %), land less (20.83 %) and large land holding (17.60 %).

Santosh (2013) noticed that around one-third of respondents (36.00 %) belonged to semi medium category followed by medium farmers (30.67 %). Small farmers were observed to the extent of 22.67 per cent and big farmers to the extent of eight per cent only. A very small per centage (2.67 %) belonged to marginal land holding category.

Mass media participation

Hiremath (2000) reported that 80.83 per cent of youths families were possessing radio and 55.00 per cent possessing television 59.17 per cent of youth listened to all other programmes in radio and 42.50 per cent viewed all other programmes in television regularly, whereas, only 4.17 and 1.67 per cent were listened and viewed Agricultural programmes in radio, television, respectively.

Sahana (2003) reported that 40.83 per cent of the farmers had medium level of mass media participation. One third of the farmers (33.00 %) had low mass media participation and about one fourth (25.83 %) of them had high mass media participation.

Shilpashree (2011) in her study on awardee farmers in North Karnataka reported that 47.50 per cent of the awardee farmers belonged to high level of mass media utilization category, followed by medium (30.00 %) and low category (22.50 %), respectively. The past studies on mass media participation depict that majority of the respondents fall under the category of medium mass media participation followed by low and high.

Avinash (2013) revealed that television was possessed television by a very high majority (87.50 %) of the respondents of which 60.00 per cent of the respondents viewed agricultural programmes occasionally. Radio sets were possessed by 20.00 per cent of the respondents, of which only 15.83 per cent of respondents were listening agricultural programmes occasionally. Further reported that half (50.00 %) of the respondents were subscribers of newspaper, with respect to reading habit of the respondents 52.50 per cent of respondents were regular readers of agricultural news. None of the respondents were subscribers of farm magazines but only 4.16 per cent of respondents occasionally used to read farm magazines. Hence, the overall mass media exposure of 44.16 per cent of the farmers belonged to medium mass media exposure category followed by low (28.33 %) and high (27.50 %) categories, respectively.

Selvaraj and Rehman (2013) concluded that more than thirty per cent of the respondents (33.80 %) possessed radio and 19.20 per cent of the respondents were the subscribers of newspapers.

Farming experience

Shilpashree (2011) reported that 52.50 per cent of the awardee farmers had high level of farming experience, followed by medium (47.50 %) level of farming experience category.

Thiranjangowda (2005) observed that, 40.62 per cent of the respondents belonged to high experience category while, 35.93 per cent and 23.45 per of the respondents belonged to medium and low experience category, respectively.

Vinay Kumar (2005) in his study reported that, 53.33 per cent of the respondents belonged to low experience category followed by medium (45.00 %) and high (1.67 %) farming experience.

Extension participation

Prasad (2002) reported that, 8.00 per cent of the rural youth were participated occasionally in training programmes whereas, 37 per cent of the respondents participated regularly and 9.33 per cent of the respondents participated occasionally in agricultural exhibitions.

Geetha (2007) conducted a study on impact of Bharatiya Agro-Industries Foundation (BAIF) programmes on livelihoods of women beneficiaries in North Karnataka. The study revealed that half of the (53.12 %) of the beneficiaries regularly attended group meetings followed by result demonstration (37.50 %),half of the respondents (50 %) occasionally attended result demonstration followed by method demonstration (31.25 %) and 93 per cent of the respondents were never participated by the beneficiaries were krishimela , field trips (75 %).

Verma *et al.* (2013) conducted a study on performance evaluation of fishery based self-help groups in West Tripura. The study revealed that majority of the respondents had medium level of extension participation (68.89 %).

Sharma *et al.* (2014) in their study on role of farm women in agricultural operations and decision making pattern. The study found that extension participation had a positive and significant relationship with agriculture operation. This shows the influence of extension participation on agriculture operation.

Singh *et al.* (2015) conducted study on role of farm women in agricultural operations and decision making pattern. The study concluded that extension participation has positive and significant relationship with participation at 1% level of significance.

Achievement motivation

Vijay Kumar (2001) in his study on entrepreneurship behaviour of floriculture farmers in Ranga reddy district of Andhra Pradesh reported that 44.16 per cent of respondents had medium achievement motivation followed by 28.34 and 27.50 per cent of respondents in low and high achievement motivation, respectively.

Arulprakash (2004) conducted a study on an analysis of Swarnajayanti Gram Swarozgar Yojana in Salem and Thiruvallur Districts of Tamil Nadu reported that, majority (60.00 %) of the respondents are from SGSY belonged medium categories.

Nagesh (2005) in his study on study on entrepreneurial behaviour of vegetable seed producing farmers of Haveri district revealed that 71.66 per cent of vegetable seed production farmers had medium achievement motivation followed by more or less equal percentage of respondents in low (15.00 %) and high (13.33 %) achievement motivation, respectively.

Binkadakatti (2008) revealed that, 40.00 per cent of trained and 36.25 per cent of untrained respondents were belonged to medium achievement motivation category, whereas, 33.75 per cent of trained and 18.75 per cent of untrained respondents were belonged to high achievement motivation category, followed by 26.25 per cent of trained and 45.00 per cent of untrained respondents were belonged to low achievement motivation category.

John *et al.* (2015) in their study on determinants of rural youth's participation in agricultural activities: the case of kahe east ward in Moshi rural district, Tanzania, indicates that 63.30 % respondents were farmers, 12.20 % were small businessmen, (10.00 %) employed in government sector, 5.60 % employed in private sector and 8 (8.9 %) had other occupations. The finding shows that most (63.00 %) of rural youth farmers had farming as their main occupation.

Economic motivation

Hiremath (2000) reported that 80.83 per cent of youths families were possessing radio and 55.00 per cent possessing television 59.17 per cent of youth listened to all other programmes in radio and 42.50 per cent viewed all other programmes in television regularly, whereas, only 4.17 and 1.67 per cent were listened and viewed Agricultural programmes in radio and television, respectively.

Manjunatha (2002) did comparative analysis on impact of irrigation on annual income and employment generation in Hemavathi project area revealed that as high as 41.70 per cent of both beneficiaries and non-beneficiaries respectively had high motivation, whereas 33.33 per cent of beneficiaries and 38.30 per cent of non-beneficiaries had medium economic motivation, followed by low economic motivation (18.40 and 20.00 % of beneficiaries and non-beneficiaries, respectively).

Bhagyalaxmi *et al.* (2003) conducted a study on profile of the rural women micro-entrepreneurs. They found that 45.00 per cent of dairy farmers had medium category of economic motivation, followed by high (30.00 %) category of economic motivation.

Khin Mar Oo (2005) conducted a study on knowledge and adoption of improved dairy management practices by women dairy farmers in Dharwad district. He observed that majority of dairy women (67.50 %) had medium level of economic motivation, followed by high economic motivation (24.16 %), whereas only 8.33 per cent of the dairywomen had low economic motivation.

Satyanarayan and Jagadeeswary (2010) revealed that two per cent of the livestock farmers had low level of economic motivation, followed by 30.00 and 68.00 per cent had medium and high level of economic motivation towards livestock farmers respectively.

Prakash *et al.* (2011) did a study on participation of rural women in dairy farming in Karnataka the study found that agriculture (52.50 %) was the major occupation of the family followed by laborers (28.33 %). The remaining farm women included home makers (15%) and government job holders (04.17 %).

Kashappa (2013) conducted a comparative study on dairy and non-dairy farmers in Belgaum district. He indicated that majority (37.50 %) of dairy farmers were had high economic motivation followed by medium (33.35 %) and meager in low category (29.17 %). Whereas, half of the non-dairy farmers (50.00 %) were had high economic motivation followed by medium (29.16 %) and low (20.83 %) level of economic motivation.

Soujanya (2014) revealed that high economic motivation was noticed among 29.16 per cent and medium level of economic motivation was exhibited by 36.66 per cent and 34.16 per cent were found to have low economic motivation.

2.5 Problems perceived by the rural youth.

Coppard (2001) indicated in his study on the rural non-farm economy in India. Identified problems include insufficiency of size of loan, inflexibility of loan, high transaction costs in terms of time taken and extensive paper work, lack of timely credit supply and maintenance of formal distance between borrower and lender, despite an expanding number of bank branches. Among small and marginal farmers, entrepreneurs, there was demand for timely, but not necessarily subsidised credit. However, directed lending programmes have focused on low interest rates and subsidies rather than accessibility and availability.

Adekunle *et al.* (2009) did research on constraints to youth involvement in agricultural production in Kwara State, Nigeria. The major findings were constraints hindering youth participation in agriculture were identified as inadequate credit facility which is considered as first rank (1st rank), lack of agricultural insurance (2nd rank), and poor returns to agricultural investment (3rd), lack of basic farming knowledge (4th) and lack of access to tractors and other farm inputs. And least rank is lack of basic farming knowledge.

Sarah *et al.* (2010) quoted in their study on rural youth participation in agriculture: prospects, challenges and the implications for policy in Nigeria. According to author marketing of farm produce was associated with numerous problems, including low prices (59.30 %), bad road network (37.00 %) and poor/lack of storage facilities (13.00 %). In spite of these challenges, youths have assets such as good literacy levels (50.00 %) and access to agricultural information among others. In terms of food security, 70.00 % of youths reported that they had adequate stock of food to feed on throughout the year, while 30.00 % said they did not have enough stock for the year.

Lyocks *et al.* (2013) conducted the study on mobilizing youth for participation in Nigerian agricultural transformation agenda, found that Major problem was inadequate incentives (39.70 %). And inadequate training and extension services (28.92 %), level of illiteracy was 31.90 %. And least was the inadequate infrastructure (21.50 %).

Ajani *et al. (*2015) carried out a research on problems of rural youth in agriculture, found that major problems encountered by youths in agriculture include lack of interest in agriculture as a result of drudgery in farm operations, lack of competitive market for agricultural products, lack of start-up capital, inadequate labour saving technologies for ease of operations, inadequate finance/credit facilities.

Riju Mathew (2015) did a research on a study on the problems of tribal youth in Kerala special reference of pathanamthitta dist. Kerala. Based on observation major findings found were majority of respondents irrespective of gender are addicted to alcoholism, panparag and betel leaves. Most of them are indebted and often dragged into various forms of exploitation by the contractors and moneylenders by purchasing the cultivated products owed by the tribals at low cost. And the study also reveals that they have poor income due to exploitation, unemployment and lack of basic needs.

3. MATERIAL AND METHODS

This chapter deals with material and methods followed in conducting the present investigation. The details are given under the following headings

3.1 RESEARCH DESIGN USED IN THE STUDY

In the present investigation, Ex-post facto research design was used. This design was considered as appropriate because the phenomenon had already occurred. Ex-post facto research is the most systematic empirical enquiry in which the researcher does not have control over independent variable as their manifestation has already occurred or they are inherent and not manipulatable.

3.2 LOCALE OF THE STUDY

3.2.1 Location

Fig 1 shows study area. Haveri district was formed in the year 2001 by dividing the earlier Dharwad district into Dharwad, Haveri and Gadag districts. The Haveri district is located between 17° (north latitude) to 15°. And east longitudes 35° to 23°.

3.2.2 Population

The total population of the district is 4,778,439. Out of total population the youth population is 5, 82,875 (2011 census)

3.2.3 Crops

The main crops grown in the district are Jowar, Maize, Cotton, Chilly, Paddy, Ragi, Pulses, Groundnut, Horse gram, Sugarcane and Sunflower.

3.2.3 Industries

The sugar factory at Sangur in Haveri taluk and Grasim industry located at Kumarapattanam in Ranebennur taluk are the important industries in the district.

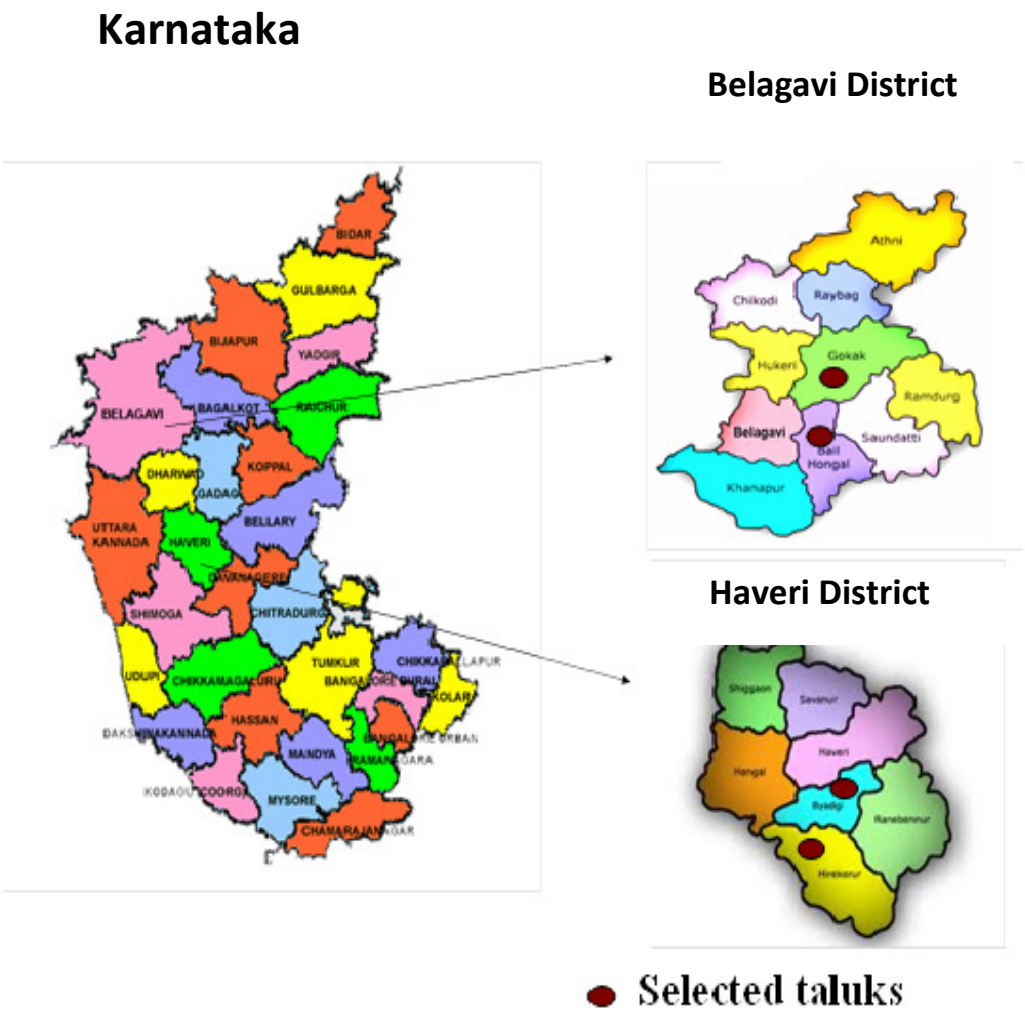

Fig. 1. Map showing study area

3.2.4 Rainfall and Climate

The district enjoys sub-tropical climate with temperatures ranging between 18 - 40℃. The rainfall varies in the district from over 903 mm in west (Hangal) to less than 592 mm in east (Ranebennur). October is the wettest month with normal monthly rainfall in all hydro meteorological stations is recorded in excess of 100mm.

3.2.5 Demographic features of Belagavi district

3.2.6 Location

The district Belgavi is located east of the Western Ghats and is situated in the north western part of Karnataka state. It is bordered by the state of Goa on its southwest and Maharashtra state towards its west and north. The district lies between 15°00 and 17°00 (north latitudes) and between 74°00 and 75°30 (east longitudes). It covers an area of 13,444 Sq. Km.

3.2.7 Population

The total population of the district is 42.15 lakh (as per 2011 Census), out of that youth population is 8, 54,685 (2011 census)

3.2.8 Rainfall and Climate

The climate of the district as a whole can be termed as semi-arid. The variation in the maximum temperature during the year ranges from 27℃ to 35℃ and minimum from 13.90℃ to 20.60℃. The district experiences pleasant winters and hot dry summers. The normal rainfall in the district decreases from more than 1859 mm in Khanapur taluk in the southwest, to less than 491 mm in Raybag taluk towards northeasterly direction.

3.2.9 Industries:

The district is covered with large number of sugarcane factories in almost all the taluks.

3.2.10 Soil types

Red sandy soil is the major soils of the district followed by the medium black soil and deep black soil. District is covered with both red and black soils.

3.3 Selection of district

The research study was conducted in two districts of North Karnataka under the jurisdiction of University of Agricultural Sciences, Dharwad. As it is having the youth clubs and having high number of youth population in these districts and also large area of land is under the agriculture in North Karnataka region.

3.3.1 Selection the taluks

Two taluks from each district and three villages from each taluka and ten respondents from each villages, thus forming sample size of 120.

3.3.2 Selection of the villages

The list of villages belong to the two taluks were obtained from Nehru Yuvak Kendra, Dharwad. (Regional head office North Karnataka) Three villages from each taluk were selected. Hence, from two districts twelve villages spread over four taluks were selected for the study.

3.3.3 Population of the study

All the rural youth who have under the age group of 18-35 (ministry of Human Resource Development) and are living in rural areas are selected for this study.

3.3.4 Selection of Sample

Sl no	District	Taluks	Villages	Sample size
1.	Haveri	Byadagi	1.Belavigi 2.Galagnatha 3.Gutthal	10 10 10
		Hirekurur	1. Doopadahalli 2. Aladakatti 3. Chikkerur	10 10 10
2.	Belagavi	1.Gokak	1.Arabhavi 2.Sanganakere 3.Duradundi	10 10 10
		2.Bailahongal	1.Kitthur 2.Naganur 3.Bailwad	10 10 10
			Total	120

3.4 VARIABLES AND THEIR MEASUREMENT

Variables and their measurement

Variables	Empirical measurements
Dependent variables	
Innovative behaviour	Procedure followed by Rajshekhar Basnayak (2012)with suitable modifications
Aspirations	Procedure followed by Bhanu (2006)
Independent variables	
Age	Chronological age of the respondents in completed years
Education	Procedure followed by Shilpashri (2011)
Farming experience	Procedure followed by Rajashekhar (2013)
Size of the land holding	Procedure followed by Shilpashri (2011)
Annual income	Procedure followed by Shivakumar (2015)
Mass media exposure	Procedure followed by Shilpashree (2011)
Extension participation	Scale developed by Siddaramaiah and Jalihal (1980) Procedure followed by Rajashekhar (2013)
Achievement motivation	Scale developed by Singh (1978) followed by Neha (2013)
Economic motivation	Scale developed by Supe (1969) followed by Nagesh (2006)

3.4.1 Dependent variable

3.4.1.1 Innovative behaviour

The scale developed by Rajshekhar (2012) same scale has been adopted. But with respect to rural youth the scale has been modified. There are 68 statements/activities these 68 statements/activities formed on the basis of specialized in agricultural extension, agronomy, horticulture, soil science, seed science, entomology, microbiology, farm engineering and agribusiness management. These activities were written in statement form with 'Yes' or 'No' answer format. The 'Yes' answer was scored as one while 'No' answer was scored as zero. Finally, 68 statements were included with two alternative answers in the scale.

The following table depicts an account of the various dimensions and items of the scale.

Sl. No.	Dimensions of the scale	Number of items
1.	Agriculture and allied practices	05
2	Information of seeds	09
3	Soil fertility and production management	10
4	Use of bio-fertilizers	05
5	Use of bio gas and bio-pesticides	06
6	Use of pest monitoring devices	04
7	Use of farm machinery	09
8	Post-harvest management	10
9	Marketing activities	10

The summations of scores obtained by each respondent on the items of each dimension indicated dimension score. The score of agriculture and allied practices ranges from 0-5, the score for information of seeds ranges from 0-9, the score of soil fertility and production management ranges from 0-10, the score of use of bio-fertilizers ranges from 0-5, the score of use of bio-pesticides ranges from 0-6, the score of use of pest monitoring devices ranges from 0-4, the score of use of use of farm machinery ranges from 0-9, the score of use of post-harvest management ranges from 0-10, the score of use of marketing activities ranges from 0-10. The total score ranges from 0-68.

Component wise distribution of the respondents according to their innovative behaviour

1	Agriculture and allied practices	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
2	Information of seeds	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
3	Soil fertility and production management	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
4	Use of bio-fertilizers	
	Categories	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
5	Use of bio gas and bio-pesticides	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
6	Use of pest monitoring devices	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)

7	Use of farm machinery	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
8	Post-harvest management	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)
9	Marketing activities	
	Category	Scores
	Low	(Mean – 0.425*SD)
	Medium	(Mean ± 0.425*SD)
	High	(Mean + 0.425*SD)

The total score of each respondent on all the dimensions were calculated and categorization of respondents is as follows.

Overall distribution of respondents according to their innovative behaviour

(n=120)

Category	Scores
Low	(Mean – 0.425*SD)
Medium	(Mean ± 0.425*SD)
High	(Mean + 0.425*SD)

3.4.1.2 Aspirations

An aspiration refers to a person or a group of person's orientation towards a particular social status or status attribute like occupation, education, income and so on (Haller, 1968). In the present study aspiration refers to rural youth's orientation towards education, occupation, enterprise, and general aspiration.

Occupational aspirations

The youth were grouped into five categories based on their occupational aspirations,

They were as follows.

1. Farming
2. Office work
3. Factory work
4. Business
5. Others

First the frequencies for different items mentioned above were calculated and then the percentages were worked out to know the degree of aspirations of rural youth towards different occupations. To carry out correlation analysis, score of 1, 2, 3 and 4 was given for farming, factory work, office work and business, respectively. The procedure followed by Nagarajaiah (1978) and as followed by Narendran (2000) was used with slight modifications.

Enterprise aspiration consists of eight agro based enterprises were included to know the enterprise aspirations of rural youth. They were as follows.

1. Agriculture (crop production) 2. Dairy

3. Poultry 4. Sericulture

5. Bee keeping 6. Rabbit rearing

7. Piggery 8. Small scale industry

A three point response continuum with most interested, moderately interested and least interested with a score of 3, 2 and 1 respectively was used to quantify the enterprise aspiration of rural youth. The procedure followed by Joshi (1979) and as followed by Doddahanumaiah (1990) was used with slight modification. Based on the total scores obtained on each enterprises they have been ranked.

General aspirations was measured with the help of aspiration scale used by Sagar (1983) and as followed by Bheemappa (2001). To facilitate, obtaining clear responses from the rural youths, the items were provided with 5 point response categories from 0 to 4 scores. Finally, the scores of all the items were added to get the aspiration score. The maximum score that one could get was 52 and the minimum was zero. Later the respondents were grouped into three Categories by using the mean and standard deviation as a measure of check.

Category	Score
Low	Less than (mean - SD)
Medium	Between (mean + SD)
High	More than (mean + SD)

3.4.2 Independent variables

3.4.2.1 Age

It refers to the chronological age of the respondents at the time of investigation. The age of the respondents was recorded as mentioned by them in completed years. Since the study is on rural youth, the age is considered between 18-35

3.4.2.2 Education

Education was operationalized as the extent of formal education undergone by the respondents. The respondents were grouped into different levels of education based on the frequency and percentage. The procedure followed by Rajashekhar (2012) was adopted for computation.

Category	Scores
Illiterate (Cannot read and write)	0
Primary school (1-4th standard)	1
Middle school (5-7th standard)	2
High school (8-10th standard)	3
Pre-university (11th and 12th standard)	4
Graduate (Above 12th standard)	5
Post Graduate (Master degree)	6

3.4.2.3 Size of the land holding

Land holding is the actual land owned by the farmer in acres. The irrigated land was converted into rainfed land by following the procedure as specified in the notification of Government of India (GOI) through circular no. 280-12/16/19-RD.III-Vol-X dated 15Nov, 1991. Accordingly one acre of wet land is equal to three acres of dry land. The respondents were categorized based on the procedure suggested by GOI. The procedure followed by Shilpashri (2011) was used as follows.

Category	Land holding (acres)
Marginal farmer	Less than 2.50
Small farmer	2.51 to 5.00
Semi medium farmer	5.01 to 10.00
Medium farmer	10.01 to 25.00
Big farmer	More than 25.01

3.4.2.4 Farming experience

Experience refers to the number of years of farming as their source of livelihood by the respondent. A score of one was given to each year of experience in farming. The procedure followed by Rajashekhar (2012) was used in the study with suitable modification. Based on the mean and standard deviation of the scores obtained, the respondents were categorized into low, medium and high categories.

Category	Scores
Low	(Mean – 0.425*SD)
Medium	(Mean ± 0.425*SD)
High	(Mean + 0.425*SD)

3.4.2.5 Annual income

It was operationalised by considering the total annual income of the earned by

the members of the family, from both agriculture and allied enterprises during last one year as expressed in rupees. Further, based on the classification of the Ministry of Rural Development, Government of India. Notification- June, 2011 to conduct the Socio Economic and Cast Census in the year 2011 (Anonymous, 2011) and as followed by Dange (2012) and Huded (2013), the respondents were grouped in three categories.

Category	Income (Rs. /annum)
Low	< ₹33,300.09
Medium	<₹ 33,300.10 - ₹ 83,449.01
High	>₹ 83,449.01

3.4.2.6 Mass media exposure

It refers to the frequency of using mass media such as radio, television, newspapers, farm magazine and internet by the respondents. Each respondent in the study area was asked to indicate their degree of participation in terms of listening habit, viewing habit and reading habit. The data is presented in frequency and percentage. The variable was quantified on the basis of procedure followed by Shilpashree (2011).

Habit of listening/seeing/reading/browsing	Scores
Regular	2
Occasional	1
Never	0

After calculating the cumulative score, the respondents were categorized into three groups by using mean and standard deviation as a measure of check.

Category	Scores
Low	(mean – 0.425*SD)
Medium	(mean ± 0.425*SD)
High	(mean + 0.425*SD)

3.4.2.7 Extension participation

This variable was quantified by following the scale developed by Siddaramaiah and Jalihal (1980) and followed by Rajashekhar (2012). A list of extension activities was prepared and the respondents were asked to indicate their extent of participation in each activity. The scoring pattern is given below;

Sl. No.	Extension activities	Extension participation		
		Regular	Occasionally	Never
1.	Training	2	1	0
2.	Extension meeting	2	1	0
3.	Field day	2	1	0
4.	Krishi mela	2	1	0
5.	Demonstrations	2	1	0
6.	Field visits	2	1	0
7.	Group discussion	2	1	0
8.	Educational tour	2	1	0
9.	Others (specify)	2	1	0

After calculating the cumulative score, the respondents were categorized into three groups by using mean and standard deviation as a measure of check.

Category	Scores
Low	(mean – 0.425*SD)
Medium	(mean ± 0.425*SD)
High	(mean + 0.425*SD)

3.4.2.8 Achievement motivation

Rogers and Svenning (1969) defined Achievement motivation in operationally as the degree of desire of the rural youth towards the achievement oriented behaviour. This variable scale developed by Byra Reddy (1976) and as followed by Bhanu (2006) was used with little modifications.

The modified scale consists of six items. All the statements were positive. The response categories were on five point continuum, with strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2 and 1 were assigned respectively with a maximum score of 30 and minimum of 6. Depending on the total scores, the respondents were grouped into 3 categories by using mean and standard deviation as a measure of check.

Category	Score
Low	Less than (mean – SD)
Medium	Between (mean + SD)
High	More than (mean + SD)

3.4.2.9 Economic motivation

Economic motivation refers to the extent to which individual is oriented towards achievement of the maximum economic ends such as maximization of farm profits. The variable was measured by using the procedure as followed by Shivalingaiah (1995) was used with some modifications. The scale consists of six statements of which the first five statements were positive, while the last one was negative. A score of 5, 4, 3, 2 and 1 was assigned for strongly agree, agree, undecided, disagree and strongly disagree responses, respectively in case of positive statements. The scoring procedure was reversed in case of negative statements. The score obtained on each statement were cumulated to obtain the total score of a respondent on this variable. The maximum score obtained by a respondent was 52 and a minimum of 1. Based on the total score, the respondents were categorized into low, medium and high groups using mean and standard deviation as a measure of check.

Category	Score
Low	Less than (mean – SD)
Medium	Between (mean + SD)
High	More than (mean + SD)

3.5 STATISTICAL TOOLS USED IN THE STUDY

The data collected were compiled, tabulated and analyzed keeping in view the objectives of the study. The data were subjected to different statistical tests as follows,

i. Mean

ii. Standard deviation

iii. Percentage

iv. Zero order correlation

4. EXPERIMENTAL RESULTS

Findings of the present investigation are presented in this chapter under the following sub heads.

4.1 Innovative behavior and aspirations of rural youth towards agriculture

4.2 Extent of rural youth participation in farm activities

4.3 Personal, psychological and socio-economic characteristics of rural youth

4.4 Problems perceived by the rural youth in farm activities

4.1 Innovative behavior and aspirations of rural youth towards agriculture

Standardization of the scale

Innovative behaviour is farmer's intentional application of new techniques, process, procedures in agriculture, marketing and post-harvest management of produces / products.

Innovative behaviour is state of application of practices, viz. agriculture and allied practices, information of seeds, soil fertility and production management, use of bio-fertilizers, use of and bio-pesticides, pest monitoring devices, farm machinery, post-harvest management, and marketing activities.

The scale developed by Rajshekhar (2012), the same scale has been adopted, but with respect to rural youth the scale has been modified. There are 68 statements/activities, these 68 statements/activities were formed on the basis specialized in agricultural extension, agronomy, horticulture, soil science, seed science, entomology, microbiology, farm engineering and agribusiness management. Sample for standardization of the scale.

Innovative behavior of rural youth

In the present study, innovative behaviour of rural youth is operationally defined as cumulative outcome of components namely, agriculture and allied practices, information of seeds, soil fertility and production management, use of bio-fertilizers, use of bio-pesticides, use of pest monitoring devices, use of farm machinery, post-harvest management, and marketing activities.

4.1.1 Agriculture and allied practices

It is clearly observed from the Table 1 and Fig 2 that, 43.33 per cent of the respondents belongs to low agriculture and allied practices behaviour category, followed by medium (32.50 %) and low (24.17 %) behaviour category, respectively.

4.1.2 Information of seeds

It is clear from Table 1 Fig 2 that, 53.34 per cent of the respondents belongs to medium information of seeds behaviour category, followed by high (26.66 %) and low (20.00 %) behaviour category, respectively.

4.1.3 Soil fertility and production management

It is observed from the Table 1 and Fig 2 that more than half (60.84 %) of the respondents are low level soil fertility and production management, and 25.00 per cent of them are belongs to medium innovative behavior category, followed by only 14.16 per cent of respondents are belongs to high level category.

4.1.4 Use of bio-fertilizers

It is clear from the Table 1 and Fig 2 that, 60.83 per cent of the respondents belonged to medium use of bio-fertilisers behaviour, followed by low (25.00 %) and high (11.17 %) category, respectively.

4.1.5 Use of bio-pesticides

Table 1 and Fig 2 reveals that, 53.33 per cent of the respondents belonged to high use of bio-pesticides behaviour, followed by low (46.67 %), medium (0 %) category, respectively.

4.1.6 Use of pest monitoring devices

A close observation from Table 1 and Fig 2 that, 66.67 per cent of the respondents had high pest monitoring devices behaviour, followed by low (23.33 %) and (10.00 %) medium pest monitoring devices behaviour.

4.1.7 Use of farm machinery

Analysis of data from Table 1 and Fig 2 revealed that more than half (69.17 %) of the respondents medium category of use of farm machinery behavior, while (25.00 %) of them were belongs to high level use of farm machinery category, followed by (5.83 %) of respondents belongs to low category.

4.1.8 Post-harvest management

The Table 1 and Fig 2 depicts that 55.00 per cent of the respondents belongs to high post-harvest management behaviour category, and 25.83 per cent of them were belongs medium level behavior category, however only (19.17 %) of the respondents belongs to low level post- harvest management behavior category.

4.1.9 Marketing activities

It can be revealed from Table 1 and Fig 2 that, 48.33 per cent of the respondents had medium marketing activities behaviour, while 35.83 per cent of them belongs to high followed by low (15.83 %) marketing activities behavior.

4.1.10 Overall innovative behaviour

The Table 1.1 Fig 3 indicates overall innovative behavior of rural youth, it reveals that 35.00 per cent of the respondents belonged to low innovative behaviour, while 33.34 per cent of respondents belongs to medium level innovative behavior followed by high (31.66 %) innovative behavior.

Aspirations of rural youth

4.1.11 Occupational aspirations

The Table 2 Fig 4 reveals that more than half (70.00 %) of the respondents aspired to join government jobs, while 51.36 per cent of the respondents aspired to take up farming in their future. And it also reveals that 41.82 per cent of the respondents want to start the business.

4.1.12 Enterprise aspiration

It can be observed from the Table 2.1 Fig 5 that more than half (55.00 %) of the respondents are aspired agricultural enterprises as more interested, while around 19.17 per cent of respondents are moderately interested in agriculture, followed by 25.83 per cent of the respondents are least interested.

Table 1. Component wise distribution of respondents according to innovative behaviour n=120

Agriculture and allied practices				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	below 2.18	52	43.33
Medium	(Mean ± 0.425*SD)	2.19-3.21	39	32.50
High	(Mean + 0.425*SD)	above 3.22	29	24.17
Mean=2.61 SD=1.10				
Information of seeds				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	upto 1.74	24	20.00
Medium	(Mean ± 0.425*SD)	1.74-2.38	64	53.34
High	(Mean + 0.425*SD)	above 2.38	32	26.66
Mean=1.98 SD=0.88				
Soil fertility and production management				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	uptp 0.62	73	60.84
Medium	(Mean ± 0.425*SD)	0.61-1.24	30	25.00
High	(Mean + 0.425*SD)	above 1.24	17	14.16
Mean=1.08 SD=0.73				
Use of bio-fertilizers				
Categories	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	upto 0.62	30	25.00
Medium	(Mean ± 0.425*SD)	0.63-1.25	73	60.83
High	(Mean + 0.425*SD)	above 1.25	17	14.17
Mean=0.98 SD=0.85				
Use of bio-pesticides				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	upto 0.33	56	46.67
Medium	(Mean ± 0.425*SD)	0.33-0.87	0	0
High	(Mean + 0.425*SD)	above 0.87	64	53.33
Mean=0.48 SD=0.21				

Table 1. Contd…..

Use of pest monitoring devices				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	upto 0.46	28	23.33
Medium	(Mean ± 0.425*SD)	0.46-0.85	12	10
High	(Mean + 0.425*SD)	above 0.86	80	66.67
Mean=0.66 SD=0.47				
Use of farm machinery				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	upto 0.98	7	5.83
Medium	(Mean ± 0.425*SD)	0.99-1.60	83	69.17
High	(Mean + 0.425*SD)	above 1.61	30	25.00
Mean=1.30 SD=0.74				
Post-harvest management				
Category	Scores	Range	Frequency	Percentage
Low	(Mean – 0.425*SD)	upto 6.73	23	19.17
Medium	(Mean ± 0.425*SD)	6.74-8.39	31	25.83
High	(Mean + 0.425*SD)	Above 8.38	66	55.00
Mean=2.17 SD=0.77				
Marketing activities				
Category	Scores	Range	Frequency	Percentage
Low	(Mean –0.425*SD)	1.84	19	15.83
Medium	(Mean ± 0.425*SD)	1.84-2.48	58	48.33
High	(Mean + 0.425*SD)	2.50	43	35.83
Mean=2.30 SD=1.20				

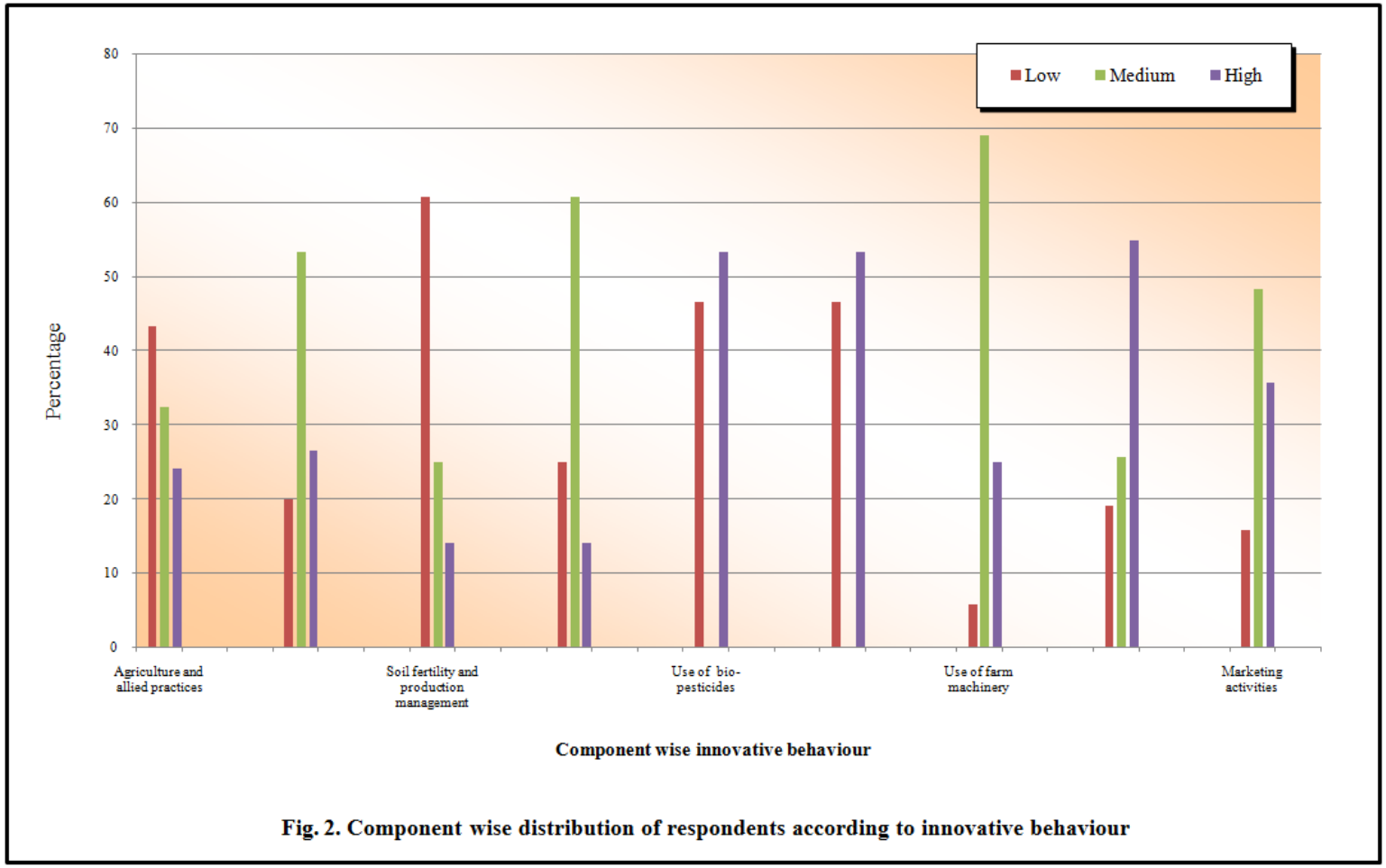

Fig. 2. Component wise distribution of respondents according to innovative behaviour

Fig. 2. Component wise distribution of respondents according to innovative behaviour

Table 1.1 Overall distributions of respondents according to innovative behaviour

n=120

Category	Range	Frequency	Percentage
Low	Upto 22.14	42	35.00
Medium	22.15-25.14	38	31.66
High	Above 25.14	40	33.34

Mean=23.64 SD=3.54

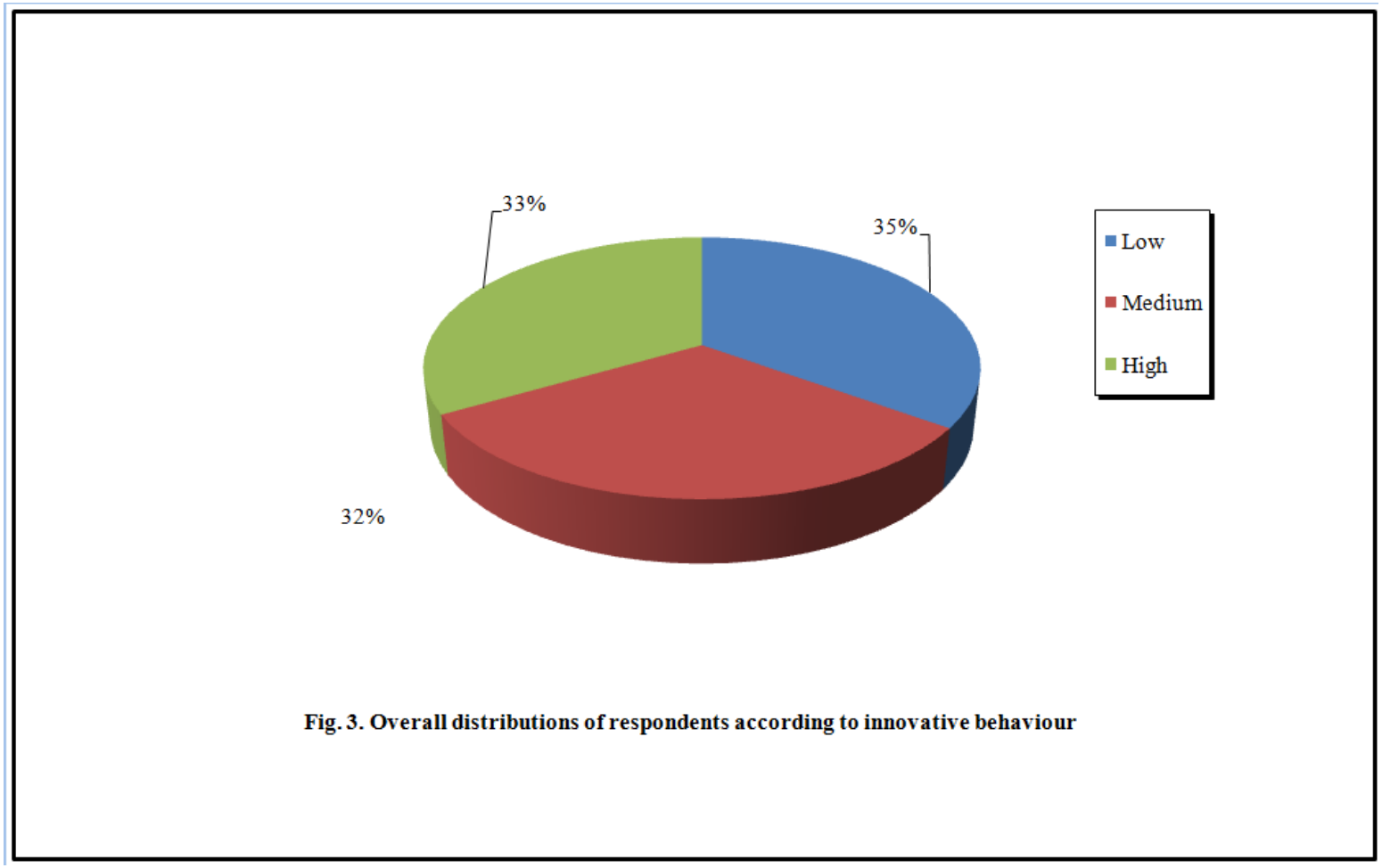

Fig. 3. Overall distributions of respondents according to innovative behaviour

Fig. 3. Overall distributions of respondents according to innovative behaviour

Table 2. Distribution of respondents according to occupational aspiration

n=120

Category	Frequency	Percentage
Farming	62	51.36
Govt jobs	77	70.00
Business	46	41.82
Others	43	39.10

Table 2.1 Distribution of respondents according to enterprise Aspirations

n=120

Sl. No.	Enterprises	Most interested		Moderately interested		Least interested	
		F	%	F	%	F	%
1	Agriculture	66	55.00	23	19.17	31	25.83
2	Dairy	28	23.33	49	40.83	43	35.83
3	Poultry	30	25.00	24	20.00	66	55.00
4	Sericulture	7	5.83	19	15.83	94	78.33
5	Bee keeping	10	8.33	48	40.00	62	51.67
6	Small scale industry	14	11.67	29	24.17	77	64.16

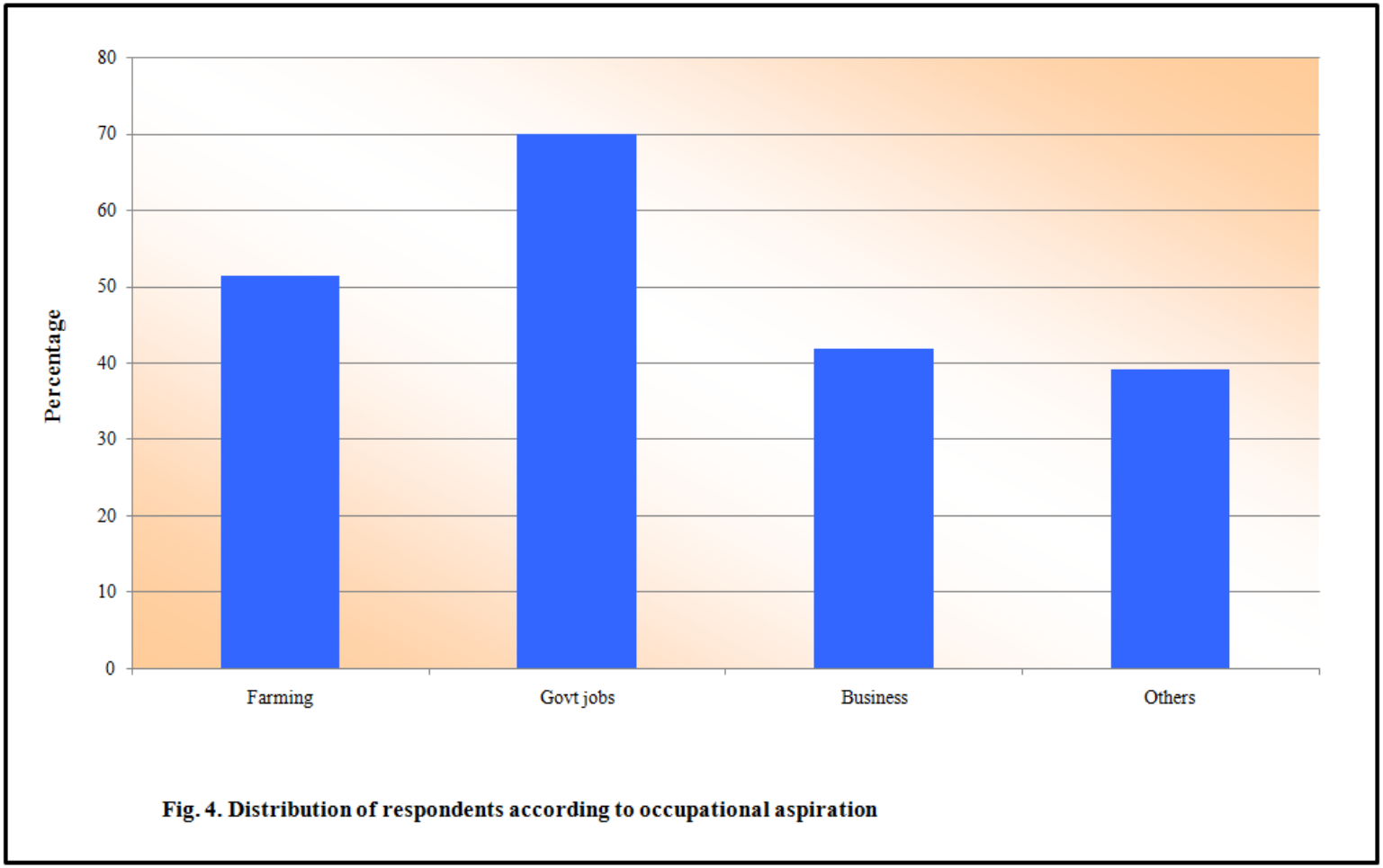

Fig. 4. Distribution of respondents according to occupational aspiration

Fig. 4. Distribution of respondents according to occupational aspiration

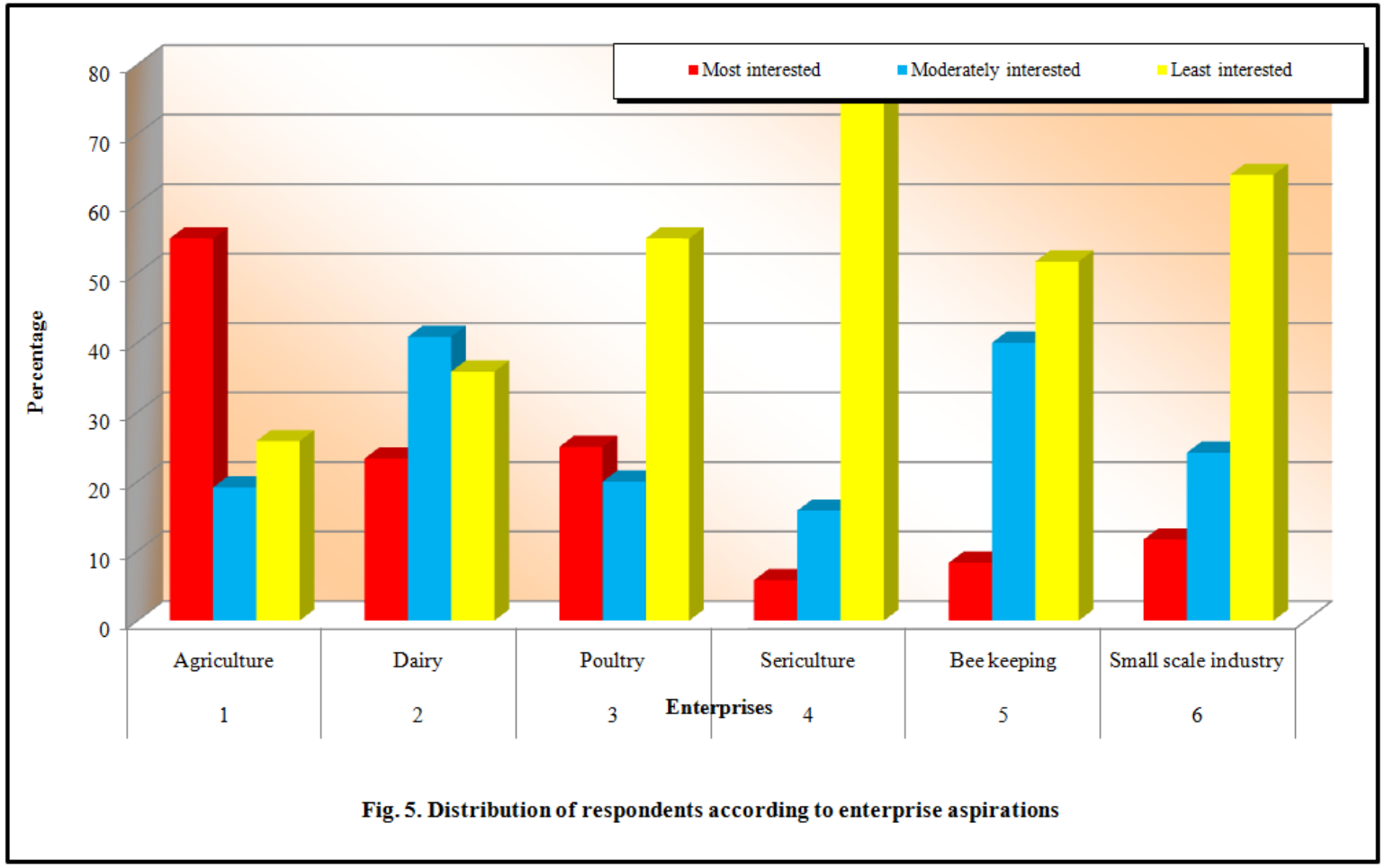

Fig. 5. Distribution of respondents according to enterprise aspirations

Fig. 5. Distribution of respondents according to enterprise aspirations

Nearly 40.83 per cent of the respondents are moderately interested in dairy enterprises. Around 35 per cent of respondents are least interested in taking up dairy enterprises followed by most interested (23.33 %).

More than half (55.00 %) of the respondents are least interested in poultry enterprises, while 25.00 per cent of them are most interested in poultry farming, followed by moderately interested (20.00 %).

The Table also reveals that majority (78.33 %) of the respondents are least interested in sericulture enterprises, while 15.83 per cent of respondents are belongs to moderately interested in sericulture, followed by 5.83 per cent of the respondents are most interested in sericulture enterprises.

Half (51.67 %) of the respondents are least interested in bee keeping, while 40.00 per cent of respondents are moderately interested, followed by most interested (8.33 %).

It is also observed from the table that majority (64.17 %) of the respondents are least interested in small scale industries, while 24.17 per cent of them are moderately interested in small scale industries, followed by most interested (11.67 %).

4.1.13 General aspirations

The Table 2.2 Fig 6 clearly indicates that 39.17 per cent of the respondents had medium level of general aspirations , while 38.33 per cent of them belongs to high level general aspirations followed by least (22.50 %) of the respondents belongs to low general level aspirations.

4.2 Extent of participation of rural youth in farm activities

The Table 3 and Fig 7 explains extent of rural youth participation in the farm activities, the table contains three sub headings namely common activities, during crop season, and agricultural and allied activities.

It is clear from the table that half of the respondents are participated regularly in ploughing (50.83 %), while equal (54.16 %) per cent of the respondent are participated regularly in harrowing and F Y M spreading, and Table also reveals that 40.83 per cent of the respondents regularly participated in removal of stubbles activity.

During crop season about 66.66 per cent of the respondents are regularly participated in sowing operations, and 62.00 per cent of them regularly participated in seeding activity, while half (54.16 %) of the respondents are participated occasionally in inter cultivation operations, and 48.33 per cent of respondents are regularly participated in post- harvest activity, followed by harvesting operations (45.83 %).

In agricultural and allied activities majority (78.33 %) of the respondents are less participated in the dairy, poultry activities, and 68.66 per cent of the respondents are occasionally participated in grazing of the cattles. More than half (51.66 %) of the respondents are never participated in marketing of broilers/ eggs.

4.3 Personal, psychological and socio-economic characteristics

4.3.1 Age

The selected respondents are all rural youth, hence the age of all the respondents is 18-35.

Table 2.2 Distribution of respondents according to general aspirations

n=120

Category	Range	Frequency	Percentage
Low	Upto 30.58	27	22.50
Medium	30.58-34.35	47	39.17
High	Above 34.36	46	38.33

Mean=32.58 SD=4.43

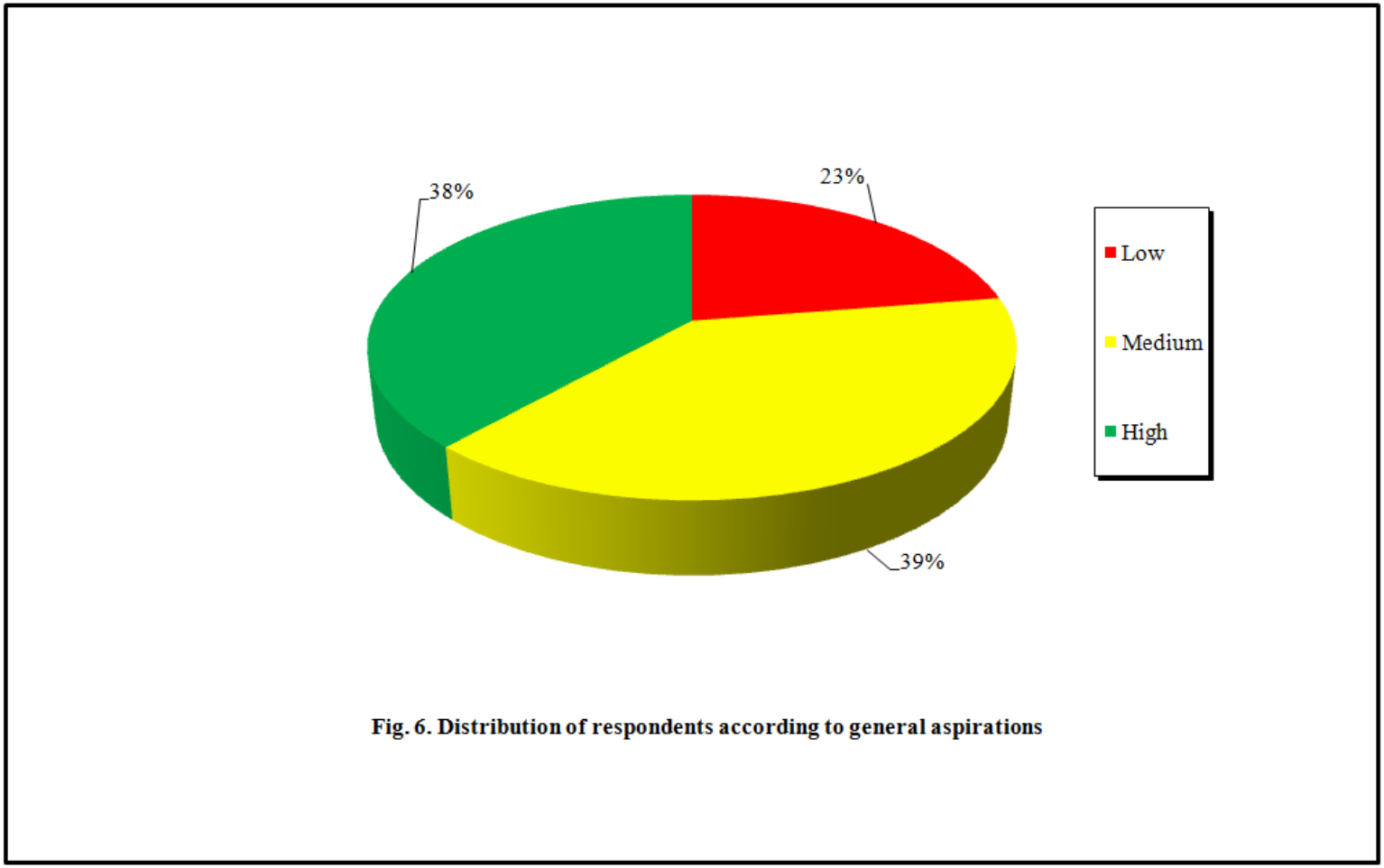

Fig. 6. Distribution of respondents according to general aspirations

Fig. 6. Distribution of respondents according to general aspirations

Table 3.0 Distribution of respondents on extent of their participation in farm activities

n=120

Sl. No	Activities	More often		Often		Less/no	
		F	%	F	%	F	%
A	Common activities						
	Ploughing	61	50.83	53	44.16	7	5.88
	Harrowing	65	54.16	53	44.16	3	2.50
	Removal of stubbles	49	40.83	47	39.16	24	20.00
	F Y M spreading	65	54.16	45	37.50	10	8.33
B	During crop season						
	Sowing operation	80	66.66	37	30.83	3	2.50
	Seeding	75	62.50	40	33.33	5	4.16
	Fertilizer application /harrowing	42	35.00	61	50.83	17	14.16
	Hand weeding	39	32.50	43	35.83	38	31.66
	Spraying chemicals	37	30.83	56	46.66	27	22.50
	Intercultivation	32	26.66	65	54.16	23	19.16
	Harvesting	55	45.83	39	32.50	26	21.66
	Post –harvest activities (threshing, winnowing)	58	48.33	49	40.83	13	10.83
C	Agricultural allied activities						
	Dairy, goatery, poultry	3	2.50	23	19.16	94	78.33
	Washing cattle	8	6.60	51	42.50	63	52.50
	Grazing	9	7.50	68	68.66	43	35.83
	Watering and Feeding	47	39.16	61	50.83	12	10.00
	Cleaning cattle's shed	29	24.16	59	49.16	32	26.66
	Milking	2	1.66	47	39.16	71	59.16
	Marketing of eggs / broilers	22	18.33	36	30.00	62	51.66

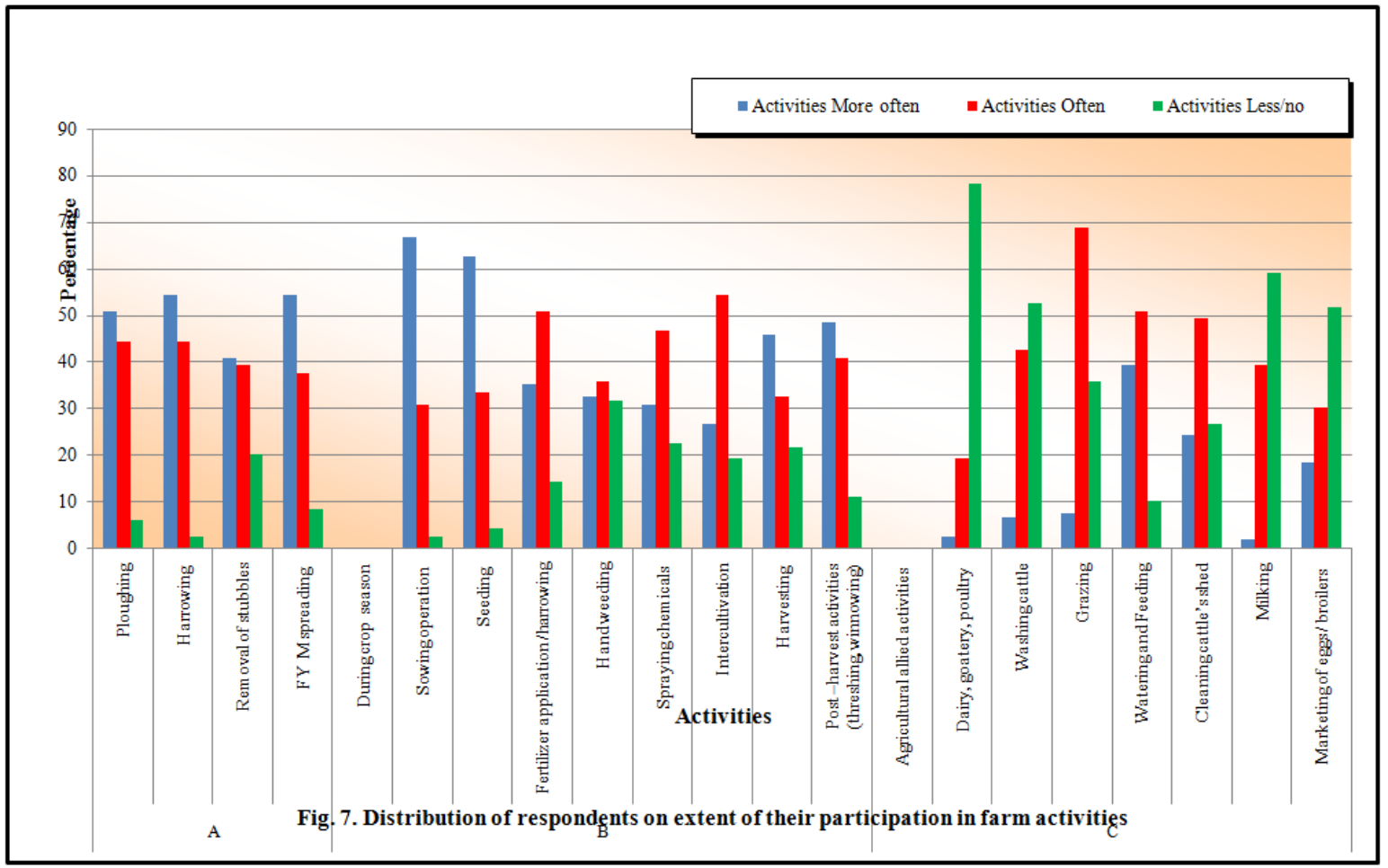

Fig. 7. Distribution of respondents on extent of their participation in farm activities

Fig. 7. Distribution of respondents on extent of their participation in farm activities

4.3.2 Education

A glance at Table 4.1 and Fig 8 Indicates that 30.83 per cent of the respondents have educated up to pre-university education. While 23.33 per cent of them are graduated and have higher education. Whereas 25.83 per cent of them had received high school education, followed by (20.00 %) PUC and meager (3.33 %) of them studied up to primary school, and rest of 1.66 per cent had illiterate.

4.3.3 Size of the land holding

Distribution of respondents according to land holding as presented in Table 4.2 and Fig 9. Depicts that, 26.67 per cent of the respondents were big farmers with more than 25 acres, followed by semi medium farmers (25.00 %) with a land of 5.01 to 10.00 acres. While 21.67 per cent of them are small farmers having land 2.51 to 5.00 acres and 16.67 per cent of them were medium farmers of land 10.01 to 25.01 acres. A meagre 10.00 per cent of them were marginal farmers with land holding of less than 2.5 acres.

4.3.4 Farming experience

The Table 4.3 and Fig 10 pertaining to overall distribution respondents according to farming experience of rural youth reveals that 38.33 per cent of the respondents belonged to medium farming experience category, followed by low farming experience (31.66 %) and high farming experience category (30.00 %), respectively.

4.3.5 Annual income

It is observed from Table 4.4 and Fig 11 that around 47.50 per cent of the respondents were in medium income group, followed by 30.83 and 21.67 per cent of them in high and low income group, respectively.

4.3.6 Mass media participation

It was interesting to note from Table 4.5 and Fig 12 that majority (80.83 %) of the respondents read the newspapers regularly, of which, 2.50 per cent of them were occasionally reading newspaper. While, 16.67 per cent of them were found that they never read the newspapers. And majority (80.83 %) of the respondents never listened agricultural programmes broadcasted through radio. While 16.67 per cent of the respondents listening agricultural programmes regularly followed by 2.50 per cent of respondents listening agricultural programmes broadcasted through radio occasionally.

Table also reveal that, majority (85.00 %) of the respondents view agricultural programmes regularly and 5.00 per cen of the respondents watch occasionally, while 10.00 per cent of the respondents never watch agricultural programmes telecasted through television. Further, the respondents are having the habit of reading farm magazines regularly (52.50 %), and 40.83 per cent of them never read the magazines, followed by regularly reading (6.67 %).

Around (35.00 %) of respondents browse the internet regularly, and 35.00 per cent them never browse the internet, while 30.00 per cent of the respondents browse the internet occasionally.

It is quite clear from the Table 4.6 and Fig 13 that more than half (51.66 %) of the respondents had high mass media participation category, followed by 25.83 per cent and 22.50 per cent in medium and low mass media participation category, respectively.

Table 4.0 Personal, psychological and socio economic characteristics of rural youth

Table 4.1 Distribution of respondents according education

n=120

Category	Frequency	Percentage
Illiterate	2	1.66
Primary	4	3.33
Middle school	24	20.00
High school	25	20.83
Pre-university	37	30.83
Graduation and above	28	23.33

Table 4.2 Distribution of respondents according to land holding

Category	Land holding	Frequency	Percentage
Marginal farmer	Up to 2.50 acres	12	10.00
Small farmer	2.51 to 5.00 acres	26	21.67
Semi medium farmer	5.01 to 10.00 acres	30	25.00
Medium farmer	10.01 to 25.00 acres	20	16.67
Big farmer	> 25.00 acres	32	26.67

Table 4.3 Distribution of respondents according farming experience

Category	Range	Frequency	Percentage
Low	6.19	38	31.66
Medium	6.19-9.40	46	38.33
High	Above 9.40	36	30.00

Mean =7.65 SD=3.40

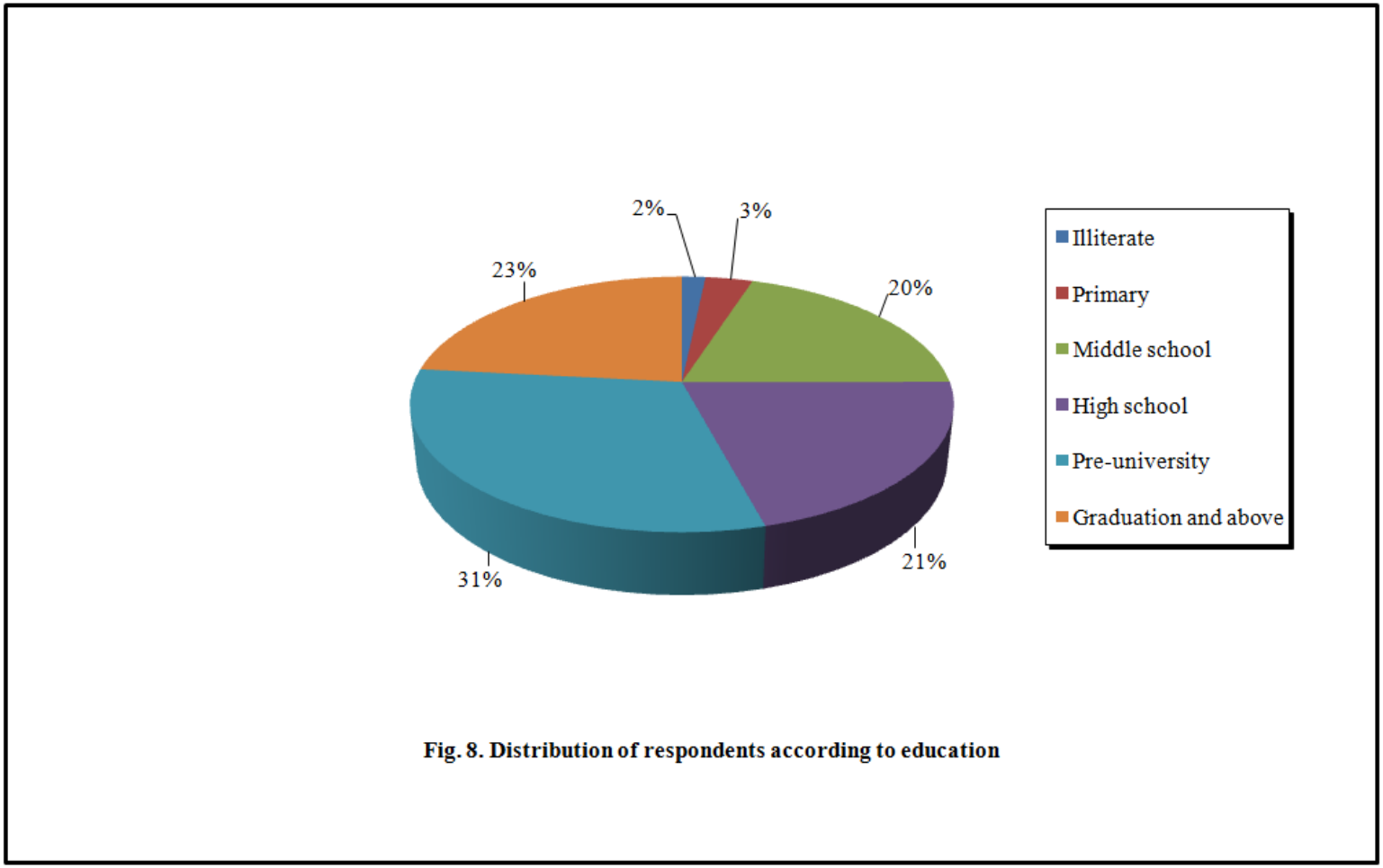

Fig. 8. Distribution of respondents according to education

Fig. 8. Distribution of respondents according to education

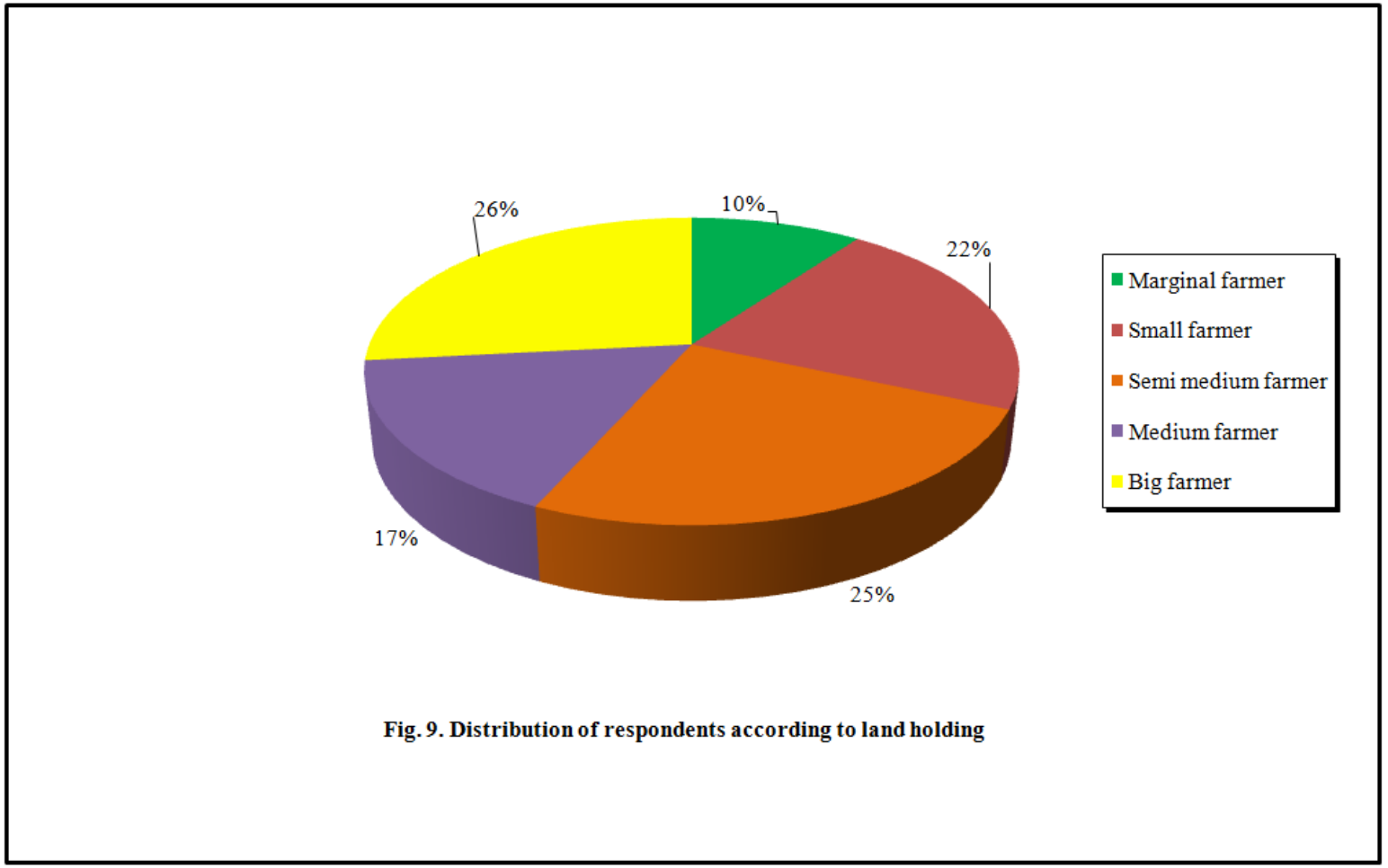

Fig. 9. Distribution of respondents according to land holding

Fig. 9. Distribution of respondents according to land holding

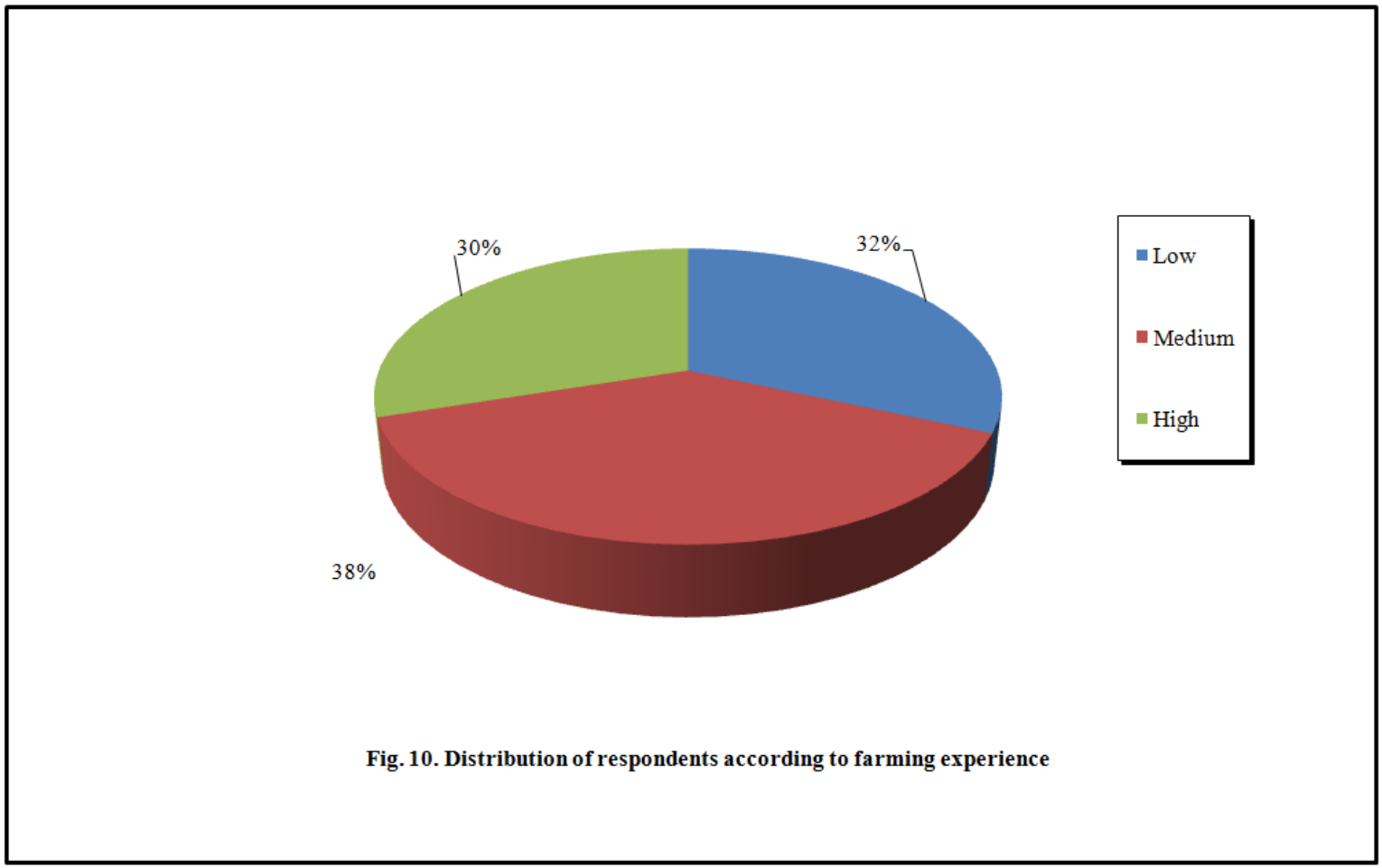

Fig. 10. Distribution of respondents according to farming experience

Fig. 10. Distribution of respondents according to farming experience

Table 4.4 Distribution of respondents according annual income

Category	Income (₹ /annum)	Frequency	Percentage
Low	< ₹33,300.09	26	21.67
Medium	< ₹ 33,300.10 - ₹ 83,449.01	57	47.50
High	>₹ 83,449.01	37	30.83

Table 4.5 Distribution of respondents according mass media participation

Sl. No.	Type of mass media used	Frequency of use					
		Regular		Occasional		Never	
		F	%	F	%	F	%
1	Newspaper reading	97	80.83	3	2.50	20	16.67
2	Radio listening (Agri.programmes)	20	16.67	3	2.50	97	80.83
3	Watching TV (Agri.programmes)	102	85.00	6	5.00	12	10.00
4	Reading farm magazines	63	52.50	8	6.67	49	40.83
5	Internet browsing	42	35.00	36	30	42	35.00

Table 4.6 Overall distribution of respondents according to mass media participation

Score	Range	f	%
Low	Upto 4.34	27	22.50
Medium	4.34-7.35	31	25.83
High	Above 7.35	62	51.66

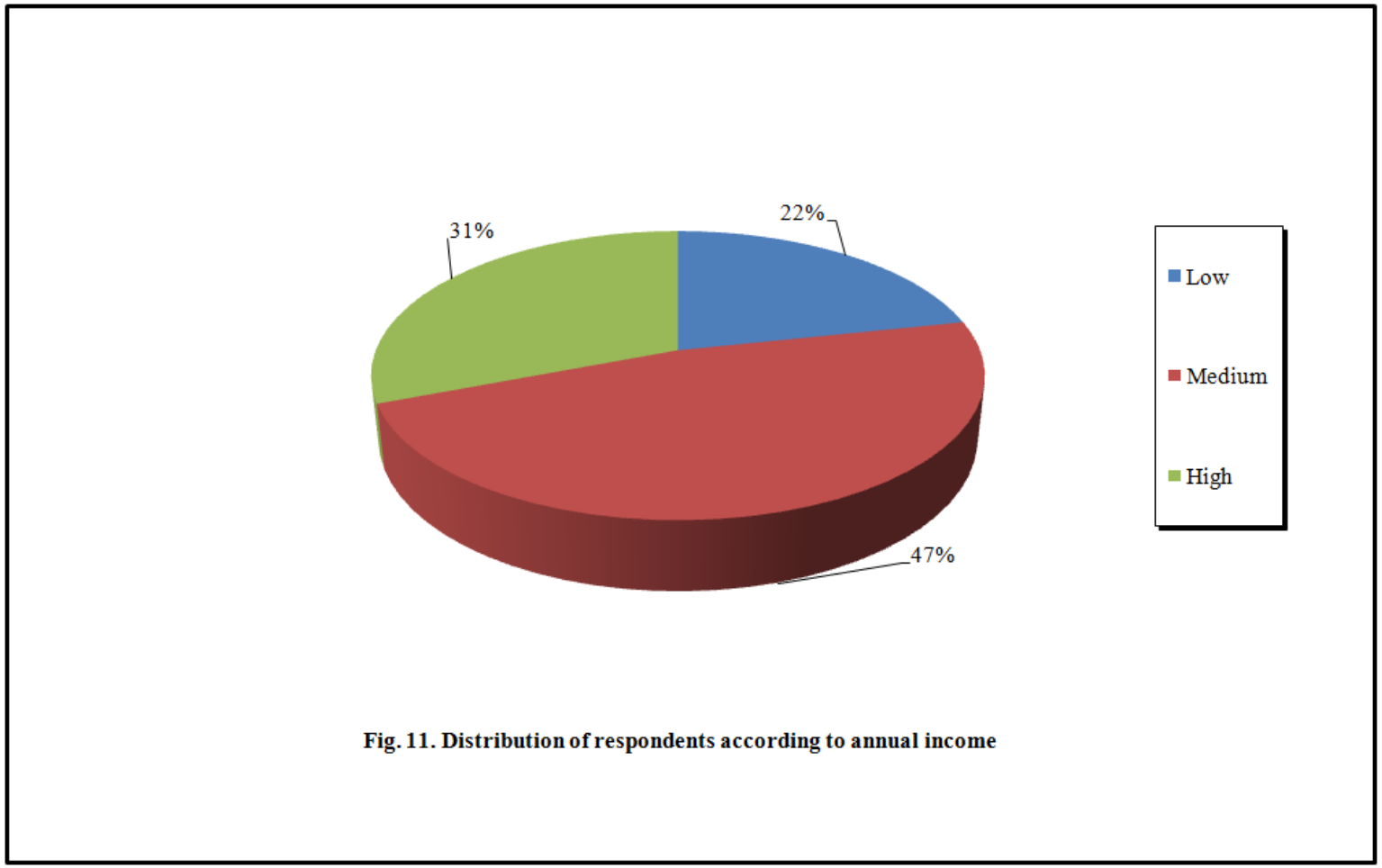

Fig. 11. Distribution of respondents according to annual income

Fig. 11. Distribution of respondents according to annual income

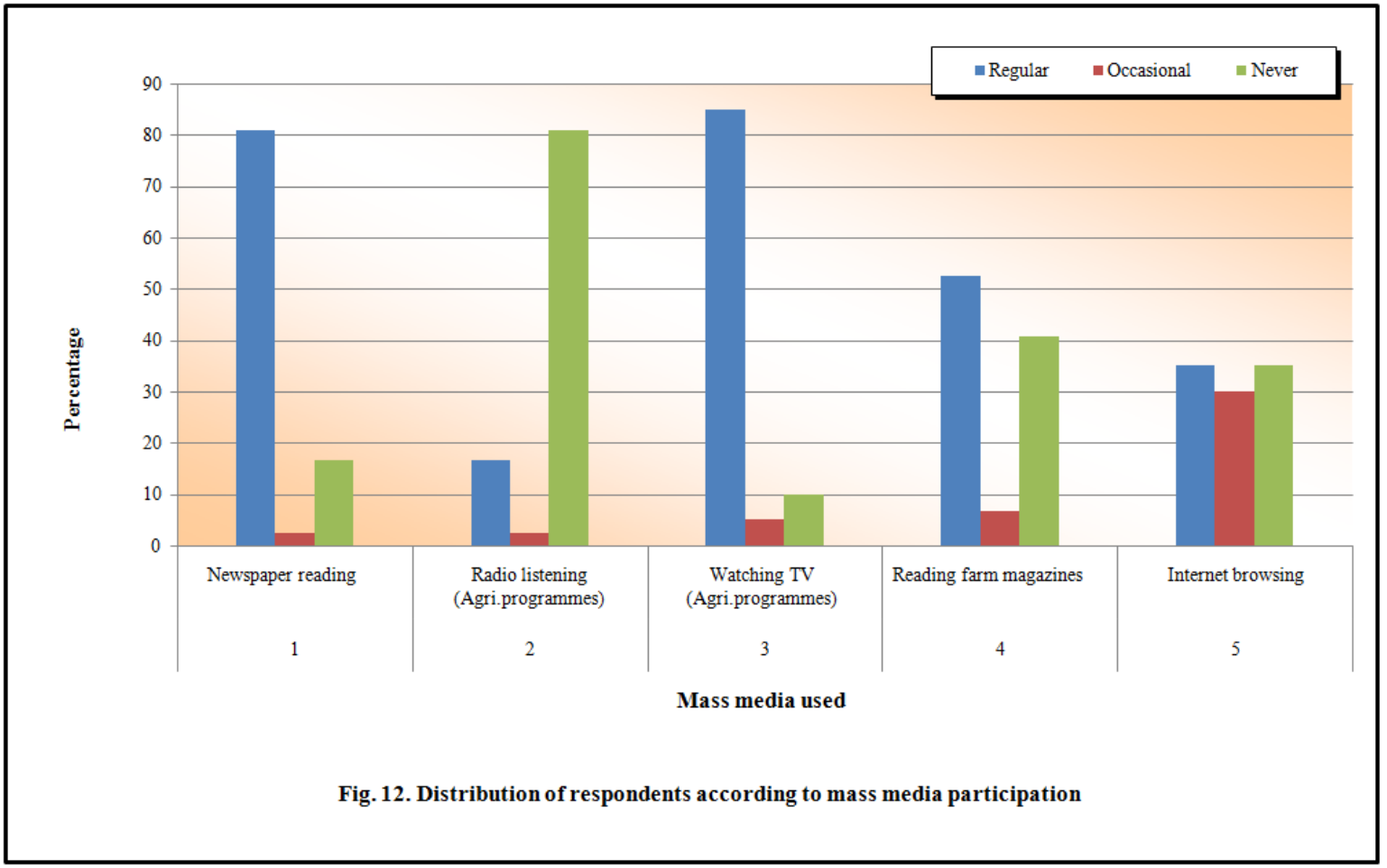

Fig. 12. Distribution of respondents according to mass media participation

Fig. 12. Distribution of respondents according to mass media participation

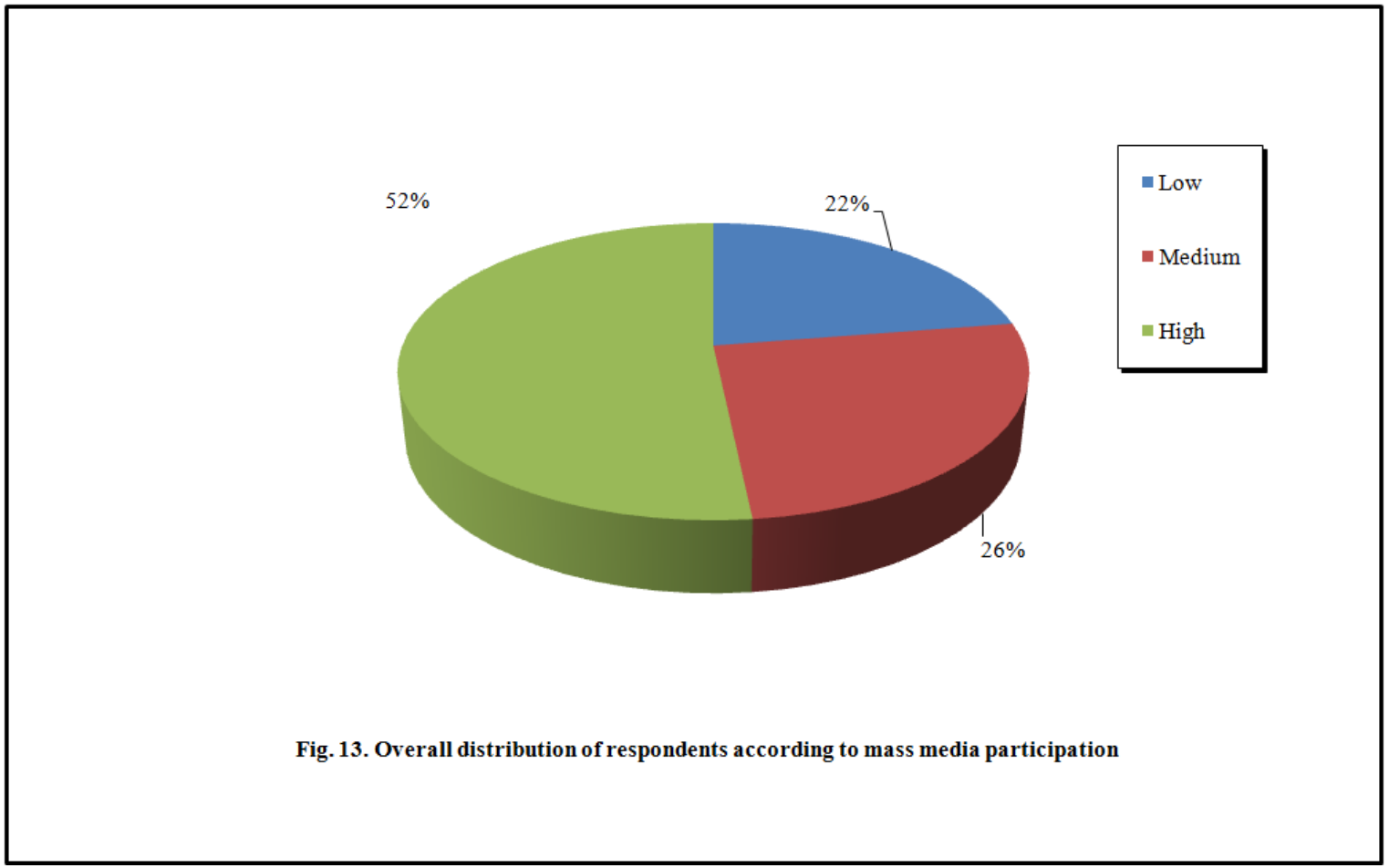

Fig. 13. Overall distribution of respondents according to mass media participation

Fig. 13. Overall distribution of respondents according to mass media participation

4.3.7 Extension participation

The Table 4.7 and Fig 14 with respect to extension participation of the respondents indicates that, more than (56.66 %) of the respondents had never participated in general meetings conducted in the villages/panchayats, while 25.00 per cent of the respondents were participated in the general meetings regularly. And only 18.33 per cent of the respondents participated occasionally in the general meetings. Majority (74.16 %) of the respondents had never participated in the discussion meetings, while 20.83 per cent of the respondents had participated in the discussion meetings occasionally and only 5.00 per cent of them were regularly participated in the discussion meetings.

Similarly, majority (72.50 %) of the respondents had never participated in field days, while 19.16 per cent of the respondents had regularly participated in field days, followed by occasional participation (8.33 %).

Majority of the respondents (88.33 %) had never participated in demonstrations, followed by occasionally participated (4.16 %) and regular participation (7.50 %).

It is interesting to note that more than half (64.16 %) of the respondents had visited krishimela regularly, while 30.83 per cent of the respondents had never visited the krishimela followed by 7.50 per cent of the respondents visited occasionally.

Majority (90.83 %) of the respondents had never attended any film shows, followed by the occasionally (6.66 %) and regularly participated (2.50 %).

Majority of the respondents (94.16 %) had never participated in study tours followed by occasionally (3.33 %) and regularly participated (2.50 %).

Similarly, majority (86.66 %) of the respondents had never attended the campaign. While, the equal per cent (6.66) of the respondents had attended the campaigns both regularly and occasionally.

Half (51.66 %) of the respondents had attended the training programmes occasionally, while 28.33 per cent of the respondents had never attended the training programmes followed by 20.00 per cent of the respondents attended regularly.

A close observation from the Table 4.8 and Fig 15 that more than half (55.83 %) of the respondents had medium level of extension participation, while 25.00 per cent of the respondents are belonged to low, and 19.17 per cent of them are belonged to high level of extension participation.

4.3.8 Achievement motivation

The Table 5.1 and Fig 16 represents the overall achievement motivation of the respondents which indicates that, 41.66 per cent of respondents comes under low level of achievement motivation category, followed by medium level achievement motivation (25.83 %) and the remaining 32.50 per cent of the respondents belonged to high level achievement motivation category.

4.3.9 Economic motivation

The data in Table 5.3 and Fig 17 reveals that, 40.00 per cent of the respondents belonged to high economic motivation group, followed by low level of economic motivation with 34.17 per cent, whereas, 25.83 per cent of the respondents belonged to medium economic motivation category.

Table 4.7 Distribution of respondents according extension participation

Sl. No.	Activities	Extent of participation					
		Regular		Occasional		Never	
		F	%	F	%	F	%
1.	General meetings	30	25	22	18.33	68	56.66
2.	Discussion meetings	6	5.00	20	20.83	89	74.16
3.	Field days	23	19.16	10	8.33	87	72.50
4.	Demonstrations	9	7.50	5	4.16	106	88.33
5.	Krishimela	77	64.16	9	7.50	37	30.83
6.	Film shows	3	2.50	8	6.66	109	90.83
7.	Campaign	8	6.66	8	6.66	104	86.66
8.	Educational tour	3	2.50	4	3.33	113	94.16
9.	Training programmes	24	20.00	62	51.66	34	28.33

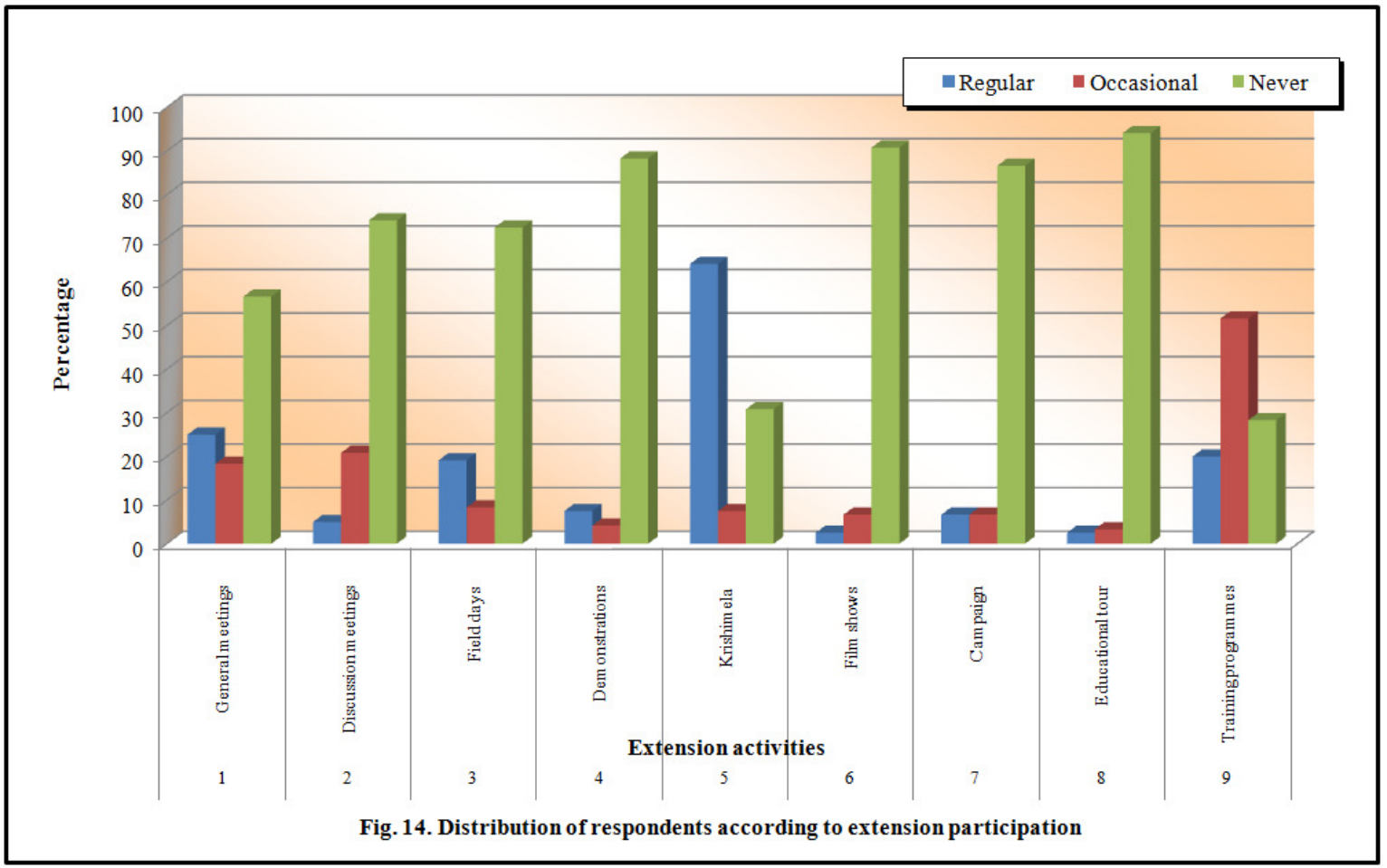

Fig. 14. Distribution of respondents according to extension participation

Fig. 14. Distribution of respondents according to extension participation

4.4.1 Problems faced by rural youth in farming activities.

The Table 5.4 and Fig. 18 depicts that financial problems was major problem which is expressed by majority (83.33 %) of the respondents and also it is assigned as rank 1st among all the problems, similarly, the 2nd rank is given to employment problems which is expressed by 75.83 per cent of the respondents, while, more than half of the respondents (60.83 %) expressed that lack of awareness to the new technologies in farming. The problem of livestock /poultry is expressed by 43.33 per cent of the respondents and is assigned as 4th rank.

The Table also reveals that 40.44 per cent of the respondents had faced village problems, while equal percentage (37.50 %) of the respondents faced the lack of training to do specific job and lack of supply of improved equipment. And 36.67 per cent of the respondents faced the problem of marketing of the agricultural products followed by health problems (35.83 %). And 31.67 per cent of the respondents had faced the problem of skill in using the mechanized equipment followed by inadequate labour supply and lack of interest (5.84 %) and (4.12 %) respectively.

4.5 Relational analysis

Correlation analysis was done to find out the relationship between independent variables with innovative behavior and aspirations of rural youth. The details of the results are presented under following headings.

4.5.1 Relationship between innovative behaviour and independent variables.

The results presented in Table 5.5 indicated a positive and significant relationship between innovative behaviour of rural youth and variables viz. education, size of the land holding and economic motivation at 1 per cent level of significance, mass media participation, extension participation and achievement motivation at 5 per cent level of significance, and variables like income exhibited positive but non significance.

4.5.2 Relationship between aspirations and independent variables.

The results of this Table 5.6 indicates that the independent variables like annual income, achievement motivation had shown positive and significant association with aspiration and similarly, land holding and economic motivation shows significant relation with aspiration of rural youth. And farming experience positive but not significant.

Table 4.8 Overall distribution of respondents according extension participation

Category	Range	Frequency	Percentage
Low	Upto 2.34	30	25
Medium	2.34-6.0	67	55.83
High	Above 6.00	23	19.17

Mean =4.44 SD=4.2

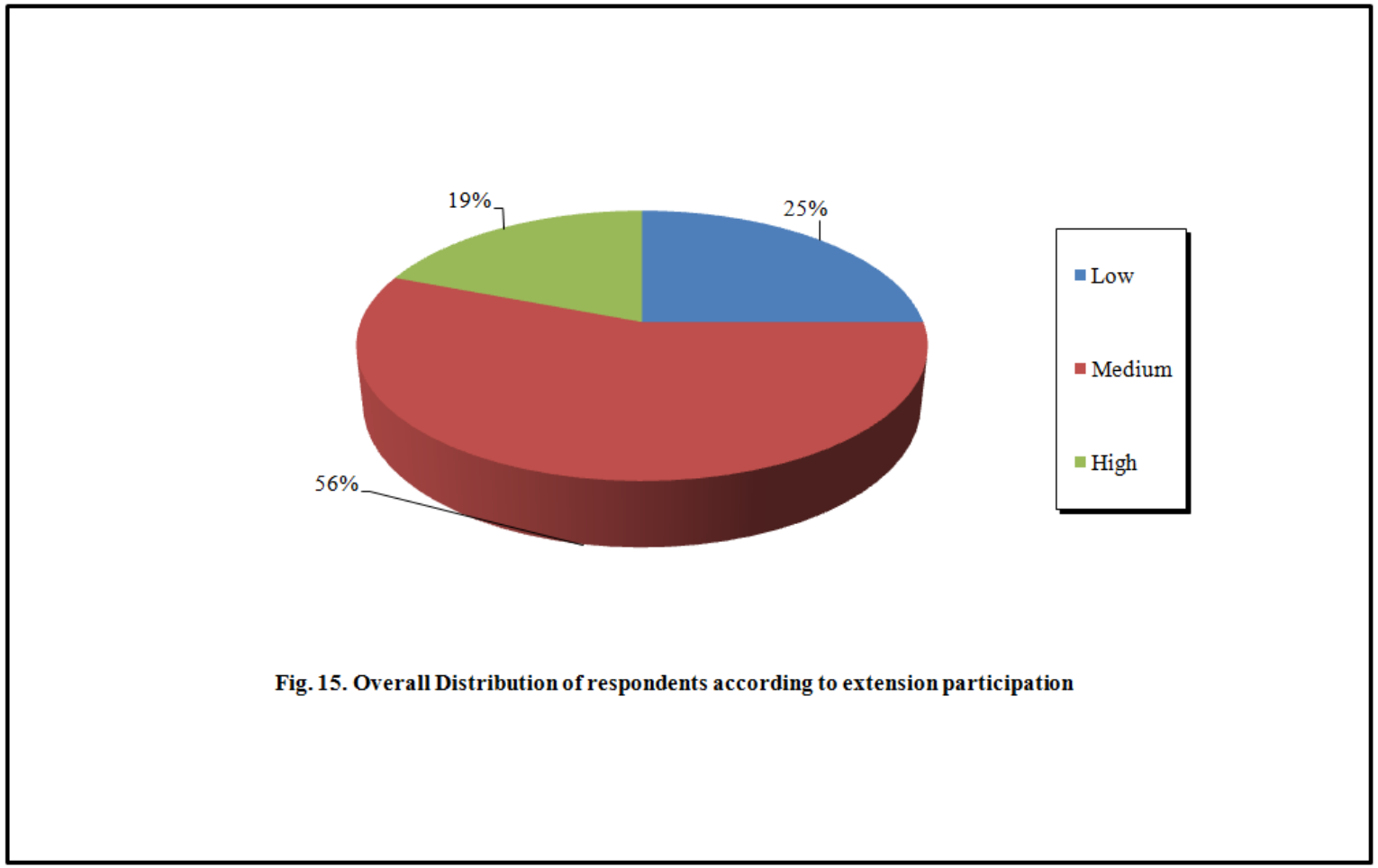

Fig. 15. Overall Distribution of respondents according to extension participation

Fig. 15. Overall Distribution of respondents according to extension participation

Table 5. Distribution of respondents according achievement motivation

n=120

Sl. No.	Statements	SA		A		UD		DA		SDA	
		F	%	F	%	F	%	F	%	F	%
1	Enjoying work as much as play	70	58.33	32	26.66	5	4.16	13	10.83	0	0.00
2	Hard working youth has a good chances of success	7	5.83	89	74.16	17	14.16	7	5.83	0	0.00
3	Even if gets no rest, should give first priority to his work	20	16.66	35	29.16	40	33.33	21	17.5	4	3.33
4	Concentrate more on work and forget obligations to others	19	15.83	36	30.00	48	40.00	17	14.16	0	0.00
5	A youth should perceive that no obstacles can stop him to perform his work better	6	5.00	51	42.50	40	33.33	20	16.66	3	2.5
6	work till satisfaction	0	0.00	20	18.33	85	70.83	13	10.83	0	0.00

SA-Strongly agree A-Agree UD-Undecided DA-Disagree SDA-Strongly disagree

Table 5.1 Overall distribution of respondents according achievement motivation

Category	Range	Frequency	Percentage
Low	39.73	50	41.66
Medium	39.71-63.60	31	25.83
High	63.61	39	32.50

Mean =51.65 SD=28.08

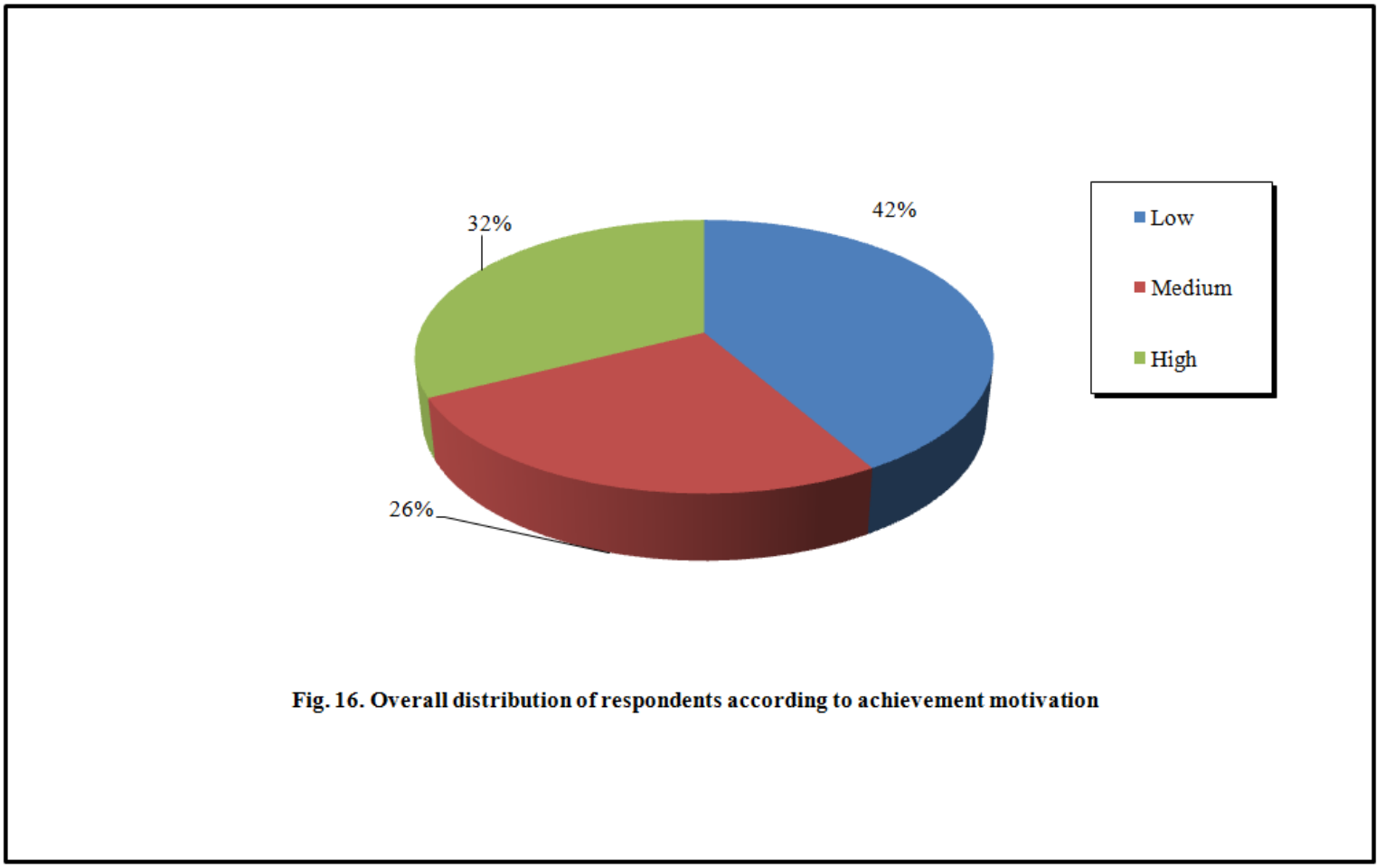

Fig. 16. Overall distribution of respondents according to achievement motivation

Fig. 16. Overall distribution of respondents according to achievement motivation

Table 5.2 Distribution of respondents according economic motivation

n=120

Sl No.	Statement	SA		A		UD		DA		SDA	
		F	%	F	%	F	%	F	%	F	%
1.	A rural youth should work towards large yields and economic profit	47	37.5	54	45.0	3	3.33	17	14.16	0	00
2.	The most successful rural youth is one who makes the most profit	5	4.16	74	89.16	22	18.33	1	0.83	3	2.50
3.	A rural youth should not only grow cash crops but should take up agro based subsidiary enterprises to increase monitory profit in comparison to growing only food crops for home consumption	18	15.00	35	29.16	49	40.83	17	14.16	1	0.83
4.	A rural youth should try new enterprises which may earn more money	17	14.16	61	50.83	25	20.83	13	10.83	4	3.33
5.	It is difficult for the rural youth children to make good start unless he provides them with economic assistance.	6	5	38	31.66	56	46.66	17	14.16	3	2.5
6.	Rural youth must earn their living but the most important thing in life cannot be defined in economic terms.	7	5.83	14	11.66	73	60.83	22	18.33	4	3.33

SA-Strongly agree A-Agree UD-Undecided DA-Disagree SDA-Strongly disagree

Table 5.3 Overall distribution of respondents according economic motivation n=120

Category	Range	Frequency	Percentage
Low	29.70	41	34.17
Medium	29.71-41.93	31	25.83
High	41.93	48	40.00

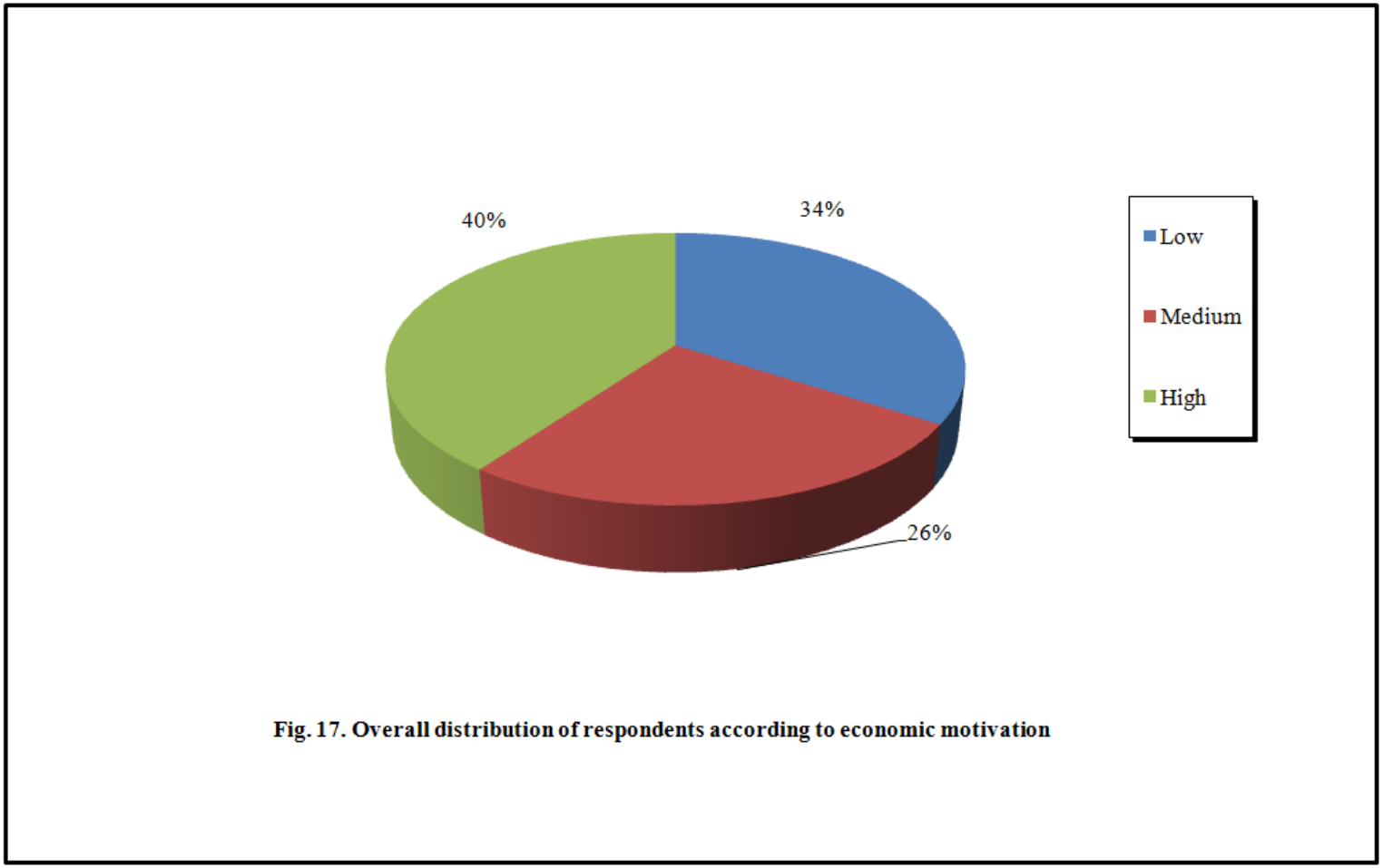

Fig. 17. Overall distribution of respondents according to economic motivation

Fig. 17. Overall distribution of respondents according to economic motivation

Table 5.4 Distribution of respondents according to problems faced by rural youth

n=120

Problems	Frequency	Percentage	Rank
Financial problem	100	83.33	I
Employment problems	91	75.83	II
Lack of awareness	73	60.83	III
Livestock/poultry problems	52	43.33	IV
Village problems	49	40.84	V
Lack of training to do specific job/ activity	45	37.50	VI
Lack of improved equipment	45	37.50	VII
Lack of competitive market for agricultural products	44	36.67	VIII
Health problems	43	35.83	IX
Lack of skill in using mechanized equipment	38	31.67	X
Inadequate labour saving technologies	7	5.84	XI
Lack of interest	5	4.12	XII

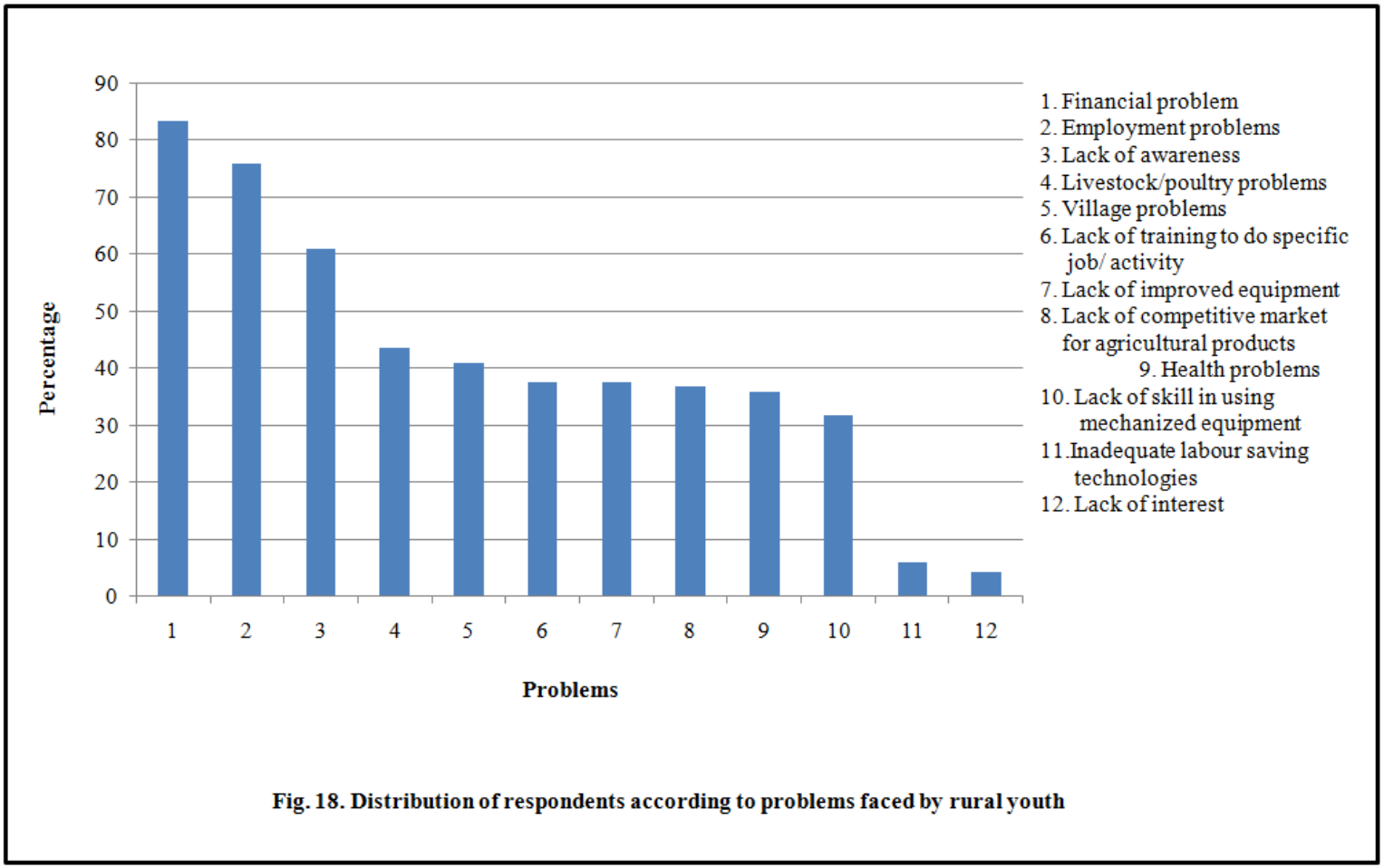

Fig. 18. Distribution of respondents according to problems faced by rural youth

Fig. 18. Distribution of respondents according to problems faced by rural youth

Table 5.5 Relationship between independent variables and innovative behaviour of rural youth

Sl. No.	Variables	r value
1	Education	0.298**
2	Land holding	0.302**
3	Farming experience	-0.1645
4	Annual income	0.159NS
5	Mass media participation	0.188*
6	Extension participation	0.198*
7	Achievement motivation	0.426**
8	Economic motivation	0.210*

* Significant at 5% level of probability
** Significant at 1% level of probability

Table 5.6 Relationship between selected independent variables and Aspirations behaviour of rural youth

Sl. No.	Variables	r value
1	Education	0.135
2	Land holding	0.572**
3	Farming experience	0.168
4	Annual income	0.570**
5	Mass media participation	0.143
6	Extension participation	0.136
7	Achievement motivation	0.293**
8	Economic motivation	0.198*

* Significant at 5% level of probability
** Significant at 1% level of probability

5. DISCUSSION

The results of the present study are discussed in this chapter under the following headings.

5.1 Innovative behavior and aspirations of rural youth towards agriculture

5.2 Extent of rural youth participation in farm activities.

5.3 Personal, psychological and socio-economic characteristics of rural youth

5.4 Problems perceived by the rural youth

1.0 Innovative behaviour scale

Research studies regarding measurement of innovative behaviour have mainly focused on institutional or organizational aspects and employee work behaviour. These measured emphases more on work culture, individual innovations and other related aspects. In recent past, attempts have been made to measure innovative proness, innovativeness but not 'innovative behaviour' of the farmer. Keeping this in view, an attempt was made in the present study to develop an innovative behaviour scale and measure the innovative behaviour of rural youth who are seen as change agents in technology dissemination.

1.2 Operational definition of innovative behaviour

In the present study innovative behaviour is operationalized as farmer's intentional application of new techniques, process, procedures in agriculture, marketing and post-harvest management of produces / products.

1.2.1 Operational definition for dimensions of innovative behaviour

1.2.2 Agriculture and allied practices

Agriculture, and allied practices includes the cultivation of plants, livestock/ management of poultry, sericulture, biofuel and other products used to sustain life.

1.2.3 Information of seeds

Information of seeds, seeds are the most important and basic input in agricultural practices, all the practices followed with respect to type of seeds, hybrids, seed testing, local and improved variety, and also buying of seeds from authorized dealer is important.

1.2.4 Soil fertility and production management:

Fertility is the term used to describe the potential capacity of a soil to grow crops. This is a combined effect of the natural fertility and the conditions of the soil at the time of crop cultivation.

The natural fertility of soil depends on several factors. The composition of the soil, the slope of the land, which affects drainage, the climate and local weather and the practices of cultivation all affect the natural fertility of the soil. There is very little or indeed nothing that a farmer can do about these factors. However, good soil management can improve the soil conditions and build up soil fertility. The proportion of organic matter can be increased by adding manure, compost and green material.

1.2.5 Biofertilizers

Biofertilizers are organisms that enrich the nutrient of soil. The main sources of bio-fertilizers are bacteria, fungi, and cyanobacteria (blue-green algae). The most striking relationship that these have with plants is symbiosis, in which the partners derive benefits from each other. Biofertilizers will help to solve such problems as increased salinity of the soil and chemical run-offs from the agricultural fields. Thus, bio-fertilizers are important if we have to ensure a healthy future for the generations to come.

Bio-fertilizers are ecofriendly organic agro-input and more cost-effective than chemical fertilizers. Bio-fertilizers such as Rhizobium, Azotobacter, Azospirillum and blue green algae (BGA) have been in use for a long time.

1.2.6 Pest monitoring

Pest monitoring describes the processes and activities that need to take place to characterize and monitor the quantity of the pest outbreak, Pest monitoring devises are the devises or the tools/ instruments used for monitoring the pest out break.

1.2.7 Farm machinery

A machine used in farming, machine (any mechanical or electrical device that transmits or modifies energy to perform or assist in the performance of human tasks) Farm Machines utilized for tillage, planting, cultivation, irrigation and harvesting of crops.

1.2.8 Post harvest handling/ management

In agriculture, post-harvest handling is the stage of crop production immediately following harvest, including cleaning, sorting and packing and packaging. When a crop is removed from the ground, or separated from its parent plant, it begins to deteriorate. Post-harvest treatment largely determines final quality, whether a crop is sold for fresh consumption, or used as an ingredient in a processed food product. Effective handling decreases post-harvest losses.

1.2.9 Agricultural marketing

Agricultural marketing activities covers the services involved in moving an agricultural product from the farm to the consumer. Numerous interconnected activities are involved in doing this, such as planning production, growing and harvesting, grading, packing, transport, storage, agro- and food processing, distribution, advertising and sale. Some definitions would even include “the acts of buying supplies, renting equipment, (and) paying labor", arguing that marketing is everything a business does. Such activities cannot take place without the exchange of information and are often heavily dependent on the availability of suitable finance.

1.3 Description of innovative behaviour scale

The scale developed by Rajshekhar (2012) same scale has been adopted. But with respect to rural youth the scale has been modified. There are 68 statements/activities these 68 statements/activities were on the basis specialized in agricultural extension, agronomy, horticulture, soil science, seed science, entomology, microbiology, farm engineering and agribusiness management. These activities were written in statement form with ‘Yes’ or ‘No’ answer format. The ‘Yes’ answer was scored as one while ‘No’ answer was scored as zero. Finally, 68 statements were included with two alternative answers in the scale.

1.3.1 Agriculture and allied practices:

The science art or occupation concerned with cultivating land raising crops and feeding breeding and raising livestock farming practices. For studying agriculture and allied practices 5 practices were included viz., Agriculture, dairy, poultry, sericulture, silviculture.

1.3.2 Information of seeds:

For studying information of seeds 09 practices were included viz.,Purchasing of quality seeds from authorized agency, purchasing of hybrid seeds for growing commercial purpose, purchasing of variety seeds for growing commercial purpose, using of self-produced /stored seeds for growing commercial purpose, seed treatment (chemical/bio fertilizer), seed production (private/government), traditional seed storage and seed processing.

1.3.3 Soil fertility and production management:

Fertile soil has the following properties: it is rich in nutrients necessary for basic plant nutrition, Including nitrogen, phosphorus and potassium, it contains sufficient minerals (trace elements) for plant nutrition and the performance of the management activities with regards to selecting, designing, operating, Controlling and updating production system. For studying soil fertility and production management, 9 practices were included viz., farm yard manure (FYM), poultry manure, sheep/goat manure, green leaf manure, vermi compost, jeevamruta, sewage water, and azolla.

1.3.4 Uses of bio-fertilizers:

Biofertilizers are organisms that enrich the nutrient quality of soil. The main sources of bio fertilizers are bacteria, fungi, and cynobacteria (blue-green algae). Use of bio-fertilizers were studied under 5 practices were included viz., Biofertilizers are organisms that enrich the nutrient quality of soil. Rhizobium/azospirillum, azetobacter, phosphorus solubilizing bacteria and VAM (Vascular Arbascular Mychorrhiza).

1.3.5 Use of bio-pesticides:

For studying use of bio-pesticides, 05 practices were included viz., N P V, trichoderma, parasitoids, bacterial pesticides, and neem based products as bio pesticide.

1.3.6 Use of pest monitoring devices:

Pest monitoring devices are the tools/ instruments used for monitoring the pest out break three practices namely use of pheromones, light traps and sticky traps was used to study the pest monitoring activity of farmers.

1.3.7 Use of farm machinery: To measure use of farm machinery here it is used of 08 statements viz., tractor, land leveler, seed driller, rotovator, seed cum fertilizer driller, weeder, sprayers/duster, was assessed to know use of farm machinery.

1.3.8 Post-harvest management:

In agriculture, post-harvest handling/management is the stage of crop production immediately after harvest, including cooling, cleaning, sorting and packing. Post-harvest technology practices adopted by farmers will be analyzed for the above said operations to know the extent of value addition to their produce to gain higher income. Post harvest technology practices adopted by the farmers will

be analysed for the above said operations to know the extent of value addition to their produce to gain higher income. For studying use of post-harvest management, 10 practices were included viz., Cleaning, processing, grading, seed treatment for effective storage, packaging, loading, storage and transport, un loading, export and value addition.

1.3.9 Marketing:

Agricultural marketing activities covers the services involved in moving an agricultural product from the farm to the consumer. Practices adopted by the farmers for the marketing of their produce will be analyzed. Marketing activities such as selling according to market price, village, trader, wholesaler, retailer, village sandy, direct marketing, commission agents, A P M C, co-operative society, contract farming and cold storage were analysed to study the agricultural marketing practices of farmers.

5.1 Innovative behaviour and aspirations of rural youth

5.1.1 Innovative behaviour

Innovative behaviour is a cumulative outcome of adoption of 09 components (65 items) namely, agriculture and allied practices, information regarding seeds, soil fertility and production management, use of bio-fertilizers, use of bio-pesticides, pest monitoring devices, use of farm machinery, post-harvest activities, and marketing activities.

It is observed from the table 1.0 and Fig.1 that, 33.33 per cent of the respondents belonged to high innovative behaviour category, while 31.67 percent of the respondents are belonged to medium innovative behaviour. However, only 35.00 per cent of them belonged to low innovative behaviour category.

High innovative behaviour

High innovative behaviour was observed in following components such as pest monitoring devices (66.67 %), then post-harvest management (55.00 %), and use of bio-pesticides (53.33 %).

Use of bio pesticides was high because most of the rural youth were aware and using neem based pesticides. Along with they are also using bio fertilizers which is the basic input to maintain soil fertility by increasing nitrogen fixation and enhances phosphorus by phosphorus solubilization.

Monitoring of pests was the other important activity in the farm, where in farmers used pheromone traps, light traps, sticky traps, etc., as an effective measure to control pests as it helped to reduce costs on pesticide application.

Post-harvest management is most important activity after harvest for fetching good price for their produce, it is necessary to go for post-harvest management practices like cleaning, value addition, packaging, grading, and transporting. Farmers adopted post-harvest practices in order to realize higher returns for their produce.

Medium innovative behaviour

Medium innovative behaviour was observed in practices such as soil fertility and production management (60.83 %), use of bio fertilizer (54.83 %) and information on seeds (53.33 %), use of farm machinery (69.17 %) and marketing activities with 48.33 percent of respondents belongs to medium innovative behavior category.

Increased awareness regarding ill effects of inorganic fertilizers on soil, water and environment in general might have influenced to adopt organic fertilizers in order to maintain soil fertility. And also it involves high costs for purchase on large scale. Here most of the rural youth using it for enhancing soil fertility.

Information on seed related aspects such as production of varieties, and purchase of seeds from authorized dealer, local seed etc. needs some education and technical know-how of using that practice.

Now a days youth are more exposed to mass media so they can easily find out marketing channels for their produce sold for good price.

Availability of labour for agricultural activities has decreased over years and it has become very difficult to get labours because of shortage and high wages. Youth farmers are using farm machinery (hired /own) so as to overcome this problem and it helps in long term investment because of their large land holdings.

Low innovative behavior

Low innovative behaviour was observed in agriculture and allied practices (43.33 %). Most of the respondents are not adopted the agricultural and allied practices, it may be the fact that adoption of different agricultural and allied practices was found to be related to the different agro climatic zones and this was reflected in technologies being adopted in varied range from one area to other and the economic condition of the farmers adopting a certain practices or innovation.

These are skill oriented and cannot be adopted by all the respondents. Farmers with sound basic knowledge and higher interest were seen adopting these practices. With respect to production, use, it requires skilled and trained people for construction and non-availability of these people locally is a major constraint noticed in lower adoption rate. And they are also felt lack of financial support to start other enterprises.

A technology which has high feasibility for adoption today may not be as effective as it should be over a period of time. Now a days technology should tend to increase the returns from farm produce. And it should be responsible to mitigate problems like high cost involving, shortage of labor, availability of resources, etc.

Aspirations

Occupational aspiration

The table 2 reveals that more than half (64.16 %) of the respondents aspired to join government jobs, while 51.66 percent of the respondents aspired to take up farming in their future. And it also reveals that 38.33 percent of the respondents want to start the business.

The majority of the rural youth want to join government but in the same line half of the respondents also want to take farming as their main occupation because unemployment in the government sector. Youth who usually participated in agricultural operations in their early ages are quite likely to develop more interest in agriculture and are supposed to future farmers of the country with better occupation and more income, youth might have hoped to change their status. These findings are in agree with Smitha (2013).

Enterprises aspiration

More than half (55.00 %) of the respondents are more preferred to take agriculture as their main enterprises, then poultry (30.00 %) followed by dairy(28.00 %) enterprises as their enterprises in the future.

The possible reason for this could be the preferring agriculture (crop production) as their first preference among different enterprises by the rural youth may be due to unemployment and they want to fulfil their basic needs like food and fodder requirement. And also may be the agriculture came from their ancestors as the main occupation for that their family. At the same time, the other enterprises requires more investment, further due to lack of training and experience to take up other enterprises which might have made them to give agriculture (crop production) as first preference. These results are conformity with results of Bhanu (2006).

General aspirations

The table reveals that 39.17 per cent of the respondents had medium level of general aspirations, while 38.33 percent of them belongs to high level general aspirations followed by least (22.50 %) of the respondents belongs to low general level aspirations.

The reason could be that rural youth had medium level achievement motivation and have medium level participation in extension activities, however, majority of rural youth preferred farming as their occupation because of unemployment. Therefore, they aspired for the things which were within their reach. As a result, they belonged to medium aspiration category. And these results are similar with results of Bhanu (2006).

5.2 Extent of rural youth participation in farm activities

It is clear from the table 3 that majority of the respondents participated regularly in common activities, which includes ploughing (50.83 %), harrowing (54.16 %), and 54.16 percent of them participated in F Y M spreading followed by removal of stubbles (40.83 %)

During crop season about 66.66 percent of the respondents regularly participated in sowing operations, and half of (54.16 %) of them participated occasionally in inter cultivation operations, followed by spraying chemicals (46.66 %). And 48.33 percent of respondents are regularly participated in post- harvest activity, followed by inter cultivation operations (45.83 %).

In agricultural and allied activities majority (78.33 %) of the respondents are less or no participation in the dairy, poultry activities, and 68.66 percent of the respondents are occasionally participated in grazing of the cattles, half of the respondents are occasionally participate in the watering and feeding activities. And more than half of the respondents are regularly participated in marketing activities.

The possible reason for majority of the respondents are more participated in common activities is may have interested in participation of such activities and also due to the fact that these are the common and necessary land preparation activities to be performed/ carried out in the field irrespective of crops grown. These results are agree with the findings of Savitha (2011).

During crop season majority of them are regularly participate in the sowing operation because they may be having less land holding and also lack of labour supply, and also family members are forced them to do this operation. Followed by harvesting operation and post-harvest operations. The

reason may be most of them belonged to nuclear families and they have to be participated in all these activities for their livelihood. More number of rural youth were participated in post- harvest activities like threshing and cleaning activities hence the results. These results are in agree with the findings of Savita (2011).

In agriculture and allied activities marketing operations are regularly participated by the rural youth. The possible reason that could be the youth are more profit oriented and they want earn more money from their farm produce.

5.3 Socio-economic, personal and psychological profile of rural youth

5.3.1 Age

Since the study is on the rural youth so, the respondents selected for this study are all under the age of 18-35. (Ministry of HRD, GOI.)

5.3.2 Education

The Table 4.1 and Fig.3 indicate that 30.83 per cent of the respondents have possessed pre-university education. While 23.33 per cent of them are graduated and have higher education. Whereas 25.83 per cent of them had received high school education, followed by (20.00 per cent) PUC and lesser 3.33 per cent of them studied up to primary school, and rest of 1.66 per cent had illiterate. The importance of higher education in the present competitive world as realized by the parents of rural youth might have induced them to send their children to schools and colleges. And also presence of the good schools and colleges in their vicinity and availability of good transportation facility might have encouraged the youth to go for higher education. These findings are in line with the results of Hari *et al.* (2013).

5.3.3 Size of the land holding

Distribution of respondents according to land holding as presented in Table 4.3 and Fig. 3 depicts that, 26.67 per cent of the respondents were big farmers with more than 25.00 acres, followed by medium farmers (16.67 %) with a land of 10.01 to 25.00 acres. While 25.00 per cent were semi medium farmers having land 5.01 to 10.00 acres and 21.67 per cent of them were small farmers of land with 2.51 to 5.01 acres. A meagre 10.00 per cent of them were marginal farmers with land holding of less than 2.50 acres.

The possible reason that could be attributed to this may be that land holding is a time bound asset which might have been passed on from generation to generation. And agriculture was found to be the main occupation of the family have inherited it from their ancestors and almost all depend on their land for living.

5.3.4 Farming experience

The table 4.4 shows the overall farming experience of rural youth reveals that 38.33 per cent of the respondents belonged to medium farming experience category, followed by high farming experience (30.00 %) and low farming experience category (31.66 %), respectively (Table 4.4 and Fig 3).

The reason for this could be that, in order to take up efficient farming, one need to have longer experience, every farmer want to make good returns so it is essential to have farming experience. In this most of the rural youth had medium level of farming experience because there may be less participation in the farming activities with their family. And also may be not much interested in farming, even though agriculture is the main occupation of that family. This results are matching with Ugwoke *et al.* (2005).

5.3.5 Annual income

It is observed from Table 4.5 and Fig. 3 that 47.50 per cent of the respondents were in medium income group, followed by 30.83 per cent and 21.67 per cent of them in high and low income group, respectively.

The possible reason might be the land holdings possessed by the farmers and their interest to adopt innovations, growing commercial crops and engage in different occupations other than agriculture might have contributed to the above findings. This finding is supported by the findings of Bhanu (2006).

5.3.6 Mass media participation

It is observed from the table that 4.6 and Fig 3, half (51.66 %) of the respondents had more exposure to mass media, while 25.83 percent of the respondents are medium exposure to mass media followed by 22.50 percent of the respondents.

This may be due to the awareness of youth about the importance of mass media as a source of getting information and also for entertainment. Moreover educational qualification and annual income of the respondents might have contributed to the above results; this results is supported by the findings of Bhanu (2006) and Sangamesh (2006).

5.3.7 Extension participation

The table 4.9 and Fig 3, shows overall distribution of the respondents in extension participation, which reveals that, more than half (55.83 %) of the respondents had medium level extension participation, and 25.00 percent of the respondents had low level extension participation. The least number of respondents 19.17 percent of them had high extension participation.

The reason may be the rural youth are not much interested in extension participation, because the now a days youth not much interested in listening theories, they want some practical oriented. But some of the rural youth invariably participate, share their experiences and contribute in the programme. Participation in such activities usually demands experience and knowledge useful for other farmers and society as a whole. These findings are in line with Hari *et al.* (2013).

5.3.9 Achievement motivation

The Table 5, and Fig 3, represents the overall achievement motivation of the respondents which indicates that 41.66 per cent of respondents comes under low level of achievement motivation category, followed by medium level achievement motivation (25.83 %) and the remaining 32.50 per cent of the respondents belonged to high level achievement motivation category.

The possible reason could be the rural youth had participate less in the extension activities and also less contact with experienced farmers and also limited resources and less opportunities to adopt the improved technologies in their field by the rural youth. These findings are matching with Vijaykumar (2001).

5.3.10 Economic motivation

The data in Table 5.2 and Fig 3, reveals that, about 40.00 per cent of the respondents belonged to high economic motivation group, followed by low level of economic motivation with 34.17 per cent, whereas, 25.83 per cent of the respondents belonged to medium economic motivation category. The reason may be the rural youth want to earn more returns from the farm produce and adoption of new crop varieties and growing commercial crops. The findings are in line with the results of Soujanya (2014).

5.4 To identify the problems faced by the rural youth in farm activities

The table 5.4 depicts that financial problems was major problem which is expressed by majority (83.33 %) of the respondents among all the problems, similarly, employment problems which is expressed by 75.83 percent of the respondents, while, more than half of the respondents (60.83 %) expressed that lack of awareness to the new technologies in farming. And problem of livestock /poultry is expressed by 43.33 percent of the respondents.

The table also reveals that 40.44 percent of the respondents had faced village problems, while equal percentage (37.50 %) of the respondents faced the lack of training to do specific job and lack of supply of improved equipment. And 36.67 percent of the respondents faced the problem of marketing of the agricultural products followed by health problems (35.83 %). And 31.67 percent of the respondents had faced the problem of skill in using the mechanized equipment followed by inadequate labour supply and lack of interest (5.84 %) and (4.12 %) respectively.

Majority of rural youth facing financial problem the reason that could be quoted that there may be less number of commercial banks and co-operative societies. So there may be less credit disbursement in these area, And majority of the respondents also facing employment problems because present era is more competitive and more unemployment exist in the country.

The table also shows that half of the respondents are facing livestock or poultry problems because due to lack of labour supply and use of bullock pairs are less in number. And rural youth also facing lack of training to do specific job, the reason might be the lack of trained personal in specific subjects and also less field demonstrations and field visits by the staff of KVK and Raitha sampark Kendra's.

5.5 Relational analysis

Correlation analysis was done to find the relationship between selected independent variables with innovative behaviour of rural youth. The details of the results are presented in ensuing paragraphs under following headings.

5.5.1 Relation of selected factors with innovative behaviour of rural youth

The results presented in table 5.5 indicated a positive and significant relationship between innovative behaviour of rural youth and variables viz. education, size of the land holding and economic motivation at 1 percent level of significance, mass media participation, extension participation and achievement motivation at 5 per cent level of significance, while variables like income and farming experience exhibited positive but non significance.

Relationship between innovative behaviour and independent variables

The results of this tables 5.6 indicates that the independent variables like annual income, achievement motivation had shown positive and significant association with aspiration and similarly, land holding and economic motivation shows significant relation with aspiration of rural youth. And farming experience positive but not significant.

The results of each factor are discussed in detail under the following sub headings.

5.5.1.2. Education

Positive significant relationship was observed between education of the respondents and their innovative behaviour of rural youth.

Education exposes an individual to various sources of information. This in turn helps him to gather more information about the technology, understand it and put it to test on his farm or enterprise. And the youth now a days use of mass media is high, Acquisition of formal education may also help to understand and interpret ideas in practice. This in turn instills a favorable attribute and orientation towards use of improved farm practices and ultimately reflecting on better innovative behaviour. The finding is in agree with the findings of Rajshekhar (2012).

5.5.1.4. Size of the land holdings

Positive and significant relationship was observed between size of the land holdings and innovative behaviour of rural youth.

The probable reason for the significant relationship might be that respondent with large holdings would have more opportunities and potentialities to try and adopt variety of technological innovations. As a result, it is quite possible that farmers with larger land holding evinced keen interest to know about new farm practices and be more receptive to such ideas, Therefore positive and significant relationship existed between size of the lad holdings and innovative behaviour of rural youth. The findings are conformity with the results of Rajashekar (2012).

5.5.1.7 Mass media exposure

Positive and significant relationship was observed between mass media participation with innovative behaviour of rural youth

In these days mass media are become important source for dissemination of knowledge, and youth also more accessible to these medias specially mobiles and internet browsing. The mass media were mainly used to update their knowledge to know the new programmes announced by the government, success stories of fellow agri preneurs and happenings in and around them. Hence, in the study area, respondents were more exposed towards various mass media sources like newspapers, magazines, television and internet etc. which has significantly contributed towards enhancing innovative behaviour of the respondents. The above findings were supported by the findings of Rajshekhar (2012).

5.5.1.8 Extension participation

With regard to extension participation of rural youth, the positive and significant relationship was observed. It was found that rural youth actively participated in most of the extension activities such as, Krishimela, training programmes, demonstrations, exhibitions, etc. This participation encouraged them to have more information and interest confidence which in turn likely to results in high innovative behaviour. The findings are supported by the result of Rajshekhar (2012).

5.5.1.6 Achievement motivation

Positive and significant relationship is observed between the innovative behavior and achievement motivation, the possible reason may be that rural youth want to achieve more and also they want achieve their goals by increasing their returns and they also possess more land holding, so these factors might have contributed to above results.

5.5.1.7 Economic motivation

Positive and significant relationship is observed between the innovative behavior and economic motivation, the reason could be that the youth are profit oriented and also they possess high economic motivation, hence significant relation may be observed.

Relationship between the aspiration and independent variables

5.5.1.8 Land holding

Relationship between aspiration levels of youths and land holding was found to be significant this might be due to the fact that high land holding and availability of resources. The finding revealed that the youth with small and large farm size differed significantly with respect to their aspiration levels. The reason that ought to be given for this finding could be that rural youth with large farm size have mostly aspired for high social status i.e., independent profession like agriculture, as the families with high land holding can better face the situations concerned with agriculture than with lower size of the land holding. Thus it was observed that the farm size of the family of rural youth was associated with their aspiration level.

5.5.1.9 Income

The table 5.5 indicate that income level is positively associated with aspiration levels of rural youths the reason may be due to more participation of rural youth in farm activities and they have high achievement motivation, also hey have more interest in farm activities with these they also available of resources. These factors might have contributed to these results.

Achievement motivation

It is possible that, the aspirations were generally the resultant of increased contact with urban areas, more mass media participation and comparing themselves with other people, the relationship between the economic motivation and aspirations of rural youth was positive and significant at 1 per cent level of probability. It can be concluded from the findings that, the economic motivation is the vital factor in determining the enterprise aspirations of rural youth. However, majority of rural youth preferred farming as their occupation because of unemployment. Therefore, they aspired for the things which were within their reach. As a result, they belonged to medium aspiration category and hence, the results.

Economic motivation

There exists significant correlation between the economic motivation and aspirations of rural youth. The economic motivation of an individual again depends upon the education level, exposure to mass media, achievement motivation which in turn increase the knowledge horizon and develop a zeal in rural youths to earn more annual income. Therefore, all these factors might have influenced the economic motivation behaviour to exhibit such trend of result.

6. SUMMARY AND CONCLUSIONS

Youth are the most vital and concrete section of population. Today youth are growing up with more power and potentiality to create a new world than any previous generation. In the developing societies, youth have a major role to play in transforming their society. They are full of energy and enthusiasm and are more adventurous. Rural youth plays an important role in agriculture and allied activities. The rural youth, male and female because of their family and community background in farming can be active partners in various agricultural activities, for young people to take to agriculture, farming must be both intellectually satisfying and economically rewarding. Indian Agriculture is striving towards inclusive growth by ensuring augmentation in productivity, sustainability and profitability by integrating experiences and efforts of the concerned stakeholders. To achieve this, innovation in technology, institution and policy is certainly a major and crucial the key.

According to 2011 census, India had a total youth population of 673 millions which is 55 per cent of the total population. Out of this population, about 65 per cent were rural youth and the remaining 35 per cent were urban youth. As, majority of the youth comes from rural areas, they are considered as the nation builders of tomorrow. An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. (Rogers). In industrial and agricultural innovation literature, a distinction is made between products, processes, and social/organizational innovations. Agricultural innovations, as traditionally studied, are mainly to categories as products, but with elements of processes, technology is used synonymously with innovation.

Most currently available measures of measuring innovative behaviour are developed on employees work behaviour or organizational aspects. These measures emphases more on work culture, individual innovations and other related aspects. But there are no any studies to measure farmers 'innovative behaviour'. In recent past, attempts have been made to measure innovative behavior of rural youth, youth farming community still contributes a healthier which is the working forces of agriculture in most of the countries and India. Keeping this in view, an attempt was made to study an innovative behaviour scale and measure the innovative behaviour of rural youth. And they are seen as change agents in technology dissemination.

FAO defines the priority age range for rural youth development from 10 to 25. The World Development Report (2007) expanded the range to include all people between 12 and 24 years.

The Government of India (GOI) officially defines youth as persons between the ages of 18 and 35 years.

The United Nations (UN) and the International Labour Organization (ILO), however, defined the youth as persons between 15 and 24 years of age.

Age and location are the two key defining characteristics of rural youth. Age definitions of youth vary quite considerably. Rural youth should be at the forefront of efforts to broaden opportunities for rural people.

Youth are participating in most of the agriculture operations like ploughing, harrowing, sowing, transplanting, weeding, harvesting, post- harvest activities and so on. Rural youth participate in marketing where the trade or enterprise is highly/commercialized and more profitable.

An aspiration refers to a person or a group of person's orientation towards a particular social status or status attributes like occupation, education, income and so on (Haller, 1968). In the present study aspiration refers to rural youth's orientation towards occupation, enterprise, and general aspiration.

Major findings of this study are:

Innovative behavior of rural youth

- About 35.00 per cent of the respondents belonged to low innovative behaviour, while 33.34 percent of the respondents belongs to high level innovative behavior followed by medium (31.66 %) innovative behavior.

Aspirations of rural youth

- Majority (70.00 %) of the respondents aspired to join government jobs, while 51.36 percent of the respondents aspired to take up farming in their future. And it also reveals that 41.82 percent of the respondents want to start the business.
- Nearly half (55.00 %) of the respondents are aspired to take up agricultural enterprises as more interested, 40.83 per cent of the respondents are moderately interested in dairy enterprises. More than half (55.00 %) of the respondents are least interested in poultry enterprises, majority (78.33 %) of the respondents are least interested in sericulture enterprises.
- Least (39.17 %) of the respondents had medium level of general aspirations while 38.33 percent of them belongs to high level general aspirations followed by least (22.50 %) of the respondents belongs to low general level aspirations.

Extent of participation of rural youth in farming activities

- More than half of the respondents are participated regularly in common activities, which includes ploughing (50.83 %), harrowing (54.16 %), and 54.16 percent of them participated in F Y M spreading followed by removal of stubbles (40.83 %)
- During crop season about 66.66 percent of the respondents are regularly participated in sowing operations, and 54.16 percent of them are participated occasionally in inter cultivation operations, followed by spraying chemicals (46.66 %).
- In agricultural and allied activities, more than three fourth of the respondents had less participated in the dairy, goatery, and poultry enterprises. Similarly, more than half (59.16 %) of the respondents less participated in milking activities and also around 68.66 percent of the respondents had often participated in grazing of the livestock.

Personal, socio economic and psychological characteristics of rural youth

Age

- The selected respondents are all rural youth, hence the age of all the respondents is 18-35.

Education

- About 30.83 per cent of the respondents have educated pre-university education. While 23.33 per cent of them are graduated and have higher education. Whereas 25.83 per cent of them had received high school education, followed by (20.00 %) PUC and lesser 3.33 per cent of them studied up to primary school, and rest of.1.66 per cent had illiterate.

Land holding

26.67 per cent of the respondents were big farmers with more than 25 acres, followed by semi medium farmers (25.00 %) with a land of 5.01 to 10.00 acres. While 21.67 per cent of them are small farmers having land 2.51 to 5.00 ha and 16.67 per cent of them were medium farmers of land 10.01 to 25.01 acres. A meagre 10.00 per cent of them were marginal farmers with land holding of less than 2.5 acres.

Farming experience

- About 38.33 per cent of the respondents belonged to medium farming experience category, followed by high farming experience (30.00 %) and low farming experience category (31.66 %), respectively.

Annual income

Around 47.50 per cent of the respondents were in medium income group, followed by 30.83 and 21.67 per cent of them in high and low income group, respectively.

Mass media participation

- Majority (80.83 %) of the respondents read the newspapers regularly,
- Majority (80.83 %) of the respondents never listened agricultural programmes broadcasted through radio.
- Majority (85.00 %) 79.17 of the respondents view agricultural programmes regularly
- Around (35.00 %) of respondents use the internet regularly,

Extension participation

- More than half (56.66 %) of the respondents are never participate in general meetings conducted in the villages/Panchayats,
- Majority (72.50 %) of the respondents had never participated in field days,
- Majority of respondents (88.33 %) had never participated in demonstrations,
- Majority (90.83 %) of the respondents had never attended any film shows,

- Half (51.66 %) of the respondents had attend the training programs occasionally,
- More than half (64.16 %) of the respondents had visited krishimela regularly,
- More than half (51.66 %) of the respondents had high extension participation category,

Achievement motivation

- About 41.66 per cent of respondents comes under low level of achievement motivation category,

Economic motivation

- About 40.00 per cent of the respondents belonged to high economic motivation group,

Problems faced by rural youth

- Financial problems was major problem which is expressed by majority (83.33 %)
- Employment problems which is expressed by 75.83 percent of the respondents,
- More than half of the respondents (60.83 %) expressed that lack of awareness to the new technologies in farming.
- Equal percentage (37.50 %) of the respondents faced the lack of training to do specific job and lack of supply of improved equipment.
- About 36.67 percent of the respondents faced the problem of marketing of the agricultural products

Relational analysis

The results indicated a positive and significant relationship between innovative behavior of rural youth and variables viz. education, size of the land holding and economic motivation at 5 percent level of significance, mass media participation, extension participation and achievement motivation at one per cent level of significance, while variables like income and farming experience exhibited positive but non significance.

Relationship between aspirations and independent variables

The results of this tables indicates that the independent variables like annual income, achievement motivation had shown positive and significant association with aspiration and similarly, land holding and economic motivation shows significant relation with aspiration of rural youth. And farming experience positive but not significant.

Implications

In the light of the findings of the study have been identified as follows and presented from the observations of the researcher during data collection, following implications are made for the effective improvement in innovative behavior and aspirations of rural youth.

1. The standardized scale developed proved to be reliable and valid and can be used as an objective instrument to measure the innovative behaviour of farmers.
2. About 35.00 percent of the rural youth were observed in low innovative behaviour implying that there is a lot of scope to enhance the innovative behaviour of farmers as they are the very effective local sources of innovation through diffusion process. Hence, extension personnel of developmental departments, SAU's, private agencies, and NGO's need to put in concrete efforts in this direction like a trainings to rural youth, providing subsidies on inputs, and establishing ABC (Agri Buisness Centers).
3. Generally, the occupational aspiration level of rural youth was high towards farming. The reason for this may be the non-availability of any other suitable occupation in the area. On the basis of this fact it can be concluded that the rural youth prefer more of localized job. And also this has been revealed the fact that, mostly they have aspiration for independent profession i.e., farming. Hence, the youth could be trained better on improved methods of farming to maximize the economic returns.
4. About half (54.16 %) of the rural youth aspired for agriculture which provides them economic benefit and incentives and hence efforts could be made by the planners to mould the rural youth aspirations towards other agro-based enterprises like dairy, poultry, sericulture, bee keeping, rabbit rearing, piggery and small scale industry, as these will provide additional income along with agriculture for stable financial status of the rural youth. And also efforts could be made by government agencies to provide good projects for rural youth with various infrastructural facilities like knowledge, credit, marketing etc., to take up agriculture enterprise in a better way.

Suggestions for future research

1. Innovative behaviour scale can be tested in different areas of the rural youth in order to know results and make broader generalizations regarding applicability of the scale.
2. Case studies on innovative behaviour of rural youth can be made in order to find innovative behaviour and apply their attributes in enhancing innovative behaviour of other non-rural youth.
3. A research study covering all aspects of rural youth in all districts of the state need to be carried out to make due recommendations for policy makers, planners to formulate effective strategies and training programmes.

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APPENDIX

STUDY ON INNOVATIVE BEHAVIOUR AND ASPIRATION OF RURAL YOUTH TOWARDS AGRICULTURE IN NORTH KARNATAKA

PART – I

Respondent No:

A. General information

1. Name of the youth:

2. Village :

3. Taluk :

4. District : Belagam / Haveri

B. Personal, psychological and socio-economic characteristics

1. Age (in years): _____

2. Education: _____

3. Land holding (acres): Irrigated: _____ Dry land : _____ Total : _____

4. Annual income

a) From agriculture: Rs. _____

b) From agro-based subsidiary enterprises (Like dairy, poultry etc.) : Rs. _____

c) From others (specify): Rs. _____

Total: Rs. _____

5. Farming experience: _____

6. Mass media participation

State your extent of use of various mass media Tools.

Sl. No.	Type of mass media used	Frequency of use		
		Regular	Occasional	Never
1.	Newspaper reading			
2.	Radio listening (Agri.programmes)			
3.	Watching TV (Agri.programmes)			
4.	Reading farm magazines			
5.	Internet browsing			
6.	Other (specify)			

7. Extension participation:

State your participation in various extension activities

Sl. No.	Activities	Extent of participation		
		Regular	Occasional	Never
1.	General meetings			
2.	Discussion meetings			
3.	Field days			
4.	Demonstrations			
5.	Krishimela			
6.	Film shows			
7.	Campaign			
8.	Educational tour			
9.	Training programmes			
10.	Any other (specify)			

8. Achievement motivation:

You are requested to indicate your agreement as strongly Agree, Agree, Undecided, Disagree, strongly Disagree to the following statements.

Sl. No.	Statements	SA	A	UD	DA	SDA
1	Enjoying work as much as play					
2	Hard working youth has a good chances of success					
3	Even if gets no rest, should give first priority to his work					
4	Concentrate more on work and forget obligations to others					
5	A youth should perceive that no obstacles can stop him to perform his work better					
6	work till satisfaction					

SA – Strongly agree: A – Agree UD – Undecided : DA – Disagree : SDA – Strongly disagree

9. Economic motivation:

You are requested to indicate your agreement as strongly Agree, Agree, Undecided, Disagree, strongly Disagree to the following statements.

Sl No.	Statement	SA	A	UD	DA	SDA
1.	A rural youth should work towards large yields and economic profit					
2.	The most successful rural youth is one who makes the most profit					
3.	A rural youth should not only grow cash crops but should take up agro based subsidiary enterprises to increase monitory profit in comparison to growing only food crops for home consumption					
4.	A rural youth should try new enterprises which may earn more money					
5.	It is difficult for the rural youth children to make good start unless he provides them with economic assistance.					
6.	Rural youth must earn their living but the most important thing in life cannot be defined in economic terms.					

PART – II Participation of rural youth in farm activities

Sl. No	Activities	More often		Often		Less/no	
		F	%	F	%	F	%
A	Common activities						
	Ploughing						
	Harrowing						
	Removal of stubbles						
	F Y M spreading						
B	Kharif season						
	Sowing operation						
	Seeding						
	Fertilizer application /harrowing						
	Hand weeding						
	Spraying chemicals						
	Intercultivation						
	Harvesting						
	Post –harvest activities (threshing, winnowing)						
C	Agricultural allied activities						
	Dairy, goatery, poultry						
	Washing cattle						
	Grazing						
	Watering and Feeding						
	Cleaning cattle's shed						
	Milking						
	Marketing of eggs / boilers						
	Others (if any)						

PART - III Problems Perceived by Rural youth

1. Employment problems
2. Financial problem
3. Health problems
4. Livestock/poultry problems
5. Village problems
6. Lack of training to do specific job/ activity
7. Lack of improved equipment
8. Lack of awareness
9. Lack of skill in using mechanized equipment
10. Lack of competitive market for agricultural products
11. Inadequate labour saving technologies
12. Lack of interest
13. Others……

Part IV: Innovative Behaviour

A) Agril and allied practices

Sl. No	Agri and allied practices	Following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	others
1	Agriculture								
2	Dairy								
3	Poultry								
4	Sericulture								
5	Silviculture								

B) Information regarding seeds

Sl. No	Agril practices	Following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	others
1	Purchasing of quality seeds from authorised agency								
2	Purchase of hybrid seeds for commercial purpose								
3	Purchase of variety seeds from commercial purpose								
4	Using of self-produced /stored seeds								
5	Seed treatment								
6	Seed production								
7	Traditional seed storage								
8	Seed processing								
9	Others								

C. Soil fertility and management

Sl. No	Organic agri materials	following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	Others
1	F Y M								
2	Poultry manure								
3	Sheep / goat								
4	Green leaf manure								
5	Vermin compost								
6	Jeevamruta								
7	Panchagavya								
8	Sewage water								
9	Azolla								
10	Others								

D. Use of bio fertilizers

Sl. No	Bio fertilizers	following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	others
1	Rhizobium/ Azospirlum								
2	Azetobactor								
3	PSB								
4	VAM								
5	Others								

E. Use of bio pesticides

Sl. No	bio pesticides	following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	others
1	N P V								
2	Tricoderma								
3	Parasitoids								
4	Bacterial pesticides								
5	Neem based products								
6	Others								

F. Pest monitoring devices

Sl no	Devices	following	Not following	Reasons					
				Personalexperience	Family	Farmers	Scientists	Mass media	others
1	Pheromones								
2	Sticky traps								
3	Light traps								
4	Other devices								

G. Use of farm machinery

Sl no	farm machinery	following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	others
1	tractor								
2	Land leveller								
3	Seed driller								
4	Rotovator								
5	Fertilizer driller								
6	Seed cum Fertilizer driller								
7	Sprayers								
8	Weeders								
9	others								

H. Post-harvest activities

Sl no	Activities	following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	Others
1	Cleaning								
2	Processing								
3	Grading								
4	Packaging								
5	Seed treatment								
6	Loading								
7	Storage and transportation								
8	Export								
9	Value addition								
10	Others								

I. Marketing activities

Sl no	activities	following	Not following	Reasons					
				Personal experience	Family	Farmers	Scientists	Mass media	Others
1	Selling as per market forces								
2	Village sandy								
3	Trader								
4	Wholeseller								
5	Retailer								
6	Direct marketing								
7	Commission agents								
8	APMC								
9	Cooperative society								
10	Storage cold / warehouse								

Aspirations of rural youth:

A) Enterprise aspirations:

State the enterprises in which you are most/moderately/least interested

Sl. No.	Enterprises	Most interested	Moderately interested	Least interested
1.	Agriculture			
2.	Dairy			
3.	Poultry			
4.	Sericulture			
5.	Bee keeping			
6.	Small scale industry			
7.	Others			

B) Occupational aspirations

Indicate which of the following occupation you would like to take up in future,

1. Farming
2. Government jobs
3. Business
4. Others …….

C) General aspirations

1. What level you expect to increase your crop production in next three years?
   Increasing by: 1.5 times/ 2 times/ 2.5 times/ 3 times/ > 3 times

2. What is your aspirations in respect to increase farm animals in next three years?
   None/ poultry/ goat or sheep/ cows or buffaloes/ bullocks

3. What is your aspiration in respect to increase your land holding in next three years?
   Increasing by: 1-2 acres/ 2-4 acres/ 4-6 acres/ 6-8 acres/ >8 acres

4. What is your expectation to provide shelter for farm animals in the next three years?
   None/ thatched shed/ mud walled and thatched/ full mud walled and tiled/ brick walled and tiled with doors

5. What is your aspiration in respect to increase your income in the next three years?
   None/less than 25%/ 25 to 50%/ 50 to 75%/ more than 75%

6. What is your aspiration in respect to house alteration or construction in the three years?
   None/ modification in the existing house/ construction of one kaccha house/ Construction of one pucca house/ construction of 2 more houses.

7. What is your aspiration in respect to purchase of farm machineries in the next three years?
   None/ fertiliser driller/tractor /seed cum fertiliser driller /others

8. What is your expectation to have more material possession in the next three years?
   None/ silk cloths / bike / brass or stainless vessels/ silver or gold Ornaments

9. What level you expect your general contentment (satisfaction) to reach in the next three years?
   None/ somewhat better/ better/ mostly better/ certainly better

10. What level you expect your sons/daughters to reach in their education?
    Primary/ Middle/ High school/ College /university or higher education

11. What level you expect your sons to reach in their occupation?
    Labour/ Caste occupation/ Independent/ Improved cultivation/ Government service

ಉತ್ತರ ಕರ್ನಾಟಕದಲ್ಲಿನ ಗ್ರಾಮೀಣ ಯುವಕರಿಗೆ ಕೃಷಿಯ ಮೇಲಿನ ನಾವಿನ್ಯತೆ ವರ್ತನೆ ಮತ್ತು ಆಕಾಂಕ್ಷೆಯ ಅಧ್ಯಯನ

ಭಾಗ– 1

ಪ್ರತಿವಾದಿ ಸಂಖ್ಯೆ:

ಎ. ಸಾಮಾನ್ಯ ಮಾಹಿತಿ

1. ಯುವಕನ ಹೆಸರು:
2. ಗ್ರಾಮ:
3. ತಾಲೂಕು:
4. ಜಿಲ್ಲೆ: ಬೆಳಗಾವಿ / ಹಾವೇರಿ

ಬಿ. ವೈಯಕ್ತಿಕ, ಮಾನಸಿಕ ಮತ್ತು ಸಾಮಾಜಿಕ ಆರ್ಥಿಕ ಗುಣಲಕ್ಷಣಗಳು

1. ವಯಸ್ಸು (ವರ್ಷಗಳಲ್ಲಿ): _____
2. ಶಿಕ್ಷಣ: _____
3. ಭೂ ಹಿಡುವಳಿ (ಎಕರೆ): ನೀರಾವರಿ: _____ ಒಣ ಭೂಮಿ: _____ ಒಟ್ಟು: _____
4. ವಾರ್ಷಿಕ ಆದಾಯ:

ಅ. ವ್ಯವಸಾಯದಿಂದ: ರೂ._____

ಬ. ಕೃಷಿ ಆಧಾರಿತ ಅಂಗಸಂಸ್ಥೆಯಿಂದ (ಹೈನುಗಾರಿಕೆ, ಕೋಳಿಸಾಕಾಣಿಕೆ ಇತರೆ.): ರೂ. _____

ಕ. ಇತರೆ (ತಿಳಿಸಿ): ರೂ._____

5. ಕೃಷಿ ಅನುಭವ: _____

6. ಸಮೂಹ ಮಾಧ್ಯಮದಲ್ಲಿ ಭಾಗವಹಿಸುವಿಕೆ

ವಿವಿಧ ಸಮೂಹ ಮಾಧ್ಯಮಗಳ ಸಾಧನವನ್ನು ಬಳಸಿಕೊಳ್ಳುದನ್ನು ತಿಳಿಸಿ.

ಕ್ರ.ಸಂ	ಸನೂಹ ಮಾಧ್ಯಮದ ವಿಧಗಳು	ಬಳಕೆಯ ಆವರ್ತನ		
		ನಿರಂತರವಾಗಿ	ಯಾವಾಗಲಾದರೊಮ್ಮೆ	ಎಂದಿಗೂ ಇಲ್ಲ
7.	ವಾರ್ತಾ ಪತ್ರಿಕೆ ಓದುವದು			
8.	ರೇಡಿಯೋ ಕೇಳುವದು (ಕೃಷಿ ಕಾರ್ಯಕ್ರಮಗಳು)			
9.	ದೂರದರ್ಶನ ವೀಕ್ಷಿಸುವುದು (ಕೃಷಿ ಕಾರ್ಯಕ್ರಮಗಳು)			
10	ನಿಯತಕಾಲಿಕೆ ಪತ್ರಿಕೆಗಳನ್ನು ಓದುವದು			
11	ಅಂತರಜಾಲವನ್ನು ವೀಕ್ಷಿಸುವುದು			
12	ಇತರೆ ((ತಿಳಿಸಿ)			

7. ವಿಸ್ತರಣೆಯಲ್ಲಿ ಭಾಗವಹಿಸುವಿಕೆ

ವಿವಿಧ ವಿಸ್ತರಣಾ ಚಟುವಟಿಕೆಯಲ್ಲಿ ನಿಮ್ಮ ಪಾಲ್ಗುಳ್ಳುವಿಕೆಯ ಬಗ್ಗೆ ತಿಳಿಸಿ.

ಕ್ರ.ಸಂ	ಚಟುವಟಿಕೆಗಳು	ಭಗವಹಿಸುವಿಕೆಯ ವ್ಯಾಪ್ತಿ		
		ನಿರಂತರವಾಗಿ	ಯಾವಾಗಲಾದರೊಮ್ಮೆ	ಎಂದಿಗೂ ಇಲ್ಲ
1.	ಸಾಮಾನ್ಯ ಸಭೆಗಳು			
2.	ಚರ್ಚೆ ಸಭೆಗಳು			
3.	ಕ್ಷೇತ್ರದ ದಿನಗಳು			
4.	ಪ್ರದರ್ಶನಗಳು			
5.	ಕೃಷಿಮೇಳ			
6.	ಚಿತ್ರ ಪ್ರದರ್ಶನಗಳು			
7.	ಕ್ಯಾಂಪೇನ್			
8.	ಶೈಕ್ಷಣಿಕ ಪ್ರವಾಸ			
9.	ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮ			
10.	ಇತರೆ (ತಿಳಿಸಿ)			

8. ಸಾಧನೆಯ ಪ್ರೇರಣೆ:

ಈ ಕೆಳಗಿನ ಹೇಳಿಕೆಗಳನ್ನು ಸೂಚಿಸಿ,

ಕ್ರ.ಸಂ	ಹೇಳಿಕೆಗಳು	ಬಲವಾಗಿ ಒಪ್ಪುತ್ತೇನೆ	ಒಪ್ಪುತ್ತೇನೆ	ತೀರ್ಮಾನವಾಗಿಲ್ಲ	ಒಪ್ಪಿಗೆ ಇಲ್ಲ	ಬಲವಾಗಿ ಒಪ್ಪಿಗೆ ಇಲ್ಲ
1	ಕೆಲಸವನ್ನು ಸಂತೋಷದಿಂದ ಆಟಆಡಿದಂತೆ ಮಾಡುವದು					
2	ಕಷ್ಟಪಟ್ಟು ದುಡಿಯುವ ಯುವಕರಿಗೆ ಯಶಸ್ಸು ಕಟ್ಟಿಟ್ಟ ಬುತ್ತಿ					
3	ವಿಶ್ರಾಂತಿ ಸಿಗದಿದ್ದರೂ ಸಹ ತನ್ನ ಕೆಲಸಕ್ಕೆ ಮೊದಲ ಆದ್ಯತೆ ನೀಡಬೇಕು					
4	ಬೇರೆದನ್ನು ಮರೆತು ಪರಿಶ್ರಮ ಮತ್ತು ಹೊಣೆಗಾರಿಕೆಗಳನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಳ್ಳಬೇಕು					
5	ಯುವಕರು ಯಾವುದೇ ಅಡೆತಡೆಗಳಿಲ್ಲದೇ ಉತ್ತಮ ಕೆಲಸ ಮಾಡಲು ಯೋಚಿಸಬೇಕು.					
6	ತೃಪ್ತಿಯಾಗಿ ಕೆಲಸ ಮಾಡಬೇಕು.					

9. ಆರ್ಥಿಕ ಪ್ರೇರಣೆ:

ಈ ಕೆಳಗಿನ ಹೇಳಿಕೆಗಳನ್ನು ಸೂಚಿಸಿ,

ಕ್ರ. ಸಂ	ಹೇಳಿಕೆಗಳು	ಬಲವಾಗಿ ಒಪ್ಪುತ್ತೇನೆ	ಒಪ್ಪುತ್ತೇನೆ	ತೀರ್ಮಾನವಾಗಿಲ್ಲ	ಒಪ್ಪಿಗೆ ಇಲ್ಲ	ಬಲವಾಗಿ ಒಪ್ಪಿಗೆ ಇಲ್ಲ
1.	ಗ್ರಾಮೀಣ ಯುವಕರು ಹೆಚ್ಚಿನ ಇಳುವರಿ ಮತ್ತು ಆರ್ಥಿಕವಾಗಿ ಲಾಭದ ಕಡೆಗೆ ಕೆಲಸ ಮಾಡಬೇಕು.					
2.	ಅತ್ಯಂತ ಯಶಸ್ವೀ ಗ್ರಾಮೀಣ ಯುವಕನೆಂದರೇ ಯಾರೊಬ್ಬ ಹೆಚ್ಚಿನ ಲಾಭ ಗಳಿಸುವನೊ.					
3.	ಗ್ರಾಮೀಣ ಯುವಕರು ಬೆಳೆಗಳಿಗಾಗಿ ದುಡಿಯಬಾರದು ಆದರಜೊತೆಗೆ ಮನೆ ಬಳಕೆಗಾಗಿ ಹಾಗೂ ಆಹಾರ ಬೆಳೆಗಳನ್ನು ಬೆಳೆಯುವದರಿಂದ ಮತ್ತು ಲಾಭ ಹೆಚ್ಚಿಸಲು ಕೃಷಿ ಮೂಲದ ಅಂಗಸಂಸ್ಥೆಯ ಉದ್ಯಮಗಳ ಸಹಾಯ ತೆಗೆದುಕೊಳ್ಳಬೇಕು.					
4.	ಗ್ರಾಮೀಣ ಯುವಕರು ಹೆಚ್ಚು ಗಳಿಸಲು ಹೊಸ ಉದ್ದಿಮೆಗಳ ಬಗ್ಗೆ ಪ್ರಯತ್ನಿಸಬೇಕು.					
5.	ಗ್ರಾಮೀಣ ಯುವಕರಿಗೆ ಉತ್ತಮವಾಗಿ ಆರ್ಥಿಕ ನೆರವು ನೀಡುವದು.					
6.	ಗ್ರಾಮೀಣ ಯುವಕರು ತಮ್ಮ ಜೀವನಕ್ಕೆ ಆರ್ಥಿಕತೆಯ ನೆರವಿಗೆ ಮಹತ್ವ ಕೊಡಬೇಕು.					

ಭಾಗ –2

ಕೃಷಿ ಚಟುವಟಿಕೆಯಲ್ಲಿ ಗ್ರಾಮೀಣ ಯುವಕರ ಭಾಗವಹಿಸುವಿಕೆ

ಕ್ರ.ಸಂ	ಚಟುವಟಿಕೆಗಳು	ಆಗಾಗ್ಗೆ		ಸಾಮಾನ್ಯವಾಗಿ		ಕಡಿಮೆ /ಇಲ್ಲ	
		ಎಫ್	%	ಎಫ್	%	ಎಫ್	%
ಅ	ಸಾಮಾನ್ಯ ಚಟುಚಟಿಕೆಗಳು						
	ಉಳುವದು						
	ಘಾಸಿಗೊಳಿಸಿವದು						
	ಕಳೆ ತೆಗೆಯುವುದು						
	ಎಫ್ ಆಯ್ ಎಮ್ ಹರಡುವದು						
ಬ	ಮುಂಗಾರಿನ ಋತುಮಾನ						
	ಬಿತ್ತನೆ ಕಾರ್ಯಾಚರಣೆ						
	ಬಿತ್ತುವದು						
	ರಸಗೊಬ್ಬರ ಹಾಕುವದು/ ಘಾಸಿಗೊಳಿಸುವದು						
	ಕೈ ಕಳೆ ಕೀಳುವದು						
	ರಾಸಾಯನಿಕಗಳನ್ನು ಸಿಂಪಡಿಸುವದು						
	ಅಂತರ ಬೇಸಾಯ						
	ಕೊಯ್ಲು						
	ಕಟಾವಿನ ನಂತರದ ಚಟುವಟಿಕೆಗಳು (ಒಕ್ಕುವದು, ತೂರುವದು)						
ಕ	ಕೃಷಿ ಸಂಭಂದಿತ ಚಟುವಟಿಕೆಗಳು						
	ಹೈನುಗಾರಿಕೆ, ಆಡುಸಾಕಾಣಿಕೆ, ಕೋಳಿಸಾಕಾಣಿಕೆ						
	ಜಾನುವಾರುಗಳನ್ನು ತೊಳೆಯುವದು						
	ಮೇಯಿಸುವದು						
	ನೀರು ಕುಡಿಸುವದು ಮತ್ತು ಆಹಾರ ನೀಡುವದು						
	ಜಾನುವಾರುಗಳ ಸ್ಥಳವನ್ನು ಸ್ವಚ್ಚಮಾಡಿ ಬೇರೆ ಚೆಲ್ಲುವುದು						
	ಹಾಲುಕರೆವುದು						
	ತತ್ತಿಗಳನ್ನು ಮಾರಾಟ ಮಾದುವುದು / ಬಾಯ್ಲರ್ಸ್						
	ಇತರೆ (ತಿಳಿಸಿ)						

ಭಾಗ–3

ಗ್ರಾಮೀಣ ಯುವಕರು ಅನುಭವಿಸುವ ತೊಂದರೆಗಳು

1. ಉದ್ಯೋಗದ ಸಮಸ್ಯೆಗಳು
2. ಆರ್ಥಿಕ ಸಮಸ್ಯೆಗಳು
3. ಆರೋಗ್ಯ ಸಮಸ್ಯೆಗಳು
4. ಜಾನುವಾರು/ ಕೋಳಿಸಾಕಾಣಿಯ ಸಮಸ್ಯೆಗಳು
5. ಗ್ರಾಮದ ಸಮಸ್ಯೆಗಳು
6. ತರಬೇತಿ ಹಾಗೂ ನಿರ್ದಿಷ್ಟ ಕೆಲಸದ ಕೊರತೆ
7. ಸುಧಾರಿತ ಉಪಕರಣಗಳ ಕೊರತೆ
8. ತಿಳುವಳಿಕೆಯ ಕೊರತೆ
9. ಯಂತ್ರಗಳ ಬಳಕೆಯ ಕೌಶಲ್ಯದ ಕೊರತೆ
10. ಕೃಷಿ ಉತ್ಪನ್ನಗಳಿಗೆ ಸ್ಪರ್ಧಾತ್ಮಕ ಮಾರುಕಟ್ಟೆಯ ಕೊರತೆ
11. ಅಸಮರ್ಪಕವಾಗಿ ಕಾರ್ಮಿಕರನ್ನು ಉಳಿಸುವ ತಂತ್ರಜ್ಞಾನ
12. ಆಸಕ್ತಿಯ ಕೊರತೆ
13. ಇತರೆ

ಭಾಗ– 4

ನಾವಿನ್ಯತೆ ವರ್ತನೆ

ಎ) ಕೃಷಿ ಮತ್ತು ಪೂರಕ ಪದ್ದತಿಗಳು

ಕ್ರ. ಸಂ	ಕೃಷಿ ಮತ್ತು ಪೂರಕ ಪದ್ದತಿಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಕೃಷಿ								
2	ಹೈನುಗಾರಿಕೆ								
3	ಕೋಳಿಸಾಕಾಣಿಕೆ								
4	ರೇಷ್ಮೆ ಸಾಕಾಣಿಕೆ								
5	ಮರ ಸಾಕಾಣಿಕೆ								

ಬಿ) ಬೀಜಗಳ ಬಗ್ಗೆ ಮಾಹಿತಿ

ಕ್ರ. ಸಂ	ಕೃಷಿ ಮತ್ತು ಪೂರಕ ಪದ್ದತಿಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಅಧಿಕಾರಯುಕ್ತ ಸಂಸ್ಥೆಯಿಂದ ಒಳ್ಳೆಯ ಗುಣಮಟ್ಟದ ಬೀಜಗಳನ್ನು ಖರೀದಿಸುವುದು								
2	ವಾಣಿಜ್ಯ ಉದ್ದೇಶಕ್ಕಾಗಿ ಹೈಬ್ರೀಡ್ ಬೀಜಗಳನ್ನು ಖರೀದಿಸುವುದು								
3	ವಾಣಿಜ್ಯ ಉದ್ದೇಶದಿಂದ ಬೀಜಗಳನ್ನು ಖರೀದಿಸುವುದು								
4	ಸ್ವಂತ ತಯಾರಿಸಿದ ಬೀಜಗಳ ಬಳಕೆ/ ಬೀಜಗಳ ಸಂಗ್ರಹ								
5	ಬೀಜೋಪಚಾರ								
6	ಬೀಜ ಉತ್ಪಾದನೆ								
7	ಸಾಂಪ್ರದಾಯಿಕ ಬೀಜ ಸಂಸ್ಕರಣೆ								
8	ಬೀಜ ಸಂಸ್ಕರಣೆ								
9	ಇತರೆ								

ಸಿ) ಮಣ್ಣಿನ ಫಲವತ್ತತೆ ಮತ್ತು ನಿರ್ವಹಣೆ

ಕ್ರ. ಸಂ	ಸಾವಯವ ಕೃಷಿ ವಸ್ತುಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಎಫ್. ಆಯ್. ಎಮ್								
2	ಕೋಳಿ ಗೊಬ್ಬರ								
3	ಕುರಿ / ಆಡು								
4	ಹಸಿರೆಲೆ ಗೊಬ್ಬರ								

5	ಎರೆಹುಳು ಗೊಬ್ಬರ								
6	ಜೀವಾಮೃತ								
7	ಪಂಜಗವ್ಯಾ								
8	ಚರಂಡಿ ನೀರು								
9	ಅಝೋಲಾ								
10	ಇತರೆ								

ಡಿ) ರಾಸಾಯನಿಕ ವಸ್ತುಗಳ ಬಳಕೆ

ಕ್ರ.ಸಂ	ರಾಸಾಯನಿಕ ವಸ್ತುಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ರೈಜೋಬಿಯಂ /ಅಜೊಸ್ಪಿರಿಲಂ								
2	ಅಜಿಟೊಬ್ಯಾಕ್ಟರ್								
3	ಪಿಎಸ್‌ಬಿ								
4	ವಿಎಎಮ್								
5	ಇತರೆ								

ಇ) ಜೈವಿಕ ಕೀಟನಾಶಕಗಳ ಬಳಕೆ

ಕ್ರ.ಸಂ	ಜೈವಿಕ ಕೀಟನಾಶಕಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಎನ್‌ಪಿವಿ								
2	ಟ್ರೈಕೊಡರ್ಮಾ								
3	ಪಾರಾಸಿಟೈಡ್								
4	ಬ್ಯಾಕ್ಟೀರಿಯಾ ಕೀಟನಾಶಕಗಳು								
5	ಬೇವಿನ ಆಧಾರಿತ ಉತ್ಪನ್ನಗಳು								
6	ಇತರೆ								

ಎಫ್) ಕೀಟ ನಿರ್ವಹಣೆಯ ಸಾಧನಗಳು

ಕ್ರ.ಸಂ	ಸಾಧನಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಪಿರೊಮೊನಾಸ್								
2	ಸ್ಪಿಕ್ಕಿ ಟ್ರ್ಯಾಪ್								
3	ಲೈಟ್ ಟ್ರ್ಯಾಪ್								
4	ಇತರೆ ಸಾಧನಗಳು								

ಜಿ) ಕೃಷಿ ಯಂತ್ರೋಪಕರಣಗಳ ಬಳಕೆ

ಕ್ರ. ಸಂ	ಕೃಷಿ ಯಂತ್ರೋಪಕರಣಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಟ್ರ್ಯಾಕ್ಟರ್								
2	ಭೂಮಿ ಸಮಕಾರಕ								
3	ನೇಗಿಲು								
4	ರೊಟೋವೇಟರ್								
5	ರಸಗೊಬ್ಬರದ ಸಾಧನ								
6	ಬೀಜ ಹಾಗೂ ರಸಗೊಬ್ಬರದ ಸಾಧನ								
7	ಸ್ಪ್ರೇಯರ್								
8	ವೀಡರ್ಸ್								
9	ಇತರೆ								

ಹೆಚ್) ಕಟಾವಿನ ನಂತರದ ಚಟುವಟಿಕೆಗಳು

ಕ್ರ. ಸಂ	ಚಟುವಟಿಕೆಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಸ್ವಚ್ಚಗೊಳಿಸುವದು								
2	ಸಂಸ್ಕರಣ								
3	ವರ್ಗೀಕರಣ								
4	ಪ್ಯಾಕಿಂಗ್								
5	ಬೀಜೋಪಚಾರ								
6	ಹೇರಿಸುವುದು								
7	ಸಂಗ್ರಹಣೆ ಮತ್ತು ಸಾಗಿಸುವದು								
8	ರಫ್ತು								
9	ಮೌಲ್ಯ ನಿಗದಿಸುವುದು								
10	ಇತರೆ								

ಐ) ಮಾರುಕಟ್ಟೆಯ ಚಟುವಟಿಕೆಗಳು

ಕ್ರ. ಸಂ	ಚಟುವಟಿಕೆಗಳು	ಅನುಸರಿಸುವದು	ಅನುಸರಿಸುವದಿಲ್ಲ	ಕಾರಣಗಳು					
				ವಯಕ್ತಿಕ ಅನುಭವ	ಕುಟುಂಬ	ರೈತರು	ವಿಜ್ಞಾನಿ	ಸಮೂಹ ಮಾಧ್ಯಮ	ಇತರೆ
1	ಮಾರುಕಟ್ಟೆಯ ದರ ಪ್ರಕಾರ ಮಾರಾಟ								
2	ಗ್ರಾಮ ಸಂತೆ								
3	ವ್ಯಾಪಾರಿ								
4	ಸಗಟು								
5	ಚಿಲ್ಲರೆ ವ್ಯಾಪಾರಿ								
6	ನೇರವಾಗಿ ಮಾರುಕಟ್ಟೆ								
7	ಆಯೋಗದ ಎಜೆಂಟ್								
8	ಎಪಿಎಮ್‌ಸಿ								
9	ಕೋ–ಆಪ್‌ಸೊಸೈಟಿ								
10	ತಂಪಾದ ಉಗ್ರಾಣ/ ಗೋದಾಮು								

ಗ್ರಾಮೀಣ ಯುವಕರ ಆಕಾಂಕ್ಷೆಗಳು:

ಎ) ಉದ್ಯಮದ ಆಕಾಂಕ್ಷೆ

ನಿಮಗೆ ರಾಜ್ಯದಲ್ಲಿನ ಯಾವ ಉತ್ತಮದ ಮೇಲೆ ಅತ್ಯಂತ / ಮಧ್ಯಮ / ಕನಿಷ್ಠ ಆಸಕ್ತಿ ಇದೆ ತಿಳಿಸಿ.

ಕ್ರ.ಸಂ	ಉದ್ಯಮ	ಅತ್ಯಂತ ಆಸಕ್ತಿ	ಮಧ್ಯಮ ಆಸಕ್ತಿ	ಕನಿಷ್ಠ ಆಸಕ್ತಿ
1.	ಕೃಷಿ			
2.	ಹೈನುಗಾರಿಕೆ			
3.	ಕೋಳಿಸಾಕಾಣಿಕೆ			
4.	ರೇಷ್ಮೆ ಸಾಕಾಣಿಕೆ			
5.	ಜೇನು ಸಾಕಾಣಿಕೆ			
6.	ಸಣ್ಣ ಪ್ರಮಾಣದ ಕೈಗಾರಿಕೆ			
7.	ಇತರೆ			

ಬಿ) ವ್ಯಾವಹಾರಿಕ ಆಕಾಂಕ್ಷೆಗಳು

ಈ ಕೆಳಗಿನವುಗಳ ಉದ್ಯೋಗದಲ್ಲಿ ನೀವು ಭವಿಷ್ಯದಲ್ಲಿ ತೆಗೆದುಕೊಳ್ಳು ಬಯಸುತ್ತೀರಾ? ಸೂಚಿಸಿ.

1. ಕೃಷಿ
2. ಸರಕಾರಿ ಕೆಲಸ
3. ವ್ಯವಹಾರ
4. ಇತರೆ _____

ಸಿ) ಸಾಮಾನ್ಯ ಆಕಾಂಕ್ಷೆಗಳು

1. ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ನೀವು ಯಾವ ಮಟ್ಟದಲ್ಲಿ ನಿಮ್ಮ ಬೆಳೆಯ ಉತ್ಪಾದನೆಯನ್ನು ಹೆಚ್ಚಿಸಲು ನಿರೀಕ್ಷಿಸುತ್ತಿರಾ?
   – ಹೆಚ್ಚುವ ಮಟ್ಟ : 1.5 ಬಾರಿ/ 2 ಬಾರಿ/ 2.5 ಬಾರಿ/ 3 ಬಾರಿ ಮತ್ತು 3 ಕ್ಕಂತ ಹೆಚ್ಚು ಬಾರಿ

2. ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ಪ್ರಾಣಿಗಳನ್ನು ಹೆಚ್ಚುಸುವ ವಿಷಯದಲ್ಲಿ ನಿಮ್ಮ ಆಕಾಂಕ್ಷೆಗಳೇನು?
   – ಇಲ್ಲ/ ಕೋಳಿಸಾಕಾಣಿಕೆ/ ಕುರಿಗಳು ಅಥವಾ ಆಡುಗಳು/ ಹಸುಗಳು ಅಥವಾ ಎಮ್ಮೆಗಳು/ ಹೋರಿಗಳು

3. ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ನೀವು ಭೂಮಿ ಹಿಡುವಳಿಯನ್ನು ಹೆಚ್ಚಿಸುವ ವಿಷಯದಲ್ಲಿನ ಆಕಾಂಕ್ಷೆ ಏನು?
   – ಹೆಚ್ಚಿಸುವ ಮಟ್ಟ: 1–2 ಎಕರೆಗಳು/2–4 ಎಕರೆಗಳು/4–6 ಎಕರೆಗಳು/6–8 ಎಕರೆಗಳು ಮತ್ತು 8 ಕ್ಕಿಂತ ಹೆಚ್ಚು ಎಕರೆಗಳು

4. ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ಪ್ರಾಣಿಗಳಿಗೆ ಆಶ್ರಯ ಒದಗಿಸುವದರ ಬಗ್ಗೆ ನಿಮ್ಮ ನಿರೀಕ್ಷೆ ಏನು?
   – ಯಾವುದು ಇಲ್ಲ/ ಹುಲ್ಲು ಶೆಡ್/ ಮಣ್ಣಿನ ಗೋಡೆಯುಳ್ಳ ಮತ್ತು ಹುಲ್ಲು/ ಪೂರ್ಣ ಮಣ್ಣಿನ ಗೋಡೆಗಳನ್ನು ಮತ್ತು ಹೆಂಚುಗಳ/ ಇಟ್ಟಿಗೆ ಗೋಡೆ ಮತ್ತು ಬಾಗಿಲುಗಳು

5. ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ನಿಮ್ಮ ಆದಾಯ ಹೆಚ್ಚಿಸುವ ವಿಷಯದಲ್ಲಿನ ನಿಮ್ಮ ಮಹತ್ವಾಕಾಂಕ್ಷೆ ಏನು?
   – ಯಾವುದು ಇಲ್ಲ/ 25 % ಕ್ಕಿಂತ ಕಡಿಮೆ/ 25 ರಿಂದ 50 %/ 50 ರಿಂ 75%/ 75 % ಕ್ಕಿಂತ ಹೆಚ್ಚಿಗೆ

6. ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ಮನೆ ಬದಲಾವಣೆ ಅಥವಾ ನಿರ್ಮಾಣಕ್ಕೆ ಸಂಭಂದಿಸಿದಂತೆ ನಿಮ್ಮ ಮಹತ್ವಾಕಾಂಕ್ಷೆಏನು?
   – ಯಾವುದು ಇಲ್ಲ/ ಅಸ್ತಿತ್ವದಲ್ಲಿರುವ ಮನೆ ಬದಲಾವಣೆ/ ಒಂದು ಸಾಧಾರಣ ಮನೆ ನಿರ್ಮಾಣ/ ಒಂದು ಒಳ್ಳೆಯ ಮನೆ ನಿರ್ಮಾಣ/ ಎರಡು ಹೆಚ್ಚಿನ ಮನೆ ನಿರ್ಮಾಣ.

7. ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ಯಾವ ಕೃಷಿ ಯಂತ್ರೋಪಕರಣಗಳನ್ನು ಖರೀದಿಸುವ ಆಕಾಂಕ್ಷೆ ಹೊಂದಿದ್ದೀರಿ?
   – ಯಾವುದೂ ಇಲ್ಲ/ ರಸಗೊಬ್ಬರ ಡ್ರಿಲ್ಲರ್/ ಟ್ರ್ಯಾಕ್ಟರ್/ ಬೀಜಮ ಮತ್ತು ರಾಸಾಯನಿಕದ ಡ್ರಿಲ್ಲರ್/ ಇತರೆ

8 ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ಹೆಚ್ಚಿ ವಸ್ತುಗಳನ್ನು ಹತೋಟಿ ಹೊಂದಲುವದ ಬಗೆಗಿನ ನಿಮ್ಮ ನಿರೀಕ್ಷೆ ಏನು?
– ಯಾವುದೂ ಇಲ್ಲ/ ರೇಷ್ಮೆ ಬಟ್ಟೆಗಳು / ಬೈಕ್/ ಹಿತ್ತಾಳೆ ಹಾಗೂ ಸ್ಟೇನ್ ಲೆಸ್ ವಾಸಲ್ಸ್/ ಬೆಳ್ಳಿ ಮತ್ತು ಬಂಗಾರದ ಆಭರಣಗಳು

9. ಮುಂದಿನ ಮೂರು ವರ್ಷಗಳಲ್ಲಿ ನೀವು ಯವ ಮಟ್ಟದಲ್ಲಿ ಸಾಮಾನ್ಯ ನೆಮ್ಮದಿಯ (ತೃಪ್ತಿ) ತಲುಪಲು ನೀರೀಕ್ಷಿಸಬಹುದು?
– ಯಾವುದೂ ಇಲ್ಲ/ ಸ್ವಲ್ಪ ಉತ್ತಮ / ಉತ್ತಮ/ ಹೆಚ್ಚಿನ ಉತ್ತಮ / ಖಂಡಿತವಾಗಿ ಉತ್ತಮ

10. ನಿಮ್ಮ ಮಗ / ಮಗಳು ತಮ್ಮ ಶಿಕ್ಷಣದಲ್ಲಿ ಯಾವ ಮಟ್ಟವನ್ನು ತಲುಪಲು ನೀರಿಕ್ಷಿಸಬಹುದು?
– ಪ್ರಾಥಮಿಕ/ ಮಧ್ಯಮ/ಪ್ರೌಢಶಾಲೆ/ ಕಾಲೇಜ/ ವಿಶ್ವವಿದ್ಯಾಲಯ ಅಥವಾ ಹೆಚ್ಚಿನ ವಿದ್ಯಾಭ್ಯಾಸ

11. ಯಾವ ಮಟ್ಟದಲ್ಲಿ ನಿಮ್ಮ ಮಕ್ಕಳಿಗೆ ಉದ್ಯೋಗ ತಲುಪಲು ನಿರೀಕ್ಷಿಸುತ್ತೀರಿ?
– ಲೇಬರ್/ ಜಾತಿ ಉದ್ಯೋಗ/ ಸ್ವತಂತ್ರ/ ಸುಧಾರಿತ ಕೃಷಿ/ ಸರಕಾರಿ ಸೇವೆ

STUDY ON INNOVATIVE BEHAVIOUR AND ASPIRATIONS OF RURAL YOUTH TOWARDS AGRICULTURE IN NORTH KARNATAKA

SHRIDHAR B. PUROHIT **2016** **Dr. R. B. BELLI**
MAJOR ADVISOR

ABSTRACT

The study was conducted in Haveri and Belagavi districts of North Karnataka during the year 2015-16 to study the innovative behavior and aspirations of the rural youth. A sample size was 120 collected by using simple random sampling method. Appropriate statistical methods were used to analyse and quantify the data. The analysis of the results pertaining to profile of respondents indicated that 30.83 per cent of the respondents were educated up to pre-university education, possessed land holding (26.67 %) with medium level of farming experience (38.33 %). Forty seven per cent of the respondents had medium level of income and 51.66 per cent of the respondents had high level of mass media participation. Fifty five per cent of the respondents had medium level of extension participation and 41.66 per cent of the respondents had low achievement motivation. Forty per cent of the respondents had high level economic motivation and 35.00 per cent of the respondents had low level innovative behavior, followed by high (33.34 %) and medium (31.66 %). Fifty five per cent of the respondents aspired to take up farming as their occupation and remaining per cent of the respondents aspired to join government jobs. Eighty three per cent of the respondents expressed financial problem as a major problem, followed by employment problems (75.83 %). The results indicated a positive and significant relationship between innovative behavior of rural youth and variables viz. education, size of the land holding and economic motivation at 5 per cent level of significance, mass media participation, extension participation and achievement motivation at one per cent level of significance, while variables like income and farming experience exhibited non-significant relationship.