YOUTH IN FARMING-AN ANALYTICAL STUDY

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M.Sc. (Ag.)

DOCTOR OF PHILOSOPHY IN AGRICULTURE

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BY

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THESIS SUBMITTED TO THE
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2016

DECLARATION

I, **K. SHIREESHA,** hereby declare that the thesis entitled "**YOUTH IN FARMING – AN ANALYTICAL STUDY"** submitted to the **Acharya N. G. Ranga Agricultural University** for the degree of **Doctor of Philosophy in Agriculture** is the result of original research work done by me. I also declare that no material contained in the thesis has been published earlier in any manner.

Place :Tirupati **(K.SHIREESHA)**

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CERTIFICATE

This is to certify that **Mrs. K. SHIREESHA** has satisfactorily prosecuted the course of research and that thesis entitled "**YOUTH IN FARMING – AN ANALYTICAL STUDY"** submitted is the result of original research work and is of sufficiently high standard to warrant its presentation to the examination. I also certify that neither the thesis nor its part thereof has been previously submitted by her for a degree of any university.

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This is to certify that the thesis entitled "**YOUTH IN FARMING – AN ANALYTICAL STUDY"**submitted in partial fulfilment of the requirements for the degree of **DOCTOR OF PHILOSOPHY IN AGRICULTURE** of the Acharya N. G.Ranga Agricultural University, Hyderabad is a record of bonafide research work carried out by **Mrs. K. SHIREESHA** under our guidance and supervision.

No part of the thesis has been submitted by the student for any other degree or diploma. The published part and all assistance and help received during the course of investigation have been duly acknowledged by the author of the thesis.

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LIST OF SYMBOLS AND ABBREVIATIONS

%	Percentage
&	And
ADA	Assistant Director of Agriculture
AEO	Agriculture Extension Officer
ANGRAU	Acharya N.G.Ranga Agricultural University
AO	Agriculture Officer
CSO	Central Statistics Office
DAATTC	District Agricultural Advisory and Transfer of Technology Centre
etc.,	Etcetra
et al.	And others
FAO	Food and Agricultural Organization
FAOSTAT	Food and Agricultural Organization Statistics
GDP	Gross Domestic Product
GVA	Gross Value Added
Ha	Hectare
ICAR	Indian Council of Agricultural Research
i.e.	That is
KVK	KrishiVigyan Kendra
MT	Million tonn
N	Count
n	Sample size
NGOs	Non Government Organizations
NI	Net Income
QD	Quartile Deviation
RARS	Regional Agricultural Research Station
SD	Standard Deviation
SAU	State AgriculturalUniversity
S.No.	Serial number
SPSS	Statistical Package for Social Sciences
USDA	United States Department of Agriculture
Viz.,	Namely
Vs	Versus

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Plate -2	Respondents of Nellore District
Plate -3	Respondents of Vizianagaram District

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ABSTRACT

The present study was conducted to analyze the selected profile characteristics of youth in farmingand their attitude towards farming. The relationship between profile characteristics of youth in farming and their attitude towards farmingwas elicited. Different combinations of farm enterprises being followed by the youth and their contribution to net income were analyzed. Perception of youth towards different farm enterprises through selected indicators was studied. The problems in farming as perceived by youth and their suggestions to overcome the problems were elicited and a strategy was designed to retain youth in farming.

Ex post facto research design was followed in the present investigation.The investigation was carried out in three districts selected each from three regions viz., Kurnool (from Rayalaseema region), Nellore (from Coastal region) and Vizianagaram (from North Coastal region) based on lottery method. Four mandals from each district were selected by following lottery method of Simple Random Sampling procedure. The sample constituted to a total of twelve mandals.Two villages from each mandal were selected by following lottery method of Simple Random Sampling procedure. The sample constituted to a total of twenty four villages.From each of the selected village, ten youth in farming were selected by following lottery method of Simple Random Sampling procedure. The sample constituted to a total of 240 respondents.The data were collected by personal interview method through a structured interview schedule and analyzed by employing suitable statistical methods. Eighteen independent variables and attitude towards youth as the dependent variable were identified for the study.

The results of the study shown that majority of the respondents were in upper young age, completed high school to college education, had marginal farm size and medium level

of material possession and annual income, low to medium exposure to training, medium level of extension contact, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation.

More than one-third of the youth in farming were with moderately to highly favourable attitude towards farming.One-third of the total youth had neutral attitude, whereas less than one-third of them had moderately to highly unfavourable attitude.

Correlation analysis revealed that annual income, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation were positively and significantly related with attitude of youth towards farming at 0.01 level of significance whereas education and exposure to training were positively significant at 0.05level.Age and farming experience were found to be negatively non-significant whereas marital status, family type, farm size, material possession, extension contact showed positively non-significant relationship with attitude of youth towards farming.

Among different combination of farm enterprises followed by youth in farming more than one-third of them followed (A+D) combination. It was also found that a vast majority of the youth had agriculture as sole and also as one of the enterprises in combination as a source of income, followed by dairy, poultry and vegetables. Nearly ten percent each of them had orchard and sheep as their source of income.Among different combination of farm enterprises being followed by youth in farming, more than ten percent of the marginal youth, slightly more than one-tenth of small farm youth and less than one-tenth of semi-medium youth had practiced (A+D) combination.

A huge majority of the youth was depending on the agriculture and it had contributed to more than two-third of the total net income (NI) of the individuals followed by dairy, vegetable, orchard, sheep, poultry and plantation.The major proportion of net income was contributed by agriculture in majority of the combinations followed by the youth in farming. On the contrary, vegetable contributed to major proportion of net income earned in the combinations consisting of vegetables as one of the farm enterprises.

The overall perception of youth in farming based on all the indicators was resulted in the ranking of the enterprises. Agriculture was perceived as the most efficient enterprise followed by dairy, vegetable, poultry, sheep, plantation and at last orchard was perceived as the least efficient enterprise by the youth in farming.

Among the production linked problems, ‘drastic variations in climatic conditions’. In case of market problems ‘involvement of intermediaries in marketing of farm produce’. In finance linked problems, ‘lack of remunerative prices for different crops’. Regarding information and communication linked problems ‘poor accessibility to different ICT tools’ were perceived as the major problems by the majority of the youth in farming.The major suggestion given by them was, ‘exploring export avenues for marketing and regularizing remunerative price for farm produce’.

The designed strategic model was primarily organized into three domains viz., socio-psychological, technological and organizational. For each domain, four “Core areas of concern” were identified to describe the strategy more comprehensively. The strategy analyzed the reality of the situation and shown the right direction for the flow of efforts of stakeholders.

Chapter –I

Introduction

Chapter I

INTRODUCTION

Farming is the Pillar of the Nation

Youth are the Pillars of the Modern Farming

The farming has played a major role in human history and the progress of farming has been a crucial factor in worldwide socio-economic change. History of World farming provides a grand narrative of ten thousand years of human ingenuity and a penetrating analysis of the rise of farming and its hand maid - civilization itself. In a broad sense, farming includes cultivation of the soil, growing and harvesting of crops, breeding and raising of livestock, dairying, and forestry and so on.

Indian farming began by 9000 BC as a result of early cultivation of plants, and domestication of crops and animals (Gupta, 2004). In good olden days the farming was carried out in order to meet the livelihood needs of the family, which was traditional and eco-friendly nature.Later on several transformations occurred at different stages of Indian farming.

In modern India, the economic contribution of farming to India's GDP is steadily declining with the country's broad-based economic growth. Still, farming is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India.

As per the 2010 FAO world agriculture statistics, India is the world's largest producer of many fresh fruits and vegetables, milk, major spices, fibrous crops, millets and castor oil seed. India is the second largest producer of wheat and rice. India is one among the largest producers of dry fruits, roots & tuber crops, coconut, sugarcane, vegetables, pulses, fish and eggs. India ranked in the world’s five largest producers of cash crops such as coffee and cotton in 2010 (FAOSTAT, 2010). India is one of the world’s five largest producers of livestock and poultry meat (USDA, 2016). India exported $39 billion worth of different farm products in 2013, making it the seventh largest

farm product exporter worldwide and the sixth largest net exporter (Levin, 2014).

As per estimates of the Central Statistics Office (CSO), the share of agriculture and allied sectors (including agriculture, livestock, forestry and fishery) was 15.35 per cent of the Gross Value Added during 2015–16. India is the largest producer, consumer and exporter of spices and spice products. India is the second largest fruit producer in the world. India's horticulture output recorded to a high of 283.5 million tonnes in the year 2014-15. India ranks third in farm and agriculture outputs. Agricultural export constitutes 10 per cent of the country's exports and is the fourth-largest exported principal commodity.

As per the 4thAdvance Estimates of CSO, food grain production is estimated at 253.16 million tonnes for 2015-16. Production of pulses estimated at 17.33 million tonnes. With an annual output of 146.3 million tonnes, India is the largest producer of milk, accounting for 18.50 per cent of the total world production. It also has the largest bovine population. India, the second-largest producer of sugar, accounts for 14 per cent of the global output. It is the sixth-largest exporter of sugar, accounting for 2.76 per cent of the global exports. (Indian agriculture industry: An overview, 2016).On the other side, in order to achieve the targeted growth rate of farming as a whole, still there is a dire need to bring necessary evolutionary changes in the way of farming it is practiced at present and also the farming has to be carefully placed in the hands of productive human resource of young generation.

Hon'ble Prime Minister Shri Narendra Modi on 25th July, 2015, on the occasion of Foundation Day of ICAR in Patna called upon the stakeholders of farming to design second green revolution with new vision, dimensions and objectives to address the challenges in farming in this modern era. In his address, he urged agricultural professionals to make young farmers as their fellow travelers in development and refinement of farm technologies.

Youth and Youth in Farming

Youth power has been a buzz word that has captivated the minds of the intelligentsia since a long time. Youth has been in the forefront of many historical developments that have changed the course of history significantly. (Prabhath, 2011). 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 careers (Bennell, 2007). The Government of India officially defines youth as persons between the ages of 13 and 35 years and it also varies depending on the programme. (Draft National Youth Policy, Ministry of Youth Affairs and Sports, 2012).

In our country youth constitute a numerically dominant potential, resourceful and also adventurous segment of the population. More than 50.00 per cent of India's current population is below the age of 25 years and over 65.00 per cent below the age of 35 years. Majority of them live in rural areas.The population in the age group of 15-34 years increased from 351 million in 2001 to 430 million in 2011. Current predictions suggest a steady increase in the youth population to 464 million by 2021. By 2020, India set to become the world's youngest country with 64.00 per cent of its population in the working age group (Indian census, 2011).

Youth are the primary productive human resource of socio-economic development. It is therefore, essential to locate the role of youth in mainstream development. The youth of India is diverse in ethnicity, religion and socio-economic backgrounds. Such diversity necessitates customized initiatives to meet needs and activate their untapped potential. This pool of youth population is a decisive factor in determining our nation's destiny. The phenomenal rise in the youth population has made India the youngest nation and one of the top human resource metrics in the world. It is vital to utilise this demographic dividend and channelize the youth and their creative energies for nation-building. Hence, India should capitalise to invest on this young pool of India and divert their involvement towards farming.

In India, farming continues to be at the mercy of the monsoon and the markets. Also, the average farm size in our country is getting smaller. Many landholdings are turning less fertile due to unabated fragmentation of land. The rural youth see no future in tilling such tiny lands. Rural youth apparently, are disillusioned with the country's farming. Be it a marginal farmer or small farmer but even those operating medium and large farms are not spared either.Most of the rural youth find in farming as an unattractive preposition; especially the way it is practiced traditionally by their parents. The society largely looks down upon farming, as also families of prospective brides do not prefer farming. Majority of farmers do not want their next generation to continue with their traditional profession. They wish them to settle down in urban areas. Further, the youth are also losing interest in farming. The reasons for the youth's lack of interest in farming are many. Low profitability of agriculture, drudgery of farm chores, poor quality of life in the rural areas and the rapidly shrinking size of landholdings are the most significant among them.

It is imperative for the nation to produce food not only to feed its one billion plus human population but also for an equal number of livestock. At this juncture young minds with creativity and achievement motivation seemingly can handle impossible tasks such as climate change adaptation & mitigation and enduring malnutrition. Generally, youth are willing to adopt new ideas and technologies and therefore they can easily transform the present status of farming. The youth could be the ideal catalyst to change the poor image of persons involved in farming, especially in the rural communities given their greater possibility to adapt new ideas, concept and technology which are all important to changing the way farming is practiced and perceived. Moreover, with the rise in their aspirations, their exposure to new age media like internet, smart phones, television the rural youth are now looking for a better life and job. The only way to stop them from leaving the villages is by ensuring better economic prospects for them in farming and improving the quality of life in the rural belt.

Given that nearly 35 percent of the country's population falls under the 15-35 years of age band and roughly 75 percent of them live in rural areas, disenchantment with farming on such a large scale is worrisome.If a majority of population moves to cities, it would put a great strain on the already overburdened urban centers. Besides, it would be a huge loss for the farming-based rural economy as the youth possess the greatest potential to transform farming into a science- and knowledge-based economy.

1.1 Need and Importance of the Study

Farming was chosen as a livelihood option for the people at its inception. It was the means for procuring their food requirements to meet their day to day life as well as mortgaging their farm products to lead their life. This phase was continued for several decades and centuries. Later on tremendous change has been occurred in the face of farming. To meet self sufficiency and food security needs of India during the period of green revolution, the focus has been changed to enhancing food production. This phase focused on intensive farming by enhancing the productivity through the use of chemical fertilizers, plant protection chemicals and other intensive practices. Substantial growth was achieved through the committed efforts of all the stakeholders in farming. Due to the intervention of globalization the importance of farming became still more magnified and routed the farmers towards quality production.

To handle the standards of globalised farming situation, the need for high technological backup, knowledge base, extension networking and risk involvement among the farming community became compulsory. The one and only option to bring laurels to farming and to make it as a lucrative option in the rural areas is the involvement of youth in farming. Being youth they are very strong in their mind set, possess high self confidence, risk taking ability and lot of inquisitiveness to adopt innovations in farming. Their education, cosmopoliteness and group dynamics will give strong support for them to handle the present farming environment.

A rising number of rural youth are turning their back on farming. Rural youth are more interested in going to cities for acquiring necessary skills for getting jobs in companies or corporate sector. Limited access to markets, assets, finance and infrastructure in rural areas, coupled with rapid growth and opportunities in urban areas increasingly makes cities the obvious choice in the search for a better life. But farming is critical to future food security, with global expectations that it can and should play a huge role in feeding the world population, which will likely exceed nine billion by 2050.India is losing more than 2,000 farmers every single day and that since 1991, the overall number of farmers has dropped by 15 million (Sainath, 2013). This has several implications for the future of Indian farming and India's food security.

Attracting and retaining youth in farming is critical for Indian farming. Most of the innovations (both technical and institutional) require a skilled agricultural work force. For instance, promotion of high value agriculture, precision farming, organic cultivation, Hi-Tech horticulture, micro-propagation, Integrated Pest Disease & Nutrients Management, Post Harvest Management, development of backward and forward linkages etc, require well trained young farmers with enthusiasm and passion for farming and ability to take risks. The rural youth could be the ideal target for skill training in these new areas of agricultural growth and to do this effectively there is a need to mobilize young farmers. Organised groups of young farmers will be useful for introducing new production technologies and organizing effective input and output markets.

The responsibility of the youth is to carry forward the tradition of farming not only because it is connected with the traditions and culture of our country, but also it has the potential of keeping the economy healthy even at times of recession by all means. Though there are risks like drought and cyclones that are completely external factors to limit the possibility to succeed, we need to consider farming as an important industry to rely upon even in the modern era of industrialization and urbanization. The advantages

of modernization include the sophisticated methods which are also essential in reducing the drudgery and enhancing the production.

Unless we know the attitude of the youth towards farming and their socio-psychological, organizational makeup, their existing farming pattern, problems perceived in farming and their suggestions in farming, it is very difficult to drive the youth towards farming. Hence the present study was taken up with the following objectives.

1.2 Objectives of the study

Keeping these important issues in view, the present study entitled "**Youth in Farming- An Analytical Study"** was been taken up with the following objectives.

1. To study the selected profile characteristics of youth in farming.
2. To study the attitude of youth towards farming with the help of the scale constructed for the study.
3. To find out the relationship between the selected profile characteristics and the attitude of youth towards farming.
4. To analyze the different combinations of farm enterprises being followed by the youth and their contribution to net income.
5. To study the perception of youth towards different farm enterprises through selected indicators.
6. To elicit the problems in farming as perceived by youth and their suggestions to overcome the problems.
7. To design a strategy to retain youth in farming.

1.3 Scope of the study

The present investigation is mainly intended to discover the attitude of youth towards farming and to design a strategy to retain youth in farming. This would provide ample scope for identifying the factors influencing the attitude of youth towards farming. The correlation analysis will also be useful to identifying appropriate profile characteristics of youth in farming, so as to take up need based efforts in improving those characteristics which contribute to the positive attitude towards farming.

It also analyses different combinations of farm enterprises followed by the youth in farming and the contribution of each farm enterprise to their net income. It was also measured in order to find out the major source of income for youth in farming. The perception of youth in farming towards different farm enterprises was also analyzed to derive many important conclusions about different farm enterprises existing and followed by the youth in farming in the rural areas.

The problems and suggestions as perceived by the youth in farming will not only serve as indicators of perceived conditions but also help the planners, policy makers, scientists to modify the strategies to improve the rural economic background, to build rural-urban reliance in a mutual way in order to attract and retain youth in farming.

This would also make the scientists and extension functionaries to know about the efficiency of the ongoing extension activities, based on which they would prepare appropriate modifications suitable for the learning and practicing critical skills for effective utilization of technologies in all spheres of development for the youth in farming.

1.4 Limitations of the study

1. One of the important limitations of the study is lack of adequate time and conveyance facilities that would normally be encountered by a student researcher.

2. The findings of the study were based on verbal expressions of the respondents. Therefore the findings were conditioned by the extent of reliable and valid information provided by those selected for the purpose of investigation.

3. Since the study is based on ex post facto research design the memory bias on the part of respondent cannot be ruled out.

4. This study was confined to Kurnool, Nellore and Vizianagaram districts of Andhra Pradesh. Hence generalizations if any based on this could be restricted to other areas with similar conditions.

5. The study was limited to a sample of 240 respondents. Hence, the findings should be interpreted with caution.

1.5 Layout of the Thesis

This study is presented in five chapters as follows

Chapter I: 'INTRODUCTION' provides a brief account of need and importance of the study, specific objectives, the need and importance, the scope as well as limitations of the study.

Chapter II: 'REVIEW OF LITERATURE', dealt with past studies, related to the present study.

Chapter III: Devoted for describing the 'MATERIAL AND METHODS' of the study including statistical tools.

Chapter IV: Dealt with 'RESULTS AND DISCUSSION' of the study.

Chapter V: Dealt with 'SUMMARY AND CONCLUSIONS' consisting implications of the findings and suggestions for future research.

The literature cited was appended at the end.

Chapter – II

Review of Literature

Chapter II

REVIEW OF LITERATURE

A thorough review of literature on the topic under investigation would provide a deep insight into the subject which is inevitable for rigorously performing the research study. Review of literature helps to acquire broad and general background in the given field of discipline. An acquaintance with earlier pertinent studies has been felt necessary to develop good understanding to the research study and to formulate appropriate research methodology. The systematic presentation of the relevant aspects drawn from various literatures not only provides strong base for the empirical investigation but also facilitates to arrive at a proper understanding of the different components of the problem under study. Considering the objectives of the study, an attempt was made to review the literature which had meaningful relation to the study and are presented under the following heads:

2.1. Profile characteristics of youth in farming.

2.2. Attitude of youth towards farming.

2.3. Relationship between selected profile characteristics and the attitude of youth towards farming.

2.4. Analysis of different combinations of farm enterprises being followed by the youth and their contribution to net income.

2.5. Perception of youth towards different farm enterprises.

2.6. Problems in farming as perceived by youth and their suggestions to overcome the problems.

2.7 Conceptual model of the study.

2.1. Selected profile characteristics of youth in farming

2.1.1. Age

Uddin *et al.* (2008) conveyed that, about half (48.35%) of the coastal rural youth were elder youth (30-35 years). More than one-fourth (27.47%) of them were youth (23-29 years), whereas only 24.18 per cent of them were younger youth (15-22 years).

Abdullahi *et al*. (2010) found that, more than half of the respondents (55.80%) were young adults in their twenties (mode = 21-24 years), followed by 29.20 per cent in the age of 18-20 years and 15.00 per cent were of 15-17 years.

Aphunu and Atoma (2010) reported that, majority (73.90%) of the rural youth were in the age group of 21-25 years, followed by (20.50%) of them were in the age group of 20 and below, whereas only 5.60 per cent of them fell in the age group of above 25 years.

Bahamana *et al.* (2010) observed that, two-fifth (40.20%) of the youth were in the age range of 20-21 years, followed by 22-24 years (32.00%) and 18-19 years (27.80%).

Mosaee and Ommani (2011) revealed that, slightly more than one-third (34.50%) of the rural youth were in the age of 21 to 24 years, followed by 22.70 per cent were in the age of 18 to 21 years, about 22.10 per cent were in the age of 15 to 18 years and 20.70 per cent were in the age group of more than 24 years.

Olaniyi *et al.* (2011) indicated that, majority (60.70%) of the sampled rural youth were within the age of 25 to 30 years, about one-quarter (25.20%) within the age category of 19 to 24 years and 14.10 per cent of them fell within the age range of 13 to 18 years. Mean age of the respondents was 24 years.

Shute (2011) stated that, nearly thirty per cent of the farmers were in the age group of 25-29 years, followed by 25.00 per cent of the farmers were in the

age group of 30-34 years, more than one-tenth (14.00%) of the farmers were under 25 years and the remaining farmers were above 34 years.

Donye *et al.* (2012) described that, about one-third (32.20%) of the farmers were in the age group of 31-40 years, followed by (22.20%) of the farmers were in the age group of 21-30 years, one-fifth (20.00%) of the farmers were in the age group of 41-50 years. More than one-forth (14.40% and 11.20%) of them were below 20 years and above 50 years respectively.

Lyocks *et al.* (2013) reported that, more than two-fifth (44.60%) of the youth were in the age group of 23-27 years, followed by (24.00%) of them were in the age group of 28-32 years, one-fifth (20.70%) of them were in the age group of 18-22 years, about one-tenth (9.10%) of them were 33-37 years and very less (1.70%) of them were 38-42 years.

Naamwintome and Bagson (2013) found that, majority (66.49%) of the youth in agriculture were belonged to the age range of 15-35 years and remaining 7.57 per cent were in the age below 15 years. 25.94 per cent of them were above 35 years.

Anamica and Ravichandran (2014) inferred that, more than two-fifth (44.37%) of the rural youth were found to belong to the second sub group i.e. age category of 21-25 years, followed by 40.00 per cent in the third sub group (age category of 26-30 years). Only 16.00 per cent of the respondents belonged to the first sub group i.e. age category of 16-20 years.

2.1.2. Education

Uddin *et al.* (2008) stated that, more than half (53.84%) of the coastal rural youth had completed their secondary schooling, followed by primary schooling (24.18%), higher secondary and above (10.98%). Equal and very less per cent (5.50%) of them were illiterate and semi-illiterate.

Abdullahi *et al.* (2010) affirmed that, more than one-third (35.80%) of the rural youth had attained full secondary school, followed by junior secondary school (19.20%), primary (17.50%), quaranic/biblical (14.20%), adult literacy (6.70%), and 6.60 per cent had no education.

Bahamana *et al.* (2010) observed that, majority (75.00%) of the youth was degree holders and 25.00 per cent of them completed diploma.

Mosaee and Ommani (2011) reported that, 15.20 per cent of youth had an elementary education, followed by equal per cent (19.40) of them were middle school and university students. Equal per cent (18.10%) of them were high school and diploma students, while 10.00 per cent of them had post school education.

Olaniyi *et al.* (2011) revealed that, majority (92.60%) of the respondents were literates who were between 1 and 18 years of formal education and the remaining (7.40%) had no formal education.

Savita (2011) found that, more than one-third (34.17%) of the rural youth had education up to middle school. Among rural male youth 36.67 per cent were educated up to secondary school. Among female 45.00 per cent were educated up to middle school.

Donye *et al.* (2012) revealed that, one-third (33.40%) of the respondents had attained secondary education, followed by those who have non-formal education (24.40%) and then primary and higher education each of which constituted 21.10 per cent.

Naamwintome and Bagson (2013) conveyed that, majority (77.84%) of the youth in agriculture had no formal education. Despite the low level of formal education in the area, 17.30, 3.24 and 1.62 per cent of them obtained some level of basic, secondary and tertiary education respectively.

Anamica and Ravichandran (2014) affirmed that, more than 45.00 per cent of the respondents had middle to high school education, followed by 30.00 per cent with higher secondary education or an equivalent qualification like diploma. Nearly one-third (22.50%) of the respondents were observed to have college education.

Viswanatha *et al.* (2014a) noticed that, 31.66 per cent of rural youth had completed pre university, followed by high school education (25.00%), middle school education (18.33%), degree and higher studies (11.66%), primary schooling (10.00%) and only 3.33 per cent were illiterates.

Viswanatha *et al.* (2014b) revealed that, two-fifth (40.00%) of rural youth had medium level of education, 31.43 per cent of them had low level of education and 28.57 per cent of them had high level of education.

Umunnakwe and Adedamola (2015) reported that, 42.50 per cent of the respondents were educated up to high school, followed by graduation and above (23.50%), middle school (17.80%), primary school (11.30%) and functionally literate (4.90%).

2.1.3. Marital Status

Muhammad *et al.* (2009) expressed that, majority (61.82%) of the rural youth were married, followed by single (37.27%) and very few (0.91%) were divorced.

Abdullahi *et al*. (2010) revealed that, half (50.80%) of the rural youth were single, followed by married (42.50%), while equal per cent (1.70%) of them were divorced and widowed respectively.

Aphunu and Akpobasa (2010) found that, more than half (52.20%) of the respondents were unmarried.

Aphunu and Atoma (2010) reported that, more than half (52.30%) of the rural youth were single and 47.70 per cent of the rural youth were married.

Olaniyi *et al.* (2011) described that, more than two-fourth (57.80%) of the respondents were married, 40.70 per cent of them were single and only very few (1.50%) of the sampled respondents were divorced.

Donye *et al.* (2012) reported that, marital status of the respondents was also found to show an equal representation of the single, married and divorced, each of which constituted 33.33% of the distribution.

Lyocks *et al.* (2013) indicated that, majority (73.60%) of the youth were married and remaining 26.40 per cent were single.

Naamwintome and Bagson (2013) conveyed that, majority (88.10%) of the youth in agriculture were married and the remaining (11.90%) were unmarried.

Umunnakwe and Adedamola (2015) revealed that, majority (72.10%) of the rural youth was married and 27.90 per cent were unmarried.

2.1.4. Family Type

Savita (2011) observed that, more than half (56.67%) of the rural male youth belonged to nuclear family. Among rural male youth, 56.67 per cent belonged to nuclear family. With regard to rural female youth, 58.33 per cent belonged to nuclear family.

Mohan and Reddy (2012) reported that, 60.00 per cent of agricultural graduates were from nuclear family and remaining 40.00 per cent were from joint family.

Viswanatha *et al.* (2014a) stated that, 65.83 per cent of rural youth belonged to nuclear family, followed by 34.17 per cent belonged to joint family.

Viswanatha *et al.* (2014b) stated that, 62.85 per cent of rural youth belong to nuclear family, followed by 37.15 per cent belong to joint family.

Umunnakwe and Adedamola (2015) explored that, 57.90 per cent of rural youth were in joint family and 42.10 per cent of rural youth were in nuclear family.

2.1.5. Farming Experience

Abdullahi *et al*. (2010) affirmed that, half (50.80%) of the rural youth had 5 to 10 years of farming experience, followed by 27.50 per cent of them had above ten years experience. The remaining 17.50 and 4.20 per cent of them had less than 5 years and no farming experience respectively.

Olaniyi *et al.* (2011) revealed that, about 27.00 per cent of the sampled rural youth had between 13 and 16 years of farming experience, 23.70 per cent had 5 to 8 years, 23.70 per cent had 9 to 12 years. 1 to 4 years (13.30%) and 17 years or more farming experience (12.60%).

Savita (2011) noticed that, more than 70.00 per cent of the respondents had medium experience in farming. Among rural male youths, 80.00 per cent had medium farming experience and among rural female youths, 61.67 per cent of the respondents had medium experience in farming.

Shute (2011) conveyed that, more than half (56.00%) of the rural youth had 1 to 5 years of farming experience, while (16.00%, 15.00% and 12.00%) of them had 6 to 10 years, less than one year and more than 10 years farming experience respectively.

Donye *et al.* (2012) also reported that, nearly half (45.60%) of them had 6-10 years of farming experience, followed by equal per cent (23.30%) of them had 1-5 years and 11-15 years of farming experience. Less than one per cent of them had more than15 years of farming experience.

2.1.6. Farm Size

Anamica and Ravichandran (2014) revealed that, half section (50.00%) of the respondents possessed small size farm holdings i.e. 2.5 to 5.0 acres. More than 45.00 per cent of the respondents possessed medium (5.01 to 10 acres) and marginal size farm holdings of less than 2.5 acres. Very few (2.50%) possessed big size farm holdings (more than 10 acres).

Viswanatha *et al.* (2014a) affirmed that, nearly half (45.84%) of the rural youth possessed medium land holding, followed by small land holding (34.16%) and large land holding (20.00%).

Viswanatha *et al.* (2014b) revealed that, nearly half (45.72%) of the rural youth were having medium land holding, followed by small land holding (34.28%) and large land holding (20.00%).

Kimaro *et al.* (2015) found that, majority (92.00%) of the respondents owned land and eight per cent of respondents did not own land. In addition the results showed that, majority (65.10%) of respondents owned land between 0-3 acres, (28.90%) between 4-6 acres, 4.8 per cent between 7-9 acres and only 1.2 per cent owned more than 10 acres.

Sarju *et al.* (2015) pointed out that, majority of the farming youth i.e. 75.00 per cent belong to marginal and small categories with an average area about 1 hectare, while medium and large farming youth restricted within 25.00 per cent with average holding 6.40 hectare.

2.1.7. Material Possession

Sangamesh (2006) reported that, in irrigated tract, 31.66 per cent of the respondent families had possessed bullock pairs, followed by buffaloes (36.66%) and cows (20.00%).

Saha *et al*. (2010) noticed that, though the study area was entirely rural based, majority of the farmers (69.58%) were residing in concrete house, followed by mixed house (30.42%). Regarding farm power, more than half (53.33%) of the farmers did not even prefer to rear a pair of draught animal because of extreme scarcity of feeds and fodder during lean period, also due to small land holding of the farmers, followed by 1 to 2 draught animal (44.17%), 3 to 4 draught animal (0.83%) and 5 to 6 draught animal (1.67%).

Olaniyi (2013) explored that, more than two-fifth (43.30%) of the respondents were categorized into average socio economic status based on their score while about one-third (30.10%) and 26.90 per cent were into low and high socio economic status categories respectively.

Roy *et al.* (2013) expressed that, majority (60.00%) of the hill farmers were having medium material possession, followed by high (21.67%) and poor (18.33%) material possession.

2.1.8. Annual Income

Bhanu (2006) observed that, less than half (45.00%) of the respondents belonged to low annual income category (upto Rs. 11,000/-), followed by 25.83 per cent of them belonged to semi-medium annual income category (Rs.11,001-22,000/-) and the remaining respondents earned more than Rs. 22,000/- per annum.

Savita (2011) conveyed that, almost half of the respondents (49.17%) had high annual income of more than Rs.33,000/-. About half (48.33%) of the respondents belonged to medium farm families and remaining 2.50 per cent had low annual income.

Donye *et al.* (2012) revealed that, exactly two-fifth (40.00%) of the respondents obtained between thirty to thirty-five thousand Nigerian Naira (N26,000-N30,000) annually followed by (N20,000 to N25,000) was earned by

35.50 per cent of the respondents. 16.00 per cent and 9.00 per cent of them earned (N31,000-N35,000) and above N35,000 respectively. (1Nigerian Naira=0.33 Rupee).

Viswanatha *et al.* (2014a) stated that, 45.50 per cent of the rural youth possessed medium level of annual income, 29.17 per cent of rural youth had high level of annual income and 28.33 per cent of rural youth had low level of annual income.

Viswanatha *et al.* (2014b) expressed that, slightly more than half (51.42%) of the rural youth possessed medium level of income, 28.57 per cent of them had low level of annual income and 20.01 per cent of them had high level of annual income.

Kimaro *et al.* (2015) pointed out that, about one-third (32.22%) of all respondents who got income from agriculture earned between Tanzania shillings 0.5M–1M, followed by (18.89%) earned between 1.5M-2M, (17.78%) earned between 2M-2.5M, (16.67%) earned between 1M-1.5M and (14.44%) earned between 2.5M-3M in a year.(1Tanzania shilling=0.030 Rupee, M=million).

2.1.9. Exposure to Training

Roy (2005) stated that, 68.75 per cent of sugarcane farmers were under medium training category, followed by low (18.33%) and high (12.92%) training category.

Abdullahi *et al*. (2010) revealed that, majority (78.25%) of the rural youth had informal farm training and the remaining (21.75%) had formal farm training.

Savita (2011) found that, majority (60.83%) of the respondents needed training in the subject area of selection of seed material. Among rural youth 38.33 per cent of them most needed training in chemical weed control, 68.33 per cent were needed training in ‘identification of pests and diseases’.

Ramalakshmi (2012) expressed that, half of the respondents had medium level of trainings undergone (50.00%), followed by low (30.83%) and high (19.17%) levels of trainings undergone.

Arowolo *et al.* (2013) observed that, more than two-fifth (44.00%) of the respondents lack exposure to enlightenment programmes on cattle rearing. However, 36.70% of the respondents admitted having been exposed to awareness or enlightenment programmes organized by Oyo State Agricultural Development Programme (OYSADEP) and supported by the clinical treatment of their animals by the veterinary field station in the area.

2.1.10. Extension Contact

Bhanu (2006) indicated that, majority (71.67%) of the respondents contacted bank officials, agriculture assistants (65.00%), veterinary department officials (61.67%), extension worker (56.67%) and officials of watershed (45.00%) occasionally. He also revealed that, more than 80.00 per cent of the respondents not participated in extension activities like field days (90.00%), educational tours (87.50%), trainings (83.34%) and discussion meetings (83.34%). About 62.50 per cent of them participated in general meetings, followed by demonstrations (57.50%) and film shows (56.67%) occasionally.

Uddin *et al.* (2008) proposed that, more than half (53.86%) of the coastal rural youth had medium level of extension contact. Equal per cent (23.07%) of them had high and low level of extension contact.

Olaniyi *et al.* (2011) witnessed that, majority (97.00%) of the respondents claimed their source of agricultural information as friend/neighbor, followed by parents (90.40%), extension agents (84.40%), Radio (78.50%), commercial input dealers (40.70%), newspapers (25.90%), agricultural shows (18.50%), television (13.30%), drama (2.20%), town crying (2.20%), internet (1.50%) and folk music (0.70%).

Umunnakwe *et al.* (2014) witnessed that, nearly two-fifth (38.87%) of the youth had low extension contact, followed by high (31.98%) and medium extension contact (29.15%).

Viswanatha *et al.* (2014a) revealed that, less than half 45.00 per cent of rural youth had medium level of extension contact, followed by 32.50 per cent of rural youth had low level of extension contact and 22.50 per cent of rural youth had high level of extension contact.

Viswanatha *et al.* (2014b) observed that, slightly more than half (51.42 %) of rural youth had medium level of extension contact, followed by 28.57 per cent of rural youth had high level of extension contact and 20.01 per cent of rural youth had low level of extension contact.

2.1.11. Mass Media Exposure

Ramu (2005) found that, more than half (55.30%) of the turmeric respondents belonged to medium level, followed by low (26.00%) and high (18.70%) levels of mass media exposure respectively.

Bhanu (2006) expressed that, majority (70.00%) of the respondents utilized all the mass media like radio (agricultural programmes), followed by television (agricultural programmes) (79.17%), newspaper (56.67%) and farm magazines (69.17%) occasionally. About 35.83 per cent of the respondents read newspaper regularly.

Gowda *et al.* (2011) reported that, two-third (65.00%) of the sugarcane farmers had medium mass media participation, followed by low (19.17%) and high (15.83%) mass media participation.

Savita (2011) revealed that, majority (94.17%) of the families of rural youth possessed television. About 75.22 per cent viewed commercial programmes daily and 20.83 per cent subscribed news paper, among them 56.00 per cent read about sports. Majority (96.70%) of the rural male youth possessed

television, among possessed, 55.00 per cent viewed commercial programmes. Among rural female youth, 91.67 per cent possessed television in that, 96.00 per cent viewed commercial programmes daily.

Mohan and Reddy (2012) stated that, majority (72.00%) of agricultural graduates had medium level of mass media exposure, followed by low level of mass media exposure (16.00%) and high level of mass media exposure (12.00%).

Umunnakwe *et al.* (2014) witnessed that, slightly more than two-fifth (41.70%) of the youth had high mass media exposure, followed by medium (30.77%) and low (27.53%) mass media exposure.

Viswanatha *et al*. (2014a) found that, slightly more than two-fifth (42.50%) of rural youth had high level of mass medium exposure, followed by 35.17per cent of rural youth had low level of mass medium exposure and 22.33 per cent of rural youth had medium level of mass medium exposure.

Viswanatha *et al*. (2014b) confirmed that, two-fifth (40.00%) of rural youth had medium level of mass medium exposure, followed by 31.43 per cent of rural youth had high level of mass medium exposure and 28.57 per cent of rural youth had low level of mass medium exposure.

2.1.12. Decision Making Ability

Kumar (2001) concluded that more than two-fifth (46.66%) of respondents had medium decision making ability, followed by low 27.50 per cent and high 25.84 per cent decision making ability respectively.

Obaiah (2004) found that, more than half (57.14%) of the trained farmers had medium decision making ability, followed by low and high level with equal percentage.

Navasakthi (2005) found that, more than half (55.00%) of the coconut farmers had medium decision making ability, followed by high (40.83%) and low (4.17%) decision making ability.

Neelaveni (2005) indicated that 48.80 per cent of the respondents had medium decision making ability, followed by high (30.00%) and low (21.20%) levels of decision making ability.

Anamica (2010) reported that, 55.00 per cent of the respondents were found to take independent decisions regarding migration. The remaining 30.00 per cent consult with their family member followed by 5.00 per cent of respondents who consult with friends and neighbours in the decision to migrate.

Savita (2011) identified that, more number of the rural youths were involved in decision making with respect to coverage of crops (64.17%). Among rural male youths, majority (93.33%) of them were involved in taking decision about coverage of crops and 86.67 per cent were involved in purchase of agricultural inputs. Among the total rural youths 35 per cent of the rural female youth were involved in decision making about coverage of crops, followed by 13.33 per cent were involved in taking loan for farm activities.

Lad *et al.* (2012) concluded that, half (50.83%) of the respondents were found in medium decision making category, followed by 32.50 per cent in low decision making category, whereas only 16.67 per cent in high decision making category.

Anamica and Ravichandran (2014) reported that, 38.13 per cent of the respondents consulted with their family members regarding migration. The remaining 33.13 per cent of them were found to take independent decisions followed by 28.74 per cent of them who consulted with friends and neighbours in the decision to migrate.

Rani (2014) stated that, two-fifth (41.67%) of the woman farmers had medium involvement in decision making, followed by high (39.16%) and low (19.17%) levels of decision making.

2.1.13. Innovativeness

Bhanu (2006) found that, two-third (65.83%) of the respondents belonged to medium innovativeness category, followed by 21.67 and 12.50 per cent belonged to low and high innovativeness categories respectively.

Uddin *et al.* (2008) proposed that, more than half (57.14%) of the coastal rural youth had moderate innovativeness. Nearly equal per cent (21.97 and 20.87) of them were highly and less innovative respectively.

Savita (2011) observed that, more than one-third (35.00%) of the respondents had medium innovativeness. Among rural male youths, 43.33 per cent had medium innovativeness. Among rural female youths, 45.00 per cent of youth had low innovativeness. The rural male youths are having higher innovativeness than rural female youths.

Umunnakwe *et al.* (2014) found that, two-fifth (42.11%) of the youth had medium innovativeness, followed by 34.81 per cent had high innovativeness, whereas 23.08 per cent of them had low innovativeness.

Viswanatha *et al.* (2014a) revealed that, two-fifth (40.00%) of rural youth had high level of innovativeness, followed by medium level of innovativeness (34.33%) and low level of innovativeness (26.66%).

Viswanatha *et al*. (2014b) informed that, more than one-third (37.15%) of rural youth had medium level of innovativeness, followed by 34.28 per cent of rural youth had high level of innovativeness and 28.57 per cent of rural youth had low level of innovativeness.

2.1.14. Scientific Orientation

Ramu (2005) reported that, about 68.67 per cent of the turmeric farmers had medium scientific orientation, followed by low (16.67%) and high (14.66%) scientific orientation.

Roy (2005) stated that, 71.66 per cent of sugarcane farmers had medium scientific orientation, 15.41 per cent of farmers had low and 12.93 per cent of farmers had high scientific orientation.

Gowda *et al.* (2011) revealed that, majority (70.83%) of the sugarcane farmers had medium scientific orientation, followed by low (20.83%) and high (8.34%).

Ramalakshmi (2012) mentioned that, 61.66 per cent of the respondents had medium scientific orientation, followed by high (20.00%) and low (18.33%) level of scientific orientation.

Deshmukh *et al.* (2013) found that, majority (60.00%) of the respondents had medium level of scientific orientation, followed by low (26.00%) and high (14.00%) levels.

Rani (2014) indicated that, majority (61.67%) of the respondents had medium level of scientific orientation, followed by high (25.83%) and low (12.50%) level of scientific orientation respectively.

2.1.15. Management orientation

Kumar (2001) revealed that, about half (47.50%) of the small farmers had low management orientation, followed by medium (37.50%) and high (15.00%) management orientation.

Gireesh (2006) reported that, half (50.00%) of the sugarcane growers had medium management orientation and the rest had high and low management orientation.

Gowda *et al.* (2011) revealed that, majority (78.33%) of the sugarcane farmers had medium management orientation, followed by low (16.67%) and high (5.00%).

Kalyan (2011) noticed that, majority (59.16%) of groundnut farmers had medium management orientation, followed by low (21.66%) and high (19.16%) management orientation.

Ramalakshmi (2012) described that, majority (71.67%) of sugarcane farmers had medium management orientation, followed by high (15.83%) and low (12.50%) management orientation.

2.1.16. Achievement Motivation

Roy (2005) stated that, 62.90 per cent of sugarcane farmers had medium achievement motivation, followed by high (19.60%) and low (17.50%) achievement motivation.

Bhanu (2006) expressed that, majority of (74.16%) the rural youth belonged to medium level of achievement motivation category, followed by 16.67 and 9.17 per cent belonged to low and high achievement motivation categories respectively.

Gireesh (2006) revealed that, 50.00 per cent of the sugarcane growers had medium achievement motivation.

Begum (2008) observed that, majority (73.33%) of groundnut farmers had medium achievement motivation, followed by high (10.83%) and low (15.84%) achievement motivation.

Anamica (2010) revealed that 70.00 per cent of the respondents had moderate to high level of achievement motivation and 30.00 per cent with low level of achievement motivation. The dominating motive of an individual is to earn more, inherent more materials and achieve a secured life free from risky situations. This achievement motivation makes an individual to migrate.

Kishore (2010) mentioned that, almost half (49.16%) of adarsha rythus had low achievement motivation, followed by medium (34.16%) and high (16.68%) achievement motivation.

Kalyan (2011) found that, 46.66 per cent of groundnut farmers had medium level of achievement motivation, followed by high (38.33%) and low (15.00%) levels.

Thilagam (2012) reported that most of the respondents 58.00 per cent were found to possess medium level of achievement motivation followed by 35.33 per cent of the respondents with high level of achievement motivation.

Hrudayranjan (2013) informed that, more than half (57.50%) of groundnut farmers had medium level of achievement motivation, followed by low (30.83%) and high (11.17%) levels achievement motivation.

Anamica and Ravichandran (2014) concluded that, nearly 75.00 per cent of the rural youth were found to possess moderate to high levels of achievement motivation. The remaining one fourth (25.00%) had a low level of achievement motivation.

Rani (2014) stated that, more than half (53.34%) of the women farmers had medium achievement motivation, followed by high (30.83%) and low (15.83%) levels of achievement motivation respectively.

2.1.17. Economic Orientation

Bhanu (2006) declared that, more than two-fifth (46.67%) of the respondents belonged to medium economic orientation category, followed by 33.33 and 20.00 per cent who belonged to high and low economic orientation categories respectively.

Ashok (2012) revealed that, nearly three-fourth (72.50%) of the SRI farmers had medium level of economic orientation, followed by low (18.33%) and high (9.17%) levels of economic orientation.

Naidu (2012) reported that, nearly two-third (62.22%) of the respondents had medium level of economic orientation, followed by high (23.89%) and low (13.89%) levels economic orientation.

Sriharinarayana (2013) reported that nearly half (49.17%) of the rice farmers had medium level of economic orientation, followed by high (34.17%) and low (16.66%) levels economic orientation.

Anamica and Ravichandran (2014) found that, more than three-fourth (76.88%) of the rural youth possessed moderate to high level of economic orientation. Low level of economic orientation was observed only among 23.12 per cent of the respondents. Further comparison of the findings showed that, the partially migrated rural youth possessed a fairly low level of economic orientation when compared to the fully migrated counter parts.

2.1.18. Risk Orientation

Anamica (2010) revealed that, the risk orientation level was high among two-fifth (42.22%) of the respondents, followed by moderate (31.11%) and low levels (26.67%) of risk orientation.

Anamica and Ravichandran (2014) stated that, about 39.38 per cent of rural youth had moderate level of risk orientation, followed by 34.37 per cent

respondents with high level of risk orientation. Further comparison revealed that, the fully migrated rural youth possessed a fair moderate risk orientation (42.50%) than the partially migrated ones (35.00%). The partially migrated were also found to possess low level of risk orientation to some extent when compared to the fully migrated ones.

Rani (2014) noticed that, majority (60.00%) of the respondents were having medium risk orientation, followed by high (29.17%) and low (10.83%) levels of risk orientation respectively.

Viswanatha *et al.* (2014a) explored that, 37.50 per cent of rural youth had medium level of risk orientation, followed by 35.00 per cent of rural youth had low level of risk orientation and 27.50 per cent of rural youth had high level of risk orientation.

Viswanatha *et al.* (2014b) found that, 42.86 per cent of rural youth had medium level of risk orientation, followed by 31.43 per cent of rural youth had high level of risk orientation and 25.71 per cent of rural youth had low level of risk orientation.

2.2. Attitude of Youth towards Farming

Hiremath (2000) reported that, 61.67 per cent of the youth had unfavourable attitude, followed by 36.67 per cent with favourable attitude and only 1.66 per cent had neutral attitude towards agriculture

Manohari (2001) stated that a majority (58.75%) of the primitive tribal groups possessed favourable attitude towards improved agricultural technologies followed by highly favourable attitude (26.25 %). Only 10 per cent were neutral category and 5.00 per cent had unfavourable attitude towards improved agricultural technologies.

Sangamesh (2006) found that, majority of the respondents (63.33%) had favourable attitude in rainfed tract and 15.00 per cent of them had more

favourable attitude towards agriculture. Similarly in irrigated tract, majority (66.66%) of the respondents had favourable attitude and 20.00 per cent of them had more favourable attitude towards agriculture.

Uddin *et al.* (2008) revealed that, majority (71.43%) of the coastal rural youth shown moderately favourable attitude, followed by (17.58%) of them were favourable, whereas only 10.99 per cent of them were having unfavourable attitude towards some selected agricultural technologies.

Abdullahi *et al*. (2010) stated that, majority (62.50%) of the rural youth had moderate attitude towards family farming, while 21.67 and 15.83 per cent of them had unfavourable and favourable attitude towards family farming.

Aphunu and Akpobasa (2010) indicated that, 69.60 per cent of the respondents had unfavourable attitude towards agriculture, while 30.40 per cent had favourable attitude towards agriculture in the study area.

Aphunu and Atoma (2010) showed that, majority (69.30%) of the respondents perceived agricultural activities negatively, while only 30.70 per cent expressed positive attitude towards agriculture in the study area. They also reported that, respondents attitude towards agriculture as a livelihood occupation in terms of mean scores of statements as farming is for the school drop-outs and illiterates (mean = 3.08), farming promote poverty (mean=2.84), farming is a bad business (mean=2.80), farming is for the less privileged in the society (mean=2.76), agriculture is meant for the aged (mean=2.66), and that, farming generates low income (mean=2.64).

Bahamana *et al.* (2010) mentioned that, majority (69.40%) of the youth had high attitude towards contract farming, followed by 29.80 per cent with moderate and 0.80 per cent with low attitude towards contract farming.

Manish *et al.* (2011) affirmed that, majority (75.50%) of the agricultural graduates had most favourable attitude towards agriclinic and agribusiness

centers. Less per cent (14.54%) of them had most unfavourable attitude and only 10.00 per cent were undecided.

Ayanda *et al.* (2012) noted that, the students ranked high potential of agriculture for self employment as the most important reason for accepting agriculture as a future means of livelihood with a ranking score of 4.3. Self sustainability of agriculture was the next uppermost reason for the acceptance with a ranking score of 4.2. However, the use of crude implements and obsolete technology by the generality of the farmers hindered the growth of the sector and worsened the economic situations of the farmers. The students also stated that, their parents lured them to read agriculture (ranking score of 3.2) as the course offered the last opportunity to pursue a university degree. Similarly, agriculture was deemed as having no bright future (with a ranking score of 1.6) in Nigeria. Respondents also expressed low interest in agricultural disciplines, with a ranking score of 2.3.

Mohan and Reddy (2012) revealed that, more than half (53.00%) of agricultural graduates had favourable attitude whereas 36.00 per cent and 11.00 per cent of them had highly favourable and less favourable attitude towards pursuing self employment in agriculture respectively.

Thilagam (2012) inferred that majority of the entrepreneurs (51.33 per cent) had moderate level of favourable attitude towards agri business followed by 28.67 per cent highly favourable and 20.00 per cent low level of favourable attitude towards agribusiness.

Angaitkar *et al.* (2013) observed that, majority (61.65%) of the rural youth had favourable attitude, followed by 22.50 per cent had unfavourable and 15.83 per cent of them had highly favourable attitude towards agriculture as a profession.

Lyocks *et al.* (2013) investigated that, majority (75.20%) of the youth like agriculture, followed by 4.10 per cent of them don't like it, 17.40 per cent of them had neutral attitude. Only 3.30 per cent of them responded as 'forced to like it'.

Anamica and Ravichandran (2014) indicated that, 42.50 per cent of the fully migrated youth had less favourable attitude, followed by moderately favourable attitude (35.00%) and highly favourable attitude (22.50%) whereas, 33.12 per cent of the partially migrated youth had less favourable attitude, followed by moderately favourable attitude (39.33%) and highly favourable attitude (27.50%). They also revealed that, more than three-fourth (77.50%) of the non-migrant rural youth were found to possess a moderately favourable to highly favourable attitude towards agriculture. Only less than one-fourth (22.50%) of them were found to hold a less favourable attitude towards agriculture.

Kitturmath *et al.* (2014) observed that, majority (70.83%) of the respondents had favourable attitude, followed by less favourable attitude (15.00%) and the remaining 14.17 per cent of them had more favourable attitude towards rural development activities.

2.3. Relationship between Profile Characteristics and Attitude of Youth towards Farming

Bhanu (2006) observed that, significant relationship was observed between dependent variables like educational aspiration, occupational aspirations and enterprise aspirations of rural youth with independent variables like education, mass media utilization, annual income, economic motivation at one per cent level of probability. Positive and significant relationship was also observed between dependent variable like general aspirations of rural youth and independent variables like extension contact and achievement motivation at 5 per cent level of probability. Negative and significant relationship was observed between

educational aspirations of rural youth and age at one per cent level of probability. There was positive and significant relationship between enterprise aspirations and extension agency contact at 5 per cent level of probability.

Uddin *et al.* (2008) revealed that, education, innovativeness and agricultural knowledge of the coastal rural youth had positive and significant relationship with their attitude towards selected modern agricultural technologies. On the other hand age, family size, family farm size, family annual income, aspiration, extension media contact and time spent in agricultural activities had no significant relationship with their attitude.

Aphunu and Atoma (2010) showed that, attitude of youth towards agriculture correlated positively and significantly with involvement in agricultural production activities (r = 0.475). The significant relationship could be attributed to a number of factors such as institutional deficiencies (dearth of infrastructures in the rural areas, lack of government support to encourage agriculture, etc) rural – urban migration tendencies, emerging new livelihood interest of youths (which are non – primary productive) generally perceived low and differed reward or feedback of agriculture as a source of livelihood.

Mosaee and Ommani (2011) noticed that, there was a positively significant relation between independent variables (income, social participation, arable land system) and rural youth's attitude towards agricultural occupation.

Mohan and Reddy (2012) stated that, type of family (r=0.0317) and achievement motivation (r=0.534) were found to be positively significant with the attitude of agricultural graduates towards pursuing self employment in agriculture.

Anamica and Ravichandran (2014) indicated that, involvement in farming (r=0.269), income expectancy (r=0.473) showed positive and significant relationship with the attitude of rural youth towards farming at one per cent level.

The age (r=-0.268), education (r=-0.260) and risk orientation(r=-0.273) exhibited negative and significant relationship at one per cent level. However farm size (r=-0.031) and achievement motivation(r=0.053) depicted their non significant relationship with the attitude of rural youth towards agriculture.

Umunnakwe *et al.* (2014) reported that, there was a significant positive effect of marital status on rural youth involvement in agricultural income generating activities. There was a significant negative influence of respondents' education on rural youth involvement in agricultural income generating activities. There was a significant positive effect of innovativeness on involvement in agricultural income generating activities. As mass media exposure of rural youth increased there was a significant positive influence on their involvement in agricultural income generating activities. The extension contact was positively related to involvement of rural youth in agricultural income generating activities.

Viswanatha *et al.* (2014a) witnessed that, education, land holding, annual income, mass media utilization, extension participation and innovativeness of rural youth was having positive and significant relationship at one per cent level. Family type and risk orientation had no significant relationship with their aspirations in agriculture.

Umunnakwe and Adedamola (2015) found that, marital status (r=0.175**) and family type (r=0.179**) was found to be positively related to participation in livelihood activities among rural youth. Their educational level (r=0.002NS) had no significant relationship with their involvement in livelihood activities.

2.4. Analysis of Different Combinations of Farm Enterprises being Followed by the Youth and their Contribution to Net Income

Bhanu (2006) revealed that, majority of rural youth ranked agriculture (Crop production) as I dairy as II, poultry as III and piggery had been ranked last in order of priority to different enterprises.

Aphunu and Akpobasa (2010) indicated that, majority (69.56%) of the youth were highly involved in arable crop production, followed by farm labour (65.21%) and crop (palm oil) processing (60.86%). Youths' were moderately engaged in agricultural business (47.52%) and poultry production (46.07%), lowly engaged in horticulture (39.13%) and cash crop production (34.28%) and very lowly involved in fish production (12.17%).

Aphunu and Atoma (2010) showed that, youths were highly involved in arable crop production (69.30%), farm labour (64.70%) and crop (palm oil) processing (61.30%). Youths were moderately engaged in agricultural business (47.70%) and poultry production (46.60%); lowly engaged in horticulture (38.6%) and cash crop (35.2%) production and very lowly involved in sheep rearing (13.6%), fish production (11.40%) and goat rearing (9.10%). The finding implied that, youths were more involved in crop production and farm labour supply than livestock production.

Saha *et al*. (2010) witnessed that, majority of the respondents (75.83%) had medium size of cross bred cows that, varies from 2 to 5, followed by1 (18.75%) and more than 5(5.42%). But in respect of other species of animal like sheep and goat, most of the farmers were having no sheep (54.58%), followed by 1 to 6 (29.17%) and more than 6 (16.25%). No goat (67.50%), 1- 3 (22.50%) and more than 3 (10.00%). No poultry (40.83%), 1-10 (50.00%) and more than 10 (9.17%).

Umeh and Odom (2011) in their study analyzed the farming activities engaged by the youth associations. The results revealed that, majority (63.00%) of the youth associations embarked on crop production projects, followed by 17.00 per cent on livestock production.

Olaniyi (2012) found that, majority (41.30%) of the urban dwellers participated in vegetable production, followed by maize (40.00%), cassava production (23.30%), yam production (18.80%). Very less per cent (7.10% and

2.90%) of them participated in production of potatoes and cowpea. 16.70 per cent of them had given no response. They also found that, 46.70 per cent of the urban dwellers participated in poultry production, followed by fishery (20.80%), goat/sheep rearing (16.70%). Equal per cent each (7.90%) of them participated in piggery and snairy. 6.30 per cent of them followed rabbitary and very less per cent (1.7%) of them were grass cutters. About 11.7 per cent of them gave no response.

Lyocks *et al.* (2013) found that, crop farming (31.40%), poultry production (28.10%) and crop/livestock marketing (17.40%) were the common areas of interest by the youth

Kimaro *et al.* (2015) observed that, 32.50 per cent of the youth engaged in maize cultivation, followed by (26.50%) engaged in beans cultivation, (24.70%) engaged in vegetable cultivation, (12.00%) engaged in rice cultivation and (4.20%) engaged in groundnuts cultivation.

Umunnakwe and Adedamola (2015) stated that, 75.71 per cent of rural youth were involved in cereal production, 56.28 per cent of them were involved in pulse production, followed by vegetable production (46.15%), milk production (31.98%), oil seed production (29.15%), fruit production (24.29%), cash crop production (24.20%), goat rearing (14.58%), fish farming (12.15%) and raising plants for fruit production (12.15%).

2.5. Perception of Youth towards Different Farm Enterprises

Satapathy and Mishra (2011) witnessed that, majority (82.59%) of the rural youth perceived seed production as a major profitable enterprise, followed by vegetable farming (81.25%), growing of scented rice (76.25%), oil seed production (73.75%), goat rearing (67.50%), floriculture (65.00%), raising of planting materials (48.75%), fingerling production (47.50%), agro-service center (35.00%) and finally agro-processing unit (22.50%).

Arowolo *et al.* (2013) indicated that, 35.00 per cent of the youth felt that, cattle rearing is unattractive, followed by traditionally – operated (32.00%), long-time business (20.70%), too labour intensive (6.00%), Low – income Output (4.00%) and 2.70 per cent of them had given no response.

Preethi and Nataraju (2014) found that, majority (46.67%) of the farm youth had high level of perception, whereas 30.00 and 23.33 per cent of farm youth had medium and low level of perception towards agriculture respectively.

Sarju *et al.* (2015) revealed that cent per cent of farming youth perceived that agricultural income not fulfills their basic needs. Due to lack of any other income option, majority (92.00%) of them were practicing farming as occupation. Majority (85.00%) of them accepted that 'dislike to farming as occupation for their children' followed by 'poor technology transfer regarding agricultural innovation was the main cause of non adoption' (73.71%). About 71.43 per cent of them agreed that 'to leave farming'. More than one-third (35.71%) of them migrated during lean period of cop season for search of job.

2.6. Problems as Perceived by the Youth in Farming and their Suggestions to overcome the problems

2.6.1 Problems as Perceived by the Youth in Farming

Bhanu (2006) concluded that, cent per cent of the respondents expressed the constraints for participation in rural developmental activities like 'rural developmental activities are risky and time consuming' and 'no recognition or awards for participation', followed by 'most of the rural developmental activities are benefited to few people and not for all' and 'groups/conflicts among people in the village' were the other important constraints faced by them for participating in rural developmental activities.

Adekunle *et al*. (2009) reported that, inadequate credit facilities (mean=2.88), poor returns to agricultural investment (mean=2.67), lack of

agricultural insurance for produce during glut period (mean= 2.67) and lack of access to tractors and other farm inputs (mean=2.48) were the major constraints that had hindered respondents' active participation in agriculture.

Akpan (2010) expressed the constraints to rural youth's involvement in agriculture by using mean scores and ranked them accordingly. Inadequate credit facility was the major constraint (2.88), followed by poor returns to investment (2.66), no agricultural insurance (2.66), poor basic farming knowledge (2.56), insufficient access to tractors & other farm inputs (2.48), no ready market (2.35) , it is energy-sapping (2.33), people perception (2.28), insufficient initial capital (2.15), farmers are not respected (2.10), non-lucrativeness of agriculture (2.03), continuous poor harvest (1.94), poor storage facilities (1.93), insufficient (0.96) and soil degradation (0.65).

Aphunu and Akpobasa (2010) indicated that, lack of incentives from government (mean = 2.30), insufficient land (mean = 2.12), lack of infrastructure in the rural areas (mean = 2.10) and inadequate training and extension services (mean = 2.02) were perceived as serious constraints hindering youth's involvement in agricultural production activities.

Rathod *et al.* (2011) noticed that, nearly 80.00 per cent of the farmers reported that, the lower productivity and low fat content in the milk of the local breeds were the major constraints, followed by poor adaptability of cross bred animals (64.00%) in the hot and humid climate of the region. Majority (87.00%) of farmers reported non availability of fodder round the year, followed by inadequate knowledge about feeding (76.00%) as the major constraint in dairy farming. High cost on feeding and storage of feed (72.00%) and low availability of dry fodder was also reported by farmers (58.00%). Majority (74.00%) of the farmers faced the problem of lack of grazing land for the animals. 72.00 per cent of the farmers reported lack of timely Artificial Insemination facility, followed by poor knowledge about Artificial Insemination (64.00%), low conception rate

through Artificial Insemination (57.00%) and difficulty in heat detection (52.00%). Health care of the animals was a major constraint for majority (84.00%) of the dairy farmers since they lacked timely veterinary and health care services. About 71.00 per cent farmers felt the disease occurrence itself as the major constraint.

Satapathy and Mishra (2011) affirmed that, market demand (mean =2.62) as one of the major environmental factors affecting agribusiness, followed by labour (mean =2.35), credit facilities (mean =2.27), preference of consumer (mean =2.25), technical support (mean =2.10), training (mean =2.07), storage facilities (mean =1.96), market strategy (mean =1.87), availability of substitute (mean =1.81) and insurance (mean =1.77).

Savita (2011) found that, majority (65.00%) of the rural youth expressed lack of awareness as their major problem (latest technology, varieties etc.). Among rural male youth, 81.67 per cent of them expressed lack of awareness as their major problem. With regard to rural female youth, 48.33 per cent expressed lack of awareness.

Umeh and Odom (2011) expressed the constraints to effective involvement of youth associations in agricultural and rural development in the area of study as inadequate fund available to the association (3.2), non recognition of youths as partners in rural development by community power brokers (3.1), inability of the youth to resolve internal organizational conflict and crisis as well as inability of the associations to establish link with donor agencies (3.0), lack of good leadership /leadership tussle in the associations (2.6) and lack of social amenities (3.1) in the rural areas.

Donye *et al.* (2012) witnessed that, more than one-fifth (22.22%) of the respondents had limited access to credit facilities. About 21.11 per cent of them had market accessibility problem, followed by lack of storage facility (14.44%), problems of pests and diseases (11.11%), poor transportation system (8.11%),

inadequate extension services (6.89%), high cost of local input (5.56%), lack of modern implements (4.44%) and finally government policy (3.33%) were the constraints faced by youth in Yam production.

Arowolo *et al.* (2013) stated that, 45.30 per cent of the youths could not give any reason for their non – involvement in cattle rearing. However, the reasons given by the remaining 54.70 per cent of the youths for their non participation included (i) inadequacy or non availability of forage or grasses for the cattle (19.30%) (ii) initial capital affordability is inadequate (15.30%) (iii) veterinary needs and care (8.00%) (iv) land acquisition problem (7.50%) (v) problems of pests and diseases and (vi) sales (2.00%).

Lyocks *et al.* (2013) identified factors that have hitherto hindered youth participation in agriculture. Most prominent among these constraints were inadequate incentives (39.70%). Inadequate training and extension services (28.90%) ranked second on the constraint list, followed by inadequate, poor and inefficient infrastructure (21.50%) and insufficient land (4.10%). 5.80 per cent of them quoted other minor problems.

Viswanatha *et al.* (2014a) revealed that, scarcity of labour (74.16%), inadequate and untimely supply of fertilizers and plant protection chemicals (69.16%), lack of required finance (67.50%), inadequate and untimely supply of seeds (56.66%) were majority of problems. Half (50.00%) of the rural youth expressed the problem of getting low price for the crop produce, less than half of them had the problem of marketing facilities (48.33%), farther distance of market (42.50%), lack of transport facilities (42.50%), lack of irrigation facilities (40.83%), lack of storage facilities (38.33%) and high cost of production (32.50%).

Jawale and Ghulghule (2015) witnessed that, all the kesar mango growers (100 per cent) expressed the major constraints in production was effect of heavy rains, winds and hail storm during flowering and fruit setting time. Majority

(85.00%) of kesar mango growers expressed problem of scarcity of labour with high wage rate. Irregular electricity supply was important constraint expressed by 83.33 per cent of kesar mango growers. The other constraints in mango production expressed by the farmers were non availability of quality grafts (80.00%), high cost of inputs (76.67%), high incidence of pest and diseases (70.00%) and lack of storage facilities near production area (66.67%). Some of the farmers have also faced constraints like lack of technical guidance (58.33%), unavailability of margin money at the time of establishment (51.67%) and inadequate irrigation facility (43.33%).

Patel and Chauhan (2015) reported that, the constraints were two fold *viz.*, related to crop production technology and soil and water conservation technology. The constraints related to crop production technologies were concerned, it is clearly observed that, lack of knowledge about recommended crop production technology (85.00%) was the main constraint expressed by the beneficiary farmers, followed by low market price of agricultural products (83.33%), lack of technical guidance (76.66%), lack of finance to purchase inputs (74.16%), high cost of farm inputs (73.33%), lack of communication facilities (70.83%), lack of timely and appropriate extension services (58.33%), risk in adoption of new technology (57.50%), high rate of labour and unavailability of sufficient labour in time (50.00%), high rate of electricity (46.66%), irregular supply of electricity (45.83%) and lack of transport facility (29.16%) were the important constraints expressed by the beneficiary farmers. Among soil and water conservation technology, the constraints viz., less subsidy (72.50%) was the main constraint expressed by the beneficiary farmers, followed by lack of knowledge about soil and water conservation technology (68.33%), construction of field bund is costly (66.66%), lack of technical guidance (58.33%), lack of finance (53.33%), timely sowing is not possible (51.66%), land leveling is costly (45.83%) and lack of timely and appropriate extension services (29.16%) were the important constraints expressed by the tribal farmers.

2.6.2 Suggestions given by the Youth in Farming

Bhanu (2006) revealed that, majority of the respondents suggest 'daily wages have to be given to every individual who participate in the activities', followed by 'rural developmental activities have to be taken up during off season/summer season' and leaders who are in the front have to be faithful and true to their sole' for better participation of rural youth in rural developmental activities.

Vaneetha (2006) reported that 33.33 per cent of the farmers opined that farmers are to be trained in the newly introduced farm equipment and 70.00 per cent of farmers needed awareness about the newly introduced farm equipment. More than one-third of the farmers (36.00%) wanted to know the cost of the equipment, and a little more than one-fourth of the farmers (20.00 %) suggested that the equipments should be easy to operate.

Lyocks *et al.* (2013) identified that, majority (51.20%) of the respondents suggested the establishment of youths training and skills acquisition centers followed by, give agricultural loans to youths (31.40%), Promote young farmers associations through internet linkages (12.40%) and Establish farm settlements (5.00%).

Jawale and Ghulghule (2015) reported that, about 98.33 per cent of kesar mango growers suggested the provision of electricity supply on time. State government should provide margin money at the time of establishment on minimum interest and State department of agriculture should provide the drip irrigation facilities on lower cost were suggested by 93.33 per cent kesar mango growers. Majority (91.67%) of farmers suggested mechanization on farm followed by provision of cold storage near production area (90.00%). Provision of nursery for improved planting material was suggested by 75.00 per cent. Some of the farmers also suggested like provision of training programme for pest and

disease control (68.33%), effective adoption of training system of extension on field level (46.67%).

Patel and Chauhan (2015) reported that, very high majority (91.67 %) of tribal farmers suggested that field demonstrations should be organized, followed by loan and subsidy should be easily available (85.00 %), remunerative market prices of agricultural products should be provided to the farmers(83.33%), farmers should be protected by crop insurance in case of failure of season(76.66%), more training should be imparted to the farmers (73.33%), proper technical guidance should be given to the farmers as and when they need (72.50%), farm inputs should be subsidized (68.33%) and more subsidy should be granted for soil and water conservation works (66.66%) were offered as important suggestion by tribal farmers.

2.7. Conceptual model of the study

Conceptual model is a diagrammatic representation of outlining the dominant elements of a system and their interrelationships with respect to a criterion variable. Conceptual model is formulated based on experience and in the present study, review of related studies was also formed as the basis for the conceptual model. The variables included in the study were grouped into independent and dependent variable.

The independent variables are conceived as those variables those precede the others in the order of time and which are theoretically expected to lead or to be followed by certain other variables. In the present study factors related to profile characteristics of youth in farming were considered as independent variables.

The dependent variable is that variable, which follows the independent variables in time. Attitude of youth towards farming was the dependent variable in the present study.

It is clear from the conceptual model that, attitude of youth towards farming was the function of selected independent variables. Based on the review of relevant literature and in consultation with the experts, eighteen independent variables were selected. The relationship was diagrammatically represented in figure 2.1. which helps to derive the following hypothesis for empirical testing.

Research Hypotheses

Based on the objectives of the study and the theoretical framework, the following research hypotheses were formulated.

General Hypothesis

There will be a significant relationship between attitude of youth towards farming and their selected profile characteristics.

The null and empirical hypotheses deduced from the general hypotheses with respect to independent and dependent variables under study were reported, tested and presented in the ‘Results and Discussion’ chapter.

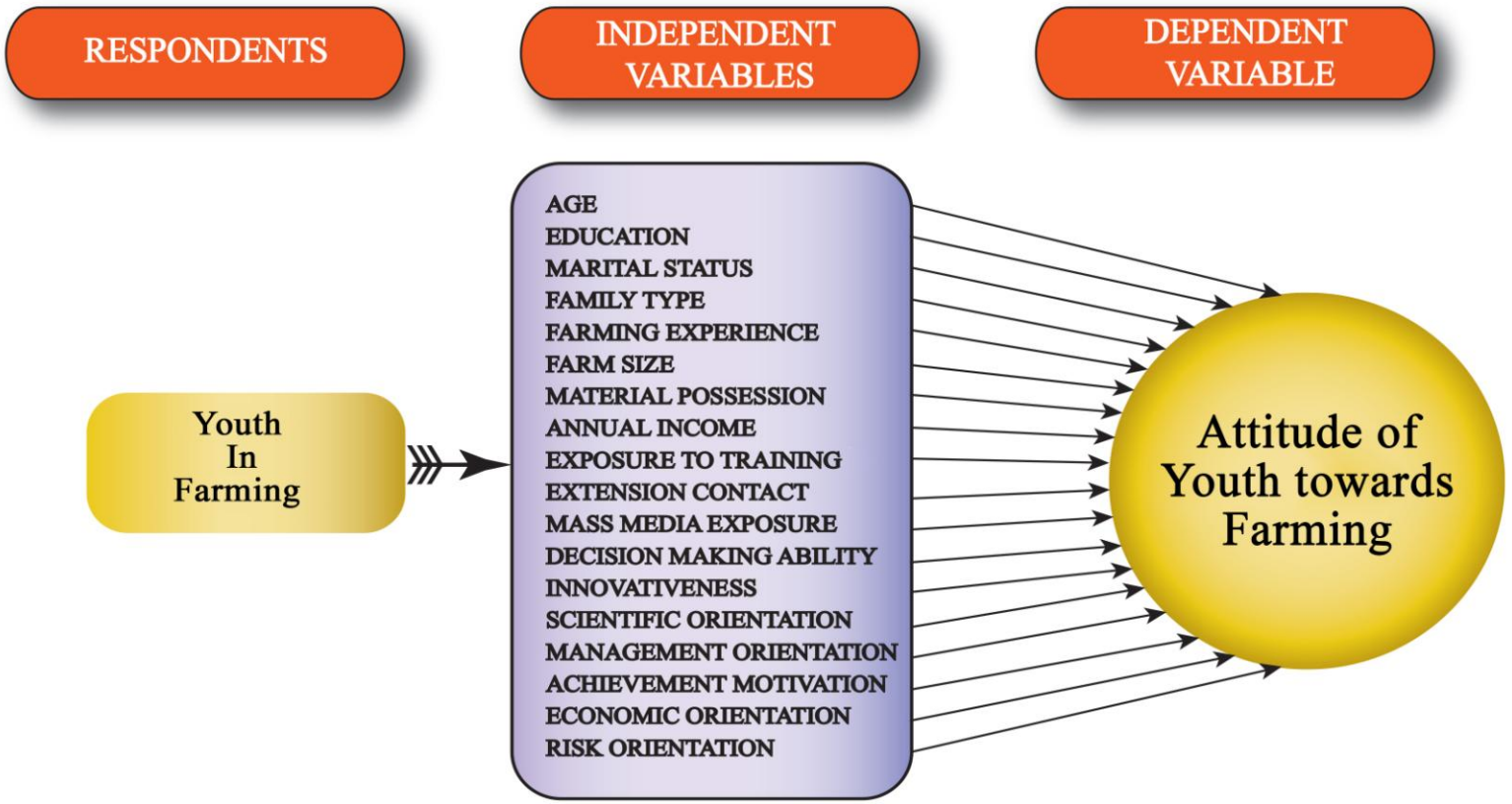


Figure 2.1. Conceptual model of the study

Chapter – III

Material & Methods

Chapter III

MATERIAL AND METHODS

This chapter deals with the research design, locale of the study, sample and sampling procedure, variables and their measurements, devices used for data collection, statistical tests used and analytical procedures followed to interpret the data. The details of the methodology followed are presented under the following heads.

3.1 Research design

3.2 Sampling procedure

3.3 Operationalisation& measurement of independent variables andconstruction of scale to measure the dependent variable "attitude of youth towards farming"

3.4 Different combinations of farm enterprises being followed by youth infarming andtheir contribution to net income

3.5 Perception of youth towards different farm enterprises

3.6 Problems in farming as perceived by youth and their suggestions to overcome the problems

3.7 Devices and methods used for data collection

3.8 Statistical tools and procedures followed

3.1 Research Design

Based on the objectives of the study, ex post facto research design was followed in the present investigation. Expostfacto research design is a systematic empirical enquiry in which the dependent variables have not been directly manipulated because they have already occurred or they are inherently not manipulated. Expostfacto studies can be devised to identify

behavioral phenomenon and to explore conditions under which a phenomenon occurs (Kerlinger,1973). Keeping in view of the type of variables under consideration, size of respondents and phenomenon to be studied, the ex postfacto research design was selected as an appropriate research design to investigate the variables influencing theattitude of youth towards farming.

3.2 Sampling Procedure

3.2.1 Locale of the study

TheAndhra Pradesh state was chosen as the locale of the study, since the researcher belongs to the state and was familiar with local language and culture. Hence, building up rapport with the respondents would become easier. The names of the three regions of Andhra Pradeshwere mentioned in the table 3.1. and figure 3.1.

3.2.2 Selection of Districts

One district from each region was selected by following lottery method of simple random sampling procedure. The sample constituted to a total of three districts. The names of the selected districts were Kurnool (from Rayalaseema region), Nellore (from Coastal region) and Vizianagaram (from North Coastal region). The list of districts was given in the table 3.1. and figure 3.2.

3.2.3 Selection of Mandals

Four mandals from each district were selected by following lottery method of simple random sampling procedure. The sample constituted to a total of twelve mandals. The list of mandalswas given in the table3.1.andfigures 3.3 (a), 3.3 (b) and 3.3 (c).

3.2.4 Selection of Villages

Two villages from each mandal were selected by following lottery method of simple random sampling procedure. The sample constituted to a

Table: 3.1. Selection of districts,mandals, villages and respondents

State	Regions &Districts	Mandals	Villages	No.of Respondents
ANDHRA PRADESH	**Rayalaseema-Kurnool (D_1)**	Rudravaram (M_1)	Erragudidinne (V_1)	10
			Peddakambaluru (V_2)	10
		Pagidyala (M_2)	Muchumarri(V_3)	10
			Lakshmapuram (V_4)	10
		Mahanandi (M_3)	Bollavaram (V_5)	10
			GajulaPalli (V_6)	10
		Gadivemula (M_4)	Koratamaddi (V_7)	10
			Pulimaddi(V_8)	10
	Coastal Andhra-Nellore(D_2)	Dakkili (M_5)	Chapalapalle (V_9)	10
			Nagavollu (V_{10})	10
		Indukurupeta (M_6)	Pamulavaripalem (V_{11})	10
			Kothuru (V_{12})	10
		Atmakuru (M_7)	Bandarupalle (V_{13})	10
			Kanupurupalle (V_{14})	10
		Buchireddypalem(M_8)	Rebala (V_{15})	10
			Nagamambapuram (V_{16})	10
	North Coastal-Vizianagaram (D_3)	Vizianagaram (M_9)	Rakodu (V_{17})	10
			Sarika(V_{18})	10
		Saluru (M_{10})	Mugadavalasa (V_{19})	10
			Saluru (V_{20})	10
		Nellimarla (M_{11})	Pinatharimi (V_{21})	10
			Sathivada (V_{22})	10
		Ramabadhrapuram (M_{12})	Kokkati (V_{23})	10
			Mamidivalasa(V_{24})	10
Total	**3**	**12**	**24**	**240**

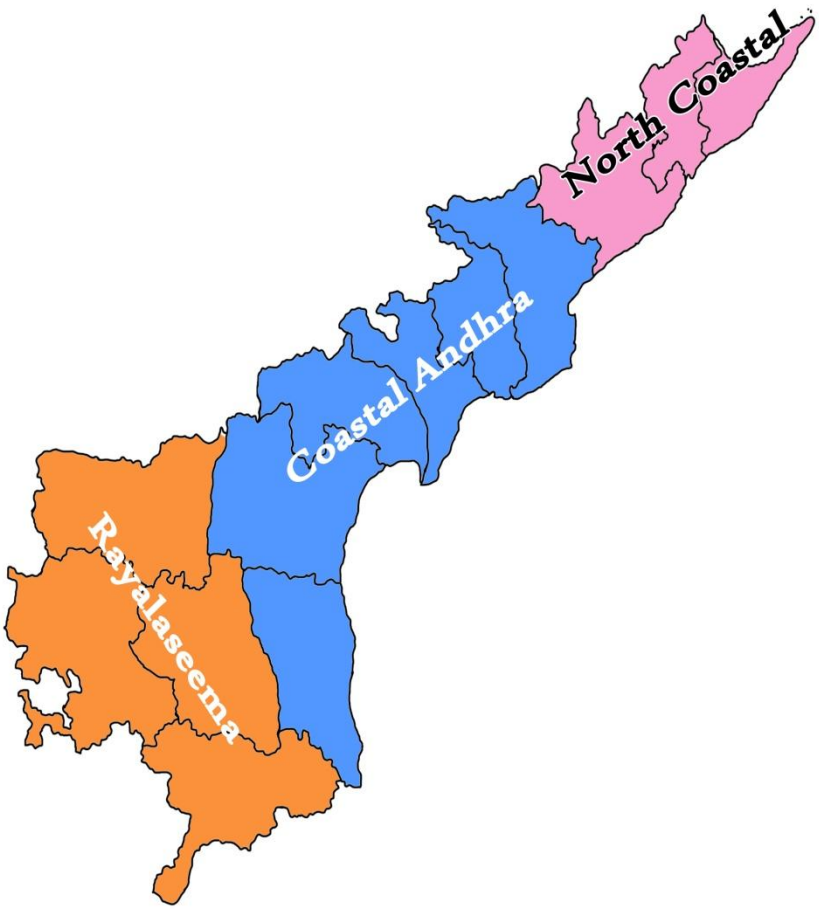


Figure 3.1. Map of Andhra Pradesh depicting three regions

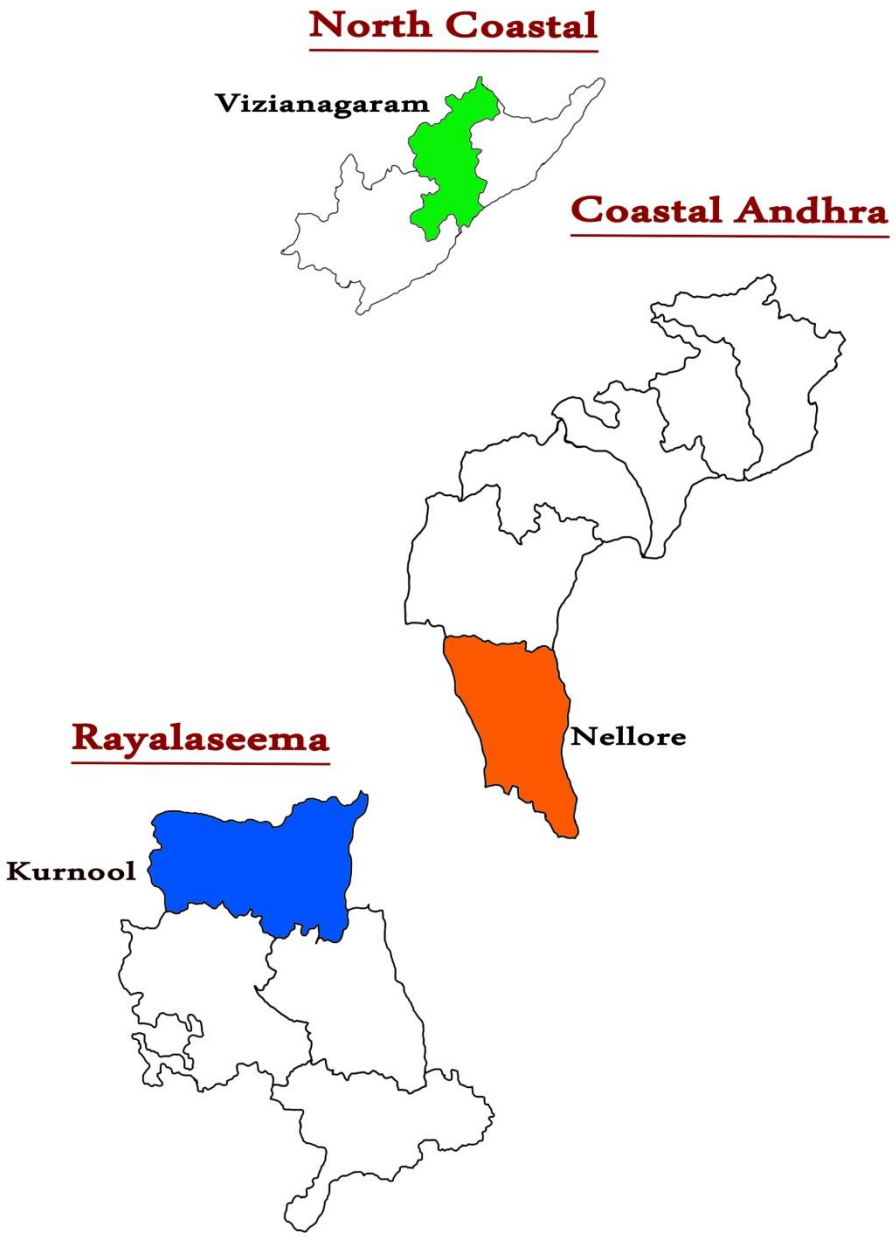


Figure 3.2. Map of three regions of Andhra Pradesh depicting selected districts

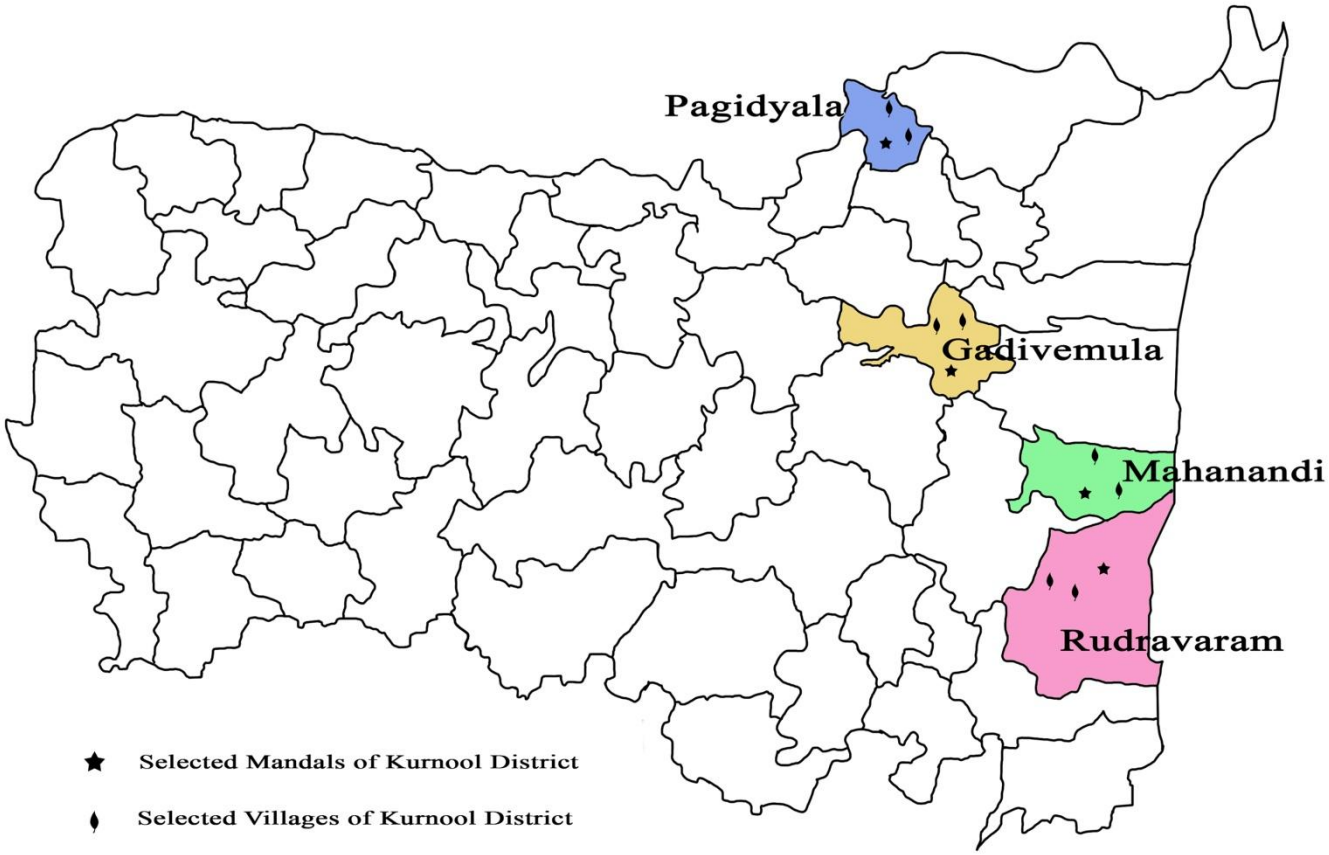


Figure 3.3 (a). Map of Kurnool depicting selected mandals and villages

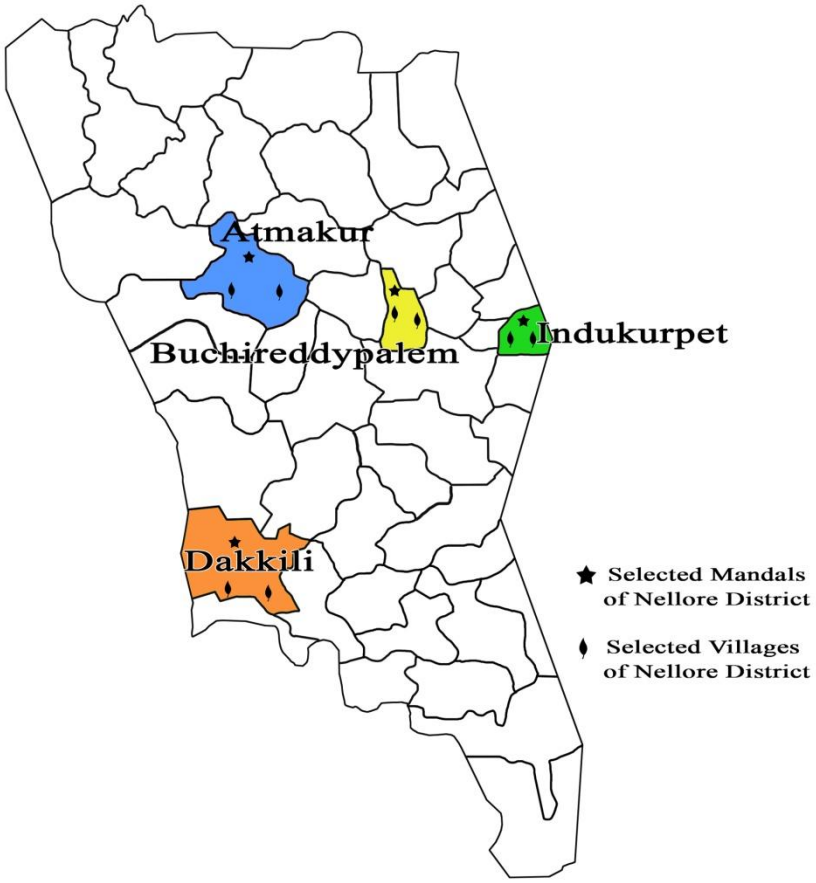


Figure 3.3 (b). Map of Nellore depicting selected mandals and villages

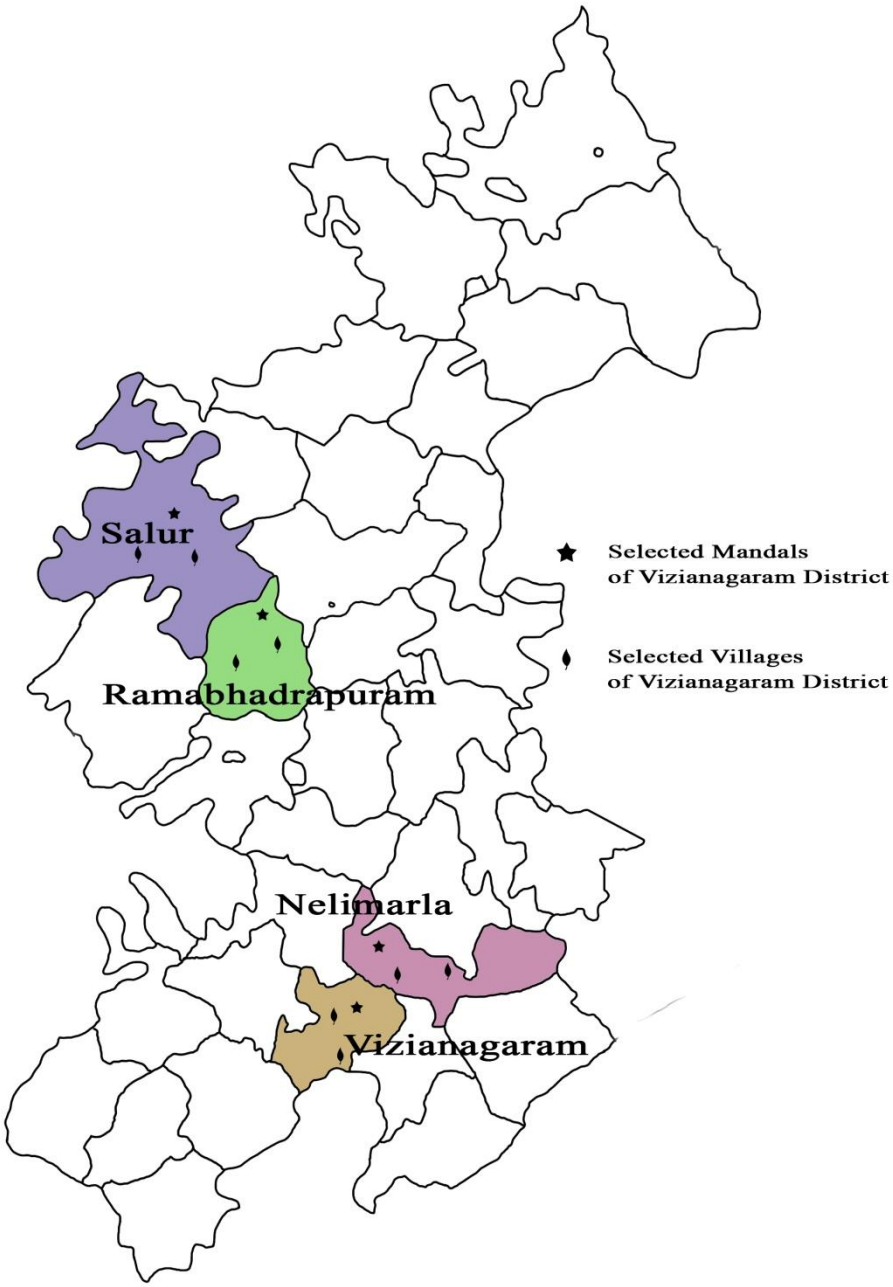


Figure 3.3 (C) Map of Vizianagaram depecting selecte mandals and villages

total of twenty four villages. The list of villages selected was given in the table 3.1. and figures 3.3(a), 3.3 (b) and 3.3 (c).

3.2.5 Selection of Respondents

From each of the selected village, ten youth in farming were selected by following lottery method of simple random sampling procedure. The sample constituted to a total of 240 respondents. The distribution of respondents was shown in the table 3.1. and figure 3.4. The entire sampling procedure was depicted in the figure 3.4.

Operational definition of Youth in Farming

Youth in farming was operationalised as, a farmer who was been in farming since three years and having below 35 years of age.

3.3Operationalisation&Measurement of Independent Variables andConstruction of Scale to Measure Dependent Variable"Attitude of Youth towards Farming"

Relevant variables were identified in consultation with experts and also based on review of related literature. The variables selected and empirical measurements followed were represented in table 3.2.

3.3.1 Independent Variables

3.3.1.1 Age (X_1)

It refers to the chronological age of the respondents in completed years at the time of investigation. A score of '1' was given for every completed year. The respondents were grouped into three categories based on the classification of agegiven by National Youth Policy of India, 2012.

S.No.	Category	Years
1.	Lower young age	18-25
2.	Middle young age	26-30
3.	Upper young age	31-35

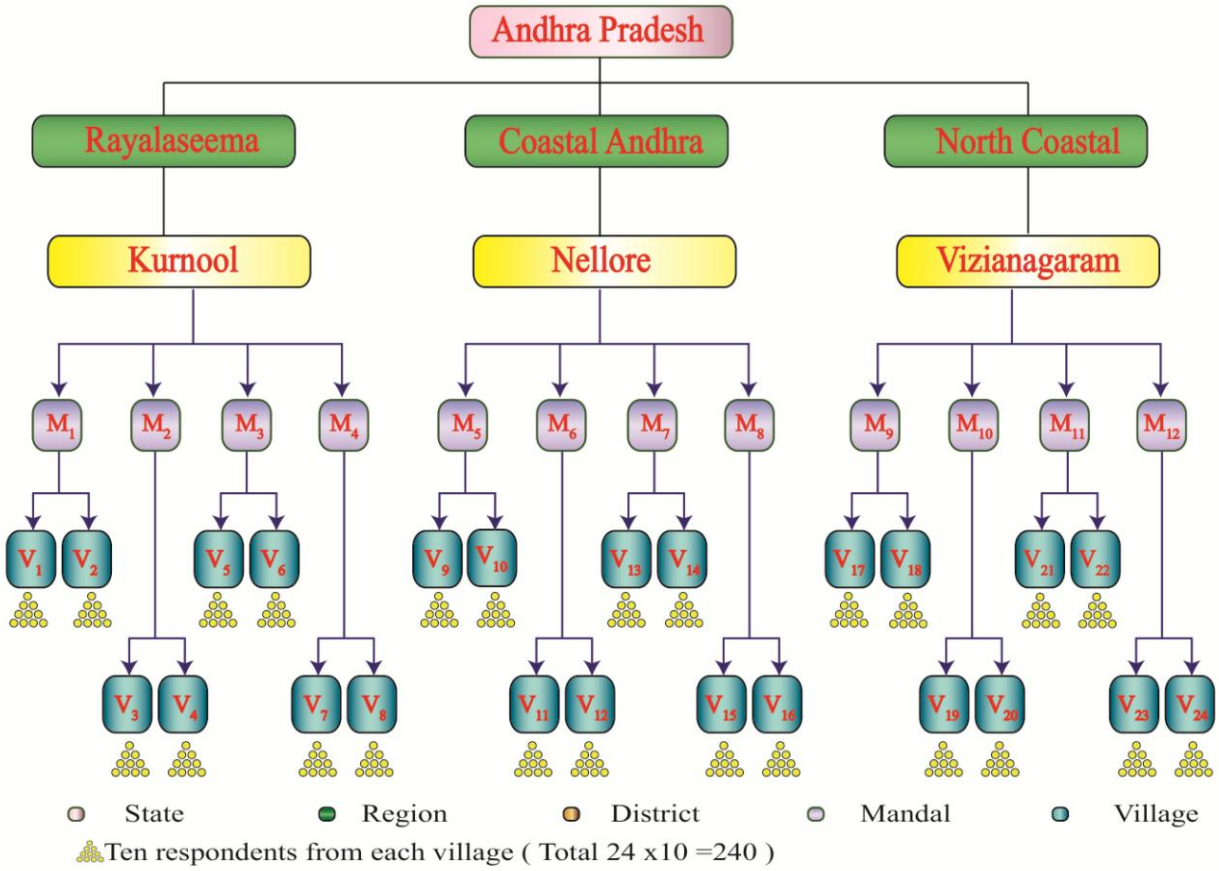


Figure 3.4. Sampling procedure followed for the research study

Table: 3.2. Variables and their empirical measurement

S. No.	Variables	Empirical Measurement
A.	**Independent Variables**	
1.	Age	Developed by National Youth Policy of India, 2012
2.	Education	Schedule developed for the study
3.	Marital status	
4.	Family type	
5.	Farming experience	Number of years of experience in farming
6.	Farm size	Schedule developed for the study
7.	Material possession	
8.	Annual income	
9.	Exposure to training	
10.	Extension contact	
11.	Mass media exposure	
12.	Decision making ability	
13.	Innovativeness	
14.	Scientific orientation	Scale developed by Raja (1998) with suitable modifications
15.	Management orientation	Scale developed by Samanta (1977) with suitable modifications
16.	Achievement motivation	Scale developed by Rani (1985) with suitable modifications
17.	Economic orientation	Scale developed by Supe (1969) with suitable modifications
18.	Risk orientation	Scale developed by Supe (1969) with suitable modifications
B.	**Dependent Variable**	
1.	Attitude of Youth towards farming	Attitude scale was constructed

3.3.1.2 Education(X_2)

It was operationally defined as the educational level attained by the individual respondent at the time of investigation. It was measured by using a schedule developed for the study.

S.No.	Category	Score
1.	Illiterate	0
2.	Can read and write	1
3.	Middle school	2
4.	High school	3
5.	College education	4

3.3.1.3 Marital Status(X_3)

It was operationally defined as "whether the individual respondent is being married or unmarried at the time of investigation." The score '1' was given for married individual and score '2' was given for unmarried individual. Accordingly the respondents were categorized.

S.No.	Category	Score
1.	Married	1
2.	Unmarried	2

3.3.1.4 Family Type (X_4)

It refers to the situation that whether the family members of respondents' were divided or combined. On this basis the respondents were divided into two categories and the scores are given below.

S. No.	Category	Score
1.	Nuclear	1
2.	Joint	2

3.3.1.5 Farming Experience (X_5)

Farming experience was operationally defined as the number of years a young farmer completed in farming at the time of investigation. A weight of '1' score was given to each completed year to compute the farming experience of each young farmer. The respondents were grouped into three categories using quartile deviation based on the farming experience scores.

S.No.	Category	Score
1.	Low farming experience	Below lower quartile (Q_1)(25^{th} percentile)
2.	Medium farming experience	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High farming experience	Above upper quartile (Q_3)(75^{th}percentile)

3.3.1.6 Farm Size(X_6)

It was operationally defined asthe total area of land owned byan individual young farmer. The respondents were grouped into the following categories on the basis of the landholdings possessed and operated by them. The standard classification as per All India Report on Number and Area of Operational Holdings was followed (Agriculture Census Division, 2014).

S.No.	Category	Area of land (Ha.)
1.	Marginal	Below 1.00 Hectare
2.	Small	1.01 to 2.0 Hectare
3.	Semi-Medium	2.01 to 4.0 Hectare
4.	Medium	4.01to 10.0 Hectare
5.	Large	10.01 Hectare and above

3.3.1.7Material Possession(X_7)

It was operationalized as the quantum of materials (both household and farm items) possessed by the respondent at the time of investigation. A structured schedule consisting of different household and farm items categorized into three levels based on their value was used for the study. A score of '1' was assigned to first level of items, '2' was assigned to second level of items and '3' was assigned to third level of items both under household and farm items. The material possession score for each respondent was arrived based on the level to which he belonged in both household and farm items. The maximum and minimum possible scores were '6' and '1'. Therespondents were categorized using quartile deviation based on their obtained scores.

S.No.	Category	Score
1.	Low Material possession	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium Material possession	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High Material possession	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.8 Annual Income (Rs.) (X_8)

It was operationally defined as the income earned by the individual respondent throughout the year.A weightage of '1' was assigned to the amount of one lakh rupees earned by an individual. Accordingly the respondents were categorized into three categories using quartile deviation.

S. No.	Category	Score
1.	Low annual income	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium annual income	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High annual income	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.9Exposure to Training(X_9)

Exposure to training was operationalisedas the number of trainings that the respondents haveundergone. The individuals were given scores based on the number of trainings they have undergone. Score of '1' was given for each training undergone by the respondent. The minimum and maximum possible scores were 1 and 15. They were grouped into three categories using quartile deviation based on the scores obtained.

S. No.	Category	Score
1.	Lessexposure to training	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium exposure to training	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High exposure to training	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.10 Extension Contact (X_{10})

It was operationlised as the degree to which the youth in farming had maintained contact and the frequency of contacts with extension personnel. The degree of extension contact of the respondents was measured with the help of a schedule developed for the study. The individuals were scored based on the number of extension personnel contacted and also the extent of contact. The extent of contact was measured with a score of '2' for 'often', '1' for 'some times' and '0' for 'never'. The total score of each respondent was arrived by adding the scores obtained. The minimumand maximumscores were in the range of 0-14.The respondents were grouped into three categories by usingquartile deviation.

S.No.	Category	Score
1.	Low extension contact	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium extension contact	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High extension contact	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.11 Mass Media Exposure(X_{11})

It was operationlised as the degree to which the youth in farming utilized the different mass media sources. The degree of mass media exposure of the respondents was measured with the help of a schedule developed for the study. The individuals were scored based on the number of mass media exposed and also the extent of exposure. The extent of exposure was measured with a score of '2' for 'regularly', '1' for 'occasionally' and '0' for 'never'. The total score of each respondent was arrived by adding all the scores. The minimumand maximum scores were in the range of 0-18.The respondents were grouped into three categories usingquartile deviation based on the scores obtained.

S.No.	Category	Score
1.	Low mass media exposure	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium mass media exposure	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High mass media exposure	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.12. Decision Making Ability (X_{12})

Decision making ability was operationally defined as the process of making choices among possible alternatives by the youth with regard to farming. Decision making was measured by using the schedule prepared for the study. The responses given were rated on three point continuum viz.,'self decision', 'after consulting family members' and 'after consulting family members, fellow farmers &others'with scores 3, 2 and 1 respectively.

S.No.	Category	Score
1.	Low decision making ability	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium decision making ability	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High decision making ability	Above upper quartile (Q_3) (75^{th}percentile)

The maximum possible score was 24 and minimum was 8. Based on the scores obtained, the respondents were categorised into three categories by using quartile deviation.

3.3.1.13 Innovativeness (X_{13})

Innovativeness was operationalised as the degree to which youth in farming adopt new ideas relatively earlier than other members in the social system. This was measured with the help of schedule developed for the study. It consisted of six items out of which five were positive and one was negative.Each item was rated on five point continuum *i.e.* strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2 and 1 respectively for positive item, while it was 1, 2, 3, 4 and 5 for negative items. The maximum possible score was 30 and minimum was 6. The respondents were grouped into three categories using quartile deviation based on the scores obtained.

S. No.	Category	Score
1.	Low innovativeness	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium innovativeness	Between Q_1 and Q_3 (25^{th}&75^{th} percentile)
3.	High innovativeness	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.14ScientificOrientation (X_{14})

It was operationlized as the degree to which youth in farming were oriented towards scientific method in decision making in his farm. It was measured with the help of a scale developed by Raja (1998) with suitable modifications. This scientific orientation has six statements out of which one statement was negative and other five were positive.

The response continuum was strongly agree, agree, undecided, disagree and strongly disagree with weightage of 5, 4, 3, 2 and 1 for positive statements and 1, 2, 3, 4 and 5 for negative statements. The scoring of

respondents was done by summing up response weightages for each statement in the scale. The maximum possible score was 30 and minimum was 6. Based on the total scores obtained by the respondents on scientific orientation, they were grouped into three categories by using quartile deviation.

S.No.	Category	Score
1.	Low scientific orientation	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium scientific orientation	Between Q_1 and Q_3 (25^{th}&75^{th} percentile)
3.	High scientific orientation	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.15 Management Orientation (X_{15})

Management orientation was operationalized as the degree to which a farmer was oriented towards scientific farm management comprising of planning, production, and marketing functions of his farm enterprise. It was measured with the help of a scale developed by Samantha (1977) with suitable modifications. The scale consists of 3 sub sections viz.,planning orientation with 3 positive and 3 negative statements, production orientation with 1 negative and 5 positive statements, and marketing orientation with 3 positive and 3 negative statements.

S. No.	Category	Score
1.	Low management orientation	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium managementorientation	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High managementorientation	Above upper quartile (Q_3) (75^{th} percentile)

The responses given were rated on a three point continuum viz., agree, undecided and disagree with scores 2, 1 and 0 for positive statements and 0, 1 and 2 for negative statements. The maximum possible score was 36 and minimum was 0. Based on the total scores obtained by the respondents on

management orientation, they were grouped into three categories by using quartile deviation.

3.3.1.16AchievementMotivation (X_{16})

Achievement motivation was operationalisedas the need to achieve a task and try to excel others in adoption of recommended package of practices. It was measured with the help of scale developed by Rani (1985). The scale consisted of 8 statements of which 6 were positive and 2 were negative. The responses given were rated on a three point continuum viz., agree, undecided and disagree with scores 2, 1 and 0 for positive statements and 0, 1 and 2 for negative statements.

The maximum possible score was 16 and minimum was 0. Based on the total scores obtained by the respondents on achievement motivation, they were grouped into three categories by using quartile deviation.

S.No.	Category	Score
1.	Low achievement motivation	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium achievement motivation	Between Q_1 and Q_3 (25^{th}&75^{th} percentile)
3.	High achievement motivation	Above upper quartile (Q_3) (75^{th}percentile)

3.3.1.17 Economic Orientation (X_{17})

It was operationalised as the extent to which an individual was oriented towards achieving the maximum returns such as maximization of farm profits.It was measured with the help of scale developed by Supe (1969). The scale consisted of 6 statements of which 5 were positive and 1 was negative.The response continuum was strongly agree, agree, undecided, disagree and strongly disagree with weightage of 5, 4, 3, 2 and 1 for positive statements and 1, 2, 3, 4 and 5 for negative statement, respectively. The scoring of respondents was done by summing up response weightages for each statement in the schedule. The maximum possible score was 30 and

minimum was 6. The respondents were grouped into three categories using quartile deviation based on the scores obtained.

S. No.	Category	Score
1.	Low economic orientation	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium economic orientation	Between Q_1 and Q_3(25^{th}&75^{th} percentile)
3.	High economic orientation	Above upper quartile (Q_3) (75^{th} percentile)

3.3.1.18 Risk Orientation

It refers to the degree to which the respondent was oriented towards risk, uncertainty and has the courage to face the problems in farming. Risk orientation was measured with the help of the scale developed by Supe (1969) with suitable modifications. The scale consisted of six statements out of which 5 were positive and one was negative.The response continuum was agree, undecided and disagree with weightage of 2, 1 and 0 for the positive statements and 0, 1 and 2 for the negative statements respectively.

S. No.	Category	Score
1.	Low risk orientation	Below lower quartile (Q_1) (25^{th} percentile)
2.	Medium risk orientation	Between Q_1 and Q_3 (25^{th}&75^{th} percentile)
3.	High risk orientation	Above upper quartile (Q_3) (75^{th}percentile)

The maximum possible score was 12 and minimum was 0.Based on the total score obtained by the respondents on risk orientation, they were grouped into three categories by using quartile deviation.

Further, an attempt was also made to find out whether there is significant association between independent variable and the region. It was analyzed by using chi-square test.

3.3.2 Dependent Variable–Attitude of Youth towards Farming

Attitude

Attitude was defined as "an enduring organization of motivational, emotional, perceptual and cognitive process with respect to some aspect of the individuals world." (Kreth and Crutchfield,1948).

Attitude was defined as "the degree of positive or negative affect associated with some psychological object." (Thurstone,1946).

Attitude was defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor."(Eagly and Chaiken, 1993).

An attitude is "a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols." (Hogg and Vaughan 2005).

Farming

Farming is defined as 'purposeful work through which elements in nature are harnessed to produce plants and animals to meet the human needs. It is a biological production process, which depends on the growth and development of selected plants and animals within the local environment.

Youth in Farming

Youth in farming was operationalised as, a farmer who was been in farming since three years and having below 35 years of age.

Attitude of Youth towardsFarming

For the present study, attitude of youth towards farming was operationalised as the psychological disposition of the rural youth about farming in varying degrees of favourableness or unfavourableness.

3.3.2.1 Selection of Attitude Scale Construction Procedure

Different types of scales were developed by Thurstone, Likert, Guttman, Bogardus and several others that differ markedly in type and method

of construction to measure the attitude. The method of Summated Rating scale developed by Likert (1932) was used in this study to construct an attitude scale to measure the attitude of youth towards farming. This method was chosen for developing the attitude scale due to following reasons

- Hall (1934) stated that, this method will give high reliability coefficient even with the less number of statements.
- Rundquist and Sletto (1936) affirmed that this method is less laborious,saves time and money.
- In this scale each statement was judged on a five point continuum to get more information about the statement.

3.3.2.2 Procedure Followed for the Construction of Attitude Scale to Measure the "Attitude of Youth towards Farming"

The following steps were carried out to construct the scale to measure the attitude of youth towards farming (Edwards,1969andChandrakandan*et al.*2000).

I. Definition of Universe

The first step in the scale construction is to define the general area of universe of content. The class of all possible statements that could be made about a given psychological object is often called a universe. In the present study all the possible statements about 'Attitude of youth towards farming' represent the universe.

II. Collection of Statements

In this step, a number of statements about "attitude of youth towards farming" were gathered from books, magazines, newspapers, research articles, journals, academic attainments, expertise of intellectuals in extension, research, teaching, farmers, self intuitions and own experiences. From all these sources a tentative list of 60 statements belonging to attitude of youth towards farming were prepared keeping in view of the applicability of statements suited to the area of study.

III. Editing of Statements

The 60 statements collected were carefully edited by using various informal criteria suggested by Wang (1932), Chave (1929), Likert (1932), Bird (1940) Edwards (1941),Thurstone(1946),and Kilpatrick (1948). The following criteria were used to edit the 60 draft statements.

- Avoided statements that refer to the past rather than to the present.
- Avoided statements that are factual or capable of being interpreted as factual.
- Avoided statements that may be interpreted in more than one way.
- Avoided statements that are irrelevant to the psychological object under consideration.
- Avoided statements that are likely to be endorsed by almost everyone or by almost no one.
- Selected the statements that are believed to cover the entire range of the affective scale of interest.
- Maintained the language of the statements simple, clear, and direct.
- Statements were made as short as possible, rarely exceeding 20 words.
- Each statement contained only one complete thought.
- Statements containing universals such as all, always, none and never often introduce ambiguity were avoided.
- Words such as only, just, merely and others of a similar nature were used with care and moderation was also carried out in writing statements.
- Almost all the, statements were framed in the form of simple sentences rather than in the form of compound or complex sentences.
- Avoided the use of words that may not be understood by those who are to be given the completed scale.
- Avoided the use of double negatives.

After editing, the 60 statements 14 statements were deleted, thus making a total of 46 statements.

IV. Testing the Statements for Relevancy

All the statements collected may not be relevant equally in measuring the attitude of youth towards farming. Hence the statements were subjected to scrutiny by judges to determine the relevancy and screening for inclusion in the final scale. For this purpose, the list of all the 46 statements were preparedin the form of questionnaire and was sent to 100 judges. The judges were requested to critically evaluate each statement for its relevancy to measure attitude of youth towards farming. They were requested to give their responses on a four point continuum viz., highly relevant, moderately relevant, slightly relevant and less relevant with scores 4, 3, 2 and 1. They were also requested to feel free to add some more statements, if they feel important and also delete unrelated statements.

The judges included the faculty and scientists working in Acharya N. G. Ranga Agricultural University, Extension Education Institute, Hyderabad, University of Agricultural Sciences, Bangalore, College of Agriculture, Pune, Central Agrciultural University, Meghalaya, Punjab Agricultural University, Ludhiana, VikramSimhapuri University, Nellore and also progressive farmers.

The responses obtained from judges were subjected to Standard Normal Deviatetest (z test). After giving the scores to the statements, ‘z’ values werecalculated for each statement. Finally, the grand ‘z’of all the 46 statements was obtained and ‘$\bar{z}$’ was calculated. All the statements with ‘z’values above $\bar{z}$ (-0.013)were selected as the scalable statements of attitude of youth towards farming. The statements with ‘z’ values below ‘$\bar{z}$’ were eliminated. Thus, 34 statements out of 46 were selected through relevancy testing.The list of statements selected with their ‘z’values was given in table 3.3.

Table 3.3 Selection of attitude statements based on relevancy test

S. No.	Statements	'z' value
1.	Advanced technologies encourage youth to flourish in farming	0.19#
2.	I want to be an elite person in society through farming	0.60#
3.	There is less opportunity for career development in farming*	0.78#
4.	I prefer to be a farmer than as an employee	0.84#
5.	As there is no other means of income I am forced to do farming*	0.91#
6.	For highly educated youth it is unwise to do farming*	0.31#
7.	I enjoy the relationship with nature through farming	0.11#
8.	Farming is not viewed as a respectable profession in the society*	0.08#
9.	I will not encourage my children to be in farming*	0.38#
10.	Access to inputs and marketing is poor in farming*	0.91#
11.	Farming is cumbersome compared to other occupations*	0.11#
12.	I feel proud to be as part of profession feeding the nation	0.43#
13.	Farming will give less scope for higher education accessibility to our children*	0.83#
14.	The present environment is more hopeful for farming	0.31#
15.	I feel farming is more profitable than any other occupation	0.21#
16.	If you choose farming, you have to be ready to face the adverse effects*	0.04#
17.	I am willing to seek for further knowledge and skills in farming	0.43#
18.	I am ready to invite innovations in farming	0.44#
19.	I work hard and smart to make farming worthy	0.95#
20.	I can overcome any type of hardships in farming	0.48#
21.	I don't want to continue in farming further*	0.52#

Table 3.3 (cont.).

22.	Farming leads to increasing standard of living	0.52#
23.	Shortage of resources is major limiting factor in farming*	0.06#
24.	Farming is more stressful*	0.18#
25.	People who are able to take risks in farming are successful	0.06#
26.	It is pleasure to lead a life in rural areas by farming	0.35#
27.	I have my own vision to develop my farm	2.36#
28.	Climate vagaries are the major threat for farming*	2.20#
29.	For smallholders farming is not profitable *	1.52#
30.	Farming gives us good reputation in society	0.91#
31.	Farming is a major source of livelihood for rural people	1.26#
32.	Low education qualification will force the youth to take up farming*	0.38#
33.	Farming is only a type of tradition for rural people*	2.51#
34.	I feel myself productive being involved in farming	2.36#
35.	I perform different operations in farming with lot of interest	-1.05
36.	Intelligent people will persist in the farming with a hope of success	-0.25
37.	I will encourage others to engage in farming	-1.57
38.	As a hereditary occupation I am doing farming for livelihood*	-2.56
39.	I have freedom to work in my own way in farming	-1.44
40.	I do experiments to improve my farming	-0.99
41.	One should have passion towards farming to practice it	-0.90
42.	It is my privilege to sustain in farming	-0.46
43.	I will focus on economic gains rather than productivity in farming	-1.23
44.	I am in doldrums due to troubles in farming*	-2.31
45.	I prefer to take risks in farming at any cost	-0.68
46.	The existing farm amenities are not enough for farming*	-0.44

Note- * Negative Statements#The statement with z value more than $\bar{z}$ value (-0.013)

V.Treating the statements with Likert's Summated Rating Technique of Scale Construction

In this step, the34 statements selected through relevancy test were given to 100 youth in farming from a non sample area and were asked to indicate their responses on a five point continuum viz., strongly agree (SA), agree (A), undecided (UD), disagree(DA) and strongly disagree (SDA) with 5,4,3,2 and 1 for positive statements and vice-versa for negative statements. After receiving the responses from the respondents, the sum of the scores of all statements given by each respondentwas calculated and the respondents were arranged in descending order based on the sum of the scores obtained for all the statements. Then the top 25 percent of the respondents with the highest scores and the bottom 25 percent of the respondentswith the lowest scores were considered as criterion groups to evaluate individual statements. The middle 50 percent of the respondents were deleted for further analysis. The top 25 percent was considered as high group and bottom 25 percent was considered as low group to calculate the critical ratio*i.e.* 't' value for each statement. The calculated 't' value for each statement will measure the extent to which the statementdifferentiates between the respondents of high group and low group.The 't' values were calculated by using the formula suggested by Edwards (1969).The 't' value for each statement was calculated by using the formula.

$$t = \frac{\left(\overline{X}_H - \overline{X}_L\right)}{\sqrt{\sum\left(X_H - \overline{X}_H\right)^2 + \sum\left(X_L - \overline{X}_L\right)^2 / n(n-1)}}$$

where,

$\overline{X}_H$ = Mean score on a given statement for the high group

$\overline{X}_L$ = Mean score on a given statement for the low group

$\Sigma\left(X_H - \overline{X}_H\right)^2$ = $\Sigma X_H^2 - \frac{\Sigma\left(X_H\right)^2}{n_H}$

$\Sigma\left(X_L - \overline{X}_L\right)^2$ = $\Sigma X_L^2 - \frac{\Sigma\left(X_L\right)^2}{n_L}$

$\overline{X}_H$ = $\frac{\Sigma X_H}{n_H}$

$\overline{X}_L$ = $\frac{\Sigma X_L}{n_L}$

n = $n_L = n_H$

Table 3.4Selection of final attitude statements based on 't' values

S. No.	Statements	't' value
1.	Advanced technologies encourage youth to flourish in farming	4.13#
2.	I work hard and smart to make farming worthy	4.08#
3.	For highly educated youth it is unwise to do farming*	4.04#
4.	I am willing to seek for further knowledge and skills in farming	2.89#
5.	Farming will give less scope for higher education accessibility to our children*	2.44#
6.	I prefer to be a farmer than as an employee	2.39#
7.	Farming leads to increasing standard of living	2.33#
8.	Access to inputs and marketing is poor in farming*	2.19#
9.	As there is no other means of income I am forced to do farming*	2.14#
10.	Shortage of resources is major limiting factor in farming*	2.05#
11.	Farming is cumbersome compared to other occupations*	2.04#
12.	I feel proud to be as part of profession feeding the nation	2.04#
13.	I don't want to continue in farming further*	2.03#
14.	I will not encourage my children to be in farming*	2.02#
15.	I am ready to invite innovations in farming	1.94#
16.	I want to be an elite person in society through farming	1.91#
17.	There is less opportunity for career development in farming*	1.86#
18.	If you choose farming, you have to be ready to face the adverse effects*	1.84#
19.	Farming is not viewed as a respectable profession in the society*	1.82#
20.	Farming is more stressful*	1.81#
21.	The present environment is more hopeful for farming	1.80#

Table 3.4 (cont.).

22.	I feel farming is more profitable than any other occupation	1.80#
23.	I can overcome any type of hardships in farming	1.80#
24.	I enjoy the relationship with nature through farming	1.78#
25.	Low education qualification will force the youth to take up farming*	1.54
26.	Farming gives us good reputation in society	1.50
27.	Farming is a major source of livelihood for rural people	1.21
28.	I feel myself productive being involved in farming	0.99
29.	Farming is only a type of tradition for rural people*	0.79
30.	It is pleasure to lead a life in rural areas by farming	0.72
31.	For smallholders farming is not profitable *	0.71
32.	Climate vagaries are the major threat for farming*	0.66
33.	People who are able to take risks in farming are successful	0.56
34.	I have my own vision to develop my farm	0.48

Note- * Negative Statements #The statement with 't' values more than 1.75

After computing 't' values for all the 34 statements, they were arranged in the order of highest 't' value to lowest 't' value. The statements with 't' values more than 1.75 were selected for the final attitude scale. Thus out of 36 statements, 24 statements with 't' value more than 1.75 were selected in the attitude scale and are presented in the table 3.4.

The final attitude scale to measure the attitude of youth towards farming comprised of 24 statements, out of which were 12 positive statements and 12 negative statements measured on a five point continuum viz., strongly agree (SA), agree (A), undecided (UD), disagree(DA) and strongly disagree (SDA) with 5,4,3,2 and 1 for positive statements and vice-versa for negative statements as shown in the table 3.5.

Table 3.5 Scale to measure attitude of youth towards farming

S. No.	Statement	Measurement				
		SA	A	UD	DA	SDA
1.	Advanced technologies encourage youth to flourish in farming					
2.	I want to be an elite person in society through farming					
3.	There is less opportunity for career development in farming*					
4.	I prefer to be a farmer than as an employee					
5.	As there is no other means of income I am forced to do farming*					
6.	For highly educated youth it is unwise to do farming*					
7.	I enjoy the relationship with nature through farming					
8.	Farming is not viewed as a respectable profession in the society*					
9.	I will not encourage my children to be in farming*					
10.	Access to inputs and marketing is poor in farming					
11.	Farming is cumbersome compared to other occupations*					
12.	I feel proud to be as part of profession feeding the nation					
13.	Farming will give less scope for higher education accessibility to our children*					
14.	The present environment is more hopeful for farming*					
15.	I feel farming is more profitable than any other occupation					
16.	If you choose farming, you have to be ready to face the adverse effects*					
17.	I am willing to seek for further knowledge and skills in farming					
18.	Shortage of resources is major limiting factor in farming*					

(Table 3.5 cont.).

19.	I am ready to invite innovations in farming					
20.	I work hard and smart to make farming worthy					
21.	I can overcome any type of hardships in farming					
22.	I don't want to continue in farming further*					
23.	Farming leads to increase in standard of living					
24.	Farming is more stressful*					

*** Negative Statement**

VI. Testing the Reliability of the scale

A scale is reliable when it will consistently produce the same results when applied on the same sample (Goode and Hatt, 1952). For testing the reliability, split half method was employed. The attitude scale of 24 statements was distributed to thirty youth in farming of non sample area for their responses.

After getting back the responses, the scale was divided into two halves, all odd statements into one half and all even statements into another. Then the co-efficient of reliability was calculated between the two halves. The correlation coefficient for both the sets was worked out. The correlation coefficient (r=0.84) was significant at 0.01 level indicating the attitude scale was highly suitable for administration to the youth in farming.

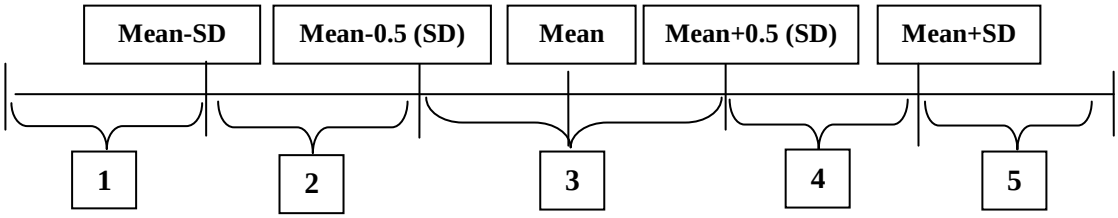
VII.Testing the Validity of the scale

The validity of the scale on attitude of youth towards farming was obtained through content validity by taking the judges opinion. The statements selected for the scale were evaluated individually and as a whole by the judges. These were again checked by experts in Acharya N.G. Ranga Agricultural University for their relevance and coverage. As the content of the attitude scale was borne out by the method of collecting statements within the universe of attitude of youth towards farming, it may reasonably be assumed

that the attitude of youth towards farming scale has content validity. The final standardized scale to measure attitude of youth towards farming (table 3.5.) was used for the present investigation.

3.3.2.3 Administration of the Attitude Scale to Measure "Attitude of Youth towards Farming

Attitude of youth towards farming was measured with the help of five point scale developed for the study. The final scale selected with 24 statements were administered to the 240 sampled youth in farming. They were requested to give responses to each statement in terms of their own degree of agreement or disagreement on a five point continuum. Each statement of scale was provided with five point continuum viz., strongly agree (SA), agree (A), undecided (UD), disagree (DA), strongly disagree (SDA) with scores of 5,4,3,2 and 1 respectively for positive statements and 1,2,3,4 and 5 for negative statements. The total score of the respondent on the scale was obtained by summing up the scores of all the statements in the scale. The possible minimum and maximum score was 24 and 120. The respondents were grouped into the following five categories based on the scores obtained by each of them duly following mean and standard deviation.



S. No.	Category	Score range
1.	Highly Unfavourable	Below Mean-SD
2.	Moderately Unfavourable	Between Mean-SD and Mean-0.5 (SD)
3.	Neutral	Between Mean-0.5 (SD)and Mean+0.5(SD)
4.	Moderately Favourable	Between Mean+0.5(SD)and Mean+SD
5.	Highly Favourable	Above Mean+SD

3.4 Different Combinations of Farm Enterprises Followed by the Youth and their Contribution to Net Income

An attempt was made on different combinations of farm enterprises being followed by youth and theirperformance as well as their sources of income in farming.

3.4.1Different Combinations of Farm Enterprises being Followedby the Youth in Farming

It was operationalisedasdifferent farm enterprises being followed by youth in their farming as a sole or combination of enterprises at the time of investigation. There were seven farm enterprises viz.,Agriculutre (A),Vegetable (V),Orchard (O),Dairy (D),Sheep (S), Poultry (P) and Plantation (PL) were in practice by the respondents as a sole orin different combinations. All Combinations were analyzed in terms of their extent of distribution among the youth in farming by using frequency and percentage.

S. No.	Sole and Combination of farm enterprises	S. No.	Sole and Combination of farm enterprises
1.	A+D	15.	A+V+O+PL
2.	A	16.	V+D
3.	A+D+P	17.	A+O+D+P
4.	A+V	18.	A+V+O
5.	A+P	19.	A+V+P
6.	A+S	20.	A+V+O+D
7.	A+D+S	21.	A+V+D+S
8.	A+O+D	22.	A+V+D+P
9.	A+O	23.	A+V+O+D+P
10.	A+V+D	24.	V+O
11.	A+D+S+P	25.	V+O+PL
12.	V	26.	V+S+P
13.	O	27.	V+O+D+P+ PL
14.	A+S+P	28.	O+D

3.4.2 Analysis of Individual Farm Enterprises in terms of their Distribution as a Single Entity

All the sevenexisting farm enterprises viz., Agriculutre (A), Vegetable (V), Orchard (O), Dairy (D), Sheep (S), Poultry (P) and Plantation (PL) were followed by youth in farming.The farm enterprise followed by the majority of the youth was identified and arranged accordingly using frequency and percentage.

3.4.3 Analysis of Different Combinations of Farm Enterprises among the Youth in Farming based on theirFarm Size

The distribution of all the 28 combinations of enterprisesamong the youth in farming based on their different land holdingswere analyzed by using frequency and percentage.

3.4.4 Contribution of Different Farm Enterprises to the Net Income (NI) of the Youthin Farming

The net income was operationally defined as the income obtained after subtracting the cost of cultivation/raising an enterprise from the gross income obtained from that concerned farm enterprise. The net income gained by all the youth from different enterprises was obtained using a schedule developed for the study. The total income was obtained by summing up the net income earned from different enterprises for all the 240 respondents. The contribution of all the seven different enterprises towards net income of respondents was represented by using frequency and percentage.

3.4.5 Proportion of Average Net Income(NI) from each enterprise in each combination

Different farm enterprises and different combinations of farm enterprises were followed by the youth in farming. They were identified and their contribution to net income was also measured using the schedule prepared for the study. The proportion of net income (NI) from each enterprise in each combination was calculated by using frequency and percentage.

3.5 Perception of Youth towards Different Farm Enterprises

Perception of youth towards different farm enterpriseswas operationalised as the sensory interpretation of different farm enterprises with the help of selected indicators. A total of ten indicators viz., profitability, investment, labour intensity, complexity of management, by-product utilization, available subsidies, input availability, risk involvement, marketing opportunities and compatibility were identified to measurethe perception of youth towards different farm enterprises. Each indicator was operationalisedfor better comprehension by the youth in farming.

- **Profitability**

It was operationally defined as the degree of relative generation of net income per unit area of a farm enterprise.

- **Investment**

Investment was operationally defined as the degree of relative expenditure incurred to produce a unit of farm produce.

- **Labour intensity**

It was operationally defined as the degree of relative involvement of labour in a farm enterprise.

- **Complexity of management**

It was operationalised as the degree of relative difficulty in handling the different operations in a farm enterprise.

- **By-product utilization**

It was operationally defined as the degree of relative utility of by-products obtained from a farm enterprise to another.

- **Available subsidies**

It was operationalised as the degree of relative availability of subsidies for different inputs of a farm enterprise.

- **Input availability**

It was operationalised as the degree of relative availability of needed inputs of a farm enterprise.

- **Risk orientation**

Risk orientation was operationalised as the degree of relative risk involved in terms of investment and returns of a farm enterprise.

- **Marketing opportunities**

It was operationalised as the degree of relative scope and opportunities for exports and domestic marketing of farm produce.

- **Compatibility**

Compatibility was operationally defined as the degree of relative sustainability of a farm enterprise with situational and socio-economic variables.

The respondents were asked to rate all the ten indicators of each enterprise followed by them at the time of investigation on a five point continuum viz., very high, high, moderate, low and very low with weightage of 5, 4, 3, 2 and 1 for positive indicators and vice-versa for negative indicators. The scoring of respondents was done by summing up response weightages given for ten indicators of farm enterprises being followed by the youth. Then the mean score for each indicator of all seven enterprises was obtained. After obtaining the mean scores of all indicators for all enterprises, they were ranked based on the mean score.

3.6 Problems as Percievedby the Youth in Farming and their Suggestions to overcome the problems.

For the present study the ‘problem’ was operationalised as the unsatisfactory situations in farming as perceived by the youth.Based on the exhaustive review of literature, interaction with youth in farming during pretesting and by taking experts opinion, a total of 30 problems were

identified and arranged under four categories viz.,ten production linked, sixmarket linked, eightfinance linked and sixinformation& communication linked problems were included to analyze the problems.The youth in farming were asked to rate each problem on a three point continuum viz., major, minor and not a problem with the scores of 2, 1 and 0 respectively.Then the ranking was given to the problems under each category based on the magnitude of mean scores obtained.

'Suggestion'was operationally defined as the requirements expressed by the youth in farming in order to fulfill their needs. Anopen ended schedule was developed to measure the suggestions. The suggestions as expressed by the respondents were keenly observed and framed into ten major suggestions. They were measured using frequency and percentage. Finally the suggestions were ranked from one to ten based on the descending order of frequencies obtained.

3.7 Devices and Methods Used for Data Collection

3.7.1 Interview Schedule

The device used for collecting data in the present study was interview schedule. Keeping in view of the specific objectives and different variables included in the study, a structured and comprehensive interview schedule was developed in consultation with experts in the field of agriculture. Most of the items included in the interview schedule were structured questions which were simple and easy to reply.

3.7.2 Pretesting of Interview Schedule

Before giving a final shape to the interview schedule the schedule was pretested with 30 youth who were actively participating in agricultural operations in non sample area with identical situation.

3.7.3 Establishing rapport

Necessary rapport with the respondents was very important step in the present research study. First few days were devoted to get acquainted with the

respondents selected for the studywith the help of extension personnel, village secretaries and local leaders. Later the investigator made informal and friendly visit to the respondents. In the light of difficulties encountered during pretesting, the interview schedule was modified and made suitable in consultation with scientists and officials. The final interview schedule prepared with suitable modifications was appended in Appendix I.

3.7.4 Method of data collection

The field investigation was carried out during the year 2015. The data was collected by administering the structured interview schedule to the respondents. The questions were asked in local language *i.e.* Telugu. The youth in farming were personally interviewed by the investigator which helped in getting first hand information and gave an opportunity to observe the respondents personally. The response of each respondent was recorded in the interview schedule with due care. Every effort was made to check and cross check the data collected from all the sample respondents.Friendly atmosphere was maintained during the interview to see that the respondents were at ease and expressed their opinions freely, fairly and frankly.

3.7.5 Preparation of report

The data collected through interview schedule was coded, tabulated, analyzed and presented in tables to make the findings meaningful and easily understandable.

3.7.6 Data Analysis Procedure

The data collected from all the respondents were coded and tabulated. Then the data were subjected to different statistical tests keeping in view the objectives of the study. The findings emerged out of the data analysis were interpreted, discussed and necessary inferences and conclusions were drawn.

3.8 Statistical Tools and Procedures Followed

Entire analysis of data was carried out using Microsoft Office Excel and SPSS software. The following statistical tests and measures were used for the analysis of the data.

3.8.1Quartile Deviation (QD)

3.8.2 Arithmetic mean ($\overline{X}$)

3.8.3 Standard deviation (σ)

3.8.4 Standard Normal Deviate Test (z test)

3.8.5 Frequency and percentage

3.8.6 Pearson's correlation coefficient (r)

3.8.7 Chi-square test ($\chi 2$)

3.8.1Quartile Deviation (QD)

In quartile deviation the quartiles (Q_1, Q_2 and Q_3) divide the data into four parts. First part of the data is lessthan Q_1, second part of the data lies between Q_1 and Q_2 and the third part of the data is between Q_2 and Q_3 and fourth/last part of the data is greater than Q_3. Q_1 is called lower quartile and Q_3 is called the upper quartile.

Quartile deviation = $(Q_3-Q_1)/2$

Second Quartile (Q_2) is also called the median because itdivides the data into equal parts. It was used to find out the variation in the variables and for categorization of respondents.

3.8.2 Arithmetic Mean($\overline{X}$)

This was used to compare the respondents in respect of their dependent variable. The arithmetic mean is the sum of scores divided by the number of respondents.

$$\bar{x} = \frac{\Sigma x}{n}$$

where,

$\bar{x}$ = Mean

Σx = Sum of scores

n = Number of respondents

3.8.3 Standard Deviation (σ)

It is positive square root of the mean of the squared observation taken from arithmetic mean. It was used to find out the variation in the score in the dependent variable and for categorization of respondents.

$$\sigma = \sqrt{\frac{1}{n}\left(\Sigma x^2 - \frac{(\Sigma x)^2}{n} \right)}$$

where ,

σ = Standard Deviation

$\sum x^2$ = Sum of squares of observations

$[\sum x]^2$ = Square of sum of '*x*' values

n = Number of observations

3.8.4 Standard Normal Deviate Test (z test)

This test was computed to identify the statements that were relevant to the attitude of youth towards farming. The formula used for the purpose was given under

$$\bar{z} = \frac{\Sigma z_i}{n}$$

$$z_i = \frac{x_i - \bar{x}}{\sigma}$$

where,

x_i = Score for i^{th} statement

$\bar{x}$ = Mean score of all statements

n= Number of statements

σ = Standard deviation calculated on x_i values

3.8.5 Count and Percentage

Count and percentages were used to know the distribution pattern of respondents according to objectives under study. Percentages were used for standardization of sample size by calculating the number of individuals that would be under a given category, if the total number of cases were hundred. Count was represented by 'N' and percentage was represented by '%' in the results of the study.

3.8.6 Correlation Co-efficient (r)

It was calculated to test the relationship between certain independent variables and dependent variable. The formula used for the calculation of co-efficient of correlation is given below. The 'r' calculated value was compared with 'r' table value for (n-2) degree of freedom. If the 'r' calculated value was greater than or equal to 'r' table value, the null hypothesis was rejected, otherwise it was accepted and conclusions were drawn accordingly.

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sqrt{\sum x^2 - \frac{(\sum x)^2}{n}}\ \sqrt{\sum y^2 - \frac{(\sum y)^2}{n}}}$$

where,

r = Coefficient of correlation between x and y

Σx = Sum of scores of variables x

Σy = Sum of scores of variables y

Σx^2 = Sum of squares of variables x

Σy^2 = Sum of squares of variables y

(Σx^2) = Squares of sum of variables x

(Σy^2) = Squares of sum of variables y

Σxy = Sum of scores of variables x

n = Size of the sample

The ‘r’ calculated value was verified for its significance to use r table value for 5percent and 1 percent level of significance at (n-2) degrees of freedom. When the ‘r’ calculated value was equal or greater than the table value, the relationship between the selected variables was considered significant otherwise it was considered as non-significant.

3.8.7Chi-square test for independence of attributes (χ2)

Chi square is a statistical test used to test the association between two categorical variables.The Chi-square statistic (χ2) used for the study was under

$$\chi^2 = \sum_{i=1}^{n} \frac{(O_i - E_i)^2}{E_i}$$

where,

O_i = Observed frequencies

E_i = Expected frequencies

n = Number of cells (or classes)

Chapter – IV

Results & Discussion

Chapter IV

RESULTS AND DISCUSSION

This chapter emphasizes the findings of the investigation with reference to the objectives of the study. The data obtained were put through statistical analysis and meaningful conclusions were drawn based on the results. They are presented under different headings as follows:

4.1 Selected profile characteristics of youth in farming.

4.2 Attitude of youth towards farming.

4.3 Relationship between selected profile characteristics and the attitude of youth towards farming.

4.4 Different combinations of farm enterprises being followed by the youth and their contribution to net income.

4.5 Perception of youth towards different farm enterprises.

4.6 Problems as perceived by youth in farming and their suggestions to overcome the problems.

4.7 Strategy to retain youth in farming.

4.8 Empirical model of the study

4.1. Selected Profile Characteristics of Youth in Farming

It is very important to scan the profile of youth in farming as it influences their attitude towards farming. Keeping this in view, an attempt has been made to analyse the selected profile characteristics of the youth in farming.

4.1.1. Age

It could be seen from the table 4.1. and figure 4.1. that, more than half (57.08%) of the youth in all the three regions were found to fit in the upper young age, followed by 29.58 per cent in the middle young age. The remaining 13.34 per cent of the youth were in lower young age. The chi-square test of independence has shown $\chi 2=5.127$ and p=0.27, which means that the age distribution of youth in farming is not related to region.

Table 4.1 Distribution of youth in farming according to their age

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Lower young age (18-25 years)	11	13.75	7	8.75	14	17.50	32	13.34
2.	Middle young age (26-30 years)	25	31.25	20	25.00	26	32.50	71	29.58
3.	Upper young age (31-35 years)	44	55.00	53	66.25	40	50.00	137	57.08
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=30 SD=4								$\chi 2=5.127$ p =0.27	

The plausible reason for the above trend might be, relatively higher age group of youth might have settled in farming erstwhile and continuing in the same profession. On the other side the youth of lower age group still may be seeking higher education to choose their profession. The remaining youth might have chosen farming as a challenging alternative for their future career.

The findings of the present study were similar with the studies of Uddin *et al.* (2008), Donye *et al.* (2012) and Lyocks *et al.* (2013).

4.1.2 Education

The table 4.2. and figure 4.2. clearly depicted that, more than one-fourth (27.10%) of the youth in farming completed their college education. Slightly one-fourth each (23.30% and 24.60%) of the youth in farming had completed their middle school and high school education respectively. About 15.83 per cent of them were in 'can read and write' category followed by illiterates (9.17%).

Table 4.2 Distribution of youth in farming based on their education

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Illiterate	5	6.25	2	2.50	15	18.75	22	9.17
2.	Can Read and write	6	7.50	7	8.75	25	31.25	38	15.83
3.	Middle school	9	11.25	25	31.25	22	27.50	56	23.30
4.	High school	26	32.50	22	27.50	11	13.75	59	24.60
5.	College education	34	42.50	24	30.00	7	8.75	65	27.10
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
$\chi 2$ =61.186								p = 0.00	

Even though majority of youth were educated, few of them were illiterates and some of them were in 'can read and write' category due to lack of awareness on importance of education and available education facilities. As already the youth might have chosen farming as their main source of income, majority of them might not have shown interest in college education. The necessity of family earning might have directed the youth to enter in to farming. The overall trend revealed that the importance of education has been recognised by the youth in farming.

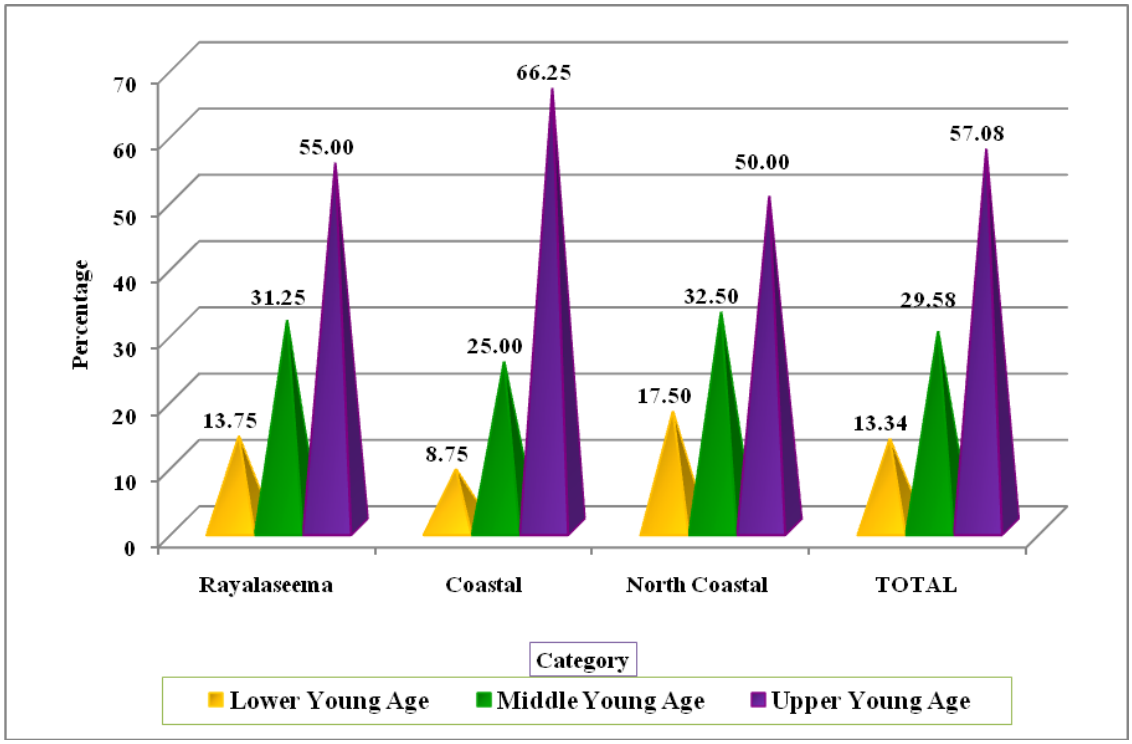


Figure 4.1. Distribution of youth in farming according to their age

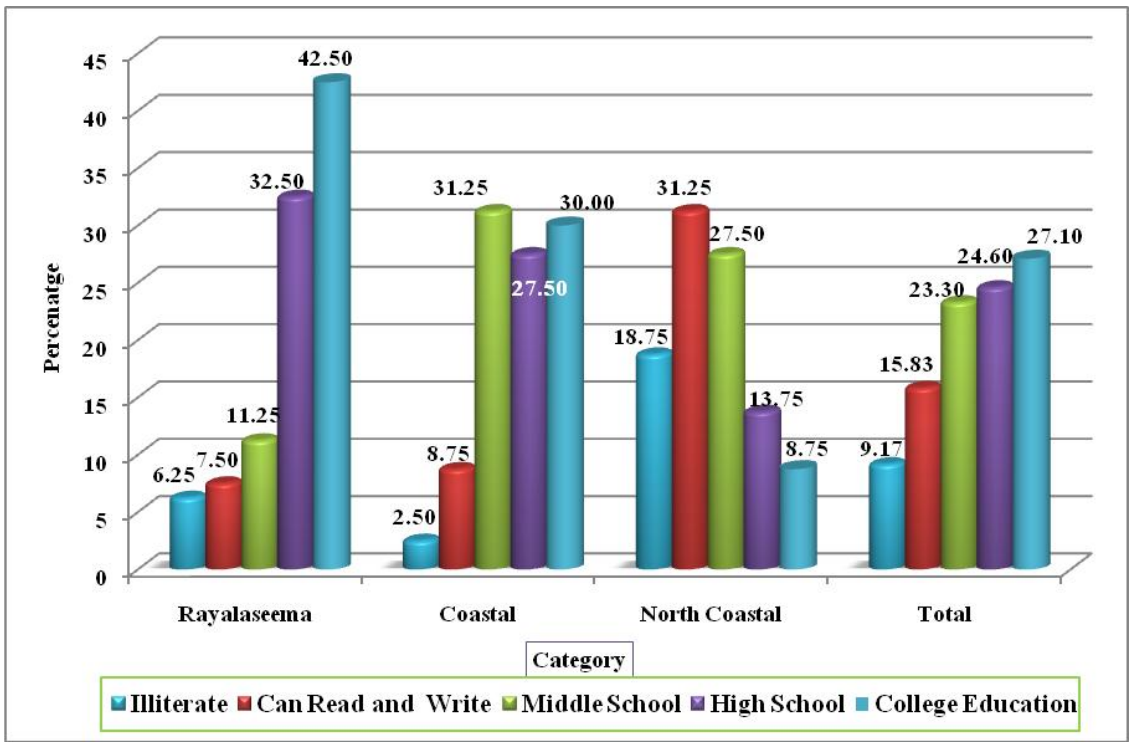


Figure 4.2. Distribution of youth in farming according to their education

It is also evident that, about 18.75 and 31.25 per cent of the youth in farming were illiterates and in 'can read and write' category respectively in North Coastal region. This is higher when compared to other regions. Nearly one-third (31.25%) of the Coastal youth had middle school education, followed by the other two regions. In case of Rayalaseema region, 32.50 per cent and 42.50 per cent of the youth had completed their high school and college education respectively. This proportion is higher than that of other two regions. The values of $\chi 2$ =61.186 and p=0.00 validated that, there was a significant association between region and education of youth in farming. This might be due to the differences in their standard of living. Low standard of living might have forced the youth to discontinue education in order to go for daily wage employment so as to meet the family requirements.

The results were in line with findings of Mosaee and Ommani (2011), Olaniyi *et al.* (2011), Anamica and Ravichandran (2014) and Viswanatha *et al.* (2014a).

4.1.3 Marital Status

An overview of table 4.3. and figure 4.3. indicated that, majority (90.00%) of the youth in farming were married and remaining 10.00 per cent of the youth in farming were unmarried.

Table 4.3. Distribution of youth in farming according to their marital status

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Married	70	87.50	71	88.79	75	93.75	216	90.00
2.	Unmarried	10	12.50	9	11.21	5	6.25	24	10.00
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
$\chi 2$ =1.944									p=0.37

The plausible reason for the above trend might be that, by virtue of age and the mean for shouldering family responsibilities ninety per cent of the youth got married. The remaining ten per cent might be pursuing higher education or might be too young to get married.

The 'chi-square' value (1.944) and 'p' value (0.37) confirmed that, there was no significant association between region and marital status of youth in farming.

The studies of Muhammad *et al.* (2009), Lyocks *et al.* (2013), Naamwintome and Bagson (2013) and Umunnakwe and Adedamola (2015) supported the present results.

4.1.4 Family Type

It could be elucidated from table 4.4. and figure 4.4. that, nearly two-third (62.92%) of the youth in farming were in nuclear family and remaining (37.08%) of them were in joint family.

Table 4.4. Distribution of youth in farming according to their family type

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Nuclear	42	52.50	49	61.25	60	75.00	151	62.92
2.	Joint	38	47.50	31	38.75	20	25.00	89	37.08
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
$\chi 2$ =8.82									p=0.01

This is an indication for social change in rural areas. Prioritised individual interests and commercial orientation of the people in rural areas might have encouraged the youth in farming to be an independent entity rather than to work as a member of joint family. Urban culture, modern technologies and the established education system might be the motivating factors to be in a nuclear family. Inspite of that, the traditional values and

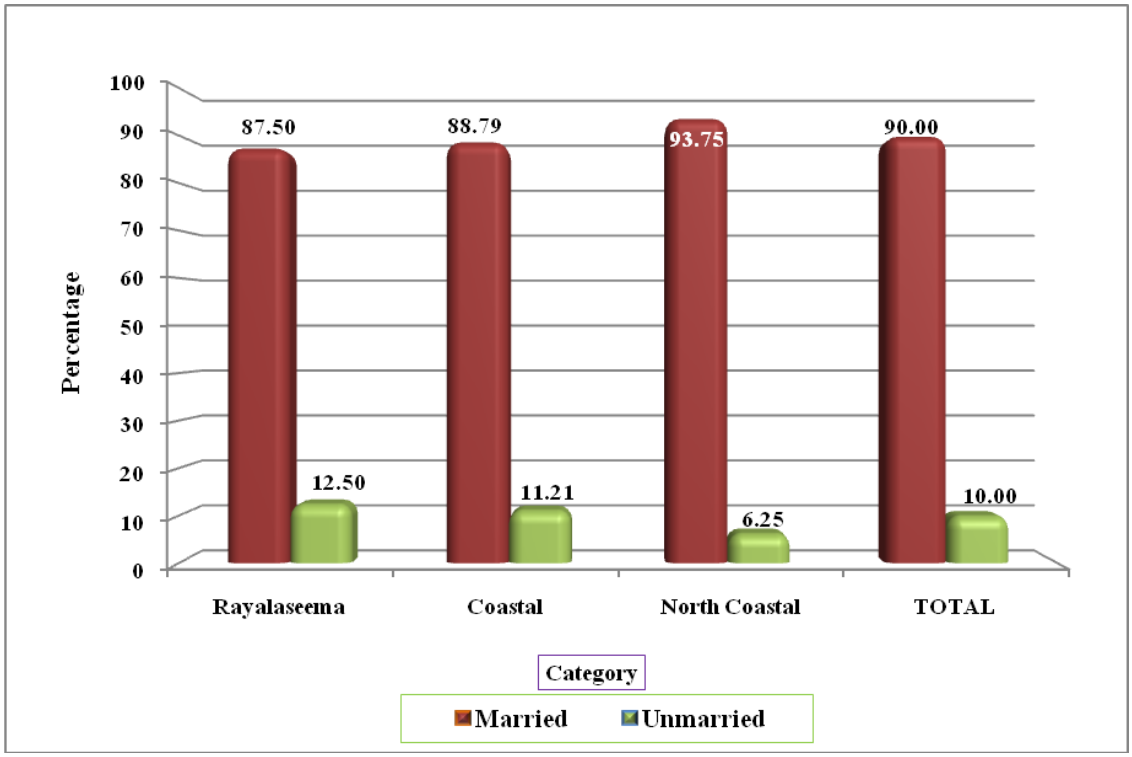


Figure 4.3. Distribution of youth in farming according to their marital status

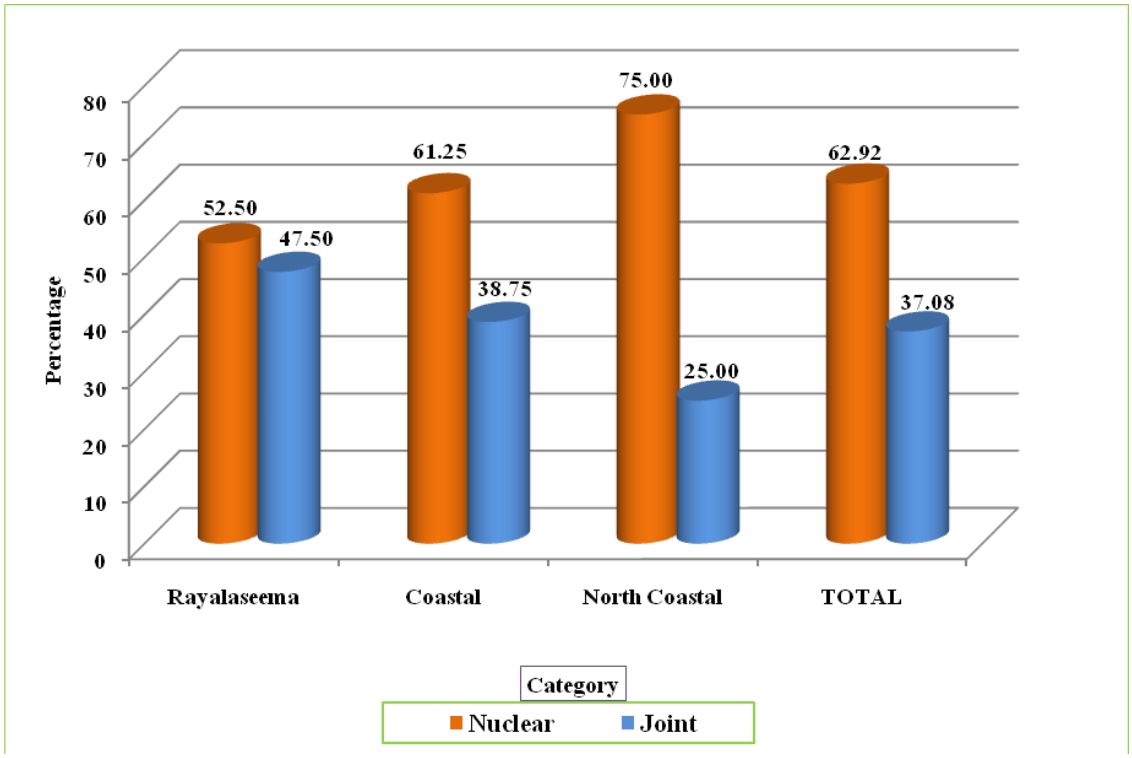


Figure 4.4. Distribution of youth in farming according to their family type

stipulated mores, taboos and rituals coupled with inevitable need for the presence of youth to support the dependent family members might have made them to lead life as a part of joint family.

The distribution of the youth in farming among different regions revealed that, majority (75.00%, 61.25% and 52.50%) of the youth were belonged to nuclear family in North Coastal, Coastal and Rayalaseema regions respectively. Whereas 25.00 per cent, 38.75 per cent and 47.50 per cent of the youth in farming were belonged to joint family in North Coastal, Coastal and Rayalaseema regions respectively. The 'chi-square 'value (8.82) and 'p' value (0.01) validated that, there was a significant association between region and respondent's family type. Inequalities in land holdings might have contributed to this trend.

The findings of the study were in conformity with the studies of Mohan and Reddy (2012), Viswanatha *et al.* (2014b) and Umunnakwe and Adedamola (2015).

4.1.5 Farming Experience

It is evident from the table 4.5. and figure 4.5. that, about 54.17 per cent of the youth in farming were with medium level of farming experience, followed by 28.75 per cent with low level of farming experience and only 17.08 per cent with high level of farming experience.

The youth in rural areas might have concentrated on higher studies instead of taking up of farming in their early stages of life. The above reason might have led to the late entry into farming by majority of youth. On the other side, the youth with discontinuation of studies and the dire need for the involvement in farming might have directed them to adopt farming.

The regional distribution informed that, slightly more than two-third (67.50%) of the youth were with medium level of farming experience in Rayalaseema followed by other regions. About 36.25 per cent of them were with low level of farming experience in Coastal region, followed by other

regions. About 31.25 per cent and equal per cent of the youth (10.00%) had high level of farming experience in North Coastal, Rayalaseema and Coastal regions individually. The 'chi-square' and 'p' value (21.88 & 0.00) respectively confirmed that, there exists a significant association between region and respondent's farming experience. The inequalities in education qualification in different regions might have led to the early entry into farming without acquiring higher education.

Table 4.5. Distribution of youth in farming according to their farming experience

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	18	22.50	29	36.25	22	27.50	69	28.75
2.	Medium	54	67.50	43	53.75	33	41.25	138	54.17
3.	High	8	10.00	8	10.00	25	31.25	33	17.08
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=10.88 S D=5.619				Q_1(25^{th} percentile)=6 Q_2 (median)=10 Q_3(75^{th} percentile)=15				$\chi 2$ = 21.88 p=0.00	

Similar findings were observed by Abdullahi *et al*. (2010), Olaniyi *et al.* (2011), Shute (2011) and Donye *et al.* (2012).

4.1.6 Farm Size

Table 4.6. and figure 4.6. depicted that, half (50.41%) of the youth in farming were marginal farmers, followed by 27.50 per cent small farmers, 14.17 per cent semi-medium farmers. Very meagre per cent (6.67% and 1.25%) of them were medium farmers and large farmers respectively.

Fragmentation of land holding might be the major reason for having more than three fourth of small and marginal farmers among the rural youth. The youth in farming from the families of land lords might have fell under

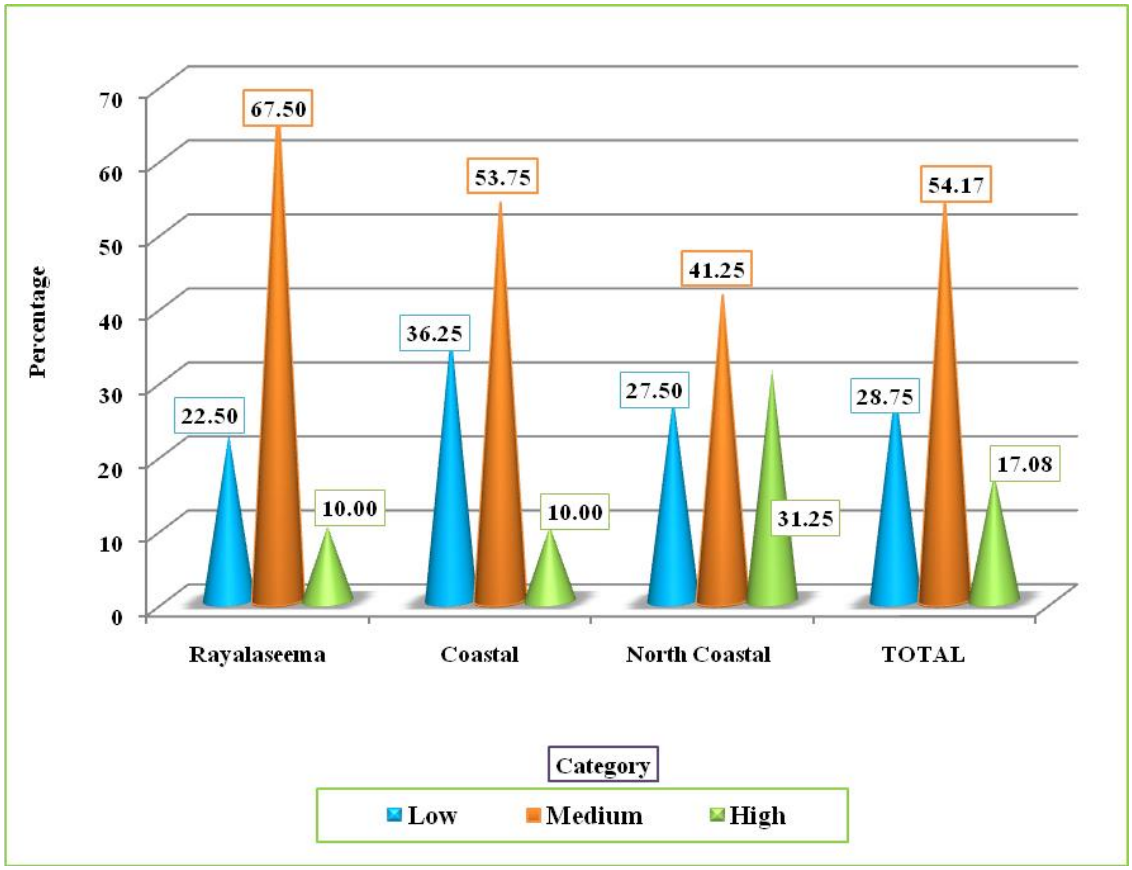


Figure 4.5. Distribution of youth in farming according to their farming experience

semi-medium, medium and large farmers. Own acquisition of land, as a result of farming output also might have contributed for the above trend.

Table 4.6. Distribution of youth in farming corresponding to their farm size

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Marginal (Below 1.00 ha)	24	30.00	39	48.75	58	72.50	121	50.41
2.	Small (1.01 to 2.00 ha)	26	32.50	24	30.00	16	20.00	66	27.50
3.	Semi-Medium (2.01 to 4.00 ha)	19	23.75	11	13.75	4	5.00	34	14.17
4	Medium (4.01 to 10.00 ha)	10	12.50	5	6.25	1	1.25	16	6.67
5	Large (10.01 ha & above)	1	1.25	1	1.25	1	1.25	3	1.25
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=1.82 SD=2.290								$\chi 2$ =34.50 p=0.00	

It could be observed from the table that, nearly three fourth (72.50%) of the youth in farming were marginal farmers in North Coastal depicting the higher proportion than the other two regions. About 32.50 per cent, 23.75 per cent and 12.50 per cent of the youth in farming were small, semi-medium and medium farmers in Rayalaseema region respectively and this is comparatively more than that of other two regions. Equal per cent (1.25%) of the youth in farming were large farmers in all the three regions. It is crystal clear from the ‘chi-square’ value (34.50) and ‘p’ value (0.00) that, there exists a significant association between region and size of land holdings with the youth. The findings of the present study were similar to that of Anamica and Ravichandran (2014), Kimaro *et al.* (2015) and Sarju *et al.* (2015).

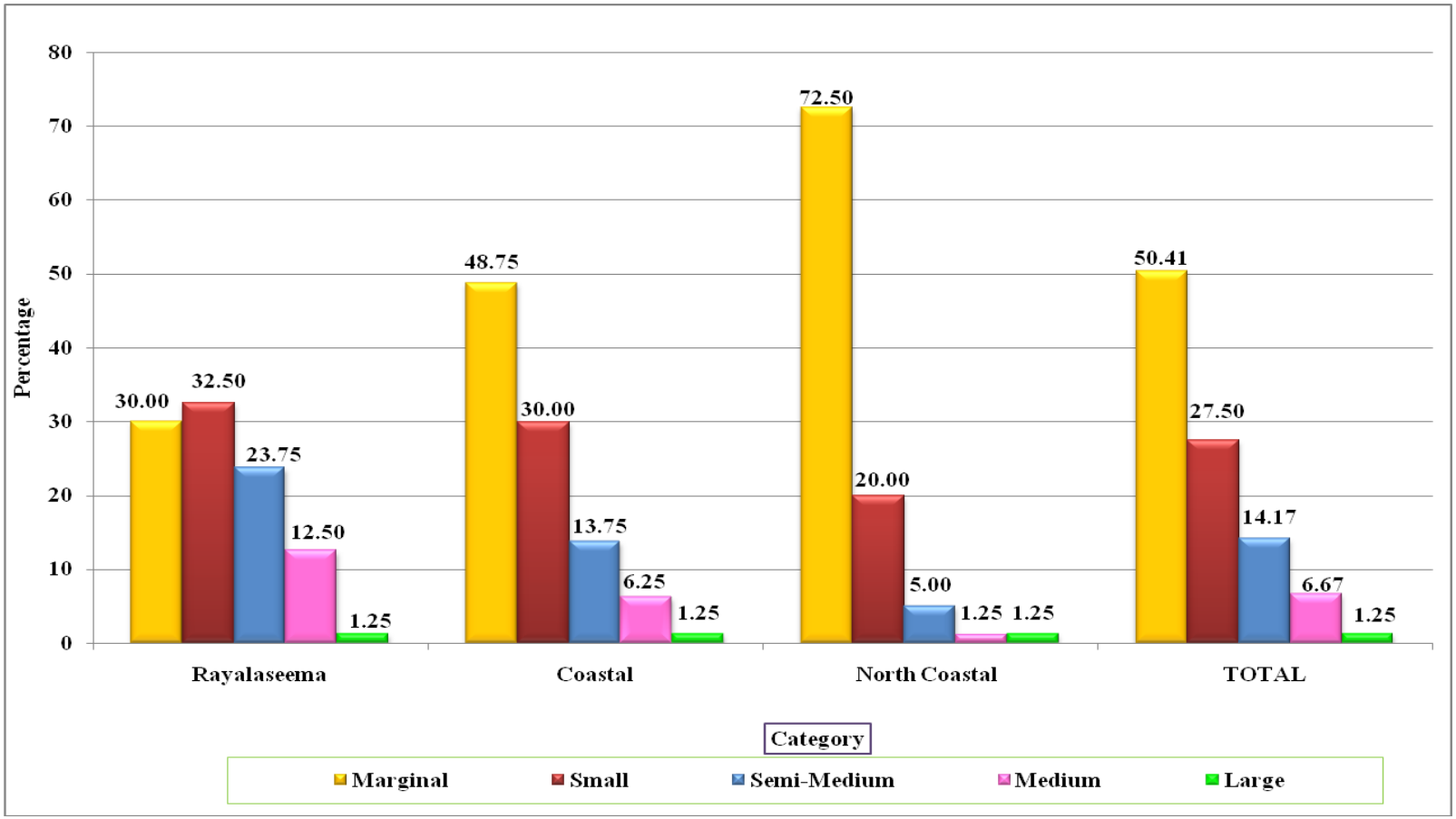


Figure 4.6. Distribution of youth in farming corresponding to their farm size

4.1.7 Material Possession

It is keenly observed from table 4.7. and figure 4.7. that, nearly half (49.58%) of the youth in farming were with medium level of material possession, followed by 32.92 per cent low level of material possession and only 17.50 per cent with high level of material possession.

The probable cause for this trend might be that, by virtue of ancestral property some of the youth in farming had high material possession. As majority of the youth in farming might be in budding stage of farming and might have put up only a limited period in farming and earned only a part of net worth of their life. Due to this they were able to procure only a limited number of house hold and farm items.

Table 4.7. Distribution of youth in farming based on their material possession

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	16	20.00	24	30.00	39	48.75	79	32.92
2.	Medium	50	62.50	37	46.25	32	40.00	119	49.58
3.	High	14	17.50	19	23.75	9	11.25	42	17.50
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=4.11 SD=1.283				Q_1(25^{th} percentile)=3 Q_2 (Median) =4 Q_3(75^{th} percentile)=5				$\chi 2$ =14.48 p=0.00	

It is also witnessed that, about 62.50 per cent, 20.00 per cent and 17.50 per cent of the youth were with medium, low and high level of material possession in Rayalaseema region respectively. In case of Coastal youth, 46.25 per cent were with medium, followed by low (30.00%) and high level (23.75%) of material possession individually. Whereas (48.75%, 40.00% and 11.25%) of them were with low, medium and high level of material possession respectively in North Coastal region. The ‘chi-square ‘value (14.48) and ‘p’ value (0.00) substantiated that, there was a significant

association between region and material possession of youth in farming. The established pattern of culture and social status might have contributed for the regional differences in terms of material possession.

Sangamesh (2006), Saha *et al*. (2010), Olaniyi (2013) and Roy *et al.* (2013) supported the findings of the present study.

4.1.8 Annual Income

An outlook from the table 4.8. and figure 4.8. inferred that, half (50.42%) of the youth in farming had medium level of annual income, followed by low level of annual income (25.00%) and high level of annual income (24.58%).

Table 4.8. Distribution of youth in farming according to their annual income

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	20	25.00	8	10.00	32	40.00	60	25.00
2.	Medium	37	46.25	44	55.00	40	50.00	121	50.42
3.	High	23	28.75	28	35.00	8	10.00	59	24.58
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=3.34 SD=2.882		Q_1 (25^{th} percentile)=1.41 lakh Q_2 (Median) =2.65 lakh Q_3 (75^{th} percentile)=4.50 lakh						$\chi 2$ = 55.29 p=0.00	

With the advent of civilisation and technological interventions in agriculture about one fourth of the youth in farming might have properly utilised such facilities and strive hard in achieving high returns from unit area. In contrary, about one fourth of the youth in farming with scarce resources and poor environmental conditions could not achieve their targeted results and fell under low income category. The remaining half of the youth

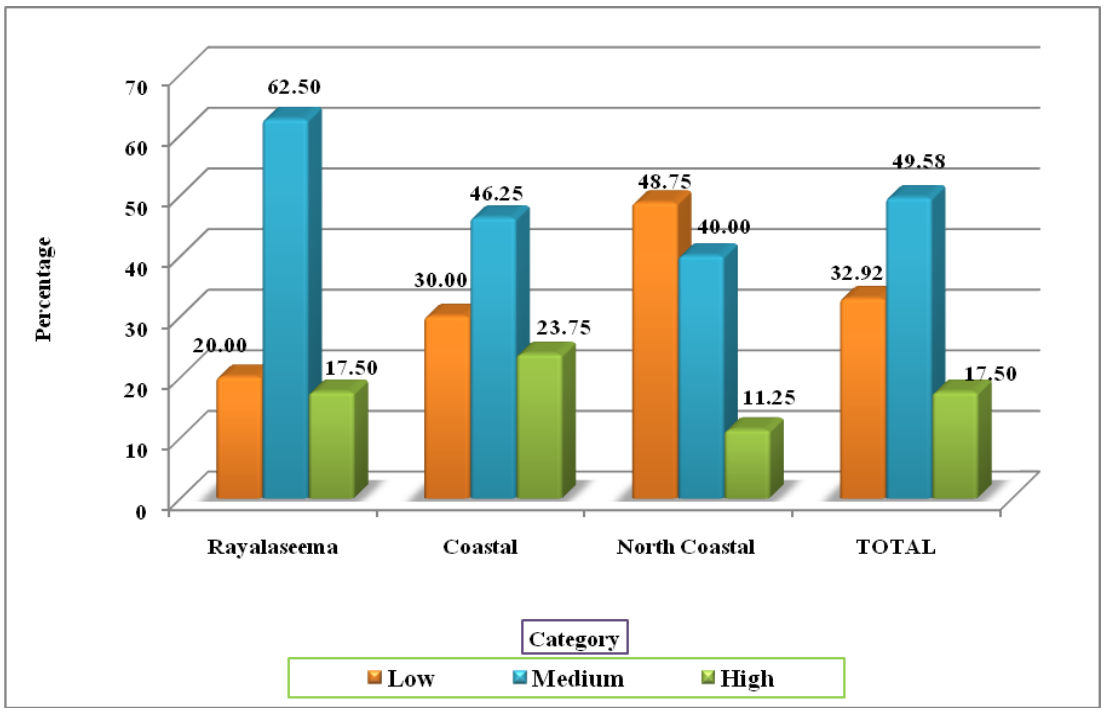


Figure 4.7. Distribution of youth in farming based on their material possession

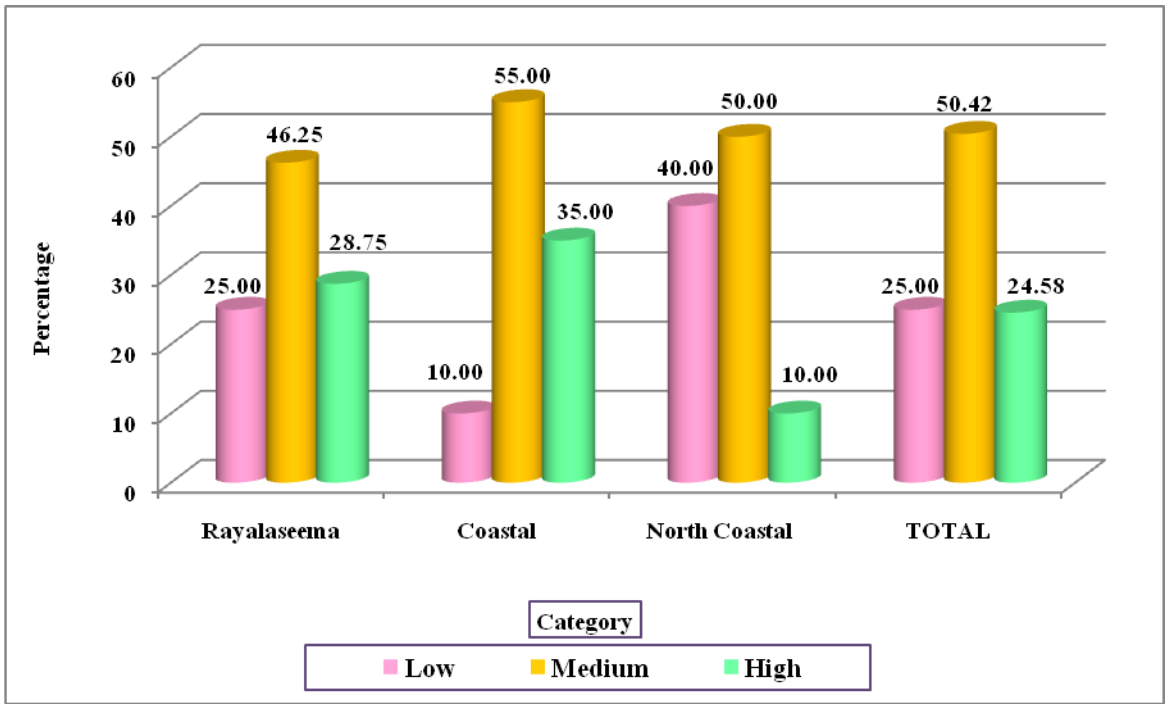


Figure 4.8. Distribution of youth in farming according to their annual income

in farming might be operating their farming activities with the available resources and leading their life with medium annual income.

It is also observed that, 55.00 per cent and 35.00 per cent of the youth in farming had medium and high level of annual income respectively in Coastal region which is higher than other two regions. Two-fifth (40.00%) of the youth had low level of annual income in North Coastal, followed by other two regions. The 'chi-square' value (55.29) and p' value (0.00) revealed that, there was a significant association between region and annual income of youth in farming. This might be due to the differences in land holdings and cropping pattern being followed by the youth in three regions.

Similar findings were communicated in the studies of Bhanu (2006), Savita (2011), Donye *et al.* (2012), Viswanatha *et al.* (2014a) and Viswanatha *et al.* (2014b).

4.1.9 Exposure to Training

Table 4.9. and figure 4.9. shown that, nearly three-fourth (39.16% medium and 37.91% low) of the youth in farming had medium to low exposure to training but only 22.93 per cent of them had high exposure to training.

Table 4.9. Distribution of youth in farming based on their exposure to training

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	23	28.75	25	31.25	43	53.75	91	37.91
2.	Medium	27	33.75	39	48.75	28	35.00	94	39.16
3.	High	30	37.50	16	20.00	9	11.25	55	22.93
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=4.81 SD=2.655				Q_1(25^{th} percentile)=3 Q_2 (Median)=4 Q_3 (75^{th} percentile)=5				$\chi 2$ =23.30 p=0.00	

The youth in farming who were innovative, progressive and oriented towards specialized farming activities namely organic farming, natural farming, precision farming, tissue culture, commercial vegetable production and seed production activities might have undergone specialized training programmes to acquire necessary skills and knowledge to operate such enterprises. Divergently, the farmers who were residing in the remote areas were not having the access towards such training facilities might be away from the exposure to training programmes and taking up agriculture with low scientific rationality.

It could be noticed that, more than half (53.75%) of the youth in North Coastal region had low exposure to training followed by the other two regions. More than one-third (37.50%) of them had high exposure to training in Rayalaseema followed by other two regions. Nearly half (48.75%) of the youth had medium exposure to training in Coastal region which is higher than that of other two regions. The ‘chi-square’ value (23.30) and ‘p’ value (0.00) represented that, there was a significant association between region and exposure to training for youth in farming. This might be due to the differences in education level and the awareness about the available capacity building activities in different regions.

Abdullahi *et al.* (2010), Savita (2011) and Arowolo *et al.* (2013) reported the similar results.

4.1.10 Extension Contact

It is apparent from table 4.10. and figure 4.10. that, nearly half (45.83%) of the youth in farming had medium extension contact, followed by low (30.83%) and high (23.34%) extension contact.

Inspite of having well established extension network in the recent past still about one-third of youth in farming were unable to access the extension services. This might be due to lack of awareness on extension services or the lack of interest in consulting the extension officials. The overall trend reflects

the scope for enhancing the quality and quantity of extension system through appropriate strategies. The present education status and desire for the modern technologies might be motivating the youth towards building up of regular extension contacts.

Table 4.10. Distribution of youth in farming according to their extension contact

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	20	25.00	18	22.50	36	45.00	74	30.83
2.	Medium	30	37.50	50	62.50	30	37.50	110	45.83
3.	High	30	37.50	12	15.00	14	17.50	56	23.34
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=5.02 SD=2.618				Q_1 (25^{th} percentile)=3 Q_2 (Median)=5 Q_3 (75^{th} percentile)=6				$\chi 2$ = 25.59 p= 0.00	

It could also be depicted from above table that, nearly half (45.00%) of the youth in farming in North Coastal region had low extension contact which is comparatively more. Almost equal per cent (25.00%, 37.50% and 37.50%) of them had been distributed among all categories in Rayalaseema. More than three-forth (62.50% and 15.00%) of them had medium to low extension contact in Coastal region respectively. The ‘chi-square’ value (25.59) and ‘p’ value (0.00) denoted that, there was a significant association between region and extension contact of youth in farming. This might be due to the regional differences in terms of awareness on the available information sources.

Bhanu (2006), Uddin *et al.* (2008) and Viswanatha *et al.* (2014a) also expressed the similar results in their studies.

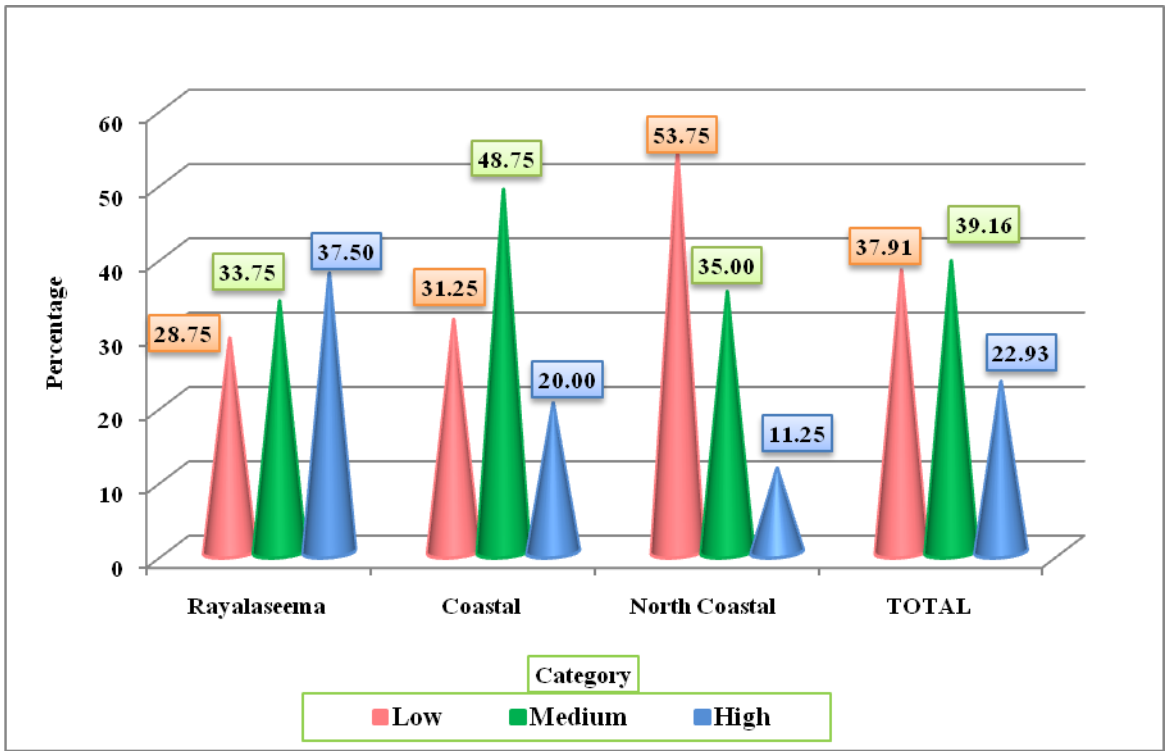


Figure 4.9. Distribution of youth in farming based on their exposure to training

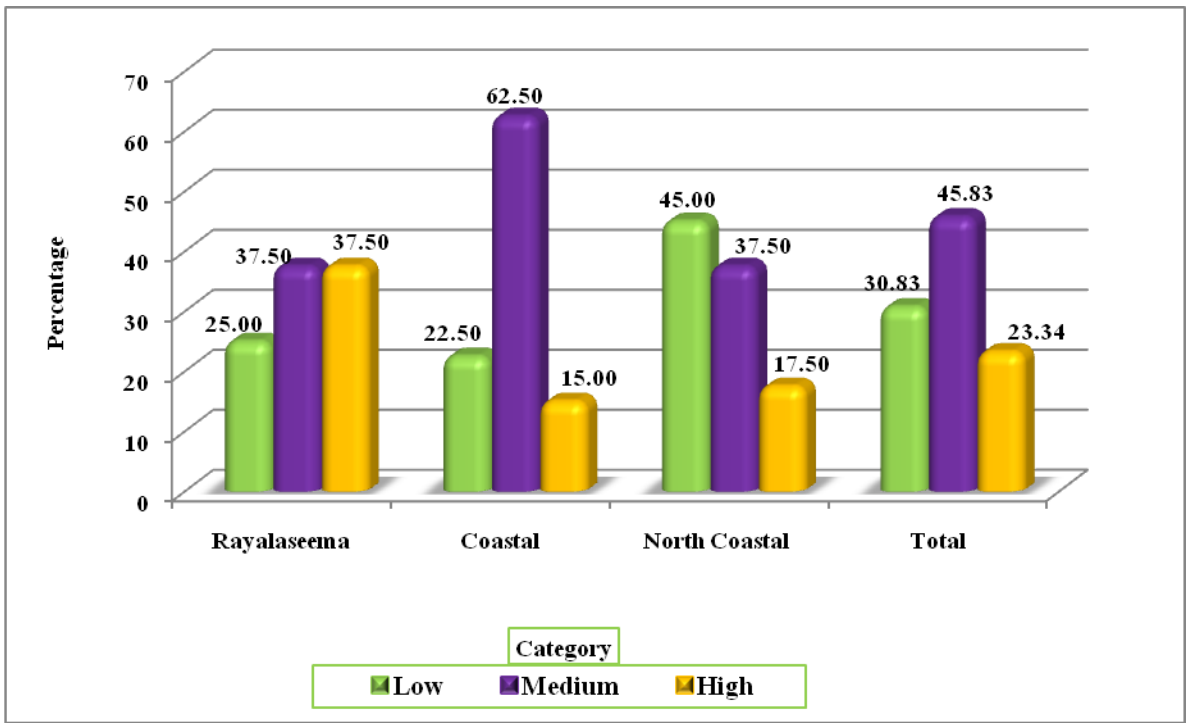


Figure 4.10. Distribution of youth in farming according to their extension contact

4.1.11 Mass Media Exposure

The table 4.11. and figure 4.11. projected that, nearly half (45.00%) of the youth in farming had medium exposure to mass media, followed by 30.83 per cent had low and only 24.17 per cent had high exposure to mass media.

In the present digital world, the electronic and print media are taking lead to reach the farming community but the pattern of utilization of these media by the youth in farming was not up to the mark. This might be due to lack of proper access to the mass media, lack of proper awareness and knowledge in utilizing the media. The intensive multifaceted work load of the youth in farming also might be hindering them to expose to different mass media. In contrast, the youth in farming with high access, time and cosmopoliteness might be attracted towards different mass media and utilising them in befitting way. This might be the cause for the existence of above trend in the youth in farming of the three regions.

Table 4.11. Distribution of youth in farming based on their mass media exposure

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	18	22.50	18	22.50	38	47.50	74	30.83
2.	Medium	29	36.25	43	53.75	36	45.00	108	45.00
3.	High	33	41.25	19	23.75	6	7.50	58	24.17
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean= 4.14 SD= 2.823				Q1 (25th percentile)= 2 Q_2 (Median) = 4 Q_3(75th percentile)= 5				$\chi 2$ = 32.39 p= 0.00	

The varied distribution of the youth in farming among different regions revealed that, majority (53.75%) of the youth had medium mass media exposure in Coastal region, followed by the other two regions. Almost half (47.50%) of youth in North Coastal region and equal per cent (22.50%) of the youth in Rayalaseema and Coastal regions had low mass media exposure.

Whereas, more than two-fifth (41.25%) of the youth in Rayalaseema and meagre part (7.50%) in North Coastal had high mass media exposure. This trend was substantiated by the 'chi-square' value (32.39) and 'p' value (0.00). The differences in terms of remoteness of the villages and non availability of various mass media sources might have contributed for the regional differences in terms of mass media exposure.

The research findings were in correspondence with the studies of Bhanu (2006), Savita (2011) and Mohan and Reddy (2012).

4.1.12 Decision Making Ability

It could be viewed from the table 4.12. and figure 4.12. that, most (45.00%) of the youth in farming had medium decision making ability, followed by high decision making ability (29.17%) and low decision making ability (25.83%).

Table 4.12. Distribution of youth in farming based on their decision making ability

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	35	43.75	12	15.00	15	18.75	62	25.83
2.	Medium	27	33.75	45	56.25	36	45.00	108	45.00
3.	High	18	22.50	23	28.75	29	36.25	70	29.17
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=19.60 SD=4.228				Q_1 (25^{th} percentile)=17 Q_2 (Median) =21 Q_3(75^{th} percentile)=23				$\chi 2$ = 22.22 p=0.00	

By virtue of their dynamic mindset, they might be having the quality of choosing the best alternative of course of actions intrepidly. In majority of cases they might not be frightened for failures rather than desperately anticipated for accomplishment of their ambition. On the other side, the youth

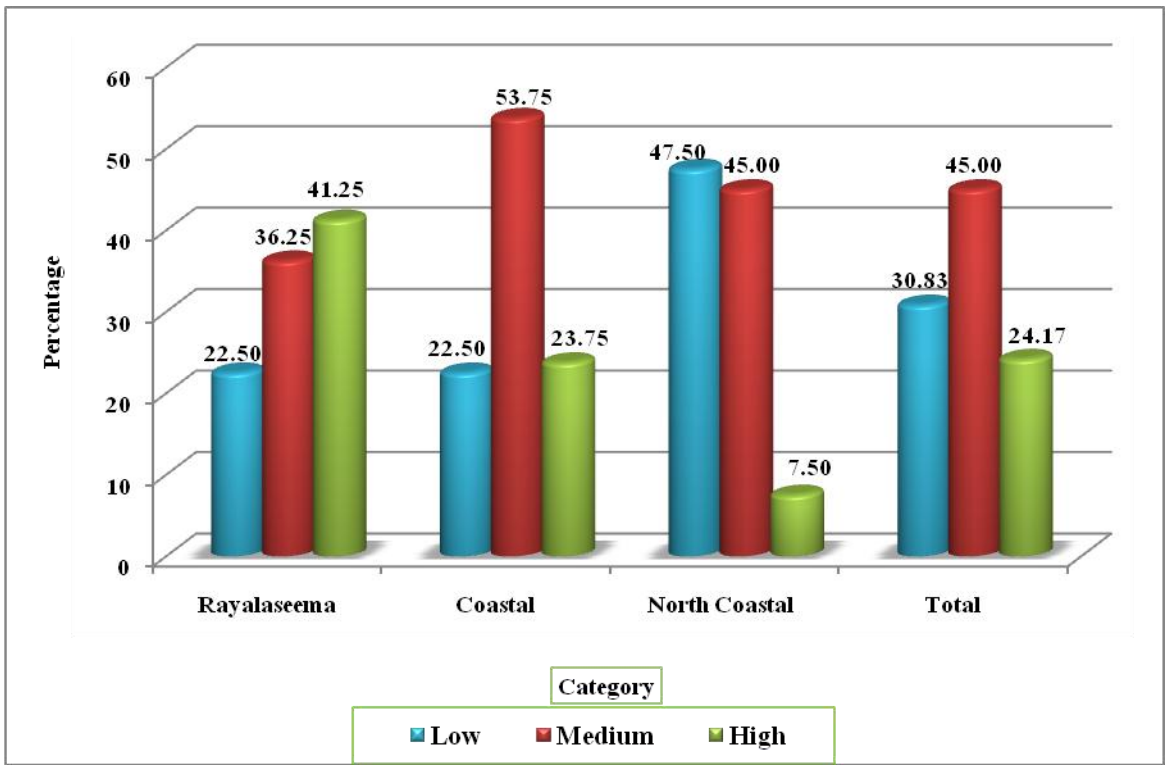


Figure 4.11. Distribution of youth in farming based on their mass media exposure

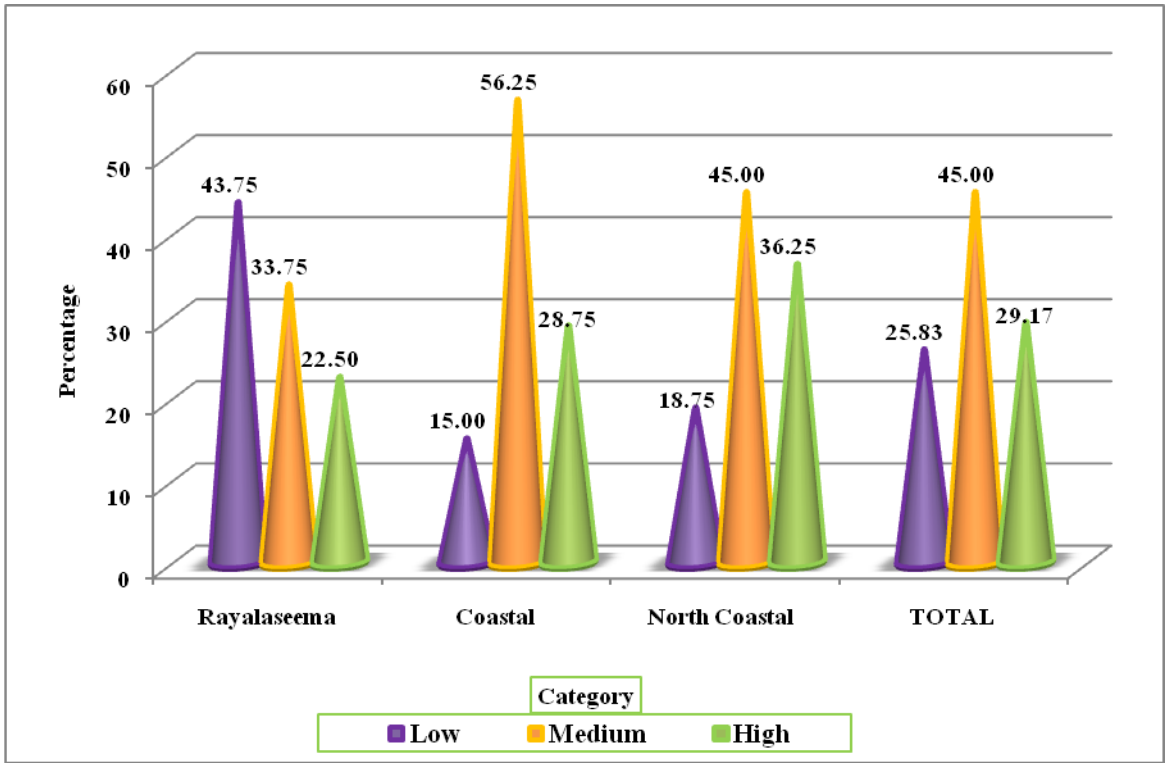


Figure 4.12. Distribution of youth in farming based on their decision making ability

in farming shouldering family errands with limited resources might not be bold enough to take decisions at appropriate time. As a whole the decision making ability is the foremost asset for the youth to lead the farming lucratively.

It is noticed from the table that, dominant part (56.25%) of the youth in farming had medium decision making ability, followed by high (28.75%) and low (15.00%) decision making ability in Coastal region. Majority (43.75%) of the youth in farming in Rayalaseema had low decision making ability, followed by medium (33.75%) and high (22.50%) decision making ability. Whereas, 45.00 per cent, 36.25 per cent and 18.75 per cent of the youth in farming had medium, high and low decision making ability in North Coastal region. The 'chi-square' value (22.22) and 'p' value (0.00) revealed that, there was a significant association between region and decision making ability of youth in farming. Differences in involvement of family members in farming and discretion power on the part of youth might have contributed to the above trend.

Obaiah (2004), Navasakthi (2005), Anamica (2010) and Savita (2011) also reported the similar results.

4.1.13 Innovativeness

The data from table 4.13. and figure 4.13. revealed that, nearly half (46.25%) of the youth in farming had moderate innovativeness, followed by 29.58 per cent of them had less and 24.17 per cent of them had high innovativeness.

Being the youngsters, they think imaginatively endeavouring to put their contemporary thoughts into actual circumstance with no dithering. Having the nature of looking for novelty in every single operation, the youth dependably take a stab at substitution or refinement of existing advancements. Quite the opposite side, youth might have perceived that, as agriculture being the profession, it is not having much opportunities and

commendable advancements to think imaginatively and in like manner dominant part of the youth habituated to standard methods of cultivating and not looking for advances in farming. This might be the possible cause for the incidence of the above mentioned tendency of youth in farming.

Table 4.13. Distribution of youth in farming according to their innovativeness

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	24	30.00	21	26.25	26	32.50	71	29.58
2.	Moderate	27	33.75	41	51.25	43	53.75	111	46.25
3.	High	29	36.25	18	22.50	11	13.75	58	24.17
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**

Mean=20.34 Q_1 (25^{th} percentile)=18 $\chi 2$ = 13.16
SD=3.865 Q_2 (Median) = 21 p=0.01
Q_3(75^{th} percentile)=22

Nearly equal percentage (30.00%, 33.75% and 36.25%) of the youth in farming had low, moderate and high innovativeness in Rayalaseema region respectively. About 51.25 per cent, 26.25 per cent and 22.50 per cent of them in Coastal region had moderate, low and high innovativeness respectively. Different proportions (53.75%, 32.50% and 13.75%) of them in North Coastal region had moderate, low and high innovativeness respectively. The chi-square' value (13.16) and 'p' value (0.01) clearly portrayed that, there exists a significant association between region and innovativeness of youth in farming. This might be due to differences in utilization of information sources and existence of need based modern technologies.

Bhanu (2006), Uddin *et al.* (2008), Umunnakwe (2014) and Viswanatha *et al.* (2014a) also found the similar results.

4.1.14 Scientific Orientation

The keen observation from table 4.14. and figure 4.14. showed that, exactly half (50.00%) of the youth in farming had moderate scientific orientation, followed by 27.50 per cent of them had low and 22.50 per cent of them had high scientific orientation.

Nearly one fourth of the youth in farming with higher education, exposure to training might have considered each and every operation of farming more technically and trying to analyze pros and cons of an activity towards superior farming performance. On the other hand, the youth in farming with lower education and orthodox way of farming might be adopting principle of thumb rule in taking up different farming operations instead of logical and intellectual thinking.

Table 4.14. Distribution of youth in farming based on their scientific orientation

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	24	30.00	16	20.00	26	32.50	66	27.50
2.	Medium	36	45.00	41	51.25	43	53.75	120	50.00
3.	High	20	25.00	23	28.75	11	13.75	54	22.50
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=22.09 SD=4.85				Q_1 (25^{th} percentile)=18 Q_2 (Median) = 22 Q_3 (75^{th} percentile)=25				$\chi 2$ = 7.52 p=0.11	

More than half (53.75%) of the youth in North Coastal had medium scientific orientation, followed by low (32.50%) and high (13.75%) scientific orientation. In case of the Coastal region, slightly more than half (51.25%) of the youth had medium scientific orientation, followed by high (28.75%) and low (20.00%) scientific orientation, whereas more than two-fifth (45.00%) of the youth were having medium scientific orientation, followed by low

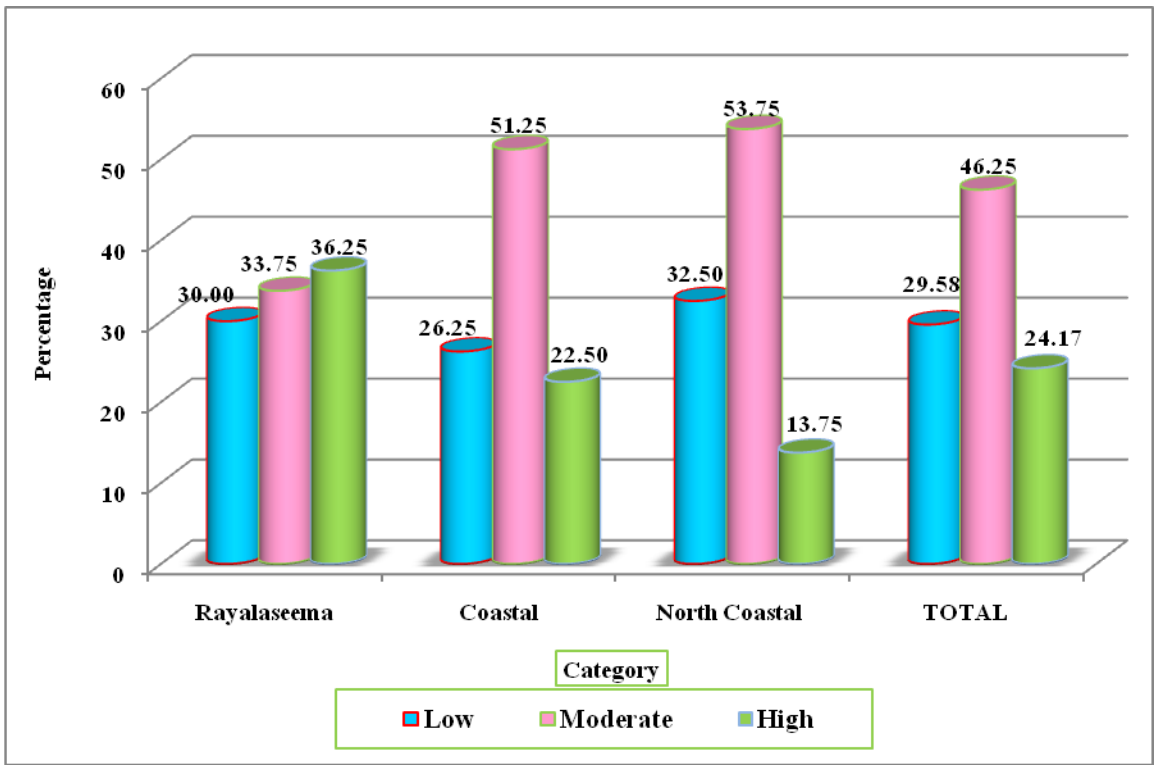


Figure 4.13. Distribution of youth in farming according to their innovativeness

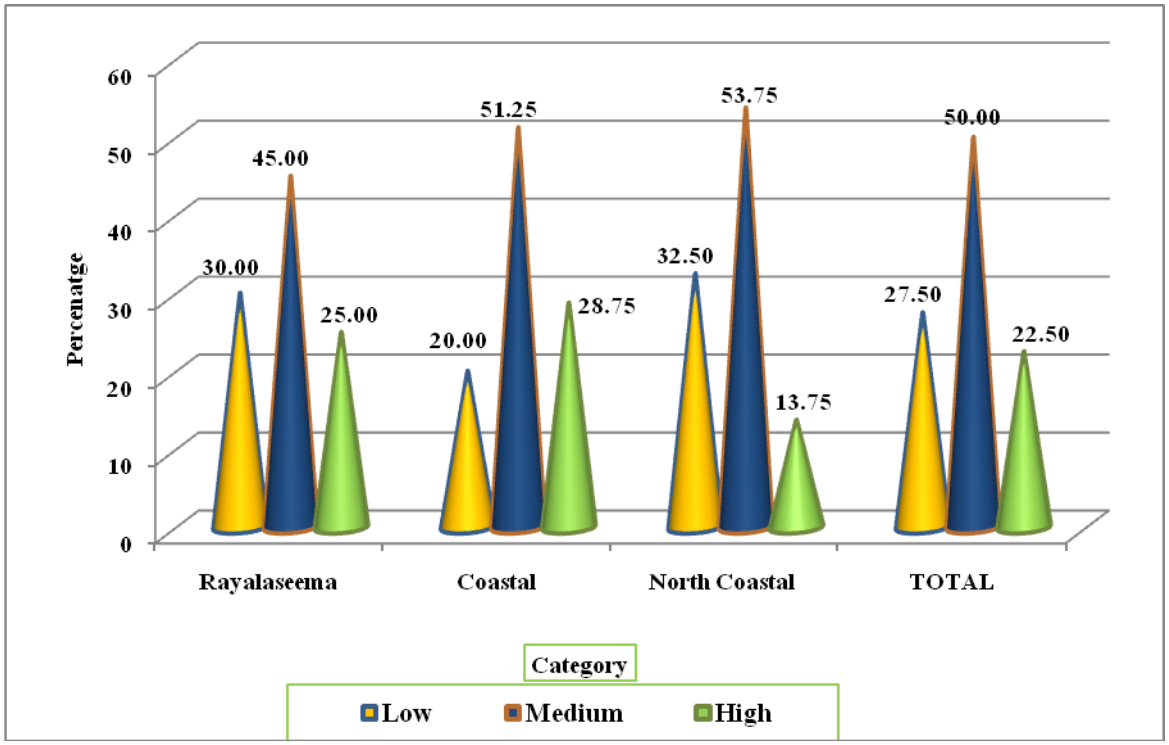


Figure 4.14. Distribution of youth in farming based on their scientific orientation

(30.00%) and high (25.00%) scientific orientation in Rayalaseema region. The 'chi-square 'value (7.52) and 'p' value (0.00) obviously explained that, there was no significant association between region and scientific orientation of youth in farming. The overall trend also depicted that there might be limitation of resources or means for acquiring scientific orientation by the youth in farming.

Similar findings were explored by Ramu (2005), Gowda *et al.* (2011), Ramalakshmi (2012) and Deshmukh *et al.* (2013).

4.1.15 Management Orientation

The observations from table 4.15. and figure 4.15. indicated that, majority (50.83%) of the youth in farming had medium management orientation, followed by low (25.00%) and high (24.17%) management orientation.

Table 4.15. Distribution of youth in farming based on their management orientation

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	21	26.25	9	11.25	30	37.50	60	25.00
2.	Medium	27	33.75	48	60.00	47	58.75	122	50.83
3.	High	32	40.00	23	28.75	3	3.75	58	24.17
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=26.08 SD=7.376				Q_1 (25^{th} percentile)=19.25 Q_2 (Median)=26.5 Q_3 (75^{th} percentile)=32				$\chi 2$ = 32.10 p=0.00	

The above trend might be due to the fact that majority of youth in farming might be good in planning and production activities, but with regard to marketing, they might be resorting to local merchants without exploring other marketing avenues. On the contrary, the farmers with good inter

personal skills and established networking might be adopting the best marketing strategies to sell their farm produce.

It is also revealed from table that, majority (60.00% medium and 28.75% high) of the youth in farming had medium to high management orientation in Coastal region, but more than one-third (37.50%) of the youth had low management orientation in North Coastal region which is comparatively more than other two regions. The ‘chi-square ‘value (32.10) and ‘p’ value (0.00) clearly indicated that, there exists a significant association between region and management orientation of youth in farming. Differences in autonomy in farming for youth and their farming experiences might have led to the above trend.

The findings of Gireesh (2006), Gowda *et al.* (2011), Kalyan (2011) and Ramalakshmi (2012) were in line with the present study.

4.1.16 Achievement Motivation

An overview of the table 4.16. and figure 4.16. projected that, less than half (45.00%) of the youth in farming had medium achievement motivation, followed by 28.75 per cent had high and 26.25 per cent of them had low achievement motivation.

n-Ach is a striving force for success with some standard of excellence. The youth might have tendency to seek challenges and a high degree of independence in their thoughts and ambitions. They strive for personal satisfaction, recognition in the society and financial assistance as the rewards of their achievement. Conversely, the youth might have chosen traditional way of farming in order to avoid failure. They might not have received the satisfaction for their efforts or recognition from the society and they might have become dissatisfied or frustrated with the existing situations in farming. The overall inclination portrayed that majority of the youth were well potent to take up challenging tasks in their future farming.

Table 4.16. Distribution of youth based on their achievement motivation

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	19	23.75	12	15.00	32	40.00	63	26.25
2.	Medium	36	45.00	38	47.50	34	42.50	108	45.00
3.	High	25	31.25	30	37.50	14	17.50	69	28.75
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**

Mean=13.30	Q1 (25^{th} percentile)=12	$\chi 2$ =42.09
SD=2.694	Q_2 (Median)=14	p=0.00
	Q_3 (75^{th} percentile)=16	

The majority (40.00% and 42.50%) of the youth in farming had low to medium achievement motivation and only 17.50 per cent of them had high achievement motivation in North Coastal region respectively. More than one-third (37.50%) of the youth in farming had high achievement motivation in Coastal region which is comparatively higher than that of other two regions. More than three-forth (45.00% and 31.25%) of the youth had medium to high achievement motivation respectively in Rayalaseema region. The 'chi-square' value (42.09) and 'p' value (0.00) keenly revealed that, there exists a significant association between region and achievement motivation of youth in farming. The possible reason might be the differences in attitude towards farming and success in previous endeavours of the youth in three regions.

Bhanu (2006), Anamica (2010), Kalyan (2011) and Anamica and Ravichandran (2014) also mentioned similar results in their studies.

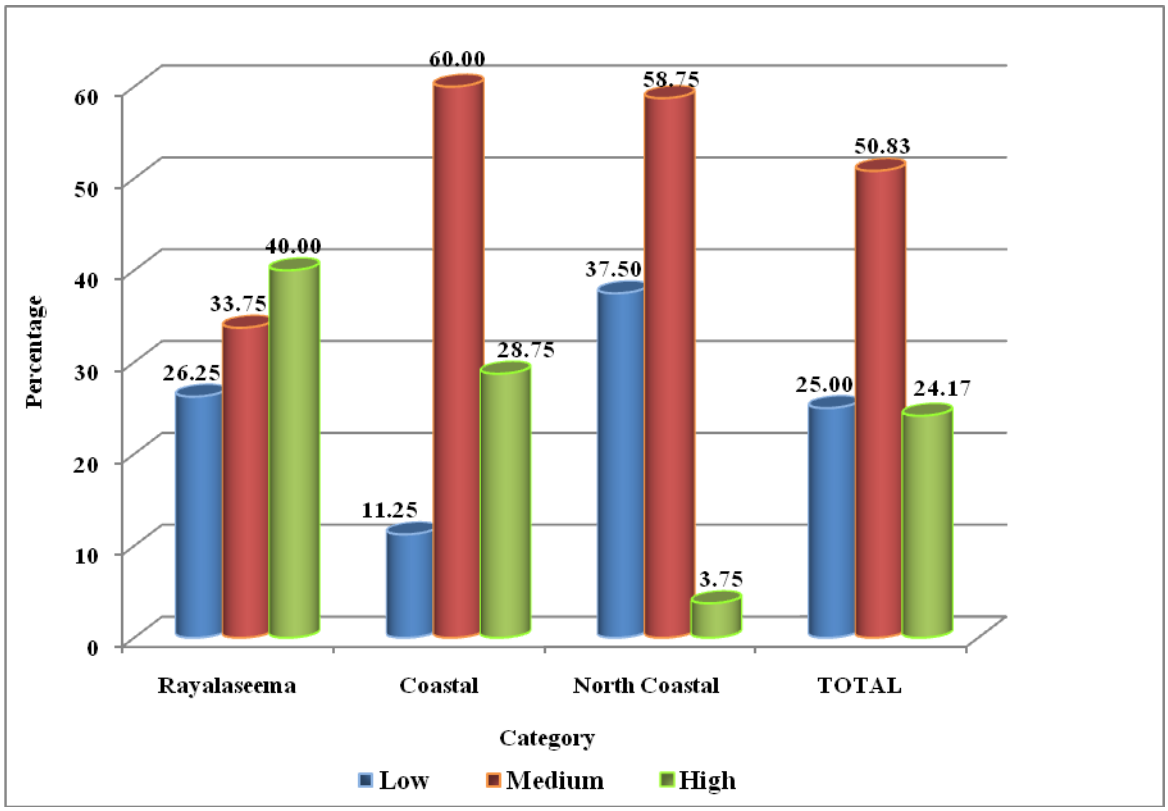


Figure 4.15. Distribution of youth in farming based on their management orientation

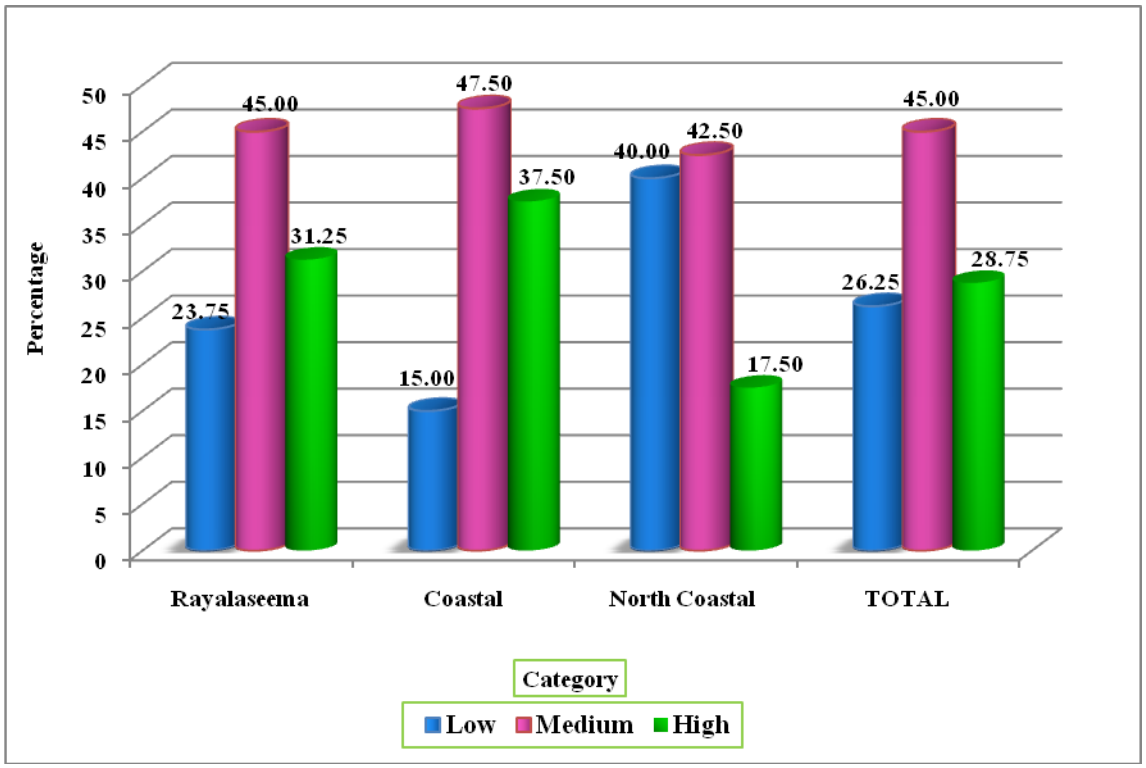


Figure 4.16. Distribution of youth in farming based on their achievement motivation

4.1.17 Economic Orientation

The data pertaining to table 4.17. and figure 4.17. revealed that, more than two-fifth (45.83%) of the youth in farming had medium economic orientation, followed by 29.17 per cent of them had low and only 25.00 per cent of them had high economic orientation.

With the advent of globalization and liberalization youth in farming are concentrating more on commercial farming with high economic orientation. This has resulted due to their vast and regular extension contacts and good market intelligence. In contrast, some of the youth in farming with lack of enough resources and life threatening problems could not orient economically inspite of having the interest to produce higher yields and to gain higher profits. Even though, the overall trend pointed out that the youth in farming might have realized the importance of economic orientation in the concurrent competitive world.

Table 4.17. Distribution of youth in farming based on their economic orientation

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	24	30.00	17	21.25	29	36.25	70	29.17
2.	Medium	25	31.25	40	50.00	45	56.25	110	45.83
3.	High	31	38.75	23	28.75	6	7.50	60	25.00
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**

Mean= 8.59 | Q1 (25^{th} percentile)= 7 | $\chi 2$= 25.32
SD= 2.665 | Q_2 (Median)= 9 | p= 0.00
Q_3 (75^{th} percentile)= 10.75

The facts also projected that, more than half (56.25%) of the youth in farming had medium economic orientation in North Coastal region, followed by other two regions. More than one third (38.75%) of the youth in farming had high economic orientation in Rayalaseema, followed by the other two

regions. Slightly more than one-third (36.25%) of the youth in farming had low economic orientation in North Coastal region followed by the other two regions. The 'chi-square' value (25.32) and 'p' value (0.00) from the table denoted that, there exists a significant association between region and economic orientation of youth in farming. Differences in established patterns of values and the existing education and knowledge level might have contributed to the above trend.

The research work done by Bhanu (2006) and Anamica and Ravichandran (2014) also supported the present study.

4.1.18 Risk Orientation

From table 4.18. and figure 4.18. that, the majority (41.67%) of the youth in farming had medium risk orientation, followed by one third (32.91%) of the youth in farming had high risk orientation and one fourth (25.42%) of the youth in farming had low risk orientation.

Table4.18. Distribution of youth in farming corresponding to their risk orientation

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Low	22	27.50	17	21.25	22	27.50	61	25.42
2.	Medium	23	28.75	40	50.00	37	46.25	100	41.67
3.	High	35	43.75	23	28.75	21	26.25	79	32.91
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=9.45 SD=2.268				Q_1 (25^{th} percentile)=8 Q_2(Median)=10 Q_3(75^{th} percentile)=11				$\chi 2$ = 10.11 p=0.03	

Risk is an unavoidable evil in every one's life. Unless one takes risks he/she cannot enjoy the fruits of success. Youth in farming through their dynamic and responsive behaviour might be geared up to endure risk in farming so as to entertain exalted profits. On the contrary, the existing

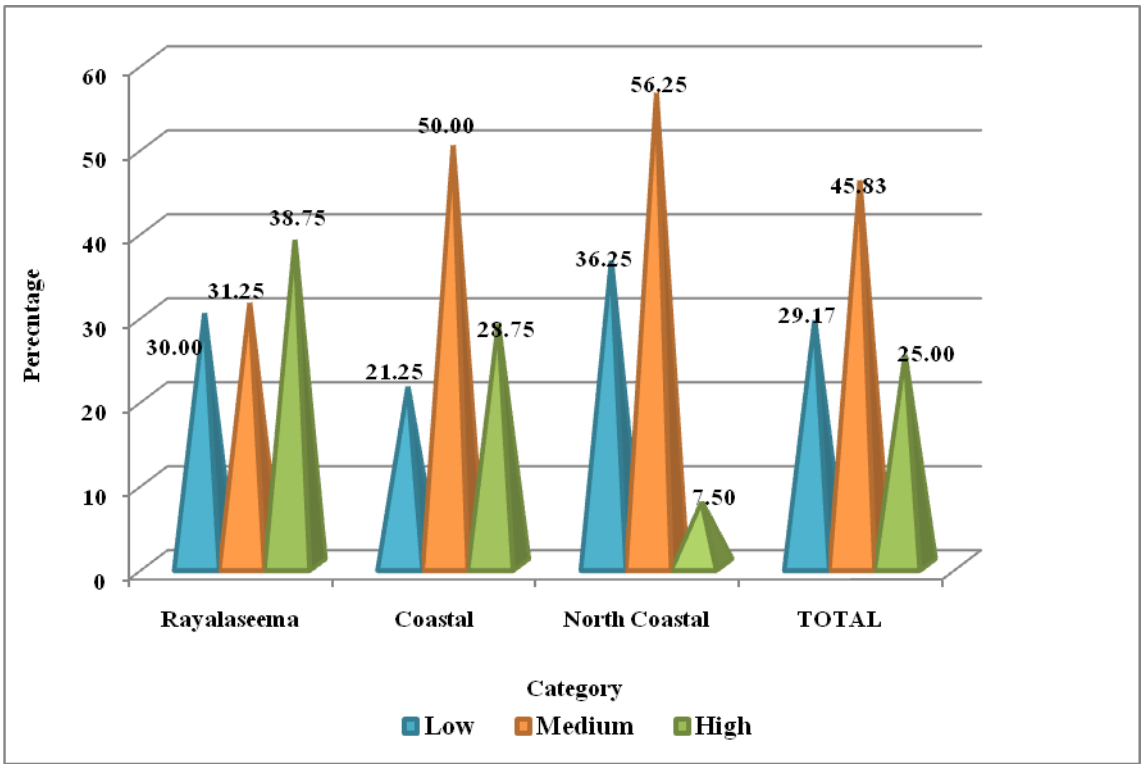


Figure 4.17. Distribution of youth in farming based on their economic orientation

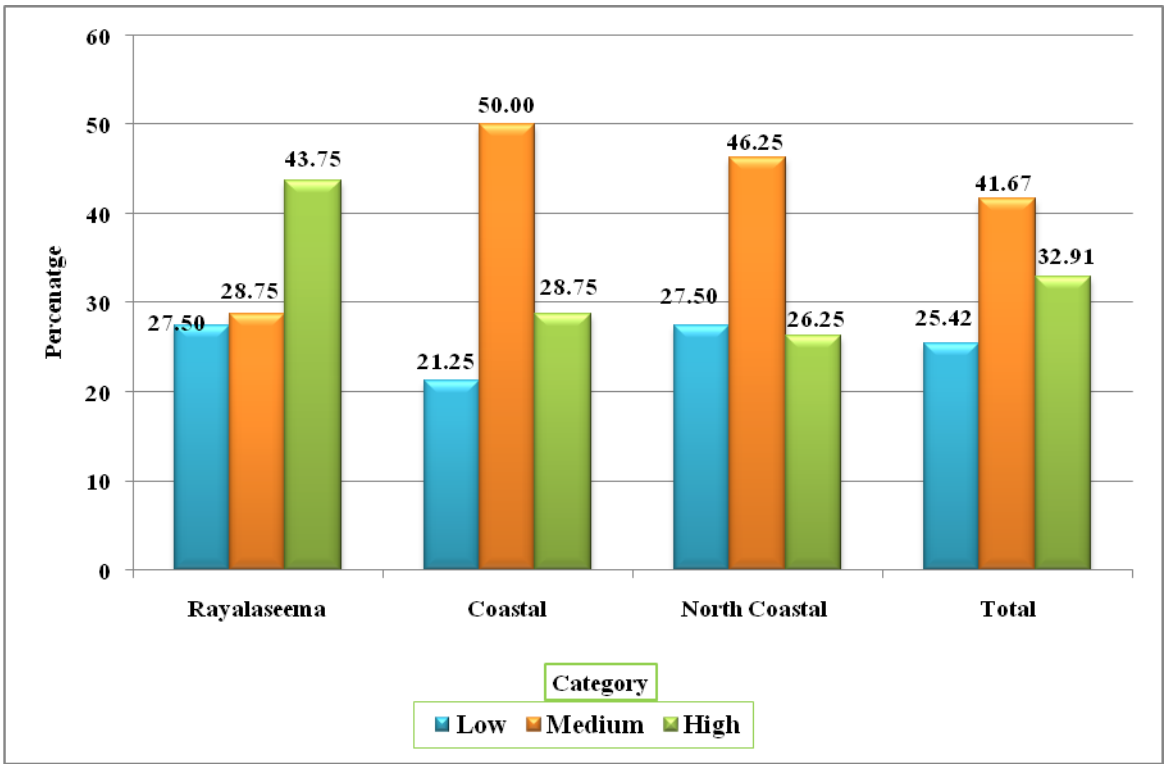


Figure 4.18. Distribution of youth in farming corresponding to their risk orientation

technological gap and other policy issues might have dragging the youth away from bearing risk in farming. Conclusively this might be the probable cause for the inclination of youth in the above manner.

The regional disparity of risk orientation of youth in farming is lucidly explained as relatively higher proportion (50.00%) of the youth in the Coastal region possessed medium risk orientation than that of other two regions. More than two-fifth (43.75%) of the youth in Rayalaseema possessed high risk orientation, followed by Coastal (28.75%) and North Coastal regions (26.25%). Equal per cent each (27.50%) of the youth in Rayalaseema, North Coastal and one fifth (21.25%) of the youth in Coastal region possessed low risk orientation. The 'chi-square' value (10.11) and 'p' value (0.03) from the table predicted that, there exists a significant association between region and risk orientation of youth in farming. Differences in net worth and possession of differential landholdings might have resulted in the above difference.

The studies of Anamica (2010), Anamica and Ravichandran (2014), Viswanatha *et al.* (2014a) and Viswanatha *et al.* (2014b) also expressed the similar results.

4.2. Attitude of Youth towards Farming

Attitude is the prime cause for the growth of an individual and will have great impact on the way we think, the way we perceive and the way we do the things. It is the determining factor for the success or failure of any vibrant endeavour. As farming is the most predominant avenue for the growth and development of a country, it became mandatory to strengthen the farming through potential and dynamic rural youth of the country. Rural youth are a formidable force in the agricultural sector. They constitute a sizeable proportion of future progressive farmers. While their contribution towards attaining agriculture security cannot be under estimated, their lukewarm attitude towards agriculture is a primary issue of concern and challenge to the future of the agriculture in India. The attitude of youth towards farming is the important concern to design deliberate strategies for retaining youth in farming.

It is apparent from the table 4.19. and figure 4.19. that, one third (33.75%) of the total youth had neutral attitude towards farming. It is followed by moderately favourable (23.75%) and moderately unfavourable (18.75%) attitude towards farming, whereas only 10.83 per cent and 12.92 per cent of them had highly unfavourable and highly favourable attitude respectively. As a whole, leading portion of the youth inclined towards favourable attitude towards farming.

Table 4.19. Distribution of youth in farming according to their attitude towards farming

S. No.	Category	Rayalaseema (n=80)		Coastal (n=80)		North Coastal (n=80)		Total (n=240)	
		N	%	N	%	N	%	N	%
1.	Highly Unfavourable	8	10.00	10	12.50	8	10.00	26	10.83
2.	Moderately Unfavourable	12	15.00	8	10.00	25	31.25	45	18.75
3.	Neutral	24	30.00	28	35.00	29	36.25	81	33.75
4.	Moderately Favourable	26	32.50	22	27.50	9	11.25	57	23.75
5.	Highly Favourable	10	12.50	12	15.00	9	11.25	31	12.92
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**
Mean=94.10								$\chi 2$ =20.12	
SD=18.77								p=0.01	

Some of the youth in farming might be adopting the latest technologies in farming, both in production and marketing and enjoying the fruits of success in farming. They might be treating the agriculture more in commercial angle rather than as a livelihood activity. This situation has developed more favourable attitude towards farming. The availability of

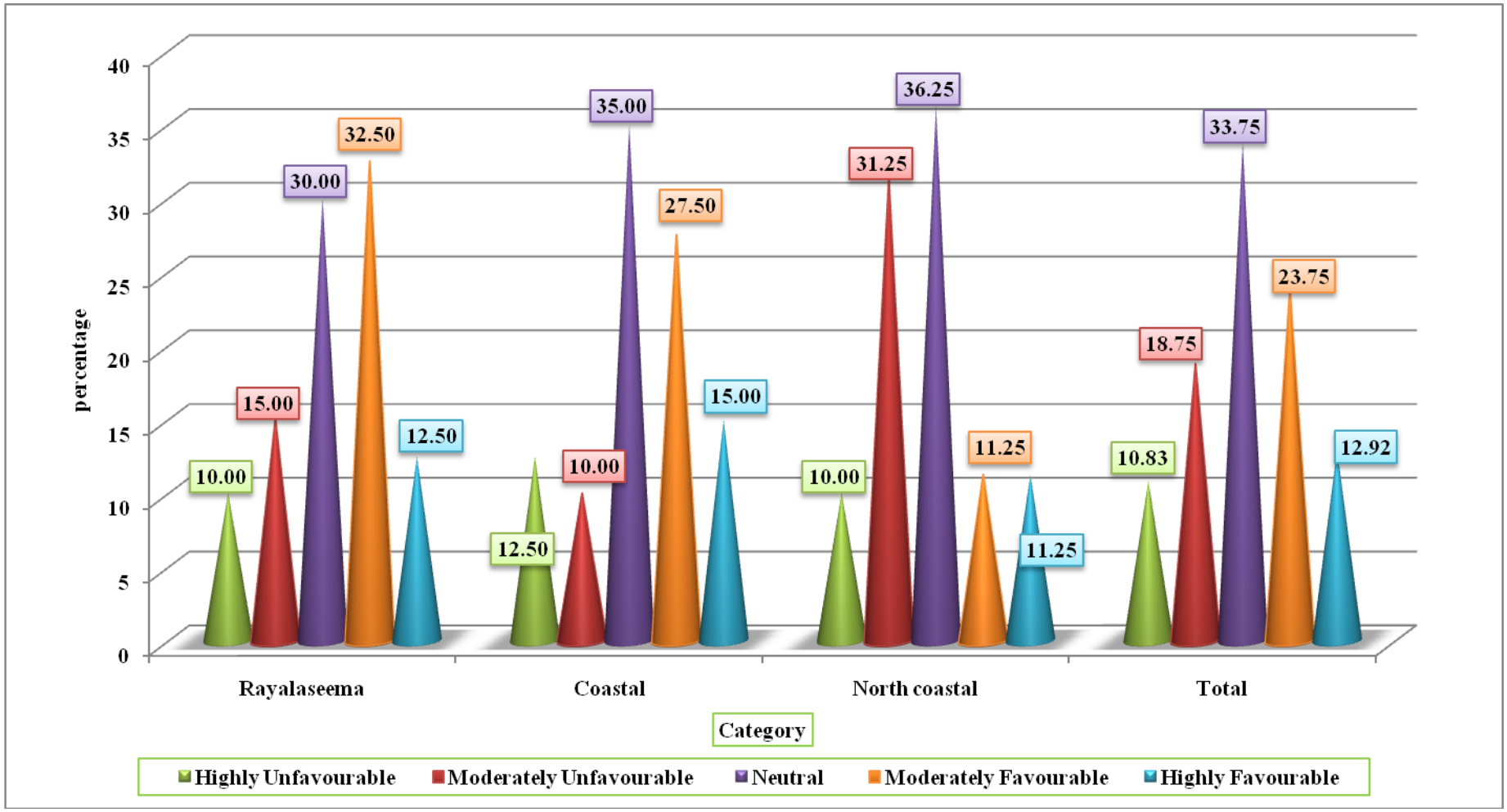


Figure 4.19. Distribution of youth in farming according to their attitude towards farming

needed resources and complementary environmental conditions might also have contributed for the above attitude.

On the other side, the scarcity of resources, unforeseen environmental conditions, lack of knowledge and skills and lack of appropriate marketing strategies might have contributed for unfavourable attitude. Simultaneously the youth also might be attracted towards off farm activities and other job related activities which are time bound and less laborious than farming. The overall attitude signifies the mixture of favourableness and unfavourableness towards farming which can be taken as an opportunity to attract the youth by adopting meticulous motivational models so as to retain the youth in farming.

More than two-third (36.25% and 31.25%) of the youth in North Coastal region had neutral and moderately unfavourable attitude towards farming, followed by the other two regions. About 12.50 per cent and 15.00 per cent of the youth in Coastal region had highly unfavourable and highly favourable attitude towards farming which is higher than that of other two regions. Nearly one third (32.50%) of the youth in Rayalaseema had moderately favourable attitude comparatively more than that of other two regions. The 'chi-square' value (20.12) and 'p' value (0.01) absolutely explained that there was a significant association between region and attitudinal disposition of youth in farming. This might be due to the divergence in patterns of farming, differences in contribution of income from farming, distinct established cultural priorities and abnormalities of available natural resources in three regions.

Abdullahi *et al*. (2010), Bahamana (2010), Angaitkar *et al.* (2013) and Kitturmath *et al.* (2014) also discovered the similar results in their studies.

4.2.1 Statement Wise Analysis of Attitude of Youth towards Farming

The attitudinal disposition of youth towards farming was clearly explained by analysing each statement in terms of its favourableness or unfavourableness by the youth in farming and the same was presented in the table 4.20.

Table 4.20. Statement wise analysis of attitude of youth towards farming

Statement No.	Statements	Mean Score	Rank
1.	I feel proud to be as part of profession feeding the nation	4.34	1
2.	I am willing to seek for further knowledge and skills in farming	4.32	2
3.	Advanced technologies encourage youth to flourish in farming	4.28	3
4.	Farming will give less scope for higher education accessibility to our children*	4.27	4
5.	I don't want to continue in farming further*	4.23	5
6.	I can overcome any type of hardships in farming	4.22	6
7.	Farming leads to increase in standard of living	4.19	7
8.	I want to be an elite person in society through farming	4.13	8
9.	Farming is not viewed as a respectable profession in the society*	4.09	9
10.	I work hard and smart to make farming worthy	4.04	10
11.	I am ready to invite innovations in farming	3.99	11
12.	I enjoy the relationship with nature through farming	3.98	12
13.	Farming is more stressful*	3.93	13
14.	I feel farming is more profitable than any other occupation	3.88	14
15.	I prefer to be a farmer than as an employee	3.80	15
16.	There is less opportunity for career development in farming*	3.79	16
17.	Farming is cumbersome compared to other occupations*	3.68	17
18.	As there is no other means of income I am forced to do farming*	3.62	18

Table 4.20. (cont.).

19.	Access to inputs and marketing is poor in farming*	3.58	19
20.	The present environment is more hopeful for farming	3.41	20
21.	If you choose farming, you have to be ready to face the adverse effects*	3.15	21
22.	Shortage of resources is major limiting factor in farming*	2.61	22
23.	For highly educated youth it is unwise to do farming*	2.24	23
24.	I will not encourage my children to be in farming*	2.15	24

All the 24 statements in the scale were presented in this table as per their rank orders of high favourableness to low favourableness as felt by the youth in farming.

It is very clear from the table 4.20. that, the statement number '1' with highest mean score (4.34) ranked first showing that, large majority of youth in farming had highest favourableness towards farming. The youth might be taking agriculture as a source of food for the entire world. "Unless a farmer performs, the people cannot live" might be the perspective of the youth in farming. They might be feeling proud to be in such an important profession.

The mean score of second statement (4.32) revealed that, majority of the youth in farming had more favourableness towards enriching their knowledge. They might be more dynamic and always seek for noteworthy change in their farming. To bring such change they might always explore for updated knowledge and skills to make farming more profitable. In that direction they might be seeking all the available information sources for updation.

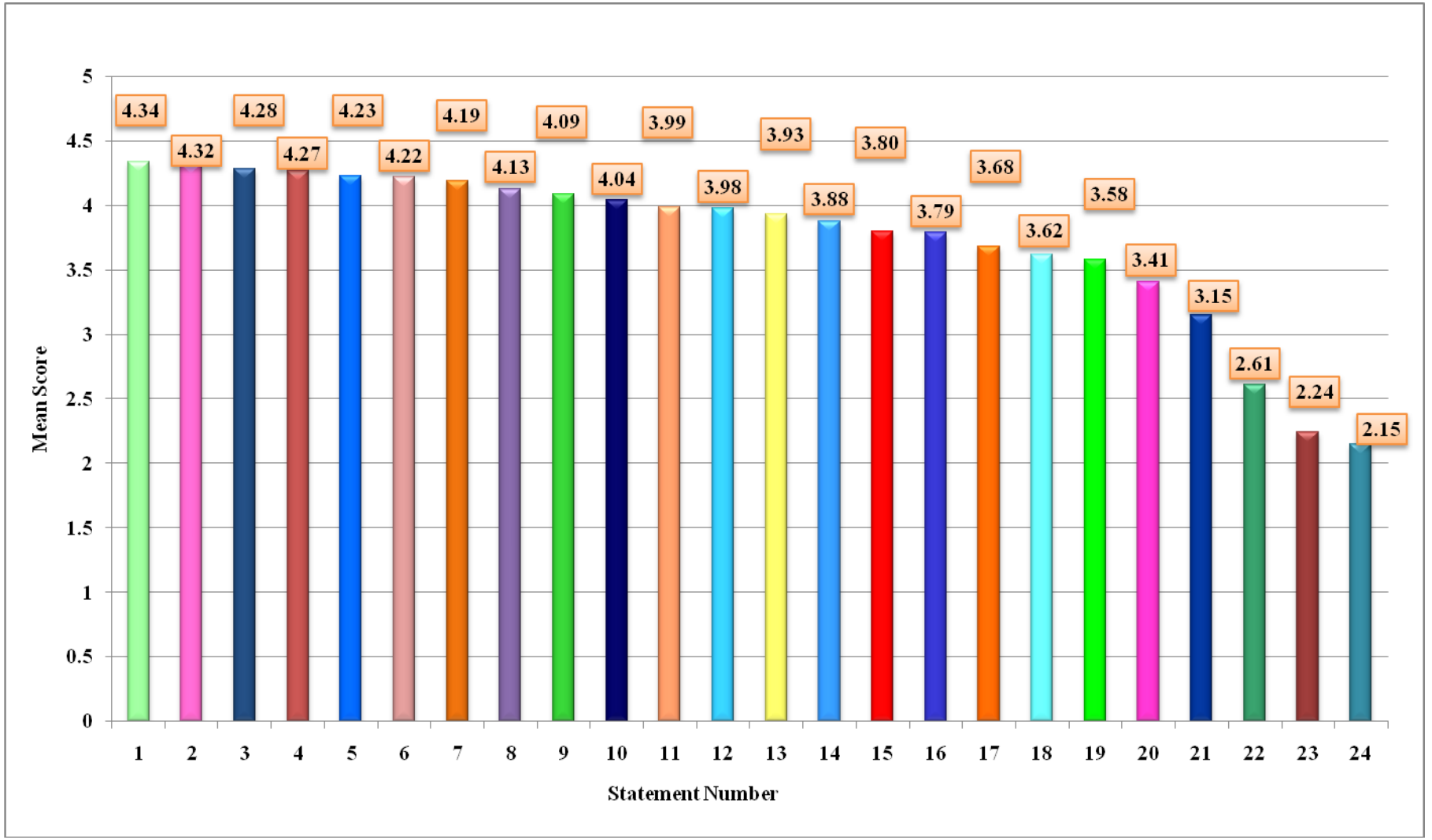


Figure 4.20.Statement wise analysis of attitude of youth towards farming

It could be observed from the third statement with mean score (4.28) that, high favourableness was shown by the most of the youth towards advanced technologies. They might have felt that technologies are most cost effective and practically feasible which bring substantial development in agriculture.

The statement number ‘4’ was viewed as one of the highly unfavourable statements with mean score (4.27) by the youth in farming. Enhanced rural urban connectivity, well established communication systems and the existence of higher educational institutions in the vicinity of rural environment might have created such attitude. The youth in farming might also be in the opinion that education is the prerequisite to flourish in life.

It is noticeable from the statement number ‘5’ with mean score (4.23) that, majority of youth had unfavourableness towards discontinuation of farming. As agriculture being more unpredictable, there will be regular ups and downs in farming. Inspite of having such threats the youth in farming might have taken this as an opportunity and sticking to farming as their challenging task.

The statement number ‘6’ was felt as one of the most favourable statements with mean score (4.22) by the youth in farming. Problems in farming are multifaceted both in production and marketing of farm produce. The youth might always be searching for the right alternative to overcome such problems. The character of self confidence might have contributed for such inclination.

The seventh statement with mean score (4.19) was regarded as one of the most favourable statements by the near majority of youth in farming. They might be thinking that farming is one of the best lucrative options for doing intensively by taking the advantage of all the possible opportunities involved in farming, starting from purchase of inputs to selling of the produce which in turn enhances the standard of living.

The statement number ‘8’ with mean score (4.13) was understood as one of the moderately favourable statements by slight majority of youth. They might have felt that farming is one of the most promising avenues to rise up to the occasion and to become a popular personality in the society. There are ample opportunities in farming to reach zenith positions. By researching and inventing farmer friendly technologies one can realize the highest satisfaction as well as can become a beneficial personality for the farming community.

It is observed from ninth statement with mean score (4.09) that, a good majority of youth had considered farming as a respectable profession in the society. Even though the farming is not a white collar job, the youth in farming might have felt this as one of the most reputable professions which involves the integration of different categories of people starting from input suppliers, labour etc., to the final traders of the farm produce. One way or the other all these subsets of people depends on farming for their livelihood security.

The statement number ‘10’ with mean score (4.04) was perceived as one of the favourable statements by some of the youth in farming. Youth wants to think critically in all possible ways for enhancement of the quality and quantity of the farm output. They always want to be a busy bee. They have realized the importance of hard work and smart work to make farming worthy.

It is visible from eleventh statement that, it was thought as one of the favourable statements by slight majority of youth with mean score (3.99). Risk taking is the precursor for innovation. The youth in farming might be ready to take the calculated risks in farming through meticulous appraisal of the new technologies in their field situation. This education qualification and knowledge in farming might have motivated them to invite such technology in farming.

The statement number ‘12’ with mean score (3.98) was perceived as one of the moderately favourable statements by some of the youth in farming.

The slight majority of them might be liking the rural environment due to its pollution free and eco-friendly nature. They might have experienced more mechanical life, low human relations in the urban environment which might not be liked by the youth in farming. They might still like the traditional lifestyle through consuming his or her own farm fresh produce.

The statement number '13' (mean score= 3.93) was perceived as one of the unfavourable statements by the moderate strength of youth in farming. They might be feeling freedom while taking up different farming operations and they might be enjoying the way they are taking up different farm operations with lot of independence and confidence. They might also be strong in their self concept and willing to receive the consequences of their performance in a positive manner.

It is clear from the statement number '14' with mean score (3.88) that, the slight majority of youth in farming viewed farming as a profitable occupation. They might have felt that within the available limited resources in the rural areas this is one of the best options when compared to other low paid employment and other off farm enterprises.

The 15th statement (mean score=3.80) elucidated that, the few majorities of youth in farming might be in the opinion that, as a profession, farming is superior to employment in terms of its significance towards freedom of work and satisfaction in terms of income.

The 16th statement (mean score=3.79) was comprehended by few majority of youth in farming as moderately unfavourable. The major part of youth in farming might be in the view of adopting integrated farming system rather than mono cropping in agriculture. This concept might have developed the vision towards diversification and expansion of their farm which will in turn widens the scope and opportunity to develop through farming. The present system of marketing and export orientation for some of the commercial crops also might have contributed to the above trend.

It could be clearly explained from 17th statement (mean score=3.68) that, considerable portion of youth in farming opposed the opinion of 'farming as a cumbersome occupation'. Due to latest development in farm mechanization, different machinery had been designed and introduced in farmer's fields which might have reduced drudgery in farm operations. The youth might be thinking that, with appropriate farm machinery, agriculture can be taken up with little manual labour and high quality produce can be yielded within the shortest time possible. But the accessibility and availability of that machinery might be a limiting factor for some of the youth in farming.

The mean score of 18th statement (3.62) envisaged that, majority of youth had shown slightly favourableness to the opinion of 'farming as a source of income'. The youth in farming with limited education qualification might be thinking that farming is the sole source of their development. On the other side the farmers with good education qualification might be viewing agriculture in a commercial angle and trying to gain maximum output per unit area.

Majority of youth in farming viewed the 19th statement with mean score (3.58) as one of the most unfavourable attitude statements. Due to Intervention of information and communication technology tools in farming might have helped the farmers in taking wise decisions in purchasing the right, reliable inputs, taking up timely farm operations and to dispose their farm produce. In contrary, some of them might be depending on unreliable source of information, input suppliers, coupled with poor marketing intelligence.

The statement number '20' with mean score (3.41) was felt by most of the youth as one of the favourable statements. The current trends in agricultural researches especially in the areas of information and communication technology, quality seeds, organic farming, precision farming, mechanization, price forecasting, marketing networks might be supporting the youth to gear up the farming.

The 21st statement with mean score (3.15) was viewed as one of the most unfavourable statements by some of the youth in farming. In the farming one has to face the problems both in production as well as marketing. Being the dynamic person of rural society, youth in farming might have shown their readiness to convert all such adversities as opportunities. As the problems are inevitable evils, the youth in farming might have themselves prepared to face the doldrums. On the other side, with scarce resources and limited education they might have felt the difficulty in facing such adverse effects.

It is apparent from 22nd statement with mean score (2.61) that, shortage of resources was viewed as favourable by the slight majority of youth in farming. By virtue of its nature, farming is more complex, requires the involvement of different elements both human and inhuman beings to succeed. Due to such complexity frequently the farming has to face the problem of shortage of such elements. Some of intelligent youth in farming might be forecasting and assessing such elements so as to replenish the gap through other suitable alternatives.

The statement number '23' (mean score=2.24) was perceived as one of the moderately unfavourable attitude statements by a majority of the youth in farming. They might be in opinion that higher education will change the mindset of youth towards more satisfactory and time bounded job opportunities rather than sticking to farming. On the other side, one part of youth in farming might be thinking that their higher education as an edge for taking up farming in a commercial angle.

It could be elucidated from 24th statement (mean score=2.15) that, the few majority of the youth in farming had shown unfavourableness towards encouraging their children to be in farming. Even though the present farming might not be certainly positive for the youth, the trend in growth and development of farming might be keeping them in crossroads.

4.3. Relationship between Profile Characteristics of Youth and their Attitude towards Farming

In order to study the nature of relationship between the selected independent variables and the attitude of youth towards farming, correlation coefficients (r) were computed and the values were presented in table 4.21.

The relationships between the selected independent variables and attitude of youth towards farming were tested by null hypothesis and empirical hypothesis.

Null hypothesis

There will be no relationship between the selected independent variables and attitude of youth towards farming.

Empirical hypothesis

There will be a significant relationship between the selected independent variables and attitude of youth towards farming.

If the calculated co-efficient of correlation value (r) between independent and dependent variables was more than the table value of 'r' at 0.01 or 0.05 level of significance, then the null hypothesis was rejected and empirical hypothesis was accepted.

4.3.1 Age Vs Attitude of Youth towards Farming

From the table 4.21. and figure 4.21. It is evident that co-efficient of correlation (r = -0.09) between age and attitude of the respondents was less than the table value of 'r' at 0.05 level of significance. Hence, it could be inferred that there was a negative and non significant relationship between age and attitude of the youth towards farming.

Youth in farming of all the groups might have similar ways of thinking and might be perceiving farming in reasonably uniform magnitude of different attributes of farming.

Table 4.21. Relationship between profile characteristics and attitude of youth towards farming

n=240

S. No.	Profile characteristics	'r' value
1.	Age	-0.09 NS
2.	Education	0.14*
3.	Marital Status	0.09 NS
4.	Family Type	0.12 NS
5.	Farming Experience	-0.08 NS
6.	Farm Size	0.07 NS
7.	Material Possession	0.07 NS
8.	Annual Income	0.23**
9.	Exposure to Training	0.14*
10.	Extension Contact	0.13 NS
11.	Mass Media Exposure	0.22**
12.	Decision Making Ability	0.18**
13.	Innovativeness	0.41**
14.	Scientific Orientation	0.43**
15.	Management Orientation	0.39**
16.	Achievement Motivation	0.19**
17.	Economic Orientation	0.54**
18.	Risk Orientation	0.31**

** Significant at 0.01 level *Significant at 0.05 level NS- Non-significant

Dependent variable

Y = Attitude of Youth towards Farming

Independent variables

X_1	=	Age
X_2	=	Education
X_3	=	Marital status
X_4	=	Family type
X_5	=	Farming experience
X_6	=	Farm size
X_7	=	Material possession
X_8	=	Annual income
X_9	=	Exposure to training
X_{10}	=	Extension contact
X_{11}	=	Mass media exposure
X_{12}	=	Decision making ability
X_{13}	=	Innovativeness
X_{14}	=	Scientific orientation
X_{15}	=	Management orientation
X_{16}	=	Achievement motivation
X_{17}	=	Economic orientation
X_{18}	=	Risk orientation

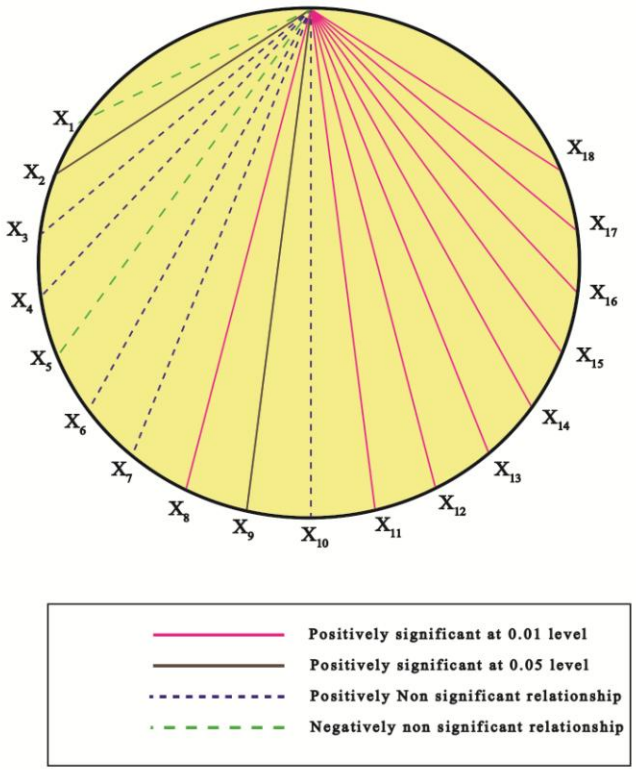


Figure 4.21. Relationship between selected profile characteristics and attitude of youth towards farming

4.3.2 Education Vs Attitude of Youth towards Farming

It could be derived from the table 4.21. and figure 4.21. that, the co-efficient of correlation (r=0.14) between education and attitude of the respondents was more than the table value of 'r' at 0.05 level of significance. Hence, it could be inferred that there was a positive and significant relationship between education and attitude of the youth towards farming.

With higher education, youth in farming might be exploring all the possible opportunities to succeed in farming. It also might have helped in enriching their knowledge and skills for attaining better productivity and profitability. In this direction highly educated youth might be more efficient in taking up their farming which in turn resulted in positive attitude. On the other side farmers with less education might be adopting the technologies by following the practices as done by their neighbouring farmers resulted in poor yields.

The findings were similar with that of Uddin *et al.* (2008) and Viswanatha *et al.* (2014a) studies. But it was against the findings of Umunnakwe and Adedamola (2015).

4.3.3 Marital Status Vs Attitude of Youth towards Farming

It could be derived from the table 4.21. and figure 4.21. that, the co-efficient of correlation (r=0.09) between marital status and attitude of the respondents was less than the table value of 'r' at 0.05 level of significance. Hence, it could be inferred that there was positive and non significant relationship between marital status and attitude of the youth towards farming.

4.3.4 Family Type Vs Attitude of Youth towards Farming

The table 4.21. and figure 4.21. revealed that, the co-efficient of correlation (r=0.12) between family type and attitude of the respondents was less than the table value of 'r' at 0.05 level of significance. The null hypothesis was accepted and alternate hypothesis was rejected. Hence, it could be inferred

that there was no significant relationship between family type and attitude of the youth towards farming.

Whatever may be the type of family, the youth in farming might have developed similar trend of attitude towards farming. The situational factors might have contributed for the variations among the youth of nuclear and joint families.

4.3.5 Farming Experience Vs Attitude of Youth towards Farming

From the table 4.21. and figure 4.21. it is apparent that co-efficient of correlation (r=-0.08) between farming experience and attitude of the respondents was less than the table value of 'r' at 0.05 level of significance. Thus, it might be inferred that there was a negative and non significant relationship between farming experience and attitude of the youth towards farming.

The farming experience might not have changed the attitude of youth towards farming. The youth with low farming experience and high farming experience might be in the similar way of thinking resulted in non significant relationship.

4.3.6 Farm Size Vs Attitude of Youth towards Farming

The co-efficient of correlation (r=0.07) between farm size and attitude of the respondents was less than the table value of 'r' at 0.05 level of significance. Hence, it could be confirmed that there was a positive and non significant relationship between farm size and attitude of the youth towards farming.

The youth in farming might be trying to utilize their available land and committed to produce maximum output from their available land holdings. Hence there was no significant relationship in their attitude among different levels of land holdings.

4.3.7 Material Possession Vs Attitude of Youth towards Farming

It could be derived from the table 4.21. and figure 4.21. that, the co-efficient of correlation (r=0.07) between material possession and attitude of the respondents was less than the table value of 'r' at 0.05 level of significance. Hence, it could be inferred that there was a positive and non significant relationship between material possession and attitude of the youth towards farming.

Even though the material possession is considered to be one of the most important factors for the success of farming, the youth in farming might not have perceived the need of such mechanization. This might be the reason for the above trend.

4.3.8 Annual Income Vs Attitude of Youth towards Farming

The results from table 4.21. and figure 4.21. conveyed that, the coefficient of correlation (r=0.23) value was found to be more than 'r' table value at 0.01 level of significance . Hence it could be inferred that, there was a positive and significant relationship between annual income and attitude of youth towards farming. It is clear that, for unit increase in annual income there was increase in attitude of youth towards farming positively.

Income is crux to assess the quality of any occupation. This determines the standard of living of an individual. As the youth in farming who are getting more income from farming might be in the opinion that farming is the best option to lead their life. On contrary, the farmers who are in the low income category might be thinking to shift from farming to choose the right alternative for earning. Hence the youth with high annual income might have developed a positive attitude towards farming. This tendency also might have helped youth in farming to think towards diversification and hence expansion of their farm.

Bhanu (2006), Mosaee and Ommani (2011), Anamica and Ravichandran (2014) Viswanatha *et al.* (2014a) supported the findings.

4.3.9 Exposure to Training Vs Attitude of Youth towards Farming

It could be derived from the table 4.21. and figure 4.21. that, the co-efficient of correlation (r=0.14) between exposure to training and attitude of the respondents was more than the table value of 'r' at 0.05 level of significance. Hence, it could be inferred that there was a positive and significant relationship between exposure to training and attitude of the youth towards farming.

Training is the means for an individual towards dynamism to face the required advancements in farming. The knowledge and skills gained in training might be helping the youth in farming towards adoption of innovative production technology which in turn led to quality production. This reason might have developed a positive attitude towards farming.

4.3.10 Extension Contact Vs Attitude of Youth towards Farming

The coefficient of correlation value (r=0.13) from the above table projected that, there was a positive and non significant relationship between extension contact and attitude of the respondents because the calculated 'r' value was less than the 'r' table value at 0.05 level of significance.

Youth in farming might be exploring all the possible means of the information sources for enriching their knowledge. Irrespective of having such contacts, the attitude of youth in farming might be influenced by other factors such as the income, prestige and so on.

4.3.11 Mass Media Exposure Vs Attitude of Youth towards Farming

It could be observed from the above table that, the coefficient of correlation value (r=0.22) was more than the 'r' table value at 0.01 level of significance. So it would be confirmed that there was a positive and significant relationship between mass media exposure and attitude of youth towards farming.

The present scenario of agricultural development is depending more on information and communication technology which is the best means to reach

the farming community. The youth in farming who are efficient in utilising such mass media tools might be receiving the information from the scientists or extension functionaries which might have helped youth to take up timely operations. Hence the mass media exposure might have resulted in better utilisation of innovative technology leading to better production.

The studies of Bhanu (2006), Umunnakwe *et al.* (2014) and Viswanatha *et al.* (2014a) pointed out the similar relationship between mass media exposure and attitude.

4.3.12 Decision Making Ability Vs Attitude of Youth towards Farming

It is apparent from the above table that, the coefficient of correlation value (r=0.18) was more than the 'r' table value at 0.01 level of significance. So it would be confirmed that there was a positive and significant relationship between decision making ability and attitude of youth towards farming.

Right decision is the precursor for developing a right attitude. Decision making ability is one of the important qualities of youth in farming which decide the fate of agriculture. A farmer taking up right decision in right time might have resulted in remarkable farming in their farm ultimately lead to the development of positive attitude towards farming. In contrary, youth in farming with poor decision making ability might have experienced poor yield in farming which in turn lead to development of negative attitude.

4.3.13 Innovativeness Vs Attitude of Youth towards Farming

It could be inferred from the table 4.21. and figure 4.21. that, the coefficient of correlation value (r=0.41) was more than the 'r' table value at 0.01 level of significance. Thus, it is evident that, there was a positive and significant relationship between innovativeness and attitude of youth towards farming.

Innovation is the key success factor for progressive development of any occupation. The quality of innovativeness will encourage the youth in farming towards adoption of modern technologies which replace age old

technologies. This change might have reflected on the evolutionary impact in farm productivity. Hence innovation brought out significant profitability in farming. Innovative technologies might have been applied both in production and marketing of their farming by the youth.

Uddin *et al.* (2008), Umunnakwe *et al.* (2014) and Viswanatha *et al.* (2014a) also noticed the positive and significant relation.

4.3.14 Scientific Orientation Vs Attitude of Youth towards Farming

The coefficient of correlation value (r=0.43) was more than the 'r' table value at 0.01 level of significance for scientific orientation. Hence, it is clear from the above table that, there was a positive and significant relationship between scientific orientation and attitude of youth towards farming.

Science is the base for any act. One has to see the root cause of any operation. Comprehension and reasoning will help in developing the quality of high scientific orientation. Educated and dynamic youth in farming might be rigorously analysed their activities for achieving success in their farming. The youth in farming with more scientific orientation might be more logical, reasonable and optimistic in adopting new technologies which have resulted in high success percentage. The education, knowledge and skills might have directly contributed for developing a positive attitude towards farming.

4.3.15 Management Orientation Vs Attitude of Youth towards Farming

From the above table the coefficient of correlation value (r=0.39) of management orientation was more than the 'r' table value at 0.01 level of significance. Thus, it is apparent that, there was a positive and significant relationship between management orientation and attitude of youth towards farming.

Effective utilisation of all possible resources is vital in measuring the efficiency of any event. Management is such a tool which deserves tremendous output through smart work. Youth in farming, who utilise all

such resources in all their phases of farming viz., planning, production and marketing might have realised remarkable returns from their farm work. This might have lead to the positive attitude towards farming.

4.3.16 Achievement Motivation Vs Attitude of Youth towards Farming

The coefficient of correlation value (r=0.19) was more than the 'r' table value at 0.01 level of significance. Thus, it is apparent from the above table that, there was a positive and significant relationship between achievement motivation and attitude of youth towards farming.

n-Ach of an individual determines one's strength of success. Youth in farming with high achievement motivation might be courageous and had a high desire to set and achieve optimistic targets in their farming through committed and sincere efforts. They might have achieved their dreams which made them to develop more affinity towards farming. Positive attitude towards farming might have drawn from such attitude.

Bhanu (2006), Mohan and Reddy (2012) and Rani (2014) supported the relationship but Anamica and Ravichandran (2014) findings were dissimilar with the current study.

4.3.1.17 Economic Orientation Vs Attitude of Youth towards Farming

It is viewed from the table 4.21. and figure 4.21. that, the coefficient of correlation value (r=0.54) was more than the 'r' table value at 0.01 level of significance. Therefore, it is true that, there was a positive and significant relationship between economic orientation and attitude of youth towards farming.

In the present world, the income is the base for appraising any enterprise or any occupation. Higher the income, greater the scope for tilting towards such means. The continuous involvement, growth and development create a positive attitude. During the course of time one might be in search of designing cost effective combinations with highest possible outputs. Hence

the economic orientation might have shown a significant impact on the positive attitude towards farming.

Bhanu (2006) expressed the similar result in their study.

4.3.1.18 Risk Orientation Vs Attitude of Youth towards Farming

The coefficient of correlation value (r=0.31) was more than the 'r' table value at 0.01 level of significance. Thus, it is apparent from the above table that, there was a positive and significant relationship between risk orientation and attitude of youth towards farming.

Youth might be taking risk in performing activities in both production and marketing so as to get maximum returns. All such youth might have won their efforts by taking calculated risk. The amount of risk encountered by youth might have given back a many fold income in farming and in turn developed positive attitude towards farming.

Anamica and Ravichandran (2014) reported negative and significant relationship at one per cent level of probability level.

The overview of the correlation analysis revealed that, education and exposure to training of youth in farming shown positively significant relationship with their attitude towards farming at 0.05 level of significance. Annual income, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation had positively significant relationship with the attitude of youth towards farming at 0.01 level of significance.

The other variables like marital status, family type, farm size, material possession and extension contact were non significantly related with the attitude of youth towards farming, whereas age and farming experience were negatively non significant with the attitude of youth towards farming at 0.05 level of significance.

4.4 Different Combinations of Farm Enterprises being followed by the Youth and their Contribution towards Net Income (NI)

Co-existence of different living beings is very essential to lead the life prosperously on the mother earth. In rural environment it was very clearly observed that, along with agriculture the other farm enterprises also existed which fulfill the essential needs of daily diet, by-product utilization of one farm enterprise to another, act as sources of subsidiary income to meet the house hold needs and also contributes to maximum utilization of all resources leading to take up intensive farming on small land holdings in order to earn maximum returns from the optimum farm output.

In the present study, it was observed that, there were seven farm enterprises being followed by youth in farming. They were Agriculture (A), Vegetable (V), Orchard (O), Dairy (D), Sheep (S), Poultry (P) and Plantation (PL). These farm enterprises were practiced in the form of different combinations by majority of the youth in farming and as a single entity by some of the youth in farming

This objective was measured by identifying all the available combinations among youth in farming, assessing the extent of each farm enterprise and the existence of different combinations of farm enterprise among youth in farming based on their farm size. Further, the contribution of net income was also analyzed by taking each enterprise wise income and proportion of income of each enterprise in all the combinations.

4.4.1 Different Combinations of Farm Enterprises being followed by the Youth in Farming

It could be noted from the table 4.22. and figure 4.22. that, more than one-third (35.42%) of the youth in farming followed (A+D) combination. About one- fourth (23.75%) of them had followed only agriculture. Nearly one-tenth (7.92%) of them had (A+D+P) followed by 6.67 per cent (A+V), 4.58 per cent (A+P). Slightly more than two per cent of them followed

(A+ S), (A+D+S) and (A+O+D) individually. Very meager per cent (1.67%, 1.25% and 1.25%) of them followed (A+O), (A+V+D) and (A+D+S+P). While other minor combinations constituted to about one tenth (9.58%) of the youth in farming. viz., "(2V+D, 2V, 2O, 2A+O+D+P, 1A+V+D+P, 1A+V+O, 1V+O, 1A+V+P, 1V+O+PL, 1A+V+O+D+P, 2A+V+O+PL, 1V+O+D+P+PL, 1A+V+D+S, 1A+V+O+D, 1V+S+P, 2A+S+P,1O+D)."

It is observed from table 4.22. and figure 4.23. that, two-fifth (40.00%) of the youth in farming in Rayalaseema practiced (A+D) combination followed by Agriculture (27.50%). Equal proportion (5.00%) of them had (A+V) and (A+O) combinations separately. (A+D+P) and (A+P) combinations were followed by equal proportion (3.75%) of the youth in farming. More than two per cent of them had (A+O+D) combination. Very less per cent (1.25%) of them followed (A+D+S) and (A+V+D) combinations individually. One-tenth of them followed other combinations.

An outlook on table 4.22 and figure 4.24. revealed that, in case of Coastal region, one- fourth (25.00%) of the youth had (A+D) combination followed by Agriculture (21.25%), (A+D+P) combination (12.50%), (A+V) combination (11.25%). Less than one-tenth (6.25%) of them followed (A+D+S) combination. 5.00 per cent of them followed (A+S) combination. 2.5 per cent of them had (A+P) combination. Very meagre proportions (1.25%) of each of them had (A+O+D), (A+V+D) and (A+D+S+P) combinations. 12.50 per cent of them followed other combinations.

The table 4.22. and figure 4.25. depicted that, about 41.25 per cent of the youth in North Coastal region possessed (A+D) combination, followed by Agriculture (22.50%). Equal proportion (7.50%) of them had (A+D+P) and (A+P) combination. About 3.75 per cent of them had (A+V) and (A+S) combination individually. (A+D+O) and (A+D+S+P) were followed by equal proportions (2.50%) of the youth. 1.25 per cent of them had (A+D+S) and (A+V+D) combinations equally. The remaining 6.25 per cent of youth had other combinations.

Table 4.22. Different combinations of farm enterprises being followed by the youth in farming

S. No.	Farm Enterprises	Rayalaseema n=80		Coastal n=80		North Coastal n=80		Total n=240	
		N	%	N	%	N	%	N	%
1.	A+D	32	40.00	20	25.00	33	41.25	85	35.42
2.	A	22	27.50	17	21.25	18	22.50	57	23.75
3.	A+D+P	3	3.75	10	12.50	6	7.50	19	7.92
4.	A+V	4	5.00	9	11.25	3	3.75	16	6.67
5.	A+P	3	3.75	2	2.50	6	7.50	11	4.58
6.	A+S	0	0	4	5.00	3	3.75	7	2.92
7.	A+D+S	1	1.25	5	6.25	1	1.25	7	2.92
8.	A+ O + D	2	2.50	1	1.25	2	2.50	5	2.08
9.	A+O	4	5.00	0	0	0	0	4	1.67
10.	A+ V +D	1	1.25	1	1.25	1	1.25	3	1.25
11.	A+D+S+P	0	0	1	1.25	2	2.50	3	1.25
12.	Other minor combinations	8	10.00	10	12.50	5	6.25	23	9.58
	Total	**80**	**100**	**80**	**100**	**80**	**100**	**240**	**100**

Note- A-Agriculture, V-Vegetable, O-Orchard, D-Dairy, S-Sheep & Goat, P-Poultry, PL-Plantations.

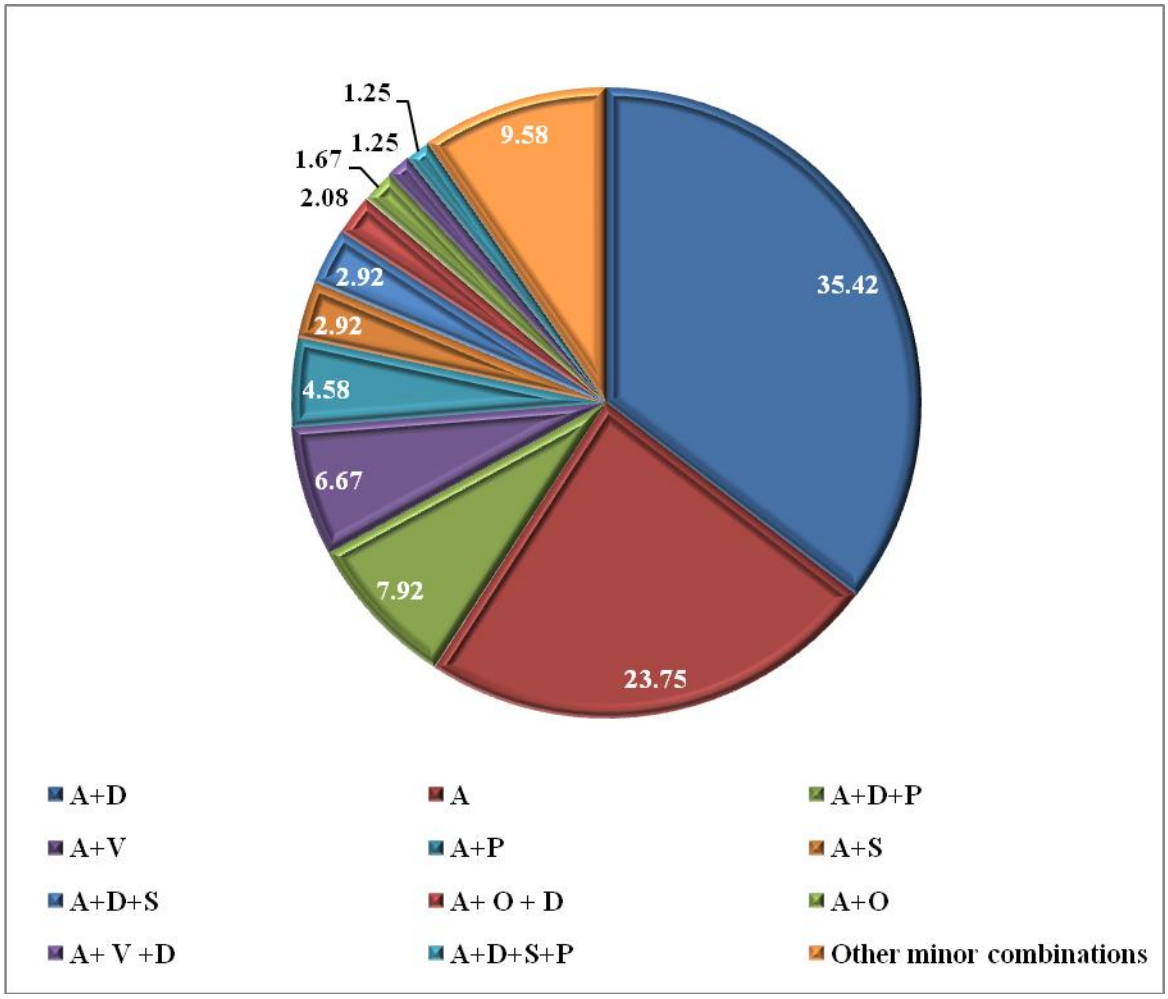


Figure 4.22. Different combinations of farm enterprises being followed by the youth in farming

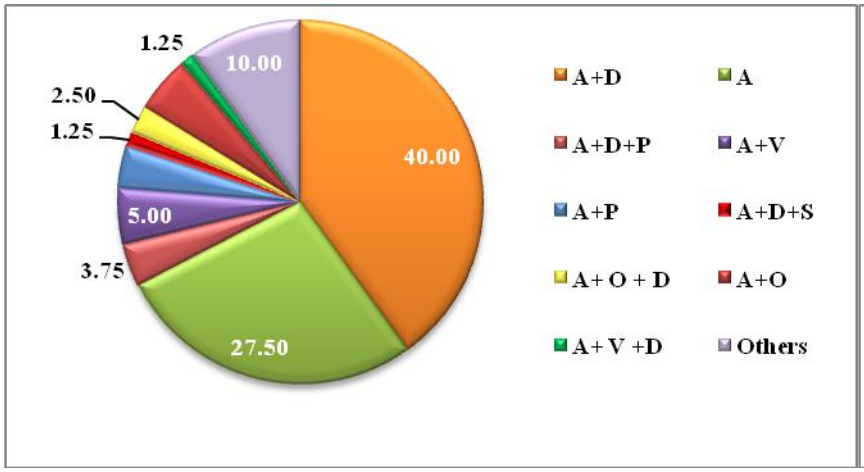
As a continuation of traditional approach of mutual dependence of agriculture and dairying is still in existence with more than one-third of the youth in farming. This is an indication for effective utilization of the by-products of one to another towards maximizing profitability, minimising cost of production and balancing environmental and soil health. Hence this combination might have been followed by majority of the youth.

Surprisingly about one-fourth of the youth were purely engaged in the agriculture as the source of their income. The possible reasons like fragmentation leading to small holdings, limited family man power due to nuclear families, low standard of living, getting relatively more income from agricultural labour than an additional farm enterprise and other situational factors might have contributed for the above trend.

(A+D+P) combination had been followed by marginal farmers to pool the limited income which was derived from all the three sources of farming. It had been treated as a livelihood combination by them. Thus the above trend might have been existed.

(A+V) combination seemed to be miniscule in existence with the youth, which involves similar line of operations and different income generation pattern together. Hence this combination might have gained importance among the youth in farming.

All other combinations in practice which were observed among the youth in farming might be based on location specific, environmental situations and other miscellaneous factors. Among all the three regions, in the coastal region combination of agriculture with dairy, poultry and sheep was relatively high as compared to other regions. On the contrary, the (A+D) combination was low in coastal region.



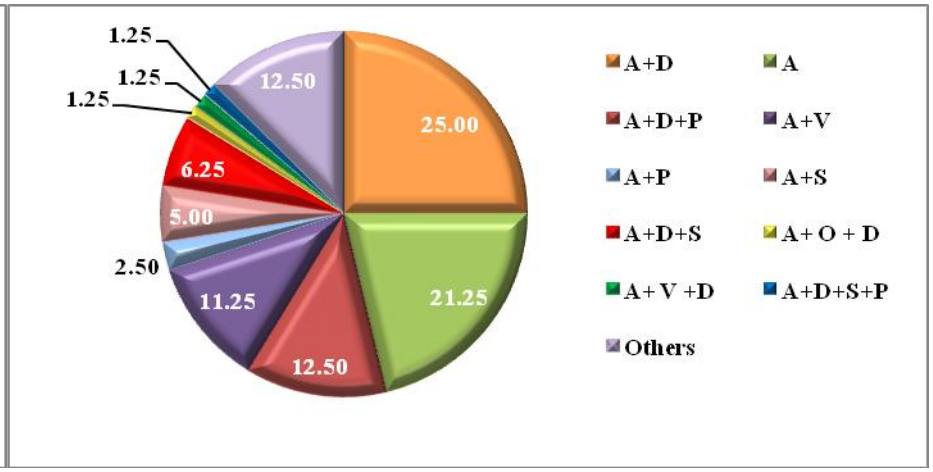


Figure 4.23.Figure 4.24.

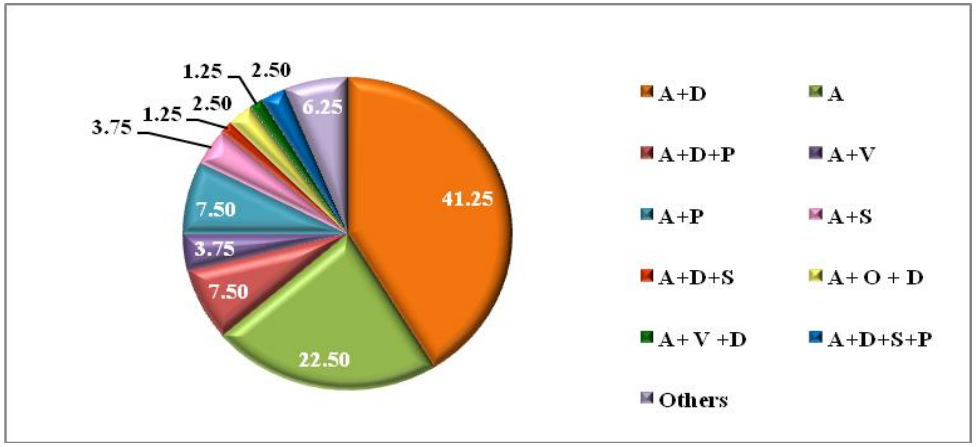


Figure 4.25. Figure 4.23., 4.24.& 4.25. Different combinations of farm enterprises being followed by the youth in farming-Region wise

4.4.2 Analysis of Individual Farm Enterprises in terms of their Distribution among the Youth in Farming

An attempt was made to analyze the individual farm enterprises in terms of their distribution among youth in farming. It could be observed from the table 4.23. and figure 4.26. that, a vast majority (95.42%) of the youth had agriculture as sole and also as one of the enterprises in combination, followed by dairy (55.00%), poultry (17.50%) and vegetables (14.58%). Nearly ten per cent of them had orchard (9.17%) and sheep (8.75%) as one of the enterprises in combination respectively. Only 1.67 per cent of them had plantation as one of the enterprises in combination.

Table 4.23. Individual farm enterprises and their distribution among the youth in farming

S. No.	Farm Enterprise	Rayalaseema n=80		Coastal n=80		North Coastal n=80		Total n=240	
		N	%	N	%	N	%	N	%
1.	Agriculture (A)	74	92.50	77	96.25	78	97.50	229	95.42
2.	Vegetable (V)	10	12.50	20	25.00	5	6.25	35	14.58
3.	Orchard (O)	9	11.25	9	11.25	4	5.00	22	9.17
4.	Dairy (D)	43	53.75	42	52.50	47	58.75	132	55.00
5.	Sheep (S)	1	1.25	11	13.75	9	11.25	21	8.75
6.	Poultry (P)	8	10.00	16	20.00	18	22.50	42	17.50
7.	Plantation (PL)	0	0.00	4	5.00	0	0.00	4	1.67

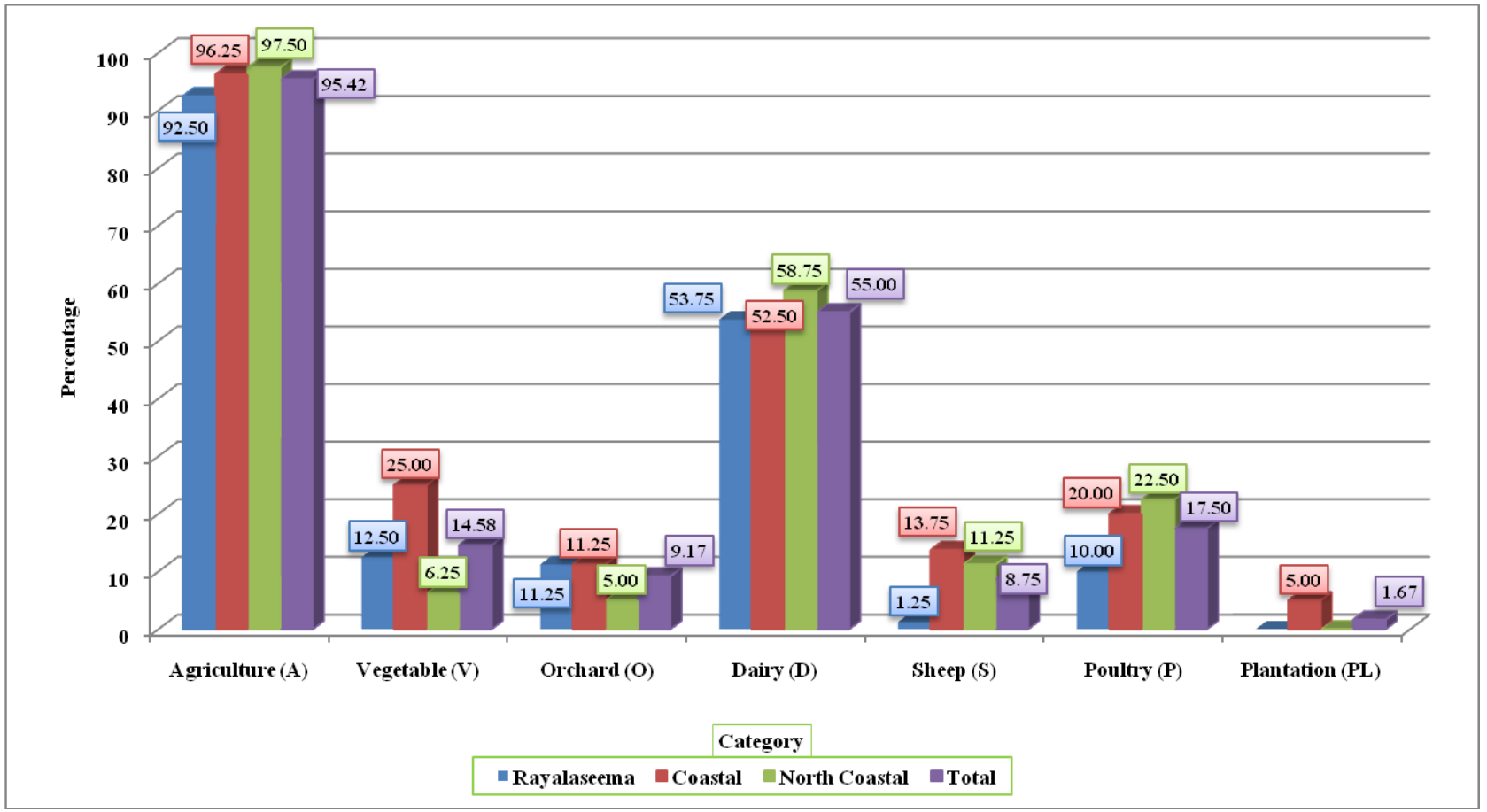


Figure 4.26.Individual farm enterprises and their distribution among the youth in farming

It was also found that, large majority of the (92.50%, 96.25% and 97.50%) youth in farming in the three regions have followed agriculture. More than half of and almost in similar proportions (53.75%, 52.50% and 58.75%) of them followed dairy farming in the three regions. Equal proportions each (11.25%) and only 5.00 per cent of them had orchards in Rayalaseema, Coastal and North Coastal regions respectively. About one-seventh (13.75%) of youth in Coastal region followed sheep which is relatively higher than that of other two regions. About one- fourth (22.50%) of the North Coastal youth had poultry as one of their farm enterprises. It is higher than that of other two regions. While plantation crops were followed by 5.00 per cent of youth in Coastal region only.

Agriculture is the backbone for farming. Entire world depends on agriculture for their existence. Agriculture has been taken as a base to run the allied farm enterprises. They will utilize the by-products of agriculture. Hence, agriculture will take lion share in the entire farming. On the other side the output from agriculture must be an integral part of everyday's diet of an individual and it occupies more than half of consumption in a day.

Traditionally, dairy was the core subsidiary enterprise to agriculture. But the concept of intensive agriculture led to the use of high yielding varieties and farm mechanization. Due to this, the role of dairy in agriculture was slowly replaced with chemical fertilisers and farm machinery. But as an independent income source for the youth in farming, dairy is one of the leading enterprises with diversified products and high utility potential among different sectors of people in the society. Hence more than half of the youth in farming might have integrated dairy in their farming. As a reverse trend the focus on organic farming in the recent past revitalized the importance of dairy in agriculture.

Poultry is also an integral part of farming for more than one-sixth of the rural youth under different combination as a small scale enterprise. They might have perceived this purely as a subsidiary source of income on a

regular basis. Relatively less efforts made by the youth towards the management of this enterprise and mostly was been taken as a backyard poultry. Consequently this trend might have been observed.

Cultivation of vegetables is another lucrative and regular source of income for about one-seventh of the youth in farming. The life style and dietary modifications among the people in both rural and urban areas led to increased demand for the vegetables. Youth in farming had the opportunity to grow different varieties of vegetables to match with the varied tastes of the people to earn high profits. Wide market networking also became an added advantage for vegetable farming. Therefore the youth might have shown such inclination.

As a perennial and long term source of income with limited regular work and high scope for domestic and export opportunities, orchards attracting the rural youth. Increased adoptability of different fruit crops in different agro-climatic regions as well as year round production and consumption of fruits also led to choose the orchard farming as one of the major options by the youth. Thus the above trend might have been observed.

Sheep and goat is another important farm enterprise among small and marginal farm youth. This enterprise been treated mainly as a livelihood option than looking in commercial angle by majority of youth in farming. It can be taken up by a pair of family members without any external labour source. In some cases this can also yield substantial income to the youth in farming. But this is treated as a low profile enterprise by the youth in farming. Hence this combination might have been followed by less proportion of youth.

Very few youth in farming also practicing plantation crops such as coconut, oil palm and betel vine. This option might have been made based on the local situational factors as well as existence of marketing sources for the produce. Thus this farm enterprise might have been one among the all other farm enterprises followed by the youth in farming.

Aphunu and Atoma (2010), Aphunu and Akpobasa (2010), Saha *et al*. (2010), Lyocks *et al.* (2013) also supported the findings of the present study.

4.4.3 Combinations of Farm Enterprises followed by Youth in Farming based on their Farm Size

It was keenly seen from table 4.24. and figure 4.27. that, about 12.50 per cent of the youth in farming (marginal farmers) had (A+D) combination, followed by Agriculture (10.83%), (A+D+P) combination (5.42%). Nearly five per cent (4.58% and 4.17%) of them followed dual combinations (A+V) and (A+P) respectively. Equal per cent (1.67%) of them practiced (A+S) and (A+D+S) individually. About 1.25 per cent of them followed (A+D+S+P) combination. About one-tenth (8.36%) of the marginal youth followed other combinations of farm enterprises.

It could be keenly observed from the table 4.24. and figure 4.28. that, in case of youth in farming (small farmers), slightly more than one-tenth (11.67%) of them had practiced (A+D), followed by Agriculture (5.83%) and (A+D+P) combination (1.67%). 1.25 per cent of them followed (A+V) enterprise combination. While, only 7.09 per cent of them followed other combinations.

It was also seen from table 4.24. and figure 4.29. that, about 7.92 per cent of the youth in farming (semi-medium farmers) practiced (A+D) combination followed by agriculture (3.75%).Very meager (0.83%) of them practiced (A+D+P). The same per cent (0.42%) of them had (A+V), (A+S), (A+D+S) and (A+O+D).

It is evident from table 4.24. and figure 4.30. Among youth in farming (medium farmers) 3.33 per cent had (A+D) combination followed by agriculture (2.08%). Equivalent per cent (0.42%) of them had practiced (A+V), (A+O) and (A+V+D+S) farm enterprise combinations.

Youth in farming (large farmers) constituted to only 1.25 per cent of the total youth and followed only Agriculture.

Table 4.24 Different combinations of farm enterprises followed by youth in farming based on their farm size n=240

S. No.	Farm Enterprises	Marginal		Small		Semi-Medium		Medium		Large		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
1.	A+D	30	12.50	28	11.67	19	7.92	8	3.33	-	-	85	35.42
2.	A	26	10.83	14	5.83	9	3.75	5	2.08	3	1.25	57	23.75
3.	A+D+P	13	5.42	4	1.67	2	0.83	-	-	-	-	19	7.92
4.	A+V	11	4.58	3	1.25	1	0.42	1	0.42	-	-	16	6.67
5.	A+P	10	4.17	1	0.42	-	-	-	-	-	-	11	4.58
6.	A+S	4	1.67	2	0.83	1	0.42	-	-	-	-	7	2.92
7.	A+D+S	4	1.67	2	0.83	1	0.42	-	-	-	-	7	2.92
8.	A+O+D	2	0.83	2	0.83	1	0.42	-	-	-	-	5	2.08
9.	A+O	1	0.42	2	0.83	-	-	1	0.42	-	-	4	1.67
10.	A+V+D	2	0.83	1	0.42	-	-	-	-	-	-	3	1.25
11.	A+D+S+P	3	1.25	-	-	-	-	-	-	-	-	3	1.25
12.	V	1	0.42	1	0.42	-	-	-	-	-	-	2	0.83
13.	O	1	0.42	1	0.42	-	-	-	-	-	-	2	0.83
14.	A+S+P	2	0.83	-	-	-	-	-	-	-	-	2	0.83
15.	A+V+O+PL	2	0.83	-	-	-	-	-	-	-	-	2	0.83
16.	V+D	-	-	2	0.83	-	-	-	-	-	-	2	0.83
17.	A+O+D+P	1	0.42	1	0.42	-	-	-	-	-	-	2	0.83
18.	A+V+O	1	0.42	-	-	-	-	-	-	-	-	1	0.42
19.	A+V+P	1	0.42	-	-	-	-	-	-	-	-	1	0.42

Table 4.24. (cont.)

20.	A+V+O+D	1	0.42	-	-	-	-	-	-	-	-	1	0.42
21.	A+V+D+S	-	-	-	-	-	-	1	0.42	-	-	1	0.42
22.	A+V+D+P	1	0.42	-	-	-	-	-	-	-	-	1	0.42
23.	A+V+O+D+P	-	-	1	0.42	-	-	-	-	-	-	1	0.42
24.	V+O	1	0.42	-	-	-	-	-	-	-	-	1	0.42
25.	V+O+PL	1	0.42	-	-	-	-	-	-	-	-	1	0.42
26.	V+S+P	1	0.42	-	-	-	-	-	-	-	-	1	0.42
27.	V+O+D+P+ PL	-	-	1	0.42	-	-	-	-	-	-	1	0.42
28.	O+D	1	0.42	-	-	-	-	-	-	-	-	1	0.42
	Total	**121**	**50.41**	**66**	**27.50**	**34**	**14.17**	**16**	**6.67**	**3**	**1.25**	**240**	**100**

A+D was the most important combination followed by the marginal, small, semi-medium and medium farmers except large farmers. Medium to large farmers might be sticking to agriculture and other one allied enterprise due to large land holdings. In contrary, almost all the trivial combination of enterprises on a limited scale was observed among the small and marginal farmers so as to strive for sustainability in their limited land holding. The overall picture reflects that A, (A+D), (A+V) and (A+P) were the vital enterprises in all the categories contributing to nearly three fourths of rural youth in farming.

4.4.4 Contribution of Each Farm Enterprise to Net Income (NI) of Youth in Farming

An overview of table 4.25. and figure 4.31. portrayed that, the contribution of each farm enterprise towards NI was different in the three regions. The overall picture depicted that, a huge majority of the youth were

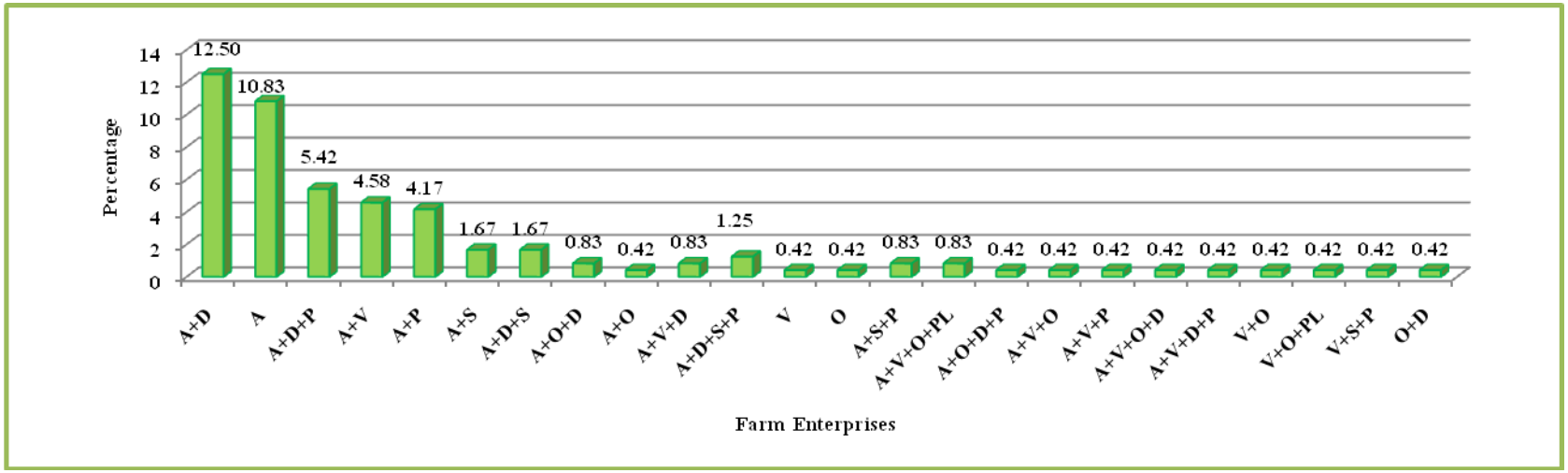


Figure 4.27. Combinations of farm enterprises followed by youth in farming (Marginal Farmers)

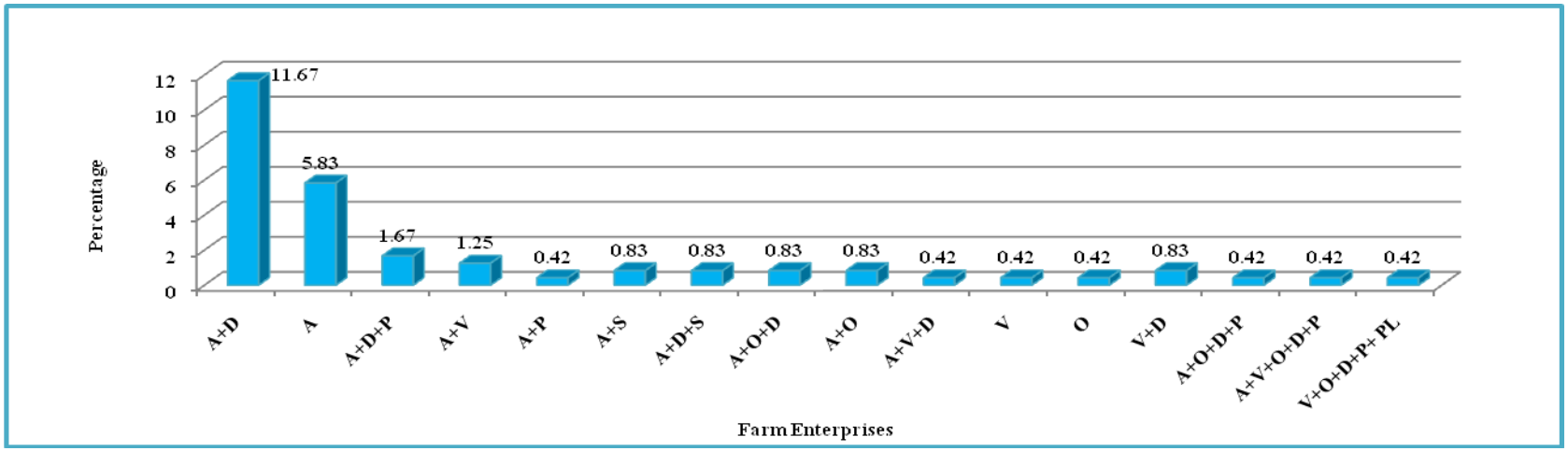


Figure 4.28. Combinations of farm enterprises followed by youth in farming (Small Farmers)

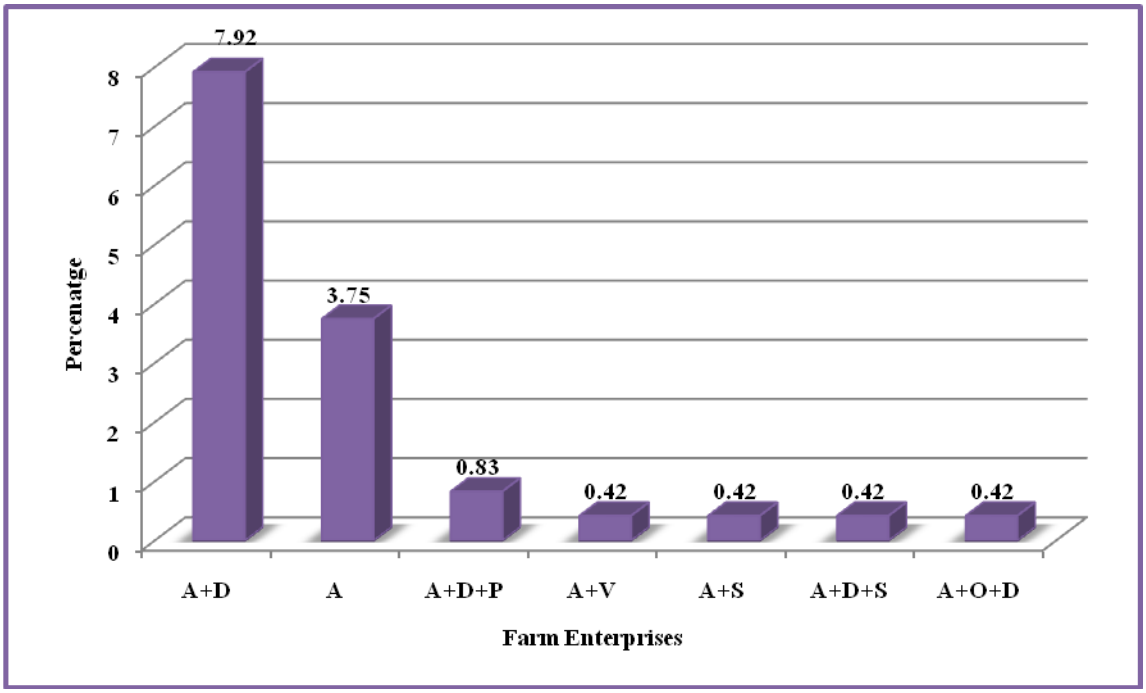


Figure 4.29. Combinations of farm enterprises followed by youth in farming (Semi-Medium Farmers)

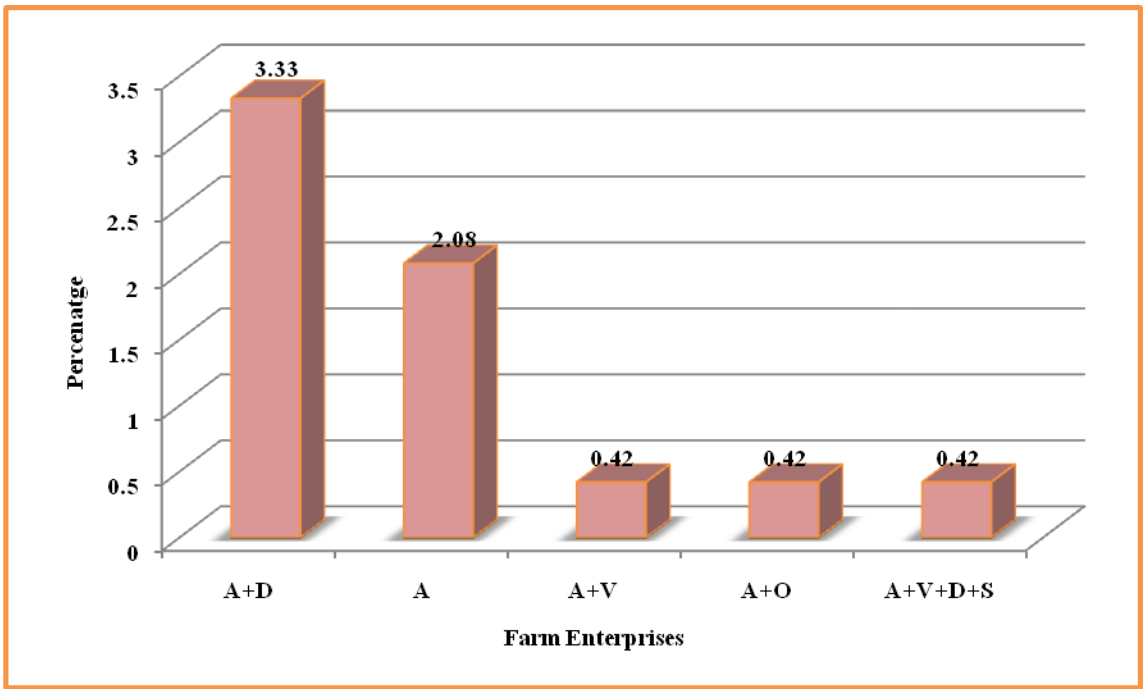


Figure 4.30. Combinations of farm enterprises followed by youth in farming (Medium Farmers)

depending on the agriculture and it had contributed to more than two-third (69.02%) of the total NI of the individuals. More than half of the youth had dairy enterprise but it had contributed to only 12.18 per cent. Vegetable farming was followed by one-seventh of the youth and it had contributed to 10.40 per cent of the total NI. About one-tenth of the youth practiced orchard farming but it contributed to only 4.28 per cent of the NI. Less percentage of the youth followed sheep farming contributing to 2.62 per cent of the NI. Only 1.20 per cent of the total NI was obtained from poultry farming by one-sixth of the youth in farming. Meagre per cent of the youth who had plantations obtained 0.30 per cent of the total NI.

It could be clearly observed from table 4.25. and figures 4.32., 4.33. and 4.34. that, agriculture was followed by almost equivalent per cent of the youth in all the three regions but the NI earned was in the ascending order (59.34%, 70.53% and 72.17%) of North Coastal, Coastal and Rayalaseema. While the contribution of NI from dairy was in the order of (7.90%, 10.37% and 25.60%) by Coastal, Rayalaseema and North Coastal regions respectively, even when the proportion of youth followed was more or less similar. High proportion of youth were following vegetable farming in Coastal, followed by other two regions and its contribution to NI was also in the same way as (12.52%, 11.66% and 3.04%) in Coastal, Rayalaseema and North Coastal. The orchard farming was followed by equal proportions of youth in farming but its contribution was alike (6.91% and 1.78%) in Coastal and Rayalaseema regions respectively, whereas, it was followed by very meagre per cent of the youth in farming and contributed to around three per cent in North Coastal region.

The sheep farming was followed by high proportion of youth in Coastal region but the contribution to net income was high in North Coastal region (4.93%) compared to the other two regions. Poultry was followed by youth in all the three regions as backyard poultry and its contribution to net

Table 4.25 Contribution of individual farm enterprise to net income (NI) of youth in farming

S. No.	Farm Enterprise	Rayalaseema n=80				Coastal n=80				North Coastal n=80				Total n=240				Rank
		No. of youth in farming		NI earned by all individuals		No. of youth in farming		NI earned by all individuals		No. of youth in farming		NI earned by all individuals		No. of youth in farming		NI earned by all individuals		
		N	%	In lakhs	%	N	%	In lakhs	%	N	%	In lakhs	%	N	%	In lakhs	%	
1	Agriculture (A)	74	92.50	154.12	72.17	77	96.25	176.08	70.53	78	97.50	64.35	59.34	229	95.42	394.55	69.02	1
2	Dairy (D)	43	53.75	22.15	10.37	42	52.50	19.73	7.90	47	58.75	27.76	25.60	132	55.00	69.64	12.18	2
3	Vegetable (V)	10	12.50	24.9	11.66	20	25.00	31.25	12.52	5	6.25	3.30	3.04	35	14.58	59.45	10.40	3
4	Orchard (O)	9	11.25	3.8	1.78	9	11.25	17.25	6.91	4	5.00	3.40	3.14	22	9.17	24.45	4.28	4
5	Sheep (S)	1	1.25	7.11	3.33	11	13.75	2.5	1.00	9	11.25	5.35	4.93	21	8.75	14.96	2.62	5
6	Poultry (P)	8	10.00	1.48	0.69	16	20.00	1.13	0.45	18	22.50	4.28	3.95	42	17.50	6.89	1.20	6
7	Plantation (PL)	0	0	0	0	4	5.00	1.7	0.68	0	0	0	0	4	1.67	1.70	0.30	7
	Total			**213.56**	**100**			**249.64**	**100**			**108.44**	**100**			**571.64**	**100**	

Note:-NI=Net Income

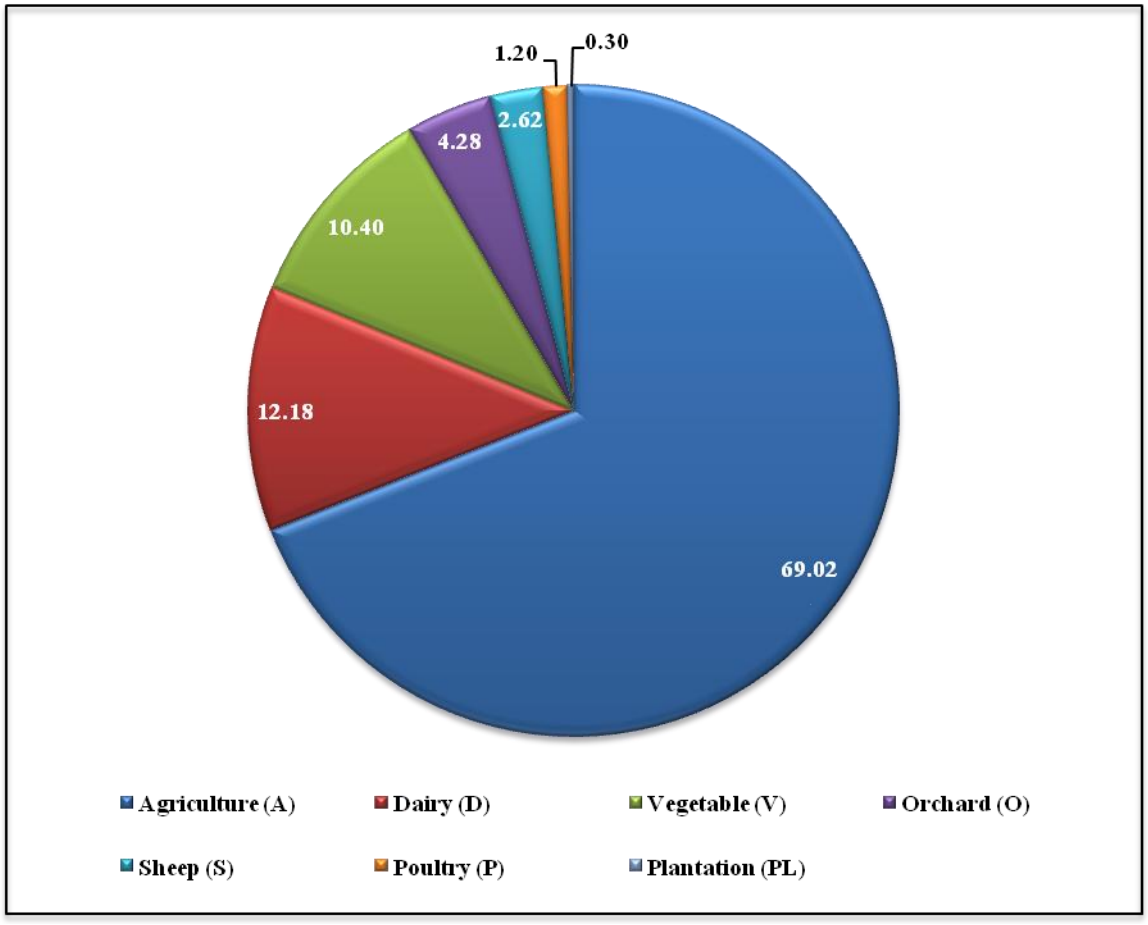


Figure 4.31. Contribution of individual farm enterprise to net income (NI) of youth in farming

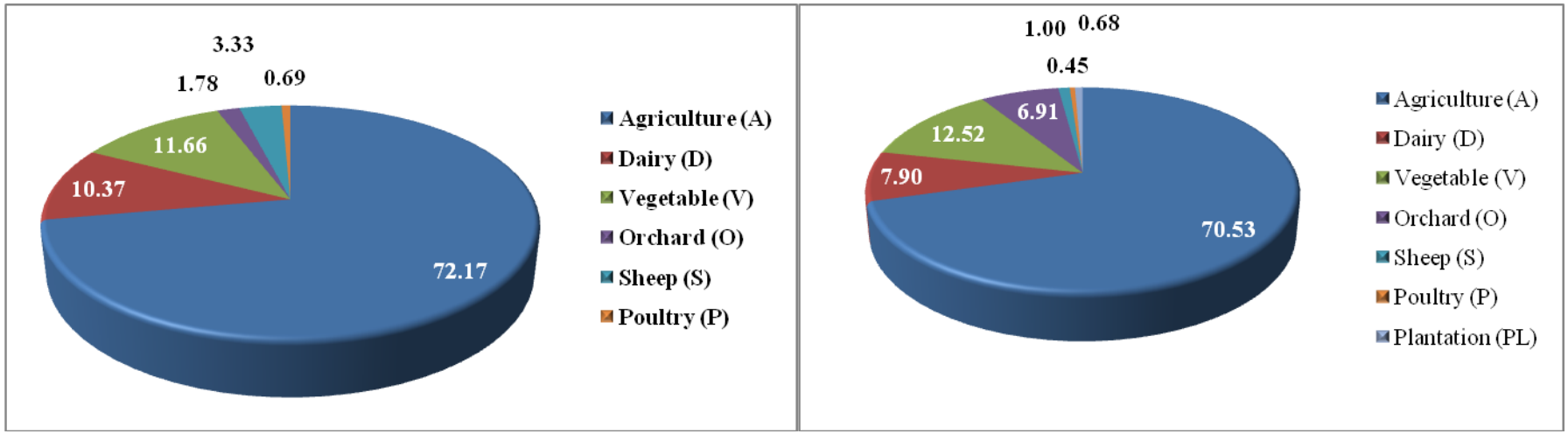


Figure 4.32.Figure 4.33.

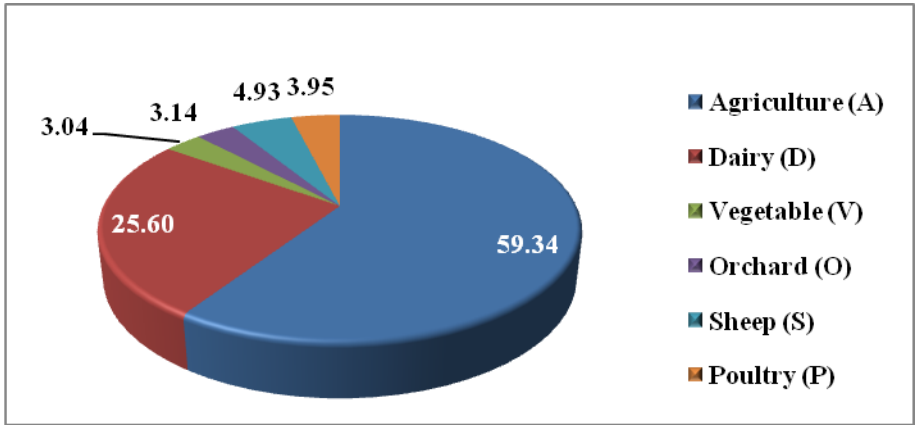


Figure 4.34. Figure 4.32., 4.33. & 4.34. Contribution of individual farm enterprise to net income (NI) of youth in farming- Region wise

income was meagre (0.69%, 0.45% and 3.95%) in Rayalaseema, Coastal and North Coastal regions respectively.

The above trend is clearly indicating that agriculture is producing nearly three fourth of the total income from farming. On the other side, in North Coastal only sixty per cent is coming from agriculture due to more dependence of youth on other allied enterprises like dairy, vegetable, sheep as source of income.

Even though more than half of youth in farming taking up dairy as one of the farm enterprise, the reason for relatively low NI from dairy might be due to high initial cost, poor maintenance, low family labour and other bottlenecks to operate dairy on medium to large scale. The size of dairy might be relatively high in North Coastal region leading to more dependence of youth on dairy which resulted in relatively high income from dairy.

The requirement of continuous and intensive efforts for both production and marketing might be reason for taking up vegetable cultivation on a limited scale by a limited number of youth in farming.

Lack of proper irrigation source and poor maintenance of orchards by the youth in farming might have produced very meagre net income from the existing orchards.

Sheep and poultry were the two important income sources for the small and marginal farmers taken up on a very limited scale, which yield negligible net income.

Bhanu (2006), Aphunu and Akpobasa (2010) and Olaniyi (2012) also found the similar results in their studies.

4.4.5 Proportion of Average Net Income from Each Enterprise in All the Existing Combinations of Farm Enterprises among Youth in Farming

The data pertaining to the table 4.26 focused that, in case of (A+D) combination, major portion (78.11%) of the NI was from agriculture and remaining (21.91%) was from dairy. In the combination of (A+D+P) more

than two-third (72.49%), 22.13 per cent and 5.38 per cent of the average NI was from agriculture, dairy and poultry separately. The average NI from agriculture was constituted to 71.99 per cent, followed by poultry (28.01%) in the (A+P) combination. From (A+D+S) combination the contribution of each enterprise to NI was (73.13%, 8.00% and 18.87%) respectively. In case of (A+V+O+D+P), 82.47 per cent of average NI was exclusively from agriculture, followed by orchard (8.25%), vegetable (4.12%), dairy (4.12%) and poultry (1.03%).

On the contrary to above trends, vegetable contributed to major portion (73.31%) of the average NI, followed by agriculture (26.69%) in (A+V) combination. In (A+V+D) combination, the contribution to average NI was in the order of 26.47 per cent, 63.24 per cent and 10.29 per cent respectively. While in case of (V+D) combination major (94.86%) and very less (5.14%) portion of the NI was from vegetable and dairy respectively. More than half (55.56%) of the per cent was from vegetable, followed by agriculture (27.78%) and orchard (16.67%) respectively in (A+V+O) combination. About 52.63 per cent of the average NI was from vegetable, followed by orchard (26.32%) and plantation (21.05%) in (V+O+Pl) combination. In (A+V+P) combination 60.00 per cent of the average NI was from vegetable, and equal per cent (20.00%) was from agriculture and poultry respectively in

(A+V+P) combination. In the same way the contribution to average NI from vegetable was (65.22%), sheep (21.74%) and poultry (13.94%) in (V+S+P) combination.

The orchard as one of the farm enterprises also contributed to considerable amount of net income to the youth in farming. In the combination (A+O) 70.94 per cent of the average NI was from orchard, followed by agriculture (29.06%). Slightly more than half (54.55%) and 45.45 per cent of the average NI was from orchard and dairy in (O+D) combination. In case of (V+O) combination two third (66.67%) and one-third (33.33%) of the average NI was from orchard and vegetable.

Table 4.26 Proportion of average net income from sole and combination of farm enterprises being followed by youth in farming n=240

S. No.	Farm enterprises	N	Proportion of average net income from each enterprise in each combination						
			A	V	O	D	S	P	PL
1.	A+D	85	**78.11**			21.91			
2.	A	57	**100.00**						
3.	A+D+P	19	**72.49**			22.13		5.38	
4.	A+V	16	26.69	**73.31**					
5.	A+P	11	**71.99**					28.01	
6.	A+S	7	47.13				**52.87**		
7.	A+D+S	7	**73.13**			8.00	18.87		
8.	A+ O + D	5	27.71		**49.88**	22.41			
9.	A+O	4	29.06		**70.94**				
10.	A+ V +D	3	26.47	**63.24**		10.29			
11.	A+D+S+P	3	31.26			**36.18**	26.77	5.79	
12.	V	2	**100.00**						
13.	O	2	**100.00**						
14.	A+S+P	2	**47.22**				38.89	13.89	
15.	A+V+O+PL	2	27.50	**37.50**	15.00				20.00
16.	V+D	2		**94.86**		5.14			
17.	A+O+D+P	2	**32.61**		**32.61**	25.82		8.97	
18.	A+V+O	1	27.78	**55.56**	16.67				
19.	A+V+P	1	20.00	**60.00**				20.00	

Table 4.26. (cont.)

20.	A+V+O+D	1	25.00	**40.00**	20.00	15.00			
21.	A+V+D+S	1	**36.36**	**36.36**		9.09	18.18		
22.	A+V+D+P	1	15.38	**41.03**		35.90		7.69	
23.	A+V+O+D+P	1	**82.47**	4.12	8.25	4.12		1.03	
24.	V+O	1		33.33	**66.67**				
25.	V+O+PL	1		**52.63**	26.32				21.05
26.	V+S+P	1		**65.22**			21.74	13.04	
27.	V+O+D+P+PL	1		**44.12**	14.71	20.59		5.88	14.71
28.	O+D	1			**54.55**	45.45			
	Total	**240**							

In case of (A+S) combination, more than half (52.87%) of the average NI was from sheep and the remaining 47.13 per cent was from agriculture.

In all the other combinations, the contribution to net income from each enterprise was distributed approximately in equal proportions. In the combination (A+O+D), (49.88%, 27.71% and 22.41%) of the average NI was gained from orchard, agriculture and dairy enterprises respectively.

More than one- third (36.18%) of the average NI was from dairy, followed by agriculture (31.26%), sheep (26.77%) and poultry (5.79%) in (A+D+S+P) combination.

In case of (A+V+O+Pl), 37.50 per cent of average NI was obtained from vegetable, followed by agriculture (27.50%), plantation (20.00%) and orchard (15.00%).

Nearly half (47.22%), nearly two-fifth (38.89%) and 13.89 per cent of the average NI was obtained from agriculture, sheep and poultry respectively in (A+S+P) combination.

More than one-third and equal per cent (36.36%) of the average NI was gained from agriculture and vegetable, followed by sheep (18.18%) and dairy (9.09%) in (A+V+D+S) combination.

It was observed from (V+O+D+P+Pl) that, more than two fifth (44.12%), one- fifth (20.59%), equal per cent (14.71%) and meagre per cent (5.88%) of the average NI was acquired from vegetable, dairy, orchard, plantation and poultry enterprises respectively.

Likewise in (A+O+D+P) combination, equal and nearly one- third (32.61%), one- fourth (25.82%) and 8.97 per cent of the average NI was gained from agriculture, orchard, dairy and poultry.

In case of (A+V+D+P) slightly more than two fifth (41.03%), slightly more than one- third (35.90%), 15.38 per cent and 7.69 per cent was contributed from vegetable, dairy, agriculture and poultry. Lastly the (A+V+O+D) combination shown that, majority (40.00%) of the average NI was earned from vegetable, followed by agriculture (25.00%), orchard (20.00%) and dairy (15.00%).

It was observed from the above table that, the major proportion of net income was contributed by agriculture in majority of the combinations followed by the youth in farming. On the contrary, vegetable contributed to major proportion of net income earned in the combinations consisting of vegetables and other farm enterprises.

4.5 Perception of Youth in Farming towards Different Farm Enterprises

Perception of youth in farming towards different farm enterprises was analysed using ten important indicators as represented in the table 4.27. and figures 4.35., 4.36., 4.37., 4.38., 4.39., 4.40. and 4.41. It could be derived from the table that, majority of youth perceived dairy as more profitable farm enterprise with mean score (3.41), followed by vegetable (mean score =3.27),

agriculture (mean score =3.16), sheep (mean score = 3.09), plantation (mean score =3.04) and orchard (mean score =2.30) as least profitable.

Majority of the youth in farming perceived that, the investment for poultry was very less with mean score (4.32), followed by orchard (mean score =3.98), sheep (mean score =3.89), plantation (mean score =3.42), agriculture (mean score =3.72), vegetable (mean score =3.46) and highest for dairy (mean score =3.26).

The labour intensity was perceived as very high for vegetables (mean score =3.03), followed by high for dairy, medium for orchard, slightly medium for agriculture, less for plantation, very less for poultry and just one or two family members were involved for maintaining sheep. This is substantiated by the mean scores 3.16, 3.29, 3.82, 4.02, 4.19 and 4.24 respectively.

The majority of youth in farming perceived that, the management of poultry (mean score =4.32) was very simple, followed by increasing order of complexity for sheep (mean score =4.18), orchard (mean score =4.01), plantation (mean score =3.66), dairy (mean score =3.51), and finally vegetables (mean score =3.28).

The by-products of different farm enterprises were utilised in different ways. By-products were more utilised from dairy (mean score =3.40), followed by decreasing manner from agriculture (mean score =3.20), vegetables (mean score =3.10), plantation (mean score =2.52), orchard (mean score =2.29), sheep (mean score =2.25) and very less utilization from poultry (mean score =2.17).

The large majority of the youth in farming had perceived that, availability of subsidies was maximum for dairy (mean score =3.36), followed by descending sequence for agriculture (mean score =3.06), vegetables (mean score =3.02), orchard (mean score =3.01), plantation (mean

score =2.86), sheep (mean score =2.89) and very less for poultry (mean score =2.62).

Input availability for different enterprises was perceived as more for agriculture (mean score =4.152), followed by vegetable, dairy, poultry, orchard, plantation and sheep with mean scores (4.10, 4.09, 3.48, 3.32, 3.24 and 2.89).

It was also examined that, the risk involved was high in orchards (mean score =3.15) and low in plantations (mean score =4.01) as perceived by the youth in farming. While the risk involved in other enterprises was, vegetable (mean score =3.32), dairy (mean score =3.45), agriculture (mean score =3.67), sheep (mean score =3.96) and less risk was involved in poultry (mean score =3.98).

Further different farm enterprises had different prevailing marketing opportunities. In the perception of youth, the marketing opportunities were vast for dairy enterprise (mean score =4.05), followed by descending order of vegetables (mean score =3.93), sheep (mean score =3.72), agriculture (mean score =3.50), plantations (mean score =3.37), poultry (mean score =3.26) and orchard (mean score =3.11).

Agriculture (mean score =4.50) was perceived as more compatible than the other enterprises by the youth in farming. Next to this was vegetable (mean score =4.23), followed by dairy (mean score =3.93), plantations (mean score =3.22), orchard (mean score =3.21), poultry (mean score =2.89) and sheep (mean score =2.52).

From the table 4.27. and figure 4.42. it is clear that, the overall perception of youth in farming based on all the indicators was resulted in the ranking of the enterprises. Agriculture was perceived as the most efficient enterprise with average mean score of all the indicators as (mean score =3.61). Dairy (mean score =3.56) was perceived as efficient enterprise, followed by vegetable (mean score =3.47) as moderately efficient, poultry

(mean score =3.41) as slightly efficient, sheep (mean score =3.36) as less efficient, plantation (mean score =3.34) as very less efficient and at last orchard (mean score =3.17) was perceived as the least efficient enterprise by the youth in farming.

Availability of high yielding breeds and relatively high value for the milk and milk products might have directed the youth in farming towards dairy in terms of its profitability. Simultaneously, the increased use of multi-varied vegetables, awareness on health and nutritional standards of the people might have resulted in significant demand and reasonably fair prices for vegetables. This situation reproduced a positive perception towards profitability of vegetables. On the other extreme, poor maintenance of the orchard, lack of irrigation facilities and improper marketing of produce might have developed the perception of relatively lowest profitability in orchards.

Majority of the youth in farming might be taking up poultry as small scale enterprise in their back yards and earning the profits with very limited investment. Simultaneously orchard was also perceived as low investment enterprise because the youth in farming might have acquired the already established orchards as the ancestral property. They might be investing very little amount towards rare farm operations for getting the yield. On the other side the dairy requires high capital investment towards purchase of quality breeds as well as health and nutritional management of milch animals.

The youth in farming might be in the opinion that, rearing of sheep and goat can be taken up with one or two available family labour without the requirement of external labour. They also might have perceived that, simultaneously they can attend other farm operations while taking care of their flock. Moreover they might have viewed that poultry as a household enterprise can be taken up by the female members of the family. On the other extreme, vegetable was perceived as the relatively labour intensive enterprise due to its high labour involvement at different stages of cultivation to the final harvest and marketing of final products.

Table 4.27. Perception of youth in farming towards different farm enterprises

n=240

Perception indicators / Farm Enterprise	N	Profitability (+)	Investment (-)	Labor intensity (-)	Complexity of management (-)	By-product utilization (+)	Available subsidies (+)	Input availability (+)	Risk involvement (-)	Marketing opportunities (+)	Compatability (+)	Sum of Mean Score	Mean Score of Farm Enterprise	Rank
Agriculture (A)	229	3.16	3.72	3.82	3.36	3.20	3.06	4.15	3.67	3.50	4.50	36.14	3.61	1
Dairy (D)	132	3.41	3.26	3.16	3.51	3.40	3.36	4.09	3.45	4.05	3.93	35.62	3.56	2
Vegetable (V)	35	3.27	3.46	3.03	3.28	3.10	3.02	4.10	3.32	3.93	4.23	34.74	3.47	3
Poultry (P)	42	2.86	4.32	4.19	4.32	2.17	2.62	3.48	3.98	3.26	2.89	34.09	3.41	4
Sheep (S)	21	3.09	3.89	4.24	4.18	2.25	2.89	2.89	3.96	3.72	2.52	33.63	3.36	5
Plantation (PL)	4	3.04	3.42	4.02	3.66	2.52	2.86	3.24	4.01	3.37	3.22	33.36	3.34	6
Orchard (O)	22	2.30	3.98	3.29	4.01	2.29	3.01	3.32	3.15	3.11	3.21	31.67	3.17	7
Mean Score of Indicator		**3.02**	**3.72**	**3.68**	**3.76**	**2.70**	**2.97**	**3.61**	**3.65**	**3.56**	**3.50**			

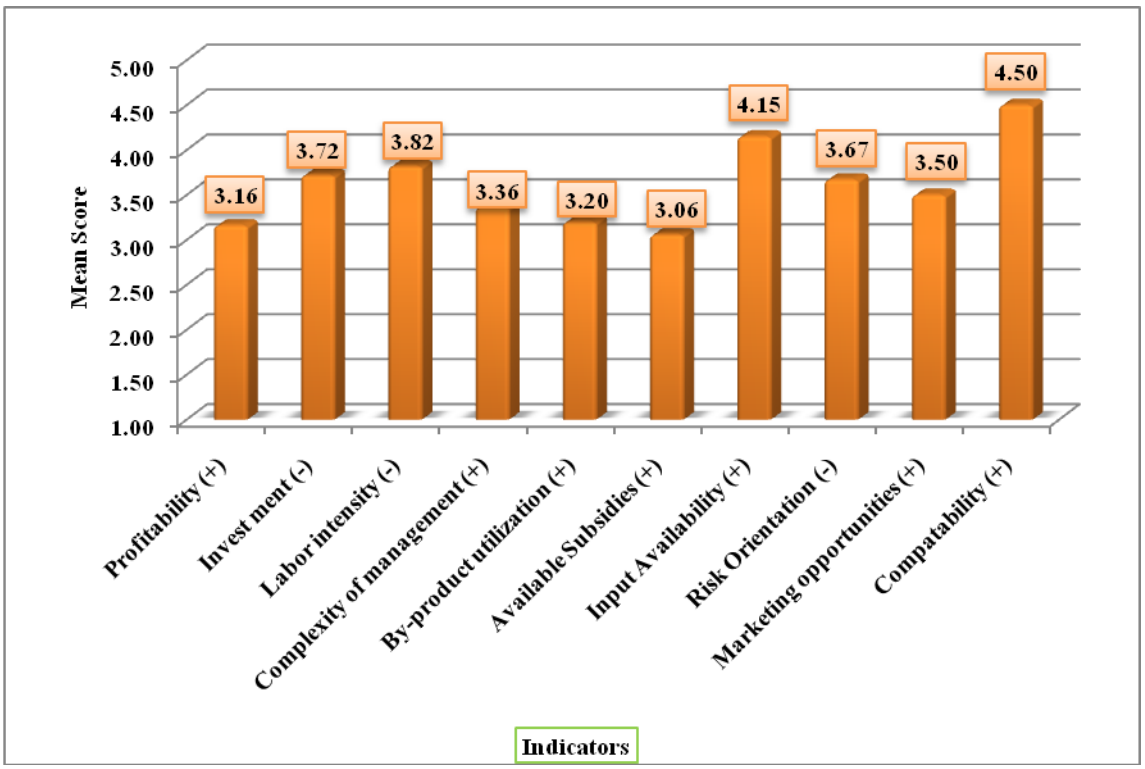


Figure 4.35. Perception of youth in farming towards Agriculture

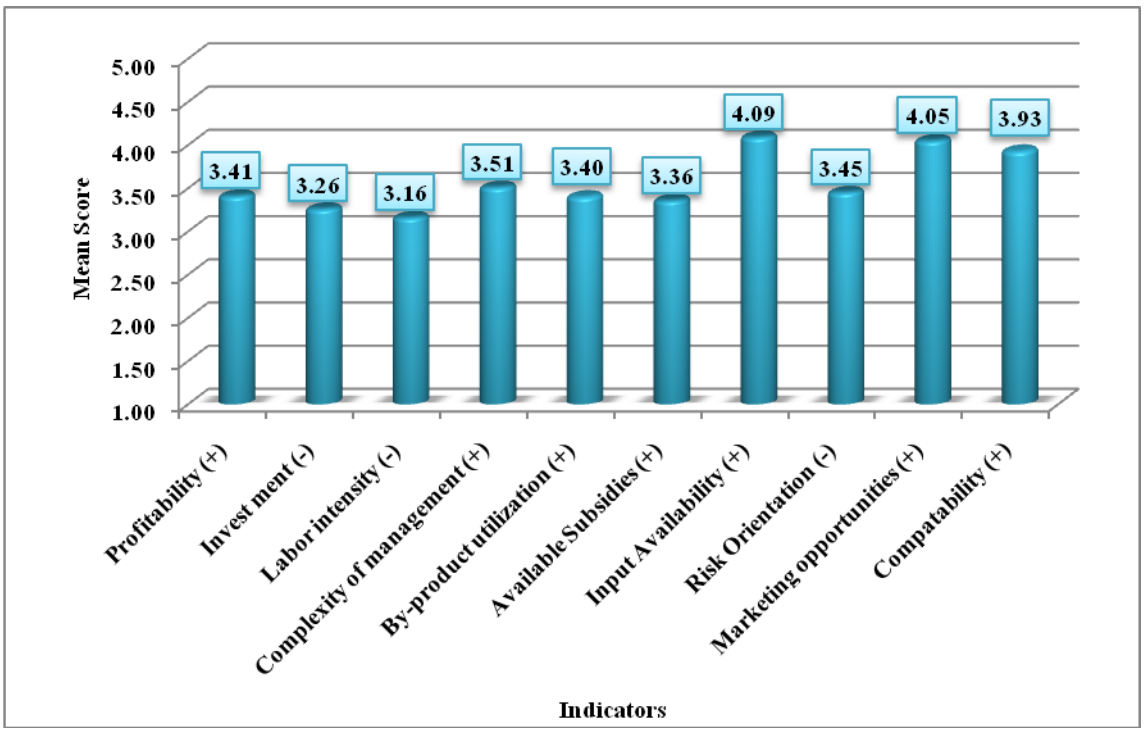


Figure 4.36. Perception of youth in farming towards Dairy

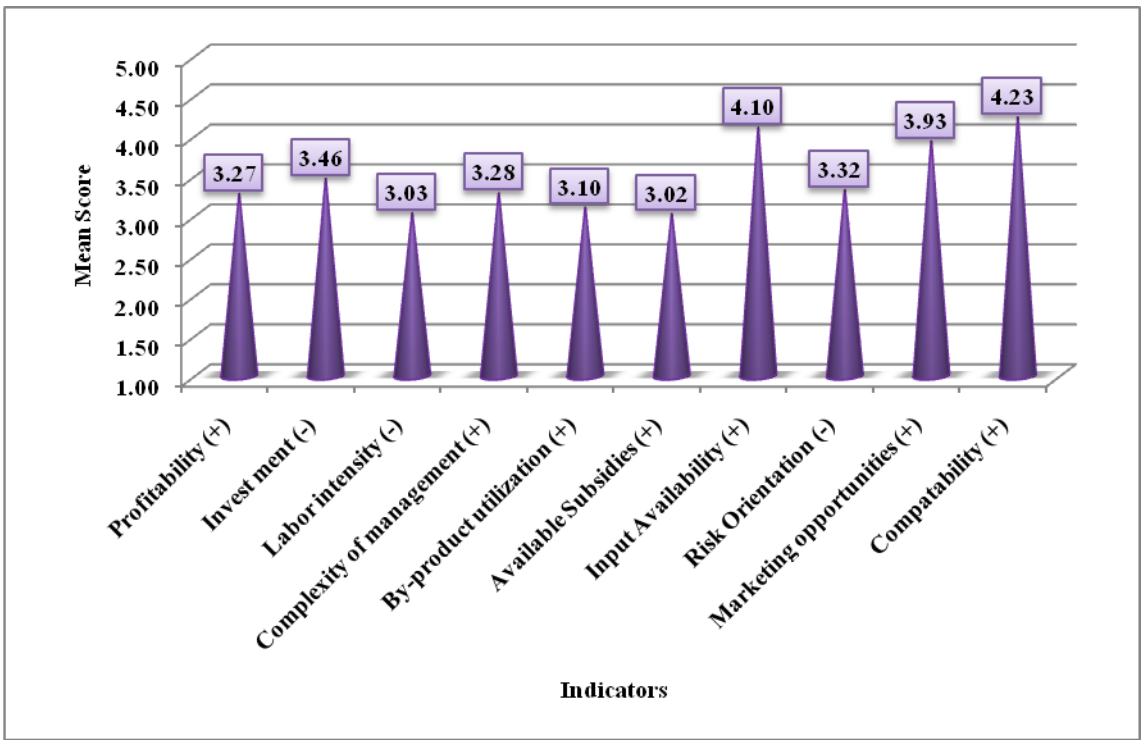


Figure 4.37. Perception of youth in farming towards Vegetable

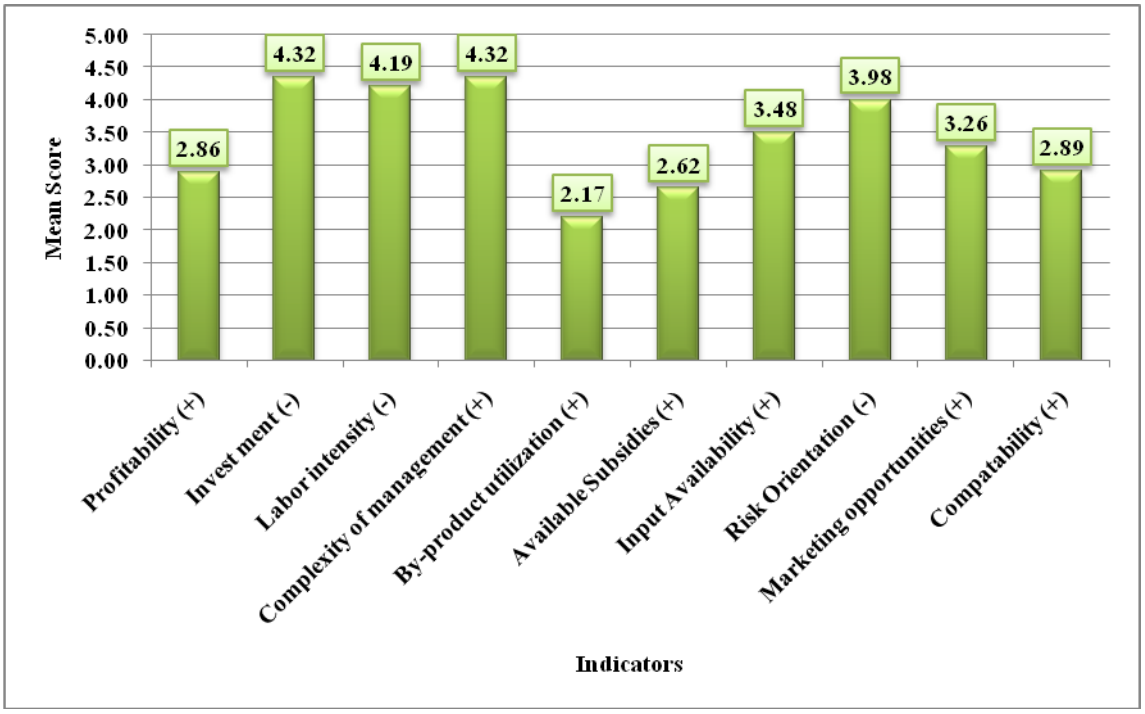


Figure 4.38. Perception of youth in farming towards Poultry

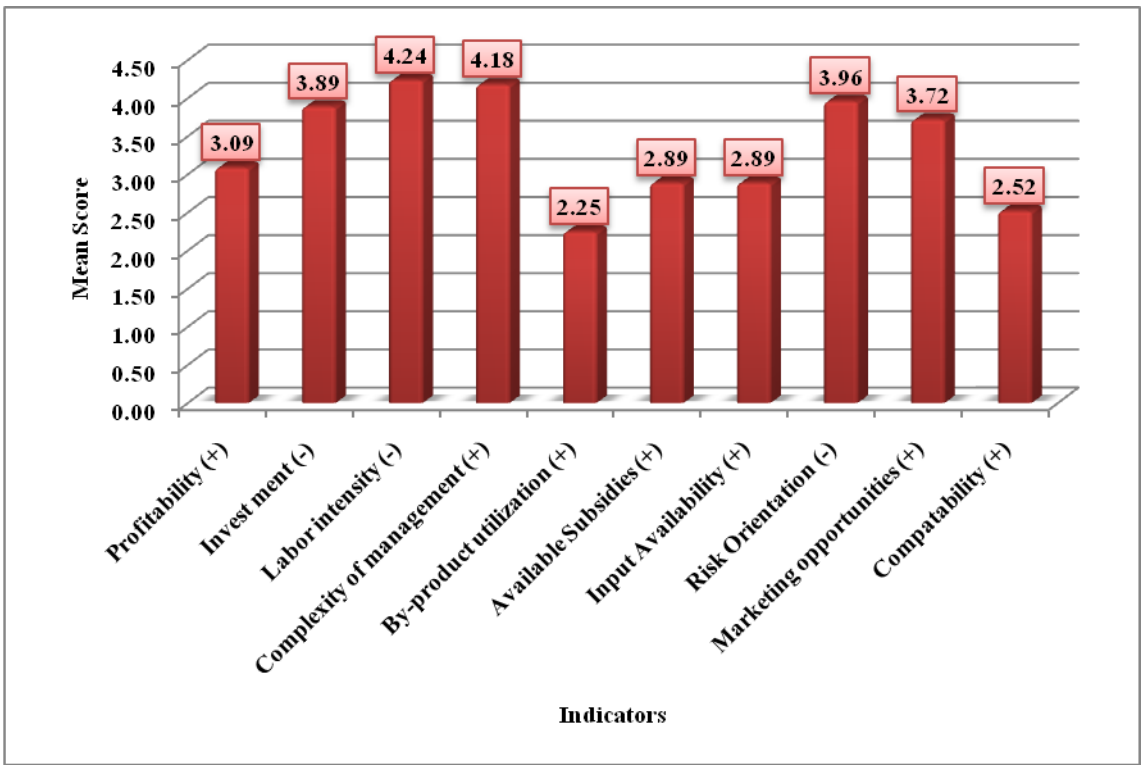


Figure 4.39. Perception of youth in farming towards Sheep

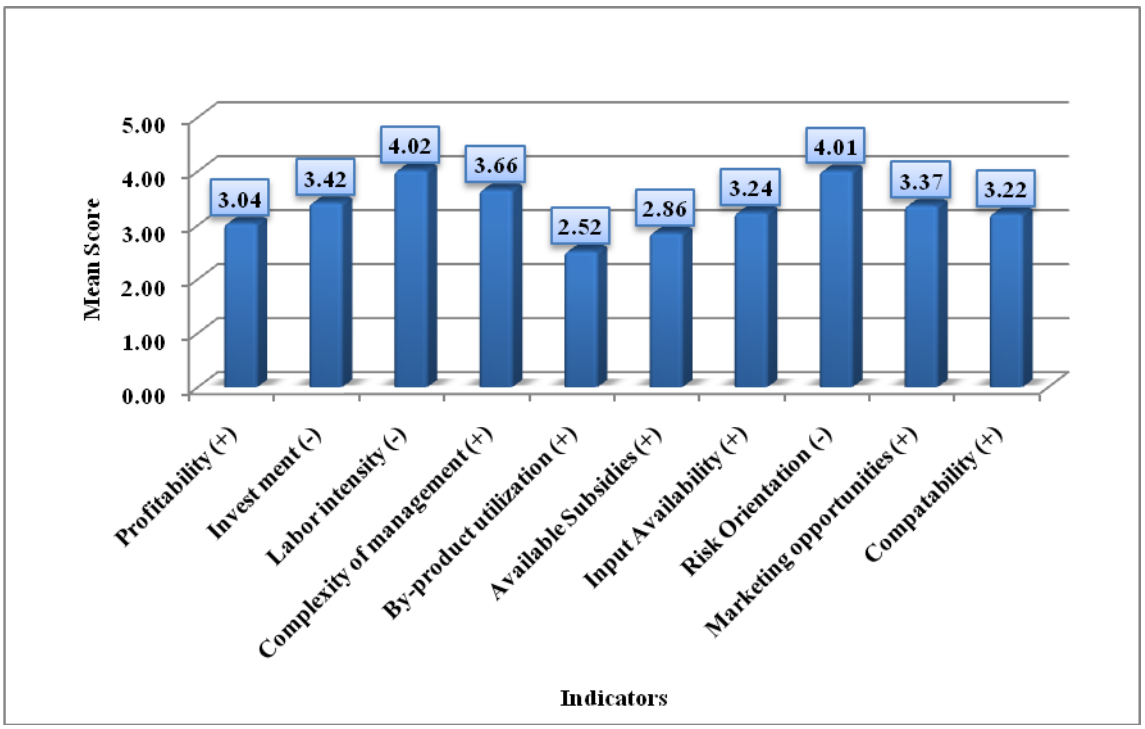


Figure 4.40. Perception of youth in farming towards Plantation

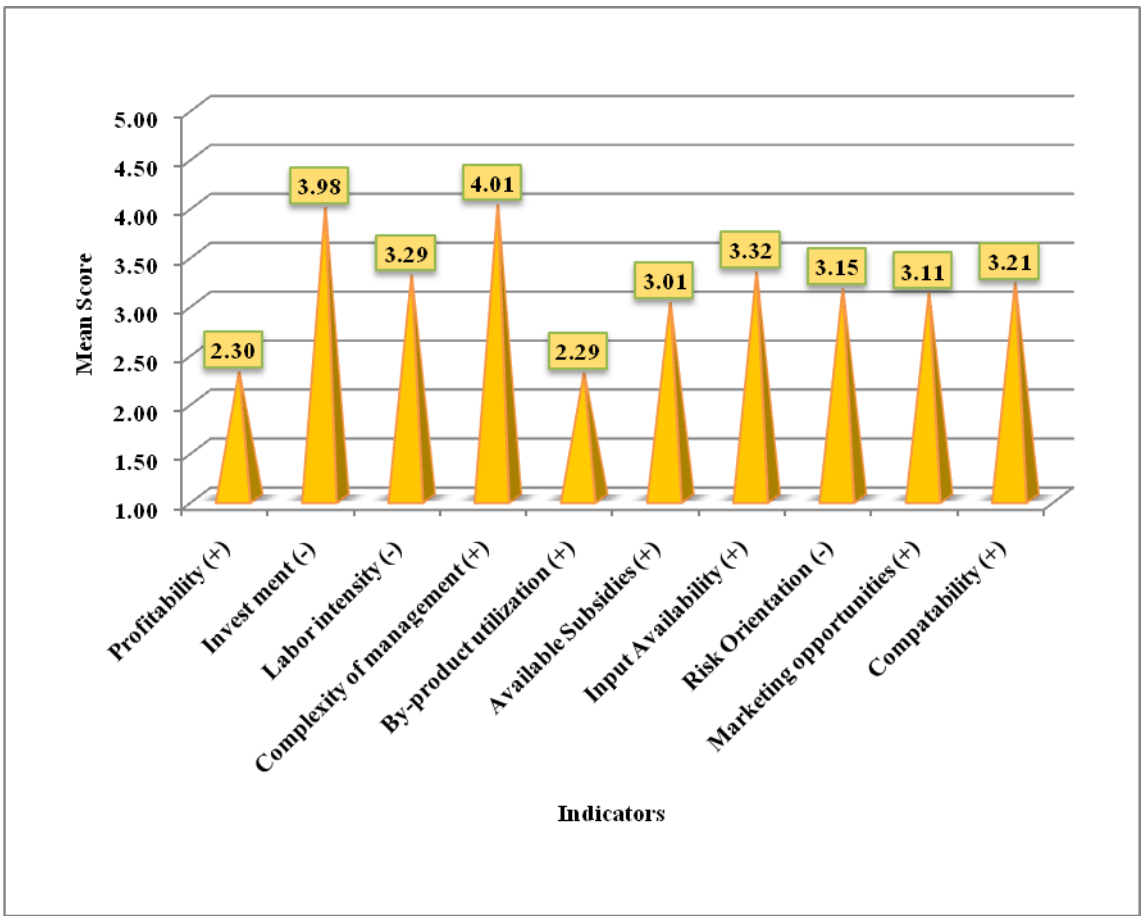


Figure 4.41. Perception of youth in farming towards Orchard

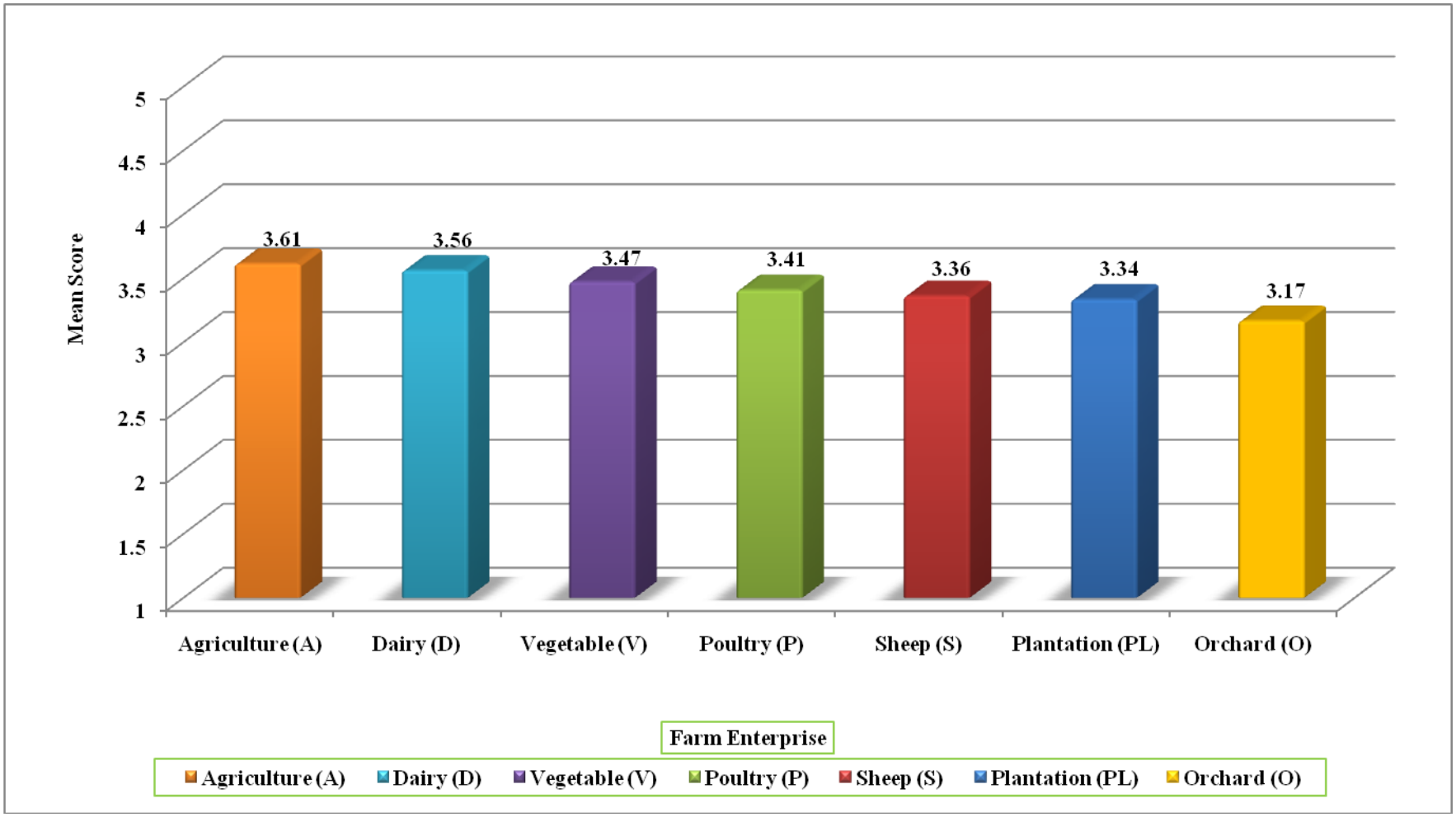


Figure 4.42. Perception of youth in farming towards different farm enterprises

Majority of youth in farming might be taking up poultry on small scale with locally available backyard poultry breeds which will be acclimatized to local conditions which require less care towards their management. They might have perceived that, poultry can be taken up with very simple production management practices. They also might be thinking that being perennial crop, the majority of orchards are seasonal and requires very limited operations in a year. Further the operations also can be taken up on a contractual basis without much technological involvement by farmers. Thus the above reason might have developed such perception in youth. The vegetables being the most sensitive crop both for biotic and abiotic stresses, requires intensive care as well as modern technological interventions. Hence the youth in farming might be very cautious towards vegetables starting from selection of seeds to the final harvest of the produce.

Dairy and agriculture are the two important mutually supporting enterprises having the effective utility of one by-product to another. Both the enterprises might be serving as the source of sustainability and enhanced profitability. The youth in farming might have perceived that these two enterprises were more effective in their by-product utilization. As poultry been taken on a small scale by majority of the youth in farming, they might not have perceived it as a source of by-products for other farm enterprises.

Almost all enterprises were been promoted by the government, non government and private agencies. Particularly, to see the farming in an integrated form the government is focussing on all the farm enterprises and might be trying to support the farmer by way of reasonable subsidies to different critical inputs and other services. Hence the youth in farming might have felt that all the enterprises had enough subsidies to motivate the farming community.

Agriculture, dairy and vegetables were the three core areas of farming for which the inputs might be readily available in the market because of its maximum usage by the farmers. On the other side the other farm enterprises

might be under limited area on a limited scale, the youth in farming might have faced scarcity or non availability of inputs in time.

Poultry, sheep, plantations and orchards were the four enterprises for which the youth in farming might have experienced a smooth and balanced deal in terms of their handling. No erratic and abrupt changes were observed in these enterprises to struggle for coping mechanism. On the other side the problem of poor quality seeds and other inputs, severe incidence of pests and diseases, high perishability and unpredictable market prices led to perception of maximum risk by the youth in farming.

Having multichannel market networking, diversified value addition and unlimited demand, the dairy might have been perceived by the youth in farming as the enterprise with maximum marketing opportunities. The regular and balanced consumption of vegetables also might have shown ample market opportunities for the youth in farming.

The prevailing social values, income generation potential of the enterprise, involvement of drudgery and the nature of involvement of family members might have determined the compatibility of an enterprise the youth in farming might have prioritised agriculture, vegetable, dairy and other enterprises respectively keeping in view of all above factors.

The overall picture of the perception on different farm enterprises towards the selected ten criteria by the youth in farming inferred that, they are comfortable with the management of all the enterprises along with appropriate technical know-how in farming and was cautious about the complexity of management (mean score=3.76) by taking care in all aspects of the enterprise development. They had perceived investment (mean score=3.72) as one of the very important indicators and have shown their readiness to invest in different farm enterprises.

Further they perceived labour intensity (mean score=3.68) for almost all enterprises was not much difficult. The risk involved (mean score=3.65) in all the enterprises was perceived as nominal for almost all enterprises. They also might be willing to take up calculated risks to earn huge profits in farming. Input availability (mean score=3.61) was also perceived as somewhat better for some of the enterprises. On the other side, there was deficiency of inputs in the peak times of requirement.

It was keenly observed that, marketing opportunities (mean score=3.56) for the produce of different enterprises was perceived as moderately organised and yet to be improved a lot. Even though the youth in farming were exploring all possible market networks and expressed satisfaction towards the marketing of their produce, still there is ample scope to get better market price through market intelligence, awaiting for high market price, online trading, export orientation, etc., They also perceived compatibility (mean score=3.50) as good for all enterprises to some extent. The average of profitability (mean score=3.02) of all the enterprises also portrayed that, the youth in farming have shown a mixed perception towards profitability as some of them might be deriving the income to their level of satisfaction and some may be in the opinion of low to marginal level of income from farming.

They were also expecting much more financial support from the government towards critical inputs (mean score=2.97) which are going to contribute significantly towards enhancing quantity and quality of farm produce. The concept of intensification in farming might have led to isolation of different farm enterprises which resulted in poor interdependence in terms of by-product utilization (mean score=2.70).

4.6 Problems as Perceived by Youth in Farming and their Suggestions to Overcome the Problems.

In this objective, the problems perceived and the suggestions given by the youth in farming to overcome their problems were observed and depicted as shown below:

4.6.1 Problems as Perceived by Youth in Farming

The problems as perceived by youth in farming were classified into four major types which were linked with production, market, finance and information & communication.

The table 4.28. explicitly depicted that, problems were ranked based on the order of highest mean score obtained within each major type of problems. Among the production linked problems, ‘drastic variations in climatic conditions’ with mean score (1.84) ranked first and ‘lack of irrigation facilities’ (mean score =1.80) ranked second and perceived as major problems by a large majority of youth in farming. ‘Insufficiency of required inputs’ (mean score =1.70), ‘unavailability of inputs in time’ (mean score =1.62) and ‘poor quality of inputs’ (mean score =1.52) were perceived as major problems by a majority of youth in farming and were ranked as third, fourth and fifth respectively. This was followed by ‘scarcity of labor’ (mean score =1.42) ranked sixth and ‘diversion of agriculture labor’ (mean score =1.39) ranked seventh which were perceived as the major problems respectively by considerable number of the youth in farming. ‘Non availability of improved varieties and technologies’ (mean score =1.31), ‘lack of appropriate farm machinery for different operations’ (mean score =1.29) and ‘less compatibility of farm machinery’ (mean score =1.25) occupied eighth, ninth and tenth ranks respectively. These were perceived as major problems by slight majority of youth in farming.

Table 4.28. Problems as perceived by the youth in farming

I	Production Linked Problems	Score	Mean Score	Rank
1.	Drastic variations in climatic conditions	442	1.84	I
2.	Poor quality of inputs	365	1.52	V
3.	Insufficiency of required inputs	409	1.70	III
4.	Unavailability of inputs in time	389	1.62	IV
5.	Non availability of improved varieties and technologies	315	1.31	VIII
6.	Lack of appropriate farm machinery for different operations	310	1.29	IX
7.	Less compatibility of farm machinery	301	1.25	X
8.	Scarcity of labour	342	1.42	VI
9.	Diversion of agriculture labour	335	1.39	VII
10.	Lack of proper irrigation facilities	433	1.80	II
II	**Market Linked Problems**	**Score**	**Mean Score**	**Rank**
1.	Involvement of intermediaries in marketing of farm produce	429	1.78	I
2.	Poor market intelligence	345	1.43	II
3.	Meager access to different marketing channels	287	1.19	V
4.	Dearth of storage facilities for farm produce	301	1.25	IV
5.	Ill equipped market yards	326	1.35	III
6.	Poor transport facilities	206	0.85	VI

(Table 4.28. cont.).

III	Finance linked Problems	Score	Mean Score	Rank
1.	Very high cost of inputs	401	1.67	III
2.	Increased labour wages	365	1.52	IV
3.	Limited access to formal sources of credit	327	1.36	V
4.	Expensive farm machinery	289	1.20	VI
5.	Limited availability of subsidies	265	1.10	VII
6.	Extreme price fluctuations of farm output	412	1.71	II
7.	Lack of remunerative prices for different crops	436	1.81	I
8.	Inadequate crop insurance	229	0.95	VIII
IV	**Information and Communication linked Problems**	**Score**	**Mean Score**	**Rank**
1.	Lack of village level information centers	339	1.41	III
2.	Lack of knowledge on ICT utilization	365	1.52	II
3.	Poor accessibility to different ICT tools	403	1.67	I
4.	Less contacts with extension agencies	325	1.35	IV
5.	Limited accessibility of extension services	247	1.02	V
6.	Lack of awareness of ongoing development schemes	214	0.89	VI

In consideration to market problems ‘involvement of intermediaries in marketing of farm produce’ (mean score=1.78) was ranked first and perceived as the most problematic by a huge majority of youth in farming. It was followed by decreasing order of mean scores of the problems as ‘poor market intelligence’ (mean score=1.43), ‘ill equipped market yards’ (mean score=1.35), ‘dearth of storage facilities for farm produce’ (mean score=1.25), ‘meager access to different marketing channels’ (mean score=1.19) ranked second, third, fourth, fifth respectively. ‘Poor transport facilities’ (mean score =0.85) ranked sixth which was perceived as a minor problem by good majority of the youth in farming.

In finance linked problems, very large majority of the youth perceived ‘lack of remunerative prices for different crops’ (mean score =1.81) as a foremost problem and it was ranked first. ‘Extreme price fluctuations of farm output’ (mean score =1.71) was ranked second and was considered as one of the major problems by most of the youth in farming. A moderate majority of the youth observed ‘very high cost of inputs’ (mean score =1.67) as a major problem. ‘Increased labour wages’ (mean score =1.52) was ranked fourth and also considered as one of the major problems by the slight majority of youth. ‘Limited access to formal sources of credit’ (mean score =1.36), ‘Expensive farm machinery’ (mean score =1.20) and ‘limited availability of subsidies’ (mean score =1.10) were considered as minor problems to some extent by majority of the youth in farming. ‘Inadequate crop insurance’ (mean score =0.95) was ranked eighth and perceived as a minor problem by large majority of the youth in farming.

Regarding information and communication linked problems ‘poor accessibility to different ICT tools’ (mean score =1.67) ranked first and was perceived as a prominent problem by the most of youth in farming. It was followed by ‘lack of knowledge on ICT utilization’ (mean score =1.52), ‘lack of village level information centers’ (mean score =1.41), ‘less contacts with extension agencies’ (mean score =1.35), ‘limited accessibility of extension

services' (mean score =1.02) were felt as some of the major problems. While 'lack of awareness of ongoing development schemes' (mean score =0.89) was perceived as a minor problem by slight majority of the youth in farming.

Climate might be the limiting factor in farming causing unexpected damage to the farm produce. Youth in farming might have felt this was the deciding factor for success in farming.

On the other side, experience of fake and poor quality inputs associated with lack of required inputs as well as lack of its timely availability also hindering the farming activities.

Lack of technological interventions in the form of varieties, innovate production technologies, micro irrigation systems and intensive farm mechanization for all the farm operations were also might have been felt by the youth in farming. Labour problem might be the major source for all these problems.

Existence of a big gap between the farm gate price and the consumer price might be the major reason for the perception of above problems. The youth in farming might have analyzed their hard work or committed efforts and realization of their returns in comparison to traders involved in marketing of farm produce. They might have diagnosed their own limitation of poor marketing storages as well as poor support from the government in terms of providing necessary infrastructure and right channels for securing lucrative returns from their farm.

The two critical components that decide the success of farm production are cost of cultivation and gross returns. Being the youth in farming, they might be focusing their strategy towards reducing the cost of cultivation as well as the ways and means for getting highest gross returns. In the course of activities they might have encountered the issue of relatively high cost of inputs and labour, meagre source of getting formal means of

credit, low levels of subsidies, crop insurance, volatile marketing of farm produce.

Information is the prerequisite for performance. Right information at right time will act as a guide and show the right path to reach the targeted goal. Youth in farming might have felt the importance of information in their day to day activities and observed the lacunae in the system of information utilization. They might have felt the need for village level source of information as well as ICT utilization in farming. They also might have felt the deficiency in utilization of ongoing development programmes due to lack of awareness.

The research findings of Umeh and Odom (2011), Donye *et al.* (2012), Lyocks *et al.* (2013), Viswanatha *et al.* (2014) and Patel and Chauhan (2015) expressed similar problems.

4.6.2 Suggestions Given by the Youth in Farming to Overcome their Problems

By virtue of age, youth in farming might be very dynamic and expecting the necessary resources and explore different opportunities which pave the way for their development. In this context they have given some important suggestions in order to improvise the current situation of farming.

Table 4.29. promisingly shown that the majority (95.83%) of the youth in farming felt that ‘exploring export avenues for marketing and regularising remunerative price for farm produce’ as one of the major suggestions and it was ranked first among all the suggestions given by the youth in farming. ‘Regulation of prices and distribution of inputs’ was suggested by second majority (94.17%) of the youth. ‘Development of climate resilient technology’ was suggested by 93.33 per cent of the youth and ranked third. It was followed by ‘strengthening of market networking through established infrastructure’ (92.08%) ranked fourth, ‘enhancing and monitoring the subsidies and crop insurance’ (91.25%) ranked fifth, ‘intensive farm mechanisation’ (90.42%) ranked sixth. ‘Intensification of extension services’

was also felt as one of the major problems by a slight majority (88.33%) of the youth in farming and ranked seventh. This was followed by 'popularizing micro irrigation technologies' (86.67%), 'strengthening of ICT in agriculture' (85.00%), 'educating the youth in farming about current trends in farming (82.92%) which were ranked eighth, ninth and tenth respectively.

Table 4.29. Suggestions given by the youth in farming to overcome their problems

S. No.	Suggestions	N	%	Rank
1.	Development of climate resilient technologies	224	93.33	III
2.	Intensive farm mechanisation	217	90.42	VI
3.	Regulation of prices and distribution of inputs	226	94.17	II
4.	Strengthening of ICT in agriculture	204	85.00	IX
5.	Enhancing and monitoring the subsidies and crop insurance	219	91.25	V
6.	Strengthening of market networking through established infrastructure	221	92.08	IV
7.	Intensification of extension services	212	88.33	VII
8.	Popularizing micro irrigation technologies	199	82.92	X
9.	Educating the youth in farming about current trends in farming	208	86.67	VIII
10.	Exploring export avenues for marketing and regulating remunerative price for farm produce	230	95.83	I

Youth in farming might be expecting remunerative price for their hard work. They might be in the opinion that the existing income which they are getting from farming was not enough to continue in farming. The involvement of government in this direction will definitely explore the ways and means for getting high remunerative price for farm produce which in turn brightens the welfare of youth in farming.

Enriched knowledge and skills are important to achieve fruits of any innovative technology. They might have felt that regular capacity building activities in the form of training programmes, method demonstrations, exposure visits etc., will develop and strengthen potential of youth in farming for their technological backup.

Youth might have seen bitter experiences with climate in their farming. Hence they perceived the need for climate resilient technologies which will be adoptable to the changing climatic situations.

As labour is becoming a scarce and costly resource in the present day situations, the youth in farming might have experienced the need for farm machinery for all the farm operations so as to reduce the cost of cultivation and a higher precision.

Lack of timely availability, high cost and low quality inputs in the market might be the reason for suggesting regularisation of prices of inputs.

Youth in farming might have felt the need of good marketing channels and their accessibility to sell their produce with relatively less transactional costs. They also might be in the need of government authorised storage facilities which will act as bridges for getting high price for the farm produce on relatively time basis.

The present extension services might not be meeting the required extension service demand of the youth in farming. They might have felt the need for still more intensive efforts, may be by enhancing the strength of

extension system and by way of reorganising the activities of different extension system.

Youth in farming with good education and dynamic behaviour might have recognised the importance of ICT in agriculture which is the key factor for speedy delivery of technology. They might have thought preciousness of time in taking up different farm operations for which ICT was made appropriate to meet the needs of youth in farming.

Subsidies and crop insurance might be the two important components as perceived by youth in farming which will support them to take up farming in a lucrative manner. The subsidies might be reducing the burden over the cost of inputs and crop insurance might be helping them at the time of crisis occurred due to biotic and abiotic changes caused in farming.

Water is becoming more and more limiting factor day to day for farming. Reduction in ground water level led to the scarcity of irrigation water. They might have experienced the impact of micro irrigation systems in efficient utilization of irrigation water. They also might be in the opinion that micro irrigation will widen the scope for intensive and precision farming.

4.7. Strategy to Retain Youth in Farming (SRYIF)

The biggest challenge for the stakeholders is “How to retain youth in farming”. Keeping in view of the results of the study, an attempt was made to retain youth in farming. The model is multi dimensional, focusing on all the possible ways and means for attracting the rural youth and providing them hand hold support to flourish in farming.

The designed strategic model was depicted in figure 4.43. It was primarily organized into three domains viz., socio-psychological, technological and organizational. All the three domains represent the broad areas of their contribution to the strategy.

For each domain, four “core areas of concern” were identified to describe the strategy more comprehensively. The strategy analyzed the reality of the situation and shown the right direction for the flow of efforts of stakeholders.

It was also depicted that the need for integration of all the three domains as well as the core areas of concern in the strategy. The three domains of the strategy and their core areas of concern will act as significant contributors to retain the youth in farming. The three domains were

I. Socio-Psychological Domain

II. Technological Domain

III. Organizational Domain

I. SOCIO-PSYCHOLOGICAL DOMAIN

This domain emphasizes the personal and socio-psychological component of youth in farming. It encompasses all the issues pertaining to individual mindset, enrichment of knowledge and skills, group behaviour and entrepreneurial culture of youth in farming. The core areas of concern under the socio-psychological domain were

1. Recognition
2. Technical knowledge and skills
3. Cooperative approach
4. Entrepreneurial culture

1. Recognition

The youth in farming were in the opinion that, their services to the society (being the pillars of the World) as well as their hard work and efficiency were not been properly recognized by the people. Farming as a core component of Indian economy, the youth in farming must be given appropriate place in social hierarchy.

This can be achieved through maximizing the income from farming by minimizing the cost of production and enhancing the price for farm produce at farm gate. Encouraging the farm youth towards establishing infrastructure for agro-eco tourism, which will facilitate the youth in farming towards attracting the urban youth towards farming. Further, it can become a lucrative source of additional income for youth in farming. They must be given opportunities to show their talents and potential in the field of farming. Special facilities and packages must be designed to build confidence as well as enthusiasm to retain in farming. National and International exposures must be given to youth in farming which help in their wholistic development.

2. Technical Knowledge and Skills

Knowledge and skills are the most important factors for the welfare of the youth in farming. Majority of the youth in farming were found to be poor in their knowledge and skills required to meet the challenging demands of the dynamic farming activity. Input variants, technological interventions, marketing avenues are the three core areas in which youth in farming must update their knowledge and skills so as to upgrade their present level of farming.

Campaign oriented extension activities must be taken up in the form of specialized training programmes and related demonstrations will enrich their knowledge and skill components. Exposure visits will explore the scope and opportunities in farming to the youth. This also helps in building confidence on the technological feasibility and economic viability. Exposure visits to national and international events will explore the latest interventions and opportunities in farming. Such visits also help in developing self confidence and self reliance among the youth in farming. Experience gained through such visits not only enrich their knowledge and skills but also widens the vision of youth in farming.

3. Cooperative approach

Group dynamics is the effective means for the growth and development. The government should frame the policies towards encouraging the youth in farming towards group farming.

"Youth in Farming" (YIF) groups must be provided with the facilities like, blanket supply of seeds, fertilizers, pesticides and other critical inputs at their door step, encouraging them towards following an established pattern of farm enterprises leading towards sustainability and maintaining optimum demand for the farm produce, combined decision making should be taken up by all the members of the group in any of the farm issues, cluster approach has to be initiated among the youth in farming. Finally, prescribed targets for each cluster and the strategies for their achievement have to be formulated for upliftment of youth in farming.

4. Entrepreneurial culture

Entrepreneurship development is the cause for the economic development of any nation. Inculcating entrepreneurial culture is mandatory for the present farming due to the established pattern of globalization and commercialization. Entrepreneurship in both the forward linkage and backward linkage in the form of industrialization and trading has shown enormous growth and made the farmers as an innocent personality of the Agri-supply chain. At this juncture, as youth are dynamic, energetic, educated, risk takers, they can be motivated in the direction of entrepreneurship in farming.

The youth in farming must not only practice different farm enterprises on a small scale in a traditional way but also, they must be creative and innovative in taking up different farm enterprises to meet the market demand both at domestic and international market level. They must be encouraged by providing essential venture capital required to establish the enterprises with sophisticated infrastructure in rural vicinities. Youth must be self motivated

and visualize the future threats of farming in order to discover the profitable and eco-friendly farming systems. Special awards and rewards must be given to the successful young entrepreneurs in farming.

II. TECHNOLOGICAL DOMAIN

This domain emphasizes the technological component of youth in farming. It encompasses all the issues pertaining to different technological issues in farming which will enhance the quality and quantity of farm production. Intervention of need based technologies and their dissemination among the youth in farming were stressed in this domain. The core areas of concern under this domain were

1. Precision farming
2. Wholistic approach
3. Intervention of new technology
4. Information and Communication Technology (ICTs)

1. Precision Farming

The one and only one solution to achieve precision in farming is sophisticated mechanization in farming. Seed to seed networking mechanism has to be designed in such a way that more than ninty per cent of the farm work has to be operated with machinery. Drudgery was considered to be the most important limiting factor in farming. Further, the factors like low quantity farm produce, scarcity of labor, untimely operations, high cost of production, lack of accuracy and perfection in different farm operations were also contributing for the poor performance in farming.

Precision farming is the need of the hour to solve all the above problems in existing traditional way of farming. Precision farming also adds prestige for the youth in farming as it is highly sophisticated involves complexity in its operation. Besides enhancing quality and quantity of production, it improves the dignity of labour among the youth in farming.

2. Wholistic approach

The present farming is mostly with agriculture as the major component, but the farmers are not much satisfied with the returns derived from the present level of farming. On the other side, the farmers with combination of enterprises based on the location specific suitability were taking farming in a wholistic angle and deriving maximum returns per unit area. This is an indication for the bright scope to flourish in farming. Efficiency in farming depends on the wholistic approach. Integrating different farm enterprises in a unit area optimizes effective utilization of by-products of one enterprise to another and results in efficient utilization of natural resources, reduced cost of production for different units, effective control over the ecological balance both for the soil and environment, leads to move towards organic farming which is the need of the hour and derives maximum output from unit area.

Wholistic approach in farming also helps the youth in farming to think towards unity in diversity. Diversification is one of the important factor for the development of the youth in multi-faceted dimensions. Effective utilization of natural resources minimized cost of production and progressive growths are three important consequences through wholistic approach.

3. Intervention of New Technology

In the present competitive world, the technology generation and dissemination were upgrading in a very less span of time. The innovation of new varieties and farmer friendly farm machinery, updation of package of practices of different crops adaptable to climate change etc., must be the priority research areas for the scientific community. There must be additional financial support from the government and other organizations collectively for utilizing the mind power of our eminent scientists in the farming.

At present the youth in farming are not attracted towards farming due to high cost and unreached technologies. In order to encourage the

involvement of youth in farming and raise the contribution of farming to GDP, there is a very urgent need of new crops, new varieties of different crops, low cost farm machinery, highly credible inputs and regular updation of all technologies.

4. Information and Communication Technology (ICT)

The information and communication technology in the present digital world is improving day by day and evolving with advanced features like readymade access of different farm technologies on the finger tips. Different web portals on crop expert systems, market information and agri-business firms, different mobile apps on technologies related to production, access to finance, trading, markets, and consumption are flourishing enormously.

Inspite of these advancements, still the ICT access, utility and technical know-how on the part of youth in farming are very limited. Hence the responsibility of the government to establish necessary information centers at village level with sophisticated ICT tools must be recognized. On the other side, the youth in farming with enthusiasm to know new things must also show interest to utilize different ICT tools available within their reach for the purpose of farming in order to overcome multi level challenges in farming.

III. ORGANIZATIONAL DOMAIN

This domain emphasizes the various institutional and policy issues which will give strong support to the youth in farming to take up farming. The issues pertaining to input management, operational management, marketing management and extension management were focused in this domain. The core areas of concern under this domain were

1. Input Management
2. Operational Management
3. Marketing Management
4. Extension Management

1. Input Management

a. Strict Vigilance on Quality Standards and Distribution of Inputs

Quality of output depends on quality of inputs. Farmers were in the opinion that the present quality inputs are very poor in some of the cases and lot of adulteration and misleading advertisements are causing huge loss for the framers. Strict vigilance towards quality of all types of inputs especially, seeds. On the other side there is need for distributing inputs timely in appropriate quantity for smooth flow of farming activities. Punishments should be imposed on the defaulters involved both at production or distribution of inputs.

Youth in farming have felt that they are facing lot of problems with the inputs. It is also important to educate the youth in farming about the quality parameters of different inputs and their measurement and evaluation. A special Quality Assurance Cell has to be formulated at the district level to regulate and maintain the pattern of distribution and check their quality standards. Forecasting and logistics are the two major issues needs to be prioritized for smooth flow of quality inputs to the needy youth in farming.

b. Subsidies

Input subsidy is one of the important factors to reduce the financial burden over the youth in farming. As the technology is improving day by day, the cost of production is also raising to the peak. Even though all these high technologies were yielding good results, they were relatively more and more above the level of production and returns. At this juncture the need for subsidies which will support the youth in farming to use all such innovative technologies for getting high returns.

Subsidies can also be prioritized for the small and marginal farmers who are in need of such support. Digitalization of all the youth in farming and their level of land holding will help in identification and labour allocation of subsidies to the need youth in farming.

2. Operational Management

a. Land Issues

From an average and below average youth in farming point of view, the land was observed as the major limiting factor. Inspite of having potential as a right attitude towards farming, they could not be able to succeed in life due to lack of enough land. Land rents are becoming more and higher and results in reduced net profit for the tenant youth in farming. Hence it is compulsory to provide enough land to the youth in farming to take up farming on a intensive scale.

Government can design a model of agreement for providing land to the youth in farming which in turn helps in formulating MOU between youth in farming and government. This approach enhances the responsibility, accountability and commitment on the part of youth in farming.

b. Crop Insurance

The aspiration, commitment and hard work are the three important characteristics of youth in farming. They can frame high aspirations to take up farming. Further they deal all their strategies with lot of commitment to reach their desired goals in farming. They sincerely execute their efforts with lot of hard work. But the farming is still in doldrums due to relatively high dependence on environment. Success and failure are becoming regular features in farming. After discharging such huge energies, the point of "failure" cannot be easily digested by the youth in farming.

To build confidence during the times of crisis is one of the important factors for retaining youth in farming. They have to be given necessary energy, confidence and economic support at the time of the failure of crop in form of crop insurance which will be a great boost for the youth in farming.

c. ***Assured Credit***

Credit to the youth in farming is not only due to limitation of self finance, but also to overcome the uncertainty in farming. Facilitation of access to credit can raise the amount of productive investment. It enhances the productivity as well as utilization of improved technologies lead to success in farming. There is need to strengthen the credit mechanism to the youth in farming. We need to formulate credit linkage with the "youth in farming" groups and promoting more of formal and authentic of credit for the youth in farming.

To meet the day to day operations in farming, still majority of the youth in farming are depending on informal sources of finance such as money lenders, traders and neighboring farmers paying more interest rates as well as input/farm output linkage with such credit providers. This situation is forcing them to use the undesired inputs at high prices and sell out their farm produce at relatively lower than market prices. Hence there is a dire need to strengthen the effective institutionalized credit system for the youth in farming.

3. Marketing Management

a. Regulation of Prices/Costs

Day by day the use of new seed varieties, fertilizers and other agro chemicals is becoming more intense and farmers were forced to use all such inputs resulting in high cost of cultivation. On the other side, exploitation by the input agencies by way of abnormal cost of inputs is enhancing the cost of cultivation. Almost there is no proper regulatory mechanism to control all such costs. Drastic variations as well as the severe demand for such inputs are becoming major threat for the farmers.

On the contrary, the prices of the farm produce are not remunerative and also such price fluctuations resulted in low income for the youth in farming. Hence there must be strict control and regulatory mechanism to monitor the cost of inputs as well as the prices for the farm produce.

b. Infrastructure

The transactional and operational costs are becoming major threats in farming. As the overheads are increasing enormously, the youth in farming are getting frustrated with the miscellaneous expenditure. Due to lack of proper infrastructure they could not be able to control all such undue expansions leading to heavy over heads and in turn reducing the real net income from farming.

Farming must be sophisticated with necessary infrastructure which acts as wheels for the engine. Unless proper infrastructure facilities are there for farming, it could not be possible to run the farming in a profitable way. They serve as stand by tools as well as catalysts in the process of handling different farm operations. In the rural environment even though enough development already made in this direction, still there is a large gap to meet the targeted challenges in farming. The major components like rural - urban road networking, cold storage go downs, market yards input supply agencies, mechanization hiring spots and other necessary facilities are highly essential to meet the present demand in farming.

c. Motivating Youth towards Export Orientation

For export orientation, the youth in farming need to be created awareness on all the sources of export as well as the technological interventions to be followed to produce export quality of farm produce. They must also be trained in export of farm production in a package mode so that they can mould their performance towards export production.

In the recent past, great efforts were made by ICAR in association with SAU's towards market intelligence and price forecasting to direct the farmers for getting high price for their produce. This is one of the good areas of development in the field of farmers marketing.

4. Extension Management

Strengthening of Research-Extension-Farmer (REF), Input-Farmer-Marketing (IFP) and Inter-Intra Institutional Linkages. Integrating the human resources linkages working towards the welfare of youth in farming must be another challenging task for the policy makers. All these stake holders one way or the other significantly contributing to bring life to the farming, but their efforts needs to be streamlined in such a way that the input manufactures, input traders, different extension service providers, researchers and other stake holders has to work together to support the youth in farming. Even though there is enough institutional set up and manpower for the guidance, assistance and hand holding support to the youth in farming, their efforts are more isolated and diversified in their makeup. To be effective or to make use of all these institutions and manpower in an efficient way, it is essential to design a network of all these agencies in such a way that we can avoid duplication of activities and impose definite responsibilities to the different stake holders. Lack of remunerative price for the farm produce is the major limitation as expressed by the youth in farming. They were expecting reasonably high price for their hard work, commitment and risk in farming.

They were in the opinion that the agencies involved in both forward and backward linkages were getting more income than the farmer who is the backbone of the nation. Hence, it is imperative to seek the ways and means to enhance the income of the youth in farming. Reducing the margins for both the agencies involved in forward and backward linkages and the same been adjusted to the income of the farmer.

The proposed comprehensive strategic model depicted all the possible practical and productive ways and means to “retain in youth in farming” which is the current challenging task for the stake holders of farming.

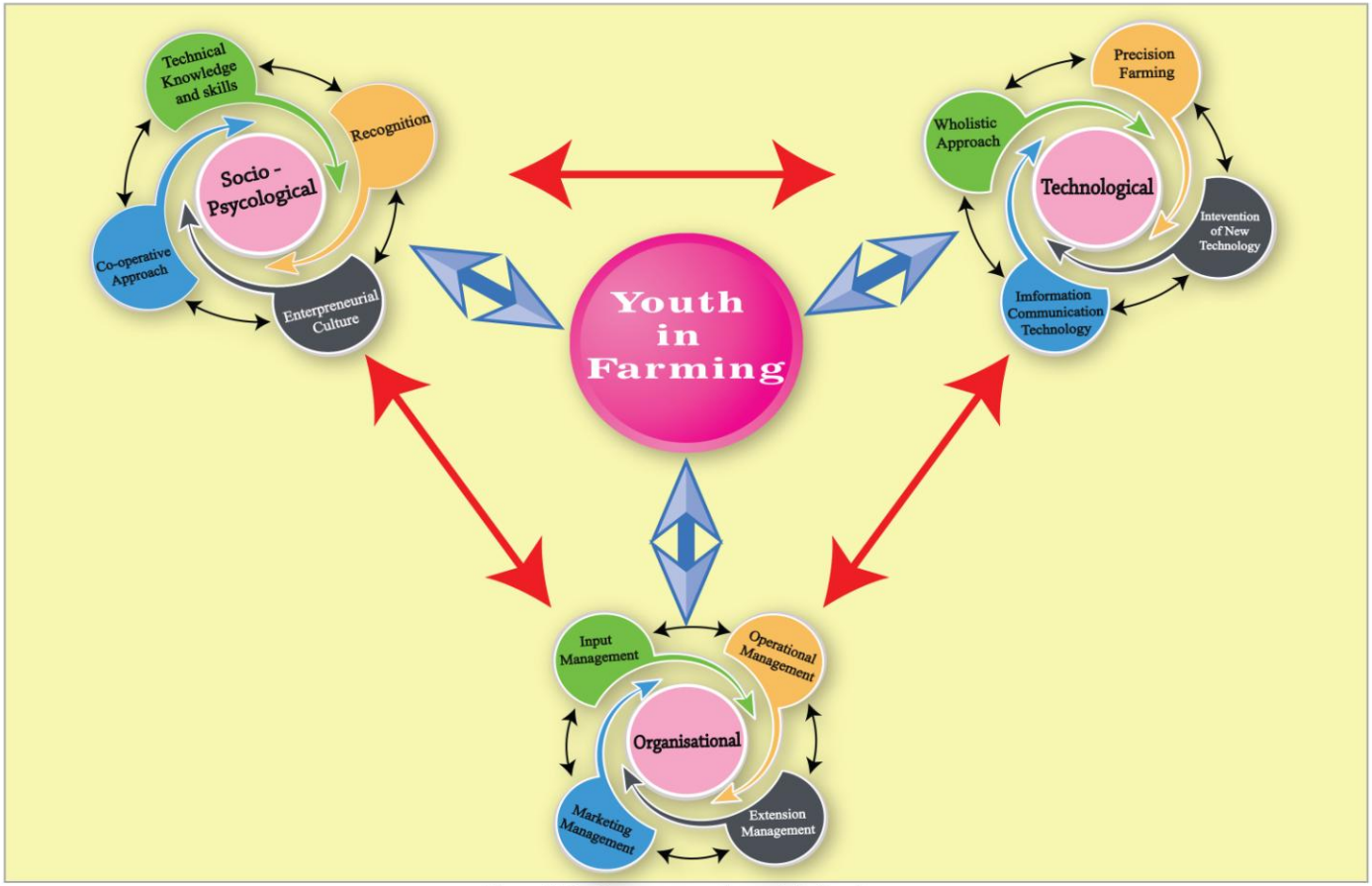


Figure 4.43. Strategy to retain youth in farming

4.8. Empirical Model of the Study

The conceptual model formulated earlier (figure.2.1.) for this research study was tested based on the results and empirical model was developed and presented in figure. 4.44.

This model was hopefully conceived to give an objective assessment of attitude of youth towards farming. This model was tested with the help of correlation analysis to find out the relationship between independent and dependent variable.

The overview of the correlation analysis revealed that, education and exposure to training of youth in farming shown positively significant relationship with their attitude towards farming at 0.05 per cent level. Annual income, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation had positively significant relationship with the attitude of youth towards farming at 0.01 per cent level.

The other variables like marital status, family type, farm size, material possession and extension contact were non significantly related with the attitude of youth towards farming whereas, age and farming experience were negatively non significant with the attitude of youth towards farming.

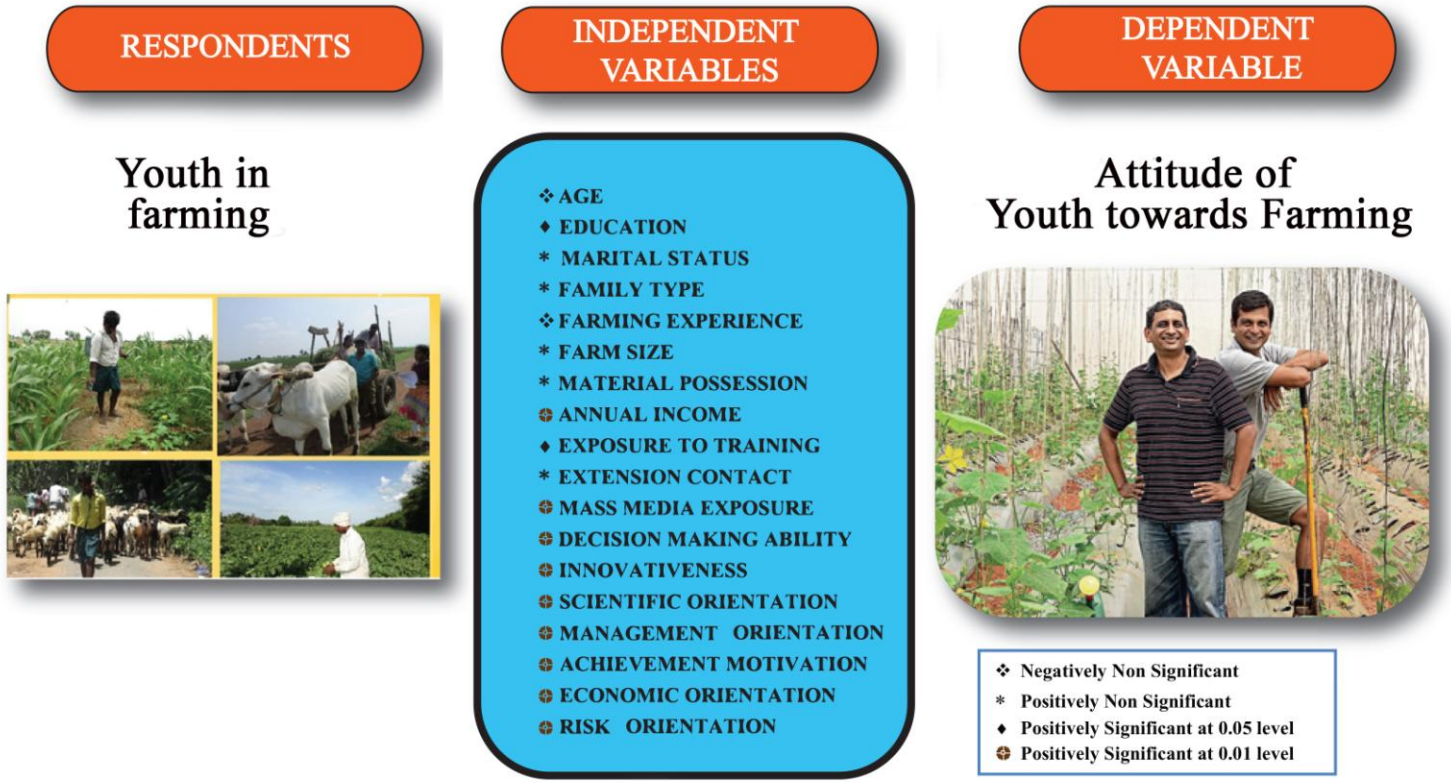


Figure 4.44. Empirical model of the study.

Chapter – v

Summary & Conclusions

Chapter V

SUMMARY AND CONCLUSIONS

The farming has played a major role in human history and the progress of farming has been a crucial factor in worldwide social economic change. History of World farming provides a grand narrative of ten thousand years of human ingenuity and a penetrating analysis of the rise of farming and its hand maid - civilization itself. In a broad sense, farming includes cultivation of the soil, growing and harvesting crops, breeding and raising of livestock, dairying, and forestry and so on.

Indian farming began by 9000 BC as a result of early cultivation of plants, and domestication of crops and animals (Gupta, 2004). In good olden days the farming was carried out in order to meet the livelihood needs of the family, which was traditional and eco-friendly nature. Later on several transformations occurred in different stages of Indian farming.

In modern India, the economic contribution of farming to India's GDP is steadily declining with the country's broad-based economic growth. Still, farming is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India.

As per the 2010 FAO world agriculture statistics, India is the world's largest producer of many fresh fruits and vegetables, milk, major spices, fibrous crops, millets and castor oil seed. India is the second largest producer of wheat and rice (FAOSTAT, 2010). India is one of the world's five largest producers of livestock and poultry meat, with one of the fastest growth rates (USDA, 2016). India exported $39 billion worth of different farm products in 2013, making it the seventh largest farm product exporter worldwide and the sixth largest net exporter (Levin, 2014).

As per estimates by the Central Statistics Office (CSO), the share of agriculture and allied sectors (including agriculture, livestock, forestry and fishery) was 15.35 per cent of the Gross Value Added (GVA) during 2015–16.

Hon'ble Prime Minister Shri Narendra Modi on 25th July, 2015, on the occasion of Foundation Day of ICAR in Patna called upon the stakeholders of agriculture to design second green revolution with new vision, dimensions and objectives to address the agricultural challenges in this modern era. In his address, he urged agricultural professionals to make young farmers as their fellow travelers in development and refinement of farm technologies.

Farming was chosen as a livelihood option for the people at its inception. It was the means for procuring their food requirements to meet their day to day life as well as mortgaging their farm products to lead their life. This phase was continued for several decades and centuries. Later on tremendous change has been occurred in the face of farming. To meet self sufficiency and food security needs of India during the periods of green revolution, the focus has been changed to enhancing food production. This phase focused on intensive farming by enhancing the productivity through the use of chemical fertilizers, plant protection chemical and other intensive practices. Substantial growth was achieved through the committed efforts of all the stakeholders in farming. Due to the intervention of globalization the importance of farming became still more magnified and routed the farmers towards quality production.

To handle the standards of globalised farming situation, the need for high technological backup, knowledge base, extension networking and risk involvement among the farming community became compulsory. The one and only one option to bring laurels to farming and to make it as a lucrative option in the rural areas is the involvement of youth in farming. Being youth they are very strong in their mind set, possess high self confidence, risk taking ability and lot of inquisitiveness to adopt innovations in farming. Their education,

cosmopoliteness and group dynamics will give strong support for them to handle the present farming environment.

A rising number of rural youth are turning their back on agriculture. Rural youth are more interested in going to cities for acquiring necessary skills for getting jobs in companies or corporate sector. Limited access to markets, assets, finance and infrastructure in rural areas, coupled with rapid growth and opportunities in urban areas increasingly makes cities the obvious choice in the search for a better life. But farming is critical to future food security, with global expectations that it can and should play a huge role in feeding the world population, which will likely exceed nine billion by 2050.

Attracting and retaining youth in farming is critical for Indian farming. Most of the new innovations (both technical and institutional) require a skilled agricultural work force. For instance, promotion of high value agriculture, precision farming, organic cultivation, Hi-Tech horticulture, micro-propagation, Integrated Pest Disease & Nutrients Management, Post Harvest Management, development of backward and forward linkages etc, require well trained young farmers with enthusiasm and passion for farming and ability to take risks. The rural youth could be the ideal target for skill training in these new areas of agricultural growth and to do this effectively there is a need to mobilize young farmers. Organised groups of young farmers will be useful for introducing new production technologies and organizing effective input and output markets.

The responsibility of the youth is to carry forward the tradition of farming not only because it is connected with the traditions and culture of our country, but also it has the potential of keeping the economy healthy even at times of recession by all means. Though there are risks like drought and cyclones that are completely external factors to limit the possibility to succeed, we need to consider farming as an important industry to rely upon even in the modern era of industrialization and urbanization. The advantages of modernization include the

sophisticated methods which are also essential in reducing the drudgery and enhancing the production.

Unless we study the attitude of the youth towards farming and their socio-psychological, organizational makeup, their existing farming pattern, problems perceived in farming and their suggestions in farming, it is very difficult to drive the youth towards farming. Hence the present study was taken up with the following objectives.

5.1 Objectives of the study

Keeping these important issues in view, the present study entitled "**Youth in Farming- An Analytical Study"** was been taken up with the following objectives.

1. To study the selected profile characteristics of youth in farming.
2. To study the attitude of youth towards farming with the help of the scale constructed for the study.
3. To find out the relationship between the selected profile characteristics and the attitude of youth towards farming.
4. To analyze the different combinations of farm enterprises being followed by the youth and their contribution to net income.
5. To study the perception of youth towards different farm enterprises through selected indicators.
6. To elicit the problems in farming as perceived by youth and their suggestions to overcome the problems.
7. To design a strategy to retain youth in farming.

5.2 Review of Literature

Keeping in view the above objectives, the relevant literature on various aspects was reviewed and strategy for the study was evolved.

5.3 Research Design

Ex post facto research design was used for conducting the study.

5.4 Sampling Procedure

Andhra Pradesh state was purposively selected. One district each from three regions of the state viz., Kurnool (from Rayalaseema region), Nellore (from Coastal region) and Vizianagaram (from North Coastal region) were selected by using lottery method of Simple Random Sampling procedure. Four mandals from each district and two villages from each mandal were selected by using the lottery method of Simple Random Sampling procedure thus making a total of 12 mandals and 24 villages respectively. From each village ten youth in farming were selected thus making a total of 240 respondents as the sample of the study.

5.5 Variables Selected for the Study

5.5.1 Dependent variable

The attitude of youth towards farming was chosen as the dependent variable of the study. It was measured using the attitude scale constructed for the study.

5.5.2 Independent variables

The independent variables selected for the study were age, education, marital status, family type, farming experience, farm size, material possession, annual income, exposure to training, extension contact, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation. The same were measured with appropriate scales and schedules for the study.

5.6 Collection of Data

The data were collected by personal interview method through a structured interview schedule. The data thus collected was coded, classified, tested statistically, tabulated and were suitably interpreted.

5.7 Results

5.7.1 Distribution of respondents based on their profile characteristics

5.7.1.1 Age

More than half (57.08%) of the youth in all the three regions were found to fit in the upper young age followed by 29.58 per cent in the middle young age. The remaining 13.34 per cent of the youth were in lower young age.

5.7.1.2 Education

More than one-fourth (27.10%) of the youth in farming completed their college education. Slightly one-fourth each (23.30% and 24.60%) of the youth in farming had completed their middle school and high school education respectively. About 15.83 per cent of them were in ‘can read and write’ category followed by illiterates (9.17%).

5.7.1.3 Marital Status

Majority (90.00%) of the youth in farming was married and remaining 10.00 per cent of the youth in farming were unmarried.

5.7.1.4 Family Type

Majority (62.92%) of the youth in farming were belonged to nuclear family and remaining (37.08%) of them was belonged to joint family.

5.7.1.5 Farming Experience

More than half (54.17%) of the youth in farming were with medium level of farming experience followed by 28.75 per cent with low level of farming experience and only 17.08 per cent with high level of farming experience.

5.7.1.6 Farm Size

Half (50.41%) of the youth in farming were marginal farmers followed by 27.50 per cent small farmers, 14.17 per cent semi-medium farmers. Very meagre per cent (6.67% and 1.25%) of them were medium farmers and large farmers respectively.

5.7.1.7 Material Possession

Nearly half (49.58%) of the youth in farming were with medium level of material possession followed by 32.92 per cent low level of material possession and only 17.50 per cent with high level of material possession.

5.7.1.8 Annual Income

Half (50.42%) of the youth in farming had medium level of annual income followed by low level of annual income (25.00%) and high level of annual income (24.58%).

5.7.1.9 Exposure to Training

Nearly three-fourth (39.16% medium and 37.91% low) of the youth in farming had medium to low exposure to training but only 22.93 per cent of them had high exposure to training.

5.7.1.10 Extension contact

More than two-fifth (45.83%) of the youth in farming had medium extension contactfollowed by low extension contact (30.83%) and high extension contact (23.34%).

5.7.1.11 Mass Media Exposure

Majority (45.00%) of the youth in farming had medium exposure to mass media followed by 30.83 per cent had low exposure to mass media and only 24.17 per cent had high exposure to mass media.

5.7.1.12 Decision making ability

Most (45.00%) of the youth in farming had medium decision making ability followed by 29.17 per cent of them had high decision making ability, whereas 25.83 per cent of them had low decision making ability.

5.7.1.13 Innovativeness

Nearly half (46.25%) of the youth in farming were moderately innovative followed by 29.58 per cent of the youth in farming were less innovative and 24.17 per cent of the youth in farming were highly innovative.

5.7.1.14 Scientific orientation

Half (50.00%) of the youth in farming had moderate scientific orientation followed by 27.50 per cent had low scientific orientation and 22.50 per cent had high scientific orientation.

5.7.1.15 Management Orientation

More than half (50.83%) of the youth in farming had medium management orientation followed by low management orientation (25.00%) and high management orientation (24.17%).

5.7.1.16 Achievement Motivation

Less than half (45.00%) of the youth in farming were with medium achievement motivation followed by 28.75 per cent of them were with high achievement motivation and 26.25 per cent of them were with low achievement motivation.

5.7.1.17 Economic Orientation

More than two-fifth (45.83%) of the youth in farming had medium economic orientation followed by 29.17 per cent of the youth had high economic orientation and only 25.00 per cent of the youth had low economic orientation.

5.7.1.18 Risk Orientation

More than two-fifth (41.67%) of the youth in farming had medium risk orientation followed by one third (32.91%) of the youth in farming had high risk orientation and one fourth (25.42%) of the youth in farming had low risk orientation.

5.7.2 Attitude of youth towards farming

One-third (33.75%) of the total youth had neutral attitude. It is followed by moderately favourable (23.75%) and moderately unfavourable (18.75%) attitude towards farming, whereas only 10.83 per cent and 12.92 per cent of them had highly unfavourable and highly favourable attitude respectively.

5.7.3 Relationship between Profile characteristics of Youth in Farming and their attitude towards farming

It could be inferred from the study that, annual income, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation were positively and significantly related with attitude of youth towards farming at one per cent level of significance whereas education and exposure to training were positively significant at five per cent level.

Age and farming experience were found to be negatively non-significant whereas marital status, family type, farm size, material possession, extension contact showed positively non-significant relationship with attitude of youth towards farming.

5.7.4 Different Combinations of Farm Enterprises being followed by the Youth and their Contribution towards Net Income (NI)

In the present study, it was observed that, there were seven farm enterprises being followed by youth in farming. They were Agriculture (A), Vegetable (V), Orchard (O), Dairy (D), Sheep (S), Poultry (P) and Plantation (PL). These farm enterprises were practiced in the form of different combinations by majority of the youth in farming and as a single entity by some of the youth in farming

This objective was measured by identifying all the available combinations among youth in farming, assessing the extent of each farm enterprise and the existence of different combinations of farm enterprise among youth in farming based on their farm size. Further, the contribution of net income was also analyzed by taking each enterprise wise income and proportion of income of each enterprise in all the combinations

5.7.4.1 Different Combinations of Farm Enterprises being followed by the Youth in Farming

More than one-third (35.42%) of the youth in farming followed (A+D) combination. About one- fourth (23.75%) of them had followed only agriculture. Nearly one-tenth (7.92%) of them had (A+D+P) followed by 6.67 per cent (A+V), 4.58 per cent (A+P). Slightly more than two per cent of them followed (A+ S), (A+D+S) and (A+O+D) individually. Very meager per cent (1.67%, 1.25% and 1.25%) of them followed (A+O), (A+V+D) and (A+D+S+P). While other minor combinations constituted to about one tenth (9.58%) of the youth in farming. viz., "**(**2V+D, 2V, 2 O, 2A+O+D+P, 1A+V+D+P, 1A+V+O, 1V+O, 1A+V+P, 1V+O+PL, 1A+V+O+D+P, 2A+V+O+PL, 1V+O+D+P+PL, 1A+V+D+S, 1A+V+O+D, 1V+S+P, 2A+S+P,1O+D**)."**

5.7.4.2 Analysis of Individual Farm Enterprises in terms of their Distribution among the Youth in Farming

It was also found that a vast majority (95.42%) of the youth had agriculture as sole and also as one of the enterprises in combination, followed by dairy (55.00%), poultry (17.50%) and vegetables (14.58%). Nearly ten per cent of them had orchard (9.17%) and sheep (8.75%) as one of the enterprises in combination respectively. Only 1.67 per cent of them had plantation as one of the enterprises in combination.

5.7.4.3 Different Combinations of Farm Enterprises being followed by Youth in Farming based on their Farm Size

About 12.50 per cent of the marginal youth had (A+D) combination, followed by Agriculture (10.83%), (A+D+P) combination (5.42%). Nearly five per cent (4.58% and 4.17%) of them followed dual combinations (A+V) and (A+P) respectively. Equal per cent (1.67%) of them practiced (A+S) and (A+D+S) individually. 1.25 per cent of them followed (A+D+S+P) combination. About one-tenth (8.36%) of the marginal youth followed other combinations of farm enterprises.

In case of small farm youth, slightly more than one- tenth (11.67%) of them had practiced (A+D), followed by Agriculture (5.83%) and (A+D+P) combination (1.67%). 1.25 per cent of them followed (A+V) enterprise combination. While, only 7.09 per cent of them followed other combinations.

It was also seen that, 7.92 per cent of the semi-medium youth practiced (A+D) combination followed by agriculture (3.75%).Very meager (0.83%) of them practiced (A+D+P). The same per cent (0.42%) of them had (A+V), (A+S), (A+D+S) and (A+O+D).

Among medium farm youth 3.33 per cent had (A+D) combination followed by agriculture (2.08%). Equivalent per cent (0.42%) of them had

practiced (A+V), (A+O) and (A+V+D+S) farm enterprise combinations. Large farm youth constituted to only 1.25 per cent of the total youth and followed only Agriculture.

5.7.4.4 Contribution of Each Farm Enterprise to Net Income (NI) of Youth in Farming

Huge majority of the youth were depending on the agriculture but it had contributed to more than two-third (69.02%) of the total NI of the individuals. More than half of the youth had dairy enterprise but it had contributed to only 12.18 per cent. Vegetable farming was followed by one-seventh of the youth and it had contributed to 10.40 per cent of the total NI. About one-tenth of the youth practiced orchard farming but it contributed to only 4.28 per cent of the NI. Less percentage of the youth followed sheep farming contributing to 2.62 per cent of the NI. Only 1.20 per cent of the total NI was obtained from poultry farming by one- sixth of the youth in farming. Meagre per cent of the youth who had plantations obtained 0.30 per cent of the total NI.

5.7.4.5 Proportion of Average Net Income from Each Enterprise in All the Existing Combinations of Farm Enterprises among Youth in Farming

In case of (A+D) combination, major portion (78.11%) of the NI was from agriculture and remaining (21.91%) was from dairy. In the combination of (A+D+P) more than two-third (72.49%), 22.13 per cent and 5.38 per cent of the average NI was from agriculture, dairy and poultry separately. The average NI from agriculture was constituted to 71.99 per cent, followed by poultry (28.01%) in the (A+P) combination. From (A+D+S) combination the contribution of each enterprise to NI was (73.13%, 8.00% and 18.87%) respectively. In case of (A+V+O+D+P), 82.47 per cent of average NI was exclusively from agriculture, followed by orchard (8.25%), vegetable (4.12%), dairy (4.12%) and poultry (1.03%).

On the contrary to above trends, vegetable contributed to major portion (73.31%) of the average NI, followed by agriculture (26.69%) in (A+V) combination. In (A+V+D) combination, the contribution to average NI was in the order of 26.47 per cent, 63.24 per cent and 10.29 per cent respectively. While in case of (V+D) combination major (94.86%) and very less (5.14%) portion of the NI was from vegetable and dairy respectively. More than half (55.56%) of the per cent was from vegetable, followed by agriculture (27.78%) and orchard (16.67%) respectively in (A+V+O) combination. 52.63 per cent of the average NI was from vegetable, followed by orchard (26.32%) and plantation (21.05%) in (V+O+Pl) combination. In (A+V+P) combination 60.00 per cent of the average NI was from vegetable, and equal per cent (20.00%) was from agriculture and poultry respectively in (A+V+P) combination. In the same way the contribution to average NI from vegetable was (65.22%), sheep (21.74%) and poultry (13.94%) in (V+S+P) combination.

The orchard as one of the farm enterprises also contributed to considerable amount of net income to the youth in farming. In the combination (A+O), 70.94 per cent of the average NI was from orchard, followed by agriculture (29.06%). Slightly more than half (54.55%) and 45.45 per cent of the average NI was from orchard and dairy in (O+D) combination. In case of (V+O) combination two third (66.67%) and one- third (33.33%) of the average NI was from orchard and vegetable.

In case of (A+S) combination, more than half (52.87%) of the average NI was from sheep and the remaining 47.13 per cent was from agriculture.

In all the other combinations, the contribution to net income from each enterprise was distributed approximately in equal proportions. In the combination (A+O+D), (49.88%, 27.71% and 22.41%) of the average NI was gained from orchard, agriculture and dairy enterprises respectively.

More than one- third (36.18%) of the average NI was from dairy, followed by agriculture (31.26%), sheep (26.77%) and poultry (5.79%) in (A+D+S+P) combination.

In case of (A+V+O+Pl), 37.50 per cent of average NI was obtained from vegetable, followed by agriculture (27.50%), plantation (20.00%) and orchard (15.00%).

Nearly half (47.22%), nearly two-fifth (38.89%) and 13.89 per cent of the average NI was obtained from agriculture, sheep and poultry respectively in (A+S+P) combination.

More than one-third and equal per cent (36.36%) of the average NI was gained from agriculture and vegetable, followed by sheep (18.18%) and dairy (9.09%) in (A+V+D+S) combination.

It was observed from (V+O+D+P+Pl) that, more than two fifth (44.12%), one- fifth (20.59%), equal per cent (14.71%) and meagre per cent (5.88%) of the average NI was acquired from vegetable, dairy, orchard, plantation and poultry enterprises respectively.

Likewise in (A+O+D+P) combination, equal and nearly one- third (32.61%), one- fourth (25.82%) and 8.97 per cent of the average NI was gained from agriculture, orchard, dairy and poultry.

In case of (A+V+D+P) slightly more than two fifth (41.03%), slightly more than one- third (35.90%), 15.38 per cent and 7.69 per cent was contributed from vegetable, dairy, agriculture and poultry. Lastly the (A+V+O+D) combination shown that, majority (40.00%) of the average NI was earned from vegetable, followed by agriculture (25.00%), orchard (20.00%) and dairy (15.00%).

5.7.5 Perception of Youth in Farming towards Different Farm Enterprises

Majority of youth in farming perceived dairy as more profitable farm enterprise with mean score (3.41), followed by vegetable (mean score =3.27), agriculture (mean score =3.16), sheep (mean score =3.09), plantation (mean score =3.04) and orchard (mean score =2.30) as least profitable.

Majority of the youth in farming perceived that, the investment for poultry was very less with mean score (4.32), followed by orchard (mean score =3.98), sheep (mean score =3.89), plantation (mean score =3.42), agriculture (mean score =3.72), vegetable (mean score =3.46) and highest for dairy (mean score =3.26).

The labour intensity was perceived as very high for vegetables (mean score =3.03), followed by high for dairy, medium for orchard, slightly medium for agriculture, less for plantation, very less for poultry and just one or two family members were involved for maintaining sheep. This is substantiated by the mean scores 3.16, 3.29, 3.82, 4.02, 4.19 and 4.24 respectively.

The majority of youth in farming perceived that, the management of poultry (mean score =4.32) was very simple, followed by increasing order of complexity for sheep (mean score =4.18), orchard (mean score =4.01), plantation (mean score =3.66), dairy (mean score =3.51), and finally vegetables (mean score =3.28).

The by-products of different farm enterprises were utilised in different ways. By-products were more utilised from dairy (mean score =3.40), followed by decreasing manner from agriculture (mean score =3.20), vegetables (mean score =3.10), plantation (mean score =2.52), orchard (mean score =2.29), sheep (mean score =2.25) and very less utilization from poultry (mean score =2.17).

The large majority of the youth in farming had perceived that, availability of subsidies was maximum for dairy (mean score =3.36), followed by descending

sequence for agriculture (mean score =3.06), vegetables (mean score =3.02), orchard (mean score =3.01), plantation (mean score =2.86), sheep (mean score =2.89) and very less for poultry (mean score =2.62).

Input availability for different enterprises was perceived as more for agriculture (mean score =4.152), followed by vegetable, dairy, poultry, orchard, plantation and sheep with mean scores (4.10, 4.09, 3.48, 3.32, 3.24 and 2.89).

It was also examined that, the risk involved was high in orchards (mean score =3.15) and low in plantations (mean score =4.01) as perceived by the youth in farming. While the risk involved in other enterprises was, vegetable (mean score =3.32), dairy (mean score =3.45), agriculture (mean score =3.67), sheep (mean score =3.96) and less risk was involved in poultry (mean score =3.98).

Further different farm enterprises had different prevailing marketing opportunities. In the perception of youth, the marketing opportunities were vast for dairy enterprise (mean score =4.05), followed by descending order of vegetables (mean score =3.93), sheep (mean score =3.72), agriculture (mean score =3.50), plantations (mean score =3.37), poultry (mean score =3.26) and orchard (mean score =3.11).

Agriculture (mean score =4.50) was perceived as more compatible than the other enterprises by the youth in farming. Next to this was vegetable (mean score =4.23), followed by dairy (mean score =3.93), plantations (mean score =3.22), orchard (mean score =3.21), poultry (mean score =2.89) and sheep (mean score =2.52).

Conclusively, the overall perception of youth in farming based on all the indicators was resulted in the ranking of the enterprises. Agriculture was perceived as the most efficient enterprise with average mean score of all the indicators as (mean score =3.61). Dairy (mean score =3.56) was perceived as efficient enterprise, followed by vegetable (mean score =3.47) as moderately

efficient, poultry (mean score =3.41) as slightly efficient, sheep (mean score =3.36) as less efficient, plantation (mean score =3.34) as very less efficient and at last orchard (mean score =3.17) was perceived as the least efficient enterprise by the youth in farming.

5.7.6. Problems as Perceived by Youth in Farming and their Suggestions to Overcome the Problems

5.7.6.1 Problems as Perceived by Youth in Farming

Among the production linked problems, 'drastic variations in climatic conditions' with mean score (1.84) ranked first and 'lack of irrigation facilities' (MS=1.80) ranked second and perceived as major problems by a large majority of youth in farming. 'Insufficiency of required inputs' (MS=1.70), 'unavailability of inputs in time' (MS=1.62) and 'poor quality of inputs' (MS=1.52) were perceived as major problems by a great majority of youth in farming and were ranked as third, fourth and fifth respectively. This was followed by 'scarcity of labor' (MS=1.42) ranked sixth and 'diversion of agriculture labor' (MS=1.39) ranked seventh which were perceived as the major problems respectively by considerable number of the youth in farming. 'Non availability of improved varieties and technologies' (MS=1.31), 'lack of appropriate farm machinery for different operations' (MS=1.29) and 'less compatibility of farm machinery' (MS=1.25) occupied eighth, ninth and tenth ranks respectively. These were perceived as major problems by slight majority of youth in farming.

In consideration to market problems 'involvement of intermediaries in marketing of farm produce (MS=1.78) was ranked first and perceived as the most problematic by a huge majority of youth in farming. It was followed by decreasing order of mean scores of the problems as 'poor market intelligence (MS=1.43), ill equipped market yards (MS=1.35), dearth of storage facilities for farm produce (MS=1.25), meager access to different marketing channels (MS=1.19) ranked second, third, fourth, fifth respectively. Poor transport

facilities (MS=0.85) ranked sixth which was perceived as a minor problem by good majority of the youth in farming.

In finance linked problems, very large majority of the youth perceived lack of remunerative prices for different crops (MS=1.81) as a foremost problem and it was ranked first. Extreme price fluctuations of farm output (MS=1.71) was ranked second and was considered as one of the major problems by most of the youth in farming. A moderate majority of the youth observed 'very high cost of inputs' (MS=1.67) as a major problem. Increased labour wages (MS=1.52) was ranked fourth and also considered as one of the major problems by the slight majority of youth. Limited access to formal sources of credit (MS=1.36), Expensive farm machinery (MS=1.20) and limited availability of subsidies (MS=1.10) were considered as minor problems to some extent by majority of the youth in farming. Inadequate crop insurance (MS=0.95) was ranked eighth and perceived as a minor problem by large majority of the youth in farming.

Regarding information and communication linked problems 'poor accessibility to different ICT tools' (MS=1.67) ranked first and was perceived as a prominent problem by the most of youth in farming. It was followed by 'lack of knowledge on ICT utilization (MS=1.52), lack of village level information centers (MS=1.41), less contacts with extension agencies (MS=1.35), limited accessibility of extension services (MS=1.02) were felt as some of the major problems. While lack of awareness of ongoing development schemes (MS=0.89) was perceived as a minor problem by slight majority of the youth in farming.

5.7.6.2 Suggestions given by the youth in farming

Majority (95.83%) of the youth in farming felt that 'exploring export avenues for marketing and regularising remunerative price for farm produce' as one of the major suggestions and it was ranked first among all the suggestions given by the youth in farming. 'Regulation of prices and distribution of inputs' was suggested by second majority (94.17%) of the youth. 'Development of

climate resilient technology' was suggested by 93.33 per cent of the youth and ranked third. It was followed by 'strengthening of market networking through established infrastructure' (92.08%) ranked fourth, 'enhancing and monitoring the subsidies and crop insurance' (91.25%) ranked fifth, 'intensive farm mechanisation' (90.42%) ranked sixth. 'Intensification of extension services' was also felt as one of the major problems by a slight majority (88.33%) of the youth in farming and ranked seventh. This was followed by 'popularizing micro irrigation technologies' (86.67%), 'strengthening of ICT in agriculture' (85.00%), 'educating the youth in farming about current trends in farming (82.92%) which were ranked eighth, ninth and tenth respectively.

5.7.7 Strategy to Retain Youth in Farming (SRYIF)

The biggest challenge for the stakeholders is "How to retain youth in farming". Keeping in view of the results of the study, an attempt was made to retain youth in farming. The model is multi dimensional, focusing all the possible ways and means for attracting the rural youth and providing them hand hold support to flourish in the farming.

The designed strategic model was primarily organized into three domains viz., socio-psychological, technological and organizational. All the three domains represent the broad areas of their contribution to the strategy.

For each domain, four "Core areas of concern" were identified to describe the strategy more comprehensively. The strategy analyzed the reality of the situation and shown the right direction for the flow of efforts of stakeholders.

It was also depicted that the need for integration of all the three domains as well as the core areas of concern in the strategy. The three domains of the strategy and their core areas of concern will act as significant contributors to retain the youth in farming. The three domains were

I. Socio-Psychological Domain

II. Technological Domain

III. Organizational Domain

The core areas of concern under each domain were

I. Socio-Psychological Domain

1. Recognition
2. Technical knowledge and skills
3. Cooperative approach
4. Entrepreneurial culture

II. Technological Domain

1. Precision farming
2. Wholistic approach
3. Intervention of new technology
4. Information and Communication Technology (ICTs)

III. Organizational Domain

1. Input Management
2. Operational Management
3. Marketing Management
4. Extension Management

5.8 Implications of the Present Study

The implications of the present study are documented based on the outcomes of the research, which in turn help the youth in farming, extension functionaries, researchers and other stakeholders of farming to contribute to the overall development of farming community. Hence, an attempt is made to document the implications of the present study, mostly in the nature of suggesting certain changes to retain youth in farming.

1. Majority of the respondents were in upper young age, completed high school to college education, had marginal farm size and medium level of material possession, annual income, low to medium exposure to training, medium level of extension contact, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation. Since majority of the respondents were in medium level with respect to most of the variables selected, the extension personnel and policy makers should take care to bring the changes in the all requirements of the youth in farming in order to achieve their overall development.
2. Even though majority of youth were educated, few of them were illiterates and some of them were in ‘can read and write’ category due to lack of awareness on importance of education and available education facilities. Hence there is a dire need to provide essential education facilities at the village level.
3. Majority of the youth in farming were having marginal farm size due to fragmentation of land holdings. Hence, there is need to provide the productive lands to youth to create interest in farming so that to encourage them to adopt innovative farming practices.

4. Majority of the youth in farming were having medium level of material possession and annual income which revealed that it is very essential to focus on every possibility of enhancing them to higher levels.
5. Low to medium exposure to training, medium levels of extension contact and mass media exposure was observed among the youth in farming. Hence, the extension functionaries must mobilise them to participate actively in all types of capacity building activities which in turn contribute to the knowledge gain, technological updation and practical feasibility of technologies at the farm level by the youth in farming.
6. Most of the youth in farming were observed to have medium levels of decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation. Hence, there is very urgent need to improve the youth in farming to attain higher levels of above said variables which could be possible by the active involvement of all stakeholders of farming community in providing need based technologies, creating awareness on the ongoing development schemes and maintaining proper communications with the youth in farming.
7. More than one-third of the youth in farming were with moderately to highly favourable attitude towards farming. So, there is dire need to bring remaining two-third of them to involve actively in farming. Hence the extension functionaries and researchers must communicate the advance technologies which are feasible at farm level to the youth in farming in time. Reduced costs of inputs and proper remunerative prices to their farm output also encourage them to involve in farming. Once their problems are addressed and their suggestions are recognised by all the stakeholders of farming community, the youth in farming will certainly show interest in farming as a profession.

8. It was also observed that, annual income, mass media exposure, decision making ability, innovativeness, scientific orientation, management orientation, achievement motivation, economic orientation and risk orientation were positively and significantly related with attitude of youth towards farming at one per cent level of significance whereas education and exposure to training were positively significant at five per cent level. Age and farming experience were found to be negatively non-significant whereas marital status, family type, farm size, material possession, extension contact showed positively non-significant relationship with attitude of youth towards farming.
9. Hence, the above variables should be taken into consideration to encourage the active participation of youth in farming and also to retain them in farming.
10. Majority of the youth in farming were following agriculture+dairy combination of farm enterprises only. So, there is need to create awareness about the importance of different farm enterprises existing at village level among the youth in farming.
11. Among all farm enterprises agriculture was found to be followed as a major farm enterprise by the youth in farming. Hence, there is need to encourage them to involve in other farm enterprises. It was also found that agriculture was the main source of net income for the youth in farming followed by other enterprises. Finally there is very urgent need to develop opportunities for following other farm enterprises along with other farm enterprises.
12. Majority of the youth in farming also perceived that agriculture was most efficient farm enterprise followed by other farm enterprises. Hence there is need to create awareness about importance of other farm enterprises and advanced technologies followed in taking up other farm enterprises. They must be encouraged to take up farming as a wholistic approach which contributes to the overall development of youth in faming.

13. Among the production linked problems, ‘drastic variations in climatic conditions’ followed by ‘lack of irrigation facilities’, ‘insufficiency of required inputs’, ‘unavailability of inputs in time’, ‘poor quality of inputs’, ‘scarcity of labor’, ‘diversion of agriculture labor’, ‘non availability of improved varieties and technologies’, ‘lack of appropriate farm machinery for different operations’ and ‘less compatibility of farm machinery’ were perceived as major problems by youth in farming.

In consideration to market problems ‘involvement of intermediaries in marketing of farm produce’ followed by ‘poor market intelligence’, ‘ill equipped market yards’, ‘dearth of storage facilities for farm produce’, ‘meager access to different marketing channel’ and ‘poor transport facilities’ were perceived as major problems by youth in farming.

In finance linked problems, very large majority of the youth perceived ‘lack of remunerative prices for different crops’ as a foremost problem followed by ‘extreme price fluctuations of farm output’, ‘very high cost of inputs’, ‘increased labour wages’, ‘limited access to formal sources of credit’, ‘expensive farm machinery’, ‘limited availability of subsidies’ and ‘inadequate crop insurance’ was perceived as the major problems.

Regarding information and communication linked problems ‘poor accessibility to different ICT tools’ followed by ‘lack of knowledge on ICT utilization, ‘lack of village level information centers’, ‘less contacts with extension agencies’, ‘limited accessibility of extension services’, ‘lack of awareness of ongoing development schemes’ was perceived as a major problems by majority of the youth in farming.

If all these problems will be addressed properly, then the youth in farming would be interested in farming.

14. Majority of the youth in farming felt that ‘exploring export avenues for marketing and regularising remunerative price for farm produce’, ‘regulation of prices and distribution of inputs’, ‘development of climate resilient technology’, ‘strengthening of market networking through established infrastructure’, ‘enhancing and monitoring the subsidies and crop insurance’, ‘intensive farm mechanisation’, ‘intensification of extension services’, ‘popularizing micro irrigation technologies’, ‘strengthening of ICT in agriculture’ and ‘educating the youth in farming about current trends in farming’ were the major suggestions given by the youth in farming.

    The suggestions given by the youth in farming must be put into action by all the stakeholders involved in farming.

5.9 Suggestions for Future Research

The outcome of the present investigation demands the need for future investigations in several directions. The following suggestions were made for future researchers who would propose to undertake studies related to this subject.

1. The investigation was carried out in a specific area with restricted sample of 240 youth in farming. Therefore, similar studies may be conducted with larger samples covering all the areas.
2. The present study considered only few selected profile characteristics in order to find their relationship with dependent variables. Number of other variables that are likely to affect the dependent variables may be studied.
3. The devices of measurement developed for the present study appear to be appropriate and convenient. However, they need to be tested for component consistency and should be tried on larger samples.
4. To have an in depth analysis of the study, some case studies must be studied thoroughly which would help to find out clear picture of the youth in farming.

Appendix

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APPENDIX – I

YOUTH IN FARMING - AN ANALYTICAL STUDY

INTERVIEW SCHEDULE

Respondent No :

Name of the respondent :

Village :

Mandal :

District :

SECTION A

SELECTED PROFILE CHARACTERISTICS OF YOUTH IN FARMING

I. Age : _____ years

II. Education Qualification :

a	Illiterate	0
b	Can read and write	1
c	Middle school	2
d	High school	3
e	College education	4

III. Marital status

a	Married	1
b	Unmarried	2

IV. Family type

a	Nuclear	1
b	Joint	2

V. Farming Experience :_____years

VI. Farm Size

S. No.	Type of land	Irrigated	Rain fed	Total
a	Owned			
b	Leased			
c	Total			

VII. Material possession

S. No.	Farm items	Score
a	Hand hoe/ Sickel/ Shovel/ Prongs/ Chisel etc.,	1
b	Bullock cart/ Cattle pair/ Wooden Plough/ Guntaka/ Sprayer/ duster/ Electric motor etc.,	2
c	Power tiller/ Tractor/ Harvesters etc.,	3
S. No.	**House hold articles**	**Score**
a	Radio/ Utensils/ Cot/ Bicycle etc.,	1
b	Gas connection/ Electricity/ Fan/ Sofa/ Almyrah/ Television/ Motor cycle/ scooter etc.,	2
c	Refrigerator/ Car/ Washing machine etc.,	3
Total		

VIII. Annual Income (Rs.)

1	Main occupation	
2	Subsidiary occupation	
3	Subsidiary occupation	
4	Subsidiary occupation	
	Total income	

IX. Exposure to Training:

Have you received any training ---- Yes/No

X. Extension contact:

Please mention the frequency of contact with the following personnel.

S. No.	Name of Personnel	Frequency of contact		
		Often	Some times	Never
		(2)	(1)	(0)
1	Agricultural Extension officer			
2	Agricultural Officer			
3	DAATTC scientists			
4	Research Station scientists			
5	Krishi Vigyan Kendra scientists			
6	NGO Personnel			
7	Input dealers			
8	Any others			

XI. Mass media exposure:

Please state what are the mass media you have utilized in general for getting farm information and the degree of contact with each them.

S. No.	Item	Regularly (2)	Occasionally (1)	Never (0)
1	Listening to radio			
2	Viewing television			
3	Reading newspaper			
4	Reading farm publications			
5	Agriculture Exhibitions			
6	Kisan melas			
7	Field trips			
8	C.D.s/DVDs on Agril. and allied sector			
9	Internet			
10	Others (specify)			

XII. Decision making ability:

Please mention how you will take decisions based on three point continuum viz., Self decision or After consulting family members or After consulting family members, fellow farmers and others

S. No.	Item	Response Category		
		Self decision (3)	After consulting family members (2)	After consulting family members, fellow farmers and others (1)
1	Adoption of innovative farm practices			
2	Testing of new varieties			
3	Allocation of farm for different enterprises			
4	Obtaining credit for taking up farm operations			
5	Utilization of capital for different farm operations			
6	Purchase of new farm machinery			
7	Marketing of farm produce			
8	Purchase of land			

XIII. Innovativeness:

The following are some of the statements related to innovativeness of a farmer. Please indicate your answer on the five point continuum against Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) or Strongly Disagree (SDA).

S. No.	Statement	Response category				
		SA (5)	A (4)	UD (3)	DA (2)	SDA (1)
1	Do you seek the advice of scientist/extension worker in farm production?					
2	Are you interested in adopting minikits/ on-farm trails?					
3	Do you follow the farm magazines/Electronic media messages?					
4	Are you willing to take up the farming practices which involve risk?					
5	Are you ready to modify the farming practices time to time?					
6	Do you give importance for monetary benefits than higher production? (-)					

XIV. Scientific Orientation:

Please indicate whether you Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) or Strongly Disagree (SDA) to each of the following statements pertaining to scientific orientation.

S. No.	Statement	Response category				
		SA (5)	A (4)	UD (3)	DA (2)	SDA (1)
1	New methods of farming give better results to farmer than traditional methods.					
2	The way your fore fathers did the farming is still the best way (-)					
3	Even a farmer with lot of experience should use new methods of farming.					
4	Though it takes time for a farmer to learn new methods of farming, it is worth.					
5	A modern farmer experiments with new ideas of farming					
6	Traditional methods have to be changed in order to raise the level of living.					

XV. Management orientation:

A set of statements representing planning, production and marketing orientation of farmers is given below. Please state whether you Agree (A) or Undecided (UD) or Disagree (DA) with each statement

a) Planning orientation:

A set of statements representing planning orientation are given below. Please state whether you Agree (A) or Undecided (UD) or Disagree (DA) with each statement

S.No	Item	A	UD	DA
1	Every year one should think fresh about the crops to be cultivated in each type of land			
2	It is not necessary to make prior decisions about the variety of crops to be cultivated in the land (-)			
3	The amount of inputs such as seeds, fertilizers and plant protection chemicals needed for raising a crop should be assessed before cultivation			
4	It is not necessary to think ahead of the cost involved in raising the crop (-)			
5	One need not consult agricultural experts for crop planning (-)			
6	It is possible to increase the yield through farm production plans			

b) Production orientation

A set of statements representing Production orientation is given below. Please state whether you Agree (A) or Undecided (UD) or Disagree (DA) with each statement

S. No	Item	A	UD	DA
1	Timely planting of crop ensures good yield			
2	One should use as much of fertilizer as one likes (-)			
3	Determining fertilizer dose by soil testing saves money			
4	Seed rate should be adopted as recommended by the specialists			
5	For timely weed control one should use suitable herbicides			
6	With low moisture rates one should use as much irrigation water as available			

C) **Marketing orientation**

A set of statements representing marketing orientation is given below. Please state whether you Agree (A) or Undecided (UD) or Disagree (DA) with each statement

S.No	Item	A	UD	DA
1	Market news is not so useful to farmer (-)			
2	A farmer can get good price by grading his produce			
3	Warehouses can help the farmer to get better price for his produce			
4	One should sell his produce to the nearest market irrespective of price (-)			
5	One should sell his produce to nearest shop where his other relatives sell(-)			
6	One should grow those crops which have more market demand			

XVI. Achievement motivation:

Please indicate whether you Agree (A), Undecided (UD) or Disagree (DA) to each of the following statements pertaining to achievement motivation

S. No.	Statement	Response Categories		
		A	UD	DA
1	One should work like a slave until one is satisfied with the result			
2	One should have determination and driving ambition to achieve certain things in life even if these qualities make one unpopular			
3	When working in group one should try to excel others in similar tasks			
4	Work should come first even if one can not get rest in order to achieve one's goal			
5	Even when one's interests are in danger he should concentrate on his job and forget his obligation to others			
6	One should set difficult goals for oneself and try to reach them			
7	The way things are happening now a days discourages one to work hard (-)			
8	It is better to be content with whatever little one has than to be always struggling(-)			

XVII Economic orientation:

Please state the degree of your agreement with each of the following statements pertaining to economic orientation, on the three point continuum viz., Agree (A), Undecided (UD), Disagree (DA)

S. No	Statement	Response Categories		
		A	UD	DA
1	A farmer should work towards larger yields and economic gains			
2	The most successful farmer is the one who makes more profits			
3	A farmer should try new farming ideas which may earn him more money			
4	It is difficult for farmer's children to make good start unless he provides them with economic assistance (-)			
5	A farmer must earn his living but the most important thing in life cannot be defined in economic terms			
6	A farmer should practice improved technology to increase monetary profits than depending on traditional technology			

XVIII. Risk orientation:

Please state the degree of your agreement with each of the following statements pertaining to risk orientation, on the three point continuum viz., Agree (A), Undecided (UD) or Disagree (DA)

S. No	Statement	Response Categories		
		A	UD	DA
1	A farmer should grow large number of crops to avoid greater risk involved in growing one or two crops			
2	A farmer should rather take more of a chance in making a big profit that to be content with a smaller but less risky profits			
3	A farmer who is willing to take greater risks than the average, success is fairly high			
4	It is good for farmer to take risks when he knows his chance of success is fairly high			
5	It is better for a farmer not to try new farming methods unless most others have used them with success (-)			
6	Trying an entirely new practice in farming by a farmer involves risk but it is worth trying			

SECTION B
Attitude of Youth towards Farming

Please indicate whether you Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) or Strongly Disagree (SDA) to each of the following statements pertaining to Attitude of youth towards farming

S. No.	Statement	Measurement				
		SA (5)	A (4)	UD (3)	DA (2)	SDA (1)
1	Advanced technologies encourage youth to flourish in farming					
2	I want to be an elite person in society through farming					
3	There is less opportunity for career development in farming*					
4	I prefer to be a farmer than as an employee					
5	As there is no other means of income I am forced to do farming*					
6	For highly educated youth it is unwise to do farming*					
7	I enjoy the relationship with nature through farming					
8	Farming is not viewed as a respectable profession in the society*					
9	I will not encourage my children to be in farming*					
10	Access to inputs and marketing is poor in farming*					
11	Farming is cumbersome compared to other occupations*					
12	I feel proud to be as part of profession feeding the nation					
13	Farming will give less scope for higher education accessibility to our children*					
14	The present environment is more hopeful for farming					
15	I feel farming is more profitable than any other occupation					
16	If you choose farming, you have to be ready to face the adverse effects*					
17	I am willing to seek for further knowledge and skills in farming					
18	Shortage of resources is major limiting factor in farming*					
19	I am ready to invite innovations in farming					
20	I work hard and smart to make farming worthy					
21	I can overcome any type of hardships in farming					
22	I don't want to continue in farming further*					
23	Farming leads to increase in standard of living					
24	Farming is more stressful*					

Note: * Negative statements

Section C

Different Combination of Farm Enterprises and Their Contribution towards Net Income

S. No.	Name of the Farm Enterprise	Contribution to Net Income	
		Amount (Rs)	**Percentage (%)**
1	Agriculture		
2	Vegetable production		
3	Orchards		
4	Floriculture		
5	Dairy		
6	Sheep and Goat		
7	Aquaculture		
8	Any other (specify)		
	Combination of Farm Enterprises (----------)	**Total**	

Section D

Please indicate whether you perceive the following indicators as Very High (5)/ High (4)/ Moderate (3)/ Low (2)/ Very Low (1) with respect to their concerned farm enterprise

Perception Indicators														
S. No.			**Profitability (+)**	**Investment (-)**	**Labor intensity (-)**	**Complexity Management (-)**	**Available subsidies (+)**	**By-product utilization (+)**	**Input availability (+)**	**Risk involvement (-)**	**Marketing opportunities (+)**	**Compatibility (+)**	**Average score**	**Overall Rank**
1	**Farm Enterprise**	Agriculture												
2		Vegetable												
3		Orchards												
4		Floriculture												
5		Dairy												
6		Sheep												
7		Aquaculture												
8		Any other (specify)												

Section E

I. Please indicate whether you perceive the following problems as major problem, minor problem and not a problem

S. No.	Problems as perceived by the youth in farming	Major problem (2)	Minor problem (1)	Not a problem (0)
I	**Production Linked Problems**			
1	Drastic variations in climatic conditions			
2	Poor quality of inputs			
3	Insufficiency of required inputs			
4	Unavailability of inputs in time			
5	Non availability of improved varieties and technologies			
6	Lack of appropriate farm machinery for different operations			
7	Less compatibility of farm machinery			
8	Scarcity of labour			
9	Diversion of agriculture labour			
10	Lack of proper irrigation facilities			
II	**Market Linked Problems**			
1	Involvement of intermediaries in marketing of farm produce			
2	Poor market intelligence			
3	Meagre access to different marketing channels			
4	Dearth of storage facilities for harvested produce			
5	Ill equipped market yards			
6	Poor transport facilities			

Contd.,

Contd.,

S. No.	Problems as perceived by the youth in farming	Major problem (2)	Minor problem (1)	Not a problem (0)
III	**Finance linked problems**			
1	Very high cost of inputs			
2	Increased labour wages			
3	Limited access to formal sources of credit			
4	Expensive farm machinery			
5	Limited availability of subsidies			
6	Extreme price fluctuations of farm output			
7	Lack of remunerative prices for different crops			
8	Inadequate crop insurances			
IV	**Information and Communication linked problems**			
1	Lack of village level information centres			
2	Lack of knowledge on ICT utilization			
3	Poor accessibility to different ICT tools			
4	Less contacts with extension agencies			
5	Limited accessibility of extension services			
6	Lack of awareness of ongoing development schemes			

II. Please mention the suggestions to overcome these problems

1.

2.

3.

4.

5.